Agenda
Board of Supervisors
Isle of Wight County
August 15, 2024

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 - Supervisor Rudolph Jefferson
6. Citizens' Comments
7. Consent Agenda
    A. Budget Amendment - Medical Supplies

       Resolution to Amend the Budget and Appropriate Funding for EMS Medical Supplies ($158,000)
    B. Budget Amendment - Dominion Energy Pass Through Funding

       Resolution to Amend the Budget and Appropriate Dominion Energy Pass Through Funding from VDEM ($80,000)
    C. Budget Amendment - Sheriff's Office Vehicles

       Adopt a Resolution to Amend the Budget and Appropriate Funds for the Acquisition of Sheriff's Office Vehicles ($99,972)
    D. Reimbursement for Capital Expenditures for Vehicles

       Resolution to Declare the County's Intent to Reimburse Itself for Capital Expenditures Related to the Acquisition of Various Vehicles ($973,000)
    E. Vehicle Acquisition Authorization

Authorization to Acquire Previously Budgeted Vehicles for County Operations

F. Vehicle Acquisition - Carrollton Tanker

Authorization to Acquire a Tanker for the Carrollton Volunteer Fire Department

G. William A. Gwaltney Way Bids

Acceptance of the Apparent Low Bid to Extend William A. Gwaltney Way in Shirley T. Holland Intermodal Park, Phase II

H. Minutes

- June 13, 2024 Regular Meeting Minutes
- July 11, 2024 Meeting Minutes

8. Regional and Inter-Governmental Reports

A. Regional Reports

9. Appointments

A. Appointments List

10. Special Presentations / Appearances

A. Budget Book Presentation

Presentation of the FY2024-25 Budget Book

B. Schools Capital Project Financing

Presentation re: Options for Financing Schools Capital Projects

C. VDOT Presentation

VDOT Update

11. County Attorney's Report

12. Public Hearings

A. CUP-03-24 Carrsville Modular Classroom

Application (CUP-3-24) of Todd Christiansen, Applicant, and

Isle of Wight County School Board, Property Owner, for a Conditional Use Permit for a Modular Classroom on Approximately 0.5 Acres Located at Carrsville Elementary School, 5355 Carrsville Highway (Rte. 58) in the Village Center Zoning District

B. CUP-7-24 Peace by the River Short-Term Rental

Application (CUP-7-24) of Jeremy Kooiman and Lucy Kooiman, Property Owners, for a Conditional Use Permit to Operate a Short-Term Rental on Approximately Two Acres Located at 214 Shivers Mill Lane in the Suburban Residential Zoning District

C. CUP-6-23 Old Stage Highway Utility Scale Solar Energy Facility

Application of Elk Development, LLC, Applicant, and William Pennie, Jr. and Teresa L. Crocker, Property Owners, for a Conditional Use Permit for a Major Utility Service, Specifically a 3.0 MW Utility-Scale Solar Energy Generation Facility, on Approximately 27.32 Acres on a 94.21-Acre Tract Located on Old Stage Highway in the Rural Agricultural Conservation (RAC) Zoning District

D. CUP-7-23 Orbit Road Utility Scale Solar Energy Facility

Application (CUP-7-23) of Elk Development, LLC, Applicant, and William Sawyer, Property Owner, for a Conditional Use Permit for a Major Utility Service, Specifically a Three Megawatt Utility-Scale Solar Energy Generation Facility, on Approximately 28.84 Acres Located on Orbit Road in the Rural Agricultural Conservation Zoning District and a Request to Withdraw 22.02 Acres from the Courthouse Agricultural and Forestal District

E. Stormwater Legislation

Ordinance to Repeal Chapter 14A - Stormwater Management Repeal and Reenact Chapter 6 - Erosion and Sedimentation

Control, Appendix B-2 Coastal Primary Sand Dune Ordinance and Chapter 17 Wetlands Zoning

13. County Administrator's Report

    A. 2025 Legislative Priorities

       Discussion of Items for 2025 Legislative Priorities

    B. Matters for the Board's Information

14. Unfinished / Old Business

    A. CUP-8-23 Sycamore Solar A Conditional Use Permit Request

       Application (CUP-8-23) of Sycamore Cross Solar, LLC, Applicant, for a Conditional Use Permit for a Major Utility Service, Specifically a 214 MW Utility-Scale Solar Energy Generation Facility and a Medium Voltage Line Known as Sycamore Cross A, on Approximately 1,795 Acres Located on Mill Swamp Road (Rte. 621) in the Rural Agricultural Conservation Zoning District as well as an Associated Application to Withdraw Approximately 860 Acres from the Moonlight Agricultural and Forestal District

    B. CUP-5-24 Sycamore Solar B Conditional Use Permit Request

       Application (CUP-5-24) of Sycamore Cross Solar , LLC, Applicant, for a for a Conditional Use Permit to Allow the Expansion of an Existing Major Utility Service, Specifically a Six MW Utility-Scale Solar Energy Generation Facility and Associated Six Medium Voltage Lines Known as Sycamore Cross B, on approximately 240 Acres Located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way

    C. Sycamore Cross Solar Energy Generation Facility Siting Agreement

       Consideration of a Siting Agreement for the Sycamore Cross Solar, LLC Project

D. Windsor Library Bids

   Consideration of Bids Received for an Addition to the Windsor Library Building

E. Rushmere Volunteer Fire Station Bids

   Consideration of Bids for an Addition to the Rushmere Volunteer Fire Station

F. Benns Church Blvd/Turner Dr Intersection Improvements

   Discussion of Potential Benns Church Blvd/Turner Dr Intersection Improvements as Outlined in the Benns Church Master TIA

15. New Business

    A. Nike Missile Project

       Discussion of the Nike Missile Restoration Project

16. Adjournment

ISSUE:

Resolution to Amend the Budget and Appropriate Funding for EMS Medical Supplies ($158,000)

BACKGROUND:

In 2017, the U.S. Congress enacted FDA and DEA regulations relative to controlled substances used by EMS agencies. Staff has previously provided a timeline of events and the impact the final rules will have on the County. In this regard, funding will need to be budgeted for acquisition of the medical supplies for EMS response.

BUDGETARY IMPACT:

The General Fund Fire Rescue budget will be increased in the amount of $158,000.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funding for EMS medical supplies.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	8/9/2024

RESOLUTION TO AMEND THE FY 2024-25 OPERATING BUDGET AND APPROPRIATE FUNDING FOR EMERGENCY RESPONSE PHARMACY COMPLIANCE

WHEREAS, the County of Isle of Wight, Virginia is required to comply with changes to opioid pharmaceutical mandates; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2024-2025 General Fund Fire Rescue budget in the amount of $158,000 from an expected increase in EMS Revenue; and,

WHEREAS, the Board of Supervisors needs to appropriate $158,000 to the General Fund Budget for the purchase of Pharmacy supplies ($50,000) and pharmacy control staff ($108,00).

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2024-25 budget is hereby amended and the funds appropriated for $158,000.

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 15th day of August, 2024.

_____
Joel C. Acree, Chairman

_____
Carey M. Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Dominion Energy Pass Through Funding from VDEM ($80,000)

BACKGROUND:

The Department of Emergency Services has received eighty thousand dollars ($80,000) from the Virginia Department of Emergency Management (VDEM) representing pass through funding from Dominion Energy to risk jurisdictions. Isle of Wight County is considered a risk jurisdiction because the Surry Nuclear Energy Station is located within 10 miles of the county.

Of the $80,000, Dominion Energy has stipulated that $5,000 must be used to offset the cost of the County's emergency alert system (IWAlert). The remaining $75,000 is stipulated for additional training, equipment and supplies to increase the county's emergency preparedness and response efforts.

BUDGETARY IMPACT:

There is no grant match requirement associated with the funding.

Adoption of the attached resolution will increase the revenues and expenditures of the FY 2024-25 Grant Fund Budget by seventy-five thousand dollars ($75,000).

In anticipation of the funding opportunity, five thousand dollars ($5,000) of the pass through funding was included in the FY2024-2025 E911 Budget and does not need to be accepted and appropriated at this time.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate the Dominion Energy pass through funding received from VDEM.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	8/5/2024

RESOLUTION TO AMEND THE FY2024-2025 OPERATING BUDGET AND APPROPRIATE FUNDING FOR PASS THROUGH DOMINION ENERGY FUNDING FROM THE VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT

WHEREAS, Isle of Wight County is considered an at-risk jurisdiction due to its close proximity (within 10 miles) to the Surry Nuclear Power Plant; and,

WHEREAS, the Board of Supervisors has received pass through funding in the amount of $80,000 from Dominion Energy for risk jurisdictions from the Virginia Department of Emergency Management (VDEM); and,

WHEREAS, funding in the amount of $5,000 was anticipated and included in the FY2024-2025 E911 Budget during the budget process; and,

WHEREAS, the Board of Supervisors desires to amend the FY2024-2025 Budget for receipt of $75,000 from the VDEM; and,

WHEREAS, the Board of Supervisors needs to appropriate $75,000 to increase the county's emergency preparedness and response efforts.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY2024-2025 Budget is hereby amended and funds appropriated in the amount of $75,000.

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 15th day of August, 2024.

_____
Joel C. Acree, Chairman

_____
Carey M. Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Adopt a Resolution to Amend the Budget and Appropriate Funds for the Acquisition of Sheriff's Office Vehicles ($99,972)

BACKGROUND:

At the Board's regular meeting on July 11, 2024, the Sheriff's Office advised two vehicles had to be taken out of service due to major mechanical failures. The failures were unexpected because both vehicles had below 100,000 miles and it was hoped that they would be functioning for another year or two before having to replace them.

The Sheriff can replace both vehicles and outfit them for a total cost of roughly $99,972 ($42,486 for each vehicle and $7500 to outfit each vehicle).

BUDGETARY IMPACT:

Funding the replacement vehicles will reduce the Unassigned Fund Balance by the amount of the acquisitions.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate funds for the acquisition of Sheriff's Office vehicles.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	8/13/2024

RESOLUTION TO AMEND THE FY 2024-25 OPERATING BUDGET AND APPROPRIATE FUNDING FOR REPLACEMENT OF COUNTY VEHICLES

WHEREAS, the Isle of Wight County Sheriff's Office has requested funding in the amount of $99,972 for replacement of two Sheriff's Office fleet vehicles; and,

WHEREAS, the Board of Supervisors desires to provide $99,972 from the unassigned fund balance for replacement of the vehicles; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2024-25 General Fund budget and appropriate funding in the amount of $99,972 from the unassigned fund balance for replacement of the vehicles.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2024-25 budget is hereby amended and funds appropriated in the amount of $99,972.

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 15th day of August, 2024.

_____
Joel C. Acree, Chairman

_____
Carey M. Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Declare the County's Intent to Reimburse Itself for Capital Expenditures Related to the Acquisition of Various Vehicles ($973,000)

BACKGROUND:

The County intends to finance the acquisition of various vehicles for County operations. In an effort to expedite the process, available County funds will be used; however, after the funds are received, the County will reimburse itself.

BUDGETARY IMPACT:

The funds acquired in the financing will be used to reimburse the County's budget.

RECOMMENDATION:

Adopt a resolution to declare the County's intent to reimburse itself for capital expenditures related to the acquisition of various vehicles.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	8/6/2024

A RESOLUTION DECLARING THE OFFICIAL INTENT OF THE COUNTY OF ISLE OF WIGHT, VIRGINIA, TO REIMBURSE ITSELF FOR CAPITAL EXPENDITURES RELATED TO THE ACQUISITION OF VARIOUS VEHICLES

A. The County of Isle of Wight, Virginia (the "County"), intends (i) to finance the purchase of various vehicles as described in the attached schedule (collectively, the "Project"), (ii) to pay certain costs of the Project as appropriate from available funds of the County prior to entering into a lease purchase financing or incurrence of other obligations or debt (the "Obligations") to finance the Project, and (iii) to reimburse itself for such original expenditures (the "Expenditures") from the proceeds of the Obligations.

B. Pursuant to Treas. Regs. § 1.150-2, the County is required to adopt a resolution in the form set forth below to preserve the County's ability to use the proceeds of the Obligations to reimburse itself for all or a portion of the Expenditure.

After careful consideration and to further the public purposes for which the County was created, **NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF ISLE OF WIGHT COUNTY, VIRGINIA, THAT**:

1. The County intends to finance the Project and related financing expenses through one or more series of Obligations. The principal amount of the Obligation(s) attributable to the Project and related financing expenses is not expected to exceed $973,000.

2. This Resolution represents a declaration of "official intent" under Treas. Regs. §1.150-2.

3. Prior to the issuance or incurrence of Obligations, the County expects to pay all or a portion of the costs of the Project from its available funds.

4. On the date each Expenditure is paid, it will be a capital expenditure (or would be with a proper election) under general federal income tax principles or will otherwise comply with the requirements of Treas. Regs. § 1.150-2(d)(3).

5. The County reasonably expects to reimburse the Expenditures made prior to the incurrence of Obligations to finance the Project from the proceeds of the Obligations and the adoption of this Resolution is consistent with the budgetary and financial circumstances of the County.

6. This Resolution shall be in effect from and after its adoption.

CERTIFICATE OF CLERK

The undersigned Clerk of the Board of Supervisors of Isle of Wight County, Virginia (the "County"), hereby certifies that:

1. A regular meeting of the Board of Supervisors of Isle of Wight County, Virginia, was duly called and held on August 15, 2024 (the "Meeting"), at which the following members were present and absent:

PRESENT: Joel C. Acree, Chairman
Don G. Rosie, II, Vice Chairman
Rudolph Jefferson
William M. McCarty, Sr.
Renee K. Rountree

ABSENT: None

2. A resolution (the "Resolution") of the County entitled "A RESOLUTION DECLARING THE OFFICIAL INTENT OF THE COUNTY OF ISLE OF WIGHT, VIRGINIA, TO REIMBURSE ITSELF FOR CAPITAL EXPENDITURES RELATED TO THE ACQUISITION OF VARIOUS VEHICLES," was duly adopted at the Meeting by the recorded affirmative vote of at least a majority of all the members of the Board of Supervisors of Isle of Wight County, Virginia, the ayes and nays being recorded in the minutes of the meeting as shown below:

MEMBER	VOTE
Joel C. Acree, Chairman	___
Don G. Rosie, II, Vice Chairman	___
Rudolph Jefferson	___
William M. McCarty, Sr.	___
Renee K. Rountree	___

3. The foregoing is a true and correct copy of the Resolution.

WITNESS my signature as of the date set forth below.

_____
Clerk

Date: _____

ISSUE:

Authorization to Acquire Previously Budgeted Vehicles for County Operations

BACKGROUND:

The Board may wish to authorize the acquisition of new and replacement vehicles for County operations including law enforcement.

BUDGETARY IMPACT:

The funding for the vehicles is included in the FY2024-25 Operating Budget.

RECOMMENDATION:

Authorize the acquisition of vehicles for County operations.

ATTACHMENTS:

Description	Type	Upload Date
FY25 Vehicle Requests	Backup Material	8/7/2024

Isle of Wight County
Proposed FY 2024-25 Budget
VEHICLE REQUESTS

8/7/2024 9:15

REPLACEMENT VEHICLES

Sheriff Vehicles

#	Make/Model	Assignment	Base cost	Equipment	Graphics	Tech Radio	Total Requested	Total Proposed
1	Durango	Investigations	$ 44,000	5,000	-	-	49,000	49,000
2	Durango	Investigations	44,000	5,000	-	-	49,000	49,000
3	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	60,700
4	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	60,700
5	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	60,700
6	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	60,700
7	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	60,700
	Total Sheriff Vehicles		**$ 308,000**	**70,000**	**6,000**	**17,500**	**401,500**	**401,500**

Other GF Vehicles

#	Make/Model	Assignment	Base cost	Equipment	Graphics	Tech Radio	Total Requested	Total Proposed
1	2024 Peterbuilt	Public Works Solid Waste	$ 250,000	-	-	-	250,000	250,000
2	2025 F550 (dump bed)	Parks & Recreation	106,000	-	-	-	106,000	90,000
3	2025 Chevy 2500 Hd	Parks & Recreation	70,000	-	-	-	70,000	54,000
4	2025 Chevy Malibu	Economic Development	31,000	-	-	-	31,000	31,000
5	2025 Ford Explorer	Information Technology	50,000	-	-	-	50,000	-
6	2025 Chevrolet Tahoe	Emergency Services	70,000	-	-	-	70,000	70,000
7	2025 Maverick	Community Development	50,000	-	-	-	50,000	34,500
	Total Other GF Depts.		**$ 627,000**	**-**	**-**	**-**	**627,000**	**529,500**

NEW VEHICLES

Sheriff Vehicles

#	Make/Model	Assignment	Base cost	Equipment	Graphics	Tech Radio	Total Requested	Total Proposed
1	Durango	Patrol	$ 44,000	12,000	1,200	3,500	60,700	-
2	Durango	Patrol	44,000	12,000	1,200	3,500	60,700	-
	Total Sheriff Vehicles		**$ 88,000**	**24,000**	**2,400**	**7,000**	**121,400**	**-**

GF Vehicles

#	Make/Model	Assignment	Base cost	Equipment	Graphics	Tech Radio	Total Requested	Total Proposed
1	2025 Maverick	Tourism	$ 31,000	-	-	-	31,000	34,500
	Total Other GF Depts.		**$ 31,000**	**-**	**-**	**-**	**31,000**	**34,500**

TOTAL VEHICLE REQUESTS	**$ 1,054,000**	**94,000**	**8,400**	**24,500**	**1,180,900**	**965,500**

ISSUE:

Authorization to Acquire a Tanker for the Carrollton Volunteer Fire Department

BACKGROUND:

The Board may wish to authorize the purchase of a tanker for Carrollton Volunteer Fire Department. The cost of the tanker is $650,980.

BUDGETARY IMPACT:

Funding is available from unspent bond proceeds.

RECOMMENDATION:

Authorize the acquisition of a tanker for Carrollton Volunteer Fire Department.

ISSUE:

Acceptance of the Apparent Low Bid to Extend William A. Gwaltney Way in Shirley T. Holland Intermodal Park, Phase II

BACKGROUND:

Bids were recently received relative to extend William A. Gwaltney Way in Shirley T. Holland Intermodal Park, Phase II. The project is funded by the Virginia Economic Development Access Program, a state-funded program that is administered by VDOT. VDOT has authorized award of this contract.

The Board may wish to authorize acceptance of the apparent low bid of $1,768,283 from Phillips Construction for road construction to extend William A. Gwaltney Way.

BUDGETARY IMPACT:

Funding is available from the Virginia Economic Development Access Program for the project.

RECOMMENDATION:

Authorize acceptance of the apparent low bid of $1,768,283 from Phillips Construction to extend William A. Gwaltney Way.

ATTACHMENTS:

Description	Type	Upload Date
Bid Tabulation Sheet	Backup Material	8/15/2024

ISLE OF WIGHT COUNTY
WILLIAM A. GWALTNEY WAY EXTENSION

IFB #25-8150-001

Date: **7/31/2024**
Time: **3:00 p.m. local time**
Opening: **3:15 p.m. local time**

Tabulation Sheet

Bidders	Base Bid	Submission Date/Time*
Parkway Grading, Inc.	$1,959,350.00	7/31/2024 1:29 pm
Excel Paving Corp.	$1,939,989.00	7/31/2024 2:06 pm
Branscome	$2,150,452.73	7/31/2024 2:16 pm
VirginiaCarolina Civil, Inc.	$1,798,777.00	7/31/2024 2:45 pm
Phillips Construction	$1,768,282.94	7/31/2024 2:50 pm

Attendees from County:

Erin Wishall, Assistant Purchasing Agent

Kristi Sutphin, Director of Economic Development

ISSUE:

- June 13, 2024 Regular Meeting Minutes
- July 11, 2024 Meeting Minutes

BACKGROUND:

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

BUDGETARY IMPACT:

None

RECOMMENDATION:

- June 13, 2024 Regular Meeting Minutes
- July 11, 2024 Meeting Minutes

ATTACHMENTS:

Description	Type	Upload Date
June 13, 2024 Minutes	Cover Memo	7/25/2024
July 11, 2024 Minutes	Cover Memo	8/9/2024

REGULAR MEETING OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ISLE OF WIGHT COUNTY GENERAL DISTRICT COURT LOCATED AT 17000 JOSIAH PARKER CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE THIRTEENTH DAY OF JUNE IN THE YEAR TWO THOUSAND AND TWENTY-FOUR

BOARD MEMBERS PRESENT:
Joel C. Acree, District 4, Chairman
Don G. Rosie, II, District 5, Vice-Chairman
Rudolph Jefferson, District 3
William M. McCarty, Sr., District 2
Renee Rountree, District 1

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

CALL TO ORDER

Chairman Acree called the regular meeting to order at 5:00 p.m.

APPROVAL OF AGENDA

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

CLOSED MEETING

Pursuant to Section 2.2-3711(A) of the Code of Virginia, Supervisor Rosie moved that the Board enter a closed session for the limited purpose of a discussion regarding the appointment of specific appointees to County boards, committees, or authorities as set forth in the agenda, as well a discussion regarding the compensation of the County Administrator, County Attorney, and Clerk and the County's Constitutional Officers, pursuant to subsection 1. The motion passed

unanimously with Supervisors Acree, Jefferson, Rosie, McCarty and Rountree voting in favor of the motion and no Supervisors voting against the motion.

At 6:00 p.m., 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, Rosie, Jefferson, McCarty, Rountree

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

INVOCATION

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

CITIZENS' COMMENTS

Rob Wilson of Strawberry Plains Road in District 5 requested a reduction in the speed limit to 45 mph on Broadwater Road from Strawberry Plains Road to Beale Place Road. He further requested that the State Police be contacted and advised about ongoing speeding, tailgating and illegal passing on Broadwater Road.

CONSENT AGENDA

Following an overview by County Administrator Keaton, on motion of Supervisor McCarty, the following Consent Agenda was adopted unanimously (5-0) with the removal of Item (D.) Facility Use Agreement between Isle of Wight County School Board and the Isle of Wight County Board of Supervisors to allow for the inclusion of the Hardy Elementary School cafeteria. Said Agreement is to be placed back on the Board's July 11, 2024 agenda once revised:

A. Resolution to Amend the FY2023-2024 Budget and Appropriate Funding for Children's Services Act ($77,000)

B. Resolution to Amend the FY2023-24 Budget and Appropriate Funds from the Safe Streets for All Grant Program ($214,000)

C. Resolution to Amend the FY2023-24 General Fund Operating Budget and Appropriate Technology Trust Funds to Automate Land Records and Provide Secure Remote Access to Land Records ($35,600)

D. Resolution Approving the County's Participation in the Proposed Settlement of Opioid-related Claims Against Kroger and their Related Corporate Entities, and Directing the County Attorney and/or the County's Outside Counsel to Execute the Documents Necessary to Effectuate the County's Participation in the Settlements

E. Employment Agreement (Clerk to the Board of Supervisors)

REGIONAL AND INTER-GOVERNMENTAL REPORTS

County Administrator Keaton reported that at the most recent meeting of the Southeastern Public Service Authority, bids were received and accepted on the flyover project and, currently, the Southeastern Public Service Authority is waiting on the Virginia Department of Transportation's final approval.

APPOINTMENTS

Supervisor Rountree moved to appoint Kathy Lippard to serve on the Blackwater Regional Library Board representing District 1. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, Rountree and McCarty voting in favor of the motion and no Supervisor voting against the motion.

Supervisor McCarty moved to appoint Fred Mitchell to serve on the Commission on Adults with Disabilities representing District 2. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, Rountree and McCarty voting in favor of the motion and no Supervisor voting against the motion.

Supervisor Jefferson moved to appoint Michael Uzzel to serve on the Commission on Adults with Disabilities representing District 3. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, Rountree and McCarty voting in favor of the motion and no Supervisor voting against the motion.

COUNTY ATTORNEY'S REPORT

County Attorney Jones advised that the elevator providing access to the Robert C. Claud, Sr. Board Room has been repaired and is now available for use during Board

meetings. In that regard, he would recommend that the Board adopt a resolution effectuating the move back into the Robert C. Claud, Sr. Board Room from the Young-Laine Courts Building effective with the Board's meeting of July 11, 2024.

Supervisor McCarty moved that the following Resolution be adopted:

RESOLUTION OF THE BOARD OF SUPERVISORS OF ISLE OF WIGHT COUNTY, VIRGINIA TO CHANGE ITS MEETING LOCATION AS ADOPTED BY THE BOARD AT ITS ORGANIZATIONAL MEETING OF JANUARY 4, 2024

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, held its organizational meeting on January 4, 2023, in the Robert C. Claud, Sr. Board Room located at 17130 Monument Circle, Isle of Wight, Virginia and adopted its 2024 meeting schedule; and,

WHEREAS, the Board of Supervisors, at its meeting held on March 7, 2024, made it known that beginning March 21, 2024, they desired to change the meeting place of their meeting from the Robert C. Claud, Sr. Board Room to the Isle of Wight County General District Court, located at 17000 Josiah Parker Circle, Isle of Wight, Virginia in order to provide access accommodations due to a broken elevator; and

WHEREAS, the elevator has been repaired and it is in working order.

NOW, THEREFORE, BE IT RESOLVED that beginning July 11, 2024 and continuing until such time as amended by the Board of Supervisors, the meeting location of the meetings of the Board of Supervisors shall be the Robert C. Claud, Sr. Board Room located at 17130 Monument Circle, Isle of Wight, Virginia, and, as is required by the Board's By-laws and §15.2-1416 of the *Code of Virginia*, that this resolution moving the meeting location be posted on the door of the initial public meeting place and inserted in a newspaper having general circulation in the County at least seven days prior to the first such meeting.

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

PUBLIC HEARING

Application of Curtis D. Lytle and Brandy W. Lytle, Property Owners, for a Change in Zoning Classification from Rural Agricultural Conservation to Conditional Rural Residential for Approximately 5.3 Acres Located at 5114 West Blackwater Road (Route 603) to Create Four Single-Family Residential Lots.

County Attorney Jones advised that the applicant has withdrawn his application from this and all future agendas.

COUNTY ADMINISTRATOR'S REPORT

Assistant County Administrator Robertson requested direction from the Board regarding update of its Strategic Plan.

Responsive to the consensus of the Board that redrafting of its Strategic Plan be discussed at a future retreat in the early upcoming fall with the goal of guiding future expenditures, staff offered to return with suggested dates for a such retreat in early October.

Included in the agenda for the Board's information was up-to-date information on the following matters: Incidents by Zone Map –May 2024; Incidents by Zone Data –May 2024; Station Activity Report –May 2024; and, Museum Report –May 2024.

UNFINISHED/OLD BUSINESS

Caleb Kitchen, Planner I, Department of Community Development, provided background information on the following application:

Application of Moonlight Solar, LLC (CUP-10-23), Applicant, and George Benjamin Edwards, Jeanette J. Edwards, George W. Edwards, LeAnn Ricks Edwards Wait, and Dana Louise Edwards, property owners for a Conditional Use Permit to Establish a Major Utility Service, Specifically a 44 MW Utility Scale Solar Energy Generation Facility and Substation, on Approximately 523 Acres located in Moonlight Road (Route 627) and Burwell's Bay Road (Route 621) in the Rural Agricultural Conservation Zoning District and a Request to withdraw Approximately 523 Acres from the Moonlight Agricultural/Forestal District.

Following questions from the Board regarding the ease or difficulty in enforcing zoning violations, safety factors, and inconsistency with the Comprehensive Plan, Supervisor Rosie moved that the application be denied. The motion was adopted (4-0) with Supervisors Acree, Rosie, Jefferson and McCarty voting in favor of the motion; Supervisor Rountree voting "Present"; and, no Supervisor voting against the motion.

Because the above project was denied by the Board, there was no need to consider the Moonlight Solar Energy Generation Siting Agreement and the matter was withdrawn from the agenda.

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Trenton Blowe, Planner II, Department of Community Development, provided background information on the following application:

(LUP-1-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC, Property Owners and Meridian Property Purchaser, LLC, Applicant, for a Comprehensive Plan Amendment for 154.3 Acres of Property to Amend the Comprehensive Plan Future Recommended Land Use Map Designation from Mixed Use to Planned Industrial.

Following questions on what was changed by the applicant at the request of citizens, Chairman Acree moved that the application be denied. The motion was adopted (4-1) with Supervisors Acree, Rosie, Rountree and McCarty voting in favor of the motion and Supervisor Jefferson voting against the motion.

//

Application (ZA-4-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC, Property Owners and Meridian Property Purchaser, LLC, Applicant, for a Change in the Zoning District from Rural Agricultural Conservation to Conditional Limited Industrial for Approximately 154.3 Acres to Allow Custom manufacturing, Industry Type 1, Warehousing and Distribution, Industry Type II with a Conditional Use Permit, and Reconstructed Wetland.

Chairman Acree moved that the application be denied. The motion was adopted (4-1) with Supervisors Acree, Rosie, Rountree and McCarty voting in favor of the motion and Supervisor Jefferson voting against the motion.

NEW BUSINESS

Application (EXC-2-24) of James River Crossings, Inc. for a Sign Exception to Allow One Sign on Each Side of Spadea Way at its Intersection with Carrollton Boulevard (Route 17).

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

//

Sandy Robinson, Community Development, presented the application (MISC-2-24) of James River Crossings, Inc. for an amendment to an approved master signage plan pursuant to Article IX Section 9-1006.D of the Zoning Ordinance for the property at the intersection of Spadea Way and Carrollton Boulevard.

There being no discussion, Supervisor McCarty moved that the application be approved. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, Rountree and McCarty voting in favor of the motion and no Supervisor voting against the motion.

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Ms. Robinson presented the application (EXC-4-24) of Riverside Health System Smithfield Hospital for a sign exception for certain signs as shown on the coordinated signage scheme plan to be located at Riverside Hospital located at 19339 Benns Grant Boulevard.

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

//

Ms. Robinson represented the following application.

Application (MISC-4-24) of Riverside HealthCare Association, Inc., Owner, for a Master Sign Plan Pursuant to Article IX Section 9-1006D of the Zoning Ordinance for the Property at 19375 Benns Grant Boulevard, Smithfield.

Russell Parish, Project Manager, Riverside Hospital, appeared and responded to questions.

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

ADJOURNMENT

At 8:30 p.m., the meeting was declared adjourned.

_____
Joel C. Acree, Chairman

_____
Carey Mills Storm, Clerk

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 ELEVENTH DAY OF JULY IN THE YEAR TWO THOUSAND AND TWENTY-FOUR

BOARD MEMBERS PRESENT
Joel C. Acree, District 4, Chairman
Don G. Rosie, II, District 5, Vice-Chairman
William M. McCarty, Sr., District 2
Renee Rountree, District 1

BOARD MEMBERS ABSENT
Rudolph Jefferson, District 3

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

CALL TO ORDER

Chairman Acree called the regular meeting to order at 5:00 p.m.

Supervisor McCarty advised that he would be participating remotely from Indianapolis, Indiana due to a personal matter.

Supervisor Rosie moved that Supervisor McCarty be authorized to participate remotely in the meeting. The motion was adopted (3-0) with Supervisors Acree, Rosie and Rountree voting in favor of the motion; Supervisor Jefferson absent from the meeting; no Supervisor voting against the motion; and, Supervisor McCarty abstaining from voting on the motion.

APPROVAL OF AGENDA

On motion of Supervisor Rountree, the agenda was amended to include an update from Captain Bryan, Sheriff's Office, and was unanimously (4-0) adopted with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

CLOSED MEETING

Pursuant to Section 2.2-3711(A) of the *Code of Virginia*, Supervisor Rosie moved to enter a closed meeting for the limited purpose of a discussion regarding the appointment of specific appointees to County boards, committees, or authorities as set forth in the agenda, as well a discussion regarding the compensation of the Clerk, pursuant to subsection 1; a discussion concerning a prospective business or industry or the expansion of an existing business or industry where no previous announcement has been made of the business' or industry's interest in locating or expanding its facilities in the community. pursuant to subsections 5.; and, consultation with legal counsel regarding specific legal matters requiring the provision of legal advice by such counsel, relating to Board governance and procedure pursuant to subsection 8. The motion passed unanimously (4-0) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; Supervisor Jefferson absent from the meeting; and, no Supervisors voting against the motion.

Upon motion of Chairman Acree and all voting in favor (4-0), 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 Chairman Acree and all voting in favor (4-0), 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, Rosie, McCarty, Rountree

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: Jefferson

INVOCATION

Bill Yoakum delivered the invocation and led the Pledge of Allegiance to the American Flag.

CITIZENS' COMMENTS

Glyn Willis of Lovers Lane in Windsor distributed copies of information pertaining to impacts related to setback requirements in the County's Zoning Ordinance.

CONSENT AGENDA

Following an overview by County Administrator Keaton of the Consent Agenda, Supervisor Rosie moved to adopt the following Resolution to Designate the Month of July as Fragile X Syndrome Awareness Month which was unanimously (4-0) adopted with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting:

RESOLUTION TO DESIGNATE
THE MONTH OF JULY AS
FRAGILE X SYNDROME AWARENESS MONTH

WHEREAS, Fragile X Syndrome (FXS) is a genetic condition that causes intellectual disability, behavioral and learning challenges, and various physical characteristics; and,

WHEREAS, FXS occurs in males (1 in 7,000) more frequently than in females (1 in 11,000)and generally with greater severity, but FXS does not appear to impact life expectancy; and,

WHEREAS, the signs of FXS includes developmental delays, learning disabilities, and social and behavioral problems; and,

WHEREAS, there is no cure for FXS; however, treatment services and therapy can control and/or improve some of the issues.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia recognize and designate the month of July as Fragile X Syndrome Awareness Month.

Supervisor Rountree followed with a motion to adopt the remainder of the following Consent Agenda:

A. Resolution to Amend the FY2024-2025 Operating Budget and Appropriate Funding From Virginia Tourism Corporation ($11,700)

B. Resolution to Amend the FY2024-2025 Operating Budget and Appropriate Opioid Settlement Funds ($40,000)

C. Facility Use Agreement Between Isle of Wight County School Board and the Isle of Wight County Board of Supervisors

D. Minutes

- May 16, 2024 Regular Meeting Minutes
- May 29, 2024 Special Called Meeting Minutes
- June 6, 2024 Work Session Minutes

The motion was unanimously (4-0) adopted with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

REGIONAL AND INTER-GOVERNMENTAL REPORTS

No reports were offered.

APPOINTMENTS

No appointments were offered.

SPECIAL PRESENTATIONS

Captain Ron Bryan addressed the Board concerning a July 2nd incident involving the radio system. He began with on July 4th, the CAD system was affected following upgrades by the IT Department and that on July 9th, an issue with phone static was identified which is being monitored by AT&T.

Following Chairman Acree's request for an explanation regarding why Motorola had not contacted the County to advise that the site was down, Supervisor Rountree moved that the Board receive a follow-up report on the incidents which occurred in the month of July from Captain Bryan at its August 15th regular meeting. The motion was adopted unanimously (4-0) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

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Garry Windley, Chief of Fire Rescue, provided an overview of new pharmacy regulations resulting from the adoption of the Drug Quality and Security Act.

County Administrator Keaton advised that he will be bringing back a budget amendment at a later date to fund an additional full-time person to track narcotics.

COUNTY ATTORNEY'S REPORT

It was the consensus of the Board, that the County Attorney be authorized to advertise the Beaver Dam Precinct being moved from its current location at the VFW Post to the Carrsville Community Center at 5336 Carrsville Highway at its August 1, 2024 work session.

PUBLIC HEARINGS

County Attorney Jones explained that the (CUP-8-23) application of Sycamore Cross Solar, LLC, the (CUP-5-24) of Sycamore Cross Solar, LLC, and the Sycamore Cross Solar Energy Generation Facility Siting Agreement for public hearing would normally be one application as the applicant is the same; however, because the properties are not contiguous, they are required to be submitted as two applications in addition to the siting agreement. He advised that three separate votes on the applications and siting agreement would be required.

Amy Ring, Director of Community Development, provided an overview of the Sycamore Cross (A) application and site description, followed by the criteria for Conditional Use Permits consideration; additional considerations for the Board;

staff analysis on environmental resources, historic resources, and economic impacts. She continued with an overview of the Comprehensive Plan consistency, Department and agency reviews, staff findings, recommendations of the Planning Commission and staff and recommended conditions.

Ms. Ring continued with the Sycamore Cross (B) application beginning with a site description, the project's background, a project description, staff analysis related to roads, economic impact, Comprehensive Plan consistency, Department and agency reviews and recommendations.

Ben Saunders, Senior Director of Development, AES, remarked that the proposed project is in a remote location, and although the project would be grandfathered by the current ordinance, AES has every intention of complying with the current ordinance. Secondly, we have heard the concern about construction traffic from the citizens and a construction management plan has been developed to address traffic. Lastly, there will be a fiscal impact that will greatly benefit the County. He went over AES and provided a project summary. He went over outreach by AES in terms of neighborhood canvassing, open houses, invitations and mailers.

Greg Creswell, Senior Development Manager, AES, went over the things learned during outreach efforts related to benefits to residents, improvement to traffic management, importance of agricultural heritage and economy to residents, and a key concern with the viewshed. He then reviewed the benefits to the community related to the Siting Agreement, the M&T tax, and the real property tax for a total revenue of $27,500,000. Next, under construction management, he reviewed the preferred routing, management strategies and additional points of emphasis. In conclusion, he addressed how the project will coexist with the agricultural heritage of the County.

Mr. Saunders provided information relative to the current revenue and payment flexibility associated with the Siting Agreement.

Chairman Acree opened the public hearing on the following three matters and called for those in favor or in opposition to speak:

A. Application (CUP-8-23) of Sycamore Cross Solar, LLC, Applicant, for additional Use Permit for a Major Utility Service, Specifically a 214 MW

Utility-Scale Solar Energy Generation Facility and a Medium Voltage Line Known as Sycamore Cross A, on Approximately 1,795 Acres Located on Mill Swamp Road (Rte. 621) in the Rural Agricultural Conservation Zoning District as well as an Associated Application to Withdraw Approximately 860 Acres from the Moonlight Agricultural and Forestal District

B. Application (CUP-5-24) of Sycamore Cross Solar , LLC, Applicant, for a for a Conditional Use Permit to Allow the Expansion of an Existing Major Utility Service, Specifically a Six MW Utility-Scale Solar Energy Generation Facility and Associated Six Medium Voltage Lines Known as Sycamore Cross B, on approximately 240 Acres Located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way

C. Sycamore Cross Solar Energy Generation Facility Siting Agreement

The following individuals spoke in opposition: David Tucker of Old Stage Highway; Brian Carroll of Stallings Creek Drive; a resident of White Hill Trail, Chris Howell of Mullet Drive in Surry; Rodney Snodgrass of Smithfield; and, Chris Edwards of Four-Square Road.

The following individuals spoke in favor of the application: John Byrum of Five Forks Road; Joe Holloman of Mill Swamp Road; Billy Joe Holloman of Barcroft Drive; Christine Sizemore of White Hill Trail; and, Nathanial Lee Smith spoke in favor.

Copies of written letters of support from the following individuals were placed at the Board's seats prior to the public hearing: Paul Hall; Catherine Bowden; Antonia Harrison; Richard Young; Russell Rose; Orion Rogers, Jr.; Aleena Ray; Barbara Newby; Kathy Gordon; Denny Goodman; Annette Goodman; Emma Faustini; Tammy Cole; Roxie Young; Regina Charity; Marilyn Charity; Douglas Charity; Cathy Brown; and, Catherine Bowden. Further, copies of a petition containing the following individuals in support of the application was placed at the Board's seat prior to the public hearing: Christina Smith; Vivian Greene; Annalese Marshall; Leah Heinchon; Leeroy Goodman; Megan Kors; Nikki Spears; John Smith; Wanda Greene; Puneet Kuman; Tony Robertson; Orion Rogers; Joe Mastrangelo; Brandon Rhodes; Sherri Bush; Lucy Grace; Jackie Davis; Precious Battes; Hebert Allen; Andre Manual; Monique Claude-Pollard; Kelly Martinex; Latoya Belk; Annette Clayton; Kirsten White; Chris Peyton; Patricia Rush; James Gray; Bernice Cook; James Taylor;

John Heide; Frances Mutts; Deborah Price; Antonia Harrison; Cathy Brown; Reverend Douglas Charity; Regina Charity; Roxie Young; Annette Goodman; Maria Porter; Marily Charity; Catherine Bowden; Barbara Newby; Denny Goodman; Mural Harrison; Laverne Bowden; Elworth Bowden; Regina Faulkner; and, Angel Marshal.

Copies of written letters in opposition from the following individuals were placed at the Board's seats prior to the public hearing: Deborah Godfrey; Anne and Brandon Kelly; and, David Tucker.

Greg Creswell of AES addressed the hours of operation, bridge capacities, poor performance with regards to storm water, burning, he would be happy to meet with Mr. Howell and Mr. Snodgrass to discuss their concerns, decommissioning and noise concerns.

Chairman Acree closed the public hearing. He advised that his most important job is to represent his constituents and that he noticed that when he replies to an email from a citizen, the email goes to Sycamorecrosssolar@gmail.com as opposed to their personal email.

Mr. Creswell responded to questions by the Board regarding emails, the community benefit fund, proffers, where the panels were purchased from and that traffic would go from Pons Store to Mullet Drive.

On motion of Supervisor Rountree, the following application was tabled:

A. Application (CUP-8-23) of Sycamore Cross Solar, LLC, Applicant, for additional Use Permit for a Major Utility Service, Specifically a 214 MW Utility-Scale Solar Energy Generation Facility and a Medium Voltage Line Known as Sycamore Cross A, on Approximately 1,795 Acres Located on Mill Swamp Road (Rte. 621) in the Rural Agricultural Conservation Zoning District as well as an Associated Application to Withdraw Approximately 860 Acres from the Moonlight Agricultural and Forestal District

The motion was adopted unanimously (4-0) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

On motion of Supervisor Rountree, the following application was tabled:

B. Application (CUP-5-24) of Sycamore Cross Solar , LLC, Applicant, for a for a Conditional Use Permit to Allow the Expansion of an Existing Major Utility Service, Specifically a Six MW Utility-Scale Solar Energy Generation Facility and Associated Six Medium Voltage Lines Known as Sycamore Cross B, on approximately 240 Acres Located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way

The motion was adopted unanimously (4-0) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

On motion of Supervisor Rountree, the following Site Agreement was tabled:

C. Sycamore Cross Solar Energy Generation Facility Siting Agreement

The motion was adopted unanimously (4-0) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisor Jefferson absent from the meeting.

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Supervisor McCarty ended his remote participation.

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The Board took a ten-minute break.

COUNTY ADMINISTRATOR'S REPORT

The Board was requested to advise staff on legislative matters to be included in the County's 2025 legislative priorities.

Chairman Acree requested Assistant County Administrator Robertson to investigate legislation proposed from the Fire Chief Association similar to the 599 Program for law enforcement.

The Board was requested to review their respective calendars and advise staff if October 24th or October 25th are good dates for the Board's 2024 retreat. Staff is in the process of locating a facilitator for the retreat and the location will be determined at a later date.

Assistant County Administrator Robertson apprised the Board that there is a provision in Charter's regulations that require that the County, as the grant recipient, would have to be the owner of the equipment that is funded by the grant. As a result, the County will not be able to utilize that grant funding. Attempts to have the funds redirected to another project were unsuccessful. Additional State funding is expected to become available in the next few months under the BEAD Program. Staff is confident that any homes or areas not currently addressed will be addressed. The Federal Government now needs to be advised that the County will not be able to utilize that funding.

The following matters were provided in the agenda for the Board's information: Delinquent Tax Collections – May 2024; Statement of Treasurer's Activity – May 2024; Incidents by Zone Map – June 2024; Incidents by Zone Data – June 2024; Station Activity Report –June 2024; and, the Museum Report –June 2024.

County Administrator Keaton advised that he had sent information under separate cover regarding paving efforts at the Courthouse Complex and VDOT mowing schedules.

Supervisor Rosie requested staff to inquire if the potholes located approximately 20 feet from ongoing paving efforts at the intersection of Routes 258 and 58 can be repaired simultaneously with that ongoing project.

Supervisor Rountree requested a report on the Isle Cares web access.

Supervisor Rountree reported there is an attempt being made to delete AM radio bands and that she had requested Senator Jordan to support a JLARK study on vapes and the taxing of.

NEW BUSINESS

County Attorney Jones advised that the City of Hampton has expressed a desire to join the Western Tidewater Regional Jail Authority and for the Board's consideration is an Amendment to the Agreement for the Creation of the Western Tidewater Regional Jail Authority to Allow the City of Hampton to Join.

Supervisor Rountree moved to authorize County Administrator Keaton to execute the agreement on behalf of the County. The motion was adopted unanimously (3-0) with Supervisors Acree, Rosie and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisors Jefferson and McCarty absent from the meeting.

Captain Tommy Potter, Sheriff's Office, represented a request for vehicles.

Supervisor Rosie moved to approve the request to replace two vehicles and authorize County Administrator Keaton to bring back a budget amendment. The motion was adopted unanimously (3-0) with Supervisors Acree, Rosie and Rountree voting in favor of the motion; no Supervisor voting against the motion; and, Supervisors Jefferson and McCarty absent from the meeting.

ADJOURNMENT

At 10:30 p.m., the meeting was declared adjourned.

_____
Joel C. Acree, 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
BOS Regional Committees by Org & Member	Cover Memo	2/1/2024

2024
BOARD OF SUPERVISORS'
REGIONAL ORGANIZATIONS (BY MEMBER)

ACREE

- *Hampton Roads Planning District Commission*
- *Western Tidewater Water Authority*
- *Western Tidewater Community Transportation Collaborative*

ROUNTREE

- *Eastern Virginia Regional Industrial Facility Authority*
- *Hampton Roads Workforce Council*
- *Western Tidewater Water Authority*

JEFFERSON

- *Western Tidewater Regional Jail*

McCARTY

- *Hampton Roads Transportation Advisory Committee*
- *Hampton Roads Transportation Planning Organization*
- *Western Tidewater Regional Jail*

ROSIE

- *Hampton Roads Military Federal Facilities Alliance*

KEATON

- *Hampton Roads Planning District Commission*
- *Hampton Roads Transportation Planning Organization*
- *Southeastern Public Service Authority*
- *Western Tidewater Regional Jail*
- *Western Tidewater Water Authority*

2024
BOARD OF SUPERVISORS'
REGIONAL ORGANIZATIONS (BY ORGANIZATION)

Eastern Virginia Regional Industrial Facility Authority	*Rountree*
Hampton Roads Military & Federal Facilities Alliance:	*Rosie*
Hampton Roads Planning District Commission:	*Acree* *Keaton*
Hampton Roads Transportation Accountability Committee:	*McCarty*
Hampton Roads Transportation Planning Organization:	*McCarty* *Keaton*
Hampton Roads Workforce Council	*Rountree*
Southeastern Public Service Authority	*Keaton* *Etheridge - (Alternate)*
Western Tidewater Community Transportation Collaborative	*Acree*
Western Tidewater Regional Jail:	*Jefferson* *McCarty* *Keaton*
Western Tidewater Water Authority:	*Rountree* *Acree* *Keaton*

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	Cover Memo	8/8/2024
Blackwater Library Board	Cover Memo	8/8/2024
Commission on Adults with Disabilities	Cover Memo	8/8/2024
Energy Task Force	Cover Memo	8/8/2024

BOARDS/COMMISSIONS/COMMITTEES

DISTRICT	BOARD/COMMISSION/COMMITTEE	APPOINTEE	CONTACT	EXPIRATION	
District 1	Audit Committee	Vacant			
District 2	Blackwater Regional Library Board	Replace Michelle Manfred with Joanna Wiggins	(757)742-2008	June	2024
District 2	Commission on Adults with Disabilities	Vacant			
District 2	Audit Committee	Vacant			
District 3	Audit Committee	Vacant			
District 3	Historical Archictural Review Committee	Replace Lee Duncan		January	2023
District 3	Energy Task Force	Vacant			
District 4	Economic Development Authority	Reappoint Sharon Cory Stallings	(757) 242-6486	April	2024
District 4	Blackwater Regional Library Board	Replace Conway Henderson		June	2025
District 4	Social Services Board	Reappoint Regina Joyner	(757) 478-6381	June	2023
District 4	Audit Committee	Vacant			
District 4	Historical Architectural Review Committee	Reappoint Durwood Scott	(757) 242-6528	Sept.	2024
District 5	Social Services Board	Reappoint Linda Boone Randolph	(757) 390-6066	June	2024
District 5	Commission on Adults with Disabilities	Vacant			
District 5	Audit Committee	Vacant			
District 5	Agricultural/Forestal District Advisory Council	Replace Emory Auston/Deceased			
District 5	Energy Task Force	Vacant			

NOT BY DISTRICT					
	BOARD/COMMISSION/COMMITTEE	APPOINTEE	CONTACT	EXPIRATION	
Town of Windsor	Economic Development Authority	Replace Reverend Samual Askew			
At-Large	Blackwater Regional Library Board	Replace Rita Gibson w/Charlene Herrala	(757) 377-8654	June	2027
	Camp Community College Board	Reappoint Roderick Hallum	(757) 328-6354	June	2024
	Fire Rescue Advisory Board	Replace Scott Brower w/Chuck Mullins		January	2025
	Hampton Roads Workforce Council	Replace L'Tanya Johnson - County Business Leader		June	2024
	Virginia Alcohol Safety Program	Replace Kimberly Davenport w/Corporal Chad Beale		August	2024
	Children's Services Act-Policy & Mgmt. Team	Replace Nancy Mayo with Dahlis Atkins		August	2024

Carey Mills Storm

From: Ben Neal <bneal@blackwaterlib.org>
Sent: Thursday, July 18, 2024 11:23 AM
To: Carey Mills Storm
Subject: FW: Library Board Member suggestion

Caution: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi, Carey,

Received your message. I wanted to make sure you got this that I sent last week, which was a recommendation that Ms. Henderson forwarded along for District 2.

I don't have anyone in mind for Manfred's spot, but I will ask around and get back to you if I find someone interested...ideally by your August meeting.

Ben Neal
Library Director
Blackwater Regional Library
22511 Main Street
Courtland, VA 23837
757-653-0298 Ext. 303
www.blackwaterlib.org

From: Ben Neal
Sent: Tuesday, July 9, 2024 10:26 AM
To: Carey Mills Storm <cstorm@isleofwightus.net>
Subject: FW: Library Board Member suggestion

Carey,

A former board member forwarded me this Library Board recommendation over the holiday. According to the county's GIS for election districts, their address is in District 2, where there is a vacancy. Just forwarding along in case they need some names to start from.

Ben

Ben Neal
Library Director
Blackwater Regional Library
22511 Main Street
Courtland, VA 23837
757-653-0298 Ext. 303
www.blackwaterlib.org

From: Connie and Jim Henderson <jim.or.connie.henderson@att.net>
Sent: Thursday, July 4, 2024 3:31 PM

blackwater regional library

www.blackwaterlib.org



Mr. Randy Keaton
Isle of Wight County Administrator
P.O. Box 80
Isle of Wight, VA 23397

April 22, 2024

Re: Board Appointment

Dear Mr. Keaton,

Isle of Wight County members of the Blackwater Regional Library Board of Trustees, Ms. Michelle Manfred and Ms. Denise Tynes, will reach the end of their term on June 30, 2024. They have both served one full term on the Board and we appreciate their efforts on behalf of the Library.

We respectfully request you appoint a 2 new trustees to serve on our board. These will be new appointees for a term of four years, expiring on June 30, 2028.

Please make sure the "new members" are aware that the Board of Trustees meets nine times a year on the third Wednesday of each month at 3:00 p.m. The meeting usually lasts for approximately two hours. The Board usually meets the Franklin branch. Trustees are also asked to be a member of a committee and these committees usually meet outside of the normal board meeting to discuss business matters in order to expedite regular board meeting time. This could mean a commitment of an additional one to two hours per month.

Enclosed is a general description of duties that can be expected of appointed members for reference.

We appreciate your attention to this matter. Thank you for your continued support of the library and its programs.

Very Best Regards,

Ben Neal
Library Director
757-653-0298 ext. 303
bneal@blackwaterlib.org

Board of Trustees

Board Mission and Vision

A public library board has the primary responsibility for the success of the library, both now and in the future. Trustees have a legal responsibility to successfully maintain a public, nonsectarian library for all residents in the library's service area.

Expectations of a Board of Trustees:

- Attend meetings regularly
- Participate in a Board orientation
- Share skills on committees
- Understand the community and its needs
- Exercise discretion and respect confidentiality outside board meetings
- Avoid conflicts of interest and put personal agendas aside when making decisions
- Actively support the implementation of board decisions
- Have an open mind and respect differing viewpoints
- Respect diversity
- Focus on a secure future for the library

As a governing body, the Board of Trustees:

Advocates for the library within the community by:

- Seeking funding opportunities
- Supporting planned programs of public relations
- Meeting with local officials to communicate library issues
- Representing the library patrons' concerns and their perspectives

Develops a strategic plan that:

- Guides and articulates the goals and objectives to be achieved
- Determines sound decision-making and priorities
- Measures the quality and effectiveness of services and programs
- Reflects contemporary library practices and future trends

Nurtures fiscal responsibility through:

- The preparing of a budget
- Scheduled monitoring of that budget and other financial progress reports
- Pursued opportunities, such as grants, campaign development, and other funds
- Communication of fiscal needs with supporting agencies
- Careful investments

Crafts policies that:

- Comply with all laws
- Form a framework of acceptable expected practices, behaviors, and procedures
- Support the mission, goals, and objectives of the library
- Outline personnel issues
- Describe facilities use and access
- Are adopted, enforced, and updated

Board of Trustees

Ensures qualified leadership by:

- Hiring a library director who manages the day-to-day operations
- Evaluating the director annually

Carey Mills Storm

Blackwater Library Bd.

From: Ben Neal <bneal@blackwaterlib.org>
Sent: Tuesday, April 16, 2024 12:47 PM
To: Carey Mills Storm
Subject: FW: Board appointments

Caution: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Carey,

One follow-up, a couple of my board members asked me to forward along the name of Ms. Charlene Herrala as a potentjal board member. "Her cell is 757-377-8654. Home is 757-242-4546 email charlene.herrala@gmail.com ". I believe she's a retired educator and lives on Walters Hwy. I think, if the board is interested, that she might be idea for the seat Ms. Gibson vacated as that is an "at-large" position.

Just passing along as a potential interested person, I did advise they fill out the interest form for County Boards' that's online, but wanted to pass along the name to you as well.

Thanks,

Ben Neal
Library Director
Blackwater Regional Library
22511 Main Street
Courtland, VA 23837
757-653-0298 Ext. 303
www.blackwaterlib.org

From: Ben Neal
Sent: Wednesday, April 10, 2024 11:46 AM
To: Carey Mills Storm <cstorm@isleofwightus.net>
Subject: Board appointments

Hi, Carey,

I hope this message finds you doing well. I received an email from one of my IOW Board Members, Rita Gibson, that she needed to resign as she is moving out of the area for family purposes. I'm including the email below, but we will need a replacement...it would be for a term that ends on June 30, 2027.

" Ben,

I am going to have to resign from the Blackwater Regional Library board. My husband and I have decided to move to Ohio and I will need to get things prepared to sell , etc.

Rita Gibson"

I was also copied on an email that Ms. Henderson sent Mr. McCarty last week resigning. This would be until the term expires on June 30, 2025. "Although we talked on the phone I realized you probably need something in writing to make my resignation official.
Please let me know if I can be of help in any way in the future.
Thanks for your interest in the library.

Conway Henderson
757-238-9890
"

I also have a formal letter to send you requesting a replacement for Michelle Manfred, whose term expires on June 30th. It would be for a four year term from July 1, 2024 to June 30, 2028. Similarly, Ms. Denise Tynes terms ends on June 30th and is eligible for re-appointment.

Let me know if you need anything, or if it'd be helpful to send some potential names.

Warmly,

Ben

Ben Neal
Library Director
Blackwater Regional Library
22511 Main Street
Courtland, VA 23837
757-653-0298 Ext. 303
www.blackwaterlib.org

Carey Mills Storm

From: Conway Henderson <jim.or.connie.henderson@att net>
Sent: Tuesday, April 16, 2024 1:46 PM
To: Carey Mills Storm
Subject: Message response

Caution: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I left a phone message also to respond to your call. I have resigned from the Board of the Blackwater Regional Library. Health problems have meant that I have had to miss several meetings and I do not believe one should serve on the Board if unable to be an active participant.
If there is any way I can still be of help to the library I will be glad to do so.

Conway Henderson

To: Ben Neal <bneal@blackwaterlib.org>
Subject: Library Board Member suggestion

Johanna Wiggins
100 Regata Lane
Smithfield, VA 23430
Cell: 757-742-2008

Johanna is young, uses the library, has two children, has financial expertise. She knows when the board meets and has authority from her job to attend meetings during the day.

Connie Henderson

COMMISSION ON ADULTS WITH DISABILITIES

DISTRICT 1	**APPOINTED**
James Piatak	12/14/2023
3 Poplar Court	
Smithfield, VA 23430	
(757) 871-1797	
DISTRICT 1	
Howard Meissel	12/14/2023
10280 Park Street	
Battery Park, VA 23304	
(757) 630-2872	
DISTRICT 2	
Fred Mitchell	6/13/2024
24266 Sugar Hill Road	
Carrollton, VA 23314	
(757) 870-1199	
DISTRICT 2	Vacant
DISTRICT 3	
Julian K. Wilson	
112 Cattail Lane, Apartment 6	
Smithfield, Virginia 23430	
(757) 870-2502	
DISTRICT 3	
Michael Uzzel	6/13/2024
9471 Central Hill Road	
Windsor, VA 23487	
(757) 357-4380	
DISTRICT 4	
Renea Acree	3/21/2024
100 Whitehead Farm Lane	
Smithfield, VA 23430	
(757) 449-1258	

	APPOINTED
DISTRICT 4	
Melinda Shortridge 106 Robin Lane, Smithfield, VA 23430 (757) 328-1012	3/21/2024
DISTRICT 5	
Carey Mills Storm 17361 Trump Town Road Windsor, VA 23487 (757)377-8649	5/16/2024
DISTRICT 5	Vacant

ENERGY TASK FORCE

Created: February 23, 2023

APPOINTEES	DISTRICT	DATE APPOINTED
Thomas Distefano 15151 Batiste Court Carrollton, VA 23314 (757) 708-0880	2	2/23/23
Lewis Edmonds 23427 John Henry Street Windsor, VA 23487 (757) 871-6550	4	3/16/23
Lynn Barlow Briggs 211 North Mason Street Smithfield, Virginia 23430 (757) 365-1611	1	3/16/23
VACANT	3	
VACANT	5	
AT-LARGE APPOINTEE (Town of Smithfield) Michael G. Smith 104 Commerce Street Smithfield, VA 23430 (757) 576-4203		4/27/23
At-LARGE APPOINTEE (Town of Windsor) Edward (Gibby) Dowdy 9 Bank Street Windsor, VA 23487		6/1/23

ISSUE:

Presentation of the FY2024-25 Budget Book

BACKGROUND:

Staff will present the finalized FY2024-25 budget book for the Board's information and reference.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Presentation re: Options for Financing Schools Capital Projects

BACKGROUND:

Jimmy Sanderson, Davenport & Associates, will provide information regarding options the Board may wish to consider for funding the County Schools' upcoming capital projects.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Per the Board's discussion and direction.

ISSUE:

VDOT Update

BACKGROUND:

VDOT staff will provide an update regarding transportation maintenance and projects throughout the County.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Application (CUP-3-24) of Todd Christiansen, Applicant, and Isle of Wight County School Board, Property Owner, for a Conditional Use Permit for a Modular Classroom on Approximately 0.5 Acres Located at Carrsville Elementary School, 5355 Carrsville Highway (Rte. 58) in the Village Center Zoning District

BACKGROUND:

Todd Christiansen, applicant, and Isle of Wight County School Board, property owner, submitted an application (CUP-3-24) for a conditional use permit for a modular classroom on approximately 0.5 acres on tax parcels 66-01-010 and 66-01-010A located at 5355 Carrsville Highway (Rte. 58) in the Village Center zoning district.

The project site is the location of Carrsville Elementary School. The school in its current form was approved for renovation in 1996. Before the construction of the modular classroom, the property had the existing school building and two previously approved modular classrooms.

In 2022, the school approached the County to place a modular classroom to the rear of the existing school on an existing concrete pad. While a modular classroom is a permitted use in the Village Center (VC) zoning district, supplementary use regulations state that modular classrooms requiring placement longer than twelve months or include construction of additional parking shall require a conditional use permit. The modular classroom was permitted to be installed with the condition that if it were on the property longer than a year, a conditional use permit would be required. The modular classroom received a certificate of occupancy in May of 2023.

A full analysis of the consistency of the application with County plans and ordinances is included in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

At its July 23rd meeting the Planning Commission recommended approval with a

unanimous vote of (9-0).

Staff recommends approval of the application as submitted.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	7/11/2024
Concept Plan	Backup Material	7/11/2024
Location Map	Backup Material	7/11/2024
Location Closeup Map	Backup Material	7/11/2024
Land Use Map	Backup Material	7/11/2024
Zoning Map	Backup Material	7/11/2024
PC Staff Report	Backup Material	8/1/2024
Ordinance	Ordinance	8/5/2024

ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Use Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[✓] Conditional Use Permit (Are applicant proposed conditions attached?): ✓ Yes ____ No

The proposed use or activity is listed as a conditional use in the VC zoning district as per Section ____ in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): ____ Yes ____ No

Proposed Use or Activity: ____

B. PROJECT DESCRIPTION:

Project Name: Carrsville Modular Classroom

Property Address (if any): 5355 Carrsville Hwy Carrsville, VA 23315

Election District: DS

Comprehensive Plan Designation: ____

The use permit will apply to 0.1 acres out of 6.97 total acres

Tax Parcel Identification # 66-01-010-5355 Number of acres to be effected: ~~0.000~~ 0.05

Tax Parcel Identification # 66-01-010A Number of acres to be effected: 0.05

Tax Parcel Identification # ____ Number of acres to be effected: ____

Proposed Utilities (check all that apply): Public Water ✓ Private Well ____

Public Sewer ✓ Private Septic ____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Todd Christiansen

Address: 820 W Main St

City, State, Zip Code: Smithfield, VA 23430

Phone No.: 365-1625 Email: tchristiansen@iwcs.k12.va.us Fax No.:

Property Owner(s) Name(s): IWCS School Board

Address: 820 W. Main St

City, State, Zip Code: Smithfield, VA 23430

Phone No.: 357-4397 Email: Fax No.:

Applicant Signature — Date: 08/02/22

Owner Signature *if different* — Date

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: _____ Fees Paid: _____

Tax Query: [ ] Current [ ] Delinquent Distribution Date: _____

Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: _____

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant Todd Christensen

Address 820 W Main St
Street

Smithfield VA 23430
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
None	

OTHER OWNERS OF AFFECTED REAL ESTATE
(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
None	

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes[ ] No[Y]
If yes, names of members:

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct, and true.

Applicant: Todd Christensen (Printed or Typed Name) Applicant: _____ (Signature) Date: 08/02/23

Commonwealth of Virginia
County of Isle of Wight

Subscribed and sworn to before me 8/2/2023 Todd Christensen
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia this 2 day of August, 2023.

Tracey Reutt
Notary Public

My Commission Expires 3/31/2025

TRACEY LEE REUTT NOTARY PUBLIC MY COMMISSION NUMBER 7260368 COMMONWEALTH OF VIRGINIA

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

****Both checklist and application required upon submission to central permitting or application will notbe accepted****

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for an exception shall be certified as complete unless the following information is provided. ***The required number of copies may be increased or reduced with permission of the Zoning Administrator, depending on the review needs.*** Applicant(s) must have their signature(s) notarized on the disclosure of real estate holdings.

- ☐ **Ten (10) copies of the following**
  - ☐ original, executed application
  - ☐ a statement of the reasons for seeking conditional or special use permit
  - ☐ narrative description of the property which shall include the tax parcel identification number
  - ☐ full size concept plan of the site to show all existing and proposed physical improvements and such otherinformation as is necessary to clearly indicate to the reviewing body that adequate provisions have been made for compliance with all standards for that particular use, the extent of the property to beso used on a given parcel or parcels, and information defining the requested exceptions. The plan shall be prepared by the appropriate authorized design professional licensed to practice in Virginia. No person shall prepare or certify design elements of site plans which are outside the limits of their professional expertise and license. Such document shall be drawn to scale and shall include the following information:
    - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
    - Title of drawing
    - Date of drawing
    - Existing wood line
    - North arrow

- Scale bar
- Current zoning of parcel(s), including tax map number(s) and owner(s)
- Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
- Street names including route number and width(s) of the right-of-way(s)

☑ **One (1) original executed application**

☑ **One (1) digital copy of ALL application documents**

☑ **One (1) reduced 11"x17" copy of concept plan**

☐ **Application fee submitted with the application. Checks should be made payable to treasurer, Isle of Wight, County**

☐ **A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.**

☑ Other information may be necessary to demonstrate compliance with all other applicable federal, state and County standards and regulations.

☐ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal willbe refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process in order to more effectively review the application and prepare the staff reports for the appropriate reviewing body.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents, and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete, and correct information available. I understand that any section not completed in its entirety may delay the processing of this application.

Todd Christiansen

Printed or Typed Name

Signature

09/05/2023

Date

Owner: Isle of Wight County
Address: 5355 Carrsville Hwy.
Carrsville, VA 23315

Zoning: VC
TPIN: 66-01-010 5355, 66-01-010A
Adjacent parcels: VC

Proposed use: Modular classroom

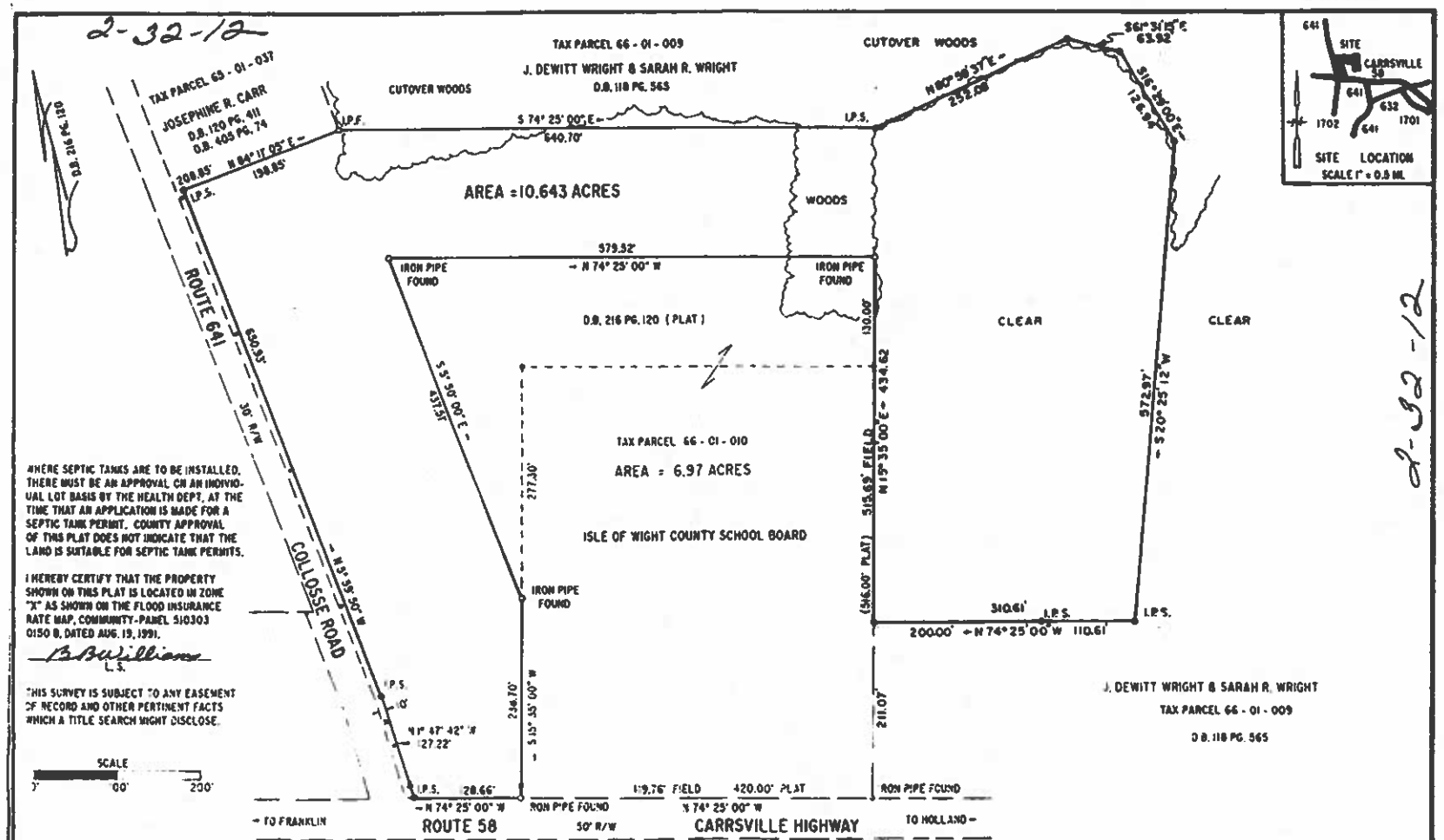
APPROVED



5311
5355


CLASSROOM
CLASSROOM

2-32-12



WHERE SEPTIC TANKS ARE TO BE INSTALLED, THERE MUST BE AN APPROVAL ON AN INDIVIDUAL LOT BASIS BY THE HEALTH DEPT. AT THE TIME THAT AN APPLICATION IS MADE FOR A SEPTIC TANK PERMIT. COUNTY APPROVAL OF THIS PLAT DOES NOT INDICATE THAT THE LAND IS SUITABLE FOR SEPTIC TANK PERMITS.

I HEREBY CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL 510303 0150 B, DATED AUG. 19, 1991.

B.B. Williams
L.S.

THIS SURVEY IS SUBJECT TO ANY EASEMENT OF RECORD AND OTHER PERTINENT FACTS WHICH A TITLE SEARCH MIGHT DISCLOSE.

SCALE
0' 100' 200'

I, B. B. WILLIAMS, A DULY LICENSED SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND PROCEDURES FOR LAND BOUNDARY SURVEYING PRACTICE AS ESTABLISHED BY THE COMMONWEALTH OF VIRGINIA BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS AND LANDSCAPE ARCHITECTS.

B.B. Williams
B. B. WILLIAMS, L.S. #1267

2-32-12

COMMONWEALTH OF VIRGINIA
B.B. Williams
S. B. WILLIAMS
NO. 1287
3-29-96
LAND SURVEYOR

WILLIAMS & VANN - LAND SURVEYOR
1104 NORTH HIGH STREET
FRANKLIN, VIRGINIA 23851

PLAT SHOWING PROPERTY OF
J. DEWITT WRIGHT & SARAH R. WRIGHT, BEING CONVEYED TO
THE ISLE OF WIGHT COUNTY SCHOOL BOARD
AS AN ADDITION TO THE SCHOOL BOARD PROPERTY
LOCATED AT 5355 CARRSVILLE HIGHWAY
WINDSOR MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA
SCALE 1" = 100' AUG. 29, 1994 **

REFERENCE - W.B. 37 PG. 415 & D.B. 118 PG. 565
○ - DENOTES IRON PIN FOUND I.P.S
● - DENOTES IRON PIN SET I.P.S.
▲ - DENOTES POWER POLE
⊕ - DENOTES 50' DEDICATED RIGHT OF WAY

See Ded Bk DB474-477

VIRGINIA: Clerk's Office of the Circuit Court of the County of Isle of Wight,
May 10 19 96, at 12:42 o'clock P.M., this Plat
was received and with the certificate annexed, admitted to record.
Teste: W. B. Lohr, Jr., CLERK, By: Catherine H. Chatfield

2-32-12

** REVISED MARCH 21, 1996

2-32-12

I HEREBY CERTIFY THAT THIS PLAT AND SUBDIVISION WAS MADE BY ME AT THE DIRECTION OF THE OWNER AND IS ENTIRELY WITHIN THE BOUNDARIES OF LAND OWNED BY J. DEWITT WRIGHT & SARAH R. WRIGHT, THE LAST INSTRUMENT OF TITLE BEING IN DEED BOOK 118, PAGE 565.

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL OF THE REQUIREMENTS OF THE BOARD OF SUPERVISORS AND ORDINANCES OF THE COUNTY OF ISLE OF WIGHT, VIRGINIA, REGARDING THE PLATTING OF SUBDIVISIONS WITHIN THE COUNTY HAVE BEEN COMPLIED WITH.

GIVEN UNDER MY HAND THIS 29th DAY OF March, 19 96

B.B. Williams
STATE REGISTERED LAND SURVEYOR

_____ HEREBY CERTIFIED THAT HE IS THE OWNER OF THE PROPERTY SHOWN ON THIS PLAT AND THAT THIS SUBDIVISION IS WITH HIS FREE CONSENT AND IN ACCORDANCE WITH HIS DESIRES.

WITNESS MY HAND AND SEAL THIS 4th DAY OF April, 19 96.

J. Dewitt Wright Jr. OWNER _____ OWNER
Sarah R. Wright OWNER _____ OWNER
_____ OWNER _____ OWNER
_____ OWNER _____ OWNER

STATE OF VIRGINIA AT LARGE
COUNTY OF SOUTHAMPTON, TO-WIT:

SUBSCRIBED AND SWORN TO BEFORE ME Linda F. Jenkins, A NOTARY PUBLIC IN AND FOR THE COUNTY OF Southampton, STATE OF VIRGINIA THIS 4th DAY OF April, 19 96.

MY COMMISSION EXPIRES December 31, 1998.

GIVEN UNDER MY HAND THIS 4th DAY OF April, 19 96.

Linda F. Jenkins
NOTARY PUBLIC

THIS PLAT IS APPROVED BY THE UNDERSIGNED IN ACCORDANCE WITH EXISTING SUBDIVISION REGULATIONS AND MAY BE COMMITTED TO RECORD.

4-25-96
DATE
HIGHWAY ENGINEER

5/7/96
DATE
AGENT OR REPRESENTATIVE OF GOVERNING BODY

2-32-12

GENERAL NOTES:

1. ACCESS TO BUILDING FOR PERSONS IN WHEELCHAIRS IS DESIGNED BY AND FIELD BUILT BY OTHERS AND SUBJECT TO LOCAL JURISDICTION APPROVAL. THE PRIMARY ENTRANCE MUST BE ACCESSIBLE.
2. ALL DOORS SHALL BE OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR EFFORT. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS SHALL NOT BE USED.
3. ALL GLAZING WITHIN A 24 INCH ARC OF DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, AND ALL GLAZING IN DOORS SHALL BE SAFETY, TEMPERED OR ACRYLIC PLASTIC SHEET.
4. ALL STEEL STRAPS REFERENCED ON FLOOR PLAN SHALL BE 1.5 INCH x 26 GA. WITH 7 - 1.5 GA x 7/16 INCH CROWN x 1 INCH STAPLES EACH END OF STRAP OR EQUIVALENT FROM RIDGE BEAM TO COLUMN, AND COLUMN TO FLOOR.
5. PORTABLE FIRE EXTINGUISHER PER N.F.P.A. - 10 INSTALLED BY OTHERS ON SITE, AND SUBJECT TO LOCAL JURISDICTION.
6. PROVISIONS FOR EXIT DISCHARGE LIGHTING ARE THE RESPONSIBILITY OF THE BUILDING OWNER AND SUBJECT TO LOCAL JURISDICTION APPROVAL WHEN NOT SHOWN ON THE FLOOR PLAN (INCLUDING EMERGENCY LIGHTING, WHEN REQUIRED).
7. WHEN LOW SIDES OF ROOF PROVIDE LESS THAN 6" OF OVERHANG, GUTTERS AND DOWN SPOUTS SHALL BE SITE INSTALLED, DESIGNED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
8. IN WIND-BORNE DEBRIS REGIONS, EXTERIOR GLAZING SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE REQUIREMENTS OF AN APPROVED IMPACT RESISTANT STANDARD, OR ASTM 1996. WIND-BORNE DEBRIS REGIONS ARE DESIGNATED IN SECTION 1609 OF THE IBC.

! ATTENTION LOCAL INSPECTIONS DEPARTMENT ! SITE INSTALLED ITEMS:

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY THE MANUFACTURER, HAVE NOT BEEN INSPECTED BY THIRD PARTY AND ARE NOT CERTIFIED BY THE STATE MODULAR LABEL. NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIAL THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTION APPROVAL. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE DOWN SYSTEM.
2. RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
3. PORTABLE FIRE EXTINGUISHER(S).
4. ELECTRICAL SERVICE HOOK-UP (INCLUDING FEEDERS) TO THE BUILDING.
5. THE MAIN ELECTRICAL PANEL AND SUB-FEEDERS.
6. CONNECTION OF ELECTRICAL CIRCUITS CROSSING OVER MODULE MATELINE(S) - (MULTI-UNITS ONLY).
7. STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES (MULTI-UNITS ONLY).
8. FIRE INSPECTION.
9. GLAZED OPENING PROTECTION (SEE GENERAL NOTE NO. 8)
10. BUILDING DRAINS, CLEANOUTS, & HOOK-UPS TO PLUMBING SYSTEM.
11. RESTROOM DESIGN & CONSTRUCTION.

STRUCTURAL LOAD LIMITATIONS:

BUILDING RISK CATAGORY: II

FLOOR DEAD AND LIVE LOAD:
A. DEAD LOAD = 12 PSF (AVERAGE)
B. UNIFORM LIVE LOAD = 50 PSF
C. CONCENTRATED LIVE LOAD = 2000 LB. OVER 30 INCH x 30 INCH AREA LOCATED ANYWHERE ON FLOOR. NOTE: UNIFORM AND CONCENTRATED LIVE LOADS ARE NOT SIMULTANEOUSLY APPLIED.

ROOF DEAD AND LIVE LOAD:
A. DEAD LOAD = 13 PSF (AVERAGE)
B. LIVE LOAD = 30 PSF

ROOF SNOW LOAD:
A. GROUND SNOW LOAD: Pg = 40 PSF
B. FLAT-ROOF SNOW LOAD: Pf = 30.8 PSF
C. SNOW EXPOSURE FACTOR: Ce = 1.0
D. SNOW IMPORTANCE FACTOR: Is = 1.0
E. SNOW THERMAL FACTOR: Ct = 1.1
F. ROOF SLOPE FACTOR: Cs = 1.0
G. SLOPED ROOF SNOW LOAD: Ps = Pf x Ce
H. DESIGN IS BASED ON FULL OR PARTIALLY EXPOSED ROOF PER ASCE 7-16.

WIND LOAD:
A. BASIC WIND SPEED (3-SEC GUST): V = 130 MPH
B. ASD WIND SPEED (3-SEC GUST): Vasd = 101 MPH
C. RISK CATEGORY: II
D. WIND EXPOSURE CATEGORY: C
E. INTERNAL PRESSURE COEFFICIENT: GCpi = 0.18
F. COMPONENT & CLADDING BASIC DESIGN PRESSURES (ASD DESIGN PRESSURE) FOR ROOF ANGLES 0 TO 7 DEGREES:
- WALL ZONE 5: P = +/-49.2 PSF (Pasd = +/-29.5 PSF)
- WALL ZONE 4: P = +/-39.9 PSF (Pasd = +/-24.0 PSF)
- ROOF ZONE 3: P = -105.4 PSF (Pasd = -63.2 PSF)
- ROOF ZONE 2: P = -77.3 PSF (Pasd = -46.4 PSF)
- ROOF ZONE 1: P = -58.6 PSF (Pasd = -35.1 PSF)
- ROOF ZONE 1': P = -33.6 PSF (Pasd = -20.2 PSF)

G. THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.
H. BUILDING DESIGN IS BASED ON "ENCLOSED" CLASSIFICATION.
I. BUILDING MEAN ROOF HEIGHT SHALL NOT EXCEED 15 FEET.

SEISMIC LOAD:
A. RISK CATEGORY IS II
B. SEISMIC IMPORTANCE FACTOR IS 1.0
C. SEISMIC SITE CLASS IS D.
D. SPECTRAL RESPONSE COEFFICIENTS:
Ss = 0.101 S1 = 0.042
Sds = 0.108 Sd1 = 0.067
E. SEISMIC DESIGN CATEGORY IS B.
F. SEISMIC FORCE RESISTING SYSTEM IS A15
G. EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
H. RESPONSE MODIFICATION FACTOR R = 6.5.
I. SEISMIC RESPONSE COEFFICIENT Cs = 0.04
J. DESIGN BASE SHEAR V = 1853 LBS

FLOOD LOAD:
THE MODULAR BLDG UNITS ARE NOT DESIGNED TO BE SUBMERGED OR SUBJECT TO WAVE ACTION. IF INSTALLED IN A FLOOD PLAIN, THE MODULAR BUILDING UNITS MUST BE INSTALLED ABOVE THE MINIMUM BASED FLOOD ELEVATION DERIVED FROM APPROPRIATE FLOOD ELEVATION MAPS FOR THE BUILDING SITE OR SET ON A FOUNDATION DESIGNED TO FLOOD LEVELS.

ROOF RAIN LOAD (IPC APPENDIX B):
A. RAIN INTENSITY: i = 4.3 INCHES/HOUR

ELECTRICAL NOTES:

1. ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRICAL CODE (NEC).
2. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "CLOSET STORAGE SPACE" AS DEFINED BY NEC ARTICLE 410.2.
3. WHEN WATER HEATERS ARE INSTALLED, THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS ONLY WHERE THE SWITCH OR CIRCUIT BREAKER IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
4. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" POSITION THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING MEANS ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
5. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE DESIGNED AND VERIFIED AS BEING IN COMPLIANCE WITH ARTICLES 110.9 & 110.10 OF THE NEC BY LOCAL ELECTRICAL CONSULTANT.
6. THE MAIN ELECTRICAL PANEL AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
7. ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED WITH APPROVED ACCESSIBLE JUNCTION BOXES, OR CABLE CONNECTORS.
8. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPT ITSELF SHALL ALSO BE LISTED FOR DAMP AND WET LOCATIONS AS PER NEC.
9. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.

SPECIAL CONDITIONS & REQUIREMENTS:

- ANY SITE ADDED STRUCTURES MUST BE INDEPENDENT OF THE FACTORY BUILDING UNLESS THE ENTIRE BUILDING IS REVALUATED BY THE SITE ENGINEER.
- TYPICAL FOUNDATION LAYOUT SHOWN IN THIS PACKAGE IS TO AID THE SITE ENGINEER/ARCHITECT FOR LOCATIONS OF REQUIRED SUPPORTS. ACTUAL FOUNDATION MUST BE DESIGNED TO SITE CONDITIONS FOR ALL APPLICABLE LOADS. THIS INCLUDES BUT IS NOT LIMITED TO CONSTRUCTION OF THE FOUNDATION, SEISMIC DESIGN AND ATTACHING THE BUILDING TO THE FOUNDATION, ALONG WITH THE RESISTANCE TO LATERAL, LONGITUDINAL SHEAR, UPLIFT AND DOWNWARD FORCES IN BOTH DIRECTIONS. REFER TO BRACING PAGE FOR APPLICABLE BRACING/SEISMIC LOADS FOR ATTACHING THE BUILDING TO FOUNDATIONS.
- ENGINEER SEAL APPLIES ONLY TO FACTORY MANUFACTURED STRUCTURAL PORTION OF THE BUILDING SEAL DOES NOT APPLY TO SITE INSTALLED ELEMENTS OR PORTIONS BUILT ON SITE SUCH AS, BUT NOT LIMITED TO: FOUNDATION, BRACING TIE DOWN TO FOUNDATION, EXTERIOR STEPS, OR OTHER SITE WORKS. SITE WORK MUST BE DESIGNED BY OTHERS FOR SITE CONDITIONS, UNDER LOCAL JURISDICATION.

MECHANICAL NOTES:

1. ALL SUPPLY AIR REGISTERS SHALL BE 10 INCHES x 10 INCHES ADJUSTABLE WITH 8 INCHES x 18 INCHES (INSIDE) OVERHEAD FIBERGLASS DUCT, UNLESS OTHERWISE SPECIFIED. DUCTS IN UNCONDITIONED SPACES SHALL HAVE R-6 MINIMUM INSULATION EXCEPT DUCTS EXPOSED TO VENTILATED ATTICS AND CRAWL SPACES SHALL HAVE R-8 INSULATION.
2. INTERIOR DOORS SHALL BE UNDERCUT 1.5 INCHES ABOVE FINISHED FLOOR FOR AIR RETURN AND/OR AS NOTED ON FLOOR PLAN (FOR UNRATED DOORS)
3. HVAC EQUIPMENT SHALL BE EQUIPPED W/OUTSIDE FREASH AIR INTAKES PROVIDING 5 CFM PER OCCUPANT & 0.06 CFM PER S.F OF BLDG. AREA PER SECTION 403.3 OF IMC
4. VENTILATION SYSTEM SHALL OPERATE CONTINUOUSLY WHEN BUILDING IS OCCUPIED.
5. VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP.
6. THERMOSTATS MUST BE PROGRAMMABLE

WINDOW & DOOR SPECIFICATIONS:

1. DOUBLE PANE WINDOWS ARE REQUIRED FOR ALL CLIMATE ZONES. SEE THE COMCHECK ENERGY CALCULATIONS FOR THE MAXIMUM ALLOWED U-FACTOR AND SHGHC.
2. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR WINDOWS IS 0.3 CFM PER SQUARE FEET OF WINDOW AREA.
3. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR EXTERIOR DOORS IS 0.3 CFM PER SQUARE FEET OF DOOR AREA.

PLUMBING NOTES:

1. TOILETS SHALL BE ELONGATED WITH NONABSORBENT OPEN FRONT SEATS.
2. REST ROOM WALLS SHALL BE COVERED WITH NONABSORBENT MATERIAL TO A MINIMUM HEIGHT OF 48 INCHES A.F.F. FLOORS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 6 INCHES.
3. THIS BUILDING SHALL BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM IF THESE ARE AVAILABLE.
4. ALL PLUMBING FIXTURES SHALL HAVE SEPARATE SHUTOFF VALVES.
5. WATER HEATER SHALL HAVE SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR. T & P RELIEF VALVE WITH DRAIN TO THROUGH AN AIR GAP 2" to 6" ABOVE PAN AND A SHUT OFF VALVE WITHIN 3 FEET ON A COLD WATER SUPPLY LINE.
6. DWV SYSTEM SHALL BE PVC - DWV.
7. WATER SUPPLY LINES SHALL BE CPVC AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LIMITATIONS AND INSTRUCTIONS.
8. WATER CLOSETS ARE TANK TYPE UNLESS OTHERWISE SPECIFIED.
9. BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
10. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER OUTLET TEMPERATURE OF 120F (48.8C).
11. THERMAL EXPANSION DEVICE, IF REQUIRED BY WATER HEATER INSTALLED, AND IF NOT SHOWN ON PLUMBING PLAN, IS DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL APPROVAL.
12. WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION.
13. WATER, SOIL, AND WASTE PIPES IN UNCONDITION SPACES SHALL BE INSULATED AND PROTECTED FROM FREEZING.
14. WHEN RESTROOM FACILITIES AND/OR PLUMBING FIXTURES REQUIRED BY CODE ARE NOT PROVIDED WITHIN THE BLDG. A HANDICAPPED ACCESSIBLE FACILITY MUST BE PROVIDED ON SITE WITHIN THE ALLOWABLE DISTANCE PER CODE. THE REQUIRED FACILITY SHALL BE THE RESPONSIBILITY OF THE BLDG. OWNER AND IS SUBJECT TO THE THE REVIEW & APPROVAL OF THE LOCAL JURISDICTION HAVING AUTHORITY. THIS NOTE SHALL BE INDICATED ON THE DATA PLATE.
15. CUSTOMER ASSUMES ALL RESPONSIBILITY FOR REQUIRED PLUMBING FIXTURES WHEN NOT SHOWN ON PLAN.
16. TEMPERATURE ACTUATED MIXING VALVES WHICH ARE INSTALLED TO REDUCE WATER TEMPERATURE TO DEFINE LIMITS SHALL COMPLY WITH ASSE 1017.
17. TEMPERED WATER SHALL BE SUPPLIED THROUGH A WATER TEMP LIMITING DEVICE THAT CONFORMS TO ASSE 1070 AND SHALL LIMIT THE TEMPERED WATER TO A MAX OF 110F(43C).
18. WHEN RESTROOM FACILITIES AND/OR PLUMBING FIXTURES REQUIRED PER CODE ARE NOT PROVIDED WITHIN THE BUILDING, A HANDICAPE ACCESSIBLE FACILITY MUST BE PROVIDED ON SITE WITHIN THE ALLOWABLE DISTANCE PER CODE. THE REQUIRED FACILITY SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER AND IS SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL JURISDICTION HAVING AUTHORITY. THIS NOTE SHALL BE INDICATED ON THE DATA PLATE.

ACCESSIBILITY NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN SHALL BE DISPLAYED AT ALL ACCESSIBLE RESTROOM FACILITIES AND AT ACCESSIBLE BUILDING ENTRANCES UNLESS ALL ENTRANCES ARE ACCESSIBLE. INACCESSIBLE ENTRANCES SHALL HAVE DIRECTIONAL SIGNS INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE ENTRANCE.
2. ACCESSIBLE DRINKING FOUNTAINS SHALL HAVE A SPOUT HEIGHT NO HIGHER THAN 36 INCHES ABOVE THE FLOOR AND EDGE OF BASIN NO HIGHER THAN 34 INCHES ABOVE THE FLOOR FOR INDIVIDUALS IN WHEELCHAIRS. ADDITIONALLY, DRINKING WATER PROVISIONS SHALL BE MADE FOR INDIVIDUALS WHO HAVE DIFFICULTY BENDING.
3. WHERE STORAGE FACILITIES SUCH AS CABINETS, SHELVES, CLOSETS AND DRAWERS ARE PROVIDED AT LEAST ONE TYPE PROVIDED SHALL CONTAIN STORAGE SPACE COMPLYING WITH THE FOLLOWING: DOORS ETC. TO SUCH SPACES SHALL BE ACCESSIBLE (I.E. TOUCH LATCHES, U-SHAPED PULLS); SPACES SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR FOR FORWARD REACH OR SIDE REACH; CLOTHES RODS OR COAT HOOKS SHALL BE A MAXIMUM OF 48 INCHES ABOVE THE FLOOR (46 INCHES MAXIMUM WHEN DISTANCE FROM WHEEL CHAIR TO ROD EXCEEDS 10 INCHES). SHELVES IN KITCHENS OR TOILET ROOMS SHALL BE 40 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE IN FLOOR.
4. CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE NO HIGHER THAN 48 INCHES ABOVE THE FLOOR. RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES ABOVE THE FLOOR. EXCEPTION: HEIGHT LIMITATIONS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
5. WHERE EMERGENCY WARNING SYSTEMS ARE PROVIDED, THEY SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. THE VISUAL ALARMS SHALL BE LOCATED THROUGHOUT, INCLUDING RESTROOM, AND PLACED 80 INCHES ABOVE THE FLOOR OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER.
6. ALL DOORS SHALL BE OPENABLE BY A SINGLE EFFORT. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM. THE MAXIMUM FORCE REQUIRED FOR PUSHING OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL NOT EXCEED 5 LBS. FOR ALL SLIDING, FOLDING, AND INTERIOR HINGED DOORS.
7. FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP-RESISTANT. CHANGES IN LEVEL BETWEEN 0.25 INCH AND 0.5 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. CHANGES IN LEVEL GREATER THAN 0.5 INCH REQUIRE RAMPS. CARPET PILE THICKNESS SHALL BE 0.5 MAX. GRATINGS IN FLOOR SHALL HAVE SPACES NO GREATER THAN 0.5 INCH WIDE IN ONE DIRECTION. DOORWAY THRESHOLDS SHALL NOT EXCEED 0.5 INCH IN HEIGHT.
8. DOORS TO ALL ACCESSIBLE SPACES SHALL HAVE ACCESSIBLE HARDWARE (I.E. LEVER - OPERRATED, PUSHTYPE, U-SHAPED) MOUNTED WITH OPERABLE PARTS BETWEEN 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.

BUILDING DESIGN PARAMETERS:

1.	USE/OCCUPANCY:	EDUCATION
2.	CONSTRUCTION TYPE:	VB
3.	SPRINKLER SYSTEM:	NO
4.	BUILDING AREA:	1750 S.F.
5.	BUILDING HEIGHT:	≤ 15 FEET
6.	NUMBER OF STORIES:	1
7.	NUMBER OF MODULES:	2
8.	OCCUPANT LOAD 76 BASED ON 20 S.F. PER PERSON (NET).	
9.	EXTERIOR WALL FIRE RATING:	NOT RATED

10. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY IBC 602 AND SECTION 705.3.
11. ENGERGY CODE COMPLIANCE: SEE ATTACHED ENERGY CALCULATIONS.
12. MANUFACTURERS DATA PLATE, STATE LABELS AND THIRD PARTY LABELS ARE TO BE LOCATED ADJACENT TO ELECTRICAL PANEL.

CODE SUMMARY:

STATE:	BUILDING/FIRE/FUEL:	ELECTRICAL:	MECHANICAL:	PLUMBING:	ACCESSIBILITY:	ENERGY:
VIRGINIA	2018 VA. UNIFORM STATEWIDE BLDG. CD. 2018 IBC	2017 NEC	2018 IMC	2018 IPC	ICC/ANSI A117.1 - 2009	2018 IECC

COVER SHEET	SHEET: 1 OF 5
FLOOR PLAN	SHEET: 2 OF 5
RISERS & CALCS	SHEET: 3 OF 5
ELEVATIONS	SHEET: 4 OF 5
CROSS SECT.	SHEET: 5 OF 5
FOUNDATION	SHEET: 1 OF 1

CONSULTING ENGINEER: KENNETH EARL DUNMON P.E.
PO BOX 6853 - AMERICUS, GA 31719 - 229-942-2020

FIRST STRING SPACE , INC.
OUR STRENGTH IS TEAMWORK
892 RAILROAD AVENUE EAST
PEARSON, GA. 31642
TEL (912)422-6455
FAX (912)422-6466

SERIAL NUMBER: FSSI-10013AB

EMC PLAN NO: FSS-10013AB	STATES: VA
DATE: MARCH 3, 2022	DESTINATION: ISLE OF WIGHT COUNTY, VA
DRAFTSMAN: BRANDON R. DOYLE	SIZE: 27'-4" x 64' (DOUBLE-WIDE)
SCALE: NO SCALE	REVISIONS: N/A
CODES: 2018 IBC (VA AMENDS)	PLAN NO: FSS-10013AB VA
COVER SHEET	SHEET: 1 OF 5

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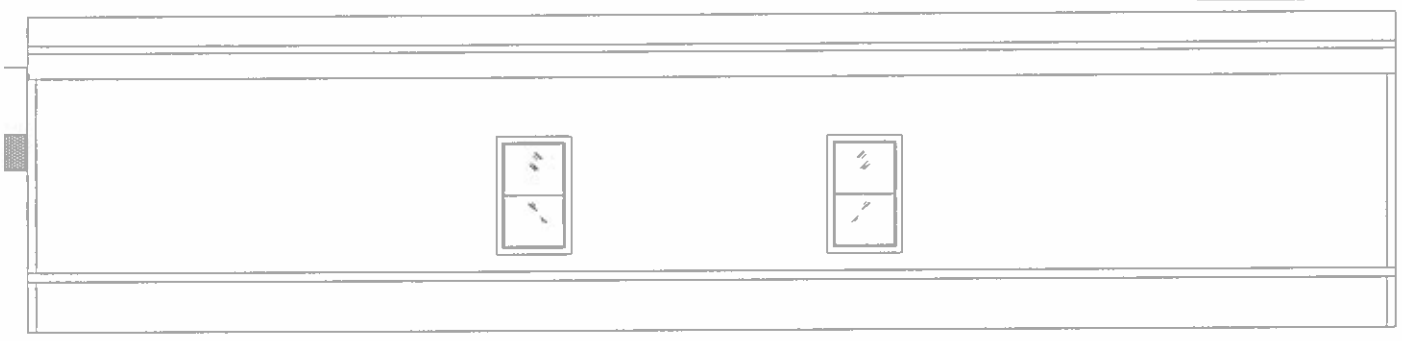
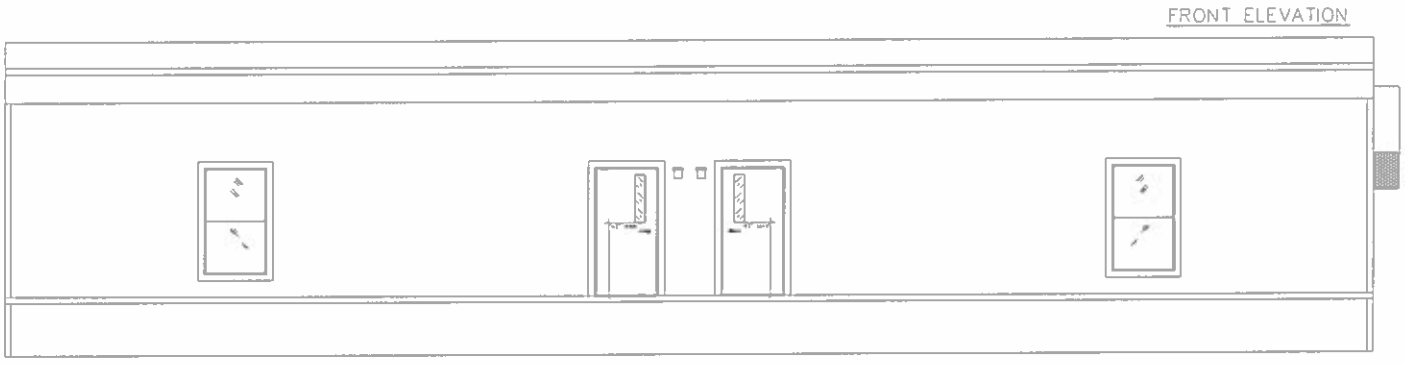
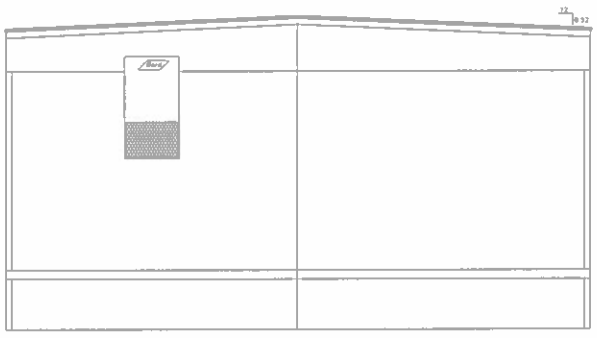
REAR ELEVATION



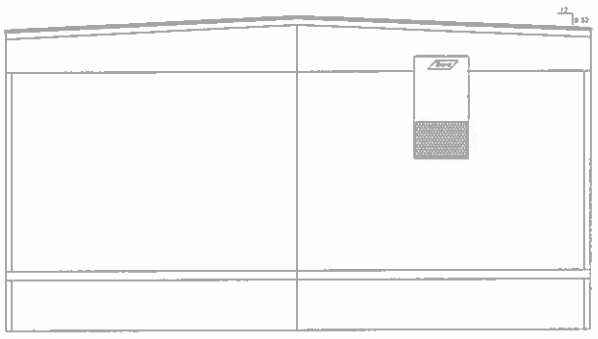
FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



ELEVATION NOTES (TYP.):

SEE-CROSS SECTION FOR METHOD OF ROOF VENTILATION

ACCESSIBLE RAMP(S), STAIR(S), AND HANDRAILS ARE SITE INSTALLED, DESIGNED BY OTHERS, AND SUBJECT TO LOCAL JURISDICTION

FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQUARE FOOT NET VENT AREA PER 1/150TH OF THE FLOOR AREA, AND AN 18" X 24" MINIMUM CRAWL SPACE ACCESS. SITE INSTALLED BY OTHERS SUBJECT TO LOCAL JURISDICTION.

ELEVATIONS SHOWN ON THIS PAGE REPRESENT BASIC COMPONENTS & ARE NOT INTENDED TO BE ALL INCLUSIVE NOR DO THESE ELEVATIONS DETAIL EVERY CODE REQUIRED ASPECT OF THIS BLDG. SITE BUILT STOOPS, STEPS, DECKS PORCHES, HANDRAILS, AND/OR SIMILAR ITEMS MUST BE PROVIDED BY OTHERS ON SITE FOR COMPLIANCE WITH APPLICABLE CODES. COMPLIANCE WITH ALL APPLICABLE CODES PER LOCAL AUTHORITY HAVING JURISDICTION, WHETHER DETAILED IN THIS SET OR NOT, MUST BE MET

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SERIAL NUMBER: FSSI-10013AB

EMC PLAN NO FSS-10013AB	STATES VA
DATE: MARCH 3, 2022	DESTINATION ISLE OF WIGHT COUNTY, VA
DRAFTSMAN BRANDON R DOYLE	SIZE 27'-4" x 64' (DOUBLE-WIDE)
SCALE: NO SCALE	REVISIONS: N/A
CODES: 2018 IBC IVA AMENDS	PLAN NO FSS-10013AB VA
ELEVATIONS	SHEET: 4 OF 5

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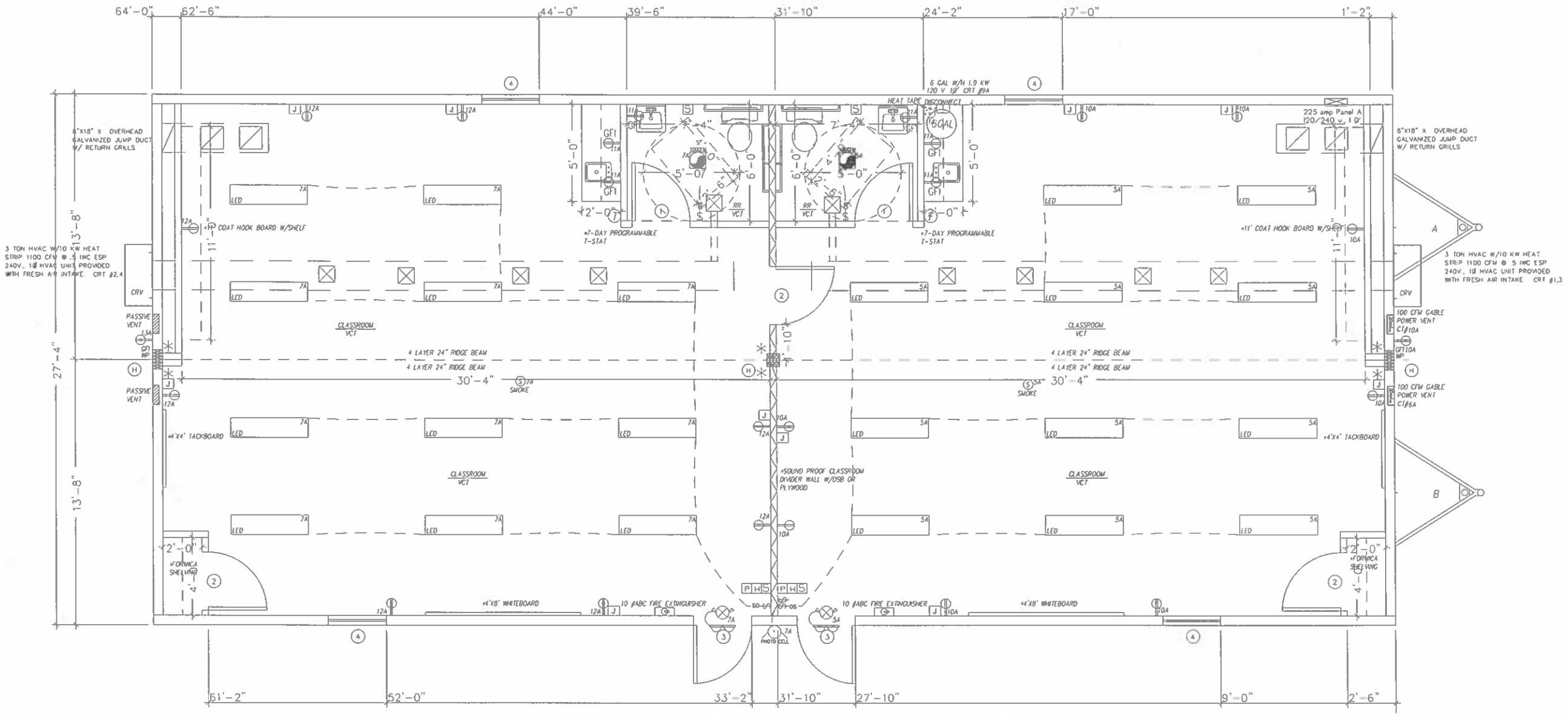

SYMBOL SCHEDULE:

- FLOUR LIGHT FIXTURE W/ 2 - 25W TUBES
- STD PORCH LIGHT 20 WATT
- EXIT/EMERGENCY LIGHT COMBO W/ BATTERY BACKUP
- 120V. DUPLEX RECEPTACLE
- JUNCTION BOX NON-POWERED
- GFI 120V. DUPLEX WEATHER PROOF RECEPT
- THERMOSTAT
- STANDARD LIGHT SWITCH
- OCCUPANCY SENSOR SWITCH
- 100 AMP ELECTRICAL PANEL BOX 120/208+
- POWERED CABLE VENT FAN
- FIRE ALARM/PULL BOX
- FIRE ALARM/HORN BOX
- FIRE ALARM/STROBE BOX
- PASSIVE GABLE VENT FAN
- SUPPLY AIR GRILLE
- RETURN AIR GRILLE
- THROUGH WALL MOUNT HVAC

COLUMN STRAPPING SCHEDULE:

- (A) (2) 2x4 SYP #2 THIS HALF.
- (B) (2) 2x4 SYP #2 EACH HALF.
- (C) (3) 2x4 SYP #2 THIS HALF.
- (D) (3) 2x4 SYP #2 EACH HALF.
- (E) (4) 2x4 SYP #2 THIS HALF.
- (F) (4) 2x4 SYP #2 EACH HALF.
- (G) (5) 2x4 SYP #2 THIS HALF.
- (H) (3) 2x6 SYP #2 EACH HALF.
- * WITH RIDGE BEAM BEARING STIFFENER

NOTES:
1. ALL COLUMN STUDS SHALL BE GLUE/NAILED TOGETHER. PVA GLUE WITH 100% COVERAGE SHALL BE USED.
2. INSTALL TWO STEEL STRAPS AT EACH STUD OF EACH COLUMN.
3. COLUMN STUDS SHALL NOT BE NOTCHED OR BORED.

DOOR & WINDOW SCHEDULE:

1. INTERIOR DOOR: 36"x80" SOLID-CORE, 6-PANEL DOOR WITH STEEL JAMB, PRIVACY LOCK, REDI-FRAME, OAK & BRONZE FINISH
2. INTERIOR DOOR: 36"x80" SOLID-CORE, 6-PANEL DOOR WITH STEEL JAMB, KEYED LOCK, REDI-FRAME, OAK & BRONZE FINISH.
3. EXTERIOR DOOR: 36"x80" STEEL DOOR, STEEL FRAME WITH 6"x30" VIEW BLOCK, GRADE 2 ACCESS, PANIC & STANDARD CLOSURE.
4. WINDOW: 36"x60" VERTICAL SLIDE, BRONZE METAL FRAME / EGRESS WINDOW, W/ LOW E INSULATED GLASS.

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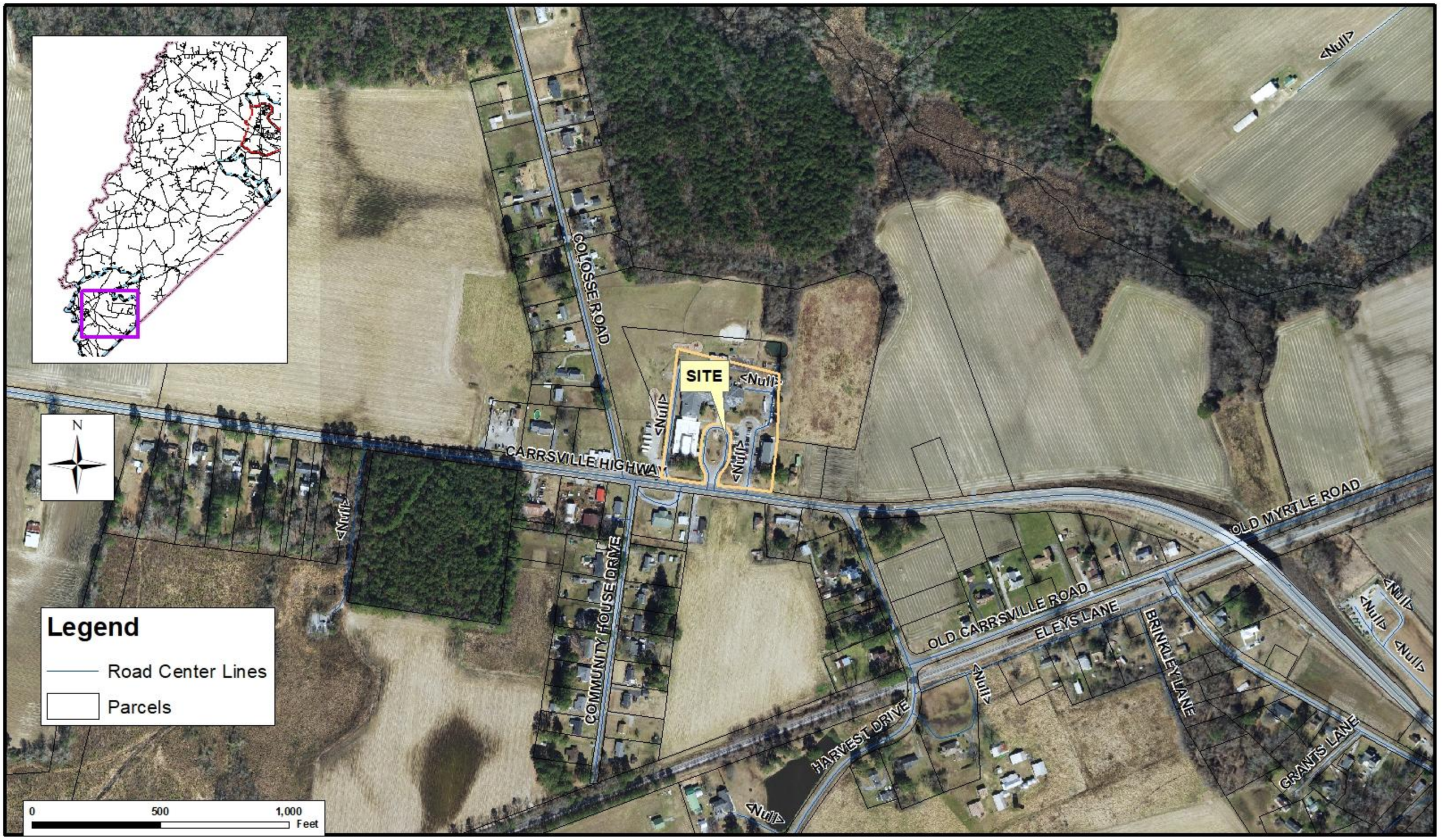
DATE: MARCH 3, 2022	DESTINATION: ISLE OF WIGHT COUNTY, VA
DRAFTSMAN: BRANDON R. DOYLE	SIZE: 27'-4" x 64' (DOUBLE-WIDE)
SCALE: NO SCALE	REVISIONS: N/A
CODES: 2018 IBC (VA AMENDS)	PLAN NO: FSS-10013AB VA
FLOOR PLAN	SHEET: 2 OF 5

FP: M:\Drafting\Shared DWG\BRANDON'S DRAWINGS\ENGINEERED PLANS\FSSI-10013AB (VA).aec

CUP-3 -24 - Conditional Use Permit- Location Map



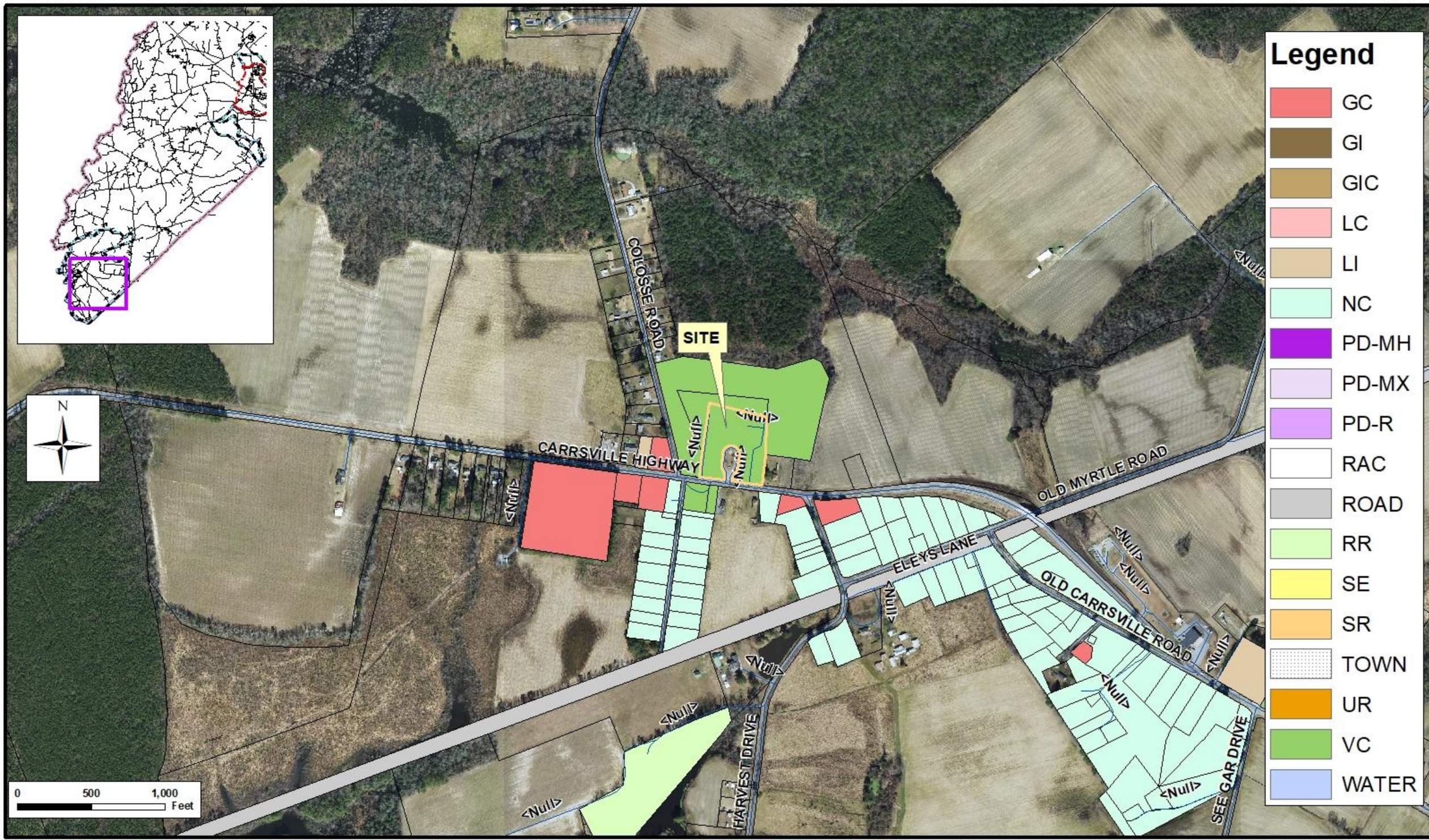
CUP-3 -24 - Conditional Use Permit- Location Closeup Map



CUP-3-24 - Conditional Use Permit- Land Use Map



CUP-3-24 - Conditional Use Permit- Zoning Map



PLANNING REPORT

APPLICATION:

Application (CUP-3-24) of Todd Christiansen, applicant, and Isle of Wight County School Board, property owner, for a conditional use permit for a modular classroom on approximately 0.5 acres on tax parcels 66-01-010 and 66-01-010A located at 5355 Carrsville Highway (Rte. 58) in the Village Center zoning district. The current use of the property is as a primary educational facility and is the site of Carrsville Elementary School.

ELECTION DISTRICT:

District 5

LOCATION:

The proposed project is located at 5355 Carrsville Highway (Rte.58). To the south across Rte. 58 is the Carrsville post office. To the west, there is some residential development along Colosse Road. To the north, there is additional property owned by the Isle of Wight County School Board. To the east are agricultural fields. A property location map is attached to this staff report.

BACKGROUND:

The project site is the location of Carrsville Elementary School. The school in its current form was approved for renovation in 1996. Before the construction of the modular classroom, the property had the existing school building and two previously approved modular classrooms.

In 2022, the school approached the County to place a modular classroom to the rear of the existing school on an existing concrete pad. While a modular classroom is a permitted use in the Village Center (VC) zoning district, supplementary use regulations state that modular classrooms requiring placement longer than twelve months or include construction of additional parking shall require a conditional use permit. The modular classroom was permitted to be installed with the condition that if it were on the property longer than a year, a conditional use permit would be required. The modular classroom received a certificate of occupancy in May of 2023.

DESCRIPTION:

The proposal is for a 1700-square-foot modular classroom at the existing school site on an existing concrete pad. The modular classroom is one building that has two separate classrooms. Each classroom can hold 20 students. Per the applicant's description, one classroom is the current location for the Pre-K program and the other classroom is being used for individual learning. The classroom is served by public water and sewer. No additional parking or structures were proposed.

COMPREHENSIVE LAND USE PLAN:

The comprehensive plan future recommended land use designation for the property is Village Center (VC). The VC land use consists of a cluster of residential development with a variety of uses supporting the local rural community such as a church, post office, and convenience store. Because the VC is meant to preserve and enhance historic rural villages, it is located outside of the Development Service Districts (DSDs).

Appropriate uses found in VC includes single-family residences and social, religious, and institutional uses such as churches or a post office. Commercial uses that support the VC land use, such as a convenience store or bed and breakfast could also be appropriate. A modular classroom is generally consistent, as it is a civic use that provides support to the educational facility for the population in the village center.

ORDINANCE REVIEW:

The zoning district classification for this property is Village Center (VC). The VC zoning district is intended to provide low to medium-density residential development in those areas of the County that are identified as "village centers" in the comprehensive plan. This district shall be used to preserve the character of these existing unincorporated rural population centers which have a single-family residential character, but which also contain certain types of community, commercial, or light industrial activities to serve primarily a local rural population. Some permitted uses in this district include single-family dwellings, bed and breakfast, post office, and general store. The property lies within the Highway Corridor Overlay.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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 described in the Zoning Ordinance, the Board may impose 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 of landmarks.

AGENCY REVIEW:

The location and installation were approved by the General Services, Inspections, and Planning and Zoning during the initial submittal.

STAFF CONCLUSIONS:

Strengths:

1. The approval of the CUP would allow the applicant to come into compliance with the zoning ordinance.
2. The use is a permitted use in the VC zoning district.

Weaknesses:

1. None identified.

STAFF RECOMMENDATION:

Staff recommends approval of the application as submitted

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	7/11/2024
Concept Plan	Backup Material	7/11/2024
Location Map	Backup Material	7/11/2024
Location Closeup Map	Backup Material	7/11/2024
Land Use Map	Backup Material	7/11/2024
Zoning Map	Backup Material	7/11/2024

ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-03-24, TO ESTABLISH A MODULAR CLASSROOM ON APPROXIMATELY 0.1 ACRES LOCATED ON CARRSVILE ROAD WITH TAX PARCEL NUMBERS 66-01-010 AND 66-01-010A ZONED VILLAGE CENTER

WHEREAS, Todd Christiansen, applicant, and Isle of Wight County School Board, property owner, has requested the issuance of a conditional use permit for a certain portion of the property with tax parcel numbers 66-01-010 AND 66-01-010A which land is depicted on Exhibit "A"; 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,

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", "Property Map", which is attached hereto, IS hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the proposal for a conditional use permit (CUP-03-24) as submitted or modified with conditions herein, the expressed purpose of which is to permit a modular classroom, 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a modular classroom 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

ISSUE:

Application (CUP-7-24) of Jeremy Kooiman and Lucy Kooiman, Property Owners, for a Conditional Use Permit to Operate a Short-Term Rental on Approximately Two Acres Located at 214 Shivers Mill Lane in the Suburban Residential Zoning District

BACKGROUND:

An application (CUP-7-24) has been submitted by Jeremy Kooiman and Lucy Kooiman, property owners, for a conditional use permit to operate a short-term rental on approximately two acres located at 214 Shivers Mill Lane on tax parcel number 43A-06-025 in the Suburban Residential zoning district.

The existing single-family dwelling was constructed in 2017 and was permitted in part through approval of a Chesapeake Bay Preservation Area Ordinance exception request that was granted by the Board of Supervisors in 2016. The Board of Supervisors also approved a Chesapeake Bay Preservation Area Ordinance exception request for a garden shed in 2019.

Additionally, the Board of Supervisors denied a conditional use permit request in 2020 to allow an accessory apartment to be located in the basement of the residence.

At their December 14, 2023, regular meeting, the Board of Supervisors adopted amendments to the Zoning Ordinance establishing a defined use type and supplementary use regulations for short-term rentals. Subsequent to these amendments being adopted, staff sent out notification letters to known short-term rental operators within the County and advised them of the ordinance changes and the process by which they needed to obtain a zoning permit. Mr. and Mrs. Kooiman applied for the short-term rental on March 19th, 2024, and staff received an objection in writing within the 30-day review period. The objection in writing is attached to this staff report.

In the Suburban Residential zoning district, short term rentals are permitted by right only after neighbor notification letters are sent to all adjacent property owners. If Community Development receives an objection in writing within 30 days of the date of sending the notification letter, then administrative approval of the application ceases until such time as a conditional use permit for the proposed short-term rental is approved by the Board of Supervisors with a recommendation

by the Planning Commission per Section 5-5005.DD.1 of the Zoning Ordinance.

A full analysis of the consistency of the application with County plans and ordinances is included in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Based on the identified strengths and weaknesses, staff recommends approval of the Conditional Use Permit with the following conditions:

1) Check-in/Check-out times for guests may not occur earlier than 8:00 A.M. or later than 8:00 P.M.
2) No outdoor recreational activities are to occur after 7:00 P.M.
3) No use of outdoor fires or flame-grills are permitted.
4) Commercial vehicles used by guests are not permitted to use the on-site parking spaces.
5) No parking of vehicles associated with the short-term rental are to occur in the cul-de-sac circle or along Anna Drive.
6) An outdoor smoking receptacle shall be installed for the disposal of cigarette butts.

At their July 23, 2024 meeting the Planning Commission recommended approval of the application to only include conditions 4 through 6, by a vote of 6-3.

ATTACHMENTS:

Description	Type	Upload Date
PC Staff Report	Backup Material	7/25/2024
Application and Concept Plan	Backup Material	7/1/2024
Site Images	Backup Material	7/1/2024
Location Map	Backup Material	7/1/2024
Zoning Map	Backup Material	7/1/2024
Land Use Map	Backup Material	7/1/2024
Sheriff's Department Comments	Backup Material	8/14/2024
Health Department Comments	Backup Material	7/1/2024
Short-Term Rental Application Materials	Backup Material	7/1/2024
Objection Received	Backup Material	7/1/2024
Ordinance and Conditions	Ordinance	7/25/2024

PLANNING REPORT

APPLICATION:

Application (CUP-7-24) of Jeremy Kooiman and Lucy Kooiman, property owners, for a conditional use permit to operate a short-term rental on approximately two acres located at 214 Shivers Mill Lane on tax parcel number 43A-06-025 in the Suburban Residential zoning district.

ELECTION DISTRICT:

D4

LOCATION:

The existing single-family dwelling is located to the rear of the Cedar Grove subdivision at 214 Shivers Mill Lane along a private road. The property abuts Brewers Creek to the rear. The current use of the property is single-family residential.

BACKGROUND:

The existing single-family dwelling was constructed in 2017 and was permitted in part through approval of a Chesapeake Bay Preservation Area Ordinance exception request that was granted by the Board of Supervisors in 2016. The Board of Supervisors also approved a Chesapeake Bay Preservation Area Ordinance exception request for a garden shed in 2019.

Additionally, the Board of Supervisors denied a conditional use permit request in 2020 to allow an accessory apartment to be located in the basement of the residence.

At their December 14, 2023, regular meeting, the Board of Supervisors adopted amendments to the Zoning Ordinance establishing a defined use type and supplementary use regulations for short-term rentals. Subsequent to these amendments being adopted, staff sent out notification letters to known short-term rental operators within the County and advised them of the ordinance changes and the process by which they needed to obtain a zoning permit. Mr. and Mrs. Kooiman applied for the short-term rental on March 19th, 2024, and staff received an objection in writing within the 30-day review period. The objection in writing is attached to this staff report.

In the Suburban Residential zoning district, short term rentals are permitted by right only after neighbor notification letters are sent to all adjacent property owners. If Community Development receives an objection in writing within 30 days of the date of sending the notification letter, then administrative approval of the application ceases until such time as a conditional use permit for the proposed short-term rental is approved by the Board of Supervisors with a recommendation by the Planning Commission per Section 5-5005.DD.1 of the Zoning Ordinance.

DESCRIPTION:

Peace by the River short-term rental will have a maximum overnight occupancy of 6 people, to include the use of 3 bedrooms in the dwelling. The concept plan shows 6 parking spaces available. Mr. Jeremy Kooiman is listed in the STR application as the 24-hour emergency contact that is responsible and available to address any conditions occurring at the short-term rental within 30 minutes. The short-term rental is advertised through online platforms such as AirBnB and Vrbo.

COMPREHENSIVE LAND USE PLAN:

The future land use designation for this parcel is Environmental Conservation. Appropriate uses for the EC land

use designation include wetlands, farms, forest uses, open space, and limited park facilities. The area designated as EC should be preserved due to environmental constraints unless site-specific analysis demonstrates there are no environmental concerns in a specific area.

The proposed use is consistent with the comprehensive plan since the existing facilities located on the parcel have been approved and constructed based on a site specific delineation and any required exceptions to the Chesapeake Bay Preservation Area Ordinance requirements.

ORDINANCE REVIEW:

The zoning district classification for the subject property is Suburban Residential (SR). The SR zoning district is intended to provide for the majority of residential development for future population growth in areas served by public utilities. The district permits moderate density development in a manner that is consistent with the provision of a high-quality "suburban" character.

The applicant proposes a short-term rental establishment within an existing single-family dwelling which is permitted by right in the SR zoning district, only after the 30-day review period described above by which a conditional use permit is required if any objection in writing is received.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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, no 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 of saturation of similar uses in the same general neighborhood of the proposed use.

In addition to the standards and other guidelines described in the Zoning Ordinance, the Board may impose 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 be applicable;
2. Traffic conditions, including facilities for pedestrians, such as sidewalks and parking facilities; the access of vehicles to roads, peak period 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

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.

Should the CUP be approved, the applicant will be required to submit a site plan for review and approval in accordance with Zoning Ordinance requirements and conditions of approval.

AGENCY REVIEW:

The application was forwarded to the following departments for their review:

- Fire Rescue: The facility would have little to no impacts on calls for service, therefore no objections.
- Sheriff's Department: There have been no incidents at this location within the past 6 years that the short-term rental has been in operation, therefore no objections.
- Health Department: No increase on residential septic system since there isn't an increase in the number of bedrooms.
- County Attorney: No objections

STAFF CONCLUSIONS:

Strengths:

1. The application is generally consistent with the Comprehensive Plan and can meet all ordinance requirements.
2. The proposed use will have minimal impact on community facilities and resources.
3. The proposed use appears to be in compliance with the recent ordinance amendments related to short-term rentals.
4. Granting the CUP will allow a short-term rental that existed prior to the ordinance changes, to continue to operate.

Weaknesses:

1. The use is located along a narrow private lane in close proximity to other residences and may cause impacts such as noise and odors.
2. There may be an increase in vehicular traffic along a private lane that already serves multiple residences.
3. Increasing the intensity of activities on the parcel may have negative impacts on sensitive environmental and natural features that surround the parcel.

STAFF RECOMMENDATION:

Based on the identified strengths and weaknesses, staff recommends approval of the Conditional Use Permit with the following conditions: 1) Check-in/Check-out times for guests may not occur earlier than 8:00 A.M. or later than 8:00 P.M. 2) No outdoor recreational activities are to occur after 7:00 P.M. 3) No use of outdoor fires or flame-grills are permitted. 4) Commercial vehicles used by guests are not permitted to use the on-site parking spaces. 5) No parking of vehicles associated with the short-term rental are to occur in the cul-de-sac circle or along Anna Drive. 6) An outdoor smoking receptable shall be installed for the disposal of cigarette butts.

ATTACHMENTS:

Description	Type	Upload Date
Application and Concept Plan	Backup Material	7/1/2024
Site Images	Backup Material	7/1/2024
Location Map	Backup Material	7/1/2024
Zoning Map	Backup Material	7/1/2024

Zoning Map	Backup Material	7/1/2024
Land Use Map	Backup Material	7/1/2024
Sheriff Department Comments	Backup Material	7/1/2024
Health Department Comments	Backup Material	7/1/2024
Short-Term Rental Application Materials	Backup Material	7/1/2024
Objection Received	Backup Material	7/1/2024

ORIGINAL

Revised 04/07/2023

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

RECEIVED
MAY 21 2024
By: A. Stephenson

#30065
CUP-7-24

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[✓] Conditional Use Permit (Are applicant proposed conditions attached?): X Yes _____ No

The proposed use or activity is listed as a conditional use in the SR-1 zoning district as per Section 1-1017 \ 1018 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): _____ Yes _____ No

Proposed Use or Activity: To continue operating short term rentals as we have been doing since June of 2018

B. PROJECT DESCRIPTION:

Project Name: Peace By The River

Property Address (if any): 214 Shivers Mill Ln. Carrollton VA 23314

Election District: 04

Comprehensive Plan Designation: _____

The use permit will apply to 2 acres out of 2 total acres

Tax Parcel Identification #43A-06-025 Number of acres to be effected: 2

Tax Parcel Identification #_____ Number of acres to be effected: _____

Tax Parcel Identification #_____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water X Private Well _____

Public Sewer _____ Private Septic X

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): JEREMY & LUCY KOOIMAN

Address: 214 SHIVERS MILL LANE

City, State, Zip Code: CARROLLTON VIRGINIA 23314

Phone No: (757)328-3114 Email: PPCONSTRUCTION1@AOL.COM

Property Owner(s) Name(s): JEREMY & LUCY KOOIMAN

Address: 214 SHIVERS MILL LN.

City, State, Zip Code: CARROLLTON VIRGINIA

Phone No.: _____ Email: _____ Fax No.: _____

757 328 3114 PPCONSTRUCTION1@AOL.COM

Applicant Signature **Date** May 20th, 2024

Owner Signature *if different* **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: 5/24/24 Fees Paid: ✓

Tax Query: [ ] Current [ ] Delinquent Distribution Date: 5/24

Posted/Date to Post: _____

AGENCIES REFERRALS:

____ Department of Conservation & Recreation	____ Inspections
____ Economic Development	✓ Sheriff's Office
✓ Emergency Services	____ Town of Smithfield
____ General Services	____ Town of Windsor
____ Environmental Planner	____ VDOT
✓ Health Department	____ Schools
____ Transportation Manager	____ Budget & Finance
____ Commission of Revenue	✓ County Attorney
____ Other _____	

Verified By: CK Date: 5/24/24

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant Jeremy & Lucy Kooiman

Address 214 Shivers Mill Lane
Street

Carrollton Virginia 23314
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
NA	Single-Family Dwelling

OTHER OWNERS OF AFFECTED REAL ESTATE
(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
NA	

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes[ ] No[X]
If yes, names of members: N/A

I do solemnly swear that the foregoing statement(s) and attachment(s), if any, are complete, correct, and true.

Applicant Jeremy Kooiman Applicant: _____ Date May 20th, 24
Printed or Typed Name Signature

Commonwealth of Virginia
County of ~~Isle of Wight~~ Suffolk

Subscribed and sworn to before me Cameron Alexander Cipcic,
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia, this 20th day of May, 20 24.

Notary Public

My Commission Expires 10-31-24

Cameron Alexander Cipcic NOTARY My Comm. Expires 10-31-24 7676049 PUBLIC COMMONWEALTH OF VIRGINIA

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

RECEIVED
MAY 21 2024
By: A. Stephenson

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

****Both checklist and application required upon submission to central permitting or application will notbe accepted****

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for an exception shall be certified as complete unless the following information is provided. ***The required number of copies may be increased or reduced with permission of the Zoning Administrator, depending on the review needs.*** Applicant(s) must have their signature(s) notarized on the disclosure of real estate holdings. All plans over 11"x17" in size are required to be folded to be processed for review.

- **Ten (10) copies of the following**
  - original, executed application
  - a statement of the reasons for seeking conditional or special use permit
  - narrative description of the property which shall include the tax parcel identification number
  - full size concept plan of the site to show all existing and proposed physical improvements and such otherinformation as is necessary to clearly indicate to the reviewing body that adequate provisions have been made for compliance with all standards for that particular use, the extent of the property to beso used on a given parcel or parcels, and information defining the requested exceptions. The plan shall be prepared by the appropriate authorized design professional licensed to practice in Virginia. No person shall prepare or certify design elements of site plans which are outside the limits of their professional expertise and license. Such document shall be drawn to scale and shall include the following information:
    - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
    - Title of drawing
    - Date of drawing
    - Existing wood line

- North arrow
- Scale bar
- Current zoning of parcel(s), including tax map number(s) and owner(s)
- Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
- Street names including route number and width(s) of the right-of-way(s)

☑ **One (1) original executed application**

☑ **One (1) digital copy of ALL application documents**

NA ☑ **One (1) reduced 11"x17" copy of concept plan**

☑ **Application fee submitted with the application. Checks should be made payable to treasurer, Isle of Wight, County**

NA ☑ **A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.**

NA ☑ Other information may be necessary to demonstrate compliance with all other applicable federal, state and County standards and regulations.

NA ☑ **All plans over 11"x17" must be folded.**

☑ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal willbe refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process in order to more effectively review the application and prepare the staff reports for the appropriate reviewing body.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents, and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete, and correct information available. I understand that any section not completed in its entirety may delay the processing of this application.

JEREM KOOIMAN

Printed or Typed Name

Signature

May 20th, 2024

Date

Isle of Wight County

May 20th, 2024

17140 Monument circle

Isle of Wight, VA 23397

RE: Statement for seeking a CU

To all members of the Planning Commission and the Board of Supervisors.

In June of 2018 we opened up our home to host temporary guests through the Airbnb platform. During our 6 years of operating this business we have had zero incidents. The reviews on line rate us as Super Hosts with a rating of 4.95 out of 5 an outstanding achievement. Our guests not only rave and love the peace and tranquility they experience at our home, they also value our involvement during their stay, always ready and available if needed. Our place is called **PEACE BY THE RIVER and that is what they experience.**

The County has recently changed the rules with a new ordinance that affects our business. Grandfathering in existing businesses as ours is not an option. That being said, we are following the outlined process which includes applying for a CUP.

We have the full support of our neighbors with the exception of one, which came as no surprise. We are selective in whom we allow in our home and only approve guests with equally high and positive ratings. The majority are a couple or two, looking for a quiet getaway or professionals posted in the area for a temporary work assignment. No one is more invested in maintaining the peace we enjoy in our surroundings than us, an objective we have met successfully.

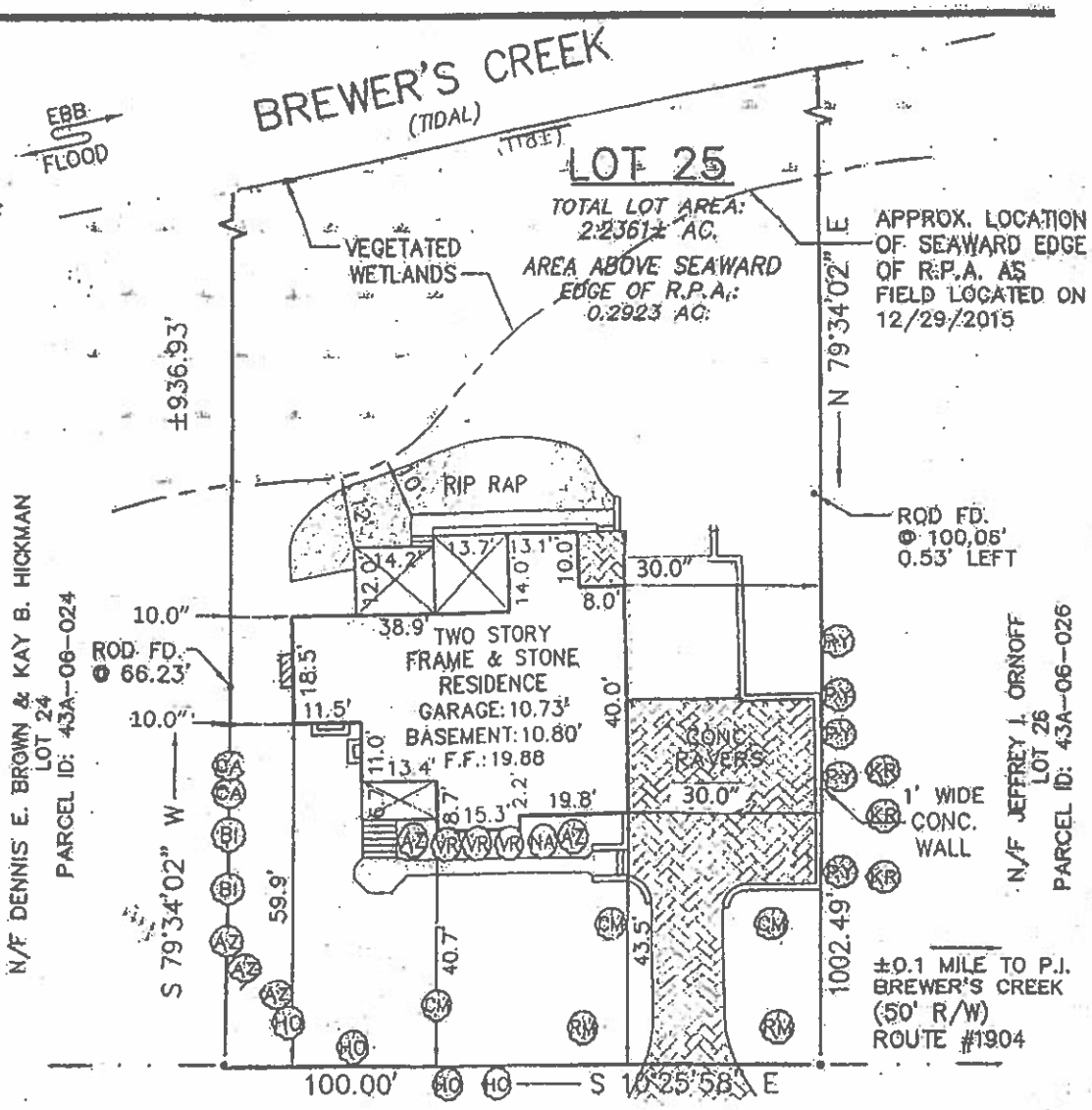
We have not only become dependent on this income but also a blessing to those who have stayed with us. Many have left as friends and thankful to have had a time of rest in our home. We have preapproved reservations on the books through august of 2025 and trust that you will grant us the CUP so we can continue to operate, serve our guests and also meet a much-needed service in Isle of Wight County,

Sincerely,

Jerry & Lucy Kooiman

Description of Property

Our property is located on 214 Shivers Mill lane, approximately 0.1 miles south of Brewers Creek Lane. The lot is located on the west side of Shivers Mill lane, a private gravel drive just of Anna Drive. The site consists of 2.2361 ± acres. The home is a single family residence tax parcel number 43 A-06-025



SHRIVER'S MILL LANE

PRIVATE LANE - GRAVEL DRIVE

LANDSCAPING SURVEY

RM DENOTES EXISTING TREE OR SHRUB
(SEE SHEET 3 OF 3 FOR TREE TABLE)

RECORD NORTH

COMMONWEALTH OF VIRGINIA
DONALD W. DAVIS
Lic. No. 1402(a)
Lic. No. 1418(b)
LAND SURVEYOR
9/25/17

SYMBOLS :
- PIPE FOUND
- IRON ROD SET
- IRON ROD FOUND
- CONC. MONUMENT

I HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE BY ME ON THIS DATE AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF THERE ARE NO ENCROACHMENTS OF BUILDINGS UNLESS SHOWN HEREON.

DAVIS & ASSOCIATES, P.C.
SURVEYORS - PLANNERS
YORK COUNTY, VIRGINIA

JOB LOCATION #214 SHIVER'S MILL LANE

PLAT OF THE PROPERTY OF:
ROBERT K. FAISON & SANDRA W. FAISON

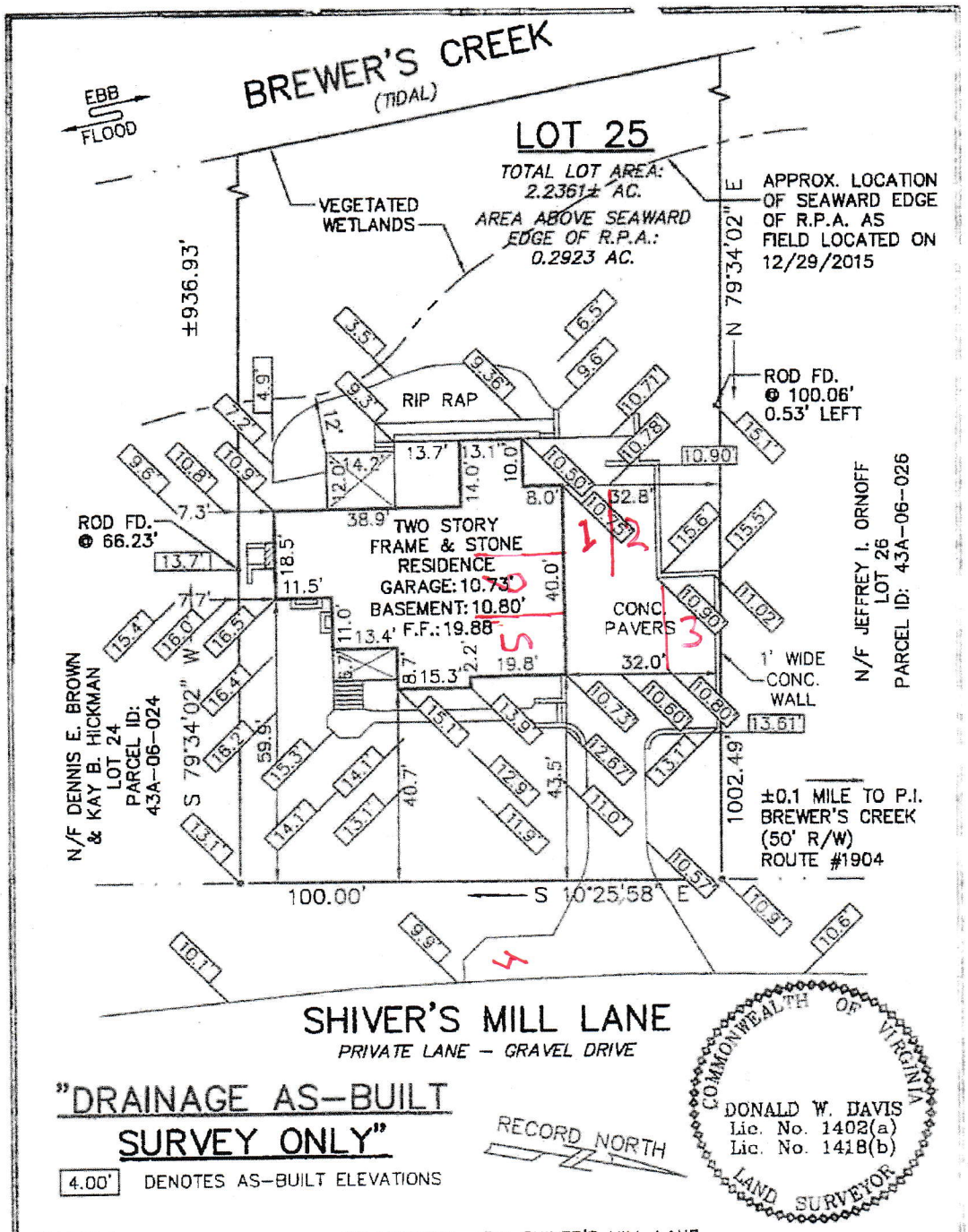
LOT 25

AS SHOWN ON:

SURVEY OF LOT 25

AS SHOWN ON COMPOSITE PLAN SUBDIVISION OF PROPERTY OF
C. L. OBREY
PREPARED BY J. J. ALFONSO, L.S. ON JULY 15, 1988

ISLE OF WIGHT COUNTY, VIRGINIA



"DRAINAGE AS-BUILT SURVEY ONLY"

4.00' DENOTES AS-BUILT ELEVATIONS

RECORD NORTH

COMMONWEALTH OF VIRGINIA
DONALD W. DAVIS
Lic. No. 1402(a)
Lic. No. 1418(b)
LAND SURVEYOR

SYMBOLS :
- PIPE FOUND
- IRON ROD SET
- IRON ROD FOUND
- CONC. MONUMENT

I HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE BY ME ON THIS DATE AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF THERE ARE NO ENCROACHMENTS OF BUILDINGS UNLESS SHOWN HEREON.

DAVIS & ASSOCIATES, P.C.
SURVEYORS - PLANNERS
YORK COUNTY, VIRGINIA

JOB LOCATION : #214 SHIVER'S MILL LANE

PLAT OF THE PROPERTY OF:
ROBERT K. FAISON & SANDRA W. FAISON

LOT 25

AS SHOWN ON

SURVEY OF LOT 25

AS SHOWN ON COMPOSITE PLAN SUBDIVISION OF PROPERTY OF
C. L. OBREY
PREPARED BY J. J. ALFONSO, L.S. ON JULY 15, 1988
ISLE OF WIGHT COUNTY, VIRGINIA

CODE: 15--0583	DWN.BY: S.J.M.	SCALE: 1" = 25'	TO: PPC CONSTRUCTION	DATE: 25 JULY, 2017



Facing Shivers Mill Lane from Anna Drive Cul-de-sac



Facing driveway from Shivers Mill Lane



Facing house from Shivers Mill Lane



Extra off-street space being used



Facing driveway from Shivers Mill Lane

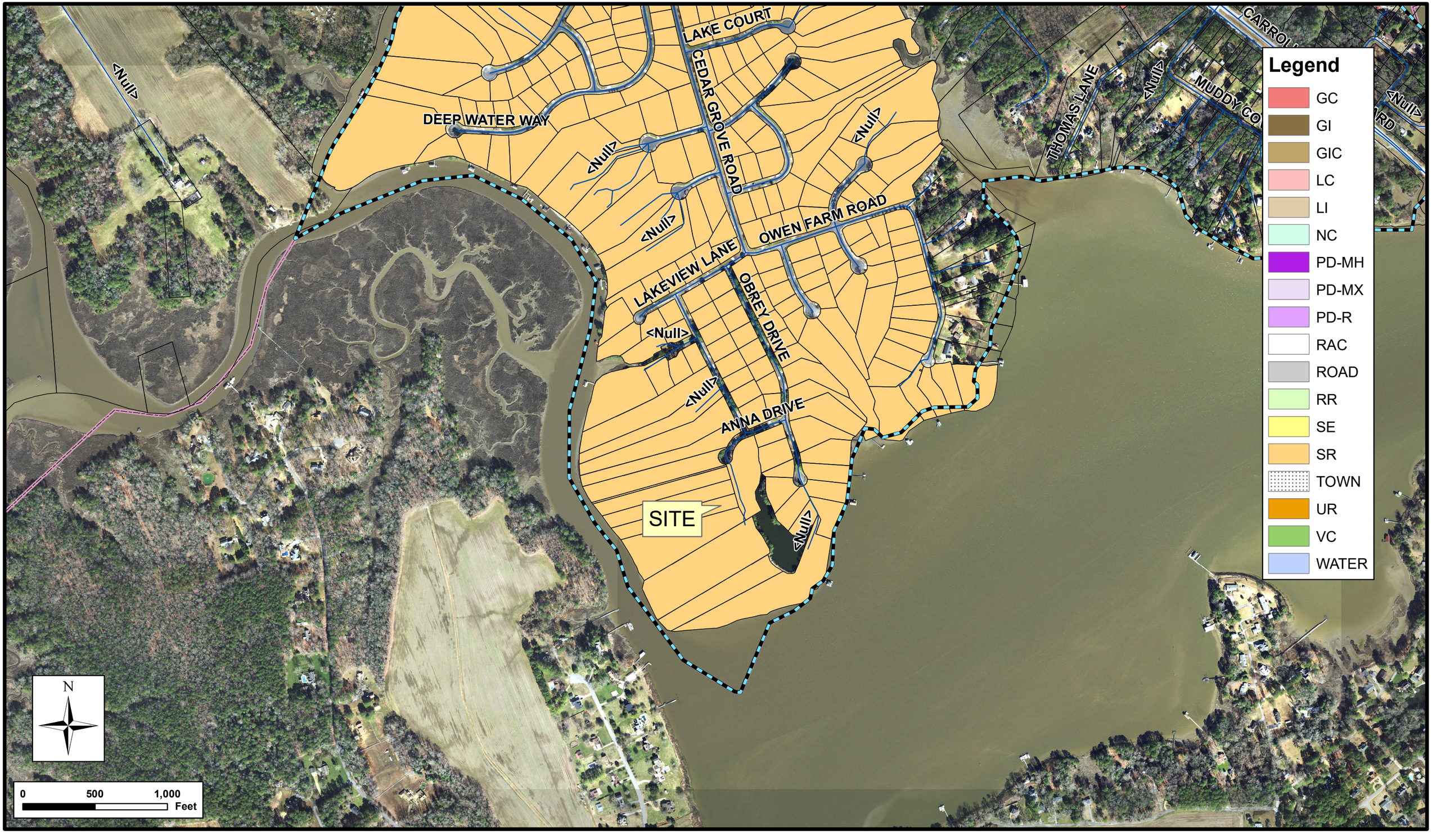


Facing house from Shivers Mill Lane

CUP-7-24 Peace by the River STR CUP Request - Location Map



CUP-7-24 Peace by the River STR CUP Request - Zoning Map



CUP-7-24 Peace by the River STR CUP Request - Land Use Map



ISLE OF WIGHT COUNTY SHERIFF'S OFFICE

P.O. Box 75 · 17110 Monument Circle · Isle of Wight, VA 23397
Phone (757) 357-2151 · Fax (757) 357-0706

James R. Clarke Jr.
Sheriff

Date; August 7, 2024

To Caleb J. Kitchen Planner 1

From: Major Joseph M. Willard

Isle of Wight Sheriff's Office

Reference Conditional Use Permit (CUP-7-24

Peace By the River Short Term Rental

214 Shivers Mill Lane

Caleb in response to the E=Mail sent on August 7, 2024, Reference complaints made to the Sheriff's Office in reference to the Kooiman's rental property on December the 13, 2020, April 16, 2024, and April 22, 2024, in my original response I listed that there had been no incident reports of complaints filed in reference to the property. A search of RMS didn't show where a report had been taken and a case number assigned to any incident but after your E-Mail further review was done and it was discovered in fact that there had been several listed events in CAD which was my oversight when checking the records. On 12/13/2020 there was a call made no description of reason Nature Blank, on April 18, 2024, a call for subjects playing corn hole being loud there are no calls shown in CAD for April 16,2024 or for April 22, 2024. The only other complain was a burning complain which was on August 6,2016. It was totally my oversite, and I hope this corrected document will set the record straight as far as to the decision that needs to be made. If any further information is needed, please advise

Joseph M. Willard

Major Joseph M. Willard

ISLE OF WIGHT

Call Time	Event ID	Rpt #	Street	Nature	Additi
09/22/2023 10	2023070299		214 SHIVERS MILL LN	CIVIL PAPER	
12/13/2020 17	2020089259		214 SHIVERS MILL LN		
05/18/2022 14	2022037776		214 SHIVERS MILL LN	CIVIL PAPER	
12/13/2020 17	2020089260		214 SHIVERS MILL LN	CITIZEN ASSIST	
08/06/2016 07	2016069812		214 SHIVERS MILL LN	BURNING COMPLAI	
08/06/2016 07	2016069811	160806002	214 SHIVERS MILL LN	BURNING COMPLAI	
12/07/2019 09	2019099028		214 SHIVERS MILL LN	CITIZEN ASSIST	DIST:
08/05/2020 11	2020058487	200805010	214 SHIVERS MILL LN	ARCING WIRES DO	DIST:
08/27/2022 12	2022065225		214 SHIVERS MILL LN	ASSIST OTHER JU	
03/24/2020 11	2020024734		214 SHIVERS MILL LN	CIVIL PAPER	
04/18/2024 20	2024029438		214 SHIVERS MILL LN	DISTURBANCE-LOU	

ISLE OF WIGHT

Event Report

Event ID: **2020-089259** Call Ref #: 168 Date/Time Received: 12/13/20 17:26:24

Rpt #:
Call Source: PHONE
Prime Unit:
Services Involved

Location: **214 SHIVERS MILL LN**
X-ST: *ANNA DR*
Jur: IOW Service: Agency:
St/Beat: District: RA:
Business: Phone: GP:

Nature: Alarm Lvl: 0 Priority: Medical Priority:

Reclassified Nature:

Caller:
Addr: 214 SHIVERS MILL LN Phone: Alarm: Alarm Type:

Vehicle #: St: Report Only: No Race: Sex: Age:

Call Taker: BJEWELL Console: IOWCAD01

Geo-Verified Addr.: Yes Nature Summary Code: Disposition: ACC Close Comments:

Notes:

Times

Call Received: 12/13/20 17:26:24 Time From Call Received
Call Routed:
Call Take Finished:
1st Dispatch:
1st En-Route:
1st Arrive:
Last Clear:

(Time Held)

(Reaction Time)

Unit Reaction: *(1st Dispatch to 1st Arrive)*
En-Route: *(1st Dispatch to 1st En-Route)*
On-Scene: *(1st Arrive to Last Clear)*

Event Log

Unit	Empl ID	Type	Description	Time Stamp	Comments (may truncate in portrait)	Close Code	User
		TR	Time Received	12/13/20 17:26:24	By: PHONE		BJEWELL
		ENT	Entered Street	12/13/20 17:26:30	214 SHIVERS MILL LN		BJEWELL
		CAN	Event Cancelled	12/13/20 17:26:36		ACC	BJEWELL

ISLE OF WIGHT

Event Report

Event ID: **2024-029438** Call Ref #: 595 Date/Time Received: 04/18/24 20:33:32

Rpt #:
Call Source: PHONE
Prime Unit: 36 MILLER, CHRISTOPHER W
Services Involved: LAW

Location: **214 SHIVERS MILL LN**
X-ST: *ANNA DR*
Jur: IOW Service: LAW Agency: IOW
St/Beat: IOW4 District: RA:
Business: Phone: GP:

Nature: **DISTURBANCE-LOUD NOISE** Alarm Lvl: 1 Priority: 2 Medical Priority:

Reclassified Nature:

Caller: ANONYMOUS
Addr: 214 SHIVERS MILL LN Phone: (757) 287-8192 Alarm: Alarm Type:

Vehicle #: St: Report Only: No Race: Sex: Age:

Call Taker: HDAVIS Console: IOWCAD01

Geo-Verified Addr.: Yes Nature Summary Code: Disposition: UNFD Close Comments:

Notes: {36} ONLY 2 SUBJS NOT BEING LOUD [04/18/24 20:52:23 DJONES]
caller reports that his neighbors are playing cornhole and being very loud and shouting, would like someone to go tell them to quiet down [04/18/24 20:36:19 HDAVIS]

Times

		Time From Call Received			
Call Received:	04/18/24 20:33:32				
Call Routed:	04/18/24 20:38:00	000:04:28		Unit Reaction:	000:09:58 *(1st Dispatch to 1st Arrive)*
Call Take Finished:	04/18/24 20:38:00	000:04:28		En-Route:	*(1st Dispatch to 1st En-Route)*
1st Dispatch:	04/18/24 20:39:34	000:06:02	*(Time Held)*	On-Scene:	000:02:54 *(1st Arrive to Last Clear)*
1st En-Route:	04/18/24 20:39:34	000:06:02			
1st Arrive:	04/18/24 20:49:32	000:16:00	*(Reaction Time)*		
Last Clear:	04/18/24 20:52:26	000:18:54			

Radio Log

Unit	Empl ID	Type	Description	Time Stamp	Comments (may truncate in portrait)	Close Code	User
36	I1382	D	Dispatched	04/18/24 20:39:34	Stat/Beat: IOW4		DJONES
36	I1382	E	En-Route	04/18/24 20:39:34	Stat/Beat: IOW4		DJONES
36	I1382	A	Arrived	04/18/24 20:49:32			DJONES
36	I1382	C	Cleared	04/18/24 20:52:26	UNFD	UNFD	DJONES

Event Log

Unit	Empl ID	Type	Description	Time Stamp	Comments (may truncate in portrait)	Close Code	User
		TR	Time Received	04/18/24 20:33:32	By: PHONE		HDAVIS
		ENT	Entered CallerPhone	04/18/24 20:33:41	7572878192		HDAVIS

ENT	Entered Street	04/18/24 20:33:50	214 SHIVERS MILL LN	HDAVIS
ENT	Entered CallerName_C	04/18/24 20:35:57	ANONYMOUS	HDAVIS
ENT	Entered Remarks	04/18/24 20:36:19		HDAVIS
ENT	Entered Nature	04/18/24 20:37:58	DISTURBANCE-LOUD NOISE	HDAVIS
FIN	Finished Call Taking	04/18/24 20:38:00		HDAVIS
VEV	Viewed Event	04/18/24 20:38:02	User First Viewed Event CAD	DJONES
VCH	Viewed Call History	04/18/24 20:39:17	Location Information	HDAVIS
ARM	Added Remarks	04/18/24 20:52:23		DJONES

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF PLANNING AND ZONING

MEMORANDUM

TO: Capt. Steve Henson, Fire Rescue
Maj. Willard, Sheriff's Department
Jonette Butler, Health Department
Bobby Jones, County Attorney

FROM: Caleb J. Kitchen, Planner I

SUBJECT: Conditional Use Permit (CUP-7-24), MUNIS #30065 **First Submittal**
Peace By The River Short Term Rental
214 Shivers Mill Lane, Tax Map No. 43ª-06-025

DATE: May 24, 2024

Attached please find the conditional use permit application and associated documents for the above-referenced project to be located at 214 Shivers Mill Lane. The Isle of Wight County Board of Supervisors recently adopted a zoning ordinance amendment that established use regulations for short term rentals. On March 19th, the applicant originally submitted for a zoning permit to establish the short term rental use (STR-24-5), however we received a written objection within the 30-day period and suspended our administrative approval. If a written objection is received, the Zoning Ordinance requires the applicant to then go through the conditional use permit process.

Please review the attached and provide written comments to me by **June 19, 2024,** indicating that you have no objections to the application as submitted or noting specific deficiencies to be addressed. As always, please feel free to contact me at (757) 365-3660 or ckitchen@iwus.net if you have any questions.

Joseph Willard

From: Caleb J. Kitchen
Sent: Wednesday, August 7, 2024 9:53 AM
To: Joseph Willard
Subject: Follow-up on CUP-7-24 Comments, Peace by the River Short Term Rental
Attachments: Sheirff Calls.JPG

Major Willard,

If you recall you sent me comments on the short term rental application, Peace by the River, back in May and said there had been no incidents on record in the 6 years since it began operation.

I've attached a letter written by the attorney for one of the neighbors opposing the application, and he references incidents where sheriff deputies responded to the scene. See attached.
Just want to double check on this to see if I need to amend my presentation to the BOS regarding your comments in any way. Thanks!

Best regards,

Caleb J. Kitchen
Planner 1
Planning & Zoning Division
757-365-3660
ISLE OF WIGHT
COUNTY, VIRGINIA

stating that there have been no incidents with the Kooiman STR. With respect to the Sherriff's Office. this is not correct. The following is a list of the known times that police have responded to disturbances caused by the Kooimans' STR guests:

[2] The December 2. 2019 letter is labeled as "Initial Notice of Violation." although it actually is the fourth such notice since all violations concerning Sec.5-1005 were taking place in the Kooimans' unpermitted Accessory Use Apartment. which Mr. Kooiman falsely claimed did not exist.

December 13. 2020: Incident number: 2020-089229: Kooimans' guest blatantly trespassing on Mr. Ornoff's property and allowing his dog to urinate and defecate on Mr. Ornoff's lawn. The responding Deputy told the trespasser to stay off Mr. Ornoff's property.

April 16, 2024: Sheriff called because Kooimans' guests were playing cornhole all afternoon and into the evening in the driveway. making loud noises. Responding Deputy told guests to stop but did not file a report

April 22, 2024: In a repeat occurrence. the Sheriff was again called because Kooimans' guests were playing cornhole all afternoon and into the evening in the driveway. making loud noises. Responding Deputy told guests to stop but did not file a report

COMMONWEALTH OF VIRGINIA

WESTERN TIDEWATER ENVIRONMENTAL HEALTH DISTRICT

ISLE OF WIGHT COUNTY HEALTH DEPARTMENT

919 S Church St
SMITHFIELD, VIRGINIA 23431
757-279-3079

June 20, 2024

Caleb J. Kitchen, Planner I
County Planner 1
Isle of Wight County
Isle of Wight, Virginia 23397

RE: Comments as requested
43a-06-025

Dear Mr. Kitchen:

The sewage waste from the home located at 214 Shivers Lane will still be considered residential waste. No further information is require for this office provided there isn't an increase in the number of bedrooms.

If this office can be of any further assistance, please do not hesitate to call me at 279-03079.

Sincerely,

J. Butler

Jonette Butler
Environmental Health Specialist, Sr.

REGISTRATION # _____ December 18, 2023

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF COMMUNITY DEVELOPMENT

SHORT TERM RENTAL APPLICATION

Property Owner Name: Jeremy & Lucy Koolman Parcel Number: _____

Address: 214 Shivers Mill Ln City, State, Zip Code Carrollton VA 23314

Phone Number: 757-328 3114 Email: ppcconstruction1@aol.com

Authorized Agent/Operator: ~~_____~~ N/A Email: _____

Address: _____ City, State, Zip Code: _____

Daytime Phone Number: _____ Evening/Weekend Phone Number: 757 943 7985

24/7 CONTACT INFORMATION

An authorized agent must be designated as a point of contact who is available to be contacted and to address conditions occurring at the short-term rental within 30 minutes.

Name: Jeremy Koolman **Email:** ppcconstruction1@aol.com

Address: 214 Shivers Mill Ln **City, State, Zip Code:** Carrollton VA 23314

Daytime Phone Number(s): 757-328 3114 **Evening/Weekend Phone Number(s):** 757 745-7501

How many bedrooms are at this address? 3 Maximum Occupants? 6

BY MY SIGNATURE:

1. I am aware a zoning permit is required. A zoning permit shall not be issued for a short-term rental until the following procedure has been completed:
   a. The zoning administrator is to send written notification by certified letter to the last known address of each adjacent property owner advising them of the proposed short-term rental and informing them that the permit may be issued if written comments are not received within thirty (30) days.
   b. The property shall also be posted with a sign pursuant to section 9-1006 for no less than fourteen (14) days prior to the expiration of the thirty-day period.
   c. If the zoning administrator receives no written objection from any property owner so notified within thirty (30) days of the date of sending the notification letter, and the zoning administrator determines that the proposed

short-term rental otherwise complies with the zoning ordinance and the requirements for sewage disposal, the zoning administrator may issue a zoning permit for the short-term rental.

d. If the zoning administrator receives written objection from any property owner so notified within thirty (30) days of the date of sending the notification letter, then the zoning administrator may not issue a zoning permit unless and until such time as a conditional use permit for the proposed short-term rental is approved by the

2. I am aware an authorized agent must be designated as a point of contact who is available to be contacted and to address conditions occurring at the short-term rental within 30 minutes. Physical responses to the site of the short-term rental are not required. The operator shall be notified in writing of failed attempts to receive timely responses from the authorized agent. Failure to respond in a timely manner shall result in a complaint subject to the penalties set forth below.
3. I am aware the Operator must register their short-term rental unit with the Community Development Department and receive a registration number.
4. The Operator authorizes County employees to enter the subject property upon reasonable advanced written notice to the Operator, at least one (1) time during the calendar year for which registration is valid, to verify the short-term rental is being operated in accordance with applicable regulations.
5. The zoning permit may not be transferred.
6. No more than one (1) short term rental may be operated on any lot.
7. Operators may enter into rental agreements with only one (1) party per legal dwelling unit per twenty-four (24) hour period.
8. A residential dwelling unit located within a building that contains three (3) or more dwelling units may not be operated as a short-term rental.
9. The maximum number of lodgers per night, over the age of eighteen (18) years, shall not exceed two persons per bedroom but in no case shall exceed sixteen persons six (6). This number shall be reduced to conform to the occupancy requirements of the Virginia uniform Building code and/or the Virginia Department of Health.
10. The number of persons allowed to gather at a short-term rental at any one time shall not exceed twice the maximum number of permitted overnight guests, including children. Only the maximum number of overnight guests shall be permitted at a short-term rental between the hours of 10:00 PM and 7:00 AM. Short-term rentals shall not be used as event centers as defined by the Zoning Ordinance.
11. Operators must obtain a business license and register for transient occupancy and state sales tax.
12. Short term rentals must meet current building and zoning regulations and be subject to a safety inspection from the County to confirm the installation of smoke alarms, fire extinguisher and a posted emergency exit plan prior to permit approval.
13. One off-street space per guest room is required in addition to the parking required for the house.
14. No visible evidence of the conduct of a short-term rental is allowed on the outside of the property.
15. The owner/operator shall not prepare meals for guests.
16. Operator shall provide proof of liability insurance to rental activity at registration and each subsequent renewal of at least one million dollars. Such insurance coverage must remain in place at all times the short-term rental is being operated.
17. Accessory structures, not including permitted accessory dwelling units, shall not be used or occupied as short-term rentals.
18. All advertisements for any short-term rental shall include the short term rental registration number for such dwelling.
19. A zoning permit for a short-term rental may be revoked by the Zoning Administrator, or designee, for the following reasons:

a. In the event of three (3) or more substantiated complaints of violation of applicable state or local laws, ordinances, and regulations, as they relate to short term rentals, within a calendar year; or
b. Authorized agent's failure to respond in a timely manner more than twice; or
c. Failure to maintain compliance with any regulation set forth in this section. An Operator whose short-term rental zoning permit has been revoked shall not be eligible to receive any new short term rental zoning permit for the remaining portion of the calendar year in which the permit was revoked, and for the entire following year.

20. Except as provided in this section, nothing herein nor the issuance of a zoning permit shall be construed to prohibit, limit, or otherwise supersede existing local authority to regulate short term rental of property through general land use and zoning authority. Nothing in this section shall be construed to supersede or limit contracts or agreements between or among individuals or private entities related to the use of real property, including recorded declarations and covenants; the provisions of condominium instruments of a condominium created pursuant to the Condominium Act (§ 55-79.39 et seq.) of the Code of Virginia, 1950, as amended; the declaration of a common interest community as defined in Code of Virginia, 1950, § 55-528, as amended; the cooperative instruments of a cooperative created pursuant to the Virginia Real Estate Cooperative Act (§ 55-424 et seq.) of the Code of Virginia, 1950, as amended; or any declaration of a property owners' association created pursuant to the Property Owners' Association Act (§ 55-508 et seq.).

I, the undersigned applicant, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete, and correct information available.

Signature of Authorized Agent/Operator _____ **Date** 3/18/24

DO NOT ACCEPT UNLESS THIS DOCUMENT IS PRINTED WITH A COLOR BACKGROUND, CONTAINS A VOID PANTOGRAPH AND A MICROPRINT BORDER

Gerald H. Gwaltney
Commissioner of the Revenue
P.O. Box 107
Isle of Wight, VA 23397

2024 BUSINESS LICENSE

License Number	**10950**
Issue Date	01/08/2024
Expiration Date	12/31/2024
Category	REPAIR PERSONAL BUS OTHR SERVS
Type	BED AND BREAKFAST CATEGORY 1
NAICS	
Business Account Number	105164
Business Phone Number	757-328-3114
Customer Number	124664

BUSINESS LOCATION

214 SHIVERS MILL LN
CARROLLTON, VA 23314

BUSINESS NAME & MAILING ADDRESS

JERRY & LUCY KOOIMAN
JERRY & LUCY KOOIMAN
214 SHIVERS MILL LN
CARROLLTON, VA 23314

NOTICE: This license becomes null & void if ownership, business name or address is changed. All applicable building & zoning regulations pertaining to business location must be followed.

Gerald H. Gwaltney
Commissioner of the Revenue

Total Received	**$0.00**

0935554202480003857160000005000 5

*** POST THIS LICENSE IN A CONSPICUOUS PLACE ***

State Farm Fire and Casualty Company
A Stock Company With Home Offices In Bloomington, Illinois

PO Box 2356
Bloomington IL 61702-2356

AT2 H-07-162C-FC0F F HW
3200

KOOIMAN LUCY & JERRY
214 SHIVERS MILL LN
CARROLLTON VA 23314-2004

RENEWAL DECLARATIONS

AMOUNT DUE **None**
Payment is due by TO BE PAID BY MORTGAGEE

Policy Number 46-CX-T403-5

Policy Period 12 Months
Effective Dates NOV 28 2022 to NOV 28 2023
The policy period begins and ends at 12:01 am standard time at the residence premises

Homeowners Policy

Location of Residence Premises
214 SHIVERS MILL LN
CARROLLTON VA 23314-2004

Your State Farm Agent
PENDERGAST INSURANCE AGY
498 S INDEPENDENCE BLVD
VIRGINIA BCH VA 23452-1164

Phone (757) 499-6813

Construction Frame
Year Built 2017

Roof Material Composition Shingle
Roof Installation Year 2017

Automatic Renewal
If the **POLICY PERIOD** is shown as **12 MONTHS**, this policy will be renewed automatically subject to the premiums rules and forms in effect for each succeeding policy period. If this policy is terminated we will give you and the Mortgagee/Lien holder written notice in compliance with the policy provisions or as required by law.

IMPORTANT MESSAGES

NOTICE Information concerning changes in your policy language is included. Please call your agent with any questions. Please help us update the data used to determine your premium. Contact your agent with the year each of your home's utilities (heating/cooling, plumbing, or electrical) and roof were last updated.

PREMIUM

Annual Premium	$1 947 00
Your premium has already been adjusted by the following:	
Utility Rating Credit	Home/Auto Discount
Claim Record Discount	Loyal Customer
Total Premium	**$1 947 00**

3200 07
20 002754 H

StateFarm

NAMED INSURED	MORTGAGEE AND ADDITIONAL INTERESTS
KOOIMAN, LUCY & JERRY	

Mortgagee
LOANDEPOT COM LLC
ISAOA/ATIMA
PO BOX 7114
TROY MI 48007-7114

Loan Number
104955450

SECTION I - PROPERTY COVERAGES AND LIMITS

Coverage	Limit of Liability
A Dwelling	$ 755,400
Other Structures	$ 75,540
B Personal Property	$ 566,550
C Loss of Use	$ 226,620
Additional Coverages	
Arson Reward	$1,000
Credit Card, Bank Fund Transfer Card, Forgery, and Counterfeit Money	$1,000
Debris Removal	Additional 5% available/$1,000 tree debris
Fire Department Service Charge	$500 per occurrence
Fuel Oil Release	$10,000
Locks and Remote Devices	$1,000
Trees, Shrubs, and Landscaping	5% of Coverage A amount/$750 per item

SECTION II - LIABILITY COVERAGES AND LIMITS

Coverage	Limit of Liability
L Personal Liability (Each Occurrence)	$ 500,000
Damage to the Property of Others	$ 1,000
M Medical Payments to Others (Each Person)	$ 5,000

INFLATION

Inflation Coverage Index: 337.6

DEDUCTIBLES

Section I Deductible	Deductible Amount
Other Losses	$ 1,000
Hurricane 2.00%	$ 15,108

LOSS SETTLEMENT PROVISIONS

A1 Replacement Cost - Similar Construction
B1 Limited Replacement Cost - Coverage B

OCT - 2022

HO-3006

FORMS OPTIONS AND ENDORSEMENTS

HW-2146	Homeowners Policy
Option JF	Jewelry and Furs $1,500 Each Article/$2,500 Aggregate
HO-2713	Hurricane Duration Deductible
HO-2732	Back-Up of Sewer or Drain
HO-2337.1	*Amendatory Endorsement
	*New Form Attached

ADDITIONAL MESSAGES

State Farm® works hard to offer you the best combination of price, service, and protection. The amount you pay for homeowners insurance is determined by many factors such as the coverages you have, the type of construction, the likelihood of future claims, and information from consumers reports.

Other limits and exclusions may apply - refer to your policy

Your policy consists of these Declarations, the Homeowners Policy shown above, and any other forms and endorsements that apply, including those shown above as well as those issued subsequent to the issuance of this policy.

This policy is issued by the State Farm Fire and Casualty Company.

Participating Policy

You are entitled to participate in a distribution of the earnings of the company as determined by our Board of Directors in accordance with the Company's Articles of Incorporation, as amended.

In Witness Whereof, the State Farm Fire and Casualty Company has caused this policy to be signed by its President and Secretary at Bloomington, Illinois.

Lynne M. Youell
Secretary

Michael T. Tipsord
President

StateFarm

Your coverage amount....

It is up to you to choose the coverages and limits that meet your needs. We recommend that you purchase a coverage limit at least equal to the estimated replacement cost of your home. Replacement cost estimates are available from building contractors and replacement cost appraisers, or, your agent can provide an Xactware estimate using information you provide about your home. We can accept the type of estimate you choose as long as it provides a reasonable level of detail about your home. State Farm® does not guarantee that any estimate will be the actual future cost to rebuild your home. Higher limits are available at higher premiums. Lower limits are also available, which if selected may make certain coverages unavailable to you. We encourage you to periodically review your coverages and limits with your agent and to notify us of any changes or additions to your home.

How-to · Host

Host liability insurance

Host liability insurance, a part of AirCover for Hosts, provides Hosts with $1 million in coverage in the rare event you are found legally responsible for a guest getting hurt or their belongings being damaged or stolen while they're staying at your place. People who help you host, like Co-Hosts and cleaners, are also included, so you can feel confident hosting on Airbnb.

IN APPITION TO OUR HOMEOWNERS POLICY AIRBNB PROVIDES UP TO 1 MILLION IN LIABILITY COVERAGE

Start a liability claim

File a claim if a guest gets hurt or their belongings are damaged.

Go to intake form

What's covered

Host liability insurance covers you if you're found legally responsible for:

- Bodily injury to a guest (or others)
- Damage to or theft of property belonging to a guest (or others)
- Damage caused by a guest (or others) to common areas, like building lobbies and nearby properties

Host liability insurance doesn't cover:

- Damage or injury resulting from something done intentionally

- Damage to your place or belongings caused by a guest (that's covered by Host damage protection)
- Other exclusions apply

The claims process

If you need to file a claim, just fill out our **liability insurance intake form**. The info will be sent to our trusted third-party insurer, who will assign your claim to a representative. They'll resolve your claim according to the terms of the insurance policy.

No opt-in required

AirCover for Hosts and its benefits are always included and always free. By simply agreeing to list or continuing to list a property on Airbnb, you are automatically covered whenever you host a stay booked on Airbnb.

If you want to opt out

Email us from the email address associated with your Host account. Be sure to include the exact title of your listing, your full name, and the phone number associated with your Host account.

The email link above is only for opting out.

Please note that Hosts in the UK can't opt out of this free liability insurance.

To learn more about Host liability insurance, go to the **comprehensive program summary**.

Disclaimer: Host liability insurance doesn't cover Hosts who offer stays through Airbnb Travel, LLC; Hosts of **Experiences**; or Hosts who offer stays in **Japan**. Keep in mind that all coverage limits are shown in USD, and that there are other **terms, conditions, and exclusions**. If you're hosting in the UK, the Host liability insurance policy is underwritten by Zurich Insurance Company Ltd., and is arranged and concluded at no additional cost for UK Hosts by Airbnb UK Services Limited—an appointed representative of Aon UK Limited, authorized and regulated by the Financial Conduct Authority. Aon's FCA register number is 310451. You can check this on the **Financial Services Register** by visiting the FCA's website or contacting the FCA on 0800 111 6768. Host damage protection isn't related to Host

- can access the full details of the insurance intermediary **here**.

This article is part of **Getting protected through AirCover for Hosts**, a guide about damage and liability coverage.

Did this article help? Yes No

Related articles

Host

Host damage protection

Host damage protection, a part of AirCover for Hosts, provides Hosts with $3 million in coverage in the rare event your place or belongings ...

Host

Getting protected through AirCover for Hosts

AirCover for Hosts is top-to-bottom protection for Airbnb Hosts.

Experience Host

Validating your license and insurance documents

We'll send you a message with a link to upload your documentation for validation through our partner, Evident.

Contact Superhost support

Our dedicated Superhost support team is here to help Hosts like you.

Contact us

You can also **give us feedback.**

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Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF COMMUNITY DEVELOPMENT

March 20, 2024

Dear Property Owner:

Please be advised that the Department of Community Development/Planning and Zoning of Isle of Wight County has received a request for a Zoning Certification from Jeremy & Lucy Kooiman to locate a short-term rental space at 214 Shivers Mill Ln, Carrollton, Virginia, to be suitable for occupancy for dwelling, sleeping, or lodging purposes.

Pursuant to the Isle of Wight County Zoning Ordinance, before this request can be permitted, you are required to be given notice as an adjacent property owner. If you have any comments in opposition to this request, they must be made in writing and received by this office within thirty (30) days of the date of this notification.

If you have any questions regarding this notification, please feel free to contact me at 757-365-3660.

Best regards,

Rachel Bass

Rachel Bass
Zoning Coordinator
Isle of Wight County

P. O. Box 80
17140 Monument Circle
Isle of Wight, VA 23397
(757) 357-9206
www.co.isle-of-wight.va.us

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF COMMUNITY DEVELOPMENT

April 11, 2024

Jeremy & Lucy Kooiman

214 Shivers Mill Ln

Carrollton, VA 23314

Mr.& Mrs. Kooiman,

Please be advised that Isle of Wight County has received a letter opposing your request to operate a short-term rental on your property.

According to the regulations for short-term rentals, since written opposition has been received, administrative approval of this request has ceased. If you would like to proceed applying for a short-term rental a conditional use permit is required. I have enclosed information on the Conditional Use Permit process and an application for your consideration.

If you have any questions, please contact me at 757-365-6306 or rbass@iwus.net.

Sincerely,

Rachel Bass

Rachel Bass

Zoning Coordinator

Isle of Wight County

From: Mr. Jeffrey I. Ornoff
212 Shivers Mill Ln.
Carrollton, VA 23314

Certified Mail: 7014 1200 0001 7697 3549

To: Ms. Rachel Bass
Zoning Coordinator
P. O. Box 80
17140 Monument Circle
Isle of Wight, VA 23397

Date: April 10, 2024

Dear Ms. Bass,

In response to your letter dated March 20, 2024, concerning your office's request from Jeremy and Lucy Kooiman to locate a short-term rental space at 214 Shivers Mill Ln. Carrollton, Virginia. I confirm that I am the owner of the adjacent property and that I absolutely, **OPPOSE** having a short-term rental business, or any other kind of commercial business, being operated in such close proximity to my Suburban Residential home. I **OPPOSE** it now, just as I **OPPOSED** it when I filed my complaint to the Isle of Wight County Board of Supervisors (almost 5 years ago) on May 28, 2019. At that time, both short-term rentals as well as "unpermitted" accessory use apartments were illegal in Isle of Wight County.

1. My neighborhood was an extremely quiet and peaceful place to live, prior to the Kooimans building their home, specifically designed to accommodate short-term rental guest in a secretly unknown and unpermitted accessory use apartment in the basement.

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3. But here's what I don't understand. As a result of the vote, NOTHING, absolutely NOTHING was done by the County to impede the Kooimans from continuing to advertise and rent out their unpermitted 1,145 square foot apartment as a short-term rental. Let me quote directly from their advertisement. It described the apartment as follows: ***"Your rental consists of two bedrooms, a fully equipped kitchen, dining room, living room with fireplace, bathroom, screened-in porch, laundry area (washer & dryer), and a sitting area with a gas BBQ grill for your use."*** The advertisement also included pictures of each and every room in the basement apartment. And, further down in the advertisement it stated, ***"Your rental encompasses the entire first floor of this beautiful home, very private and your rental is exactly as shown in the pictures."*** At no time ever**,** and I repeat**, EVER** did the Kooimans advertise or rent out, two rooms to two people. In fact, just the opposite was true. Further down in the same advertisement, under <u>house rules,</u> it

said, ***"Max guests 2-4 adult sleeping arrangements, please contact us."*** How was this allowed to continue if the Board of Supervisors recognized that the use of this apartment for short-term rental was injurious to the use and enjoyment of my property? Where is the transparency that my Board of Supervisors so often boast about? There is no transparency here. I can only hope that now since the County has enacted its new short-term rental ordnance that it somehow gives them better legal standing and the ability to finish what they started when they denied the Kooimans' after-the fact Conditional Use Permit for the accessory use apartment. I pray this is the reason, and I hope that the Board of Supervisors will soon deny the Kooimans' application for a short-term rental Zoning Certificate.

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An actual example from October 2021: Two of the Kooimans' rental guests were on a business trip doing work for Dominion Energy. They stayed at the Kooimans' Hotel for **38 nights**. Both of the guests each had their own separate service truck, with very loud safety back-up warning alarms. Each morning when they departed for work at 5:00 AM, the startling sound from the back-up alarms would "alarmingly" wake both me and my dog from deep sleep. My dog immediately staring barking and growling as if my house was being intruded upon. Likewise, in the evenings, usually around 6:30 -7:00 PM, the quests would return from work, and the high-pitched sounds of the alarms would interrupt my enjoyment of my dinner while I tried to watch the evening news on television. The only noise I'm sure the Kooimans heard was the sound of money going into their banking account.

7. Because of the Kooiman short-term rental business, I no longer feel like I actually live in a suburban residential neighborhood anymore. That would imply that I know who my neighbors are. I have completely different people occupying the Kooimans' house on any given day. These people are not my neighbors. They are perfect strangers and because of it, I no longer feel safe in my own home. In fact, I hardly go out of my house anymore.

8. Even my legal rights to expect law enforcement to protect me and my property from illegal trespassers and criminals has been jeopardized as a result of the Kooimans' short-term rental business.

9. Fire and Safety Hazards are now a higher risk due to the Kooimans' short-term rental business. At times both Kooimans' guests as well as their family create a potential fire hazard by double-parking their cars on Anna Drive, where it intersects with Shivers Mill Ln. According to Board Supervisor, Mr. Joel Acree, who was a former Fire Captain for the Carrollton Volunteer Fire Department, said in the March 2024 meeting, this area in the circle of Anna Drive is used as a staging area by the Fire Dept. Also, I have already seen on a couple of occasions, some of Kooimans' short-term rental guests throwing lit cigarette butts into my yard behind my garage. Even Mr. Kooiman himself, while building his house, tried to burn down my garage by burning construction material in close proximity to the garage. The fire caused damage to the vinyl siding. Later that same day after the Fire Department extinguished the fire, Mr. Kooiman in his arrogance, started another fire and went home for the evening leaving the fire still burning and unattended.

10. Whether or not the short-term rental business is conducted in the basement apartment or in any other part of the Kooimans' house, it matters not! It would still be injurious to my use and enjoyment of my property, as well as interfere with my quality of life.

11. How many short-term rentals are Mr. and Ms. Kooiman planning on operating in Isle of Wight County? Under the new short-term rental ordnance. Specifically, Section 5-5005 – Supplementary use regulations for commercial use types, Part DD Short Term Rentals.

Sub-part 8, states: ***"A residential dwelling unit located within a building that contains three (3) or more dwelling units may not be operated as a short-term rental."*** Why are Mr. and Mrs. Kooiman using one of their Heritage Apartment dwelling units as a short-term rental? The new ordnance makes it perfectly clear that such use is **not permitted**. The Kooimans have advertisements on both Airbnb and Vrbo websites. Will this short-term rental be ordered to cease-and desist? **(See Airbnb Apartment and Vrbo Apartment enclosures or internet links).**

12. The Kooimans continually misrepresented the status of their accessory apartment which they used for their illegal short-term rental business. According to a letter received from a FOIA request, Mr. Kooiman told County officials that there were no bedrooms on the lower level of the home; that the pictures in their on-line ads were of rooms located in the main dwelling; that no accessory apartment existed; that he made no changes to the basement since he received his certificate of occupancy. Note:(The certificate was issued on November 15, 2017.); Mr. Kooiman told Staff officials, that because of the limited choices Airbnb gives users to describe their rental units on the website, he explained he chose "apartment", as the most accurate way to describe his bedroom rentals which could be accessed separately from the rest of the house. **(See BZA Staff Report)** and **(See Certificate of Occupancy)**

13. According to the same BZA report, Mr. Art Berkley, the County Building Inspector Director, who performed the occupancy inspection, stated that Mr. Kooiman told him that the basement was to be used as a home office. On October 11, 2019, after numerous delays caused by Mr. Kooiman, Inspector Berkley, finally managed to perform another inspection the Kooiman' basement and found that Mr. Kooiman had in fact converted to offices into two bedrooms. On November 25, 2019, the County finally figured out what the Kooimans' advertisements were telling them all along, **the basement did in fact constitute a separate dwelling and qualified as an accessory apartment.**

14. After all the previous misrepresentations made by Mr. and Mrs. Kooiman, which are documented in the BZA report, I am simply amazed at the ease with which the Kooimans can simply ignore their past responses to County Officials and move on to a completely new misrepresentation. The Kooimans tried to sell a new story to the BOS and well as sell it to the Circuit Court. They are now claiming they built their basement apartment with family and aging parents in mind. They also claimed that only when they not using it for family, that they would "occasionally" host short-term rental guests. The Kooiman's even went as far as saying that they did not even think about using the apartment as an Airbnb until after they moved into the house after receiving their Certificate of Occupancy. (This story is a long way from Kooimans' early claim that there simply was no apartment in the basement.) Their new story is further unraveled and comes apart when you look at the Kooiman's latest Airbnb advertisements. On both of their Airbnb advertisements, the one for the entire house and the one for the Heritage Apartment unit. They both show on the **last page** of the adds: "Hosted by Lucy and Jerry", and just under that the add shows that they joined Airbnb in January of 2017. **That's 10 months prior to receiving their certificate of occupancy.** It seems to me that the Kooimans put a lot of thought into opening an Airbnb with plenty of time to build the driveway and the

accessory apartment, both unpermitted and both suitable for their short-term rental business. All of it long before moving into their house. Also please notice on the last page of the advertisements where it the Kooimans have had 111 reviews. I assume that not all their customers have left reviews, but even if my assumption is wrong, 111 reviews pretty much shows that the Kooimans' family is not using the basement apartment as often as they would have you believe. This all leads me to a very important question for the Board of Supervisors. How do you ever expect to be able to enforce short-term rentals, at least here by the Kooimans, where they have continuously tried to mislead you. **(See Airbnb Entire Home Rental, Enclosure or Internet Links)**

15. There can be little doubt that I have always opposed the Kooimans commercial short-term rental business, whereas 5 years ago, I filed a complaint about it to the Board of Supervisors, when STRs were illegal. I also filed a civil case against the Kooimans 3 years ago in the Circuit Court for violating their deed restrictions for operating a short-term rental business out of their illegal basement apartment. So, as you can clearly see, I rightfully OPPOSE with good cause the Kooimans request for a Zoning Certificate for a commercial short-term rental business. Based on my personal experience of dealing with the Kooimans and their illegal short term rental business, I believe it makes me qualified to say that short-term rentals have no business in Suburban Residential neighborhoods. There's absolutely nothing neighborly about them. They only serve to pit neighbors against neighbors and they should be banned in Isle of Wight County. I beg you! Please **DO NOT** approve a Zoning Certification for the Kooimans. This is not the right location for a short-term rental business, and based on the Kooimans' past and present history, they certainly do not merit one.

Respectfully,



Jeffrey I. Ornoff
212 Shivers Mill Ln.
Carrollton, VA 23314
Ph: (757) 287-8192
Email: jiornoff6@charter.net

Airbnb Apartment:
https://www.airbnb.com/rooms/775210193069129548?adults=1&children=0&enable_m3_private_room=true&infants=0&pets=0&check_in=2024-03-03&check_out=2024-03-08&source_impression_id=p3_1709076680_WyqDWhIVzWYVHGoz&previous_page_section_name=1000&federated_search_id=1e9300d4-cb81-4425-9546-9d1ef471866e

Vrbo Apartment:
https://www.vrbo.com/3468998?dateless=true&x_pwa=1&rfrr=HSR&pwa_ts=1709077058931&referrerUrl=aHR0cHM6Ly93d3cudnJiby5jb20vSG90ZWwtU2VhcmNo&useRewards=true&adults=2&regionId=86911&destination=Carrollton,+Virginia,+United+States+of+America&destType=MARKET&latLong=36.946815,-76.560508&searchId=0a2eb53c-7b7c-4c16-8700-f466db532f2a&privacyTrackingState=CAN_TRACK&sort=RECOMMENDED&userIntent=&expediaPropertyId=95437448

Airbnb Entire Home Rental:
https://www.airbnb.com/rooms/32546333?adults=1&children=0&enable_m3_private_room=true&infants=0&pets=0&search_mode=regular_search&check_in=2024-04-27&check_out=2024-05-02&source_impression_id=p3_1712590078_QuSd30XPVS2MhdX%2F&previous_page_section_name=1000&federated_search_id=cf8cdf55-8be1-4f19-a750-730ce78be8bd

From: Mr. Jeffrey I. Ornoff
212 Shivers Mill Ln.
Carrollton, VA 23314

Certified Mail: 7014 1200 0001 7697 3549

To: Ms. Rachel Bass
Zoning Coordinator
P. O. Box 80
17140 Monument Circle
Isle of Wight, VA 23397

Date: April 10, 2024

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7. Because of the Kooiman short-term rental business, I no longer feel like I actually live in a suburban residential neighborhood anymore. That would imply that I know who my neighbors are. I have completely different people occupying the Kooimans' house on any given day. These people are not my neighbors. They are perfect strangers and because of it, I no longer feel safe in my own home. In fact, I hardly go out of my house anymore.

8. Even my legal rights to expect law enforcement to protect me and my property from illegal trespassers and criminals has been jeopardized as a result of the Kooimans' short-term rental business.

9. Fire and Safety Hazards are now a higher risk due to the Kooimans' short-term rental business. At times both Kooimans' guests as well as their family create a potential fire hazard by double-parking their cars on Anna Drive, where it intersects with Shivers Mill Ln. According to Board Supervisor, Mr. Joel Acree, who was a former Fire Captain for the Carrollton Volunteer Fire Department, said in the March 2024 meeting, this area in the circle of Anna Drive is used as a staging area by the Fire Dept. Also, I have already seen on a couple of occasions, some of Kooimans' short-term rental guests throwing lit cigarette butts into my yard behind my garage. Even Mr. Kooiman himself, while building his house, tried to burn down my garage by burning construction material in close proximity to the garage. The fire caused damage to the vinyl siding. Later that same day after the Fire Department extinguished the fire, Mr. Kooiman in his arrogance, started another fire and went home for the evening leaving the fire still burning and unattended.

10. Whether or not the short-term rental business is conducted in the basement apartment or in any other part of the Kooimans' house, it matters not! It would still be injurious to my use and enjoyment of my property, as well as interfere with my quality of life.

11. How many short-term rentals are Mr. and Ms. Kooiman planning on operating in Isle of Wight County? Under the new short-term rental ordnance. Specifically, Section 5-5005 – Supplementary use regulations for commercial use types, Part DD Short Term Rentals.

Sub-part 8, states: ***"A residential dwelling unit located within a building that contains three (3) or more dwelling units may not be operated as a short-term rental."*** Why are Mr. and Mrs. Kooiman using one of their Heritage Apartment dwelling units as a short-term rental? The new ordnance makes it perfectly clear that such use is **not permitted**. The Kooimans have advertisements on both Airbnb and Vrbo websites. Will this short-term rental be ordered to cease-and desist? **(See Airbnb Apartment and Vrbo Apartment enclosures or internet links).**

12. The Kooimans continually misrepresented the status of their accessory apartment which they used for their illegal short-term rental business. According to a letter received from a FOIA request, Mr. Kooiman told County officials that there were no bedrooms on the lower level of the home; that the pictures in their on-line ads were of rooms located in the main dwelling; that no accessory apartment existed; that he made no changes to the basement since he received his certificate of occupancy. Note:(The certificate was issued on November 15, 2017.); Mr. Kooiman told Staff officials, that because of the limited choices Airbnb gives users to describe their rental units on the website, he explained he chose "apartment", as the most accurate way to describe his bedroom rentals which could be accessed separately from the rest of the house. **(See BZA Staff Report)** and **(See Certificate of Occupancy)**

13. According to the same BZA report, Mr. Art Berkley, the County Building Inspector Director, who performed the occupancy inspection, stated that Mr. Kooiman told him that the basement was to be used as a home office. On October 11, 2019, after numerous delays caused by Mr. Kooiman, Inspector Berkley, finally managed to perform another inspection the Kooiman' basement and found that Mr. Kooiman had in fact converted to offices into two bedrooms. On November 25, 2019, the County finally figured out what the Kooimans' advertisements were telling them all along, **the basement did in fact constitute a separate dwelling and qualified as an accessory apartment.**

14. After all the previous misrepresentations made by Mr. and Mrs. Kooiman, which are documented in the BZA report, I am simply amazed at the ease with which the Kooimans can simply ignore their past responses to County Officials and move on to a completely new misrepresentation. The Kooimans tried to sell a new story to the BOS and well as sell it to the Circuit Court. They are now claiming they built their basement apartment with family and aging parents in mind. They also claimed that only when they not using it for family, that they would "occasionally" host short-term rental guests. The Kooiman's even went as far as saying that they did not even think about using the apartment as an Airbnb until after they moved into the house after receiving their Certificate of Occupancy. (This story is a long way from Kooimans' early claim that there simply was no apartment in the basement.) Their new story is further unraveled and comes apart when you look at the Kooiman's latest Airbnb advertisements. On both of their Airbnb advertisements, the one for the entire house and the one for the Heritage Apartment unit. They both show on the **last page** of the adds: "Hosted by Lucy and Jerry", and just under that the add shows that they joined Airbnb in January of 2017. **That's 10 months prior to receiving their certificate of occupancy.** It seems to me that the Kooimans put a lot of thought into opening an Airbnb with plenty of time to build the driveway and the

accessory apartment, both unpermitted and both suitable for their short-term rental business. All of it long before moving into their house. Also please notice on the last page of the advertisements where it the Kooimans have had 111 reviews. I assume that not all their customers have left reviews, but even if my assumption is wrong, 111 reviews pretty much shows that the Kooimans' family is not using the basement apartment as often as they would have you believe. This all leads me to a very important question for the Board of Supervisors. How do you ever expect to be able to enforce short-term rentals, at least here by the Kooimans, where they have continuously tried to mislead you. **(See Airbnb Entire Home Rental, Enclosure or Internet Links)**

15. There can be little doubt that I have always opposed the Kooimans commercial short-term rental business, whereas 5 years ago, I filed a complaint about it to the Board of Supervisors, when STRs were illegal. I also filed a civil case against the Kooimans 3 years ago in the Circuit Court for violating their deed restrictions for operating a short-term rental business out of their illegal basement apartment. So, as you can clearly see, I rightfully OPPOSE with good cause the Kooimans request for a Zoning Certificate for a commercial short-term rental business. Based on my personal experience of dealing with the Kooimans and their illegal short term rental business, I believe it makes me qualified to say that short-term rentals have no business in Suburban Residential neighborhoods. There's absolutely nothing neighborly about them. They only serve to pit neighbors against neighbors and they should be banned in Isle of Wight County. I beg you! Please **DO NOT** approve a Zoning Certification for the Kooimans. This is not the right location for a short-term rental business, and based on the Kooimans' past and present history, they certainly do not merit one.

Respectfully,



Jeffrey I. Ornoff
212 Shivers Mill Ln.
Carrollton, VA 23314
Ph: (757) 287-8192
Email: jiornoff6@charter.net

Airbnb Apartment:
https://www.airbnb.com/rooms/775210193069129548?adults=1&children=0&enable_m3_private_room=true&infants=0&pets=0&check_in=2024-03-03&check_out=2024-03-08&source_impression_id=p3_1709076680_WyqDWhIVzWYVHGoz&previous_page_section_name=1000&federated_search_id=1e9300d4-cb81-4425-9546-9d1ef471866e

Vrbo Apartment:
https://www.vrbo.com/3468998?dateless=true&x_pwa=1&rfrr=HSR&pwa_ts=1709077058931&referrerUrl=aHR0cHM6Ly93d3cudnJiby5jb20vSG90ZWwtU2VhcmNo&useRewards=true&adults=2&regionId=86911&destination=Carrollton,+Virginia,+United+States+of+America&destType=MARKET&latLong=36.946815,-76.560508&searchId=0a2eb53c-7b7c-4c16-8700-f466db532f2a&privacyTrackingState=CAN_TRACK&sort=RECOMMENDED&userIntent=&expediaPropertyId=95437448

Airbnb Entire Home Rental:
https://www.airbnb.com/rooms/32546333?adults=1&children=0&enable_m3_private_room=true&infants=0&pets=0&search_mode=regular_search&check_in=2024-04-27&check_out=2024-05-02&source_impression_id=p3_1712590078_QuSd30XPVS2MhdX%2F&previous_page_section_name=1000&federated_search_id=cf8cdf55-8be1-4f19-a750-730ce78be8bd

ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-7-24, TO ESTABLISH A SHORT-TERM RENTAL FACILITY ON APPROXIMATELY TWO ACRES LOCATED AT 214 SHIVERS MILL LANE WITH TAX PARCEL NUMBER 43A-06-025 ZONED SUBURBAN RESIDENTIAL.

WHEREAS, Jeremy Kooiman and Lucy Kooiman, property owners, have requested the issuance of a conditional use permit for a certain portion or all of the property with tax parcel number 43A-06-025, which land is depicted on Exhibit "A"; 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 to approve the request with conditions;

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", "Property Map", and Exhibit "B" 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 a conditional use permit (CUP-7-24), as submitted or modified with conditions herein, the expressed purpose of which is to permit a short-term rental 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a short-term rental facility is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property, subject to the

attached conditions in Exhibit “B” and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a short-term rental 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

CUP-7-24 Exhibit A



EXHIBIT B – RECOMMENDED CONDITIONS

CUP-7-24

Staff Recommendations:

1. Check-in/Check-out times for guests may not occur earlier than 8:00 A.M. or later than 8:00 P.M.
2. No outdoor recreational activities are to occur after 7:00 P.M.
3. No use of outdoor fires or flame-grills are permitted.
4. Commercial vehicles associated with the short-term rental are not permitted to use the on-site parking spaces.
5. No parking of vehicles associated with the short-term rental are to occur in the cul-de-sac circle or along Anna Drive.
6. An outdoor smoking receptacle shall be installed for the disposal of cigarette butts.

ISSUE:

Application of Elk Development, LLC, Applicant, and William Pennie, Jr. and Teresa L. Crocker, Property Owners, for a Conditional Use Permit for a Major Utility Service, Specifically a 3.0 MW Utility-Scale Solar Energy Generation Facility, on Approximately 27.32 Acres on a 94.21-Acre Tract Located on Old Stage Highway in the Rural Agricultural Conservation (RAC) Zoning District

BACKGROUND:

Elk Development, LLC, applicant, and William Pennie, Jr. and Teresa L. Crocker, property owners, submitted an application for a conditional use permit for a major utility service, specifically a 3.0 MW utility-scale solar energy generation facility, on approximately 27.32 acres on a 94.21-acre tract located on Old Stage Highway with tax parcel number 13-01-005 in the Rural Agricultural Conservation (RAC) zoning district.

The 22.62-acre project is situated on a parcel consisting of approximately 94.21 acres primarily consisting of agricultural fields. The property is in the RAC zoning district. Not all acreage comprising this parcel is proposed for the solar facility. Based on the project area, 22.62 acres of crops will be removed from production. Approximately 18 acres will be in the fenced area of the solar facility project area. The subject property has never been developed and has been used historically for agriculture. Of the acreage included in the project area, six of the acres are considered prime farmland, with four of those acres included inside the fenced area.

After the June Planning Commission meeting, the applicant submitted a revised layout to show compliance with Ordinance requirements. The revised layout includes new locations for the panels and an increased distance from the Keystone Segment of the Captain John Smith National Historic Trail. The panels are now shown a minimum of 250 feet from the historic trail which meets the supplementary use regulations of the zoning ordinance. The revised layout also includes a reduction in the amount of acreage in the project area. The updated documents have been attached for your use.

A full analysis of the consistency of the application with County plans and ordinances is attached in the Planning Commission staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

At their June 25, 2024, regular meeting, the Planning Commission recommended denial of the application with a unanimous vote (10-0).

With the updated layout reducing the amount of acreage being used for the project and increasing the distance to the nearest historic resource, staff recommends approval of the application with the following conditions: 1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads. 2) No improvements shall be located closer than 250 feet from boundary of the Keystone Segment of the Captain John Smith Trail. 3) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR. 4) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process. 5) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response. 6) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility. 7) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times. 8) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing. 9) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project. 10) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous

waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 11) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results. 12) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	6/14/2024
Revised Concept Plan	Backup Material	8/5/2024
Concept Plan	Backup Material	5/20/2024
Narrative	Backup Material	6/14/2024
Transportation Route	Backup Material	5/20/2024
Economic Impact Analysis	Backup Material	6/14/2024
Visual Impact Analysis	Backup Material	5/20/2024
Wetland Study	Backup Material	5/22/2024
Threatened and Endangered Species Assesssment	Backup Material	5/22/2024
Phase 1 Study	Backup Material	5/20/2024
Isle of Wight County Musuem Response	Backup Material	5/20/2024
Mitigation Memo DHR	Backup Material	5/20/2024
Location Map	Backup Material	5/20/2024
Location Closeup Map	Backup Material	5/20/2024
Zoning Map	Backup Material	5/20/2024
Land Use Map	Backup Material	5/20/2024
Ecological Core map	Backup Material	5/22/2024
Solar Facility Table	Backup Material	6/18/2024

PC Staff Report	Backup Material	8/1/2024
Revised Application	Backup Material	8/5/2024
Revised Narrative	Backup Material	8/5/2024
Ordinance	Ordinance	8/5/2024

Local Roots, Global Reach

ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[x] Conditional Use Permit (Are applicant proposed conditions attached?): x Yes _____ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?):_____Yes _____ No

Proposed Use or Activity: Solar Energy Generation Facility

B. PROJECT DESCRIPTION:

Project Name: VAL025

Property Address (if any): 8699 OLD STAGE HWY, SMITHFIELD, VA 23430

Election District: 3

Comprehensive Plan Designation: RURAL AGRICULTURAL CONSERVATION

The use permit will apply to 27.32 acres out of 94.21 total acres

Tax Parcel Identification # 13-01-005 Number of acres to be effected: 94.21

Tax Parcel Identification #_____Number of acres to be effected: _____

Tax Parcel Identification #_____Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water_____ Private Well _____

Public Sewer_____ Private Septic _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): ELK DEVELOPMENT, LLC

Address: 6865 DEERPATH ROAD, SUITE 330

City, State, Zip Code: ELKRIDGE, MD, 21075

Phone No.: 570-847-7555 Email: rhickox@pivotenergy.net Fax No.:

Property Owner(s) Name(s): CROCKER WILLIAM PENNIE JR & TERESA L

Address: 16338 MORGARTS BEACH RD

City, State, Zip Code: SMITHFIELD, VA 23430

Phone No.: 757-651-9280 Email: fnhrugershooter@gmail.com Fax No.:

5/16/2024

Applicant Signature **Date**

24 MAR 23

Owner Signature *if different* **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: _____ Fees Paid: _____
Tax Query: [ ] Current [ ] Delinquent Distribution Date: _____
Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: _____

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant ELK DEVELOPMENT, LLC

Address 6865 DEERPATH ROAD, SUITE 330
Street

ELKRIDGE MD 21075
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
8699 OLD STAGE HWY, SMITHFIELD, VA 23430	AGRICULTURE FIELDS & WOODLAND

OTHER OWNERS OF AFFECTED REAL ESTATE

(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
CROCKER WILLIAM PENNIE JR & TERESA L	16338 MORGARTS BEACH RD
	SMITHFIELD, VA 23430
Pivot Energy	
Elk Development, LLC (a wholly owned subsidiary of Pivot Energy)	

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes[ ] No[X]
If yes, names of members:

_____

_____

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct, and true.

Applicant: Michael Sloan - President, East of Pivot Energy Applicant: _____ Date: _____
Printed or Typed Name Signature

Commonwealth of Virginia
County of Isle of Wight

Subscribed and sworn to before me_____,
A Notary Public in and for the County of Isle of Wight, Commonwealth
of Virginia, this_____day of_____, 20_____.

_____
Notary Public

My Commission Expires_____

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided**. The required number of copies may be reduced with permission of the Zoning Administrator.**

- ☒ Application: Ten (10) copies of the original, executed application, one (1) digital copy of all application documents, and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page 3 of the application.

- ☒ The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.

- ☒ Ten (10) copies of a statement of the reasons for seeking such permit and if applicable, a statement of conditions.

- ☒ Ten (10) copies of a narrative description of the property which shall include the Tax Parcel Identification

- ☒ Ten (10) copies of a concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:
    - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
    - Title of drawing
    - Date of drawing
    - Existing wood line
    - North arrow
    - Scale bar
    - Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
    - Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
    - Street names including route number and width(s) of the right-of-way(s)
    - Ten (10) full size copies, with one (1) reduced 11-inch X 17-inch copy and a digital copy shall be submitted

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

☒ Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

☒ A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

☒ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

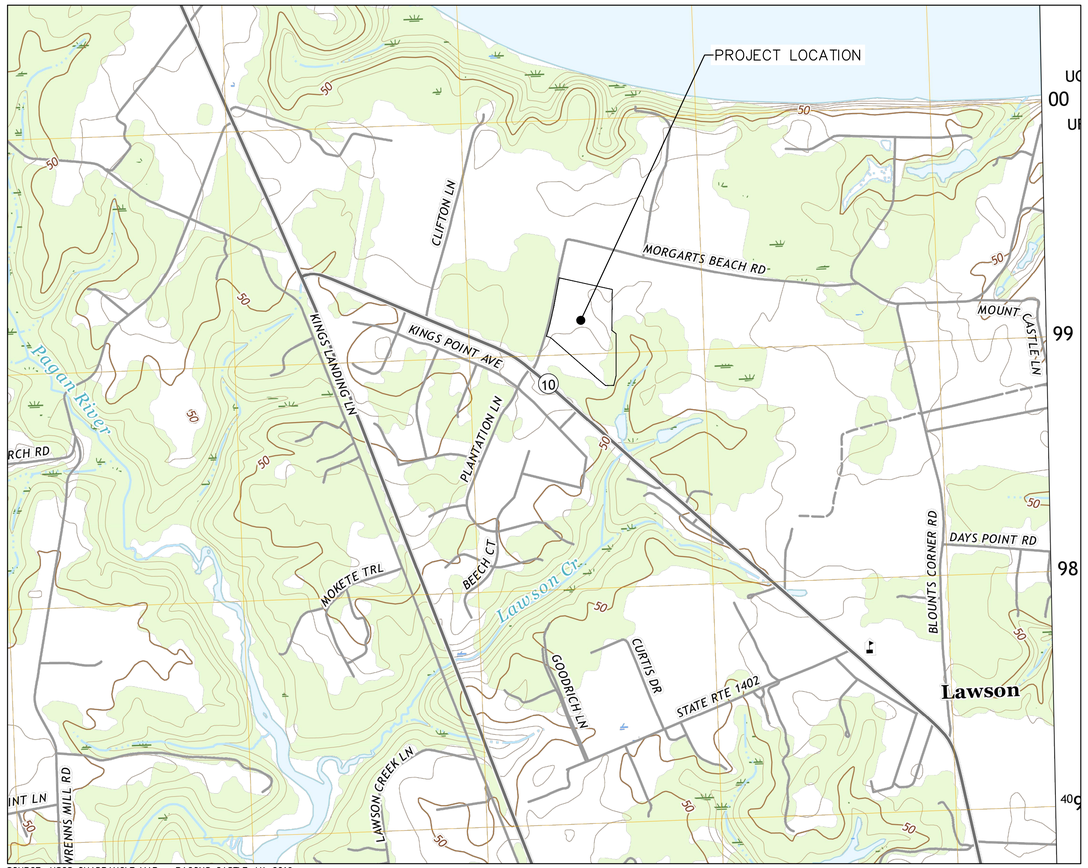
Jon Fitzpatrick

Printed or Typed Name

Signature

16/05/2024

Date



SOURCE: USGS QUADRANGLE MAP – BACONS CASTLE, VA 2019

VICINITY MAP

1000 0 1000 2000

SCALE: 1" = 1000'

CONDITIONAL USE CONCEPT PLAN

VAL025
Solar Energy System

8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA

GENERAL NOTES

1. SOLAR PANEL AND ELECTRICAL LAYOUT AND DESIGN PROVIDED BY PIVOT ENERGY, 6865 DEERPATH ROAD, STE 330, ELKRIDGE, MD 21075. 410-779-9377
2. SITE PLANS AND DESIGN PERFORMED BY DAWOOD ENGINEERING, INC., 11 GRANDVIEW CIRCLE, SUITE 116, CANONSBURG, PA 15317, 855-432-9663.
3. THE DEVELOPER SHALL COMPLY WITH ALL APPLICABLE COUNTY ORDINANCES IN EFFECT AT TIME OF SUBMISSION OF THE PLAN.
4. SITE DEVELOPMENT PLAN APPROVAL DOES NOT RELIEVE THE OWNER FROM ALL APPLICABLE SIGN REGULATIONS. ALL PROPOSED ON-SITE SIGNAGE SHALL CONFORM TO THE COUNTY ORDINANCES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
6. NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF ANY EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH THE EASEMENT AGREEMENT.
7. ALL EXISTING UTILITIES HAVE BEEN SHOWN IN ACCORDANCE WITH THE AVAILABLE INFORMATION. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN. ADDITIONAL UTILITIES MAY BE ENCOUNTERED.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES AND WILL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES AND STRUCTURES AT ALL TIMES.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AND COMPLETELY AT HIS EXPENSE.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COPY OF ALL PERMITS RELATED TO THE CONSTRUCTION SHOWN ON THESE PLANS ON THE JOB SITE AT ALL TIMES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC SAFETY AS MANDATED BY DOT, OSHA, DEQ AND OTHER AGENCIES.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL.
13. CONTRACTOR SHALL DEVELOP A PLAN FOR CONSTRUCTION TO AVOID DIRECT IMPACT TO ANY OF THE HISTORICAL RESOURCES IDENTIFIED. IN ADDITION, SHOULD ANY ARCHAEOLOGICAL ARTIFACTS BE DISCOVERED DURING CONSTRUCTION THE LANDOWNER SHALL BE NOTIFIED IMMEDIATELY. THE LANDOWNER SHALL CONSIDER USING THE ISLE OF WIGHT COUNTY MUSEUM AS A REPOSITORY FOR DISCOVERED ARTIFACTS.
14. IN ACCORDANCE WITH ISLE OF WIGHT ZONING ORDINANCE 5-5003, SECTION M.4.h., CONTRACTOR SHALL INSPECT AND VIDEO DOCUMENT ALL SECONDARY ROADS TO BE UTILIZED BY CONSTRUCTION VEHICLES PRIOR TO STARTING CONSTRUCTION AND AGAIN AFTER CONSTRUCTION IS COMPLETE. ALL ROADS DAMAGED BY SOLAR FARM CONSTRUCTION TO BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

SURVEY NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON FIELD SURVEY PERFORMED BY DAWOOD ENGINEERING, INC. IN OCTOBER AND NOVEMBER 2022.
2. THE LEGAL RIGHT-OF-WAY ON VA-10 IS 50 FEET.
3. THE LEGAL RIGHT-OF-WAY ON SR 673 IS 30 FEET BASED ON INSTRUMENT #040006491
4. VERTICAL CONTROL IS BASED ON NAVD 88 GEOID 18.
5. HORIZONTAL CONTROL IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM-SOUTH ZONE, NAD83 (2011) (EPOCH 2010.00).
6. ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE BASED UPON SURFACE FEATURES AND RECORD DRAWINGS PROVIDED. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATION SHOWN HEREON. ADDITIONAL BURIED UTILITIES AND STRUCTURES MAY BE ENCOUNTERED.
7. THE SITE IS NOT SITUATED WITHIN A FLOOD HAZARD AREA ACCORDING TO FEMA FLOOD INSURANCE RATE MAP PANEL NUMBER 51093C0070E, EFFECTIVE DATE 12/2/2015.
8. A FIELD DELINEATION OF WETLAND HABITATS WAS CONDUCTED BY DAWOOD ENGINEERING, INC. IN OCTOBER 2022. THE WETLANDS AND WATERCOURSES IDENTIFIED HAVE BEEN DELINEATED ON THE SURVEY.

LAND OWNERS

PARCEL 13-01-005
WILLIAM PENNIE JR & TERESA L CROCKER

SOURCE OF TITLE

INSTRUMENT #090005573
RECORDED IN ISLE OF WIGHT COUNTY
ON SEPTEMBER 18, 2009
GRANTEE: WILLIAM PENNIE CROCKER, JR
AND TERESA L. CROCKER
GRANTOR: MARY C. CROCKER

LEGEND
(TYPICAL ALL PLAN SHEETS)

- Right of Way
- Center Line
- Record
- Found
- Used
- Book
- Page
- Iron Pin Found
- Pipe Found
- Stone Monument Found
- Iron Pin Monument Found
- Concrete Monument Found
- Axle Found
- Fence Post Found
- Angle Iron Found
- Mag Nail Found
- Railroad Spike Found
- Benchmark
- Bollard
- Road Sign
- Post Or Pole
- Handicapped Parking
- Electric Vault
- Electric Meter
- Electric Pole
- Guy Wire
- Light Post/Pole
- Telephone Manhole
- Cable Box
- Water Meter
- Water Manhole
- Water Spigot
- Water Valve
- Sanitary Sewer Cleanout
- Sanitary Sewer Manhole
- Gas Meter
- Gas Valve
- Gas Marker
- Gas Test Station
- Storm Sewer Inlet
- Storm Sewer Manhole
- Parcel Boundary Line
- Legal Right-Of-Way Line
- Center Line
- Edge Of Bituminous Paving
- Edge Of Gravel
- Curb
- Fence Line
- Guide Rail
- Building Line
- Tree Line
- Overhead Electric Line
- Underground Electric Line
- Overhead Telephone Line
- Underground Telephone Line
- Overhead Cable TV
- Underground Cable TV
- Water Line
- Sanitary Sewer Line
- Gas Line
- Storm Sewer Line
- Water Edge / Stream
- Wetlands
- Soil Type and Limits (XXX)
- Minor Contour
- Major Contour

VISIT va811.com Dig With CARE

CALL 811 BEFORE YOU DIG
ALLOW REQUIRED TIME FOR MARKING
RESPECT THE MARKS
EXCAVATE CAREFULLY

THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT, AS AMENDED, REQUIRES THREE BUSINESS DAYS NOTICE TO UTILITIES BEFORE YOU DIG, DRILL, OR BLAST. DIAL 8-1-1 OR 1-800-552-7001 NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 15 BUSINESS DAYS PRIOR TO THE EXCAVATION OF A WORK AREA.

VIRGINIA ONE CALL SYSTEM TICKET NUMBER
DESIGN TICKET No.: A230601979-00A DATE: 11/02/22

LIST OF PUBLIC UTILITIES

COMPANY: AT&T (ATT392)
CONTACT: COLIN PROFITT
804-869-7359
IN EVENT OF DAMAGE CALL: 800-252-1133

COMPANY: COLUMBIA GAS (CGV333)
CONTACT: UTILIQUEST
703-754-2116
IN EVENT OF DAMAGE CALL: 800-544-5606

COMPANY: CHARTER COMMUNICATIONS (CHC191)
CONTACT: JEFF WAGGONER
804-641-3544
IN EVENT OF DAMAGE CALL: 855-272-2862

COMPANY: DOMINION EAST DISTRIBUTIO (DOM409)
CONTACT: UTILIQUEST
804-286-1721
IN EVENT OF DAMAGE CALL: 866-366-4357

COMPANY: MID-ATLANTIC BROADBAND (MBC487)
CONTACT: STAKE CENTER LOCATING
801-364-1063
IN EVENT OF DAMAGE CALL: 866-480-1934

COMPANY: VERIZON (VZN757)
CONTACT: UTILIQUEST
757-315-8119
IN EVENT OF DAMAGE CALL: 888-483-1233

LISTING OF REQUIRED PERMITS

- ISLE OF WIGHT COUNTY APPROVALS
  CONDITIONAL USE
  SITE DEVELOPMENT PLAN
- VDOT LAND USE PERMIT (LUP-CEI) FOR DRIVEWAY CONSTRUCTION WITHIN MORGARTS BEACH RD RIGHT-OF-WAY
- VDOT LAND USE PERMIT (LUP-UT) FOR UTILITY INSTALLATION WITHIN MORGARTS BEACH RD AND OLD STAGE HWY RIGHT-OF-WAY (BY DOMINION)
- VDEQ VPDES (VAR10) FOR LAND DISTURBANCE EXCEEDING 1-ACRE

PLAN SHEET INDEX:

C1 ..... COVER SHEET
C2 ..... PROPERTY PLAT / NEARBY RESOURCES MAP
C3 ..... ENVIRONMENTAL SITE ASSESSMENT PLAN
C4 ..... EXISTING CONDITIONS SITE PLAN
C5 ..... SITE DEVELOPMENT PLAN

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DOCUMENT PREPARED BY:
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T 724.746.0730 www.dawood.us

SCALE:

DOCUMENT PREPARED FOR:
ELK DEVELOPMENT, LLC
6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL025 Solar Energy System
8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
COVER SHEET

DATE	MARCH 28, 2023
JOB NO.	2200547.01
FILE NAME	LD-SK-TI
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C1

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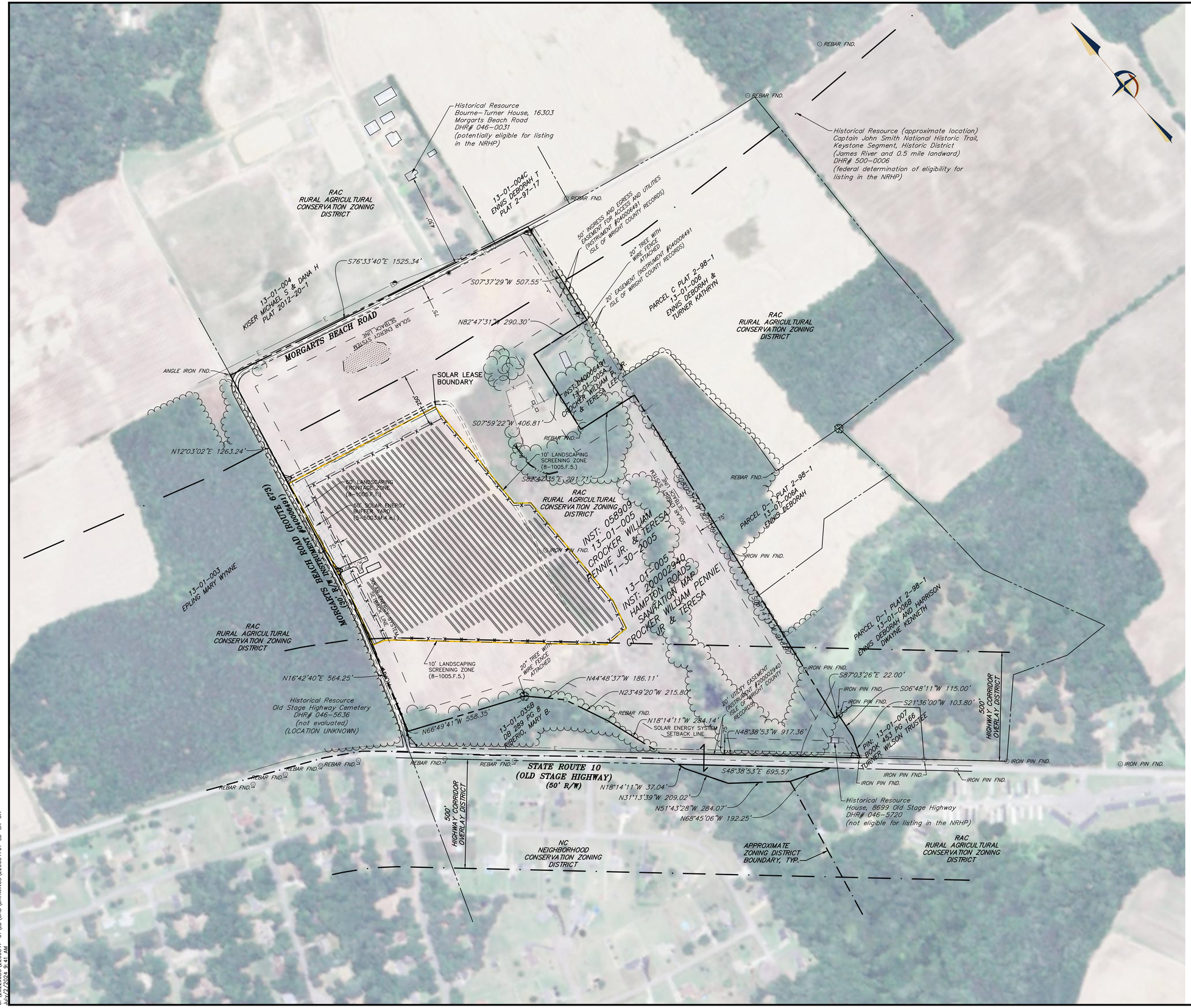
July/2/2024 9:40 AM



ZONING REQUIREMENTS / SITE DATA		
TAX PARCEL	13–01–005	
ZONING DISTRICT	RURAL AGRICULTURAL CONSERVATION (RAC) DISTRICT & HIGHWAY CORRIDOR OVERLAY (HCO) DISTRICT	
EXISTING LAND USE	AGRICULTURE	
PROPOSED LAND USE	AGRICULTURE	SOLAR ENERGY SYSTEM (UTILITY SERVICE/MAJOR)
WATER/WASTEWATER	EXISTING TO REMAIN	N/A
SITE ACCESS	MORGARTS BEACH ROAD	
REQUIRED LOT SIZE	40,000–SF	
ACTUAL LOT SIZE PER USE	59.40 AC	22.62 AC
TOTAL LOT SIZE	82.02 AC	
REQUIRED LOT WIDTH	150–FT	
ACTUAL LOT WIDTH	1818 FT	
REQUIRED LOT FRONTAGE	120–FT	
ACTUAL LOT FRONTAGE	917 FT (VA 10) + 3260 FT (SR 673)	
MINIMUM FRONT SETBACK	60–FT	SOLAR ENERGY SYSTEMS: 75–FT ALL PROPERTY LINES (125–FT FROM RESIDENTIAL PARCELS)
MINIMUM SIDE SETBACK	15–FT (ONE SIDE) 35–FT (BOTH SIDES) (15–FT ACCESSORY STRUCTURES)	
MINIMUM REAR SETBACK	35–FT (5–FT ACCESSORY STRUCTURES)	
MAXIMUM BUILDING HEIGHT	LESSOR OF 35–FT OR 3–STORIES	
ACTUAL BUILDING HEIGHT	< 35 FT	N/A
MAXIMUM HEIGHT FOR GROUND–MOUNTED SOLAR PANELS	15–FT AT MAXIMUM TILT (EXCEPT FOR VEGETATION MANAGEMENT OR FOR INSPECTION, MAINTENANCE, OR REPAIR)	
MAXIMUM SOUND FROM SOLAR ENERGY SYSTEM	60 DbA (A–WEIGHTED DECIBELS) AS MEASURED AT ANY PARCEL LINE	
MINIMUM STORMWATER MANAGEMENT FACILITY SETBACK	20–FT FROM PUBLIC RIGHT–OF–WAY, PROPERTY LINES, EASEMENTS, OR ANY BUILDING	

LANDSCAPING AND SCREENING REQUIREMENTS	
TOTAL SITE REQUIREMENTS	
8–1003.B.	MINIMUM 25% EVERGREEN SPECIES MINIMUM 50% NATIVE SPECIES MINIMUM 15% LANDSCAPE SURFACE RATIO
LANDSCAPING ZONE REQUIREMENTS	
8–1005.F.1.	60' WIDE FRONTAGE ZONE 1.75 POINTS / LF MINIMUM 60% NON–ORNAMENTAL MAXIMUM 50% EVERGREEN
8–1005.F.2.	10' WIDE BUFFER ZONE 0.9 POINTS / LF (ADJ. TO RES. STRUCTURE) 0.45 POINTS / LF (NOT ADJ.) ONE PEDESTRIAN BREAK PER 50 LF (MIN. 6' WIDE)
8–1005.F.5.	10' WIDE SCREENING ZONE 0.8 POINTS / LF NOT INCLUDING FENCES/BERMS/WALLS
SOLAR ENERGY REQUIREMENTS	
5–5003.M.4.e.i.	PUBLIC ROAD 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF TREES AND SHRUBS AT MAXIMUM 8–FT ON CENTER
5–5003.M.4.e.ii.	ABUTTING RESIDENTIAL PARCEL 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF LARGE AND SMALL CANOPY TREES AND MEDIUM SHRUBS AT MAXIMUM 8–FT ON CENTER

SITE AREA TABULATION		
NET (LESS R/W) PARCEL SIZE	3,572,717 SF	82.02 AC
PROJECT AREA LIMITS OF CONSTRUCTION	1,177,098 SF	27.02 AC
PROPOSED LAND DISTURBANCE	TBD	TBD
PROPOSED TREE CLEARING	2700 SF	0.06 AC
PROJECT AREA ACREAGE:	**EXISTING**	**PROPOSED**
SOLAR FARM (FENCED AREA)	0	19.88 AC (88%)
OPEN SPACE	22.62 AC (100%)	2.74 AC (12%)
BUILDING AREA	0	0
IMPERVIOUS COVERAGE	0	0.13 AC
MOUNTED SOLAR PANELS	n/a	5.04 AC
FENCING	0	0.18 AC
LANDSCAPING	n/a	2.65 AC
POINT OF INTERCONNECTION	n/a	0.08 AC
CROPS (TYPE VARIES)	22.62 AC	0
PASTURE	0	0
WOODLAND	0	0
PARCEL AREA ACREAGE:	**EXISTING**	**PROPOSED**
CROPS (TYPE VARIES)	45 AC	24 AC
PASTURE	0	0
WOODLAND	11 AC	11 AC

NET DEVELOPABLE ACREAGE *		
GROSS SOLAR LEASE AREA	22.62 Acres	
TIDAL WETLANDS	0	AT 100%
100–YEAR FLOODPLAINS	0	AT 100%
RESOURCE PROTECTION AREAS (INCLUDING 100–FT BUFFER)	0	AT 100%
NON–TIDAL WETLANDS	0	AT 50%
SLOPES >15% BUT <30%	0.03	AT 50%
SLOPES >30%	0.01	AT 100%
POWER TRANSMISSION LINE EASEMENTS	0	AT 100%
GAS TRANSMISSION LINE EASEMENTS	0	AT 100%
STREET RIGHT–OF–WAY, EXISTING OR PLANNED, PUBLIC OR PRIVATE	22.62	AT 20%
SOLAR LEASE AREA NET DEVELOPABLE AREA *	18.07 Acres	

* NDA CALCULATIONS FOR SOLAR LEASE AREA ONLY. NDA OUTSIDE THE SOLAR LEASE AREA HAS NOT BEEN DETERMINED

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SCALE: 1" = 200'

DOCUMENT PREPARED FOR:

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6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL025 Solar Energy System
8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
PROPERTY PLAT / NEARBY RESOURCES MAP

DATE	MARCH 28, 2023
JOB NO.	2200547.01
FILE NAME	LD–SK–OA
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C2

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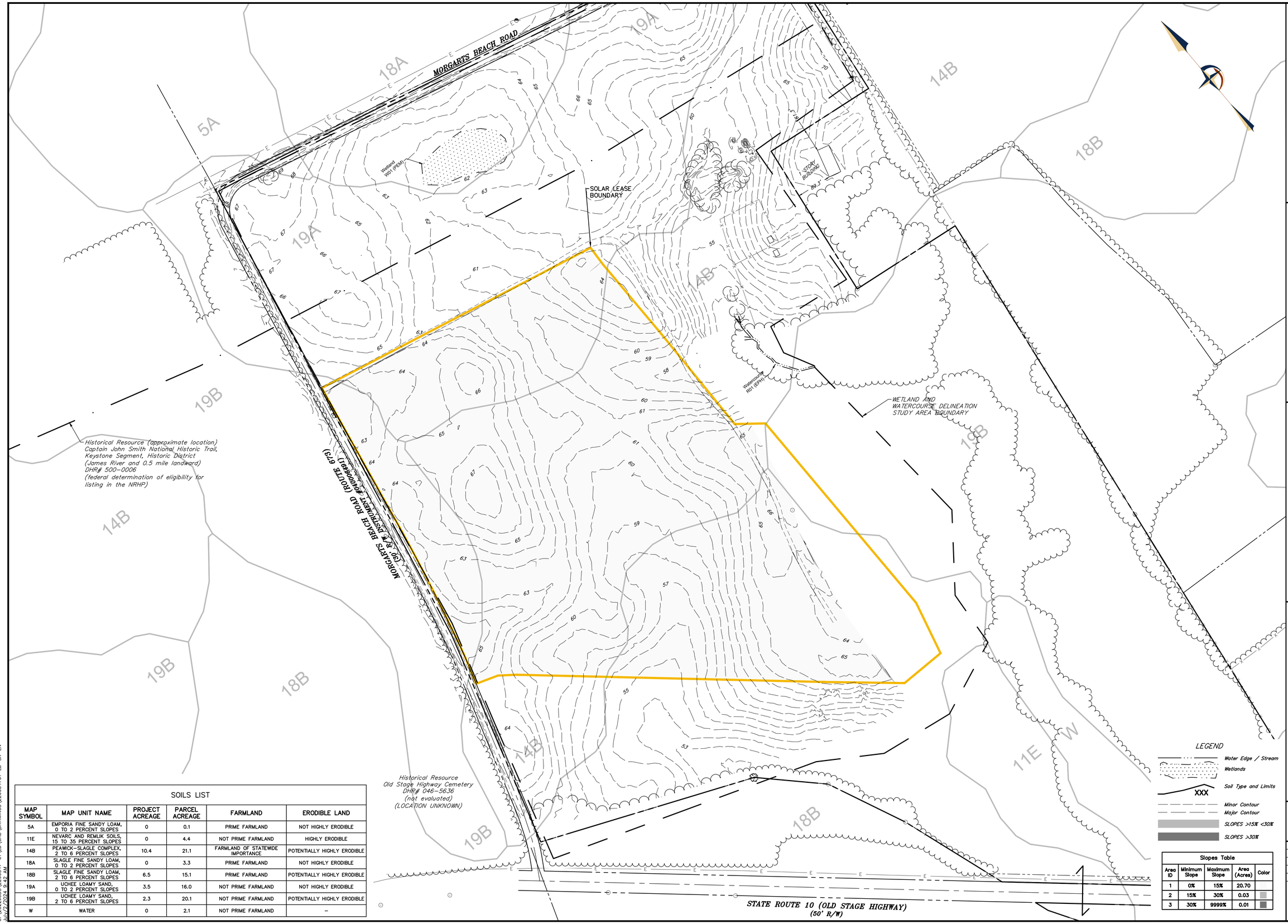

SOILS LIST					
MAP SYMBOL	MAP UNIT NAME	PROJECT ACREAGE	PARCEL ACREAGE	FARMLAND	ERODIBLE LAND
5A	EMPORIA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0	0.1	PRIME FARMLAND	NOT HIGHLY ERODIBLE
11E	NEVARC AND REMLIK SOILS, 15 TO 35 PERCENT SLOPES	0	4.4	NOT PRIME FARMLAND	HIGHLY ERODIBLE
14B	PEAWICK-SLAGLE COMPLEX, 2 TO 6 PERCENT SLOPES	10.4	21.1	FARMLAND OF STATEWIDE IMPORTANCE	POTENTIALLY HIGHLY ERODIBLE
18A	SLAGLE FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0	3.3	PRIME FARMLAND	NOT HIGHLY ERODIBLE
18B	SLAGLE FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	6.5	15.1	PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
19A	UCHEE LOAMY SAND, 0 TO 2 PERCENT SLOPES	3.5	16.0	NOT PRIME FARMLAND	NOT HIGHLY ERODIBLE
19B	UCHEE LOAMY SAND, 2 TO 6 PERCENT SLOPES	2.3	20.1	NOT PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
W	WATER	0	2.1	NOT PRIME FARMLAND	–

Slopes Table				
Area ID	Minimum Slope	Maximum Slope	Area (Acres)	Color
1	0%	15%	20.70	
2	15%	30%	0.03	
3	30%	9999%	0.01	

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CONDITIONAL USE CONCEPT PLAN
FOR
VAL025 Solar Energy System
8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
ENVIRONMENTAL SITE ASSESSMENT PLAN

DATE	MARCH 28, 2023
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DRAWN BY	CWW
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SHEET NO	C3

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MORGARTS BEACH ROAD

13-01-004
KISER MICHAEL S & DANA H
PLAT 2012-20-1

LOCATION BASED ON AERIAL IMAGERY

E POLE

50' INGRESS AND EGRESS EASEMENT FOR ACCESS AND UTILITIES (INSTRUMENT #040006491 ISLE OF WIGHT COUNTY RECORDS)

LOCATION BASED ON AERIAL IMAGERY

20' EASEMENT (INSTRUMENT #040006491 ISLE OF WRIGHT COUNTY RECORDS)

PARCEL C PLAT 2-98-1
13-01-006
ENNIS DEBORAH &
TURNER KATHRYN

RAC
RURAL AGRICULTURAL CONSERVATION
ZONING DISTRICT

Wetland W01 (PEM)

SOLAR LEASE BOUNDARY

1 STORY BUILDING

INST: 040006491
13-01-006A
CROCKER WILLIAM P. JR.
& TERESA LEE

FARM LANE

Watercourse R01 (EPH)

WETLAND AND WATERCOURSE DELINEATION STUDY AREA BOUNDARY

PARCEL D-1 PLAT 2-98-1
13-01-006A
ENNIS DEBORAH

Historical Resource (approximate location)
Captain John Smith National Historic Trail, Keystone Segment, Historic District
(James River and 0.5 mile landward)
DHR# 500-0006
(federal determination of eligibility for listing in the NRHP)

MORGARTS BEACH ROAD (ROUTE 673)
(50' R/W DEDICATED & ACCEPTED)

13-01-003
EPLING MARY WYNNE

INST: 058909
13-01-005
CROCKER WILLIAM
PENNIE JR. & TERESA
11-30-2005

INST: 200002940
13-01-005
HAMPTON ROADS SANITATION MAP
CROCKER WILLIAM PENNIE JR & TERESA

RAC
RURAL AGRICULTURAL CONSERVATION
ZONING DISTRICT

Historical Resource
Old Stage Highway Cemetery
DHR# 046-5636
(not evaluated)
(LOCATION UNKNOWN)

13-01-035B
DB 289 PG 8
RIBERIO, MARY B.

HIGHWAY CORRIDOR OVERLAY DISTRICT 500'

20' UTILITY EASEMENT (INSTRUMENT #200002940 ISLE OF WRIGHT COUNTY RECORDS)

APPROXIMATE LOCATION OF LOCATION BASED ON AERIAL IMAGERY

ASPHALT

50.0'

STATE ROUTE 10 (OLD STAGE HIGHWAY)
(50' R/W)

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HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
EXISTING CONDITIONS SITE PLAN

DATE	MARCH 28, 2023
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O:\2022JOBS\2200547-01\LD\CAD\DRAWINGS\2200547-01-LD-SK-EC
JUL 2, 2024 - 9:43 AM

MORGARTS BEACH ROAD

13-01-004
KISER MICHAEL S & DANA H
PLAT 2012-20-1

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PARCEL C PLAT 2-98-1
13-01-006
ENNIS DEBORAH &
TURNER KATHRYN

RAC
RURAL AGRICULTURAL CONSERVATION
ZONING DISTRICT

SOLAR ENERGY SYSTEM SETBACK LINE

Wetland W01 (PEM)

SOLAR LEASE BOUNDARY

1 STORY BUILDING

INST: 040006491
13-01-006A
CROCKER WILLIAM P. JR.
& TERESA LEE

3 STAGGERED ROWS OF TREES AND SHRUBS AT MAXIMUM 8-FT ON CENTER

TEMPORARY STAGING AREA, PARKING, AND LAYDOWN YARD

DIRT FARM LANE (12' WIDE)

25' CLEAR SIGHT TRIANGLE

PRIVATE ENTRANCE (GRAVEL)

SDR REQ'D, TABLE 2-5, 25 MPH, = 280'
(ACTUAL SDR >280')

50' LANDSCAPING FRONTAGE ZONE (8-1005F.1.)

50' SOLAR ENERGY BUFFER YARD (5-8003M.4.e.)

WETLAND AND WATERCOURSE DELINEATION STUDY AREA BOUNDARY

Watercourse R01 (EPH)

10' LANDSCAPING SCREENING ZONE (8-1005.F.5.)

PARCEL D-1 PLAT 2-98-1
13-01-006A
ENNIS DEBORAH

Historical Resource (approximate location)
Captain John Smith National Historic Trail,
Keystone Segment, Historic District
(James River and 0.5 mile landward)
DHR# 500-0006
(federal determination of eligibility for listing in the NRHP)

MORGARTS BEACH ROAD (ROUTE 673)
(50' R/W PER SUBDIVISION #040006491)

13-01-003
EPLING MARY WYNNE

25' CLEAR SIGHT TRIANGLE

GRAVEL ROAD (20' WIDE)

CONC. EQUIPMENT PAD (26'x65')

MODERATE VOLUME COMMERCIAL ENTRANCE (GRAVEL)

15" CULVERT

3 STAGGERED ROWS OF TREES AND SHRUBS AT MAXIMUM 8-FT ON CENTER

SDL REQ'D, TABLE 2-5, 25 MPH, = 280'
(ACTUAL SDL >280')

UNDERGROUND MV LINE

SOLAR ENERGY SYSTEM SETBACK LINE

INST: 058909
13-01-005
CROCKER WILLIAM
PENNIE JR. & TERESA
11-50-2005

INST: 200002940
13-01-005
HAMPTON ROADS SANITATION MAP
CROCKER WILLIAM PENNIE JR. & TERESA

96'

SECURITY FENCE

PV MODULES, TYP

CONTINUOUS VEGETATIVE LANDSCAPING SCREEN

10' LANDSCAPING SCREENING ZONE (8-1005.F.5.)

AERIAL MV LINE

UTILITY POLE, TYP 7 PLACES

RAC
RURAL AGRICULTURAL CONSERVATION
ZONING DISTRICT

Historical Resource
Old Stage Highway Cemetery
DHR# 046-5636
(not evaluated)
(LOCATION UNKNOWN)

HIGHWAY CORRIDOR OVERLAY DISTRICT
500'

13-01-035B
DB 289 PG 8
RIBERO, MARY B.

20' UTILITY EASEMENT (INSTRUMENT #200002940 ISLE OF WRIGHT COUNTY RECORDS)

APPROXIMATE LOCATION OF WATSON CREEK LOCATION BASED ON AERIAL IMAGERY

SOLAR ENERGY SYSTEM SETBACK LINE

VEGETATION TO BE CUT AS REQUIRED FOR AERIAL LINES

AERIAL MV LINE

ASPHALT

POI MV INTERCONNECTION (EXISTING POLE)

LIMITS OF CONSTRUCTION (LOC)

50.0'

STATE ROUTE 10 (OLD STAGE HIGHWAY)
(50' R/W)

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DOCUMENT PREPARED BY:

DAWOOD
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SCALE: 1" = 100'

DOCUMENT PREPARED FOR:

ELK DEVELOPMENT, LLC
6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL025 Solar Energy System
8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
SITE DEVELOPMENT PLAN

DATE	MARCH 28, 2023
JOB NO.	2200547.01
FILE NAME	LD-SK-PN
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C5

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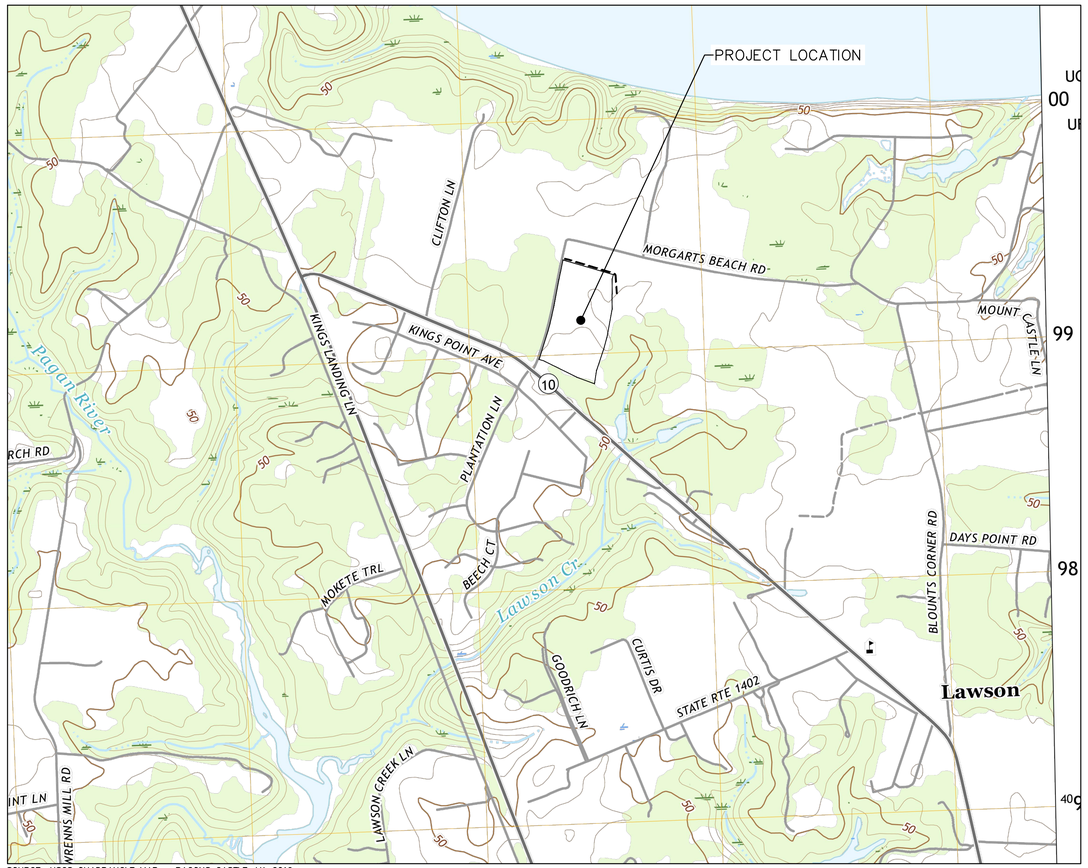

SOURCE: USGS QUADRANGLE MAP – BACONS CASTLE, VA 2019

VICINITY MAP

1000 0 1000 2000

SCALE: 1" = 1000'

CONDITIONAL USE CONCEPT PLAN

VAL025
Solar Energy System

8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA

GENERAL NOTES

1. SOLAR PANEL AND ELECTRICAL LAYOUT AND DESIGN PROVIDED BY PIVOT ENERGY, 6865 DEERPATH ROAD, STE 330, ELKRIDGE, MD 21075. 410-779-9377
2. SITE PLANS AND DESIGN PERFORMED BY DAWOOD ENGINEERING, INC., 11 GRANDVIEW CIRCLE, SUITE 116, CANONSBURG, PA 15317, 855-432-9663.
3. THE DEVELOPER SHALL COMPLY WITH ALL APPLICABLE COUNTY ORDINANCES IN EFFECT AT TIME OF SUBMISSION OF THE PLAN.
4. SITE DEVELOPMENT PLAN APPROVAL DOES NOT RELIEVE THE OWNER FROM ALL APPLICABLE SIGN REGULATIONS. ALL PROPOSED ON-SITE SIGNAGE SHALL CONFORM TO THE COUNTY ORDINANCES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
6. NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF ANY EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH THE EASEMENT AGREEMENT.
7. ALL EXISTING UTILITIES HAVE BEEN SHOWN IN ACCORDANCE WITH THE AVAILABLE INFORMATION. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN. ADDITIONAL UTILITIES MAY BE ENCOUNTERED.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES AND WILL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES AND STRUCTURES AT ALL TIMES.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AND COMPLETELY AT HIS EXPENSE.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COPY OF ALL PERMITS RELATED TO THE CONSTRUCTION SHOWN ON THESE PLANS ON THE JOB SITE AT ALL TIMES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC SAFETY AS MANDATED BY DOT, OSHA, DEQ AND OTHER AGENCIES.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL.
13. CONTRACTOR SHALL DEVELOP A PLAN FOR CONSTRUCTION TO AVOID DIRECT IMPACT TO ANY OF THE HISTORICAL RESOURCES IDENTIFIED. IN ADDITION, SHOULD ANY ARCHAEOLOGICAL ARTIFACTS BE DISCOVERED DURING CONSTRUCTION THE LANDOWNER SHALL BE NOTIFIED IMMEDIATELY. THE LANDOWNER SHALL CONSIDER USING THE ISLE OF WIGHT COUNTY MUSEUM AS A REPOSITORY FOR DISCOVERED ARTIFACTS.
14. IN ACCORDANCE WITH ISLE OF WIGHT ZONING ORDINANCE 5-5003, SECTION M.4.h., CONTRACTOR SHALL INSPECT AND VIDEO DOCUMENT ALL SECONDARY ROADS TO BE UTILIZED BY CONSTRUCTION VEHICLES PRIOR TO STARTING CONSTRUCTION AND AGAIN AFTER CONSTRUCTION IS COMPLETE. ALL ROADS DAMAGED BY SOLAR FARM CONSTRUCTION TO BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

SURVEY NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON FIELD SURVEY PERFORMED BY DAWOOD ENGINEERING, INC. IN OCTOBER AND NOVEMBER 2022.
2. THE LEGAL RIGHT-OF-WAY ON VA-10 IS 50 FEET.
3. THE LEGAL RIGHT-OF-WAY ON SR 673 IS 30 FEET BASED ON INSTRUMENT #040006491
4. VERTICAL CONTROL IS BASED ON NAVD 88 GEOID 18.
5. HORIZONTAL CONTROL IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM-SOUTH ZONE, NAD83 (2011) (EPOCH 2010.00).
6. ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE BASED UPON SURFACE FEATURES AND RECORD DRAWINGS PROVIDED. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATION SHOWN HEREON. ADDITIONAL BURIED UTILITIES AND STRUCTURES MAY BE ENCOUNTERED.
7. THE SITE IS NOT SITUATED WITHIN A FLOOD HAZARD AREA ACCORDING TO FEMA FLOOD INSURANCE RATE MAP PANEL NUMBER 51093C0070E, EFFECTIVE DATE 12/2/2015.
8. A FIELD DELINEATION OF WETLAND HABITATS WAS CONDUCTED BY DAWOOD ENGINEERING, INC. IN OCTOBER 2022. THE WETLANDS AND WATERCOURSES IDENTIFIED HAVE BEEN DELINEATED ON THE SURVEY.

LAND OWNERS

PARCEL 13-01-005
WILLIAM PENNIE JR & TERESA L CROCKER

SOURCE OF TITLE

INSTRUMENT #090005573
RECORDED IN ISLE OF WIGHT COUNTY
ON SEPTEMBER 18, 2009
GRANTEE: WILLIAM PENNIE CROCKER, JR
AND TERESA L. CROCKER
GRANTOR: MARY C. CROCKER

LEGEND
(TYPICAL ALL PLAN SHEETS)

- R/W Right of Way
- ℄ Center Line
- R Record
- F Found
- U Used
- B Book
- P Page
- I.P. Fnd. Iron Pin Found
- Pipe. Fnd. Pipe Found
- Stone Fnd. Stone Monument Found
- IP. Mon. Fnd. Iron Pin Monument Found
- Mon. Fnd. Concrete Monument Found
- Axle Found
- Fence Post Found
- Angle Iron Found
- Mag Nail Found
- Railroad Spike Found
- Benchmark
- Bollard
- Road Sign
- Post Or Pole
- Handicapped Parking
- Electric Vault
- Electric Meter
- Electric Pole
- Guy Wire
- Light Post/Pole
- Telephone Manhole
- Cable Box
- Water Meter
- Water Manhole
- Water Spigot
- Water Valve
- Sanitary Sewer Cleanout
- Sanitary Sewer Manhole
- Gas Meter
- Gas Valve
- Gas Marker
- Gas Test Station
- Storm Sewer Inlet
- Storm Sewer Manhole
- Parcel Boundary Line
- Legal Right-Of-Way Line
- Center Line
- Edge Of Bituminous Paving
- Edge Of Gravel
- Curb
- Fence Line
- Guide Rail
- Building Line
- Tree Line
- Overhead Electric Line
- Underground Electric Line
- Overhead Telephone Line
- Underground Telephone Line
- Overhead Cable TV
- Underground Cable TV
- Water Line
- Sanitary Sewer Line
- Gas Line
- Storm Sewer Line
- Water Edge / Stream
- Wetlands
- Soil Type and Limits (XXX / XXX)
- Minor Contour
- Major Contour

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CALL 811 BEFORE YOU DIG
ALLOW REQUIRED TIME FOR MARKING
RESPECT THE MARKS
EXCAVATE CAREFULLY

THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT, AS AMENDED, REQUIRES THREE BUSINESS DAYS NOTICE TO UTILITIES BEFORE YOU DIG, DRILL, OR BLAST. DIAL 8-1-1 OR 1-800-552-7001 NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 15 BUSINESS DAYS PRIOR TO THE EXCAVATION OF A WORK AREA.

VIRGINIA ONE CALL SYSTEM TICKET NUMBER
DESIGN TICKET No.: A230601979-00A DATE: 11/02/22

LIST OF PUBLIC UTILITIES

COMPANY: AT&T (ATT392)
CONTACT: COLIN PROFITT
804-869-7359
IN EVENT OF DAMAGE CALL: 800-252-1133

COMPANY: COLUMBIA GAS (CGV333)
CONTACT: UTILIQUEST
703-754-2116
IN EVENT OF DAMAGE CALL: 800-544-5606

COMPANY: CHARTER COMMUNICATIONS (CHC191)
CONTACT: JEFF WAGGONER
804-641-3544
IN EVENT OF DAMAGE CALL: 855-272-2862

COMPANY: DOMINION EAST DISTRIBUTIO (DOM409)
CONTACT: UTILIQUEST
804-286-1721
IN EVENT OF DAMAGE CALL: 866-366-4357

COMPANY: MID-ATLANTIC BROADBAND (MBC487)
CONTACT: STAKE CENTER LOCATING
801-364-1063
IN EVENT OF DAMAGE CALL: 866-480-1934

COMPANY: VERIZON (VZN757)
CONTACT: UTILIQUEST
757-315-8119
IN EVENT OF DAMAGE CALL: 888-483-1233

LISTING OF REQUIRED PERMITS

- ISLE OF WIGHT COUNTY APPROVALS
  CONDITIONAL USE
  SITE DEVELOPMENT PLAN
- VDOT LAND USE PERMIT (LUP-CEI) FOR DRIVEWAY CONSTRUCTION WITHIN MORGARTS BEACH RD RIGHT-OF-WAY
- VDOT LAND USE PERMIT (LUP-UT) FOR UTILITY INSTALLATION WITHIN MORGARTS BEACH RD AND OLD STAGE HWY RIGHT-OF-WAY (BY DOMINION)
- VDEQ VPDES (VAR10) FOR LAND DISTURBANCE EXCEEDING 1-ACRE

PLAN SHEET INDEX:

C1 ..... COVER SHEET
C2 ..... PROPERTY PLAT / NEARBY RESOURCES MAP
C3 ..... ENVIRONMENTAL SITE ASSESSMENT PLAN
C4 ..... EXISTING CONDITIONS SITE PLAN
C5 ..... SITE DEVELOPMENT PLAN

REVISIONS

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FOR
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DRAWING TITLE
COVER SHEET

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ZONING REQUIREMENTS / SITE DATA		
TAX PARCEL	13-01-005	
ZONING DISTRICT	RURAL AGRICULTURAL CONSERVATION (RAC) DISTRICT & HIGHWAY CORRIDOR OVERLAY (HCO) DISTRICT	
EXISTING LAND USE	AGRICULTURE	
PROPOSED LAND USE	AGRICULTURE	SOLAR ENERGY SYSTEM (UTILITY SERVICE/MAJOR)
WATER/WASTEWATER	EXISTING TO REMAIN	N/A
SITE ACCESS	MORGARTS BEACH ROAD	
REQUIRED LOT SIZE	40,000-SF	
ACTUAL LOT SIZE PER USE	57.33 AC	24.79 AC
TOTAL LOT SIZE	82.12 AC	
REQUIRED LOT WIDTH	150-FT	
ACTUAL LOT WIDTH	1818 FT	
REQUIRED LOT FRONTAGE	120-FT	
ACTUAL LOT FRONTAGE	917 FT (VA 10) + 3260 FT (SR 673)	
MINIMUM FRONT SETBACK	60-FT	SOLAR ENERGY SYSTEMS: 75-FT ALL PROPERTY LINES (125-FT FROM RESIDENTIAL PARCELS)
MINIMUM SIDE SETBACK	15-FT (ONE SIDE) 35-FT (BOTH SIDES) (15-FT ACCESSORY STRUCTURES)	
MINIMUM REAR SETBACK	35-FT (5-FT ACCESSORY STRUCTURES)	
MAXIMUM BUILDING HEIGHT	LESSOR OF 35-FT OR 3-STORIES	
ACTUAL BUILDING HEIGHT	< 35 FT	N/A
MAXIMUM HEIGHT FOR GROUND-MOUNTED SOLAR PANELS	15-FT AT MAXIMUM TILT (EXCEPT FOR VEGETATION MANAGEMENT OR FOR INSPECTION, MAINTENANCE, OR REPAIR)	
MAXIMUM SOUND FROM SOLAR ENERGY SYSTEM	60 DbA (A-WEIGHTED DECIBELS) AS MEASURED AT ANY PARCEL LINE	
MINIMUM STORMWATER MANAGEMENT FACILITY SETBACK	20-FT FROM PUBLIC RIGHT-OF-WAY, PROPERTY LINES, EASEMENTS, OR ANY BUILDING	

LANDSCAPING AND SCREENING REQUIREMENTS	
TOTAL SITE REQUIREMENTS	
8-1003.B.	MINIMUM 25% EVERGREEN SPECIES MINIMUM 50% NATIVE SPECIES MINIMUM 15% LANDSCAPE SURFACE RATIO
LANDSCAPING ZONE REQUIREMENTS	
8-1005.F.1.	60' WIDE FRONTAGE ZONE 1.75 POINTS / LF MINIMUM 60% NON-ORNAMENTAL MAXIMUM 50% EVERGREEN
8-1005.F.2.	10' WIDE BUFFER ZONE 0.9 POINTS / LF (ADJ. TO RES. STRUCTURE) 0.45 POINTS / LF (NOT ADJ.) ONE PEDESTRIAN BREAK PER 50 LF (MIN. 6' WIDE)
8-1005.F.5.	10' WIDE SCREENING ZONE 0.8 POINTS / LF NOT INCLUDING FENCES/BERMS/WALLS
SOLAR ENERGY REQUIREMENTS	
5-5003.M.4.e.i.	PUBLIC ROAD 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF TREES AND SHRUBS AT MAXIMUM 8-FT ON CENTER
5-5003.M.4.e.ii.	ABUTTING RESIDENTIAL PARCEL 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF LARGE AND SMALL CANOPY TREES AND MEDIUM SHRUBS AT MAXIMUM 8-FT ON CENTER

SITE AREA TABULATION		
PARCEL SIZE	3,577,326 SF	82.12 AC
PROJECT AREA LIMITS OF CONSTRUCTION	1,273,421 SF	29.23 AC
PROPOSED LAND DISTURBANCE	TBD	TBD
PROPOSED TREE CLEARING	2700 SF	0.06 AC
PROJECT AREA ACREAGE:	**EXISTING**	**PROPOSED**
SOLAR FARM (FENCED AREA)	0	23.60 AC (86%)
OPEN SPACE	24.79 AC (100%)	3.72 AC (14%)
BUILDING AREA	0	0
IMPERVIOUS COVERAGE	0	0.26 AC
MOUNTED SOLAR PANELS	n/a	4.99 AC
FENCING	0	0.20 AC
LANDSCAPING	n/a	3.02 AC
POINT OF INTERCONNECTION	n/a	0.08 AC
CROPS (TYPE VARIES)	24.79 AC	0
PASTURE	0	0
WOODLAND	0.06 AC	0
PARCEL AREA ACREAGE:	**EXISTING**	**PROPOSED**
CROPS (TYPE VARIES)	48 AC	15 AC
PASTURE	0	0
WOODLAND	31 AC	31 AC

NET DEVELOPABLE ACREAGE *		
GROSS SOLAR LEASE AREA	27.32 Acres	
TIDAL WETLANDS	0	AT 100%
100-YEAR FLOODPLAINS	0	AT 100%
RESOURCE PROTECTION AREAS (INCLUDING 100-FT BUFFER)	0	AT 100%
NON-TIDAL WETLANDS	0	AT 50%
SLOPES >15% BUT <30%	0.03	AT 50%
SLOPES >30%	0.01	AT 100%
POWER TRANSMISSION LINE EASEMENTS	0	AT 100%
GAS TRANSMISSION LINE EASEMENTS	0	AT 100%
STREET RIGHT-OF-WAY, EXISTING OR PLANNED, PUBLIC OR PRIVATE	27.32	AT 20%
SOLAR LEASE AREA NET DEVELOPABLE AREA *	21.83 Acres	

* NDA CALCULATIONS FOR SOLAR LEASE AREA ONLY. NDA OUTSIDE THE SOLAR LEASE AREA HAS NOT BEEN DETERMINED

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PROPERTY PLAT / NEARBY RESOURCES MAP

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MORGARTS BEACH ROAD

SOLAR LEASE BOUNDARY

WETLAND AND WATERCOURSE DELINEATION STUDY AREA BOUNDARY

Wetland W01 (PEM)

Watercourse R01 (EPH)

1 STORY BUILDING

Historical Resource (approximate location)
Captain John Smith National Historic Trail, Keystone Segment, Historic District
(James River and 0.5 mile landward)
DHR# 500-0006
(federal determination of eligibility for listing in the NRHP)

MORGARTS BEACH ROAD (ROUTE 673)
(50' R/W DEPARTMENT OF TRANSPORTATION)

Historical Resource
Old Stage Highway Cemetery
DHR# 046-5636
(not evaluated)
(LOCATION UNKNOWN)

STATE ROUTE 10 (OLD STAGE HIGHWAY)
(50' R/W)

SOILS LIST					
MAP SYMBOL	MAP UNIT NAME	PROJECT ACREAGE	PARCEL ACREAGE	FARMLAND	ERODIBLE LAND
5A	EMPORIA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0	0.1	PRIME FARMLAND	NOT HIGHLY ERODIBLE
11E	NEVARC AND REMLIK SOILS, 15 TO 35 PERCENT SLOPES	0	4.4	NOT PRIME FARMLAND	HIGHLY ERODIBLE
14B	PEAWICK-SLAGLE COMPLEX, 2 TO 6 PERCENT SLOPES	12.5	21.1	FARMLAND OF STATEWIDE IMPORTANCE	POTENTIALLY HIGHLY ERODIBLE
18A	SLAGLE FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0	3.3	PRIME FARMLAND	NOT HIGHLY ERODIBLE
18B	SLAGLE FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	6.0	15.1	PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
19A	UCHEE LOAMY SAND, 0 TO 2 PERCENT SLOPES	4.4	16.0	NOT PRIME FARMLAND	NOT HIGHLY ERODIBLE
19B	UCHEE LOAMY SAND, 2 TO 6 PERCENT SLOPES	1.9	20.1	NOT PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
W	WATER	0	2.1	NOT PRIME FARMLAND	–

LEGEND

- Water Edge / Stream
- Wetlands
- Soil Type and Limits (XXX)
- Minor Contour
- Major Contour
- SLOPES >15% <30%
- SLOPES >30%

Slopes Table				
Area ID	Minimum Slope	Maximum Slope	Area (Acres)	Color
1	0%	15%	27.29	
2	15%	30%	0.03	
3	30%	9999%	0.01	

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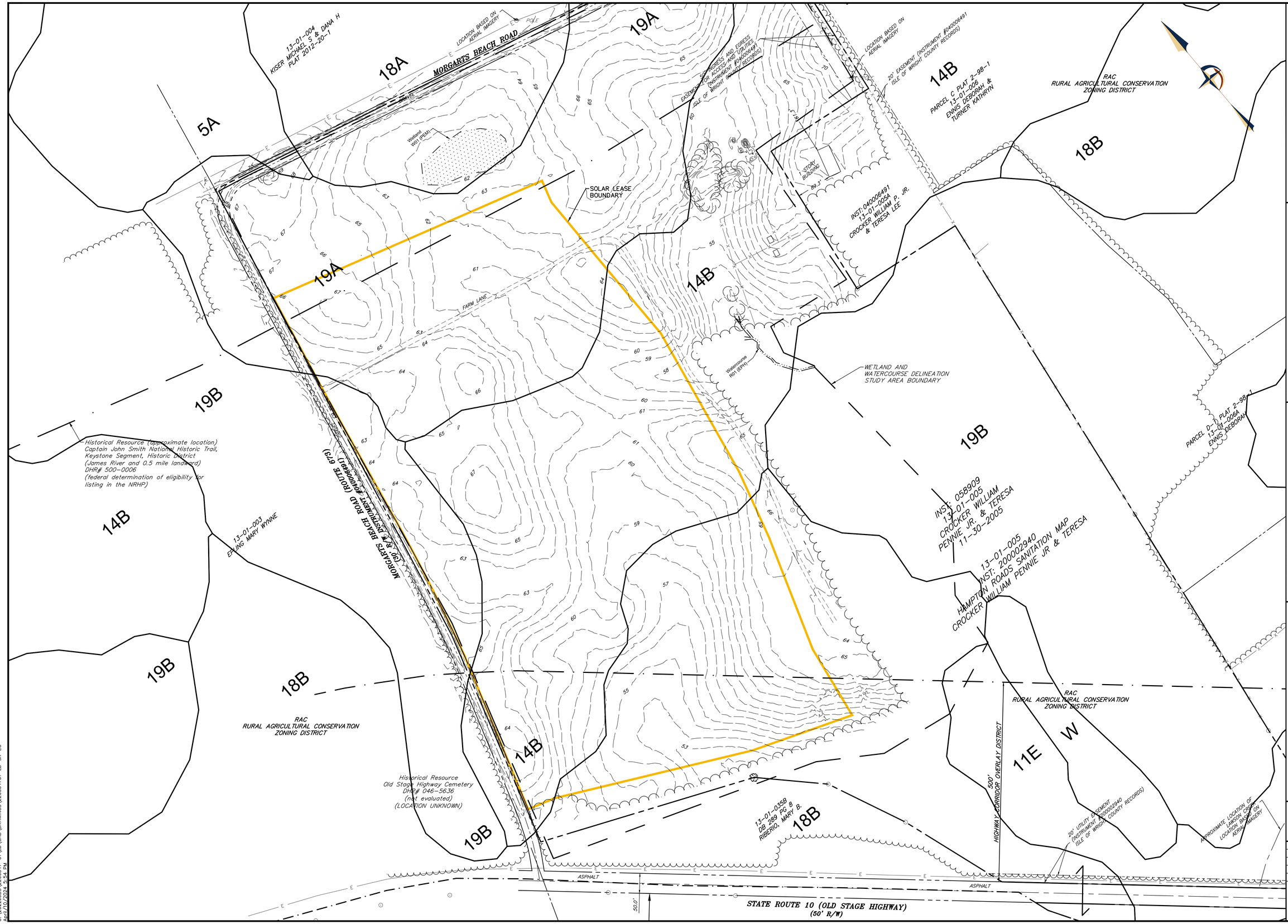

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EXISTING CONDITIONS SITE PLAN

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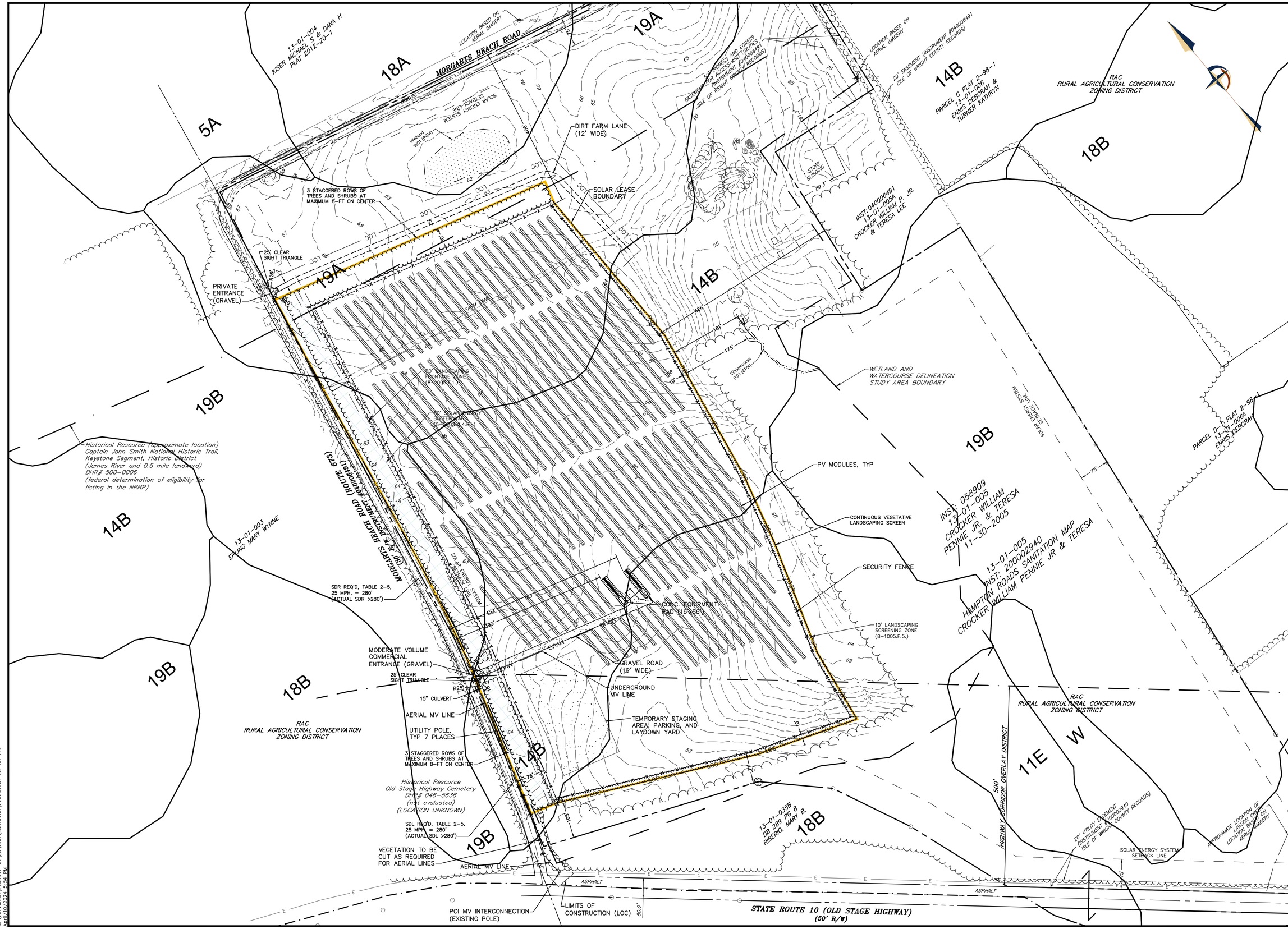

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Pivot Energy



Conditional Use Permit Application for: Elk Development, LLC's

(a holding Company of Pivot energy)

VAL025- Old Stage Highway Project

Pivot Energy

1601 Wewatta St., # 700
Denver, CO 80202

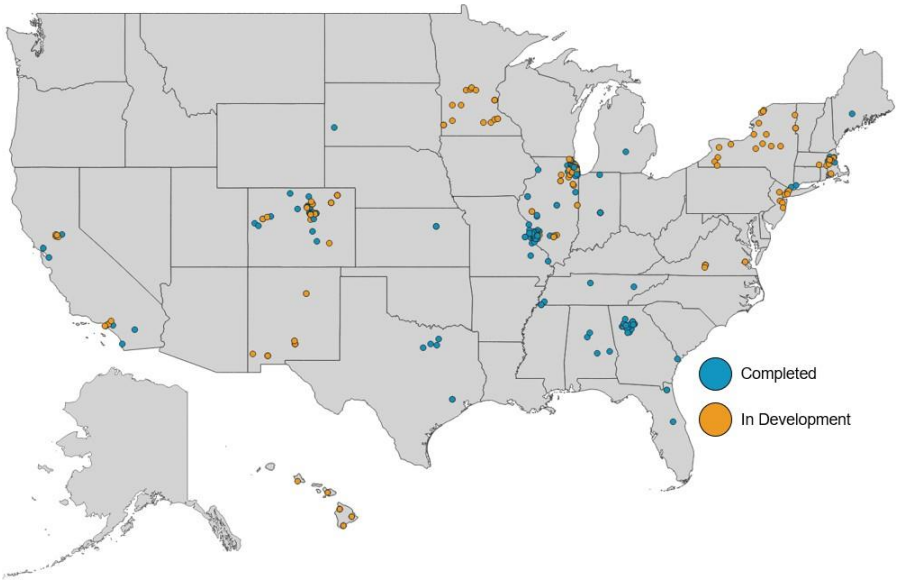
Executive Summary

Elk Development, LLC, a holding company of, Pivot Energy is pleased to apply for a Conditional Use Permit (CUP) from the County of Isle of Wight for Elk Development, LLC's VAL025- Old Stage Highway Project (aka: Old Stage) (the Project). This Project represents a small, solar photovoltaic (PV) facility totalling three (3) megawatts in capacity as measured in alternating-current (AC). The proposed project is located at 8699 Old Stage Hwy, Smithfield, Virginia. The subject parcel is identified as tax parcel 13-01-005 owned by William Pennie Jr & Teresa L Crocker. The site is accessed off Morgarts Beach Rd (SR 673), approximately 3.5-miles north of Smithfield. The site is in the Rural Agriculture Conservation (RAC) zoning district in Isle of Wight County. Hardy Elementary School is located approximately 0.7 miles southeast of the subject parcel. There are no recreation facilities within 1-mile of the site. The parcel is 94.21 acres, the project will encompass 27.32 acres (leased area) of the parcel with 23.6 within the fence line and 33 acres of land coming out of production (Please see Plan Drawing C2 for full tabulation of acrage).

This project will positively impact the local community by employing local labor, decarbonizing the local grid, offering a discount to local subscribing Dominion customers, and providing increased resources to the County over the life of the project. Pivot's lead developer on this project, Robert Hickox, has previous experience permitting similar solar projects in Virginia. With a strong development and customer relationship background in small utility, commercial, and community solar projects, Pivot continues to expand its offerings throughout the solar industry by working with low-income communities, residential renters and homeowners, agricultural customers, local businesses, & local government organizations.

Prior Solar Development Success:

Recently Completed and Ongoing Projects



Community Solar Development Experience

Background on Pivot Energy

Pivot Energy is a turnkey solar developer of commercial and industrial solar projects founded in 2009 and headquartered in Denver, Colorado. Pivot has become a national leader in commercial and industrial solar projects, with hundreds of successful projects completed for many small, mid-sized and Fortune 500 companies, as well as for nonprofit, government, and military organizations.

Pivot Energy has built or developed the most community solar projects of any developer in Colorado and has expanded to build projects nationwide over the last several years. Our development team works in conjunction with our EPC team to plan a project for success from the beginning and execute in a timely manner. Pivot will provide turnkey development of the community solar garden, from initial site planning and engineering to system design, construction, commissioning, and customer subscriptions.

Pivot Energy is a certified B Corps, using a triple bottom line approach to measure our progress on more than just a financial basis. Our goal is to achieve balance between three, sometimes opposing, ends of People, Planet, and Profit. B Corps, or Benefit Corporations, are redefining success in business to include benefits to workers, society, and the environment. We aim to balance these measures in all aspects of our projects to bring widespread benefit to multiple areas of the community.

Experience with Developing and Operating Similar Solar Facilities

Pivot Energy has invested heavily in both the Colorado community solar market as well as community and commercial solar nationally. Our company also has community solar projects either under construction or in development in states including Minnesota, Illinois, New York, New Mexico, Virginia, and more totaling well over 150MW.

In Colorado Pivot has become the largest community solar developer having built or in process of developing more than 70 MW of community solar. Pivot Energy is also one of the only developers to never abandon a community solar project with a 100% success rate post-bid. Our team's experience is deeply rooted in development having built many of the early projects at previous companies and then coming together as a team of industry experts to accelerate community solar development, construction, and customer adoption throughout the country.

Pivot Energy's SunCentral team has also become the largest and most all-encompassing subscription manager in Colorado with thousands of residential customers and serving more than 16MW of low-income customer capacity throughout Colorado. We are proud that our SunCentral management platform is so widely used by the market. Our team regularly communicates with MPEI to not only manage customers within the market but also look for ways to improve how utilities and developers can communicate and operate to continuously provide better experiences to the end customer and bring projects to successful completion.

Pivot Energy Acquisition by ECP

As of June 1, 2021 Pivot Energy is wholly owned by Energy Capital Partners (ECP)[1]. Founded in 2005, ECP is a leading investor across energy transition, electrification and decarbonization infrastructure assets, including power generation, renewables and storage solutions, environmental infrastructure and efficiency & reliability assets facilitating the energy transition. The ECP team, comprised of 53 people with 500 years of collective industry experience, deep expertise and extensive relationships, has consummated more than 60 transactions over the last 10 years, representing more than $45 billion of enterprise value.

More information on the acquisition available at: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

ECP has extensive experience in energy infrastructure with portfolio companies including Sunnova and Calpine. The investment in Pivot Energy by ECP allows for Pivot to not only develop solar assets and manage customers through our SunCentral platform but to maintain ownership of the assets through their full life. Additionally, Pivot Energy is a part of ECP's continued commitment to Environmental, Social, and Governance (ESG) goals and their expansion into renewable energy. Pivot Energy is ECP's first certified B Corporation and, as noted in their 2021 ESG Report highlights ECP's "ability to source attractive investments that have positive benefits from both a social justice and environmental standpoint."[2]

More information on ECP's ESG goals available at:
https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

In addition to the funding from ECP, Pivot Energy is nearing closing with both our tax equity partner and back leverage partner for our 2024 project portfolio that this project would be placed into. Pivot Energy is in final negotiations with a single tax equity partner that we have chosen as well as a single back leverage partner which are allowing us to get industry leading terms and cost of capital to make these projects very financially efficient.

In August 2022, Pivot Energy acquires SGC Power a Maryland-based community solar developer, who develops, and designs solar projects that produce long-term lease income for property owners while providing affordable clean energy to surrounding communities.

More information on the acquisition available at: Pivot Energy Announces Acquisition of Maryland-Based Community Solar Developer SGC Power (prnewswire.com)

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[1] PR Newswire – ECP Announces Acquisition of Pivot Energy: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

[2] Energy Capital Partners (ECP) – ESG Report: https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

Selected Customer List

Our customer list includes small, midsized, and Fortune 500 companies, as well as utilities, nonprofits, governments, and military institutions.



Project Design

Elk Development, LLC seeks to develop Old Stage with a collective nameplate capacity up to 3MWac. The clean energy generated by the solar array will be delivered to Dominion Energy's grid (the Grid) at 12kV, 3 phase distribution line along Old Stage Hwy. The Project is designed to be a community solar project that would offer a discount to local Dominion customers on their utility bill once operational. The system will be installed at 8699 Old Stage Hwy in Isle of Wight County. The subject parcel is identified as tax parcel 13-01- 005 owned by William Pennie Jr & Teresa L Crocker. The site is accessed off Morgarts Beach Rd (SR 673), approximately 3.5-miles north of Smithfield. The property consists of woodland and agricultural fields. The site is in the Rural Agriculture Conservation (RAC) zoning district.

Old Stage will be comprised of approximately 7,770 solar PV panels from Tier 1 manufacturers. Elk Development and Pivot Energy only uses crystalline solar panel using silicon and inert borophosphosilicate glass on their solar facilities. These panel are recyclable and do not have the potential toxic effects of cadmium-telluride panels (CDTe).

Standard additional equipment includes single axis tracker components, DC to AC inverters, medium-voltage transformers and control cabinets, project switchgear, meters, and the attachment facilities to the current local grid.

These panels will be mounted to a single-axis tracking (SAT) system designed to maximize the panel production by following the rising and setting of the sun. This SAT system includes linked horizontal steel support beams known as torque tubes, with a centrally located drive train system. The rows will be 22 feet apart (center-to-center) and the square footage of the panels will account for approximately 24% of the total Project acreage. The racking system will be affixed to pile-driven metal beams at a depth of approximately 10 feet. At full tilt, the maximum height of any panel will be under fifteen feet (15').

The solar panels in each row will be wired together into a circuit. There will be a DC to AC string inverter for approximately every 3 rows, typically mounted on a piling adjacent to the tracker structure. Once the inverter converts the panels DC power to AC, this power will be transmitted from the string inverters via three-phase direct-buried cables (at a depth of approximately 4.5 feet) and aggregated at the AC collection switch gear before moving to the medium-voltage transformer. This transformer will be mounted on a concrete slab alongside project switchgear and control cabinet. After the transformer steps up the electric power voltage to match the existing Grid, the power is transmitted to the Project's protective recloser and metering equipment before connecting with Dominion's powerlines.

An internal access drive made from all-weather aggregate base will provide access to the array. This Site access will be restricted by a perimeter security fence in compliance with Federal and State regulations. Manual swing gates will be built at the main entrance and other required entry points as determined by maintenance crews and/or safety personnel. National Electric Code Standards for safety and signage will be met or exceeded.

The project will be obscured from view by providing fence and using natural and planted vegetative buffers will meet or exceed the standards outlined by the County of Isle of Wight's ordinance.

Environmental Impact

Land Use

The project area is currently open agricultural field. Woodland areas exist on the subject parcel outside the project limits. The site is bounded on three sides by woodland and agricultural fields with a dwelling to the north. A residential neighborhood is located south of the property across Old Stage Hwy. The site fronts on Old Stage Hwy (BUS VA-10) to the south and Morgarts Beach Rd (SR 673) to the west and north.

Topography

The site topography can be described as fairly flat coastal plain. The site predominately slopes gently eastward with some low spots on the property. There are no steep slopes within the project area. A topographic survey of the project area was performed by Dawood Engineering, Inc. in October and November 2022. The streams and wetlands within the project area were delineated by Dawood Engineering, Inc. in October 2022. The vertical datum used is the North American Vertical Datum 1988 (NAVD 88). The horizontal datum is the North American Datum 1983 (NAD 83), Virginia State Plane Coordinate System.

Soils

The soil delineation for this project was completed using the United States Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Soil types expected within the subject parcel include Slagle fine sandy loam (18A, 18B), Yemassee fine sandy loam (23), Emporia fine sandy loam (5A, 5B), Chipley sand (4), Nawney loam (10), and Nevarc and Remlik soils (11E). Of these, 11E is a highly erodible soil, 5B and 18B are potentially highly erodible, and 4, 5A, 10, 18A, and 23 are not highly erodible. Soils 5A, 5B, 18A, and 18B are prime farmland. Soils 23 are prime farmland if drained. Soils 4, 10, and 11E are not prime farmland.

As indicated by the Virginia Department of Energy geological mapping, the site is underlain by the Charles City Formation (Qcc). This formation varies from 0-55 feet or more in thickness and consists of light- to medium-gray and light- to dark-yellowish and reddish-brown sand, silt, and clay composing surficial deposits of riverine terraces and coast-parallel plains. This unit is adjacent to, and inset below, the Windsor Formation and older deposits.

Wetlands & Receiving Waters

Pivot Energy has engaged a qualified environmental professional to conduct a field delineation to confirm that the site is designed away from the few identified, isolated wetlands to ensure no negative environmental impact. A summarized copy of this report is included in our application packet. Runoff from the subject parcel drains to Lawson Creek, or one of its tributaries. Lawson Creek flows through the eastern edge of the property. Lawson Creek is a tributary of Pagan River in the James River basin.

Wildlife Habitats

Coordination with various state and federal agencies determined no adverse impacts to threatened or endangered species are anticipated as a result of the project. Refer to the Threatened and Endangered Species Assessment prepared by Dawood Engineering, Inc for additional information.

Cultural and Historical Resources

A Phase I Cultural Resources Survey was completed by Stantec Consulting Services. Inc. in February and March 2023. No previously recorded archaeological nor architectural sites are located within the project area. One new isolated archaeological find, a whiteware body sherd, was identified. The find is not eligible for listing to the NRHP. One new architectural resource was identified on the subject parcel outside the project limits but was determined not eligible for listing in the NRHP. Three resources located within 0.5 miles of the project were considered eligible or potentially eligible for listing in the NRHP. Refer to the Cultural Resource Assessment prepared by Dawood Engineering, Inc for additional information.

State Agency Diligence

Before solar projects in Virginia can begin construction, they must be vetted by the Virginia Department of Environmental Quality (VADEQ) regulation process in the form of permits by rule (PBR). This state-level oversight ensures that conditions and standards necessary to protect the Commonwealth's natural resources are met by a proposed project. This review, in coordination with the Virginia Department of Historic Resources, the Virginia Department of Wildlife Resources, and the Virginia Department of Conservation and Recreation analyze the proposal for potential impacts on wildlife, historic resources, prime farmland, and environmental impact.

The thorough diligence involved in securing VADEQ's PBR—and any subsequent mitigation measures required—offer strong protection for localities considering a project like ours. The land use decision within our CUP application is only the first of many steps a project must satisfy before submitting for a building permit.

Construction

Construction of the solar energy system, including access road and interconnection to the electric grid, is to occur in three phases. The first phase of the project is anticipated to take 6 months to complete and will consist of construction of 1 MW of solar panels, electrical switch gear, site preparation, fencing, access road, and vegetative buffers. As Dominion Energy approves the interconnection of the second and third 1MW section of solar panels (both currently in study by the utility) they will be installed.

Construction of first phase is scheduled to start in September 2024. Finish date of the third phase is anticipated to be in April 2025. This schedule is based on the latest available information. Actual dates may vary based on regulatory requirements, weather, and other unforeseen issues. It is anticipated that onsite work will be conducted during the standard workweek (Monday through Friday) when workers will be onsite from 7:00AM to 5:00PM (10 hours). In the event of inclement weather, missed weekdays may be occasion made up on Saturdays to maintain construction schedules.

Construction activities associated with the project include establishing access, material delivery and storage, loading and hauling, construction of racking system with driven posts for foundations, mounting of solar modules, construction of equipment pads, installing equipment, trenching underground cable ductbanks, backfill and compaction, installing utility poles and aerial power lines, installing security fencing, and revegetation.

Construction of the solar energy system and site appurtenances is to occur in sections to limit disturbed area. The following is a general estimation of duration of the activities associated with the project. Some will occur simultaneously as work progresses. Estimated timing of the construction activities are as follows:

- Sediment control devices are to be installed in each area before any upslope earth disturbance commences. It is anticipated installing the sediment control devices will take approximately 1 week.
- Access road construction is anticipated to take roughly 1 week.
- Construction of the racking system and installation of solar modules will take approximately 4 months.
- Construction of the equipment pad and installation of equipment will take approximately 3 weeks.
- Trenching and cable installation will take approximately 6 weeks.
- Installing the poles and overhead power lines, including the interconnection, will take approximately 2 weeks.
- Final restoration, including seeding and mulching, is to be completed immediately as improvements are finished in each area. It is anticipated final restoration will take approximately 2 weeks.
- Sediment control devices are to be removed once the upslope area has been permanently stabilized. This should take less than 1 week.

Operations and Maintenance

After construction is complete, we anticipate minimal site access requirements for Project maintenance activities. At a minimum, the Project will undergo two annual preventative maintenance checks, once in the spring (~April) and once in the fall (~August). While all products installed on site are of the highest quality per industry standard testing practices & classifications, occasional dispatch to site may be required to correct outages on an as-needed basis. Corrective activities such as this may add two to four site access instances each year.

As the long-term owners & operators of the proposed Project, our team will also actively monitor site performance 24/7 and will address any issues in a timely manner. Based on performance impact, our contracted O&M providers will respond within 24, 48, or 72 hours depending on the outage type. Our sites are unmanned regularly unless maintenance is required, which would occur between Monday – Friday from 8 AM – 5 PM.

Average rainfall in the County of Orbit Rd. anticipated to be adequate for natural cleaning of the panels. Vegetative ground cover will be managed during the growing season in compliance with local requirements, including but not limited to land use permit specifications, water management plans, and site access agreements.

Solar Grazing – Vegetative Maintenance through Dual Ag Use

“Solar Grazing” is a method of vegetation control for solar sites that utilizes livestock. Sheep are best suited due to their size and grazing behavior. Ground cover is established with a “Fuzz and Buzz” mix that is conducive to grazing as well as pollinating. Projects such as the proposed Old Stage. would contract with local sheep farmers to move onto site in the Spring, care for them during grazing season, and move off site in the Winter. Sheep are excellent at grazing under panels where mowing is more labor intensive. The perimeter fence protects sheep from predators and solar panels provide shelter from rain, wind, and direct sun on hot days.



Pivot Energy has established a partnership with United Agrivoltaics to help lead our Solar Grazing initiatives. With a network of sites across the country and partners in Solar Grazing since 2015, United Agrivoltaics will assist Pivot Energy in a vegetative maintenance plan for this dual use.

Impacts and Mitigations

Water – No on-site source of potable water will be required during construction or operations for Old Stage. If any on-site water source is required during construction or operation, it will be supplied by the host Project and sourced off-site. No new well will be dug for this project.

Sound – The majority of sound associated with the proposed Project will occur during construction. This is expected to be the result of material deliveries to the Property and support beam installation for the array. Impacts from noise are mitigated from a selected site that has few abutting neighbors and restricted hours of construction operations.

Once operational, Old Stage will be practically inaudible. At a distance of 3ft from the security fence, our inverters and racking equipment create a sound comparable to a home HVAC unit. These sound measurements fall to less than 50dB at only 50ft from the perimeter—equivalent to background noise in the County.

Glare – No glare hazard is expected during construction or operations. Our Tier I panels are treated with anti-glare coating and are designed to absorb as much sunlight as possible. The setbacks and robust vegetative screening from neighbors will further obscure any visual impact of the proposed Project.

Odor – Our EPC team will store, collect, and dispose of any solid construction material waste to prevent any odors from the Site, mitigating any impact on neighboring properties. No detectable odors are produced from the solar array components during operations.

Dust – Possible dust occurrence during operations is most likely to result from delivery or construction trucks on the Site. This will be mitigated by spraying water on dry dirt and enforcing a 5 MPH speed limit within the construction area. Minimal vehicle or foot traffic during operations and vegetative groundcover will naturally mitigate against concerns for dust.

Security and Access – The perimeter fence around the array will be no taller than 8 feet in height and contain no barbed wire. This fence will be black or another neutral color with final design approval to be sought from the Planning Director. The gates within the fence will remain locked while access will be coordinated through our operations and maintenance personnel. Our Site will provide a "Knox Box" to provide 24/7 access for local emergency personnel. The Applicant will ensure suitable access from Pocket Road is maintained for fire or other emergency vehicles.

Removal

At the end of the Project's life, it will be decommissioned and removed from the Property. Formal notice of end of operations will be sent to County via Certified Mail. The Project will then be completely removed from the Property and reasonably restored to previous condition within 365 days of receipt of notice. Old Stage would expect County approval of our decommissioning plan—to include posting of surety funds—prior to building permit issuance. We have included a preliminary decommissioning cost estimate in our submission.

Economic Development

Jobs

To the extent possible, Old Stage will source local materials and labor for the construction and maintenance of the project. We estimate that this project will create approximately 30 new construction positions and 1-2 operations positions. Operations jobs will be focused on facility upkeep with responsibilities such as vegetation management, equipment repair, and component maintenance. Typical cadence for site maintenance is every two to three months.

Increased County Revenue

Additionally, this project's lease revenue would provide direct fiscal benefit to the County. This has been outlined in a report commissioned from MAGNUM ECONOMIC's *"VAL025 - OLD STAGE HIGHWAY ECONOMIC AND FISCAL CONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA*". This report has been included in our application.

Regulatory Conformance

Virginia Code § 15.2-2232 requires that the Board of Supervisors makes a determination as to whether or not the general location, character, and extent of a proposed solar energy facility is in substantial accord with the locality's adopted comprehensive plan.

The Project includes construction of an approximately 27.32-acre solar farm (including buffer areas) within the existing field. Existing woodland and buildings are to remain. The proposed development is shown on the concept plan included with the conditional use application. A solar energy system (utility service/major) is a permissible use by conditional use within the RAC district. This statement has been prepared to show the proposed use will conform to the standards of the Zoning Ordinance. We believe the standards of section 1-1017 (Conditional Uses) have been met and respectively request the conditional use be granted. The standards for review and the conditions and guarantees have been addressed as follows:

Zoning Ordinance Section 1-1017.H – Standards for review of a conditional use application

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;*
   The adverse effects of the proposed use on the public health, safety, and general welfare would be minimal. The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable federal, state, and local requirements and in general conformance with manufacturer recommendations and industry standards. All proposed equipment is to be readily accessible for fire and police protection. Measures, such as vegetative screening and security fencing, are proposed to mitigate any potential adverse effects and limit access.
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;*
   The proposed use is compatible with the other uses in the area providing energy for the neighborhood and will not be injurious nor substantially impair the use of other property in the area. Existing and proposed screening will limit the visual impact from adjacent property and roadways.
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;*
   The proposed use does not require permanent water supply or sewage disposal. With established vegetation beneath and around the solar panels, the existing storm drainage facilities should be adequate and will be supplemented with further management facilities as needed during Site Plan Review. A short gravel access road is to be constructed to provide direct access to the solar energy system. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards.
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;*
   Traffic generated by the use should be negligible consisting of the occasional inspection or maintenance vehicle. A gravel drive from the public roadway is to be constructed to provide access directly to the solar farm.

5. *That the proposed conditional use is not contrary to the goals and objectives of the Isle of Wight County comprehensive Plan;*

The proposed use is consistent with the comprehensive plan. As stated in the plan, a solar farm is an appropriate use for the Rural Agricultural Conservation area. The use is consistent with the priority to protect natural resources and rural lifestyle and the policy to facilitate non-residential development. Converting the area from an agricultural field has the potential to reduce the amount of stormwater runoff, increasing groundwater quantity, by changing the ground cover. This would also potentially improve the quality of surface water and groundwater by reducing the use of fertilizers and pesticides. The combination of natural and supplemental screening and fencing to be maintained around the solar panels will preserve the rural character of the area.

"Require facilities to be located adjacent or close to existing electric transmission lines."

The project proposes to interconnect to the Dominion three-phase powerlines that run across the property's road frontage along Old Stage Hwy.

"Require facilities to be located outside of DSDs."

The project is sited on a property that is approximately 7.0 miles away from the nearest DSD (Newport).

"Avoid or minimize impact to prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively."

The parcel being used takes up only 24.78. acres of cropland out the 94 acre property, which will continue to be farmed. Given the average farm size of 340 acres and over 80,000 total farm acres in Isle of Wight County, Old Stage presents a negligible impact on farmlands, which it more than offsets by providing homes with clean, locally generated power.

Additionally Pivot Energy promotes as a standard the use of sheep grazing as vegetation control on the site, which will allow the land to continue to function as agricultural lands.

"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 sight with a resource location) or within the Highway Corridor Overlay district."

The proposed existing, mature vegetative buffer along Old Stage Hwy will provide complete screening of the site from the public.

The Comprehensive Plan also outlines several Policy themes with Action Items associated toward those ends. Below are some of the more applicable selections regarding solar projects and our determination of the project would fit.

Preserve: Protect water quality from sedimentation and pollutants carried by runoff through the continued enforcement of the local stormwater management program.

Before final site plan approval, Pivot Energy must secure confirmation from the Virginia Department of Environmental Quality that the designed stormwater management features will meet or exceed the rates of current property use. Verification of this confirmation will safeguard against any degradation of local stormwater management as a result of the project.

Shape: Protect rural historic landscapes by ensuring development is consistent with existing community character through performance criteria for new development.

The vegetative screening plans provided offer mature, existing bufferings required by the solar ordinance. Exceeding the vegetative screening standard by this degree shows the specific focus on existing community character.

Serve: Encourage collaboration with the private sector to provide integrated infrastructure in the most efficient way possible.

Serve: Design and develop public facilities, wherever possible, that take advantage of alternative energy sources and conserve energy in operations.

Serve: Ensure all major utility service use types mitigate any potential negative impacts to the character and future viability of surrounding land uses.

The Old Stage project offers alternative energy sourced power generation for the local community, financed by private investment, to the net fiscal benefit for the county. By designing vegetative buffering that exceeds the county requirement for solar projects in its particular location, Old Stage is sited respectfully to local character and land uses while allowing the site landowner to exercise his property rights.

Educate: Continue to grow programs that enhance job skills of County residents needed by employers.

Pivot has contacted SHINE to coordinate plans for community colleges and academic institutions across Virginia so we can increase access to solar training programs across the state.

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;*

   The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable regulations.

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.*

   The proposed use at this location will not result in a saturation of similar uses in the same neighborhood. The only other known solar farms in the county are at Oliver Farms and Bennetts Creek Nursery located approximately 9-miles south of the site off VA-10/VA-32 near the county line with Suffolk. There are two other proposed solar projects approximately 10-miles south of this project. One project is currently under construction on Redhouse Road. Another project is approved but not yet constructed on Orbit Road.

   Proximity to three phase power lines and substations limits the available areas suitable for the installation of solar projects. After this site is constructed the electrical infrastructure supporting these facilities will be built out and not able to support further development.

Zoning Ordinance Section 1-1017.I – Conditions and guarantees

1. *The number of persons living or working in the immediate area and the proposed hours of operation, as may applicable.*

   N/A - No persons are to be located on-site. Any necessary maintenance personnel will be stationed elsewhere. Operations will be continuous while the sun is shining though personnel will generally only be onsite during inspections and maintenance.

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;*
   The nature of the proposed use, the site layout, and its relation to access streets are such that both pedestrian and vehicular traffic should not conflict with the normal traffic of the neighborhood. Traffic should be minimal utilizing a proposed gravel drive for access. Adequate parking is proposed for the occasional need. Fencing is proposed to restrict access.

3. *The orderly growth of the neighborhood and community and the fiscal impact on the county;*
   The proposed use is of such location, size, and character that, in general, it will be in harmony with the appropriate and orderly growth of the neighborhood and will not be detrimental to the orderly growth of adjacent properties. The proposed use will a provide supplementary energy source for the community. Traffic will be minimal and sufficient landscaping is proposed to screen adjacent properties. The proposed use will not have a significant fiscal impact on the county, other than the increase in tax base due to the change in use.

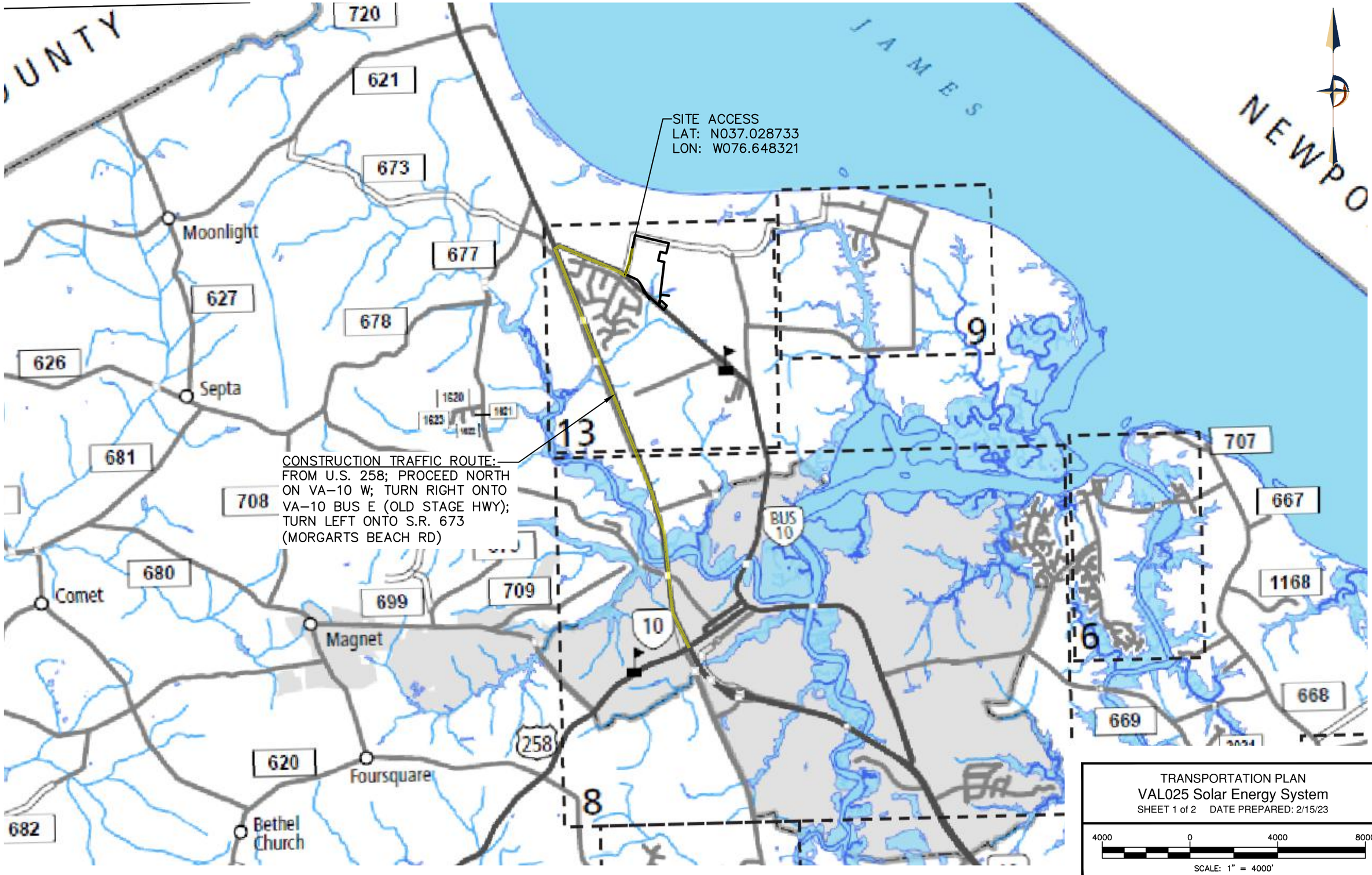
4. *The effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise upon the use of surrounding properties;*
   The proposed use, under normal operations, is not expected to produce any significant effects that would adversely impact the surrounding properties. Solar panels are designed to absorb light, with any glare to be minimized by the angle and tilt of the panels. Additionally, the proposed screening will further obscure any glare to adjacent roads and properties. All equipment is to be designed and operated in accordance with Federal, State, and local regulations. The solar panels will produce virtually no noise, vibrations, fumes, smoke, gas, dust, or odors. The system equipment is not expected to generate meaningful noise levels, vibrations, fumes, smoke, gas, dust, or odors. The location of the solar panels and equipment within the parcel and the use of vegetative screening will reduce the effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise from the use adversely impacting 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;*
   The proposed use would not create undue impacts to police, fire protection, or ambulance services. Fencing is proposed to restrict access and standard fire safety measures are to be utilized to reduce fire hazards. All proposed equipment is to be readily accessible for fire and police protection. Emergency response service to the site is to be facilitated through the construction of a new access road. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards. The proposed use does not require sewerage, water, or waste disposal services.

6. *The degree to which the development is consistent with generally accepted engineering and planning principles and practices;*
   The developer intends to design, construct, operate, inspect, and maintain the proposed development to be 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;*
   The nearest such public facility is the Hardy Elementary School approximately 0.7-miles southeast of the subject parcel.

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;*
   The proposed use does not conflict with the purposes set forth in the ordinance nor comprehensive plan. The proposed use is consistent with the comprehensive plan. Due to the nature of the use, the effect on the roads, parks, schools, sewers, water, population, and recreation should be negligible. The use does not involve the construction of facilities that would directly cause an increase in population or increase the demand for public facilities and services.
9. *The environmental impact, the effect on sensitive natural features, and opportunities for recreation and open space;*
   N/A – Any adverse environmental impact from the proposed use is negligible. The proposed construction area is limited to the existing farm field. The development will not result in the loss or damage of any sensitive feature. Recreation and open space aren't applicable to this development as it will not result in additional residents.
10. *The preservation of cultural and historic resources or landmarks.*
    There are no known cultural or historic resources or landmarks within the project area. The proposed construction area is limited to the existing access and farm field. One new architectural resource, a house, was identified on the subject parcel outside the project limits. Three historical resources are located near the project, a cemetery across Morgarts Beach Road west of the project, a house on the parcel north of the project site, and the Captain John Smith Historic Trail north of the project area. Existing and proposed screening will minimize any adverse impact to these resources. Mitigation for any adverse effect of the proposed project on the resources is being coordinated with the Virginia Department of Historic Resources.



TRANSPORTATION PLAN
VAL025 Solar Energy System
SHEET 1 of 2 DATE PREPARED: 2/15/23

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SCALE: 1" = 4000'

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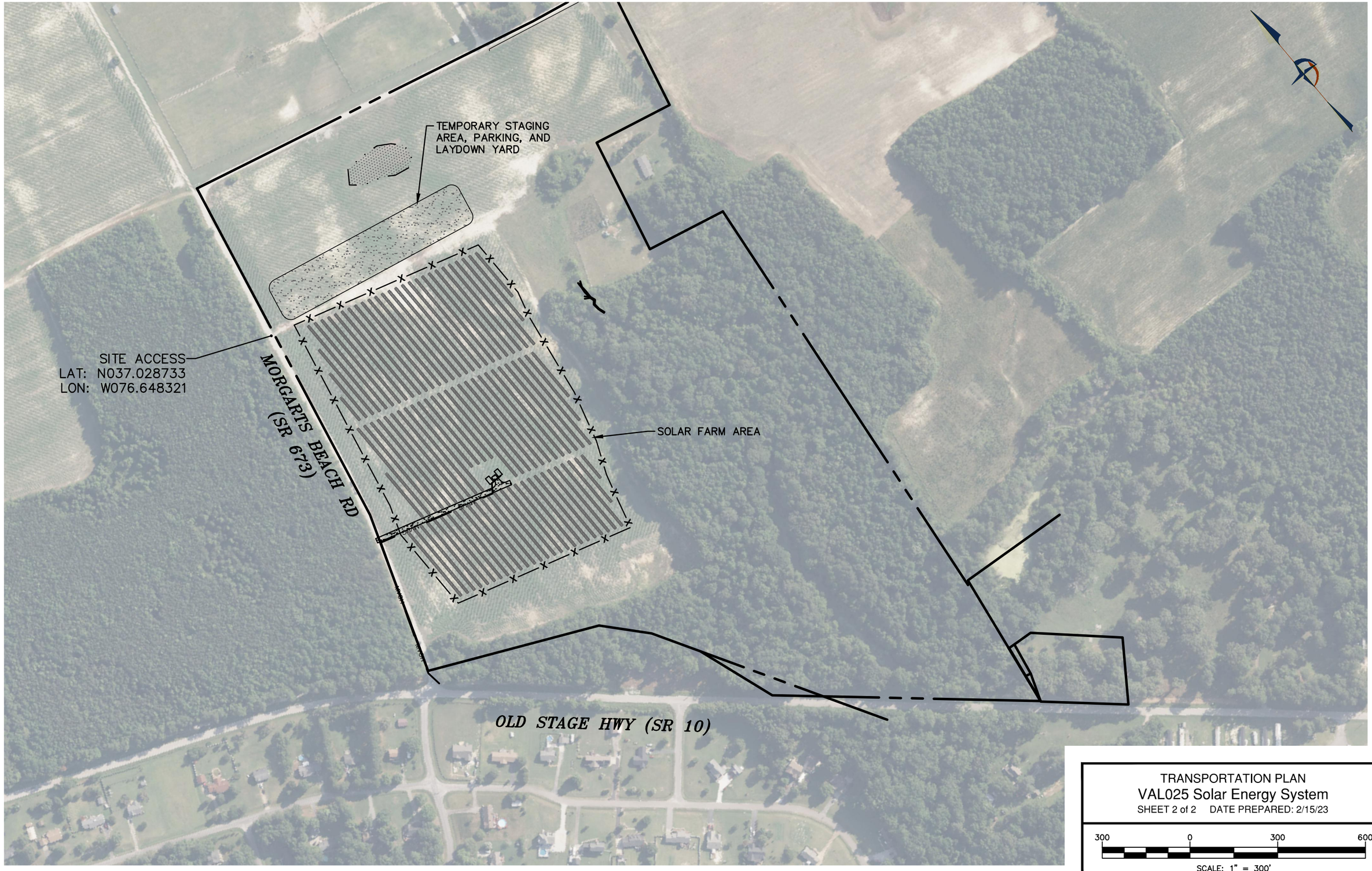

TRANSPORTATION PLAN

VAL025 Solar Energy System

SHEET 2 of 2 DATE PREPARED: 2/15/23

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SCALE: 1" = 300'

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VAL025- OLD STAGE HIGHWAY

ECONOMIC AND FISCAL CONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA



Prepared for

Pivot Energy

MAY 2024

MANGUM economics

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About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. One recent example was an analysis of the proposed $2.3 billion Green City "net-zero eco district." The Mangum Team has also authored multiple economic development plans, including identifying industry recruitment opportunities created by the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 29 GW of proposed solar, wind, battery energy storage, and hydro projects spanning more than twenty-five states. Among those projects was Dominion's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Advanced Applied Technology:** The Mangum Team specializes in analyzing how advanced technology developments (like data centers, fiber networks, and advanced manufacturing plants) contribute to the state and local economies. We have worked with local governments, trade associations, developers, and operating firms across the country to show how investments in advanced critical infrastructure transform local economies across the country.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Old Stage Highway project would make to Isle of Wight County, Virginia. The primary findings from that assessment are as follows:

1) **VAL025- Old Stage Highway (Old Stage Highway) is a proposed 3-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located near Morgart's Beach Road and Old Stage Highway in Isle of Wight County, Virginia. The total actively used, fenced-in solar site including a solar buffer would be approximately 27.32 acres of land.**

2) **The proposed Old Stage Highway project would make an economic contribution to Isle of Wight County:**

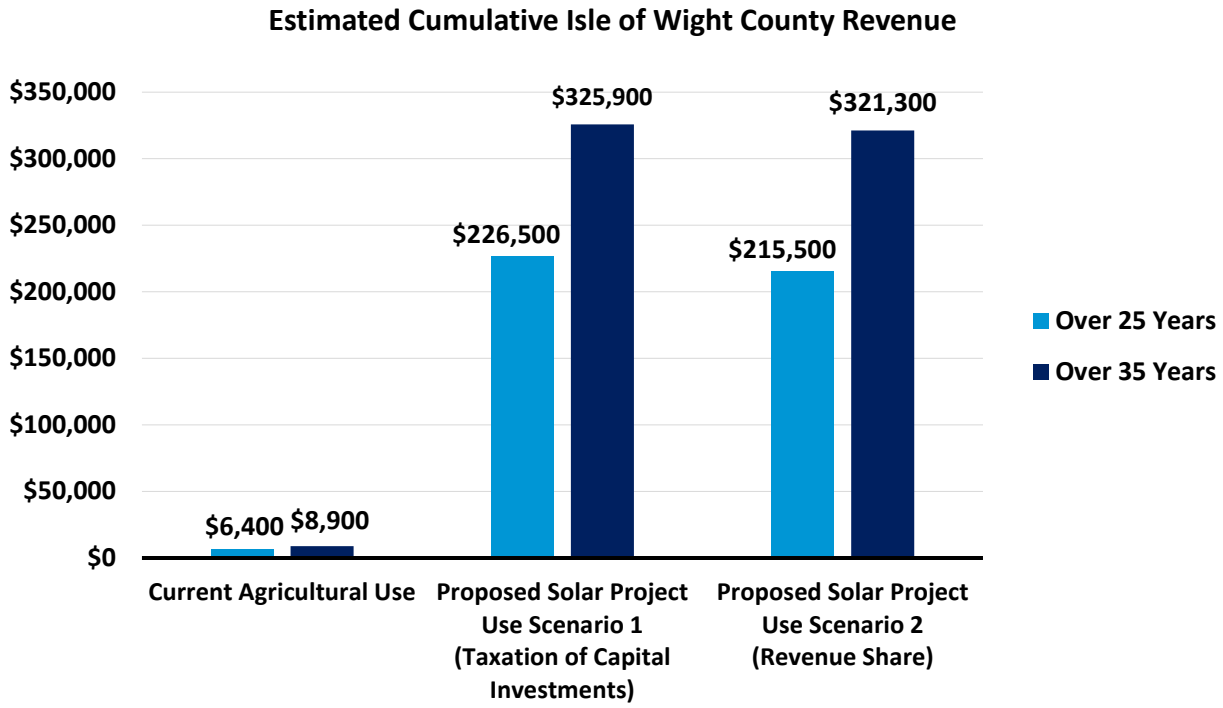
   - The proposed Old Stage Highway project would provide an estimated one-time pulse of economic activity to Isle of Wight County during its construction phase supporting approximately:
     - 3 jobs.
     - $98,000 in associated wages and benefits.
     - $180,500 in economic output.
   - The proposed Old Stage Highway project would provide an estimated annual economic impact to Isle of Wight County during its ongoing operational phase supporting approximately:
     - < 1 job.
     - $21,200 in associated wages and benefits.
     - $72,400 in economic output.

3) **The Old Stage Highway project would have a significantly greater fiscal impact on Isle of Wight County than the property generates in its current agricultural use:**

   - $24,000 in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.
   - The proposed Old Stage Highway project would generate approximately $226,500 in cumulative county revenue over a 25-year operational life and approximately $325,900 in cumulative county revenue over a 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments (Scenario 1).
   - The proposed Old Stage Highway project would generate approximately $215,500 in cumulative county revenue over a 25-year operational life and approximately $321,300 in cumulative county revenue over a 35-year operational life assuming revenues are

generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance (Scenario 2).

- In the property's current agricultural use, it would generate approximately $6,400 in cumulative county revenue over 25 years and approximately $8,900 in cumulative county revenue over 35 years.



The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good 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 VAL025- Old Stage Highway (Old Stage Highway) project would make to Isle of Wight County, Virginia. This report was commissioned by Pivot Energy and produced by Mangum Economics.

The Project

Old Stage Highway is a proposed 3-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located near Morgart's Beach Road and Old Stage Highway in Isle of Wight County, Virginia. The total actively used, fenced-in solar site including a solar buffer would be approximately 27.32 acres of land.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Old Stage Highway project would make to Isle of Wight County. The 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 Old Stage Highway project, the analysis employs a regional economic impact model called IMPLAN.[1] 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 Old Stage Highway project purchases goods and services – or when 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 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

[1] IMPLAN is produced by IMPLAN Group, LLC.

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 Old Stage Highway 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

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Old Stage Highway project would have on Isle of Wight County.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The Old Stage Highway project would employ approximately 50 full-time equivalent construction workers. Approximately 80 percent of those workers would be from Virginia, but are assumed to be from outside of Isle of Wight County.[2]
- The out-of-state workers would stay in the county during the construction period.
- Per diem spending for in-state workers would be approximately $15.[3]
- Per diem spending for out-state workers would be approximately $139.[4]
- All construction expenditures are assumed to take place during a six-month period.[5]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Old Stage Highway project would not provide a direct impact to Isle of Wight County because the construction labor is assumed to be from outside of the county.[6]

[2] Data Source: Pivot Energy.
[3] Data Source: U.S. General Services Administration.
[4] Data Source: U.S. General Services Administration.
[5] Data Source: Pivot Energy.
[6] Per diem spending is considered a household (employee) to business transaction and is therefore not a direct impact.

Taking into account the per diem spending of the construction workers, the total estimated one-time impact on Isle of Wight County would support approximately: 1) 3 jobs, 2) $98,000 in wages and benefits, 3) $180,500 in economic output, and 4) $24,000 in state and local tax revenue.

Table 1: Estimated One-Time Economic and Fiscal Impact on Isle of Wight County from Construction of the Old Stage Highway Project

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	-	-	-
2nd Round Indirect and Induced Economic Activity	3	$98,000	$180,500
Total Economic Activity	**3**	**$98,000**	**$180,500**
Fiscal Impact			
State and Local Tax Revenue			**$24,000**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

This portion of the section assesses the annual economic and fiscal impact that the proposed Old Stage Highway project would have on Isle of Wight County during its operational phase.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The Old Stage Highway project would spend approximately $53,000 each year for maintenance and repair, vegetative control, and other operational expenditures.[7]
- The Old Stage Highway project would make confidential lease payments to landowners.[8]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Old Stage Highway project would directly support approximately: 1) < 1 job, 2) $13,800 in wages and benefits, and 3) $41,800 in economic output to Isle of Wight County.

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on Isle of Wight County would be approximately: 1) < 1 job, 2) $21,200 in wages and benefits, and 3) $72,400 in economic output.

[7] Data Source: Pivot Energy.
[8] Data Source: Pivot Energy.

Table 2: Estimated Annual Economic Impact on Isle of Wight County from the Ongoing Operation of the Old Stage Highway Project

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	< 1	$13,800	$41,800
2nd Round Indirect and Induced Economic Activity	< 1	$7,400	$30,600
Total Economic Activity	**< 1**	**$21,200**	**$72,400**

Fiscal Impact Assumptions

The analysis is based on the following assumptions:

- Total capitalized investment in machinery and tools in the Old Stage Highway project is estimated to be approximately $6.2 million.[9]
- The leased acreage of the Old Stage Highway project would encompass approximately 24.8 acres located in Isle of Wight County.[10]
- The approximately 27.32 actively used, fenced-in acres including a solar buffer would be removed from the land use program and reassessed at a solar use assessment value of $15,000 per acre.[11]
- The initial interconnection request for Old Stage Highway was filed in 2021.[12]
- Tax rates are assumed to remain constant throughout the analysis.
- The Old Stage Highway project's total generation capacity would be 3 MW AC.[13]
- The Old Stage Highway project would become operational in 2025.[14]

Fiscal Impact

This portion of the section quantifies the direct fiscal contribution that the proposed Old Stage Highway project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Old Stage Highway project would generate for Isle of Wight County over a 25-year period and a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Old Stage Highway would generate for Isle of Wight County from taxes levied on the capital investment in machinery and tools, while Scenario 2 tax revenue generated from the capital investment will be

[9] Data Source: Derived from data provided by Pivot Energy.
[10] Data Source: Pivot Energy.
[11] Data Source: Isle of Wight County staff and Pivot Energy.
[12] Data Source: Pivot Energy.
[13] Data Source: Pivot Energy.
[14] Data Source: Pivot Energy.

replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 3 details the increased tax revenue associated with reassessing the 27.32-acre solar site as solar use property. The county real estate tax revenue from the fenced-in acreage after reassessment is estimated to be approximately $2,900 per year, for a cumulative total of approximately $72,700 over a 25-year operational life and approximately $101,800 over a 35-year operational life. Adding one-time rollback taxes of approximately $4,300 increases that cumulative total to approximately $77,100 over 25 years and approximately $106,200 over 35 years. In contrast, the property currently generates approximately $260 per year for the county, for a cumulative total of approximately $6,400 over 25 years and approximately $8,900 over 35 years.

Table 3: Estimated County Revenue Generated by the Proposed Old Stage Highway Project over 25 Years and 35 Years from Real Estate Taxes

	Over 25 Years	Over 35 Years
Estimated Increased Appraised Value of Property[15]	$409,800	$409,800
Isle of Wight County Real Estate Tax Rate[16]	0.0071	0.0071
Annual County Real Estate Tax – Solar Use	$2,900	$2,900
Revenue over Operational Life	**$72,700**	**$101,800**
One-time Rollback Taxes[17]	**$4,300**	**$4,300**
Total Cumulative Revenue over Operational Life	**$77,100**	**$106,200**

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment in Machinery and Tools

Table 4 separately details the additional annual revenue that the proposed Old Stage Highway project would generate for Isle of Wight County over a 25-year period and a 35-year period from taxes levied on capital investment in machinery and tools. 1) the taxable portion of capital investments based on the stepdown local tax exemption pursuant to Virginia Code §58.1-2606.1[18], times 2) Isle of Wight County's

[15] Calculated as 19.4 acres times $15,000 per acre.
[16] Data Source: Isle of Wight County's Commissioner of Revenue's office.
[17] Rollback taxes are computed as the difference between the current land use value assessment tax and the tax on the fair market value for the affected acreage for five complete tax years plus the current year. Does not account for changes in assessment values over time.
[18] Virginia Code §58.1-2606.1 stipulates that solar facilities 5MW or less are subject to a stepdown exemption from local property taxes if the project is approved by the locality on or after July 1, 2022. The amount of the exemption is 80 percent in the first five years, 70 percent in years six through ten, and 60 percent thereafter.

depreciation guidelines for machinery and tools[19], times 3) Isle of Wight County's real estate tax rate of $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.1.[20]

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Old Stage Highway project would be approximately $3,520 in the project's first year of operation, with that figure projected to increase to approximately $7,030 in year 11 of the project as the value of the exemption is reduced for a cumulative total of approximately $149,400 over 25 years and approximately $219,700 over 35 years.

Table 4: Estimated County Revenue by Proposed Solar Investment Over 25 Years and 35 Years

Year	Total Capital Investment Subject to Exemption[21]	Depreciated Value of Taxable Capital Investment[22]	Additional Annual County Tax Revenue Solar Investment[23]
1	$6,190,100	$495,208	$3,520
2	$6,190,100	$495,208	$3,520
3	$6,190,100	$495,208	$3,520
4	$6,190,100	$495,208	$3,520
5	$6,190,100	$495,208	$3,520
6	$6,190,100	$742,812	$5,270
7	$6,190,100	$742,812	$5,270
8	$6,190,100	$742,812	$5,270
9	$6,190,100	$742,812	$5,270
10	$6,190,100	$742,812	$5,270
11	$6,190,100	$990,416	$7,030
12	$6,190,100	$990,416	$7,030
13	$6,190,100	$990,416	$7,030
14	$6,190,100	$990,416	$7,030
15	$6,190,100	$990,416	$7,030
16	$6,190,100	$990,416	$7,030
17	$6,190,100	$990,416	$7,030
18	$6,190,100	$990,416	$7,030

[19] Because Old Stage Highway would be independently owned and does not meet the definition of an "Electric Supplier" because it is under 25 MW, it would be assessed locally. Although the actual potential local assessment methodology is not known, the analysis presented is based on the assumption that the investment would be assessed as machinery and tools because of the Virginia Department of Taxation Tax Ruling 14-37, which determined that production of electricity for sale or resale by a private entity is eligible for the industrial manufacturing processing exemption from sales and use taxes.

[20] Data Source: Isle of Wight County's Commissioner of Revenue's office. Pursuant to Virginia Code §58.1-2606.1, Old Stage Highway would be taxable at a rate not exceeding the county's real estate tax rate.

[21] Data Source: Pivot Energy.

[22] Accounts for Isle of Wight County's depreciation guidelines for Machinery and Tools. Also accounts for the stepdown exemption from local property taxes pursuant to Virginia Code §58.1-2606.1 for projects 5 MW or less and approved by a locality after July 1, 2022. The amount of the exemption is 80 percent in the first five years, 70 percent in years six through ten, and 60 percent thereafter.

[23] Calculated pursuant to Virginia Code §58.1-2606.1. Because Old Stage Highway would be independently owned and does not meet the definition of an "Electric Supplier" because it is under 5 MW, it would be taxed at the Isle of Wight County real estate tax rate of $0.71 per $100.

Year	Total Capital Investment Subject to Exemption[21]	Depreciated Value of Taxable Capital Investment[22]	Additional Annual County Tax Revenue Solar Investment[23]
19	$6,190,100	$990,416	$7,030
20	$6,190,100	$990,416	$7,030
21	$6,190,100	$990,416	$7,030
22	$6,190,100	$990,416	$7,030
23	$6,190,100	$990,416	$7,030
24	$6,190,100	$990,416	$7,030
25	$6,190,100	$990,416	$7,030
CUMULATIVE TOTAL OVER 25 YEARS			**$149,400**
26	$6,190,100	$990,416	$7,030
27	$6,190,100	$990,416	$7,030
28	$6,190,100	$990,416	$7,030
29	$6,190,100	$990,416	$7,030
30	$6,190,100	$990,416	$7,030
31	$6,190,100	$990,416	$7,030
32	$6,190,100	$990,416	$7,030
33	$6,190,100	$990,416	$7,030
34	$6,190,100	$990,416	$7,030
35	$6,190,100	$990,416	$7,030
CUMULATIVE TOTAL OVER 35 YEARS			**$219,700**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

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 Old Stage Highway project would make to Isle of Wight County over its operational life under Scenario 1. As these data indicate, that cumulative total is approximately $226,500 over 25 years and approximately $325,900 over 35 years.

Table 5: Estimated Cumulative County Tax Revenue from the Proposed Old Stage Highway Project under Scenario 1

	Over 25 Years	Over 35 Years
County Real Estate Tax Revenue	$77,100	$106,200
County Revenue from Taxation of Capital Investments	$149,400	$219,700
TOTAL Cumulative Revenue	**$226,500**	**$325,900**

**Totals may not sum due to rounding.*

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Old Stage Highway project would generate for Isle of Wight County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636. The Virginia Code currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect on July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026. Section 58.1-3660 further stipulates that capital investment associated with the solar project will be exempt from taxation if the county adopts an energy revenue share ordinance.

Table 6 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 3 MW AC and an assumed commissioning date of 2025, a revenue share ordinance would generate approximately $138,500 over a 25-year operational life and approximately $215,200 over a 35-year operational life.

Table 6: Estimated County Revenue Generated from Revenue Share Ordinance over 25 Years and 35 Years[24]

Year	MW	Payment per MW with Escalator	Annual County Revenue
1	3	$1,400	$4,200
2	3	$1,540	$4,620
3	3	$1,540	$4,620
4	3	$1,540	$4,620
5	3	$1,540	$4,620
6	3	$1,540	$4,620
7	3	$1,694	$5,082
8	3	$1,694	$5,082
9	3	$1,694	$5,082
10	3	$1,694	$5,082
11	3	$1,694	$5,082
12	3	$1,863	$5,590
13	3	$1,863	$5,590
14	3	$1,863	$5,590
15	3	$1,863	$5,590
16	3	$1,863	$5,590
17	3	$2,050	$6,149
18	3	$2,050	$6,149
19	3	$2,050	$6,149
20	3	$2,050	$6,149
21	3	$2,050	$6,149
22	3	$2,255	$6,764

[24] Data Source: Pivot Energy.

Year	MW	Payment per MW with Escalator	Annual County Revenue
23	3	$2,255	$6,764
24	3	$2,255	$6,764
25	3	$2,255	$6,764
CUMULATIVE TOTAL OVER 25 YEARS			**$138,500**
27	3	$2,480	$7,441
28	3	$2,480	$7,441
29	3	$2,480	$7,441
30	3	$2,480	$7,441
31	3	$2,480	$7,441
32	3	$2,728	$8,185
33	3	$2,728	$8,185
34	3	$2,728	$8,185
35	3	$2,728	$8,185
CUMULATIVE TOTAL OVER 35 YEARS			**$215,200**

**Totals may not sum due to rounding.*

Scenario 2: Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Old Stage Highway project would make to Isle of Wight County over its operational life. As these data indicate, that cumulative total is approximately $215,500 over 25 years and approximately $321,300 over 35 years.

Table 7: Estimated Cumulative County Revenue from the Proposed Old Stage Highway Project over 25 Years and 35 Years under Scenario 2

	Over 25 Years	Over 35 Years
County Real Estate Tax Revenue	$77,100	$106,200
County Revenue from Revenue Share Ordinance	$138,500	$215,200
TOTAL Cumulative Revenue	**$215,500**	**$321,300**

**Totals may not sum due to rounding.*

Current Agricultural Use

This section provides a benchmark for the previous estimates of the fiscal contribution that the proposed Old Stage Highway project would make to Isle of Wight County by estimating the fiscal contribution that the site makes to the county in its current agricultural use.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The proposed Old Stage Highway project would be situated within an approximate 24.8-acre tract of agricultural land used to produce cotton.[25]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 8, in its current agricultural use the proposed Old Stage Highway project site directly supports approximately: 1) < 1 job, 2) $6,700 in wages and benefits, and 3) $17,700 in economic output to Isle of Wight County.

Taking into account the economic ripple effects that direct impact generates, on average, the total annually supported impact on Isle of Wight County is approximately: 1) < 1 job, 2) $10,500 in wages and benefits, and 3) $27,200 in economic output.

Table 8: Total Estimated Annual Economic Impact of the Old Stage Highway Project Site on Isle of Wight County – Current Agricultural Use[26]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	< 1	$6,700	$17,700
2nd Round Indirect and Induced Economic Activity	< 1	$3,800	$9,500
Total Economic Activity	**< 1**	**$10,500**	**$27,200**

**Totals may not sum due to rounding.*

Fiscal Impact Assumptions

- The current assessment value of the affected acreage is approximately $35,900.[27]

[25] Data Source: Pivot Energy.
[26] Calculations based data from the U.S. Department of Agriculture and IMPLAN Group, LLC for Virginia.
[27] Data Source: Derived from Isle of Wight County's property card database.

Fiscal Impact

Table 9 details the estimated tax revenue that the proposed Old Stage Highway site generates for Isle of Wight County in its current agricultural use. As the data in Table 9 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $260 per year, for a cumulative total of approximately $6,400 over 25 years and approximately $8,900 over 35 years.

Table 9: Estimated County Revenue Generated by the Proposed Old Stage Highway Project Site over 25 Years and 35 Years from Real Estate Taxes – Current Agricultural Use

	Over 25 Years	Over 35 Years
Estimated Assessed Value of Property – Current Agricultural Use[28]	$35,900	$35,900
Isle of Wight County Real Estate Tax Rate[29]	0.0071	0.0071
Estimated Annual County Real Estate Tax – Current Agricultural Use	$260	$260
Total Cumulative Revenue over Operational Life	**$6,400**	**$8,900**

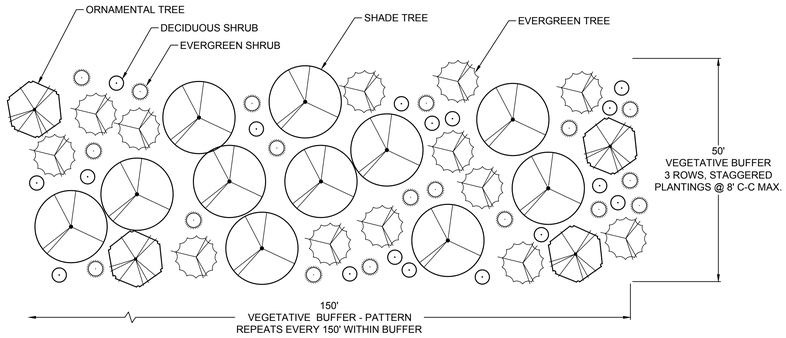
**Totals may not sum due to rounding.*

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.

[28] Data Source: Derived from Isle of Wight County's property card database.
[29] Data Source: Isle of Wight County's Commissioner of Revenue's office.



KEY MAP
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | VIEW 1
NOT TO SCALE



EXISTING CONDITIONS | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED TIME OF PLANTING | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 5 YEAR GROWTH | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 10 YEAR GROWTH | VIEW 1
NOT TO SCALE

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REVISIONS

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DOCUMENT PREPARED FOR:
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6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

LANDSCAPE PLAN
FOR
VAL025 Solar Energy System
8699 OLD STAGE HWY, SMITHFIELD
HARDY MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
VIEWSHED ANALYSIS
- VIEW 1 -

DATE	JULY 14, 2023
JOB NO.	2200574.01
FILE NAME	LD-LA-VA
DRAWN BY	TKM
CHECKED BY	JTP
SHEET NO	VA-1

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KEY MAP
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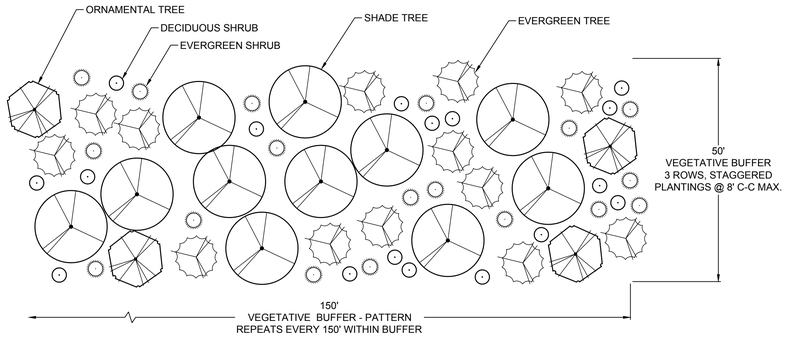

PROPOSED LANDSCAPE BUFFER | VIEW 2
NOT TO SCALE



EXISTING CONDITIONS | VIEW 2
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED TIME OF PLANTING | VIEW 2
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 5 GROWTH | VIEW 2
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PROPOSED LANDSCAPE BUFFER | ESTIMATED 10 YEAR GROWTH | VIEW 2
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DATE	JULY 14, 2023
JOB NO.	2200574.01
FILE NAME	LD-LA-VA
DRAWN BY	TKM
CHECKED BY	JTP
SHEET NO	VA-2

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EASTERN RED CEDAR



GREEN GIANT ARBORVITAE



FLOWERING DOGWOOD



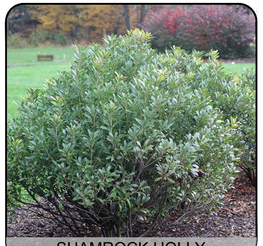
RED SUNSET RED MAPLE



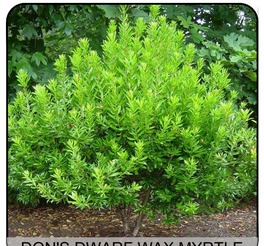
WINTERBERRY HOLLY



RED TWIG DOGWOOD



SHAMROCK HOLLY



DON'S DWARF WAX MYRTLE

PLANT PALETTE

DECIDUOUS TREES

QUERCUS PALUSTRIS (PIN OAK)
HEIGHT: 50-70 FT
SPREAD: 40-60 FT
GROWTH RATE: +1-2 FT/YEAR

ACER RUBRUM ' RED SUNSET'
HEIGHT: 40-50 FT
SPREAD: 30-40 FT
GROWTH RATE: + 2 FT/YEAR

EVERGREEN TREES

JUNIPERUS VIRGINIANA (EASTERN RED CEDAR)
HEIGHT: 30-65 FT
SPREAD: 8-25 FT
GROWTH RATE: + 1-2 FT/YEAR

THUJA PLICATA ' GREEN GIANT"
HEIGHT: 40-60 FT
SPREAD: 12-15 FT
GROWTH RATE: + 2-3 FT/YEAR

ORNAMENTAL TREES

CORNUS FLORIDA (FLOWERING DOGWOOD)
HEIGHT: 15-30 FT
SPREAD: 15-30 FT
GROWTH RATE: + 1-2 FT/YEAR

CRATAEGUS VIRIDIS ' WINTER KING'
HEIGHT: 25-35 FT
SPREAD: 25-35 FT
GROWTH RATE: + 1-2 FT/YEAR

EVERGREEN SHRUBS

MYRICA CERIFERA ' DONS DWARF'
HEIGHT: 3-4 FT
SPREAD: 4-6 FT

ILEX GLABRA ' SHAMROCK'
HEIGHT: 3-4 FT
SPREAD: 3-4 FT

DECIDUOUS SHRUBS

CORNUS STOLONIFERA ' ARTIC FIRE'
HEIGHT: 3-5 FT
SPREAD: 3-5 FT
ILEX VERTICILLATA ' NANA'
HEIGHT: 3-12 FT
SPREAD: 3-12 FT

NOTE: TREES SHALL BE INSTALLED AT 6' - 8' HEIGHT MINIMUM. SHRUBS SHALL BE INSTALLED AT 24-30" HEIGHT MINIMUM. THE PROPOSED VEGETATION DEPICTED IN THIS EXHIBIT ARE FOR CONCEPT PURPOSES ONLY. FINAL PLANT SPECIES WILL BE DETERMINED WITH FINAL DESIGN.



PIN OAK



WINTER KING HAWTHORNE

SUBJECT TO FINAL ENGINEERING

REVISIONS

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SHEET NO	VA-3

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WETLAND AND WATERCOURSE DELINEATION REPORT

VAL025

2200547.01

ISLE OF WIGHT COUNTY, VIRGINIA

DAWOOD
ENGINEERS ▸ PLANNERS ▸ SURVEYORS
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November 18, 2022

Revised: October 03, 2023

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Table 3 – Summary of Watercourses

1.0 EXECUTIVE SUMMARY

This report presents the findings of a wetland and watercourse delineation study conducted by Dawood Engineering, Inc. (Dawood) for the VAL025 Project ("Project"). The project area of investigation (AOI) consists of approximately 56.9-acres in Isle of Wight County, Virginia (Figure 1).

One palustrine emergent (PEM) wetland and one ephemeral watercourse were delineated for the proposed Project.

The AOI is comprised primarily of active agricultural fields and forest. At the time of the investigation, all fields were planted in cotton.

2.0 METHODOLOGY

Dawood reviewed the AOI for potential jurisdictional waters including wetlands and watercourses (ephemeral, intermittent, and perennial). The methodology for conducting the wetland and watercourse delineation work is presented below.

2.1 Methodology for Delineating Wetlands

The wetland delineation was based on Dawood's professional judgment and interpretation of the technical criteria presented in the *Corps of Engineers Wetlands Delineation Manual, Environmental Laboratory, 1987* (Manual) and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*. The routine onsite determination method described in the Manual supplemented by the *National Wetland Plant List* (2020) and U.S. Department of Agriculture (USDA) Natural Resources Conservation Service's *Soil Survey Geographic Database* (SSURGO) for Isle of Wight County, Virginia map and metadata were utilized to determine site characteristics and determine if wetlands were present on the site. Dawood completed the following scope of services to identify and delineate jurisdictional wetland boundaries at the site:

1. Office Data Review: Dawood personnel reviewed the U.S. Geological Survey (USGS) topographic mapping (Figure 1), U.S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) Map (Figure 2), USDA's SSURGO map (Figure 3), existing aerial photography, and the hydric soils list from the SSURGO's metadata file. These resources were used to identify potential wetland areas prior to conducting the fieldwork. Other potential jurisdictional water bodies located within the project area, such as watercourses and ponds, are also identified from these resources.

2. Site Reconnaissance: Dawood conducted the initial site reconnaissance on October 20, 2022, and performed a follow-up investigation for an expansion of the AOI on October 01, 2023. Dawood performed the investigation using the routine onsite determination method (Environmental Laboratory 1987). First, plant communities present on the site were identified. The dominant plant species within each community were identified and a determination was made on whether hydrophytic (wetland) plants dominated the plant community. Next, a representative test site was located within the plant community and soils were sampled using a manual soil auger to determine if hydric soil indicators were present. Lastly, the test site was inspected to determine if indicators of wetland hydrology (inundation, soil saturation, etc.) were present. When a test site was determined to be within a wetland, further testing was performed to locate the wetland/non-wetland boundary and a second test was typically established

outside of the wetland boundary to document non-wetland conditions. Completed wetland determination data forms are provided in Appendix A. Representative photographs of the AOI were taken and are in Appendix B.

2.2 Methodology for Delineating Watercourses

Dawood reviewed the site for watercourses that would likely be considered jurisdictional by state and or federal regulatory agencies. A weight-of-evidence approach for identifying watercourses is used to evaluate multiple lines of evidence concerning physical and biological indicators of watercourse hydrology. Dawood uses field indicators such as flow, substrate composition, embeddedness, presence/absence of defined bed and banks, origin of hydrologic source, presence/absence of vegetation in the watercourse channel, and composition and relative abundances of resident benthic macroinvertebrates to classify on-site watercourse segments into three watercourse types: ephemeral, intermittent, or perennial. A description of each watercourse type is provided below.

- Ephemeral Watercourse – Watercourse reaches lacking flow or benthic macroinvertebrate communities. Ephemeral watercourses typically flow in direct response to precipitation events and/or snow melt.
- Intermittent Watercourse – Watercourse reaches containing seasonal flows and possibly containing a benthic macroinvertebrate community comprised of taxa with short aquatic life stages (e.g., midges, blackfly larvae).
- Perennial Watercourse – Watercourse reaches containing year-round flow dominated by a diverse benthic macroinvertebrate community and containing permanently aquatic taxa or those with long aquatic life stages (e.g., freshwater mussels, dobsonflies, mayflies, spring salamanders, and stoneflies).

The uppermost limit of a perennial watercourse is determined at the point where there is a shift in the benthic macroinvertebrate community, from one with a predominance of long-lived taxa to one dominated by short-lived taxa. The uppermost limit of an intermittent watercourse is determined at the point where there is a loss of flow and/or benthic macroinvertebrate communities. At this point, the break between intermittent and ephemeral is identified. The uppermost limit of an ephemeral watercourse is determined at the point where the watercourse loses its defined bed and bank, or ordinary high-water mark (OHWM) and a predominance of upland vegetation is observed within the channel.

The limit of each watercourse segment, if present, is marked in the field with surveyor's ribbon flags and subsequently georeferenced using a handheld GPS unit with sub-centimeter accuracy capability.

3.0 FINDINGS

3.1 National Wetlands Inventory Maps

The USFWS NWI map has been prepared based on high altitude infrared aerial photography and limited ground truthing. Wetlands and deepwater habitats are identified on these maps and classified according to the system developed by Cowardin and et. al. (1979).

One NWI resource (PEM1/SS1C) was identified along the eastern limit of the AOI on the Bacons Castle, VA quadrangle NWI map (see Figure 2). Ground truthing was performed in this area during the field investigation and the area was determined to be non-wetland.

3.2 Site Soils

A review of the SSURGO map and database for Isle of Wight County, Virginia (USDA 2022) identifies seven soil mapping units within the project area of investigation. The soil mapping units identified are shown in Figure 3 and summarized in Table 1.

TABLE 1. SUMMARY OF ONSITE SOILS

Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Soil Classification
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	Hydric
11E	Nevarc and Remlik soils, 15 to 35 percent slopes	Moderately well drained	Hydric
14B	Peawick-Slagle complex, 2 to 6 percent slopes	Moderately well drained	Hydric
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	Hydric
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	Hydric
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	Hydric
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	Hydric

USDA [Survey Area Version: 19 Survey Area Version Date: 09/05/2023]

The following paragraphs provide a short description of the soil series found at the site:

The Emporia series consists of very deep, well drained, and moderately slow to slow permeability soils commonly found in upland areas of the Coastal Plain. Soils of this series are formed in marine sediments. Slopes range from 0 to 50 percent. Depth to bedrock is greater than 72 inches.

The Nevarc series consists of very deep, moderately well drained, and slow permeability soils commonly found int marine terraces of the Coastal Plain. Soils of this series are formed in marine deposits. Slopes range from 2 to 55 percent. Depth to bedrock is greater than 72 inches.

Soils of the Peawick series are very deep and moderately well drained with very slow permeability. They formed in clayey fluvial sediments on stream terraces of the Coastal Plain and Peidmont. Slopes range from 0 to 15 percent. Depth to bedrock is greater than 72 inches.

The Remlik series consists of very deep, well drained soils that formed in loamy and sandy sediments on Coastal Plain side slopes. Permeability is moderate or moderately rapid. Slopes range from 2 to 65 percent. Depth to bedrock is greater than 60 inches.

The Slagle series consists of very deep, moderately well drained soils formed in marine deposits. Slopes range from 0 to 25 percent. Permeability is moderately slow to slow. Depth to bedrock is greater than 72 inches

The Uchee series consists of very deep, well drained, moderately slowly permeable soils that formed in sandy and loamy marine sediments. They are on smooth ridgetops and dissected side slopes of the Coastal Plain. Slopes range from 0 to 25 percent.

3.3 Site Plant Communities

Dominant plant species within extant plant communities were identified and the U.S. Army Corps of Engineers (USACE) wetland plant indicator status was determined according to the *National Wetland Plant List* (2020). The USACE has established five wetland plant indicator categories, defined as follows:

(1) Obligate Wetland (OBL) – Almost always occur in wetlands; rarely in non-wetlands;
(2) Facultative Wetland (FACW) – Usually occur in wetlands, but occasionally occur in non-wetlands;
(3) Facultative (FAC) – Commonly occur in wetlands and non-wetlands;
(4) Facultative Upland (FACU) – Usually occur in non-wetlands, but occasionally occur in wetlands; and
(5) Upland (UPL) – Almost always occur in non-wetlands, rarely in wetlands.

The USACE considers plants classified as OBL, FACW or FAC to be wetland plants (or hydrophytes). The plant communities present on the site are composed of agricultural fields, grassland, and forest.

The dominant plant species observed in the area of investigation and their indicator statuses are recorded on individual data forms presented in Appendix A.

Representative photographs of watercourses, wetlands, and habitat within the project area of investigation are provided in Appendix B.

3.4 Site Hydrology

Site elevations in the project area range from approximately 45 to 75 feet above mean sea level. Surface water on the site is conveyed to Lawson Creek, which carries surface water to Pagan River.

3.5 Delineated Wetlands

One wetland was identified within the area of investigation for the proposed Project. The size, cover-type, based on the Cowardin classification system, and corresponding test sites and photograph numbers are provided below in Table 2. A wetland determination data form is provided in Appendix A and resource photographs are provided in Appendix B. Wetland W01 is classified as non-tidal.

TABLE 2. SUMMARY OF WETLANDS

Wetland Name	Sample Point	Total Delineated Wetland Acreage[1]	Wetland Classification[2]	Tidal/Non-tidal	Isolated?	Associated Photograph Number(s)
W01	W01-SPW	0.46	PEM	Non-tidal	Yes	3, 4

[1] Total Wetland Acreage within AOI

[2]Cowardin 1979

3.6 Delineated Watercourses

Dawood identified one watercourse within the area of investigation that may be considered "jurisdictional" by applicable regulatory agencies. Watercourse name, classification, and delineated length are provided in Table 3 below. Resource photographs are included in Appendix B.

TABLE 3. SUMMARY OF WATERCOURSES

Watercourse Name	Waters Classification	Delineated Watercourse Length (feet)[1]	Associated Photograph Number(s)
R01	Ephemeral	258	1, 2

[1] Total length of Watercourse within AOI

3.7 Other Delineated Waters

No other potentially jurisdictional waters were identified during the site reconnaissance.

4.0 CONCLUSIONS

One PEM wetland and one ephemeral watercourse were identified and delineated for the proposed VAL025 project. No other potentially jurisdictional waters were delineated within the Project's area of investigation. Dawood ecologists flagged and subsequently georeferenced the wetland boundary using a GPS unit with sub-meter accuracy capability. The boundaries of all potential jurisdictional waters are shown on Figure 4. Wetland W01 is considered significantly disturbed due to its location within an agricultural field; however, hydrology, hydrophytic vegetation, and hydric soil indicators were all observed and used to delineate the wetland boundary. Detailed site conditions have been documented in wetland determination data forms included as Appendix A.

5.0 REGULATORY CONSIDERATIONS

5.1 Meetings with Regulatory Agencies

To date, there have been no meetings between Dawood, VMRC, DEQ, or USACE regarding potentially jurisdictional waters identified within the project area of investigation.

5.2 Regulatory Discussion

The USACE and Virginia DEQ regulate discharges of fill and obstructions/encroachments within or across jurisdictional wetlands and watercourses. Discharges of dredged or fill material into waters of the United States, including non-isolated wetlands, require permits from the USACE under the provisions of Section 404 of the Clean Water Act (CWA).

Excavation, filling, dumping, permanent flooding or impounding of wetlands; or activities that may cause draining, that significantly alter or degrade existing wetland acreage or functions are prohibited without a Virginia Water Protection Permit.

To determine if a wetland is classified as an isolated wetland and therefore not regulated under Section 404 of the CWA or Section 10 of the rivers and Harbors Act, an Approved JD must be obtained from the Corps. A Jurisdictional Determination (JD) is a two-step process of 1) identifying and locating aquatic resources (including wetlands) on a property, and 2) determining whether those identified resources are regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act. Regarding wetlands, the JD process determines if a wetland is located adjacent to a traditionally navigable water (TNW) or a relatively permanent water (RPW) that is a tributary to a TNW. If such a connection exists, then USACE will assert jurisdiction over such a wetland. If a wetland is located adjacent to, but not abutting, a RPW or TNW, then the JD process will determine if a significant nexus exists between a wetland and a TNW. If such a nexus exists, then the wetland is regulated by USACE. If the Corps determines that no such nexus exists, then the identified wetland is considered an isolated wetland and is not regulated under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act, presuming that the use, degradation, or destruction of the wetland could not affect interstate commerce.

6.0 DISCLAIMER

Dawood's wetlands and watercourse delineation services were conducted in a manner consistent with the criteria contained in the Manual and the 2012 Supplement and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the project. It must be recognized that the delineation was based on field observations and Dawood's professional interpretation of the criteria in the Manual and Regional Supplement at the time of the fieldwork. Wetland determinations may change subsequent to Dawood's delineation based on changes in the regulatory criteria, seasonal variations in hydrology, alterations to drainage patterns and other human activities and/or land disturbances.

7.0 REFERENCES

Cowardin, L. M., V. Carter, and F. C. Golet. 1979. *Classification of Wetlands and Deep Water Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service. Washington D. C. FWS/OBS-79/31.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

Natural Resources Conservation Service, United States Department of Agriculture, Soil Survey Geographic (SSURGO) Database for Isle of Wight County, Virginia. Survey Area Version: 19; Survey Area Version Date: 09/05/2023.

Title 9, Code of Virginia, Agency 25 State Water Control Board, *Chapter 260 Water Quality Standards*.

Title 33, Code of Federal Regulations, Section 404. *Clean Water Act.*

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

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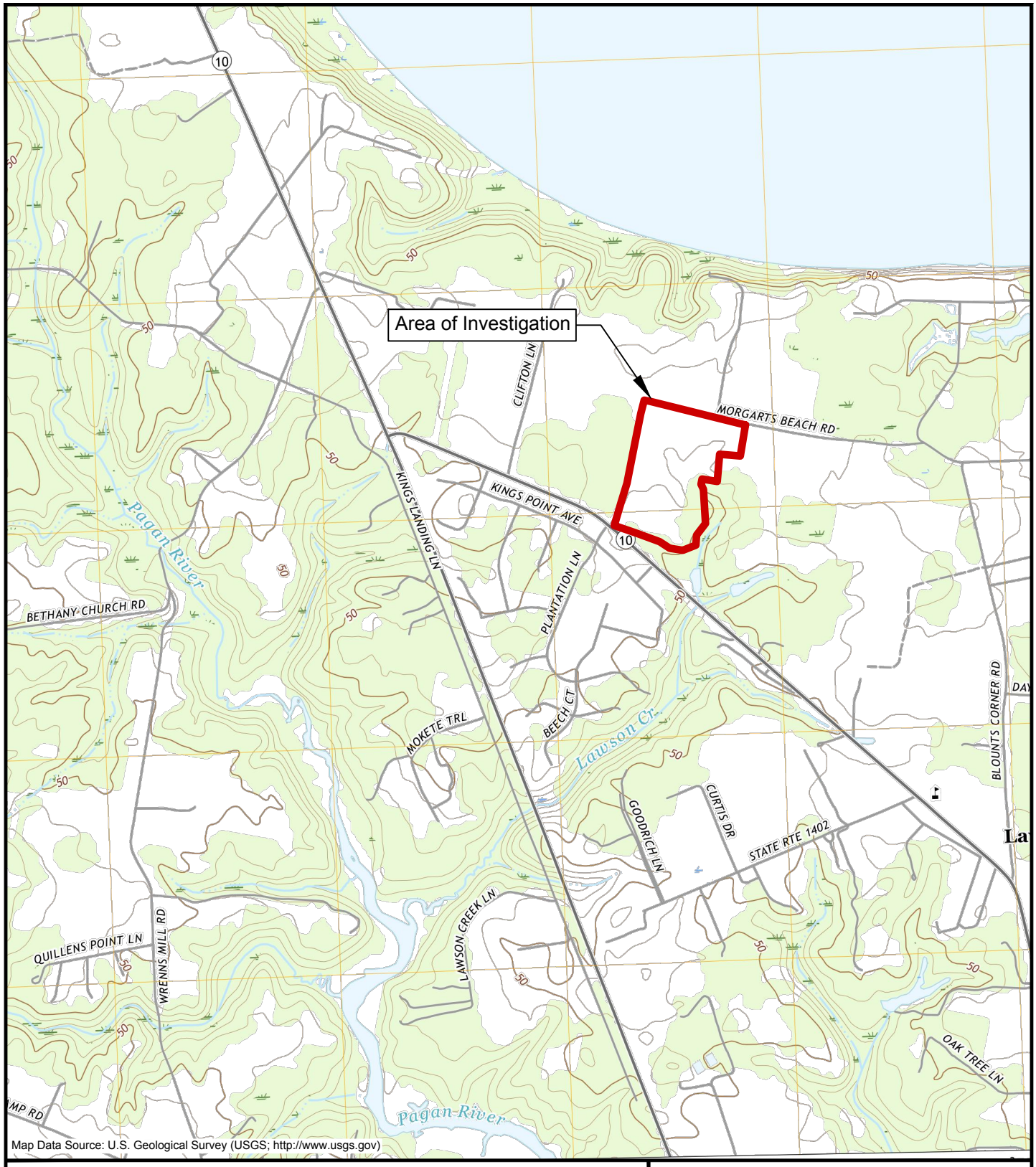
FIGURES



Map Data Source: U.S. Geological Survey (USGS; http://www.usgs.gov)

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PROJECT NUMBER:	2200547.01		
DRAWN BY:	JWY	APPROVED BY:	KRR

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DRAWN BY:	JWY
APPROVED BY:	KRR

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SCALE: 1" = 400'

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Aerial Photography Source: Virginia Geographic Information Network (VGIN; http://vgin.vdem.virginia.gov)
Soil Survey Data Source: NRCS, USDA Soil Survey for Isle of Wight County, Virginia (http://soildatamart.nrcs.usda.gov/)

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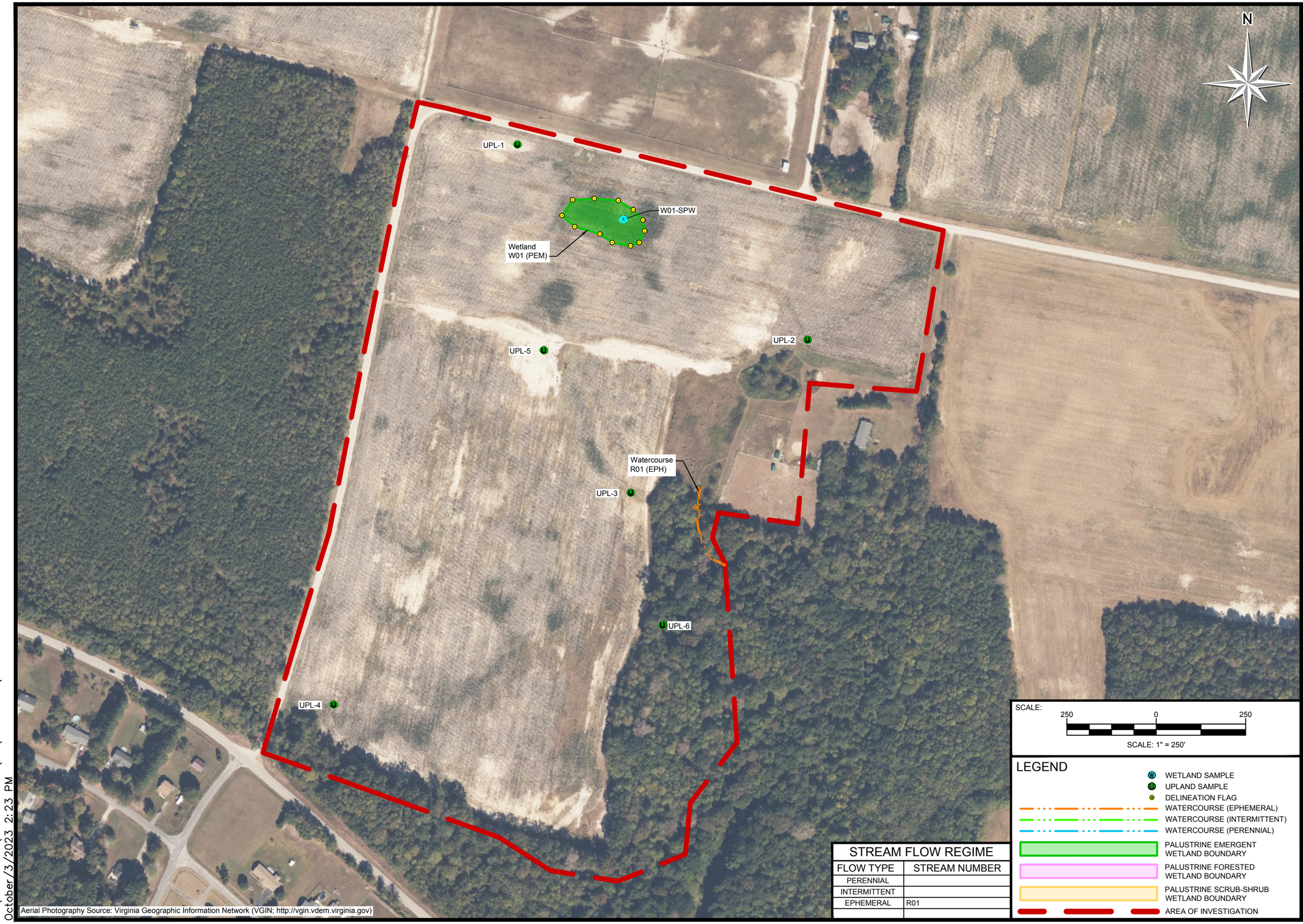

STREAM FLOW REGIME	
FLOW TYPE	STREAM NUMBER
PERENNIAL	
INTERMITTENT	
EPHEMERAL	R01

SCALE:

250 0 250

SCALE: 1" = 250'

LEGEND

- WETLAND SAMPLE
- UPLAND SAMPLE
- DELINEATION FLAG
- WATERCOURSE (EPHEMERAL)
- WATERCOURSE (INTERMITTENT)
- WATERCOURSE (PERENNIAL)
- PALUSTRINE EMERGENT WETLAND BOUNDARY
- PALUSTRINE FORESTED WETLAND BOUNDARY
- PALUSTRINE SCRUB-SHRUB WETLAND BOUNDARY
- AREA OF INVESTIGATION

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FIGURE 4:

WETLAND AND WATERCOURSE DELINEATION MAP

DATE	OCTOBER 03, 2023
JOB NO.	2200547.01
FILE NAME	EN-FL-WD01
DRAWN BY	JWY
CHECKED BY	KRR

PROJECT NAME

VAL025

O:\2022JOBS\2200547-01\EN\DRAWINGS\2200547.01-EN-FL-WD01
October 3, 2023 2:23 PM

APPENDIX A

DATA SHEETS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-1

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale/lowland Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRR T Lat: 37.029863 Long: 37.029863 Datum: NAD83

Soil Map Unit Name: Slagle fine sandy loam, 0 to 2 percent slopes (18A) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Gossypium hirsutum	20	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20.0 = Total Cover		
50% of total cover: 10.0	20% of total cover: 4.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	20 (A)		80 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed

SOIL

Sampling Point: UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR 6/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-2

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR or MLRA): LRR T Lat: 37.028389 Long: -76.644147 Datum: NAD83

Soil Map Unit Name: Peawick-Slagle complex, 2 to 6 percent slopes (14B) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed. The sample plot was documented due to evidence of lack of growth of cotton individuals.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-2

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Gossypium hirsutum	30	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30.0 = Total Cover		
50% of total cover: 15.0	20% of total cover: 6.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	30 (A)		120 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed. Cotton was observed not growing within portions of the sample plot. Due to a lack of hydrology and hydric soil indicators, the sample plot area was not considered naturally problematic in qualifying for the presence of hydrophytic vegetation.

SOIL

Sampling Point: UPL-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/3	100					Sand	
2-20	10YR 5/6	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-3

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale/lowland Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRR T Lat: 37.027170 Long: -76.645861 Datum: NAD83

Soil Map Unit Name: Peawick-Slagle complex, 2 to 6 percent slopes (14B) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Gossypium hirsutum	30	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30.0 = Total Cover		
50% of total cover: 15.0	20% of total cover: 6.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	30 (A)		120 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed

SOIL

Sampling Point: UPL-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					Loamy Sand	
12-20	2.5Y 5/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-4

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR or MLRA): LRR T Lat: 37.025393 Long: -76.648930 Datum: NAD83

Soil Map Unit Name: Slagle fine sandy loam, 2 to 6 percent slopes (18B) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-4

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Gossypium hirsutum	40	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40.0 = Total Cover		
50% of total cover: 20.0	20% of total cover: 8.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	40 (A)		160 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed

SOIL

Sampling Point: UPL-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/4	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-5

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Level Slope (%): 1

Subregion (LRR or MLRA): LRR T Lat: 37.028277 Long: -76.646666 Datum: NAD83

Soil Map Unit Name: Uchee loamy sand, 0 to 2 percent slopes (19A) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-5

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Gossypium hirsutum	20	Y	FACU
2. Digitaria sanguinalis	15	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35.0 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	35 (A)		140 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed

SOIL

Sampling Point: UPL-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/2	100					Sand	
4-16	10YR 5/3	100					Sand	
16-24	2.5Y 6/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/02/2023

Applicant/Owner: Pivot Energy State: VA Sampling Point: UPL-6

Investigator(s): K. Rucker Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR or MLRA): LRR T Lat: _____ Long: _____ Datum: NAD83

Soil Map Unit Name: Uchee loamy sand, 2 to 6 percent slopes (19B) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
The sample plot is located within a previously logged area (likely <3 years). Though woody vegetation was observed regrowing, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____	
Water Table Present?	Yes _____	No _____	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____	**Wetland Hydrology Present?** Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators were observed.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL-6

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Eupatorium capillifolium	45	Y	FACU
2. Erigeron canadensis	20	Y	FACU
3. Phytolacca americana	15	N	FACU
4. Albizia lebbeck	15	N	UPL
5. Senecio hieracilfolius	15	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	110.0 = Total Cover		
50% of total cover: 55.0	20% of total cover: 22.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	80	x 4 =	320
UPL species	15	x 5 =	75
Column Totals:	110 (A)		440 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No ✔

Remarks: (If observed, list morphological adaptations below). A dominant hydrophytic vegetative community was not observed

SOIL

Sampling Point: UPL-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5yr 3/2	100					Sand	
4-18	10YR 4/4	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks: No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: VAL025 City/County: Isle of Wight County Sampling Date: 10/20/2022

Applicant/Owner: Pivot Energy State: VA Sampling Point: W01-SPW

Investigator(s): K. Rucker & J. Yealy Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRR T Lat: 37.029272 Long: -76.645878 Datum: NAD83

Soil Map Unit Name: Slagle fine sandy loam, 0 to 2 percent slopes (18A) NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
The sample plot is located within an active agricultural field; therefore, vegetation is considered significantly disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: W01-SPW

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Sapling Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		
Herb Stratum (Plot size: 5')			
1. Cyperus odoratus	50	Y	FACW
2. Rorippa sylvestris	15	Y	OBL
3. Cyperus iria	5	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70.0 = Total Cover		
50% of total cover: 35.0	20% of total cover: 14.0		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	0.0 = Total Cover		
50% of total cover: 0.0	20% of total cover: 0.0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	55	x 2 =	110
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		125 (B)

Prevalence Index = B/A = 1.79

Hydrophytic Vegetation Indicators:

- ✔ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ✔ 3 - Prevalence Index is ≤3.0[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✔ No

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: W01-SPW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	97	2.5YR 5/8	3	C	PL	Loam	
3-18	10YR 5/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

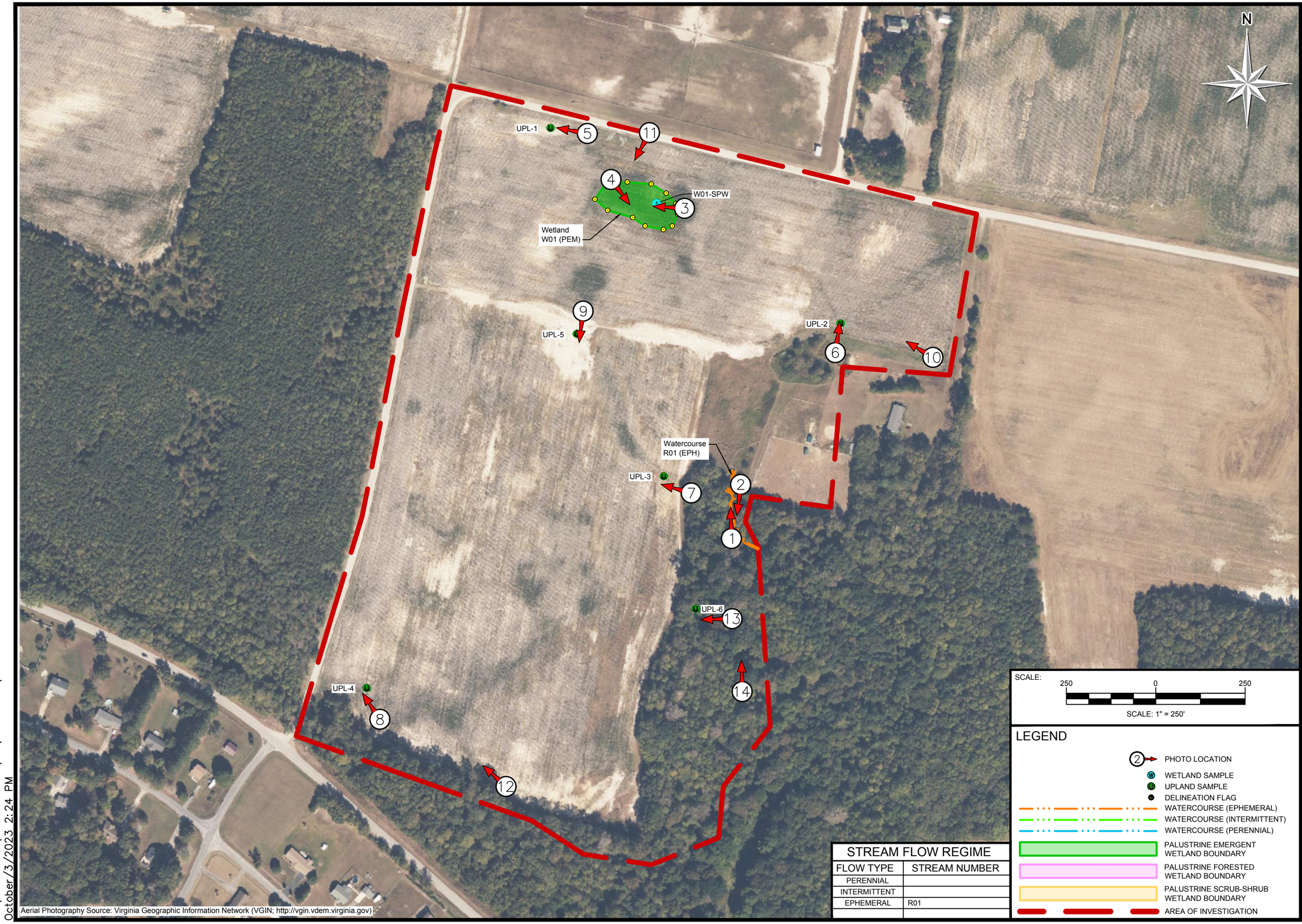
Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

APPENDIX B

SITE PHOTOGRAPHS



STREAM FLOW REGIME	
FLOW TYPE	STREAM NUMBER
PERENNIAL	
INTERMITTENT	
EPHEMERAL	R01

SCALE:

250 0 250

SCALE: 1" = 250'

LEGEND

- PHOTO LOCATION
- WETLAND SAMPLE
- UPLAND SAMPLE
- DELINEATION FLAG
- WATERCOURSE (EPHEMERAL)
- WATERCOURSE (INTERMITTENT)
- WATERCOURSE (PERENNIAL)
- PALUSTRINE EMERGENT WETLAND BOUNDARY
- PALUSTRINE FORESTED WETLAND BOUNDARY
- PALUSTRINE SCRUB-SHRUB WETLAND BOUNDARY
- AREA OF INVESTIGATION

REVISIONS

NO.	DATE	DESCRIPTION

DOCUMENT PREPARED FOR:

DOCUMENT PREPARED BY:

DAWOOD
4250 Crums Mill Road
Suite 301
Harrisburg, PA 17112
t: 855.432.9663
f: 717.732.8596

DRAWING TITLE:

PHOTO LOCATION MAP

DATE	OCTOBER 03, 2023
JOB NO.	2200547.01
FILE NAME	EN-FL-WP01
DRAWN BY	JWY
CHECKED BY	KRR

PROJECT NAME

VAL025

O:\2022JOBS\2200547-01\EN\DRAWINGS\220054701-EN-FL-WP01
October 3, 2023 2:24 PM



1. VIEW OF WATERCOURSE R01 LOOKING UPSTREAM



2. VIEW OF WATERCOURSE R01 LOOKING DOWNSTREAM

DAWOOD
ENGINEERS • PLANNERS • SURVEYORS

Job Nos. 2200547.01

SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA



3. VIEW OF WETLAND W01 LOOKING WEST



4. VIEW OF WETLAND W01 LOOKING SOUTHEAST

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ENGINEERS • PLANNERS • SURVEYORS

Job Nos. 2200547.01

SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA



5. VIEW OF UPL-1 LOOKING WEST



6. VIEW OF UPL-2 LOOKING NORTH

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Job Nos. 2200547.01

SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA



7. VIEW OF UPL-3 LOOKING WEST



8. VIEW OF UPL-4 LOOKING NORTHWEST

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Job Nos. 2200547.01

SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA



9. VIEW OF UPL-5 LOOKING SOUTH



10. GENERAL VIEW OF AOI

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SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA



11. GENERAL VIEW OF AOI



12. GENERAL VIEW OF AOI

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SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA

Job Nos. 2200547.01



13. VIEW OF UPL-6 LOOKING WEST



14. GENERAL VIEW OF FORMER WOODED AREA LOOKING NORTH

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Job Nos. 2200547.01

SITE PHOTOGRAPHS
VAL025
ISLE OF WIGHT COUNTY, VIRGINIA

VAL025: THREATENED AND ENDANGERED SPECIES ASSESSMENT

Isle of Wight County, Virginia

Prepared by:

DAWOOD
ENGINEERS ▸ PLANNERS ▸ SURVEYORS

4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Prepared For:

Elk Development, LLC
6865 Deerpath Road, Suite 330
Elkridge, MD 21075

Summary

Dawood has performed desktop surveys, reviewed publicly available maps and information, and coordinated with state and federal agencies to determine if the proposed VAL025 Solar Facility Project has the potential to impact threatened or endangered species. A review for threatened and endangered species within or potentially impacted by the project area was coordinated with United States Fish and Wildlife Service (USFWS) via the IPaC system, with Virginia Department of Conservation and Recreation (DCR) via an Information Services Order Form, with Virginia Department of Wildlife Resources (DWR) via a VaFWIS system review and email coordination, and with the National Oceanic and Atmospheric Administration (NOAA) via email. No impacts to threatened and/or endangered species are proposed or anticipated as a result of the project. A summary of identified threatened and endangered species within the proposed project area and agency coordination is below.

USFWS

The USFWS species list generated by the IPaC system noted one endangered species (Northern Long-eared Bat) and one candidate species (Monarch Butterfly) potentially within the proposed project area. No response from the Service was received in the 30-day period determined by USFWS; therefore, the conclusions of the Consistency Letter are deemed appropriate.

Northern Long-eared Bat

A "may affect" determination was issued by USFWS for the Northern Long-eared Bat; however, the USFWS Consistency Letter states that any take that would occur is not prohibited under ESA Section 4(d). Neither tree-clearing or disturbance of caves is proposed by the project. Therefore, no take of this species is proposed nor anticipated as a result of the project. Additionally, a review of the NLEB Winter Habitat and Roost Trees mapper maintained by VA Department of Game and Inland Fisheries does not denote any hibernaculum or known maternity roost trees within or in proximity to the proposed project area.

Monarch Butterfly

The proposed project area is an actively managed agricultural field and lacks potential habitat (e.g., milkweed and flowering plants) for the species. Therefore, no impacts to this species are proposed or anticipated. Additionally, enhancement of the proposed project area with native pollinator plant species will improve the potential to support this species.

Migratory Birds

Migratory birds are not anticipated to be impacted by the proposed project. General measures and habitat protection will be implemented by the proposed project in accordance with USFWS Nationwide Standard Conservation Measures to reduce impacts to migratory bird species. Such measures include but are not limited to: no proposed tree-clearing, proper management of waste, limiting project impacts to already disturbed lands, implementing an Erosion and Sedimentation Control Plan, and restoration with native plant species.

Virginia Department of Wildlife Resources

A 2-mile radius search via the VaFWIS system was used to develop an Initial Project Assessment (IPA) Report. One confirmed federally listed endangered species, the Atlantic Sturgeon, and two Anadromous Fish Use Areas were confirmed to be within the 2-mile radius of the proposed project area. One Tier IIa species, the Barking Treefrog was also confirmed within the 2-mile radius. The IPA identified one Colonial Water Bird Colony within the 2-mile radius. One Bald Eagle nest and

two Bald Eagle Concentration Areas and Roosts were identified within the 2-mile radius. Coordination with Virginia DWR was performed to ensure no potential impacts to threatened and endangered species were anticipated as a result of the proposed project. The response email from DWR, dated March 17, 2023, indicates there are no anticipated adverse impacts to species under their jurisdiction from the proposed work.

Virginia Department of Conservation and Recreation

Consultation with the Virginia Department of Conservation and Recreation (DCR) was performed via their Information Services Order Form to determine if the proposed project had the potential to impact species under their jurisdiction. Per the DCR response letter, dated 03/10/2023, no impacts to species under their jurisdiction are anticipated as a result of the proposed project. DCR does recommend the development of an invasive species management plan for the project and planting of native species following construction activities. Such activities will be included for the proposed project to maximize benefits to native pollinators. The DCR response letter is included in Enclosure C.

NOAA

Project details were provided to NOAA via email. NOAA stated that although four species of sea turtles, shortnose sturgeon, and Atlantic sturgeon originating from five Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its rivers and tributaries, direct and/or indirect impacts to these species are not anticipated. The email response from NOAA's Brian D Hopper is included as Enclosure D.

Coastal Avian Protection Zone (CAPZ)

The proposed VAL025 project is located within Coastal Avian Protection Zone 12. The Virginia DEQ's Solar Permit by Rule Guidance for CAPZ areas defines Zone 12 as:

> "Zone 12: Outer fringes of the lower, middle and northern peninsulas. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles)."

As discussed above, coordination with the Virginia Department of Game and Inland Fisheries has determined that the proposed project is not anticipated to have the potential to impact Bald Eagles. Therefore, no impacts to protected species within Zone 12 are anticipated.

Enclosure A: USFWS - IPaC Species List & Consistency Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project code: 2023-0040990
Project Name: Pivot_VAL025

February 02, 2023

Subject: Consistency letter for the 'Pivot_VAL025' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Jacob Yealy:

The U.S. Fish and Wildlife Service (Service) received on February 02, 2023 your effects determination for the 'Pivot_VAL025' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will

first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Pivot_VAL025

2. Description

The following description was provided for the project 'Pivot_VAL025':

> Construction of a solar photovoltaic energy system and associated site improvements including solar panels, equipment, cables, interconnection to the existing power lines, and access road.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.0266467,-76.64739632449405,14z



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

4. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

5. Will the action involve Tree Removal?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency:	Dawood Engineering, Inc.
Name:	Jacob Yealy
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Address Line 2:	Suite 301
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State:	PA
Zip:	17112
Email	jacob.yealy@dawood.net
Phone:	7179651521

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project Code: 2023-0040990
Project Name: Pivot_VAL025

February 02, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Project Code: 2023-0040990
Project Name: Pivot_VAL025
Project Type: Power Gen - Solar
Project Description: Construction of a solar photovoltaic energy system and associated site improvements including solar panels, equipment, cables, interconnection to the existing power lines, and access road.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.0266467,-76.64739632449405,14z



Counties: Isle of Wight County, Virginia

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15

NAME	BREEDING SEASON
Blue-winged Warbler *Vermivora pinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Kentucky Warbler *Oporornis formosus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere

NAME	BREEDING SEASON
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

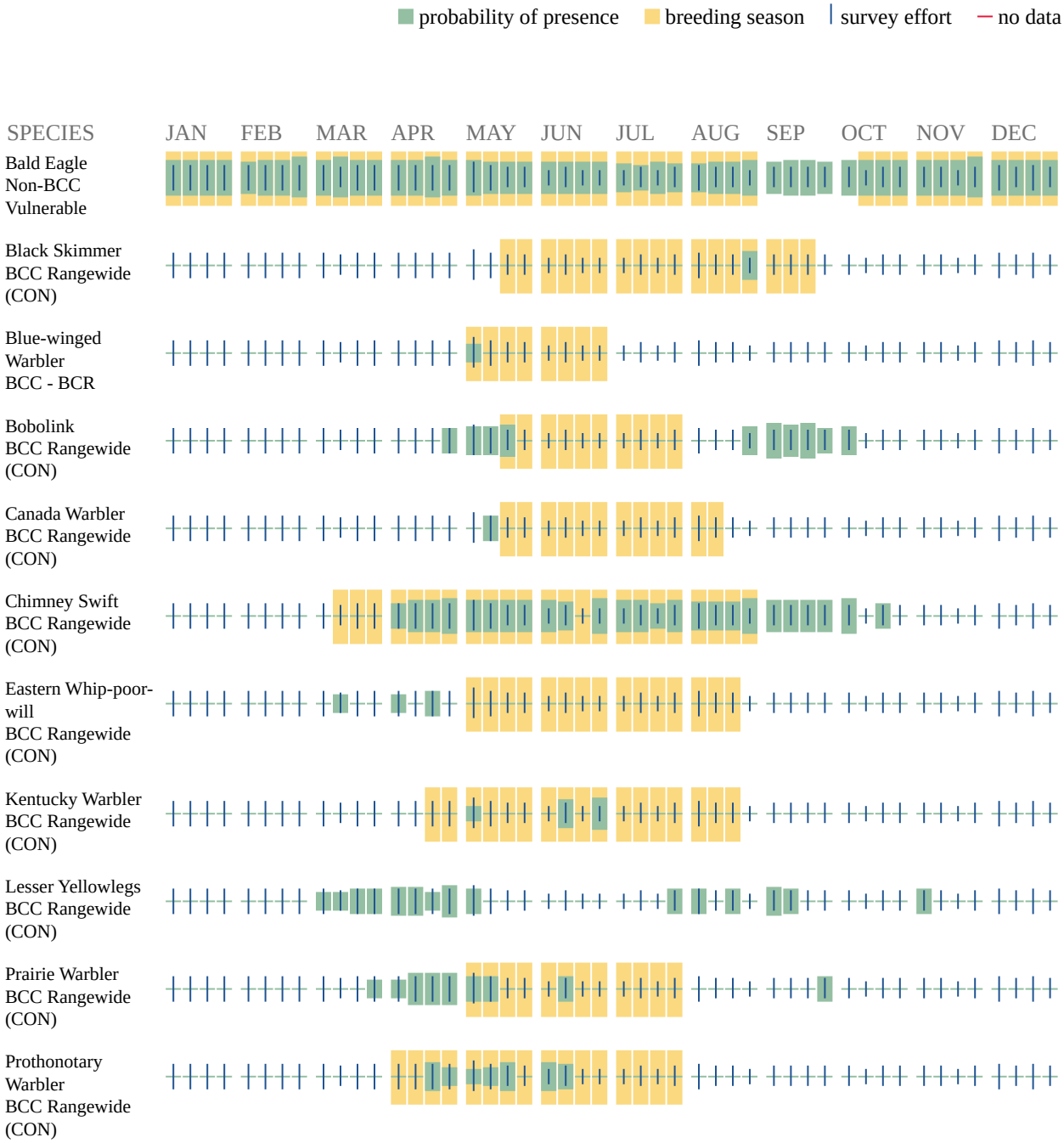
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

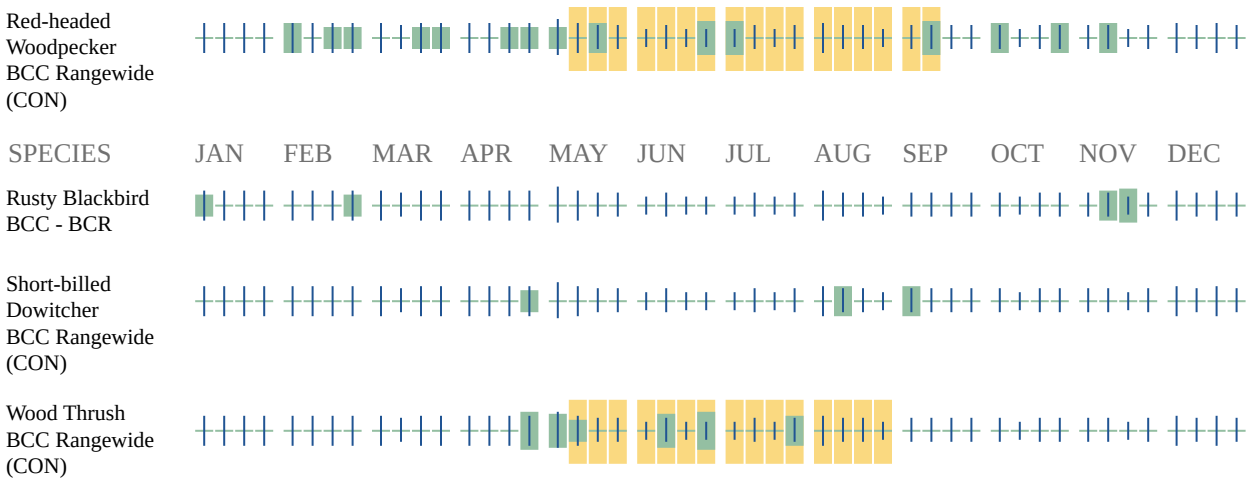
Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act

requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPaC User Contact Information

Agency:	Dawood Engineering, Inc.
Name:	Jacob Yealy
Address:	4250 Crums Mill Road
Address Line 2:	Suite 301
City:	Harrisburg
State:	PA
Zip:	17112
Email	jacob.yealy@dawood.net
Phone:	7179651521

Enclosure B: VaFWIS Initial Project Assessment, CCB Maps & VA DWR Response

VaFWIS Initial Project Assessment Report Compiled on 3/15/2023, 7:53:46 AM

Help

Known or likely to occur within a **2 mile radius around point 37.0268690 -76.6473158** in **093 Isle of Wight County, VA**

View Map of Site Location

480 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 30) (30 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes	BOVA,SppObs
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta		BOVA
040144	FTST	Ia	Knot, red	Calidris canutus rufa		BOVA
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA,Habitat
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
020052	SE	IIa	Salamander, eastern tiger	Ambystoma tigrinum		BOVA
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus		Habitat
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040379	ST	Ia	Sparrow, Henslow's	Centronyx henslowii		Habitat
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei		BOVA,Habitat
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin		BOVA,Habitat
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA
070131		Ic	Isopod, Phreatic	Caecidotea phreatica		BOVA
020063		IIa	Toad, oak	Anaxyrus quercicus		BOVA,Habitat
020002		IIa	Treefrog, barking	Hyla gratiosa	Yes	BOVA,SppObs
040052		IIa	Duck, American black	Anas rubripes		BOVA
040033		IIa	Egret, snowy	Egretta thula		BOVA
040029		IIa	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA

To view **All 480 species** View 480

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (2 records)

View Map of All Anadromous Fish Use Streams

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	
C92	James River 1	Confirmed	6		IV	Yes
P127	Pagan river	Potential	0			Yes

Impediments to Fish Passage (1 records)

View Map of All Fish Impediments

ID	Name	River	View Map
396	WRENNS DAM	PAGAN RIVER	Yes

Colonial Water Bird Survey (1 records)

View Map of All Query Results Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Warren Creek	1	Jun 1 1993	1			Yes

Displayed 1 Colonial Water Bird Survey

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

are present. View Map of Bald Eagle Concentration Areas and Roosts

(2 records)

BECAR ID	Observation Year	Authority	Type	Comments	View Map
48	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Summer Concentration Area	Eagle_use Low	Yes
51	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Winter Concentration Area	Eagle_use Low	Yes

Bald Eagle Nests (1 records)

View Map of All Query Results
Bald Eagle Nests

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
IW0702	4	Apr 23 2008	Unknown	Yes

Displayed 1 Bald Eagle Nests

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species (6 Species)

View Map of Combined Terrestrial Habitat Predicted for 6 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis	Yes
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Yes
040379	ST	Ia	Sparrow, Henslow's	Centronyx henslowii	Yes
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes

Public Holdings:

N/A

Compiled on 3/15/2023, 7:53:46 AM I1466865.0 report=IPA searchType= R dist= 3218 poi= 37.0268690 -76.6473158

PixelSize=64; Anadromous=0.021199; BECAR=0.026016; Bats=0.018249; Buffer=0.059286; County=0.065083; Impediments=0.020612; Init=0.096113; PublicLands=0.022049; SppObs=0.305503; TEWaters=0.026976; TierReaches=0.03766; TierTerrestrial=0.095867; Total=0.951569; Tracking_BOVA=0.191886; Trout=0.020844

Anadromous James River 1

37,01,36.7 -76,38,50.3
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

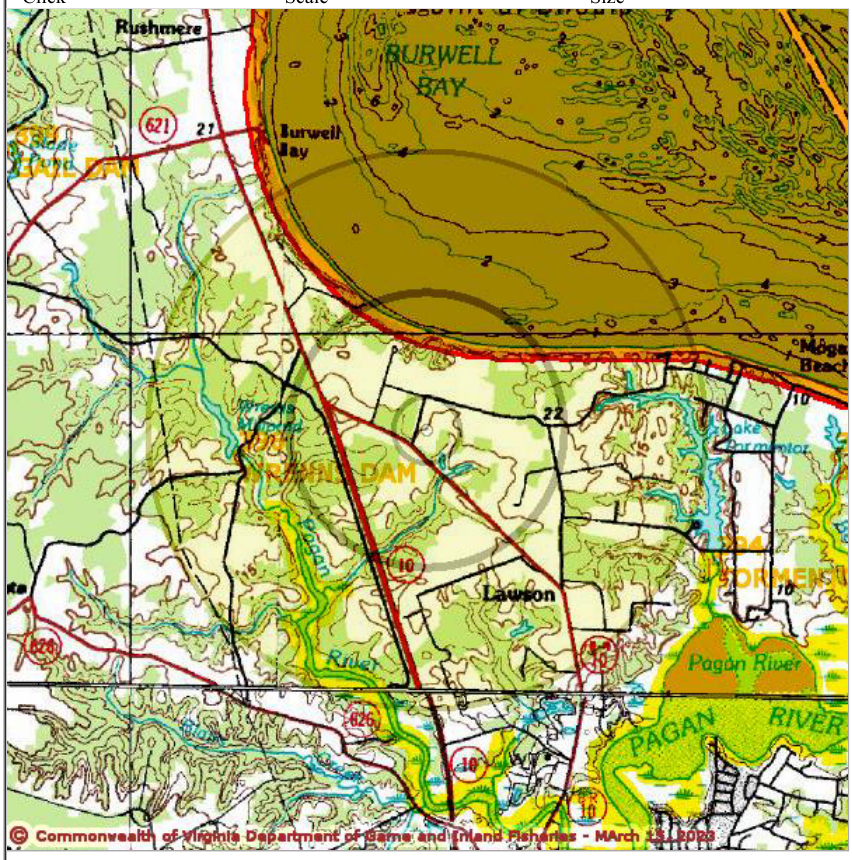
Map Overlay Choices
Current List: Position, Search, Observation

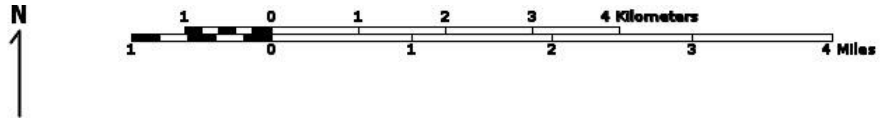
Map Overlay Legend

Anadromous Fish Reach
Confirmed
Selected Confirmed
Potential
Selected Potential
123 Impediment
Position Rings 1 mile and 1/4 mile at the Search Point
2 mile radius Search Area
Data Observation Site

Refresh Browser Page

Map Click: Pan | Id | M
Map Scale: In — Zoom — Out
Screen Size: Small — Size — Big
Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
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All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-15 07:48:36 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select min(b.minx),min(b.miny),max(b.maxx),max(b.maxy) from vafwis_tables.dbo.cvAnadromous a join vafwis_tables.dbo.cvAnadromous_XY b on b.anadromous = a.anadromous where a.anadromous = 'C92'

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Anadromous Pagan river

37,01,36.7 -76,38,50.3
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

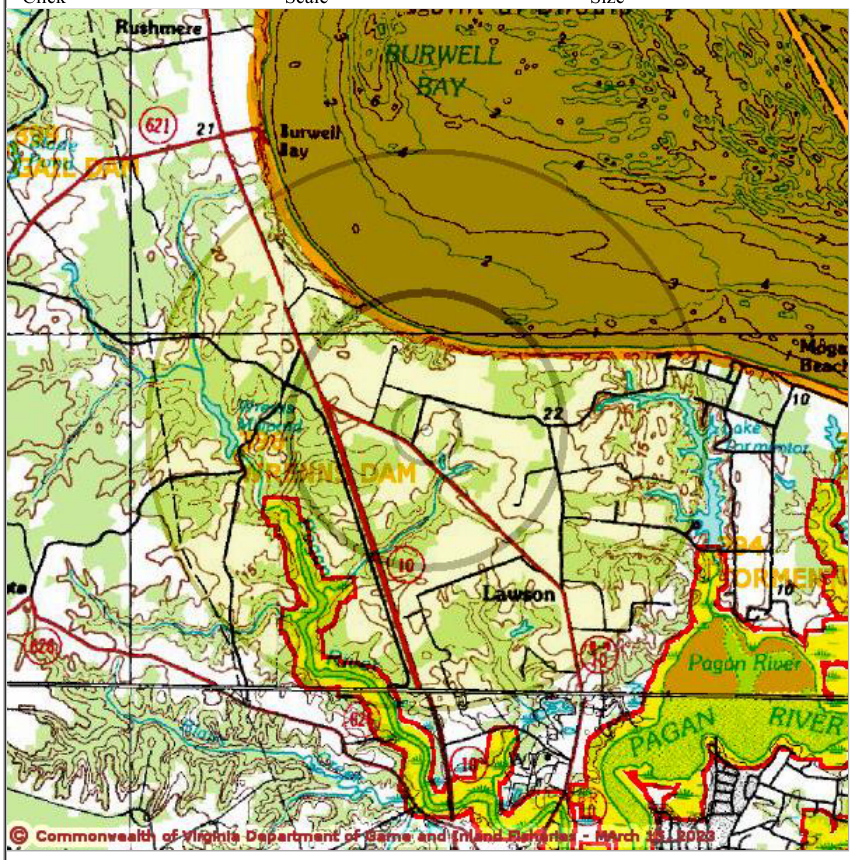
Map Overlay Choices
Current List: Position, Search, Observation

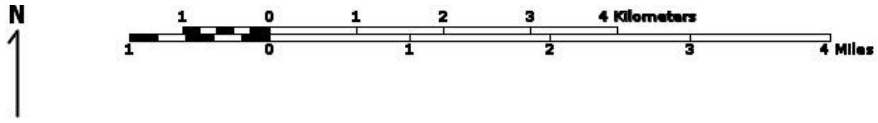
Map Overlay Legend

Anadromous Fish Reach
Confirmed
Selected Confirmed
Potential
Selected Potential
123 Impediment
Position Rings 1 mile and 1/4 mile at the Search Point
2 mile radius Search Area
Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
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map assembled 2023-03-15 07:50:06 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select min(b.minx),min(b.miny),max(b.maxx),max(b.maxy) from vafwis_tables.dbo.cvAnadromous a join vafwis_tables.dbo.cvAnadromous_XY b on b.anadromous = a.anadromous where a.anadromous = 'P127'

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Bald Eagle Concentration Areas and Roosts 48

37,01,36.7 -76,38,50.3 is **the Search Point**

Display at center | **Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

Map Overlay Legend

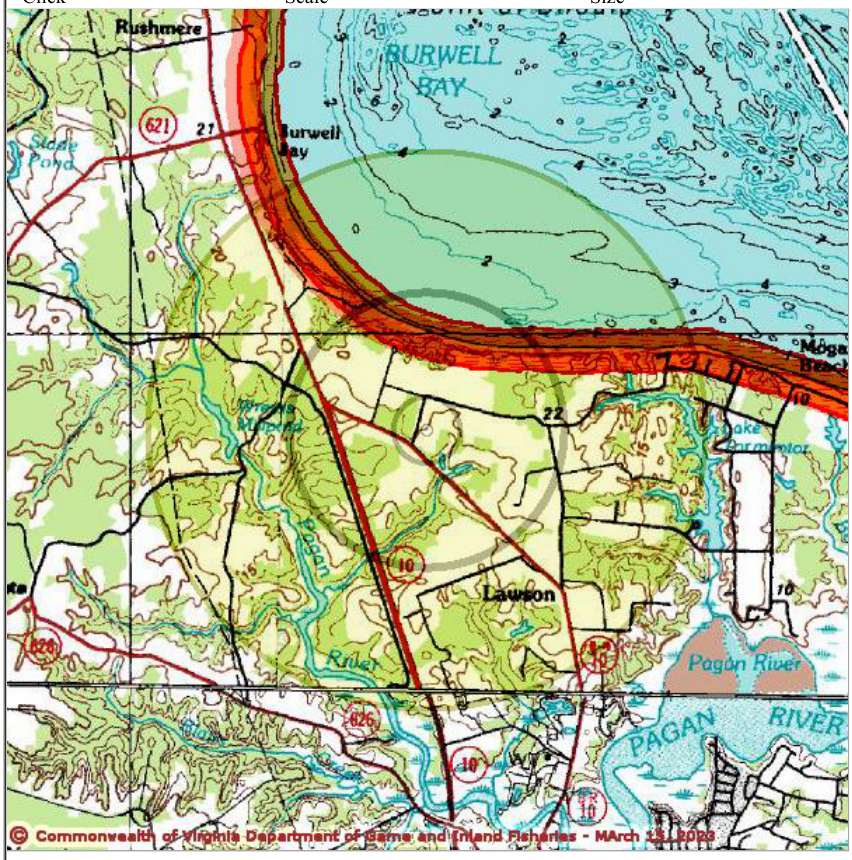
Position Rings 1 mile and 1/4 mile at the Search Point

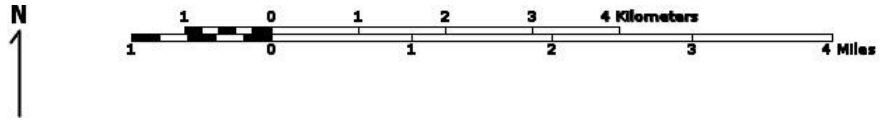
2 mile radius Search Area

Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2023-03-15 07:54:25 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select BECAR_ID from vafwis_tables.dbo.cvBECAR where BECAR_ID in ('48')

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Bald Eagle Concentration Areas and Roosts 51

37,01,36.7 -76,38,50.3 is **the Search Point**

Display at center | **Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

Map Overlay Legend

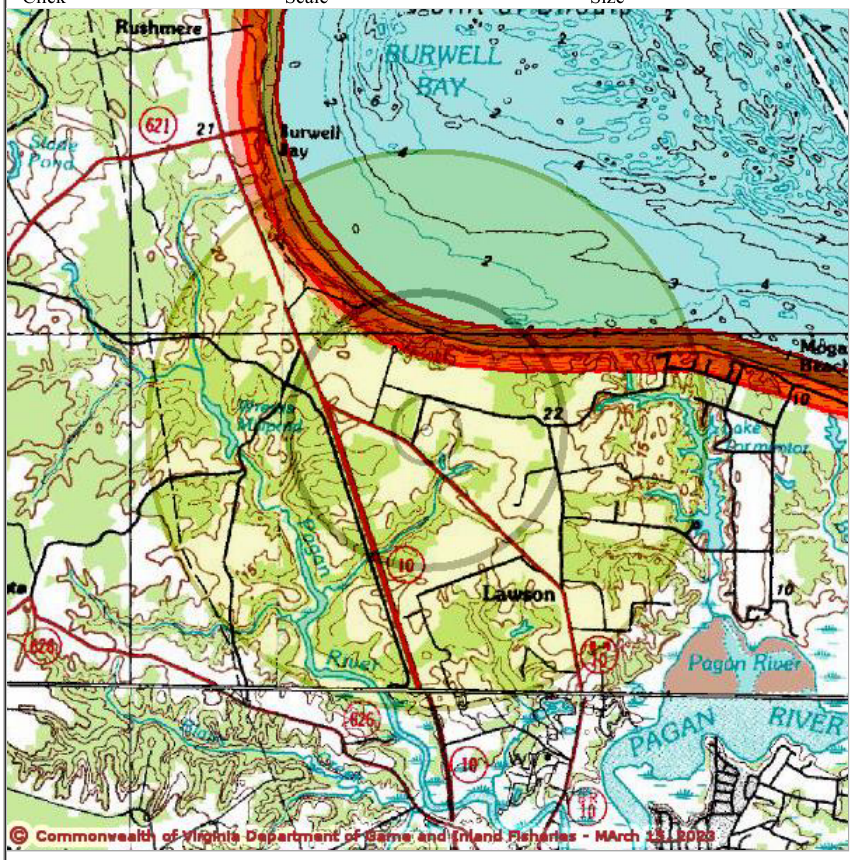
Position Rings 1 mile and 1/4 mile at the Search Point

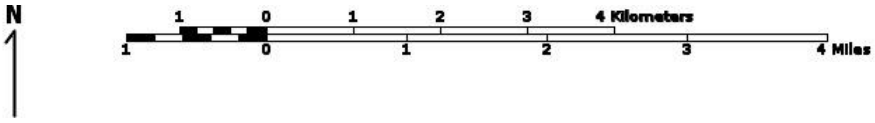
2 mile radius Search Area

Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2023-03-15 07:55:00 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select BECAR_ID from vafwis_tables.dbo.cvBECAR where BECAR_ID in ('51')

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Bald agle Nest IW0702

37,01,36.7 -76,38,50.3
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

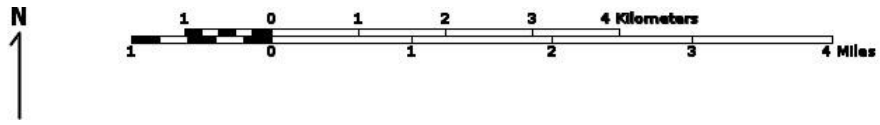
Map Overlay Legend

- **Position Rings** 1 mile and 1/4 mile at the Search Point
- **2 mile radius Search Area**
- **Bald Eagle nests** 660 and 330 foot management zones
- **Data Observation Site**

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
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map assembled 2023-03-15 07:55:19 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select xy.x,xy.y, xxvy256.Displace_X, xxvy256.Displace_Y, cc.High_TE, obs.FeatType from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs obs on obs.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSite256 s256 on s256.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSitexxvy256 xxvy256 on xxvy256.obsSite256 = s256.obsSite256 join vafwis_tables.dbo.cvSppObs_CC cc on cc.obsID = xy.obsID Join

CCB Mapping Portal



Layers: VA Eagle Nest Locator

Map Center [longitude, latitude]: [-76.64131164550781, 37.03041116282044]

Map Link:
https://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=15&lat=37.03041116282044&lng=-76.64131164550781&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 03/15/2023

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Colonial Water Bird Survey Warren Creek

37,01,36.7 -76,38,50.3
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

Map Overlay Legend

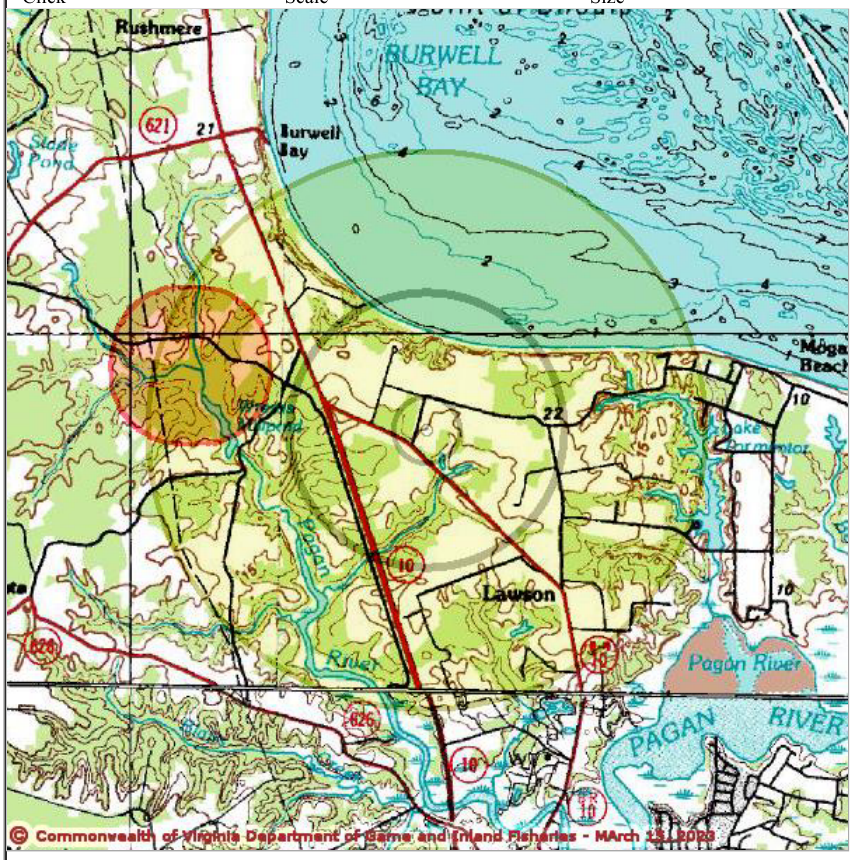
Position Rings 1 mile and 1/4 mile at the Search Point

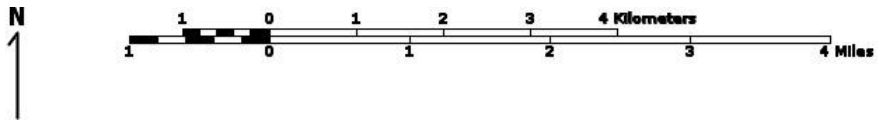
2 mile radius Search Area

Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2023-03-15 07:51:21 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select xy.x,xy.y,xy.offset_x,xy.offset_y, cc.High_TE from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs a on a.obsID = xy.obsID and case when CHARINDEX('Colony_Name=',a.Comments)>0 then SUBSTRING(a.Comments,CHARINDEX('Colony_Name=',a.Comments)+12, case when CHARINDEX(';',a.Comments,CHARINDEX('Colony_Name=',a.Comments)) > 12 then CHARINDEX(';',a.Comments,CHARINDEX('Colony_Name=',a.Comments)) -

CCB Mapping Portal



Layers: Colonial Waterbirds 2013

Map Center [longitude, latitude]: [-76.64388656616211, 37.02595723163245]

Map Link:
https://ccbbirds.org/maps/#layer=Colonial+Waterbirds+2013&zoom=14&lat=37.02595723163245&lng=-76.64388656616211&legend=legend_tab_88b838c8-e51a-11e4-b5d2-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 03/15/2023

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Fish Impediment
WRENNS DAM

37,01,36.7 -76,38,50.3
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

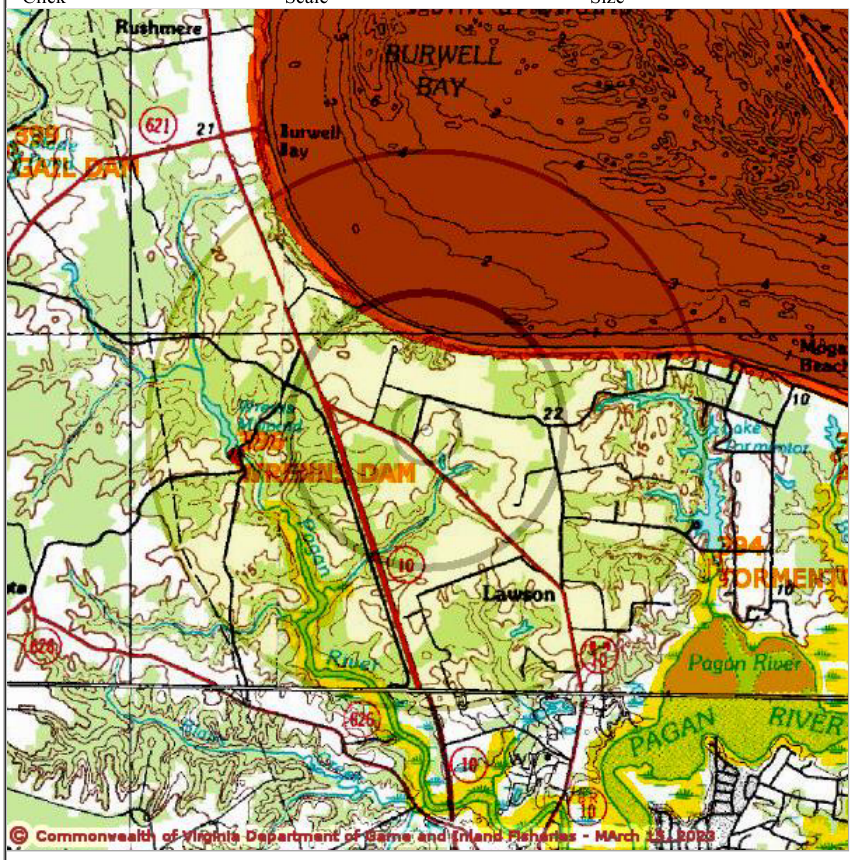
Map Overlay Choices
Current List: Position, Search, Observation

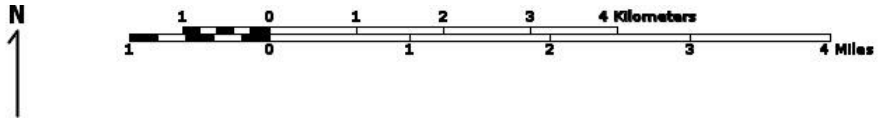
Map Overlay Legend

Anadromous Fish Reach
Confirmed
Potential
123 Impediment
Position Rings 1 mile and 1/4 mile at the Search Point
2 mile radius Search Area
Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,01,36.7 -76,38,50.3
Map Location 37,01,36.7 -76,38,50.3

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 348676 and top 4103922. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-15 07:50:46 (qa/qc March 21, 2016 12:20 - tn=1466865.0 dist=3218 I)
$poi=37.0268690 -76.6473158$query=select UTM17NAD83East,UTM17NAD83North from vafwis_tables.dbo.cvImpediments_xy where Impediments = 396

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Jacob Yealy

From: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Sent: Friday, March 17, 2023 2:26 PM
To: Jacob Yealy
Subject: ESSLog# 42853_VAL025 Solar_DWR_AEM20230317

Categories: Filed by Newforma

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Mr. Yealy,
We have reviewed the subject project that proposes to construct a solar facility in Isle of Wight County. We do not currently document any listed wildlife or designated resources under our jurisdiction from the project area. Therefore, we do not anticipate adverse impacts upon such species or resources to result from the proposed work.

To minimize impacts upon wildlife, we recommend review of and adherence to the solar facility development, operation, and fencing recommendations included within the document found here: https://dwr.virginia.gov/wp-content/uploads/media/Solar-Energy-Facility-Guidance.pdf

Thank you, Amy

Amy Martin
(she/her/hers)
Manager, Wildlife Information and Environmental Services
P 804.481.5296
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

_*

Enclosure C: VA DCR Coordination Letter

Travis A. Voyles
Secretary of Natural and Historic Resources

Matthew S. Wells
Director

Andrew W. Smith
Chief Deputy Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Frank N. Stovall
Deputy Director for Operations

Darryl Glover
Deputy Director for Dam Safety, Floodplain Management and Soil and Water Conservation

Laura Ellis
Deputy Director for Administration and Finance

March 10, 2023

Jacob Yealy
Dawood Engineering
4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Re: VAL025 Solar

Dear Mr. Yealy:

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.

Biotics documents the presence of natural heritage resources within the project boundary including a 100ft buffer. However, due to the scope of the activity we do not anticipate that this project will adversely impact these natural heritage resources. Please note, a predictive model identifying potential habitat for Barking treefrog (*Hyla gratiosa*, G5/S2S3/NL/NL) intersects the project boundary. However, based on DCR biologist's review of the proposed project a survey is not recommended for the resource.

DCR 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. For screening zones outside the perimeter fencing, DCR recommends native species appropriate for the region be used. 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/home/showpublisheddocument?id=2466. 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).

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

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months (September 10, 2023) has passed before it is utilized.

A fee of $90.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (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 http://vafwis.org/fwis/ or contact Amy Martin at (804-367-2211) or amy.martin@dwr.virginia.gov.

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

Sincerely,

Tyler Meader

Tyler Meader
Natural Heritage Locality Liaison

CC: Susan Tripp, DEQ
Randy R. Keaton, Isle of Wight County Administrator

Enclosure D: NOAA ESA Section 7 Map & Coordination Email

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,583.06 acres

Feb 9 2023 13:27:44 Eastern Standard Time



Atlantic Sturgeon
Shortnose Sturgeon
Sea Turtles
In or Near Critical Habitat

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	4	1,322.92	N/A
Shortnose Sturgeon	1	330.73	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	4	1,322.94	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	1	330.73	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_JAM_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	James River	03/15	11/30	N/A	N/A	330.73
2	ANS_JAM_JUV_MAF	Atlantic sturgeon	Juvenile	Migrating & Foraging	James River	01/01	12/31	N/A	N/A	330.73
3	ANS_JAM_ADU_STG	Atlantic sturgeon	Adult	Staging	James River	05/01	11/30	N/A	N/A	330.73
4	ANS_JAM_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	James River	03/15	11/30	N/A	N/A	330.73

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_JAM_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	James River	03/01	11/30	N/A	N/A	330.73

Sea Turtles

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	GRN_STS_AJV_MAF	Green sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	330.74
2	KMP_STS_AJV_MAF	Kemp's ridley sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	330.74
3	LTR_STS_AJV_MAF	Leatherback sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	330.74
4	LOG_STS_AJV_MAF	Loggerhead sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	330.74

In or Near Critical Habitat

#	Species	In or Near Critical Habitat	Area(acres)
1	Atlantic Sturgeon	Chesapeake Bay Unit 5: James River	330.73

Jacob Yealy

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Friday, February 24, 2023 7:07 AM
To: Jacob Yealy
Subject: Re: ESA Section 7 Coordination

Categories: Filed by Newforma

ATTENTION: This e-mail is from outside the organization. DO NOT click links or open attachments unless you confirm the incoming address of the sender.

On Thu, Feb 16, 2023 at 7:43 AM Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov> wrote:

Hi Jacob,

I apologize for the late response. Your email and attachments dated February 9, 2023, regarding three solar facility development projects in Virginia, requested information on the presence of ESA-listed species under our jurisdiction.

Although four species of sea turtles, shortnose sturgeon, and Atlantic sturgeon originating from five Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its rivers and tributaries, based on the location the project and information you provided in your email and attachments, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should there be additional changes to the project plans or new information becomes available that changes the basis for this determination, further coordination should be pursued. Please contact me (brian.d.hopper@noaa.gov), should you have any questions regarding these comments. If you have any questions regarding essential fish habitat, please contact Dave O'Brien (david.l.obrien@noaa.gov, 804-684-7828).
.

Regards,
-Brian

On Mon, Feb 13, 2023 at 10:17 AM NMFS.GAR ESA.Section7 - NOAA Service Account <nmfs.gar.esa.section7@noaa.gov> wrote:

Incoming tech assistance request

---------- Forwarded message ---------
From: **Jacob Yealy** <Jacob.Yealy@dawood.net>
Date: Thu, Feb 9, 2023 at 2:06 PM
Subject: ESA Section 7 Coordination
To: NMFS.GAR.ESA.Section7@noaa.gov <NMFS.GAR.ESA.Section7@noaa.gov>

Hello,

I am working on the T&E coordination for 3 solar facility development projects in Virginia. We're looking to verify that our projects have no potential to impact threatened or endangered species. A review of the Section 7 ESA Mapper was performed for each of the projects (attached). One of these (VAL025) has listed species and critical habitat near the project area. Another (VAL032) shows that the Section 7 Consultation Area is just outside of that 1-mile buffer, while the last (VAL035) has no Section 7 areas nearby.

Can you please confirm what materials are needed to perform a project review to ensure no potential impacts for the VAL025 project & that neither the VAL032 or VAL035 projects require further coordination with NOAA?

Thanks,

Jacob Yealy

Ecologist

Dawood Engineering, Inc.

Jacob.Yealy@dawood.net

Office: 717-732-8576

Mobile: 717-965-1521

--

Brian D. Hopper
Protected Resources Division
NOAA Fisheries
Greater Atlantic Regional Fisheries Office
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--

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*

Stantec

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia

April 6, 2023

Prepared for:

Dawood Engineering, Inc.
Attn: Mr. Kevin Rucker
4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Prepared by:

Donald Sadler, Project Archaeologist

Sandra DeChard, Senior Architectural Historian

and

Brynn Stewart, Senior Principal Investigator

Stantec Consulting Services Inc.
5209 Center Street
Williamsburg VA 23188
(757) 220-6869

The conclusions in the Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the Client and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by _____
(signature)

Donald Sadler, MA, Project Archaeologist

Prepared by _____

Sandra DeChard, Senior Architectural Historian

Reviewed by _____
(signature)

Brynn Stewart, MA, Senior Principal Investigator

Approved by _____
(signature)

Seth Mitchell, MA, RPA, Principal Archaeologist

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Executive Summary

From February 13 to March 8, 2023, Stantec Consulting Services Inc. (Stantec) conducted a cultural resources survey of approximately 20 acres associated with the proposed 3-megawatt (MW) VAL-025 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located north of Old Stage Highway (Route 10) and northeast from the junction with Morgarts Beach Road (Route 628). The Project is bounded by Morgarts Beach Road to the west, Old Stage Highway to the south, and private dirt farm roads to the north and east. The Project Area comprises a gently rolling harvested cotton field. The work was conducted on behalf of Dawood Engineering, Inc. (Dawood).

The Phase I cultural resources survey was designed to locate and identify cultural resources within the Project Area, defined as the entire approximately 20-acre Project parcel, and to obtain sufficient information to make recommendations regarding their potential eligibility for listing to the National Register of Historic Places (NRHP).

Archaeological Survey

During the archaeological survey, Stantec conducted pedestrian survey of the entire Project Area concurrently with systematic subsurface testing. A total of 403 shovel tests were excavated at 50-foot intervals along 17 transects (Transects A–Q) spaced 50 feet apart throughout the Project Area. One shovel test was not excavated due to its location within standing water. One shovel test was positive for cultural material. Three radial shovel tests were excavated at 25-foot intervals to determine the bounds of the newly identified cultural resource, with no radial shovel tests positive for additional cultural material. One new isolated archaeological site find (2607-IF1) was identified during this investigation. ***By definition, Isolated Archaeological Find 2607-IF1 is not eligible for listing to the NRHP. No further archaeological work is recommended within the Project Area.***

Recommendations for Archaeological Resources within the Project Area

Resource	Resource Type	Association	Stantec Recommendation
2607-IF1	1 Whiteware Body Sherd	1820+	Not Eligible; No Further Work

Architecture Survey

A total of 10 individual resources were located within the architectural Study Area, defined as the Project Area and a 0.5-mile radius around the Project Area, and included four previously recorded and six newly recorded resources. The Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006) had a Federal Determination of Eligibility prior to the survey and was therefore not resurveyed. One resource was determined to be potentially eligible for listing and one resource was determined to be not eligible prior to the survey but was surveyed more than five years ago and therefore was redocumented during the current Project. One resource had not been evaluated for eligibility by the Virginia Department of Historic Resources (DHR). Resources which had been determined NRHP eligible as well as one previously unevaluated, but not visible resource, were evaluated for visual effects. The

surveyed resources consisted of farms and single dwellings with associated outbuildings as well as one late eighteenth to mid-nineteenth century cemetery.

The Bourne-Turner House (DHR #046-0031) had been determined as potentially eligible for listing in the NRHP by DHR in 2015. Based on the current survey, it is recommended that the resource maintain its NRHP eligibility status as the house and secondary resources retain integrity and appear to have not been significantly altered since the previous survey.

One resource, the Old State Highway Cemetery (DHR #046-5636), was not visible from the public right-of-way (ROW) and was therefore not able to be resurveyed. Based on the circumstances, the resource was considered eligible for the purposes of environmental review.

The remaining seven resources surveyed during the current project are generally reflective of the late nineteenth to mid-twentieth century development of Isle of Wight County and lack direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP. As such, it is recommended that the resources are not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.

No further work is recommended for resources within the Architectural Study Area as part of the VAL025 Solar project.

Visual Effects

An effects evaluation, in addition to the Phase I architectural survey, was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed Project. Two resources were assessed for effects and included the potentially eligible Bourne-Turner House (DHR #046-0031) and the portion of the NRHP-eligible Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006) within the current architectural Study Area. One resource, the Old Stage Highway Cemetery (DHR #046-5636), had not been evaluated for NRHP eligibility but was not visible from the public ROW. Therefore, for the purposes of environmental review, this resource is being considered eligible for listing. Based on the current proposed Project Area and the existing landscape it is recommended that the proposed Project would have an **Adverse Effect** on the Bourne-Turner House (DHR #046-0031) and the portion of the Keystone Segment of the Captain John Smith National Historic Trail Historic District (DHR #500-0006) located within the current architectural Study Area. The proposed Project would have **No Effect** on the Old Stage Highway Cemetery (DHR #046-5636). ***Based on the effects evaluation, it is likely DHR will require mitigation for Adverse Effect of the proposed Project. It is suggested that vegetative screening be installed on the north side of the solar parcel to lessen the Adverse Effect.***

Effects Evaluation of NRHP Eligible and Potentially Eligible Properties

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
046-0031	Bourne-Turner House, 16303 Morgarts Beach Road	c. 1790	Determined Potentially Eligible in 2015 under Criterion C	Adverse Effect

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
046-5636	Old Stage Highway Cemetery, Old Stage Highway	c. 1798	Not Evaluated	No Effect
500-0006	Captain John Smith National Historic Trail, Keystone Segment, Historic District	c. 1550	Federal Determination of Eligibility in 2015	Adverse Effect*

***Only for Portion of the Resource within the Study Area**

Abbreviations

ACC	Archaeological Consultants of the Carolinas, Inc.
amsl	above mean sea level
D+A	Dutton & Associates, LLC
DCR	Virginia Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality
DHR	Virginia Department of Historic Resources
GPS	Global Positioning System
JRIA	James River Institute for Archaeology, Inc.
MW	megawatt
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
ROW	Right-of-Way
Stantec	Stantec Consulting Services Inc.
STP	shovel test pit
USDI	United States Department of the Interior
V-CRIS	Virginia Cultural Resource Information System
VHLC	Virginia Historic Landmarks Commission
VLR	Virginia Landmarks Register
WMCAR	William and Mary Center for Archaeological Research

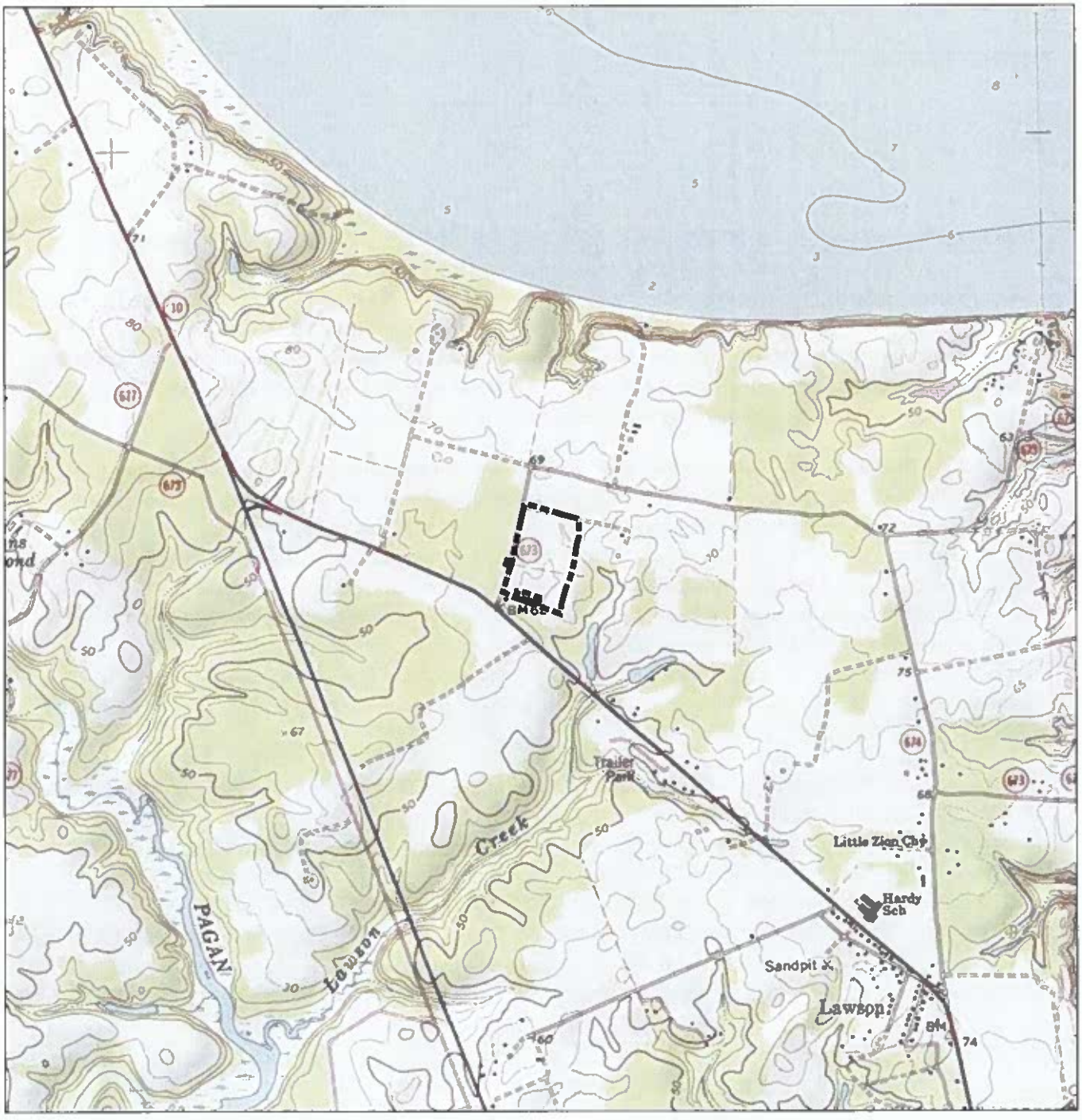


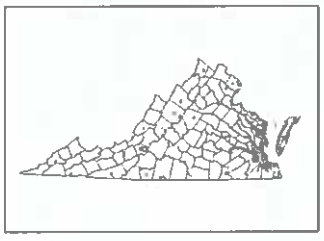
1.0 INTRODUCTION

From February 13 to March 8, 2023, Stantec Consulting Services Inc. (Stantec) conducted a cultural resources survey of approximately 20 acres associated with the proposed 3-megawatt (MW) VAL-025 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located north of Old Stage Highway (Route 10) and northeast from the junction with Morgarts Beach Road (Route 628). The Project is bounded by Morgarts Beach Road to the west, Old Stage Highway to the south, and private dirt farm roads to the north and east. The Project Area comprises a gently rolling harvested cotton field (Figure 1). The work was conducted on behalf of Dawood Engineering, Inc. (Dawood).

The cultural resources investigations described herein were conducted as part of the State Corporation Commission (SCC) application process. Additionally, all cultural resources services detailed herein were conducted pursuant to the National Historic Preservation Act of 1966, as amended, the Archeological and Historic Preservation Act of 1974, Executive Order 11593, and relevant sections of 36 CFR 60 and 36 CFR 800. The Stantec Project Managers directing this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9). The cultural resources fieldwork component of these investigations will conform to the qualifications specified in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983) and the DHR's *Guidelines for Conducting Historic Resources Survey in Virginia* (2017).

Senior Principal Investigator Brynn Stewart oversaw the project. Project Archaeologist Donald Sadler and Senior Architectural Historian Sandra DeChard co-authored the resulting technical report. Project Archaeologist Donald Sadler directed the fieldwork and was assisted in the field by Archaeological Technicians Mark Jacobs and Noelle Thompson-Worthington. Senior Architectural Historian Sandra DeChard oversaw the architectural fieldwork conducted by Architectural Historian Technician Olivia McCarty. All artifact processing and analysis was completed by Laboratory Manager Emily Curme. GIS Analyst Elise Ljiko prepared the report graphics and project maps. Copies of all field notes, maps, correspondence, and historical research materials are on file at Stantec's office in Richmond, Virginia.





Project Area

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-02
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
Dawood Engineering, Inc.
VAL025 Solar Project

195602607

Figure No
1

Title
Project Location Map

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Bacons Castle, VA Quadrangle 1992

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2.0 PHYSICAL AND ENVIRONMENTAL CONTEXT

2.1 INTRODUCTION

The Project Area is located north of Old Stage Highway (Route 10) and northeast from the junction with Morgarts Beach Road (Route 628). The Project is bounded by Morgarts Beach Road to the west, Old Stage Highway to the south, and private dirt farm roads to the north and east. The Project Area comprises a gently rolling recently harvested cotton field.

2.2 GEOLOGY AND TOPOGRAPHY

The Project Area is located within the Coastal Plain physiographic province in the James River drainage basin. The Coastal Plain province is generally characterized by lowlands, with some elevated areas present, which are deeply dissected by drainages that trend mostly to the southeast, towards the Atlantic Ocean (Teifke 1973). Elevations within the Project Area range from approximately 55 to 66 feet above mean sea level (amsl).

The pre-Holocene geology of the Virginia Coastal Plain consists of igneous and metamorphic rocks of Precambrian and Paleozoic age overlain by a series of sedimentary deposits dating to the Cretaceous period. Geologists have divided the Cretaceous through Quaternary sedimentary deposits into five categories: Lower Cretaceous, Upper Cretaceous, Paleocene, Eocene, and Miocene (Teifke 1973). Beginning as early as the Late Cretaceous, a cycle of transgression and regression related to glacial activities and consequent sea level fluctuation is responsible for the formation of these sedimentary layers in the Coastal Plain. These layers have been named the Mattaponi (Upper Cretaceous/Paleocene), Nanjemoy (Eocene), Calvert (Eocene/Miocene), and Yorktown (Miocene) formations (Teifke 1973:10-11).

The Quaternary has been characterized by the continued deposition of clays, silts, sands, gravels and peat bogs. The Late Pleistocene-Holocene geology of the Virginia Coastal Plain has mostly been characterized by marine transgression onto the land, filling what is today known as the Chesapeake Bay. Sedimentary systems affecting the area include fluvial and marine-estuarine depositional systems. Fluvial forces included overbank flow and stream meander resulting in alluvial deposition. Marine-estuarine soil deposition occurs during hurricanes, tidal floods, and longshore currents (Onuschak 1973:111-124).

The Project Area is situated on the Bacons Castle Formation, comprised of gray, yellowish-orange, and reddish-brown sand, gravel, silt, and clay that constitutes surficial deposits of high plains extending from Richmond eastward to the Surry Scarp. Within the Project Area, the unit consists of massive to thick-bedded pebble and cobble gravel, grading upward into cross-bedded, pebble sand and sandy, clayey silt (Rader and Evans 1993).

2.3 HYDROLOGY

The Project Area is drained by Lawson Creek, a tributary of the Pagan River, which flows into the James River. The James River flows into the Chesapeake Bay and thence to the Atlantic Ocean.

2.4 SOIL MORPHOLOGY

Soils within the Project Area ranged from moderately well to well drained, with moderately well drained soils dominating. Table 1 presents the soil types found within the Project Area and serves as a key to Figure 2.

Table 1 Key to the Soils Map

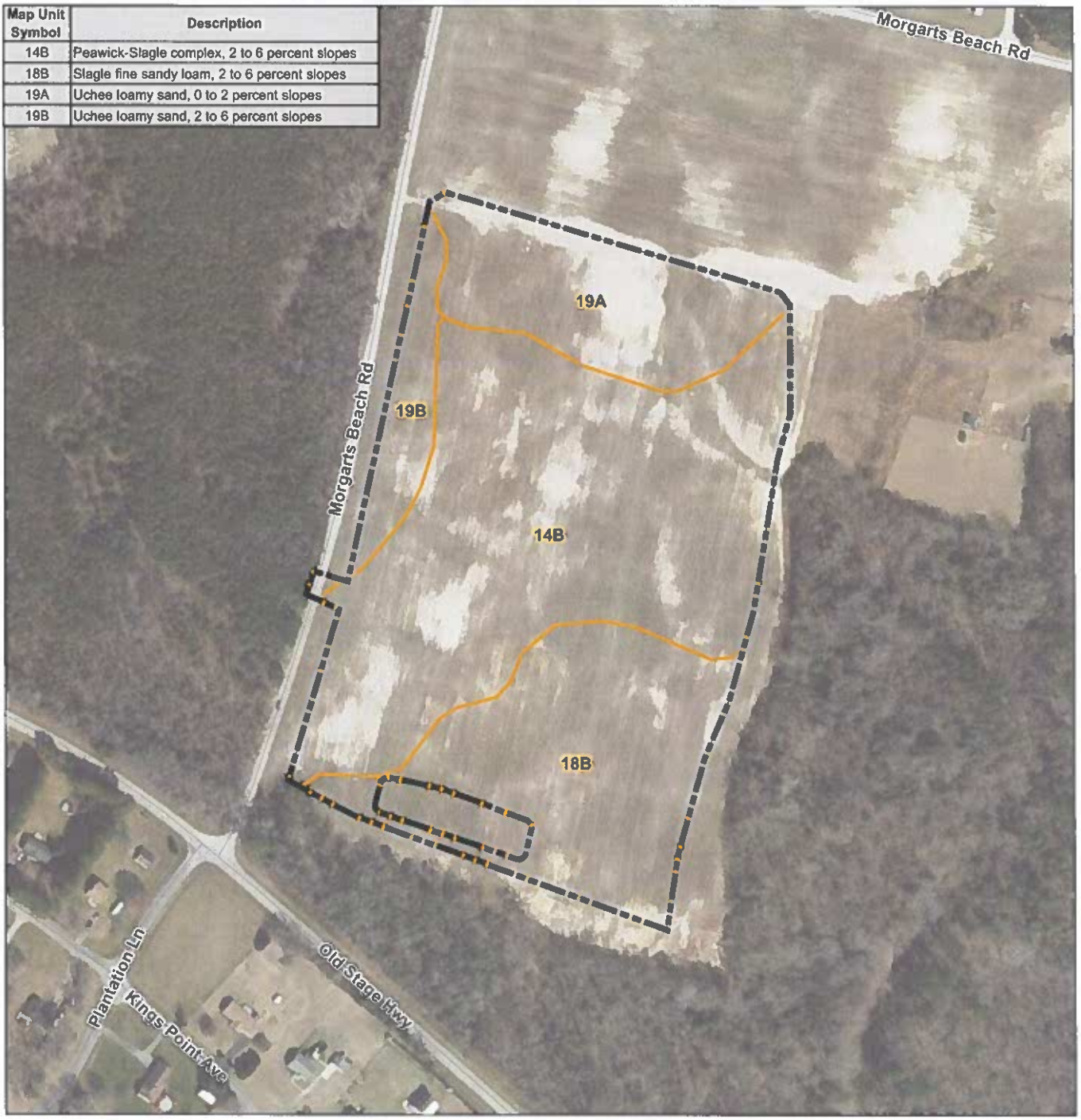
Symbol	Map Unit Name	Percent Slope	Drainage Description
14B	Peawick-Slagle complex	2–6	Moderately Well Drained
18B	Slagle fine sandy loam	2–6	Moderately Well Drained
19A	Uchee loamy sand	0–2	Well Drained
19B	Uchee loamy sand	2–6	Well Drained

2.5 NATURAL RESOURCES

Floral and faunal communities in southeastern Virginia have changed considerably over the past 10,000 years. This environmental change was linked to the warming trend that caused glaciers to melt and sea levels to rise. By the Early Holocene, beech, hemlock, and birch were the dominant species, and the former pine spruce forests of the Late Pleistocene became less common. In general, a mixed hardwood forest dominated the Mid-Holocene and included hazelnut, alder, maple, black gum, beech, ash, and walnut (Dent 1995:86). Stands of oak and hickory were also common during this period, and hickory nuts appear to have been a significant element of the diet of Mid-Holocene occupants of the Coastal Plain (Whyte 1990:126).

After 5,000 years ago, the climate of the Chesapeake Bay region became increasingly drier, and white oak continued to be the dominate forest species, with pine becoming increasingly more common. Additionally, legumes and arrowwood joined elderberry and blueberry as significant understory species. By approximately 1,700 years ago, the region became wetter and cooler, and mixed hardwood vegetation combined with an increase in pine, particularly in the lower Tidewater area, dominated the regional flora (Dent 1995:86-88).

Map Unit Symbol	Description
14B	Peawick-Slagle complex, 2 to 6 percent slopes
18B	Slagle fine sandy loam, 2 to 6 percent slopes
19A	Uchee loamy sand, 0 to 2 percent slopes
19B	Uchee loamy sand, 2 to 6 percent slopes





Project Area
Soils

0 150 300 Feet
(At original document size of 8.5x11)
1:3,600

N

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
195602607
Dawood Engineering, Inc.
VAL025 Solar Project

Figure No.
2

Title
Soils Map

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau, USDA NRCS SSURGO Soil Survey, VDOT
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

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Wetland environs have also undergone considerable change over time as sea level fluctuations have created, destroyed, and recreated new estuaries and tidal flats. Cypress and white cedar were the most common trees in the wetland areas of the region during the prehistoric period, a trend that has continued into the present. While cordgrasses were prominent in estuarine areas, sedges and other grasses dominated freshwater wetlands. These grasses would have played an essential role in the lives of the region's indigenous population (Dent 1995:91-92).

The unique freshwater/saltwater environment found in the local estuary system has served to create a wide degree of faunal diversity in the region. By approximately 2,000 to 3,000 years ago, human populations would have enjoyed an ecosystem similar to that of today. A wide variety of fish and shellfish species coupled with numerous avian species would have allowed prehistoric inhabitants of the area to exploit an abundant food base. Likewise, the cultivation of plants such as corn, beans, and squash, and the hunting of mammalian species would have completed a tremendously diverse diet. Oysters, crabs, fresh and saltwater clams, shrimp, mussels, bass, flounder, shad, herring, snapper, sturgeon, and bluefish were among the important riverine and estuary fauna of the tidewater area that native inhabitants of the region would have exploited (Dent 1995; Stevens 1991).

3.0 CULTURAL CONTEXT

Virginia's Native American prehistory is typically divided into three main periods: Paleoindian; Archaic; and Woodland. These divisions are based on changes in material culture and settlement systems. In more recent decades, the possibility of human presence in the region that predates the Paleoindian period has moved from remote to probable. For this reason, a Pre-Clovis discussion precedes the traditional tripartite division of Virginia's Native American history. The seventeenth-through twentieth-century historical overview follows the DHR (2017) guidelines. The cultural context, as defined by the *Secretary of the Interior's Standards and Guidelines for Archaeology* and Chapter3 of the DHR's 2017 guidelines, provides the historic, social, and environmental information required for evaluation of any cultural resources present within the Project Area.

3.1 PRE-CLOVIS (? –13,000 BC)

The 1927 discovery of a fluted point in the ribs of an extinct species of bison at Folsom, New Mexico proved that ancient North Americans had immigrated during the Pleistocene. It did not, however, establish the precise timing of the arrival of humans in the Americas, nor did it adequately resolve questions about the lifestyle of those societies (Meltzer 1988:2-3). Both the stratigraphic record and the radiocarbon assays from several sites, including the Cactus Hill site in Sussex County, Virginia (44SX0202), suggest the possibility of human occupation of North America before the fluted point makers appeared on the scene (McAvoy and McAvoy 1997). Buried strata at the Cactus Hill Site have returned radiocarbon dates of 15,000 years ago from strata situated below levels containing fluted points (McAvoy and McAvoy 1997:165). To date only a handful of pre-Clovis sites have been identified in North America, including in Pennsylvania, Virginia, and New Mexico. Though the likelihood of identifying pre-Clovis sites within the Project Area is extremely low.

3.2 PALEOINDIAN PERIOD (PRIOR TO 8000 BC)

In the decades following the discovery at Folsom, New Mexico, the association of fluted points with the bones of large, extinct mammals, in particular mastodons, on the western plains coupled with the scarcity of other Paleoindian sites, led to the inference that the Paleoindian subsistence strategy centered on the pursuit of big game. This picture, however, exaggerates the reliance of western Paleoindian groups on large game, and appears to be of limited relevance to eastern Paleoindian life. The archaeological data from Virginia compiled by Dr. Ben McCary records numerous discoveries of fluted points, but no unambiguous association between extinct large game and fluted points (Boyd 1989:139). A similar situation occurs throughout the eastern United States. For this reason, many archaeologists now hold that eastern Paleoindians were generalized foragers (e.g., Grayson and Meltzer 2003; but see Fiedel and Haynes 2004).

Most large Paleoindian sites in the southeastern United States are quarry or quarry-related (Meltzer 1988:21), though multiple band aggregation sites also occur (McAvoy 1992:145). Recognizable sites most often result from long-term habitation or repeated use of the same location. It follows from the presence of primarily quarry or quarry-related sites that stone outcrops were regularly revisited. Though the full range of available lithic resources was used to manufacture fluted points (e.g., Phelps 1983), a number of studies have noted a focus on cryptocrystalline materials (e.g., chert, jasper, chalcedony) (Gardner 1974, 1989; Goodyear 1979). The recovery of cryptocrystalline materials at locations far removed from quarries indicates exchange, extensive group movement, or both characterized the Paleoindian era. In addition, the very limited differences between sites and within sites suggest that most people had access to all available resources, while the small size of most Paleoindian sites indicates group size generally was limited to extended families.

3.3 ARCHAIC PERIOD (8000–1200 BC)

The Archaic began with the northward retreat of periglacial environments and the appearance of archaeological assemblages lacking fluted points. In the Chesapeake Bay region, a shift from moist, cool conditions to a warmer, drier climate accompanied the glacial retreat. In response to changing climatic conditions, in particular the receding ice sheets, Chesapeake Bay sea levels rose continuously from roughly 15,000 years ago to the present. Simultaneously, local subsidence of the earth's crust also may have contributed to the formation of the Chesapeake Bay. Between 15,000 and 14,000 years ago, the waters of the Atlantic began to submerge portions of the continental shelf. For every 30 centimeters (approximately 1 foot) of sea level rise, approximately 510 meters (approximately 1,673 feet) of the shelf were inundated. Ten thousand years ago the sea began to flood the mouth of the ancestral Susquehanna River, located near the present-day mouth of the Chesapeake Bay. Sea level rose at 0.2 centimeters (approximately 0.1 inch) per year between 8000 and 3000 years ago. At 8000 years ago, the head of the ancestral bay was near Smith Island, at 5000, near Annapolis, and by 3000 years ago, it had reached the Sassafras River. Numerous archaeologists suggest that the stabilization of water levels in the bay at this time provided the necessary conditions for the development of extensive shellfish beds and habitats favorable for anadromous fish (e.g., Waselkov 1982). After approximately 1000 BC, sea level rise slowed to approximately 0.12 centimeters/year, and Chesapeake Bay approached its present contours (Dent 1995:69-95).

In addition, in contrast with the broad similarity among Paleoindian point forms, distinct style zones developed during the Early and Middle Archaic (8000–3500 BC). The Atlantic Coast/Southeastern stylistic sequence was not characteristic of the Midwest (Ford 1974:392). In addition, increased use of locally available lithics occurred between 8000 and 3500 BC (Custer 1990:36; Sassaman et al. 1988:85-88). The reduction of the size of style zones and the focus on local lithic materials implies contracting social networks and incipient territories, possibly a reaction to population growth (Anderson and Hanson 1988:271). Despite changes in patterns of mobility and point form, numerous archaeologists argue on environmental (Custer 1990:2-8) and subsistence (Smith 1986) grounds for continuity in social dynamics between 10,000 and 6,000 BC. From this point of view, Dalton through Lecroy populations exhibited "general similarities and regional habitat-related variation in settlement-subsistence patterns and material



culture assemblages" (Smith 1986:10). Band-level social organization involving seasonal movements corresponding to the seasonal availability of resources and, in some instances, shorter-interval movement characterized Archaic societies.

Reliance on ground-stone technology increased during the Archaic period. New tool categories associated with the Archaic include celts, net sinkers, pestles, pecked stones, and axes Archaic knappers also produced chipped-stone versions of celts and axes and, near the end of the Late Archaic, labor-intensive vessels carved from soapstone quarried in the Piedmont formed an important part of assemblages (Geier 1990; McLearen 1991).

3.3.1 Early Archaic (8000–6500 BC)

Corner- and side-notched points with serrated blades predominate at the beginning of the Early Archaic period, reflecting innovation in hafting technology and, possibly, the invention of the atlatl. Notched point forms include Palmer and Kirk Corner-Notched and, in localized areas, various side-notched types. Around 7000 BC, a variety of bifurcate base projectile point forms appeared in the Middle Atlantic region. In eastern Virginia, LeCroy points constitute the majority of bifurcate forms (Dent 1995; Justice 1995). Despite the shift in point form over time some researchers portray the Early Archaic as a continuation of the Paleoindian period, characterized by reliance on cryptocrystalline lithic material and similar settlement and subsistence patterns (Gardner 1989). Early Archaic sites are still locally uncommon at this time, and it is during the Middle Archaic period that a proliferation of sites occurs in the region (Gardner 1982, 1986).

3.3.2 Middle Archaic (6500–3000 BC)

The appearance of stemmed projectile points and a shift towards more expedient use of stone marks the beginning of the Middle Archaic across much of the Atlantic Slope and Southeast (Amick and Carr 1996:43-45; Justice 1995). In this area of Virginia, the most common Middle Archaic projectile point types are (from oldest to most recent) LeCroy, Stanly, Morrow Mountain, and Guilford, followed by the side-notched Halifax type sometime after 3500 BC. This latter type is generally one of the most abundant found in upland interior settings; however, it is possible that many riverine sites of the period are hidden under alluvial sediment. Informal modified flakes to some extent replaced formal unifacial tools, and local materials constitute a greater percentage of Middle Archaic assemblages than had been true of earlier time periods. Sites occur throughout the landscape, including beneath the now-inundated Chesapeake Bay (Blanton 1996; Dent 1995:173-178).

An analysis of components from the Piedmont (Klein and Klatka 1991) indicates only slightly higher use of interior uplands over riverine settings during the Middle Archaic period and, within the riverine settings such as the present Project Area, there is a fully equal use of both alluvial landforms (floodplains/low terraces) and upland landforms/bluffs adjacent to the rivers (Klein and Klatka 1991:155). However, a repetition of this pattern in the Project Area, located within the Valley and Ridge region, would be dependent on geomorphological conditions: i.e., artifacts indicating the entire span of the Middle Archaic could be present on all landforms, unless the alluvial bottoms are restricted to sediments of too recent an

age to contain deposits of such antiquity. Where sediments are too young, however, evidence of Middle Archaic presence should be concentrated on old, stable landforms lying as close as possible to the river and its small tributary streams.

3.3.3 Late Archaic (3000–1200 BC)

Stemmed and notched knife and spear point forms, including various large, broad-bladed stemmed knives and projectile points (e.g., Savannah River, Susquehanna, Perkiomen points), rank among the most distinctive and securely dated Late Archaic point forms (Coe 1964; Dent 1995; Justice 1995; Ritchie 1971). Marked increases in population, and, in some areas, decreased mobility appear to characterize the Late Archaic throughout eastern North America. Locally, the increase in the number of Halifax and Savannah River components and sites relative to the preceding periods suggests population rose in Virginia between about 3500 BC and ca. 1200 BC.

Mouer (1991a:262) believes it likely that "at least intensive harvesting of wild seeds," if not the beginnings of domestication, characterized Transitional through Early Woodland times (ca. 2000–500 BC) in the Chesapeake Bay region, as it did in the Midwest. The process, however, did not proceed at an even rate across the Eastern Woodlands or the Middle Atlantic Region (Stewart 1995:184-5). Yarnell (1976:268), for example, states that sunflower, sump weed, and possibly goosefoot may have been cultivated as early as 2000 BC. In the lower Little Tennessee River valley, the remains of squash have been found in Late Archaic Savannah River contexts (ca. 2400 BC), with both squash and gourd recovered from Iddins period contexts of slightly more recent date (Chapman and Shea 1981:70). Experiments with domestication in the Mid-Continent indicate the possibility, even the likelihood, that the inhabitants of the Middle Atlantic cultivated small grains and other plants (Hodges 1991:228-230; Mouer 1991b:259-263). "Scant" evidence for early cultivation appears in the archaeological record from Virginia, however (Mouer 1991a:259; Gallivan and McKnight 2006).

Soapstone bowls are a well-known feature of Late Archaic exchange systems (McLearen 1991:107-8). In addition, Stewart (1989:52) argues for broad-based exchange of "artifacts made from jasper, argillite, rhyolite, ironstone, soapstone, Midwestern lithics, obsidian, marine shell and copper" throughout the Middle Atlantic region during the Late Archaic. Thus, Late Archaic society clearly differed from that of earlier times. The production and wide-spread exchange of utilitarian and ritually important, labor-intensive goods does not fit the expected archaeological signature of highly egalitarian foragers. Rather, a social order exhibiting some sort of status differences among individuals or groups (Mouer 1991a:265) and somewhat restricted group movement (Stewart 1989:57) likely existed. Still, sites dating to the Late Archaic occur frequently throughout Virginia and the Middle Atlantic region. Late Archaic sites occur in greater numbers and in a wider range of environments than sites associated with the Early and Middle Archaic periods (Klein and Klatka 1991).

3.4 WOODLAND PERIOD (1200 BC–AD 1600)

Increasing use of ceramic technology, a growing dependence upon horticulture, and a shift toward greater sedentism characterize the Woodland period. Most researchers divide the Woodland period into

three sub-periods (Early Woodland, Middle Woodland, and Late Woodland), based primarily on stylistic and technological changes observed in ceramic wares and projectile points, as well as shifts in settlement patterns (e.g., Gardner 1982). Not all researchers agree with this tripartite subdivision, however.

3.4.1 Early Woodland (1200–500 BC)

The onset of the Woodland period traditionally correlates with the appearance of ceramics (Willey and Phillips 1958:118). Early theorists linked ceramics with agriculture, though few continue to support this position (cf. reviews in Egloff 1991; Hodges 1991). Rather, the evolution of subsistence and technological systems (e.g., Gardner 1982) and various aspects of pan-Eastern interaction (e.g., Egloff 1991; Klein 1997) currently are believed to underlie the evolution of ceramic containers.

The steatite-tempered Marcey Creek type and variants containing other mineral inclusions appear to date between 1200 and 800 BC (Egloff 1991:244-5). Manson (1947) unearthed flat-bottomed, plain sherds and cord-marked sherds with conoidal bases, both of which included soapstone-temper, in the uppermost of two distinct strata at the Marcey Creek Site. The lowermost level contained narrow variants of Savannah River points, termed Holmes Points by Gardner (1986), and soapstone bowls, suggesting that soapstone-tempered sherds post-date bowls of soapstone (but see Sassaman 1999). Earlier Slattery (1946) had identified similar sherds at a site on Seldon Island, along the Potomac River to the northeast of Leesburg, along with sand-and-grit tempered sherds. Though friable sand-and-grit-tempered Accokeek Creek and Elk Island ceramics appear subsequent to Marcey Creek, associated C-14 on stratified sites, dates range from 1100 through 500 BC. Klein and Stevens (1996) cite regional data to support the proposition that, while the thickness, amount of temper, and size of temper in quartz/sand-tempered, cord-marked ceramics shifted over time, similar pots continued in use into Middle Woodland times.

Small bifaces and expedient tools such as drills, perforators, scrapers and utilized flakes regularly appear in Early Woodland assemblages. Other lithic artifacts reported on Early Woodland sites in the Chesapeake region include bipolar flakes, hammerstones, net sinkers, mortars, and pestles (McLearen 1991). Also noted on sites in the region are tools of bone, and projectile points manufactured from antler, bone, turkey spurs, and shark's teeth (Waselkov 1982). The increased number of sites dating to the Early Woodland, coupled with the recognition of structures, features, and activity areas at some sites, suggests rising population size in the Chesapeake region (e.g., Mouer 1991b:38-9; Stewart 1995:183). In contrast, noting that the addition of pottery to stone adds temporally diagnostic artifacts to the archaeological record, Fiedel (2001:106–7) observes that more sites are expected to appear in the archaeological record during Woodland times. Furthermore, the various Broadspears, dating to the Terminal Archaic (ca. 2000–1000 BC), may represent a curated technology (Barber and Tolley 1984), while replication experiments suggest stemmed bifaces similar to Early Woodland types rank among the easiest forms to produce using quartz (Bourdeau 1981). Therefore, a shift from a curated, less commonly discarded biface form, to points easily produced from a ubiquitous material accompanied the appearance of ceramics. Thus, the absence of a dramatic swell in the number of sites, coupled with decreased representation of diagnostic point forms, indicates a demographic trough or at best a flat demographic curve characterized the period.



In general, sparse concentrations of artifacts characterize Early Woodland sites (Mouer 1990:160-174; Stewart 1998:2). Regardless, the preservation of an extensive accumulation of Early Woodland artifacts suggests the existence of a unique geomorphological, and probably social, setting. Overall, the data appear to indicate a return to the mobile, egalitarian social organization characteristic of Early and Middle Archaic times (Klein 2003). Even at large Early Woodland sites post-dating AD 800, very limited evidence of long-distance exchange or the manufacture of labor-intensive artifacts comparable to the soapstone exchange of the Terminal Archaic appears.

3.4.2 Middle Woodland (500 BC–AD 900)

Popes Creek net-impressed ceramics appear after roughly 500 B.C., marking the beginning of the Middle Woodland I period (500 BC–AD 200) (Blanton 1992:72-3; Egloff and Potter 1982:99). Cord-marked ceramics and stemmed points, however, continued in use for some time after AD 500 (McLearen 1992:44-5), for example, lumps the period between 3000 BC and AD 1000 under the rubric Woodland I based on the similarity in adaptation and the presence of considerable variation in the form of contemporaneous stemmed and notched points.

Net-impressed surface treatments occur on a variety of ceramic types manufactured during Middle Woodland times. Pope's Creek ceramics first appear after 500 BC, with the start of the Middle Woodland (Blanton 1992:72-3; Egloff and Potter 1982:99). Early Woodland cord-marked ceramics and stemmed projectile points are found in Middle Woodland contexts, suggesting a continuation of Early Woodland technologies (McLearen 1992:44-5). The Prince George and Varina types appear to represent a continuum of development in the technology used to produced Popes Creek sherds, rather than dramatically different types (Mouer et al. 1986).

The appearance of assemblages containing significant amounts of durable ceramics after 500 BC indicates a shift in the organization of production occurred during the Middle Woodland periods (Brown 1986, 1989). In addition to the advantages of ceramic vessels as cooking pots, ceramic production contrasts with the manufacture of baskets and wooden bowls in its embrace of economies of scale. Rather than a start-and-stop process that fits well into odd bits of time, ceramic production required greater scheduling and continued attention over an extended period of time. Shifts in the scheduling of work, therefore, accompanied the transition from Early to Middle Woodland times.

Broad-spectrum hunting-fishing-gathering continued to characterize the region as a whole throughout the Middle Woodland period. Shellfish, anadromous and resident fishes, deer, waterfowl, and turkey ranked high among the important fauna in the Middle Woodland diet. Various nuts, amaranth, and chenopod seeds also appear to be important resources during this period. After 300 BC, large shell middens containing dense concentrations of artifacts become increasingly common, indicating repeated use of at least one type of site. Middens and the presence of houses at a number of sites indicate longer stays, though populations remained far from sedentary (Gallivan 2003). People continued to reside for much of the year in relatively small settlements, and interior storage features rarely occur on Middle Woodland sites (Gallivan 2003:75-98).

3.4.3 Late Woodland (AD 900–1600)

Intensified use of cultivated plants, particularly maize, beans, and squash, distinguished the Late Woodland adaptation from that of earlier periods. European accounts describe a heavy reliance on slash-and-burn agricultural methods. In addition to cultigens and shellfish, Late Woodland peoples throughout the region continued to rely on various mammals, fish, and birds for sustenance (Dent 1995:251). Perhaps as a consequence of the greater importance of cultigens in the diet, access to expanses of arable land ranks among the most important factors influencing site selection (Dent 1995; Potter 1993).

Small, triangular arrow points, generally believed to reflect the widespread use of the bow-and-arrow, form the overwhelming majority of Late Woodland projectile points. Triangular points include the Levanna, Madison, Roanoke, and Clarksville types, which vary in size and base form. Point size may also decrease over time (Coe 1964; Potter 1993; Ritchie 1971). Shell beads and copper beads became important ornaments and symbols during the Late Woodland period, primarily in the last few centuries prior to the arrival of European colonists. Powhatan's Mantle, a deerskin cloak decorated with thousands of small marginella beads sewn into various patterns, reflects the use of shell beads as symbols of identity and status. Pendants and gorgets made of shell were also common. Of note, five engraved shell masks, decorated with a traditional Southeastern "forked/weeping eye" motif were found in a seventeenth-century burial on the floodplain of the Potomac River in Stafford County. Three of the five masks exhibit similarities to masks recovered from sites in the Southeastern U.S. (Smith and Smith 1989), possibly an indication of long-distance trade. Bone also was used to manufacture beads, as well as utilitarian items such as pins, fishhooks, and points.

Late Woodland populations constructed palisaded villages. In addition, Native American settlements included nucleated villages lacking palisades, dispersed hamlets, and temporary camps. Work by Potter (1993), Hodges and Hodges (1994), and Mouer et al. (1992) suggest that dispersed villages were common throughout Virginia. Housing varied throughout this region: some sites show evidence of longhouses located adjacent to the palisade, while elsewhere, short, oval structures have been unearthed (Dent 1995; Gallivan 2003; Hodges and Hodges 1994; Mouer et al. 1992; Potter 1993; Stephenson 1963).

The large base camps, hamlets, and villages are typically located on bluffs, terraces, or high floodplains adjacent to rivers or major tributaries. Small seasonal camps and non-seasonally based satellite camps supporting nearby sedentary villages and hamlets are located along smaller streams in the interior. Limited concentrations and sparse scatters of lithics and ceramics typically characterized these campsites. The majority of the Late Woodland sites that had been recorded at the time of the Barber et al. (1992) study were located along the major high order streams and rivers, consistent with the ethnohistoric evidence (e.g., Rountree et al. 2007). By the end of the Late Woodland Period, Dent (1995) notes that a generally unoccupied buffer zone appears to have been maintained between the Powhatan on the inner Coastal Plain and the Monacan west of the fall line. According to Dent, this, and other similar buffer zones throughout the Chesapeake region, may have been game preserves or just "...the result the tendency of chiefdoms to nucleate populations for the purposes of control."

3.5 SETTLEMENT TO SOCIETY (1600–1750)

In May 1607, a small group of Englishmen under the authority of the Virginia Company of London arrived at Jamestown Island, where they established the first permanent English settlement in the New World. English contact with Native Americans living in what is now Isle of Wight County occurred in 1608 when Captain John Smith purchased 20 bushels of corn from the Warrosquoyacke people. Smith and other early settlers contacted the Warrosquoyacke on several occasions as their villages were located along the James River near Pagan Point (Boddie 1938).

The first English settlers in what is now Isle of Wight County included Captain Christopher Lawne, Sir Richard Worsley, Nathaniel Basse, and John Hobson. Soon after their arrival at Jamestown in April 1619, a settlement was established on the south shore of the James River at Lawne's Creek, near the current boundary between Isle of Wight and Surry counties (Morrison 1907). Lawne's plantation was known as Warrosquoyacke, after the local Indian group. Lawne represented his plantation at the first meeting of the House of Burgesses in 1619; however, Lawne and most of the settlers on his plantation died within the year. After Lawn's death, the plantation was renamed Isle of Wight Plantation for the English island where a number of the early settlers were from (Morrison 1907). Edward Bennett was granted a patent along the Pagan River in 1621, and was soon followed by Nathaniel Basse, who settled at Basse's Choice. These Southside settlements were devastated and suffered the loss of 53 colonists the following year during the Powhatan uprising and massacre of 1622. Sir George Yeardley led a punitive expedition later in the year against the Warrosquoyacke and Nansemond, which helped to open the south shore of the James to increasing settlement. When Virginia's first counties were created in 1634, Warrosquoyacke County encompassed the Isle of Wight (Hiden 1957). Warrosquoyacke was divided in 1647 between Isle of Wight to the west, and Upper and Lower Norfolk counties to the east. Early settlement of the county centered round the James River's south shore and both the east and west shores of Pagan Creek (King 1993). In the 1623-1624 census, only 53 people lived at Warrosquoyacke as settlers were hesitant to return after the 1622 massacre (Boddie 1938; Morrison 1907).

As early as 1632, The Old Brick Church, now known locally as Old Saint Lukes Church, was constructed. Though the exact date of construction is not known, a church was extant at least by 1638. A deed registering the conveyance of 100 acres to John Marshall references the church and that the parcel was bound by a deep swamp (Jones Creek) (King 1993). John Fulgham, also in 1638, deeded one acre of land to the Lower Parish vestry which was described as the land on which the church stood and that it was located near a deep swamp. This information further confirms the presence of the church in 1638 (King 1993). In addition to confirming the location of the Old Brick Church, these deeds also reference the "main road" which appears to generally follow the current course of Route 10 between Smithfield and Suffolk. The colonial settlement of Isle of Wight County focused on the major rivers and especially along the James and Pagan rivers near Smithfield.

3.6 COLONY TO NATION (1751–1789)

The latter half of the eighteenth century brought widespread changes to the American colonies. The French and Indian War, which began on the Virginia frontier in 1753, caused Britain to levy new taxes and to impose new restrictions upon settlement of new territories in 1763. Parliamentary Acts restricted free trade and navigation, imposed unpopular taxes on items such as molasses (1733) and sugar (1764), and the Stamp Act of 1765 coupled with the doubling of the Export Tax the year before put severe strains on Northern merchants. The trickle-down effect on Southern planters was apparent. Tobacco prices were persistently low, the economy sluggish, and the dependence and indebtedness to British merchants was growing. The complaints of these southern planters, their northern merchants, and the western land speculators helped to "unite" an otherwise diverse continent into what would become a country (Sadler 2006:24; Billings 1975).

Isle of Wight's economy in the second half of the eighteenth century still centered around tobacco cultivation, despite the fact that the Southside's sandy soils were never particularly conducive to growing it. By the later years of the eighteenth century, however, Isle of Wight's farmers were beginning to diversify their crops and explore alternative products. Touring the Smithfield area in 1783, German visitor Johann David Schoeff commented that:

> "...the coast is nearer here, one has passed the tobacco country proper, the plant not thriving on the poorer sandy soil of the region, but tobacco is brought hither from more distant parts; on the other hand, the extensive pine forests supply a different sort of produce, namely tar, pitch and turpentine, which with salted hog meat are the most important articles for export of this place" (King 1993:194).

Isle of Wight County was the scene of several military actions during the seventeenth and eighteenth centuries. In 1676, the county was the scene of Bacon's Rebellion and during the Revolutionary War, British troops passed through the county (Morrison 1907). As with most other parts of Virginia, Isle of Wight's citizens' loyalties were divided, as revolution grew imminent in the 1770s. A considerable number of English and Scots immigrants resided in Isle of Wight, and when they left the county—willingly or not—their lands were considered escheated and sold to their more "patriotic" neighbors. A number of local men joined the Princess Anne District Battalion in 1775 and fought at Kempsville and Portsmouth. Later in the war, Isle of Wight men served in the 7th, 8th, and 9th companies of the 4th Virginia Regiment of Foot. No major battles were fought in Isle of Wight during the War of Independence, though British Lt. Col. Banastre Tarleton led a raid against the Isle of Wight courthouse in Smithfield in 1781. Tarleton succeeded in damaging the building, however, the court records were not lost to the attack, as they had recently been removed and hidden (King 1993:60-65).

3.7 EARLY NATIONAL PERIOD (1790–1829)

At the close of the Revolutionary War, residents across the state of Virginia entered a long period of social, political, and economic change. The rural economy based primarily in tobacco prior to the war was changed radically as farmland had been exhausted and the Capital moved to Richmond. It was not long



before a small group of Virginians dedicated to "scientific agriculture" helped to usher in a new era of productive farming. In his series of essays entitled *Arator*, Caroline County's John Taylor demonstrated the benefits of four-field crop rotation, in which soils could be improved significantly by rotating corn, wheat, fertilizer, and clover. Similarly, in the early 1820s, Edmund Ruffin publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Other agricultural improvements included contour plowing to reduce erosion, cast iron plows, threshing machines, and corn shellers (Kaplan 1993:87-88).

Despite the obvious benefits of the transition from tobacco to grain crops, the farming methods of the late eighteenth and early nineteenth centuries continued to have a deleterious effect on exhausted soils. Under the traditional three-crop rotation system, a field first would be planted in corn, the following year in wheat, then left unplowed the third year to provide grazing for cattle and hogs. Recognizing the need for improved agricultural practices, Loudoun County farmer John A. Binns spearheaded the agricultural reform movement in Virginia. His 1803 Treatise on Practical Farming, which won the admiration of President Thomas Jefferson, outlined a formula for improving crop yields that would come to be known as the "Loudoun System." In his widely read book, Binns recommended deep plowing, the use of gypsum to restore soil productivity, and revising the old crop rotation pattern to include a third year of clover (Poland 1976:84-88).

The first federal census of 1790 recorded that Isle of Wight County had a total population of 9,028, including 4,786 (53 percent) whites, 3,867 (43 percent) black slaves, and 375 (4 percent) free blacks. The total population of Isle of Wight grew little between 1790 and 1830, when county residents numbered 10,517. The number of free blacks, however, increased more than 300 percent over this same period (King 1993:139). During this period, Isle of Wight made the transition from an economy predominantly reliant upon tobacco as the cash crop to one characterized by diversified farming and the exploitation of the county's timber resources. The most important local products now included wheat, corn, oats, Irish potatoes, sweet potatoes, peas, beans, hogs, and forest products. By the 1830s, Isle of Wight farmers were also growing enough cotton to support two local factories (King 1993:198).

3.8 ANTEBELLUM PERIOD (1830–1860)

From 1830 to 1860, the population of Isle of Wight County remained virtually constant at around 5,000 inhabitants. Slavery was not as important to the social and economic makeup as in other Tidewater counties in the antebellum period, and Isle of Wight was also home to a significant number of free slaves before Emancipation. By 1860, there were 1,370 free blacks residing in the county; together they held 2,965 acres of land, a modest average of 44.25 acres per adult male (King 1993:146). Nevertheless, the institution of slavery differentiated Virginia from points north. Wealthy Virginians renewed their commitment to slavery. Other Anglo-Americans, however, became less likely to own slaves than during the earlier years of the Republic.

An agricultural and economic depression characterized much of this era, at least until the 1840s and 1850s. Wheat prices declined sharply. In addition, the completion of the Erie Canal opened the market to mid-western grains. Though agitation for the construction of canals had begun at the end of the previous



century, it was not until 1833 that the Chesapeake and Ohio Canal opened from Harpers Ferry to Georgetown (Keller 2000:24).

In order to compete with and for western commerce, the State borrowed heavily to invest in railroad and road construction between 1840 and 1860 (Willis 1986:425). In general, farm economies prospered during the 1850s as wheat prices rose. This period also witnessed the introduction and general use of animal-powered agricultural machinery (Parker 1986:90).

3.9 CIVIL WAR (1861–1865)

Isle of Wight County's economy had never been heavily oriented toward slave labor, and many of its citizens questioned the wisdom of fighting a sectional conflict to protect what they perceived to be the interests of large slave owners. However, when war was finally declared, many Isle of Wight men willingly took up arms to defend the Confederacy, some joining the Surry Light Artillery Company, and others the Isle of Wight Grays, which became Company D of the 16th Virginia Infantry Regiment (King 1993:164-66).

When Federal Major General Benjamin Butler seized Newport News in May 1861, Confederate General Robert E. Lee quickly realized the threat posed to Suffolk, an important junction of the Southside railroad lines connecting the port of Norfolk with Petersburg and Richmond. Immediately Lee ordered local commander Brigadier General Benjamin Huger to strengthen the region's defenses, and to erect or expand a number of fortifications along the Nansemond River and the south side of the James River in Isle of Wight County. On May 14, 1862, several Federal gunboats came up the James, and fired on Fort Boykin, an important Southside fortification located on Burwell's Bay, several miles west of Smithfield. Overwhelmed by the longer range of the Union guns, the Confederate defenders of Fort Boykin abandoned the defenses, destroying their guns and the fort's buildings in the process. After this engagement, Huger withdrew his forces from the Southside forts, and it is likely that the battery near Ragged Island was abandoned by late May 1862 (Cormier 1989:22-23; King 1993:168- 174).

Isle of Wight County saw few direct military engagements during the course of the war, the most significant being the Battle of Smithfield of January 31–February 1, 1864, in which a minor Union assault against the town was repulsed by its Confederate defenders. Living in a sort of no-man's-land, Isle of Wight's citizens were harried by frequent Federal cavalry raids, which frequently resulted in the appropriation of supplies and the destruction of property. An 1864 resolution of the county's justices succinctly outlined the hardships faced by Isle of Wight citizens during the war years:

> Whereas on account of the exposed condition of the county, being beyond the lines of the Confederate Army and subject to frequent and destructive raids of the enemy and the difficult and embarrassed communication with other sections of the state, our people, in a great measure, are dependent upon their own resources for an adequate supply of the necessities of life. And whereas, on account of the loss of almost our entire slave population, and the loss of a number of our free labor, and the conscription of white men between the ages of eighteen and forty-five to recruit the ranks of our armies, there is a

> great scarcity of productive labor, and whereas any further extension of conscription within the limits of this county will but result in the paralyzing of production and great suffering and hardships upon those who will be left at home... all other business is suspended in the county and, our people with scarcely an exception, are engaged in the cultivation of the soil (King 1993:179-80).

3.10 RECONSTRUCTION AND GROWTH (1866–1916)

Four years of civil war also had a devastating effect on Isle of Wight County, though it certainly suffered less than other parts of the Commonwealth. The county was left poorer in the wake of the conflict: agricultural life was hampered by the lack of draft animals and the poor condition of long-neglected fields; and it was difficult for most former slave owners to come to terms, both emotionally and financially, with emancipation. The county's population also dropped considerably in the immediate postwar years. In 1860, Isle of Wight's residents numbered nearly 10,000; by 1870, the population had dropped by almost 20 percent, to 8,320. After the war, both black and white residents left Isle of Wight in large numbers, many seeking work in nearby cities. Physically, economically, socially, and politically, the landscape of the county had been irrevocably altered in a short period of time (King 1993:139, 146).

Agricultural changes in Isle of Wight County, including the remarkable growth of peanut and soybean production, spurred population growth in the county toward the end of the nineteenth century, and by 1890 the county's population had well exceeded its pre-war levels. In the early twentieth century, Isle of Wight farmers profited from an expanding truck-farming market, supplying the growing cities of Newport News and Norfolk with a variety of fresh fruits and vegetables. The meat packing industry also grew considerably during this period, introducing the famed "Smithfield ham" to a national market (King 1993).

3.11 WORLD WAR I TO WORLD WAR II (1917–1945)

This era also saw frequent and rapid change in Isle of Wight County. For example, electric power became available to the majority of rural residents after 1939, when the Community Electric Cooperative first began raising power lines. But, perhaps the most significant local development witnessed during this period was the construction of the James River Bridge, officially opened by President Calvin Coolidge on November 17, 1928. Virtually overnight, the bridge ended Isle of Wight's relative isolation from Hampton Roads' growing urban centers. County businessman and booster Albert Sidney Johnson was instrumental in getting the main north-south U.S. highway (Route 17) routed through Isle of Wight via the James River Bridge and across the new Crittenden and Nansemond River bridges to Portsmouth and Norfolk. Initially the bridge tolls were high enough to discourage daily commuting to the Peninsula, but ready access to the region's cities still proved a significant stimulus to the local economy, despite the onset of the Depression (King 1993:214 and 227-28).

3.12 THE NEW DOMINION (1946–PRESENT)

Isle of Wight grew at an unprecedented rate after the Second World War, and today the county has a total of 28,500 residents, more than double the population at the turn of the twentieth century. In 1975, the state took over the James River Bridge and removed the tolls; as a result, Isle of Wight County quickly developed into a bedroom community of Newport News, with residential developments springing up along the Route 17 corridor. Despite this increasing residential growth, the majority of Isle of Wight County remains predominantly rural in character (King 1993).

4.0 HISTORIC MAP REVIEW

Historic maps were reviewed as part of the background research conducted for the archaeological survey. Online map repositories, including the Library of Congress, the United States Geological Survey (USGS) Historical Topographic Map Explorer, the online David Rumsey Map Collection hosted by Cartography Associates, and state and county maps of Virginia compiled online at www.mapgeeks.org were examined to identify historic maps which depict the Project Area. The details and observations from this review are summarized in Tables 2 and 3.

Table 2 Summary of Observations for Historic Maps

Figure	Year	Observations, Property and Adjoining Sites
3	1624	John Smith's early map of Virginia depicts the general vicinity of the Project Area as being located within the territory of the Powhatan. While no detail is provided for the Project Area itself, it is shown as being in close proximity to the village of the Warraskerack. It is also between two tributaries of the James River that separate it from the villages of Mokete to the south and Mathomauk to the east.
4	1755	This map illustrates the general location of the Project but does not offer significant detail. The Project Area is located near the confluence of the Pagan River, noted as "Pagan Cr." and the James River. The wider region includes major waterways, roads, towns, and plantations, often located along the James River.
5	1781	This map illustrates the marches of Lord Cornwallis through the Project Area vicinity during the American Revolution. One marching route was located south of the Project Area; however, there are no details depicted for the Project Area itself. Major waterways, towns, and plantations are shown in the wider region. The Pagan River ("Pagan Cr.") is shown and the nearest town is Burwell.
6	1827	Major waterways, including nearby "Burrels Bay" and the Pagan River ("Pagan C."), and roadways are depicted on this map as well as Smithfield Courthouse to the south. No detail is provided for the Project Area.
7	1864	This map shows roads and waterways but offers little additional detail of the Project Area vicinity. Portions of the Project Area appear to have been lightly wooded, mainly along the edges.
8	1891	This map depicts major waterways and roadways as well as mills, churches, and farmsteads. Farmsteads often include landowner or resident names. While there is no detail provided for the Project Ara, Fort Boykin is depicted to the east and a battery is shown to the northwest..

Table 3 Summary of Observations for USGS Topographic Maps

Figure	Year/Quad	Scale	Observations, Property and Adjoining Sites
9	1907 Yorktown, Virginia	1:62,500	This map depicts the Project Area vicinity as primarily rural with sparse occupation. Structures are shown both on major roads as well as along driveways or access roads, including near the northeastern portion of the Project. The Project Area is shown as primarily open land; however, woodland is depicted in the southwest corner.
10	1948 Bacon's Castle, Virginia	1:24,000	This map continues to show the Project Area vicinity as predominately rural with sparse occupation. A dirt farm road which borders the Project to the north appears for the first time on this map. This road was not present on a prior map from 1943. The Project Area is shown as partially wooded in the southern half.

HISTORIC MAP REVIEW



Figure 3 Detail from *Virginia Discovered and Described* Depicting the Project Area Vicinity (Smith and Hole 1624; Library of Congress Geography and Maps Division).

HISTORIC MAP REVIEW

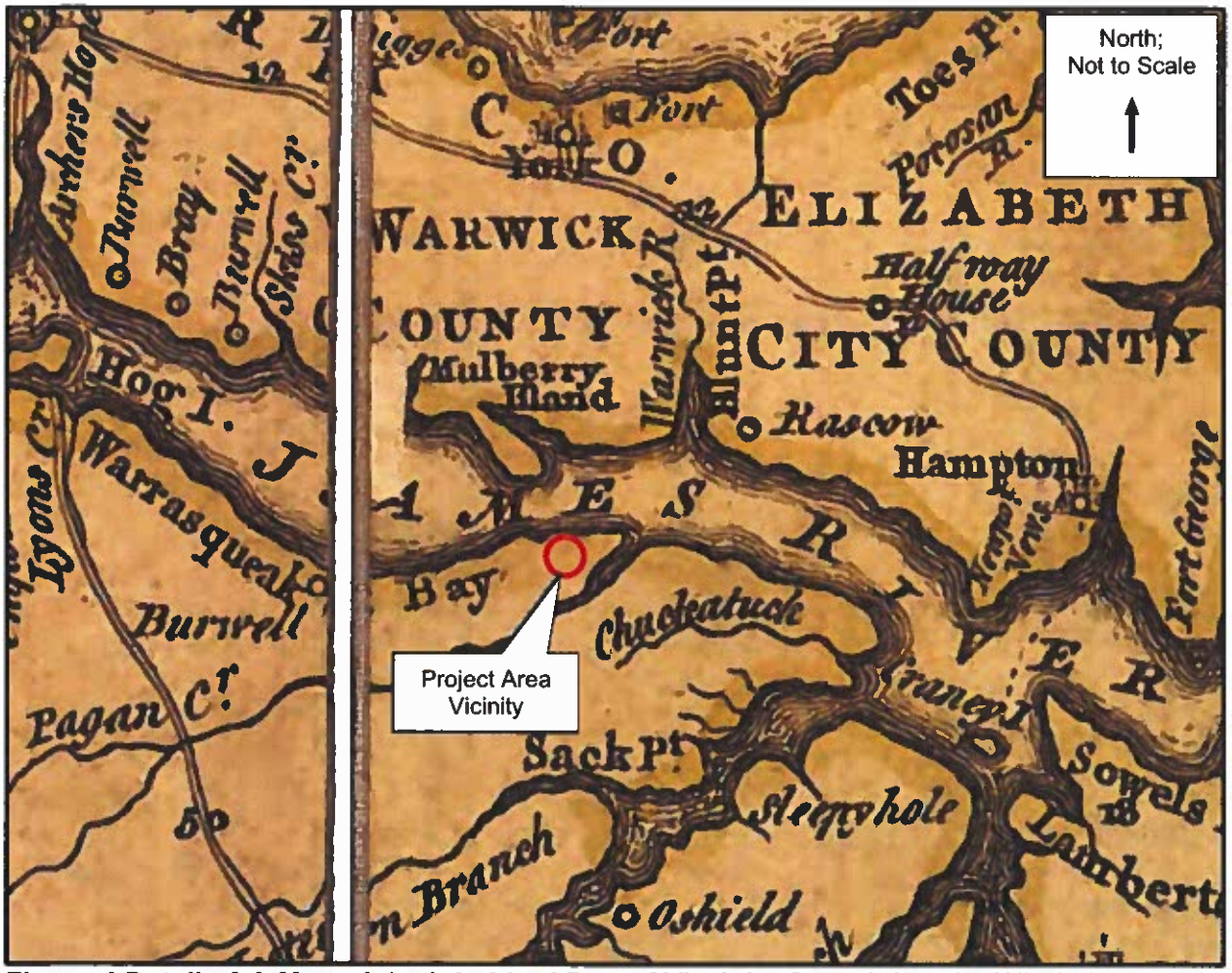


Figure 4 Detail of *A Map of the Inhabited Part of Virginia, Containing the Whole Province of Maryland with Part of Pensilvania, New Jersey and North Carolina* Depicting the Project Area Vicinity (Fry et al. 1755; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

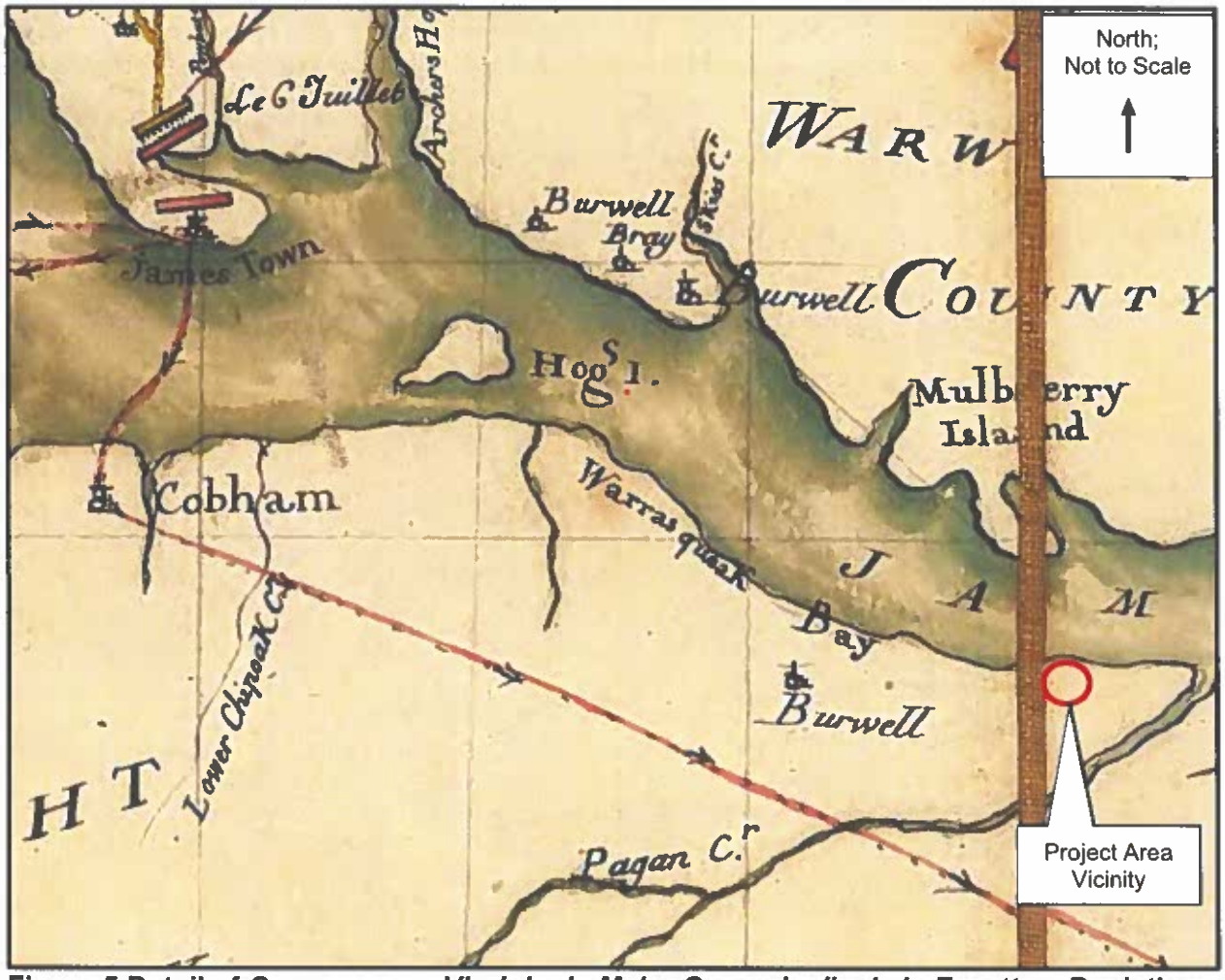


Figure 5 Detail of *Campagne en Virginie du Major General m'is de LaFayette*... Depicting the Project Area Vicinity (Chesnoy and Lafayette 1781; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

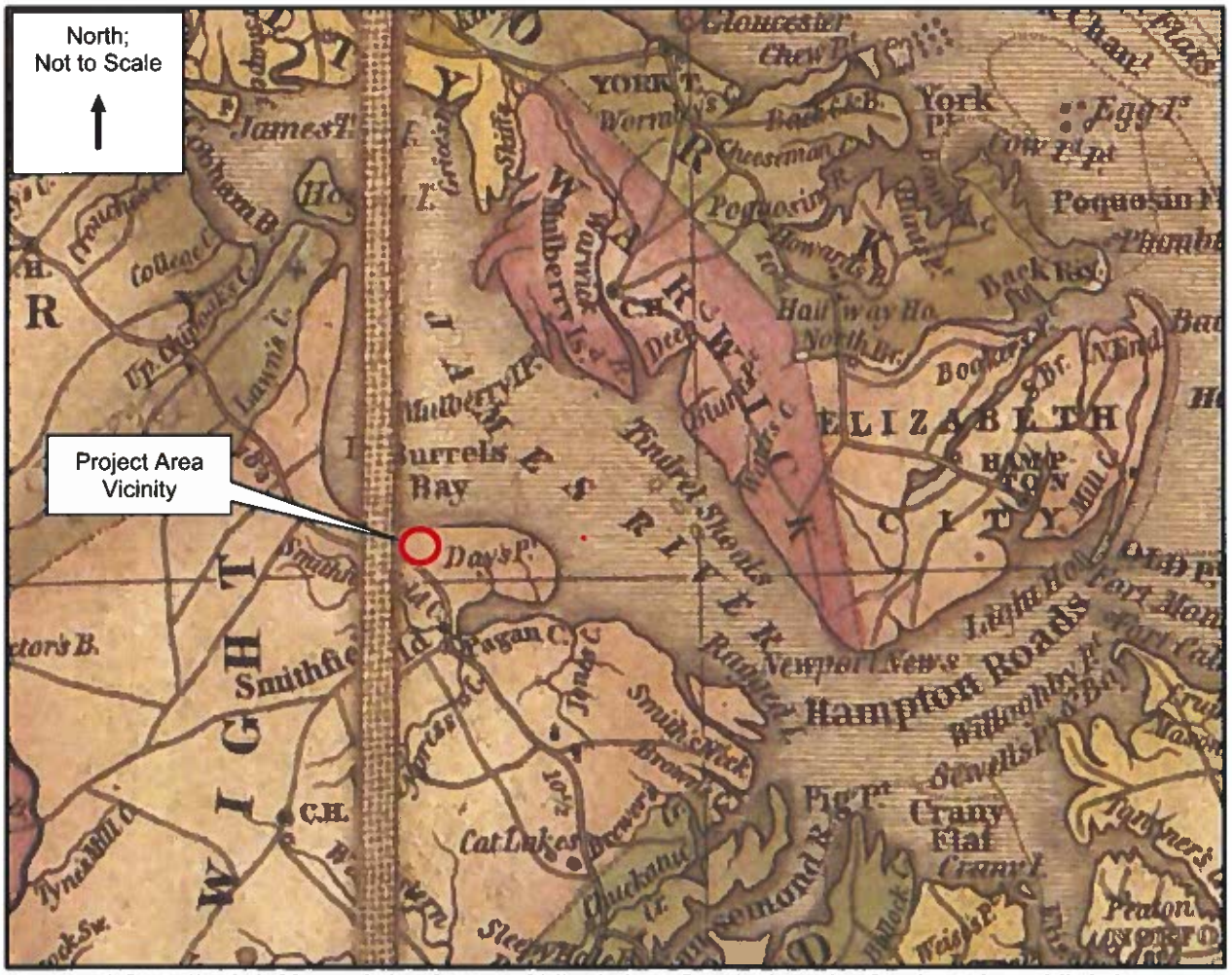


Figure 6 Detail of *A Map of the State of Virginia…* Depicting the Project Area Vicinity (Böÿe 1827; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

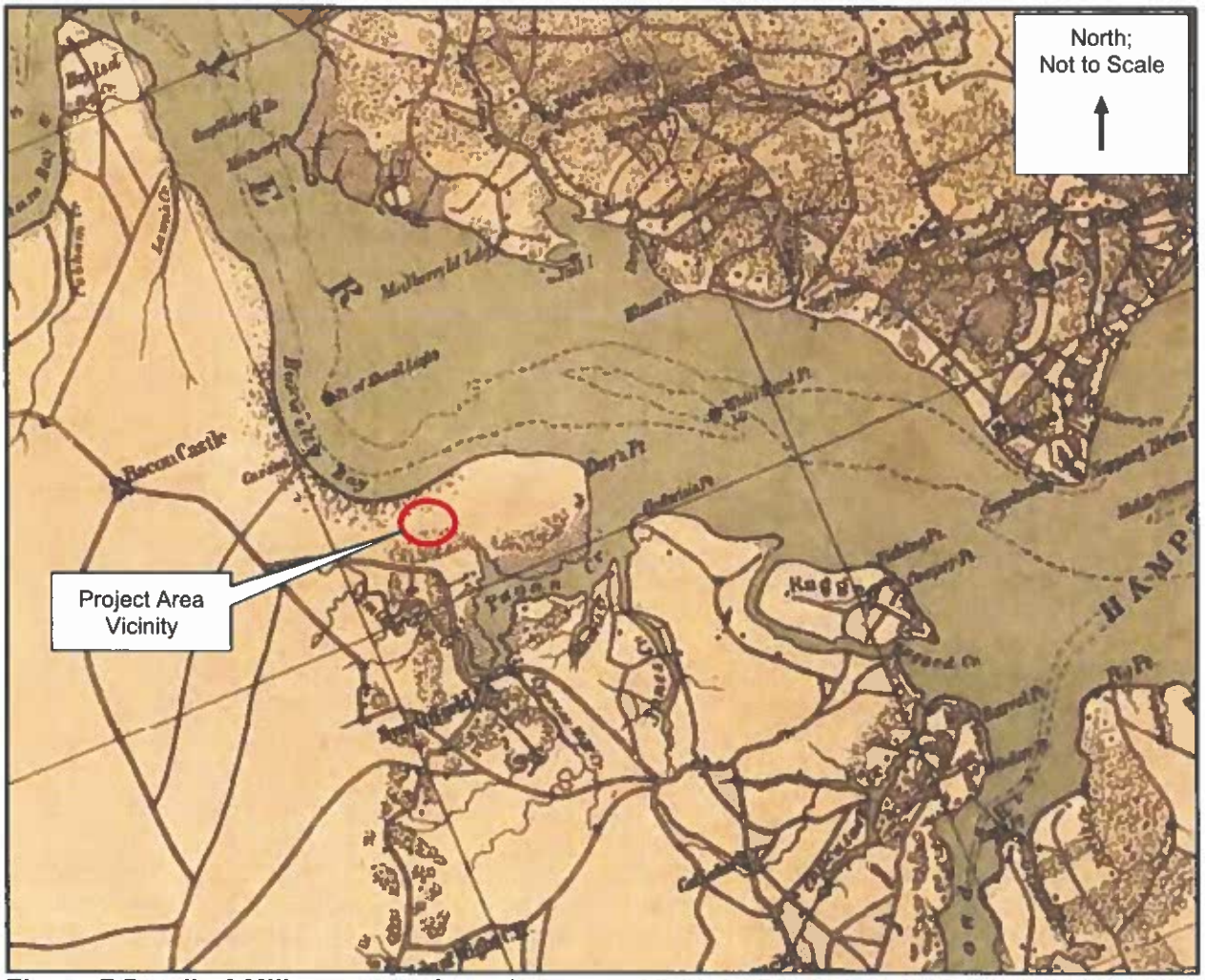


Figure 7 Detail of *Military map of south-eastern Virginia*, Depicting the Project Area Vicinity (Lindenkohl 1864; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

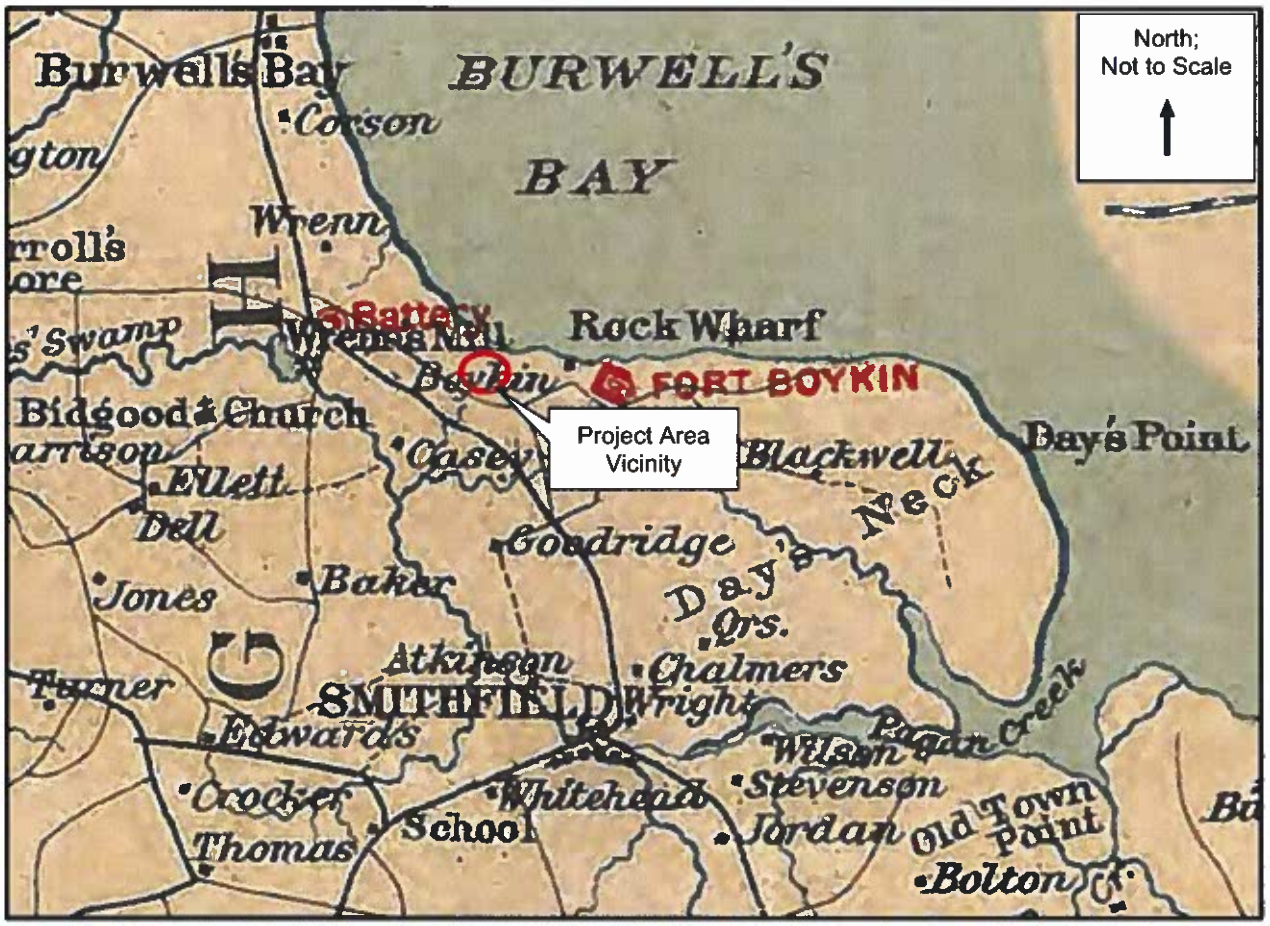


Figure 8 Detail of *Preliminary map of a part of the south side of James River, Va.: from surveys and reconnaissances* Depicting the Project Area Vicinity (Campbell et al. 1891; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

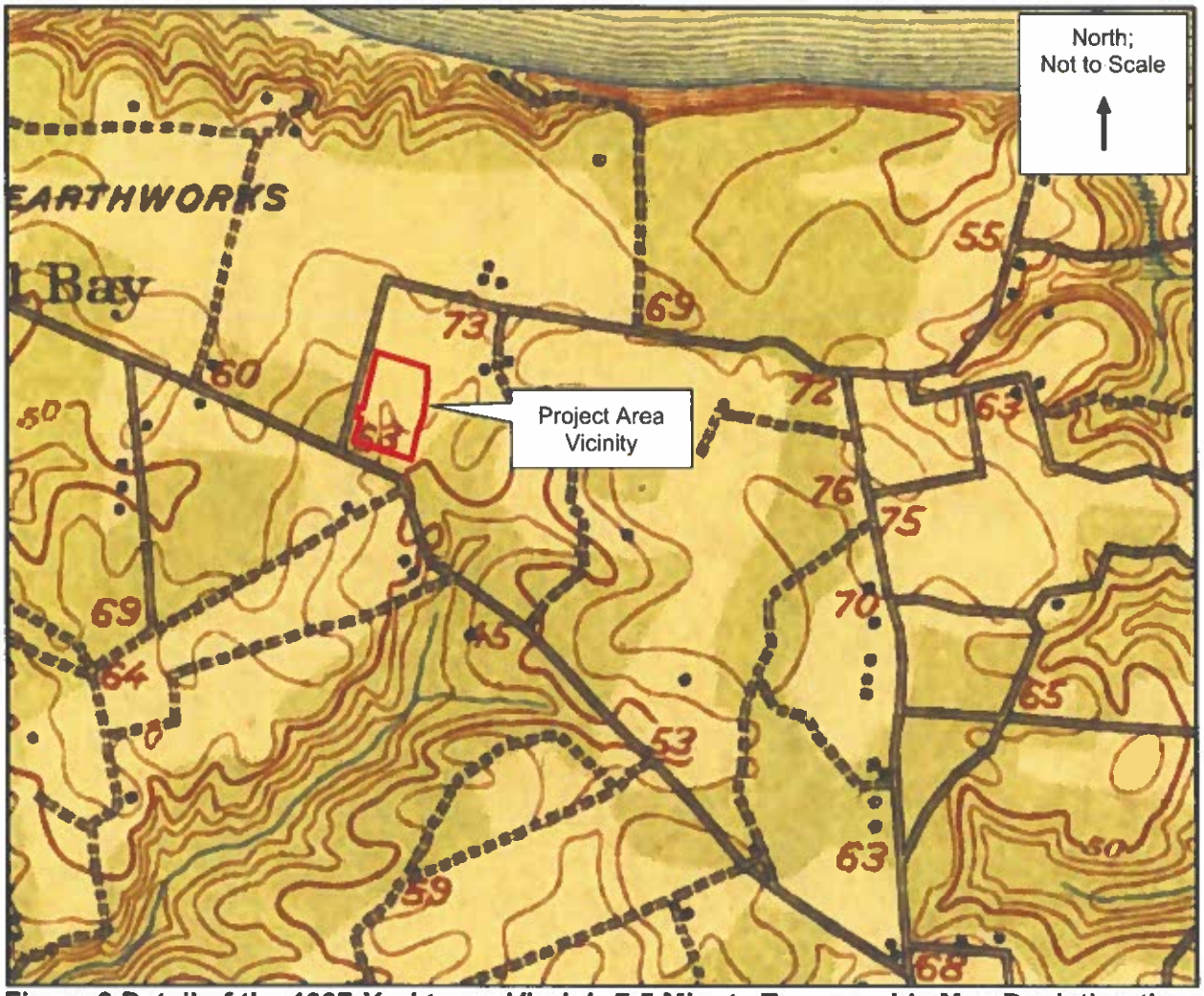


Figure 9 Detail of the 1907 *Yorktown, Virginia* 7.5 Minute Topographic Map Depicting the Project Area (USGS 1907; http://historicalmaps.arcgis.com/usgs/, Accessed 2023).

HISTORIC MAP REVIEW

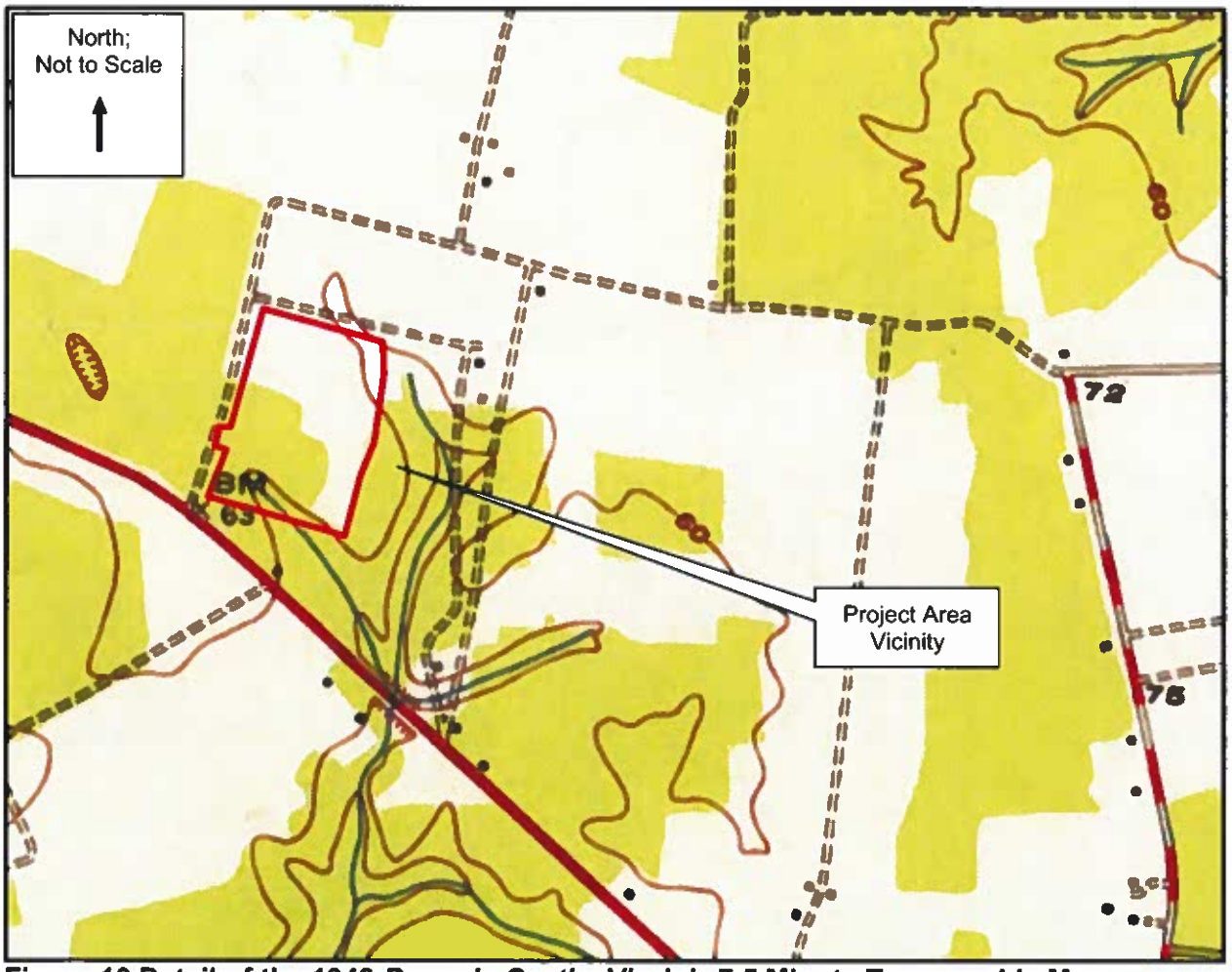


Figure 10 Detail of the 1948 *Bacon's Castle, Virginia* 7.5 Minute Topographic Map Depicting the Project Area (USGS 1948; http://historicalmaps.arcgis.com/usgs/, accessed 2023).

5.0 RESEARCH DESIGN

5.1 OBJECTIVES

The Phase I cultural resources survey was designed to locate and identify archaeological resources within the Project Area, as well as to document any standing structures 50 years of age or older located within the Project Area and within a 0.5-mile radius of the Project Area. Stantec designed the survey to obtain sufficient information to make recommendations about the research potential of identified cultural resources based on the resource's potential eligibility for listing on the NRHP. A cultural resource is gauged to be significant if it meets at least one of four NRHP criteria:

A. Associated with significant events in the broad patterns of national history.

B. Associated with the lives of persons significant in our past.

C. Representative of a type, period, or method of construction, or the work of a master.

D. Capable of yielding important information about the past.

Criterion D typically applies to archaeological sites. In order to be capable of yielding important information about the past, generally a site must possess artifacts, soil strata, structural remains, or other cultural features that make it possible to test historical hypotheses, corroborate and amplify currently available information, or reconstruct the sequence of the local archaeological record.

5.2 PREVIOUS INVESTIGATIONS

5.2.1 Previous Cultural Resources Surveys

No previously conducted cultural resource surveys have occurred within the Project Area.

5.2.2 Archaeological Sites

No previously recorded archaeological sites are located within the Project Area. Eleven previously recorded archaeological sites are located within a 1-mile radius of the Project Area (Table 4; Figure 11). Of these, three are Native American and eight are historic. None of the sites have been formally evaluated for potential NRHP eligibility.

Table 4 Previously Identified Archaeological Sites within a 1-Mile Radius of the Project Area

Resource	Resource Type	Association	Reference	NRHP Status
44IW0184	Dwelling, single	17th Century	JRIA 1999	Not Evaluated
44IW0356	Earthworks	Civil War	ACC 2022	Not Evaluated

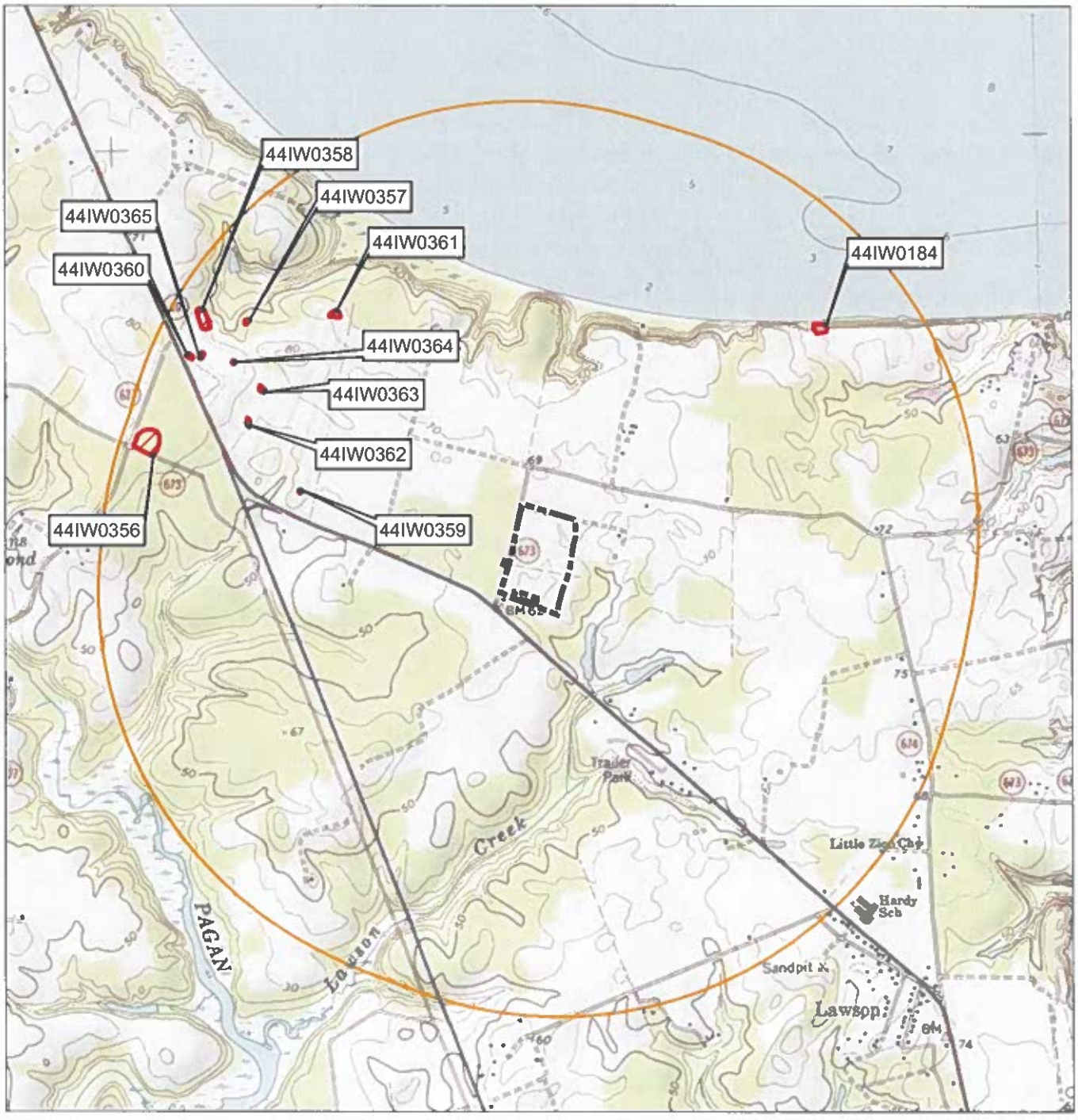
Resource	Resource Type	Association	Reference	NRHP Status
44IW0357	Artifact Scatter	Mid-18th to Early 19th c.	ACC 2022	Not Evaluated
44IW0358	Artifact Scatter	20th Century	ACC 2022	Not Evaluated
44IW0359	Artifact Scatter	Late 18th to Early 19th c.	ACC 2022	Not Evaluated
44IW0360	Lithic Scatter	Pre-Contact	ACC 2022	Not Evaluated
44IW0361	Artifact Scatter	Late 18th to Early 19th c.	ACC 2022	Not Evaluated
44IW0362	Artifact Scatter	18th Century	ACC 2022	Not Evaluated
44IW0363	Artifact Scatter	18th Century	ACC 2022	Not Evaluated
44IW0364	Isolated Find	Pre-Contact	ACC 2022	Not Evaluated
44IW0365	Isolated Find	Pre-Contact	ACC 2022	Not Evaluated

5.2.3 Architectural Resources

No previously identified architectural resources are located within the Project Area. Nine previously identified architectural resources are located within a 1-mile radius of the Project Area (Table 5; Figure 12). These resources include five houses ranging in date from circa 1775 to 1900, a cemetery, two farms, and the Captain John Smith Chesapeake National Historic Trail (DHR #500-0006). The latter resource has been determined to be eligible for NRHP listing, while the circa 1790 Bourne-Turner House (DHR #046-0031) has been determined to be potentially eligible for NRHP inclusion. Two resources have been determined to be not eligible for listing on the NRHP and the remaining five resources have not been evaluated for NRHP eligibility.

Table 5 Previously Recorded Architectural Resources within a 1-Mile Radius of the Project Area

DHR #	Resource	Date	Reference	NRHP Recommendation
046-0031	Bourne-Turner House	c. 1790	Stantec 2014; Loth 1969	Potentially Eligible (DHR 2015)
046-0043	Casey House	c. 1806	Unknown 1970	Not Evaluated
046-0045	The Rocks	c. 1775	Read 1971	Not Evaluated
046-5189	Farmhouse, 7428 Clifton Lane	c. 1905	Stantec 2014; Kimble 2005	Not Eligible (DHR 2015)
046-5205	Rowland Edwards House	1834	Kimble 2005	Not Evaluated
046-5461	Farm, 15138 Green Run Lane	c. 1900	Stantec 2014	Not Eligible (DHR 2015)
046-5636	Old Stage Highway Cemetery	c. 1798	Gordon 2020	Not Evaluated
046-5708	House, Green Run Lane	1900	ACC 2022	Not Evaluated
500-0006	Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District	c. 1550	D+A 2022; WMCAR 2015	Eligible (NPS 2015)





Project Area
1-Mile Buffer
Archaeological Site

0 1,000 2,000 Feet
(At original document size of 8.5x11)
1:24,000

N

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
195602607
Dawood Engineering, Inc.
VAL025 Solar Project

Figure No
11

Title
Previously Identified Archaeological Sites within a 1-Mile Radius of the Project Area

Page 5.3

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Bacons Castle, VA Quadrangle 1992

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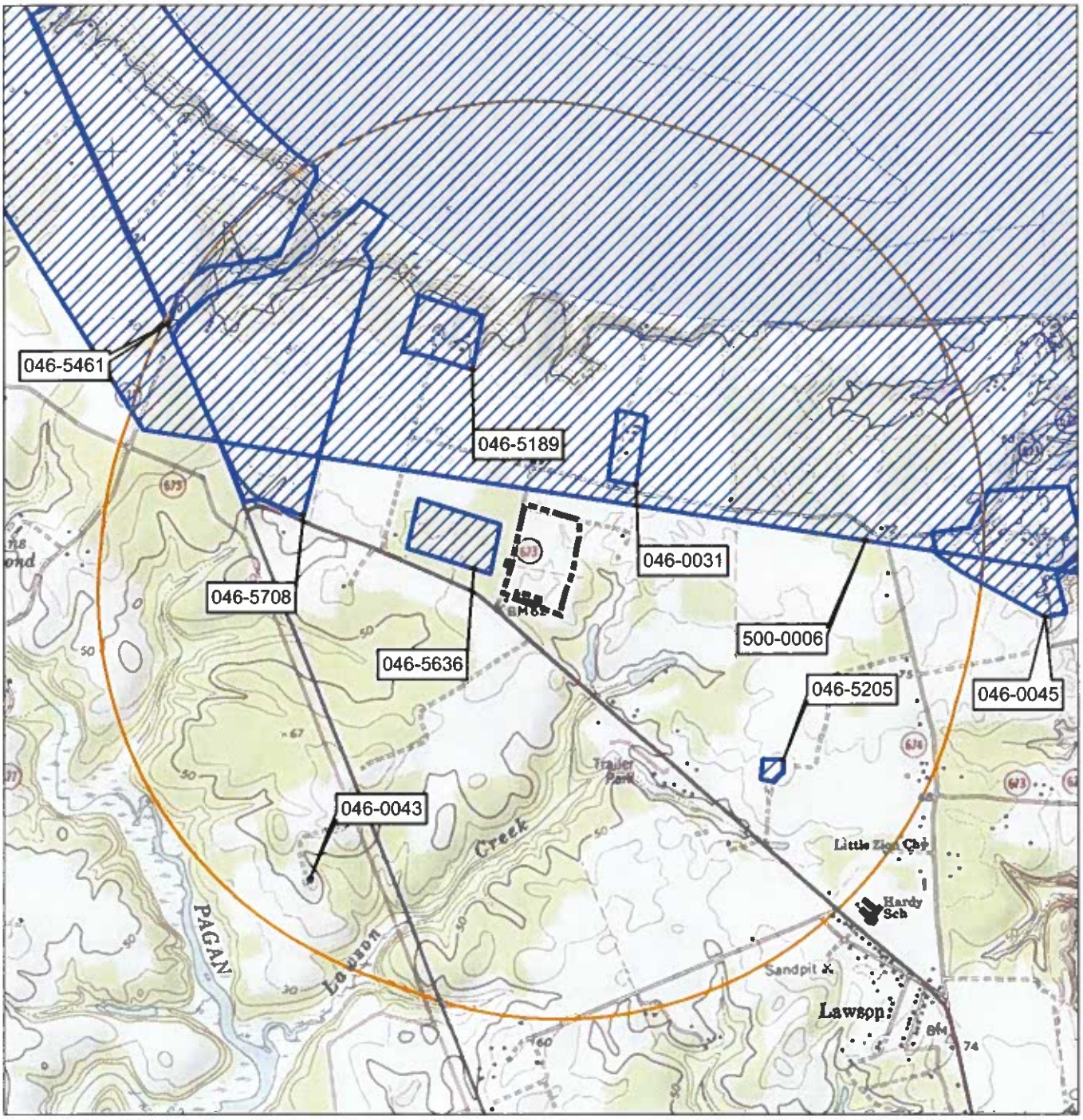
Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Bacons Castle, VA Quadrangle 1992

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-02
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
Dawood Engineering, Inc.
VAL025 Solar Project

195602607

Figure No
12

Title
Previously Identified Architectural Resources within a 1-Mile Radius of the Project Area

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6.0 SURVEY METHODOLOGY

6.1 ARCHAEOLOGICAL SURVEY

6.1.1 Shovel Testing

Stantec field archaeologists conducted systematic pedestrian survey across the entire Project Area in conjunction with systematic shovel testing. Shovel tests were excavated at 50-foot intervals along 17 transects (Transects A–Q) spaced 50 feet apart throughout the Project Area. Shovel testing was not conducted in areas exhibiting 15 percent or greater slope, that were wet or waterlogged, or exhibited obvious disturbances. Radial shovel tests were excavated at 25-foot intervals around each positive shovel test to determine the bounds of newly identified cultural resources.

All shovel tests measured approximately 1.25 feet (15 inches) in diameter and were excavated to sterile subsoil. Soil from all shovel tests was passed through 1/4-inch mesh screen. For each excavated shovel test, the stratigraphic profile was recorded with complete descriptions using Munsell color designators (Munsell Color 1994) and U. S. Department of Agriculture soil texture terminology (Soil Survey Staff 1999).

- A (Topsoil or surface vegetation) – Organic or humus layer consisting of grass, leaf litter, or other surface materials.
- Ap (Plow Zone) – A horizon soils that have been impacted by plowing and agricultural practice; usually an organic layer that has formed through decomposition of A horizon soils mixed with leftover organic matter from agricultural practices.
- E (eluviated) – Leached of clay, minerals, and organic matter, leaving a concentration of sand and silt particles of quartz or other resistant materials – missing in some soils but often found in older soils and forest soils. Often interpreted as a transition layer between A and B horizon soils; often present in intact archaeological site settings and is representative of a living surface.
- B (B Horizon [Subsoil]) – Rich in minerals that leached (moved down) from the A or E horizons and accumulated here. Typically denoted as the culturally sterile B Horizon (Subsoil) as deposits tend to predate human occupation.

All pertinent data including: the site location, the location of features, any permanent landmarks, the topography, the vegetation, any disturbed areas, and the location of surface survey and subsurface tests was digitally collected utilizing ESRI's Collector for ArcGIS installed on Apple iPads enabled with GPS location services and supplemented by a Trimble R1 GPS Receiver. Field survey notes were collected by Stantec's Project Archaeologists and Crew Chief documenting daily progress, conditions, and access issues.

6.1.2 Definitions

This field survey used two designations for archaeological resources: the *archaeological site* and the *isolated archaeological find*. An *archaeological site* is regarded as any apparent location of human activity not limited to simple loss, casual or single-episode discard, and having sufficient archaeological evidence to indicate that further testing would produce interpretable archaeological data. Three artifacts related temporally or functionally within a spatially restricted area constitute an archaeological site (DHR 2017: Chapter 6, page 1). In contrast, an *isolated archaeological find* is defined as an area marked by surface indications and little else; containing three or less artifacts of a similar period; and/or representing an area reflecting simple loss, casual, or single-episode discard, all of which retain a low potential for providing additional interpretable archaeological data. By definition, archaeological resources of this type are not eligible for listing in the NRHP because they lack the ability to provide significant information about the prehistoric or historic past.

6.1.3 Laboratory Methods

All archaeological data and specimens collected during the archaeological survey were transported to Stantec's laboratory in Richmond, Virginia, for processing and analysis. Prior to washing, artifacts from a given provenience were first emptied into a screened basket and sorted. Next, the provenience information from the field bags was confirmed with the bag catalog and transferred onto bag tags. Stable objects were washed with tap water using a soft brush, with careful attention paid to the edges of ceramics and glass to aid in the identification of body type and to assist in mending. Washed items were then placed by provenience on a drying rack.

Once dry, the artifacts were re-bagged by provenience and material type. Artifacts of a given provenience were placed in clean 2-millimeter-thick re-sealable polyethylene bags that were perforated to allow air exchange. Each grouped material type was placed in a separate plastic bag (i.e., all glass in one bag, all brick fragments in one bag, etc.) and each of these individual type bags were then placed in a larger bag with the bag tag noting the provenience.

After processing and re-bagging, the entire artifact assemblage was then cataloged for analysis. Stylistic attributes were described using current terminology and recorded by count into a database for analysis. Once all the artifacts were cataloged, the ceramics were then pulled from their bags and marked with correct provenience information. Diagnostic ceramics were sorted out and grouped together based on type or ware and/or vessel or function and checked for cross mends.

Analysis of historic artifacts was aided by reference works such as *The Parks Canada Glass Glossary* (Jones and Sullivan 1989), *Telling Time for Archaeologists* (Miller et al. 2000), the *Guide to Artifacts of Colonial America*, (Noel Hume 1969), and the *Colonial Williamsburg Foundation Laboratory Manual* (Pittman et al. 1987).

All materials generated by this project will be curated according to the standards outlined in 36 CFR Part 79 (*Curation of Federally-Owned and Administered Archaeological Collections*) and by DHR. All processed artifact bags were deposited in acid-free Hollinger boxes for permanent storage.

6.1.4 Expected Results – Archaeological Site Identification

Native American sites are generally found within 1,000 to 1,500 feet of a significant water source, on moderately well- to well-drained soils on low relief landforms. The Project Area is located across a gently rolling to relatively level landform. Three Native American archaeological sites have been previously identified within a 1-mile radius of the Project Area. One is a small lithic scatter and two are isolated finds. All three resources are of unknown temporal affiliation. The sites were identified west of the Project Area, on level landforms above the head of an unnamed small tributary of the James River. The lack of previously recorded Native American sites in the Project Area vicinity likely reflects the limited number of archaeological surveys that have occurred in the area rather than a lack of Native American activity. The Project Area is also situated near the head of a stream, though Lawson Creek is a tributary of the Pagan River, rather than the James River. There is a moderate probability for the Project Area to contain additional Native American resources.

The Project Area consists of a gently rolling harvested cotton field. As historic map review has shown the vicinity of the Project Area has largely reminded rural and undeveloped. While farmsteads were present in the surrounding area in the nineteenth and twentieth centuries, no maps have indicated that structures once stood in the Project Area. Much of the Project Area comprises relatively level, moderately well-drained land. Eight previously identified archaeological sites within 1 mile of the Project Area are historic. Those previously recorded historic sites with temporal affiliations date generally from the seventeenth to the twentieth century and include a single dwelling, Civil War earthworks, and artifact scatters. The seventeenth century single dwelling site (44IW0184) is located northeast of the Project Area, on the bank of the James River while the earthworks (44IW0356) are situated northwest of the Project Area at the intersection of Routes 677 and 673. Three of the five artifact scatters are situated along the southern edge of a small unnamed tributary of the James River while the remaining two are in a level inland setting between the same tributary and the head of an unnamed branch of the Pagan River. There is a low to moderate probability of identifying additional historic resources within the Project Area.

6.2 ARCHITECTURAL SURVEY

The Phase I field survey strategy consisted of systematic identification and recordation of historic architectural resources dating to 50 years or older located on the Project parcel or within a 0.5-mile radius of the Project Area. The documentation efforts consisted of resurveying and re-evaluating previously recorded resources for NRHP eligibility in order to update the DHR's V-CRIS database. Previously recorded resources were updated including revising sketch maps and photographing all visible resources present on the property. Newly recorded resources within the Project Area were also surveyed and the information recorded on a reconnaissance level survey form. Sketch plan maps were drawn for each resource and the buildings/structures photographed as visible. The Phase I architectural survey was

conducted from public right-of-way (ROW) only unless permission was specifically granted by the owner at the time of the field survey. In some cases, the resources were not visible from the public ROW, or the view was partially obscured due to vegetation and/or distance and therefore limited architectural survey was possible.

6.2.1 Definitions

Architectural resources include all standing structures or buildings that are 50 years or older. Potential eligibility of architectural resources requires that one or more of the National Register of Historic Places Criteria, such as association with significant events in the broad patterns of national history (Criterion A), association with the lives of persons significant in our past (Criterion B), and/or representative of a type, period, or method of construction, or the work of a master (Criterion C), be met. Where individual structures do not meet these National Register criteria, but constitute a cohesive group of related buildings, a potential NRHP district may be considered.

6.3 REPORT PREPARATION

The results of the archival research, fieldwork, and laboratory analysis were synthesized and summarized within this report. The report describes the results of each of these facets of the Phase I survey research and is illustrated by selected maps and drawings. Appendix A presents a descriptive catalog of all artifacts recovered from surface and excavated contexts. Appendix B presents architectural resource survey mapping. Appendix C presents architectural V-CRIS forms. Appendix D presents resumes for key personnel.



7.0 ARCHAEOLOGICAL SURVEY RESULTS

7.1 INTRODUCTION

The Project Area is located north of Old Stage Highway (Route 10) and northeast from the junction with Morgarts Beach Road (Route 628). The Project is bounded by Morgarts Beach Road to the west, Old Stage Highway to the south, and private dirt farm roads to the north and east. The Project Area comprises a gently rolling harvested cotton field. Light grass is present throughout much of the Project Area, which also exhibits large pockets of sand surface soils. Some of the sand appears to be redeposited fill utilized to level low areas in the field. A small area of standing water was present in the northwest corner of the Project Area (Figures 13–18).



Figure 13 View from the Southwestern Corner of the Project Area; View to the Northeast.



Figure 14 View from Northwestern Corner of the Project Area; View to the South.

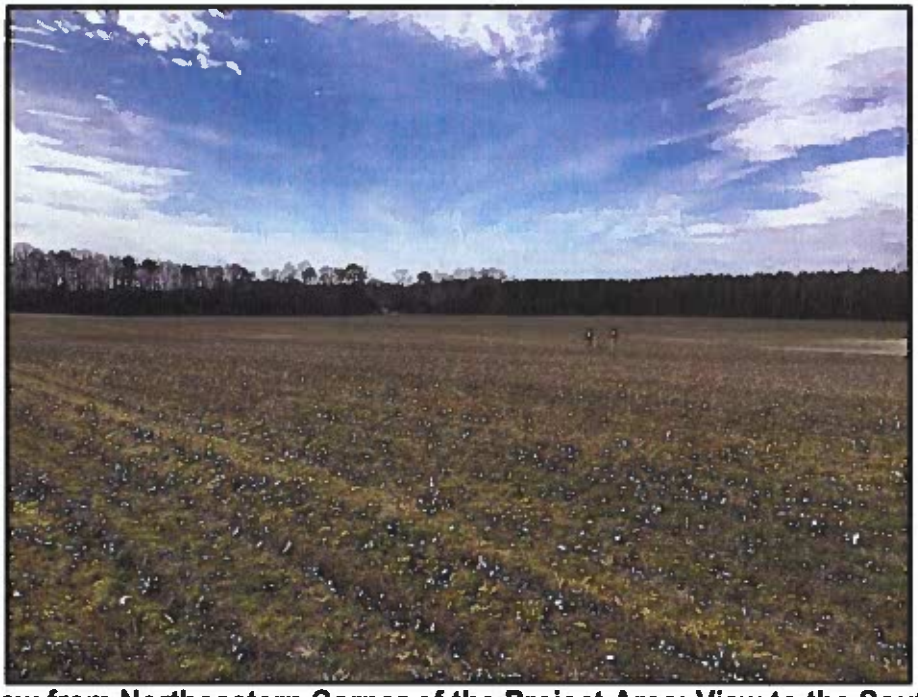


Figure 15 View from Northeastern Corner of the Project Area; View to the Southwest.



Figure 16 View from Central Portion of the Project Area; View to the South.



Figure 17 View from Southeastern Corner of the Project Area; View to the North.



Figure 18 View of Sand Fill in Northern Portion of the Project Area; View to the South.



Figure No.

19

Title

Archaeological Base Map

Client/Project 195602607

Dawood Engineering, Inc.
VAL025 Solar Project

Project Location

Isle of Wight County, Virginia

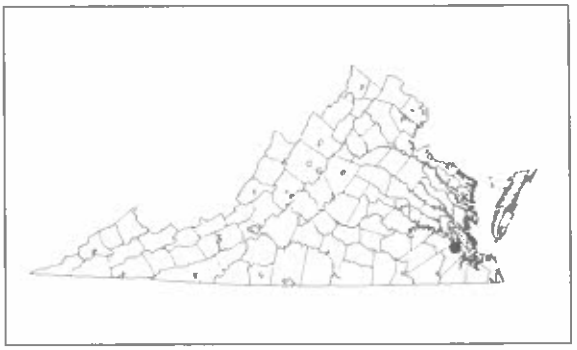
Prepared by ECL on 2023-03-02
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

N

0 200 400 Feet

(At original document size of 11x17)
1:2,400

- Primary Negative Shovel Test Pit
- Primary Positive Shovel Test Pit
- Radial Negative Shovel Test Pit
- Project Area
- 5-Foot Contour



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc.; Stantec; U.S. Census Bureau; VDOT
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

Stantec

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Responsibility for verifying the accuracy and completeness of the data

7.2 SHOVEL TESTING

A total of 403 shovel tests were excavated at 50-foot intervals along 17 transects (Transects A–Q) spaced 50 feet apart throughout the Project Area. One shovel test (shovel test pit [STP] A22) was not excavated due to its location within standing water. One shovel test was positive for cultural material. Three radial shovel tests were excavated at 25-foot intervals around the positive test to determine the bounds of the newly identified cultural resource. No radial shovel tests positive for additional cultural material. In addition to the positive shovel test, early twentieth-century artifacts, including small brick fragments, whiteware sherds, and bottle glass were observed within pockets of white sand fill in the northeastern portion of the Project Area. This redeposited soil (see Figure 18) appears to have been utilized to fill low spots in the field and the artifacts contained therein lacked provenience. This material was not collected. Shovel testing resulting in the identification of one new isolated archaeological find (2607-IF1) (see Figure 19).

A representative shovel test profile for the majority of the Project Area consisted of three strata (STP J12). Stratum I was characterized as a layer of 10YR4/2 dark grayish-brown sandy loam (Ap Horizon), which extended in depth from approximately 0 to 0.6 foot below ground surface. Stratum I was underlain by Stratum II, a layer of 10YR5/3 brown sand (Buried Ap Horizon) extending from approximately 0.6 to 1 foot below ground surface. Underlying Stratum II was Stratum III, a layer of 10YR5/4 yellowish-brown sandy clay (Subsoil). Stratum III was excavated from approximately 1 to 1.4 feet below ground surface (Table 6).

Table 6 STP J12 Soil Profile

Stratum	Depth (ft.)	Color	Soil Type/Texture	Interpretation
I	0–0.6	10YR4/2 Dark Grayish Brown	Sandy Loam	Ap Horizon
II	0.6–1	10YR5/3 Brown	Sand	Buried Ap Horizon
III	1–1.4	10YR5/4 Yellowish Brown	Sandy Clay	Subsoil

7.3 ARCHAEOLOGICAL RESULTS

One new Isolated Archaeological Find (2607-IF1) was identified during the Phase I survey. Isolated Archaeological Find 2607-IF1 was identified along the eastern edge of the Project Area. The 1944 *Yorktown, Virginia* USGS topographic map depicts structures to the east of this location (see Figure 9).

7.3.1 Isolated Archaeological Finds

Identified in STP Q12 in the eastern portion of the Project Area, Isolated Archaeological Find 2607-IF1 consisted of one whiteware body sherd (1820-) (Appendix A). STP Q12 contained of three strata in profile. Stratum I was characterized as a layer of 10YR4/2 dark grayish-brown sandy loam (Ap Horizon), which extended in depth from approximately 0 to 0.6 foot below ground surface. Stratum I was underlain by Stratum II, a layer of 10YR5/3 brown sand (Buried Ap Horizon) extending from approximately 0.6 to 1 foot below ground surface. Underlying Stratum II was Stratum III, a layer of 10YR5/4 yellowish-brown

sandy clay (Subsoil), which extended in depth from approximately 1 to 1.4 feet below ground surface (Table 7).

Table 7 STP Q12 Soil Profile

Stratum	Depth (ft.)	Color	Soil Type/Texture	Interpretation
I	0–0.6	10YR5/2 Dark Grayish Brown	Sandy Loam	Ap Horizon
II	0.6–1	10YR5/3 Brown	Sand	Buried Ap Horizon
III	1–1.4	10YR5/4 Yellowish Brown	Sandy Clay	Subsoil

Three radial shovel tests were excavated at 25-foot intervals around STP Q12. One radial shovel test was not excavated as it fell outside of the Project Area boundary. No radial shovel tests were positive for additional cultural material. ***By definition, Isolated Archaeological Find 2607-IF1 is not eligible for listing to the NRHP.***

8.0 ARCHITECTURE SURVEY RESULTS

The Phase I architectural survey was conducted by Stantec from March 8, 2023. The documentation of these historic resources was conducted pursuant to the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* [United States Department of the Interior {USDI} 1983]) and state (*Guidelines for Conducting Historic Resources Investigations in Virginia* [DHR 2011, revised 2017]) guidelines.

8.1 PHASE I ARCHITECTURAL SURVEY

Six newly recorded and four previously recorded individual resources were located within the architectural Study Area. One of the previously recorded resources has been determined eligible and one potentially eligible for listing in the NRHP. The NRHP-eligible resource was not resurveyed as part of the current project. One resource was determined not eligible prior to the current survey but was surveyed more than five years ago and therefore was resurveyed. One resource had not been evaluated for eligibility by DHR (Table 8). Resources which had been determined NRHP eligible as well as one previously unevaluated, but not visible resource were evaluated for visual effects in Section 8.2 below. The surveyed resources consisted of farms and single dwellings with associated outbuildings as well as one late eighteenth to mid-nineteenth century cemetery.

Table 8 Previously Recorded Architectural Resources within the Survey Area

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey
046-0031	Bourne-Turner House, 16303 Morgarts Beach Road	c. 1790	Determined Potentially Eligible in 2015 under Criterion C
046-5189	Farmhouse, 7428 Clifton Lane	c. 1905	Determined Not Eligible
046-5636	Old Stage Highway Cemetery, Old Stage Highway	c. 1798	Not Evaluated
500-0006	Captain John Smith National Historic Trail, Keystone Segment, Historic District	c. 1550	Federal Determination of Eligibility

Table 9 Newly Recorded Architectural Resources within the Architectural Survey Area

DHR #	Resource Name	Date
046-5715	House, 8736 Old Stage Highway	1950
046-5716	House, 8837 Old Stage Highway	1958
046-5717	House, 8821 Old Stage Highway	1970
046-5718	House, 8785 Old Stage Highway	1956
046-5719	House, 8731 Old Stage Highway	1950
046-5720	House, 8699 Old Stage Highway	1930

The architectural style classifications used to categorize the resources surveyed conform to those accepted by the NRHP and in *A Field Guide to American Houses* (McAlester and McAlester 1998). The domestic resources surveyed were mainly vernacular dwellings and Craftsman Bungalow, Minimal Traditional, and Ranch styles.

8.1.1 Dwelling Types

8.1.1.1 Vernacular

Dwellings historically have been classified as Vernacular when the design of the building does not fit into any particular style category. The oldest, and one of the most architecturally intact dwellings documented during the current survey, is the late nineteenth century Bourne-Turner House (DHR #046-0031). The house is one-and-a-half-stories supported by a brick foundation laid in a three-course American bond pattern although some repairs appear to have been made which have interrupted the coursing. The exterior is sheathed in beaded weatherboard and the roof clad in asphalt shingles with the front slope clad in scalloped wood shingles. Two parged exterior end, presumable brick, chimneys with corbeled caps are located off the western gable end. A shed-roofed closet is located between the two chimneys and a small, brick wing with wood board door and gable roof provides access into the basement. Extending across the rear of the dwelling is a one-story, shed-roofed ell which appears originally to have been supported by brick piers. The dwelling also features a gable-roofed entry porch supported by square wood posts, and a one-story wing off the eastern end of the dwelling. Fenestration comprises three-over-three wood sash windows in the basement, six-over-nine wood sashes flanked by louvered wood shutters on the first floor, and six-over-six wood sashes in the narrow shed-roofed dormers (Figure 20).



Figure 20 Bourne-Turner House (DHR #046-0031), 16303 Morgarts Beach Road, View Looking Northeast.

8.1.1.2 Craftsman-Style Bungalows

The Craftsman-style, developed in California, is inspired by the designs stemming from the English Arts and Crafts movement of the early twentieth century. The intention of the style is to be in harmony with the natural environment. The characteristics of the style include one-and-a-half stories, horizontal lines, wide projecting eaves with brackets, exposed rafter ends, and tapered square columns on brick, or sometimes stone, bases. Front gable or shed-roofed dormers located on the front roof slope are also characteristic of this style. One of the most well-known architects designing is this style was the team of Charles Sumner Greene and his brother, Henry Mather Greene. The earliest of their designs, constructed c. 1903, is located in Pasadena, California. The style spread from west to east by the popular magazines of the time period including *House Beautiful*, among others. The small scale of the houses, as well as their availability, often through mail order, and affordability for the growing middle class made this style of architecture popular during the early twentieth century (Pennsylvania Historical and Museum Commission 2015). The type was also ideal as a style of architecture that could be sited on the narrow lots of the rapidly expanding planned suburban areas of the time period.

The single example of a Craftsman-style bungalow (DHR #046-5720) within the architecture Study Area was located at 8699 Old Stage Highway. The bungalow is architecturally intact but appears to have been abandoned. The one-and-a-half-story, three-bay dwelling is frame construction and is supported by a brick foundation. Projecting from the front roof slope of the side gable roof are two gable-roofed dormers and visible above the ridge line of the roof is a brick flue with corbelled cap. The exterior walls are clad in

weatherboards and a one-story, hipped-roof, once screened-in porch extends across the façade. The northwestern end of the porch has been incorporated into the narrow, hipped-roof wing off the dwelling's northwest gable end. Additional features include six-over-one wood sash windows and bracketed eaves (Figure 21).



Figure 21 Craftsman-Style Bungalow (DHR #046-5720), 8699 Old Stage Highway, View Looking North.

8.1.1.3 Minimal Traditional

Minimal Traditional dwellings, popular between c. 1935 and 1950, were a response to the Depression era. The houses were simplified from the early Craftsman style bungalows and mid-twentieth century Tudor Revival style. The dwellings featured no or extremely limited ornamentation. Other characteristics included narrow eaves. Less steep roof lines, as compared to the Tudor Revival style, were also common (McAlester and McAlester 1993:478).

The single example of a Minimal Traditional dwelling within the architecture Study Area was located at 8731 Old Stage Highway (DHR #046-5719). The dwelling, constructed in 1950, incorporates typical characteristics of the style including limited ornamentation and essentially no eaves. The cross-gable form of the dwelling is also common to this mid-twentieth century style. The dwelling has been altered with the replacement of its original siding and windows with vinyl. Additional features include a brick foundation, one-story, shed-roofed and hipped-roof wing, exterior end brick chimney, and shed-roofed hood over the front entry (Figure 22).



Figure 22 Minimal Traditional Dwelling (DHR #046-5719), 8731 Old Stage Highway, View Looking East.

8.1.1.4 Ranch-Style

The Ranch-style, the popularity of which is evident in the many planned developments of the 1950s and 1960s, originated in 1930s California. The style became dominant in the 1940s with the increased dependence on the automobile. Prior to the 1940s, many urban and suburban dwellers resided in compact houses on small lots and walked to the streetcar lines. The increasing popularity of the automobile allowed people to move further out from the city and indulge in more expansive lots. The Ranch house's design allowed a lateral expansion of dwellings, emphasizing the façade, and could fit on larger residential lots with more open space between houses (McAlester and McAlester 1993:479). Two examples were documented and are detailed below.

The first example is a one-story, L-shaped dwelling with rusticated brick exterior walls and a cross-gable roof clad in asphalt shingles. A one-story, shed-roofed porch with ornate cast metal supports extends along the western and southern elevations. The dwelling also features an exterior end rusticated brick chimney, Chicago-style window, triple single-light entry doors, and one-over-one wood sash windows (Figure 23).

The second example, which is partially obscured by trees, is a one-story, frame dwelling with one-story, gable-roofed wing. The exterior is clad in vinyl with a section of the facade in brick veneer. The cross - gable roof is sheathed in asphalt shingles and a large brick chimney projects through the front roof slope. Other visible features include a two-over-two horizontally divided wood sash window and a Chicago-style window (Figure 24).

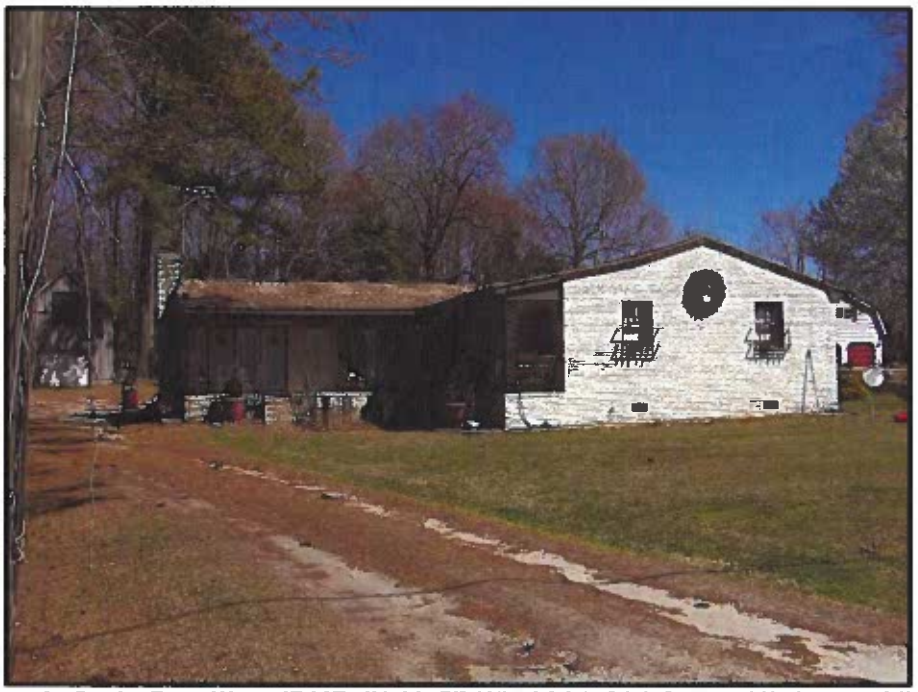


Figure 23 Ranch-Style Dwelling (DHR #046-5717), 8821 Old Stage Highway, View Looking East.



Figure 24 Ranch-Style Dwelling (DHR #046-5718), 8785 Old Stage Highway, View Looking East.

8.2 VISUAL EFFECTS EVALUATION

An effects evaluation, in addition to the Phase I architectural survey, was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed Project. Three resources were assessed for effects and included the potentially eligible Bourne-Turner House (DHR #046-0031) and a portion of the NRHP-eligible Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006). One resource, the Old Stage Cemetery (DHR #046-5636), had not been evaluated for NRHP eligibility prior to the survey but was not visible from the public ROW. Therefore, for the purposes of environmental review, the resource is being considered eligible for listing.

8.2.1 Bourne-Turner House (DHR #046-0031)

The c. 1790 Bourne-Turner House, which has been described in Section 8.1.1.1 (see Figure 21), has been determined potentially eligible for listing in the NRHP under Criterion C for its architectural merit. The property also contains a number of secondary resources associated with agriculture, which include several livestock barns and a c. 1790 smokehouse (DHR Site Files).

The dwelling and secondary resources on the property are located back from the road within an open, relatively level landscape (Appendix B; Figure 25). At its closest point, the proposed Project is approximately 620 feet from the southwestern corner of the property. While several large trees are located in the vicinity of the house, the main direction looking towards the proposed Project is relatively unobstructed and will have a direct view of the solar panels on the parcel (Figure 26). Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the NRHP potentially eligible Bourne-Turner House (DHR #046-0031).





Figure 25 View of the Bourne-Turner House Property (DHR #046-0031), 16303 Morgarts Beach Road, View Looking Northeast.



Figure 26 View from the Bourne-Turner House (DHR #046-0031), Looking Southwest towards Solar Parcel from Viewpoint (VP) 3.

8.2.2 The Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District (DHR #500-0006)

The Captain John Smith Chesapeake National Historic Trail (Trail) encompasses over 3,000 miles of waterway associated with the voyages of John Smith as well as early explorations of the Chesapeake Bay region. The resource was designated by Congress in 2006 through an amendment to Section 5(a) of the National Trails System Act (16 U.S.C. 1244(a)) and is the first nationally designated water trail under the Act. The Trail route extends throughout the Chesapeake Bay and includes tributaries explored by Smith. The Trail was further extended into four additional rivers considered as historic components of the Trail by the Secretary of the Interior in May 2012 (DHR Site Files). Per the National Park Service (NPS) documentation for the Trail: "The purpose of the Captain John Smith Chesapeake National Historic Trail is to commemorate the exploratory voyages of Captain Smith on the Chesapeake Bay and its tributaries in 1607-1609; to share knowledge about the American Indian societies and cultures of the seventeenth century; and to interpret the natural history of the Bay (both historic and contemporary)."

The entirety of the Trail within the Commonwealth of Virginia has not been evaluated for listing on the NRHP. However, in the vicinity of the current Project Area, a portion of the trail has been defined as the Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District comprising 148,426 acres along the shore and including the James River. The historic district extends south from the Jamestown-Scotland Wharf Ferry to the Pagan River and Burwell's Bay for a distance of approximately 13 miles. The land-based portion of the historic district encompasses an area measuring 0.5-mile in width from the east and west shorelines of the James River. The Keystone Segment historic district received a federal determination of eligibility, issued by the Keeper of the National Register under Criterion A for its significance in Exploration and Settlement as well as Ethnic Heritage, under Criterion B for its association with John Smith, under Criterion C for its architectural merit, and under Criterion D for its archaeological potential (DHR Site Files). Overall, the portion of the Trail associated with the eligible historic district and in proximity to the current Project remains mainly rural with intact cultural landscapes reflective of the indigenous and English settlement patterns in the region. According to the district nomination and site files, the historic district retains integrity of setting, association, feeling, and location.

A review of the Trail comprehensive plan indicates that there are no identified evocative landscapes or associated archaeological sites/places contributing to the district's eligibility in the vicinity of the Project or within the portion of the historic district that is within view of the proposed solar project. A high level marsh is noted on the Trail maps to the south of the Project area, but outside the boundaries of the defined Keystone Segment historic district, however, would not be considered when assessing the potential visual effects of the proposed Project to the historic district.

Only a small portion of the Keystone Segment Historic district, approximately 258 acres, is located within the architectural Study Area for the proposed Project. This portion comprises a relatively level, open landscape with agricultural fields and an area of woodlands between the fields and the James River which varies from approximately 252 feet to approximately 1,167 feet in depth (Appendix B). At its closest point, as mapped in VCRIS, the land-based portion of the Keystone Segment historic district is approximately 211 feet to the northwest of the proposed Project and will have a direct view of the solar



panels on the parcel (Figures 27 and 28). Due to the density of trees and vegetation paralleling the James River, it appears unlikely that the proposed Project would be visible from the portion of the historic district coterminous with the James River channel. Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the portion of the NRHP-eligible Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District (DHR #500-0006) located within the current architectural Study Area. The installation of the solar panels would significantly detract from the historic district's integrity of setting and feeling, two critical elements contributing to the overall significance of the Keystone Segment Historic District.



Figure 27 View from the Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District (DHR #500-0006), Looking Southeast from VP 1.

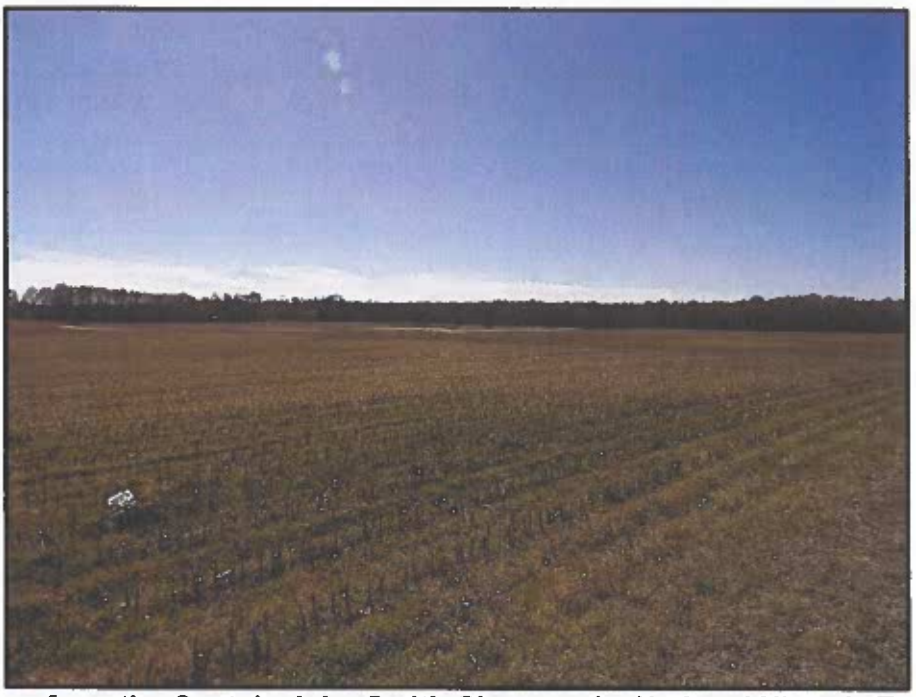


Figure 28 View from the Captain John Smith Chesapeake National Historic Trail, Keystone Segment, Historic District (DHR #500-0006), Looking Southwest from VP 2.

8.2.3 Old Stage Highway Cemetery (DHR #046-5636)

The Old Stage Highway Cemetery (DHR #046-5636) dates to around 1798. When the resource was first surveyed in 2000, the cemetery contained 15 visible graves with 13 of the 15 graves within a fence, which, according to the previous survey, utilized musket barrels as vertical slates with a wrought iron top and bottom rail. The fence has suffered from vandalism and the cemetery overall has suffered damage from various hurricanes. The cemetery was noted as containing African American graves, mainly with the surname of Wilson and range in date from 1796 to 1873 (DHR Site Files). The cemetery, although currently unevaluated by DHR, was not visible from the public ROW and numerous "No Trespassing" signs were present. It is therefore being considered eligible for the purposes of environmental review for the current proposed Project.

The cemetery is located within a dense area of trees and as currently mapped in VCRIS, is approximately 280 feet west of the proposed Project. All but the road surface between the resource and proposed Project parcel comprises dense tree cover (Figure 29; Appendix B). Based on the fieldwork, it is anticipated that the proposed Project will have **No Effect** on the Old Stage Highway Cemetery (DHR #046-5636).



Figure 29 Detail of VCRIS Database Map Depicting the Location of the Old Stage Highway Cemetery in Relation to the Proposed Solar Site Project (https://vcris.dhr.virginia.gov/VCRIS/Mapviewer/#GoToMap).

9.0 CONCLUSIONS AND RECOMMENDATIONS

From February 13 to March 8, 2023, Stantec conducted a cultural resources survey of approximately 20 acres associated with the proposed 3 MW VAL-025 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located north of Old Stage Highway (Route 10) and northeast from the junction with Morgarts Beach Road (Route 628). The Project is bounded by Morgarts Beach Road to the west, Old Stage Highway to the south, and private dirt farm roads to the north and east. The Project Area comprises a gently rolling recently harvested cotton field.

The Phase I cultural resources survey was designed to locate and identify cultural resources within the Project Area, defined as the entire approximately 20-acre Project parcel, and to obtain sufficient information to make recommendations regarding their potential eligibility for listing to the NRHP.

9.1 ARCHAEOLOGICAL SURVEY RESULTS

During the archaeological survey, Stantec conducted pedestrian survey of the entire Project Area concurrently with systematic subsurface testing. A total of 403 shovel tests were excavated at 50-foot intervals along 17 transects (Transects A–Q) spaced 50 feet apart throughout the Project Area. One shovel test was not excavated due to its location in standing water. One shovel test was positive for cultural material. Three radial shovel tests were excavated at 25-foot intervals around the positive test to determine the bounds of this newly recorded cultural resource. No radial shovel tests positive for additional cultural material. In addition to the positive shovel test, early twentieth-century artifacts, including small brick fragments, whiteware sherds, and bottle glass were observed within pockets of white sand fill in the northeastern portion of the Project Area. This redeposited soil appears to have been utilized to fill low spots in the field and the artifacts contained therein lacked provenience. This material was not collected. One new isolated archaeological site find (2607-IF1) was identified during this investigation (Table 10). ***By definition, Isolated Archaeological Find 2607-IF1 is not eligible for listing to the NRHP. No further archaeological investigation is recommended for the proposed Project Area.***

Table 10 Recommendations for Archaeological Resources within the Project Area

Resource	Resource Type	Association	Stantec Recommendation
2607-IF1	Whiteware body sherd	1820-	Not Eligible; No Further Work

9.2 ARCHITECTURAL SURVEY RESULTS

A total of 10 individual resources were located within the architectural Study Area, defined as the Project Area and a 0.5-mile radius around the Project Area, and included four previously recorded and six newly recorded resources. The Captain John Smith National Historic Trail, Keystone Segment, Historic District

(DHR #500-0006) had a Federal Determination of Eligibility prior to the survey and was therefore not resurveyed. One resource was determined potentially eligible for listing and one resource was determined not eligible prior to the survey but was surveyed more than five years ago and therefore was redocumented during the current investigation. One resource had not been evaluated for eligibility by the DHR. Resources which had been determined NRHP eligible as well as one previously unevaluated, but not visible resource, were evaluated for visual effects.

The Bourne-Turner House (DHR #046-0031) had been determined as potentially eligible for listing in the NRHP by DHR in 2015. Based on the current survey, it is recommended that the resource maintain its NRHP eligibility status as the house and secondary resources retain integrity and appear to have not been significantly altered since the previous survey.

One resource, the Old State Highway Cemetery (DHR #046-5636) was not visible from the public ROW and was therefore not able to be resurveyed. Based on the circumstances, the resource was considered eligible for the purposes of environmental review.

The remaining seven resources surveyed during the current project are generally reflective of the late nineteenth to mid-twentieth century development of Isle of Wight County and lack direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP. As such, it is recommended that the resources are not individually eligible for listing on the NRHP (Table 11). Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.

The resources, under NRHP Criterion A do not individually express any distinctive themes relating to the development of Isle of Wight County and do not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.

The resources surveyed do not appear to be associated with any known individuals who made significant contributions to the historical development of Isle of Wight County. Although limited information about the owners of the properties is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resources do not meet the criteria necessary for listing on the NRHP under Criterion B.

The resources do not appear to have significant architectural integrity for listing on the NRHP under Criterion C and are of a common architectural style. In addition, the resources are utilitarian in design and do not embody distinctive characteristics of a type, period, or method of construction nor do the dwellings represent the work of a master. It is therefore recommended that the resources surveyed do not meet the criteria necessary for listing on the NRHP under Criterion C.

No further work is recommended for resources within the Architectural Study Area as part of the VAL025 Solar Project.



Table 11 NRHP Recommendations for Architectural Resources Surveyed within the Architecture Study Area

DHR #	Resource Name	Date	NRHP Recommendation as a Result of the Survey
046-0031	Bourne-Turner House, 16303 Morgarts Beach Road	c. 1790	Recommended to Retain its NRHP Potentially Eligible Status under Criterion C
046-5189	Farmhouse, 7428 Clifton Lane	c. 1905	Recommended not Eligible for Listing in the NRHP
046-5636	Old Stage Highway Cemetery, Old Stage Highway	c. 1798	Not Visible from Public ROW; Considered Eligible for Environmental Review Purposes
046-5715	House, 8736 Old Stage Highway	1950	Recommended not Eligible for Listing in the NRHP
046-5716	House, 8837 Old Stage Highway	1958	Recommended not Eligible for Listing in the NRHP
046-5717	House, 8821 Old Stage Highway	1970	Recommended not Eligible for Listing in the NRHP
046-5718	House, 8785 Old Stage Highway	1956	Recommended not Eligible for Listing in the NRHP
046-5719	House, 8731 Old Stage Highway	1950	Recommended not Eligible for Listing in the NRHP
046-5720	House, 8699 Old Stage Highway	1930	Recommended not Eligible for Listing in the NRHP

***Resources Highlighted in Gray were Previously Recorded.**

9.3 EFFECTS EVALUATION

An effects evaluation, in addition to the Phase I architectural survey, was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed Project. Two resources were assessed for effects and included the potentially eligible Bourne-Turner House (DHR #046-0031) and the portion of the NRHP-eligible Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006) within the current architectural Study Area. One resource, the Old Stage Highway Cemetery (DHR #046-5636), had not been evaluated for NRHP eligibility but was not visible from the public ROW. Therefore, for the purposes of environmental review, this resource is being considered eligible for listing. Based on the current proposed Project Area and the existing landscape it is recommended that the proposed Project would have an **Adverse Effect** on the Bourne-Turner House (DHR #046-0031) and the portion of the Keystone Segment of the Captain John Smith National Historic Trail Historic District (DHR #500-0006) located within the current architectural Study Area. The proposed Project would have **No Effect** on the Old Stage Highway Cemetery (DHR #046-5636). ***Based on the effects evaluation, it is likely DHR will require mitigation for Adverse Effect of the proposed Project. It is suggested that vegetative screening be installed on the north side of the solar parcel to lessen the Adverse Effect*** (Appendix B).

Table 12 Effects Evaluation of NRHP Eligible and Potentially Eligible Properties

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
046-0031	Bourne-Turner House, 16303 Morgarts Beach Road	c. 1790	Determined Potentially Eligible in 2015 under Criterion C	Adverse Effect
046-5636	Old Stage Highway Cemetery, Old Stage Highway	c. 1798	Not Evaluated	No Effect

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
500-0006	Captain John Smith National Historic Trail, Keystone Segment, Historic District	c. 1550	Federal Determination of Eligibility in 2015	Adverse Effect*

***Only for Portion of the Resource within the Study Area**

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APPENDICES

Appendix A ARTIFACT INVENTORY

Artifact Inventory

VAL-025 Solar Farm

Context	**Count and Description**	
2607-IF1		**TPQ: 1820**

1 Ceramic fragment, refined earthenware, press molded, (1820-), Whiteware body sherd

Appendix B ARCHITECTURAL RESOURCE SURVEY MAPS



Figure No.

Appendix B

Title

Architectural Resources Map

Client/Project

195602607

Dawood Engineering, Inc.
VAL025 Solar Project

Project Location

Isle of Wight County, Virginia

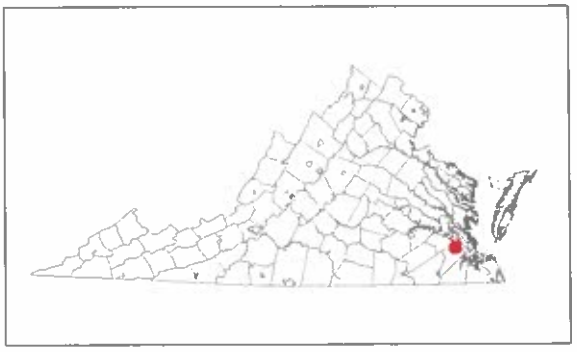
Prepared by ECL on 2023-04-03
TR by JMH on 2023-04-03
IR by SLD on 2023-04-03

N

0 800 1,600 Feet

(At original document size of 11x17)
1:9,600

- View Point
- Project Area
- 0.5- Mile Buffer
- Surveyed Architectural Resource with Viewshed Evaluation Conducted
- Architectural Resource Viewshed Only
- Resource Not Visible; Considered Eligible for Purposes of Environmental Review and Visual Effects Evaluation Conducted
- Surveyed Architectural Resource
- Newly Recorded Architectural Resource



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., Stantec, U.S. Census Bureau, VDOT, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

Stantec

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. responsibility for verifying the accuracy and completeness of the data

Appendix C ARCHITECTURAL V-CRIS FORMS

Property Information

Property Names

Name Explanation	Name
Descriptive	House at Smith's Beach
Function/Location	Farm, 16303 Morgarts Beach Rd (Rt 673)
Historic/Current	Bourne-Turner House

Property Evaluation Status

DHR Staff: Potentially Eligible

Property Addresses

Current - 16303 Morgarts Beach Road Route 673

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): 13-01-004
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

May 1969: Located on north side of Route 673, in open field screened on the north from Burwell Bay and the James River by a wooded section of the tract. The complex includes several outbuildings. Old kitchen with huge chimney and early smokehouse still stand in yard. Earlier kitchen which stood some distance from west end of house has been torn down.

March 2014: The house is set back from the road, and is accessed by a long driveway. Fields fenced in and used as horse pastures are adjacent to both sides of the property. Wood fencing encloses a small yard area immediately surrounding the house. Shrubs grow adjacent to the foundation, and trees obscure some areas of the house from view from the public access road. A thick tree line is also visible behind the house. Secondary resources include a smokehouse, a shed, and two barns to the north of the dwelling, a shed, a vehicle shed, a livestock shelter, and two barns to the northeast, and a shed to the east.

March 2023: The landscape does not appear to have significantly changed since the previous survey. One of the sheds noted during the previous survey may have been the kitchen noted during the 1969 survey or may have served as a wash house. The shed to the east of the house within the fence line noted during the 2014 survey functions as an equine shelter, and the shed located directly behind the house appears to be a pump or well house.

Surveyor Assessment:

May 1969: Most of the land around Burwell's Bay was owned originally by the Burwell's and the Bennett's. Edward Bennett's daughter Silvestra Hill inherited much of this riverfront property & it was gradually sold off into smaller holdings. See survey form for complete chain of title, from 1762 (Jennings Ingram) through ca 1880 (Thomas B. Bournes to James A. Turner). Current owner is noted as James I. Turner.

2007: The Dutch-roofed house near the James River has long been called the Bourne place after Thomas H. Bourne who lived here during the Civil War.

This place is one of two remaining original manors on the James River between Burwell's Bay and Battery Park.

March 2014: The resource, in the opinion of the surveyor, is not recommended as individually eligible for listing on the NRHP under Criterion A, B, C or D. The property does not reflect broad patterns in history, and there is no known association with important people or events. Additionally, the architecture is undistinguished in workmanship and the materials stock.

March 2023: In 2015, the resource was determined potentially eligible for listing in the NRHP under Criterion C for its architectural merit. Based on the current survey, it is recommended that the resource retain its NRHP eligibility status.

Surveyor Recommendation: Recommended Potentially Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic

Resource Type:	Single Dwelling
NR Resource Type:	Building
Date of Construction:	ca 1790
Date Source:	Site Visit
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Architecture/Landscape, Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	1.5
Condition:	Good
Interior Plan:	Side Passage
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Euro-American
Cultural Affiliation Details:	*No Data*

Architectural Description:

May 1969: Late 18th century to early 19th century 1.5 story frame dwelling with gambrel roof. Beaded weatherboarding; finished basement; closet between two large outside chimneys on west end of house; hall is about 14 feet wide; runs from front to back with two large rooms to the left, the front door deeper than the back.

Wainscoting and mantels with a reeded design may not be original but have been there a long time. Enclosed stairway - has been changed several times. Until recently there were H & L hinges on all the doors. Original windows in roof (dormers) were only two window panes wide. Floors are wide, pine. Turners built modern kitchen wing on east end.

Undated entry: Two story side passage frame house with two large exterior end brick chimneys, a side gable roof, and two smaller additions on the end opposite the chimneys. Single story single bay entry porch, brick foundation. Good condition.

March 2014: Other than the construction of a one-story, frame side addition off the east elevation, the house appears unaltered since the previous survey. A previously unrecorded feature is the wood shingles present on the second floor of the main elevation.

March 2023: The house is one-and-a-half-stories supported by a brick foundation laid in a three-course American bond pattern, although it **appears some repairs appear to have been made which have interrupted** the coursing. The exterior is sheathed in beaded weatherboard and the **roof clad primarily in asphalt shingles, with the front slope clad in scalloped** wood shingles. Two parged exterior end, presumably brick, **chimneys with corbeled caps are located off the western gable end. A shed-roofed closet is located between the two chimneys and a small, brick wing with wood board door and gable roof provides access into the basement.** Extending across the rear of the dwelling is a one-story, shed-**roofed ell which appears originally to have been supported by brick piers.** The dwelling also features a gable-roofed entry porch supported by **square wood posts, and a one-story wing off the eastern end of the dwelling.** Fenestration comprises three-over-three wood sash windows in the **basement, six-over-nine wood sashes flanked by louvered wood shutters** on the first floor, and six-over-six wood sashes in the narrow shed-roofed dormers.

Exterior Components

Component	Component Type	Material	Material Treatment
Windows	Sash, Double-Hung	Wood	6/6
Chimneys	Exterior End	Brick	Cap, Corbeled
Roof	Gable, Side	Wood	Shingle
Structural System and Exterior Treatment	Frame	Wood	Weatherboard
Porch	1-story, 1-bay	Wood	Columns
Foundation	English	Brick	American/Common Bond
Roof	Side Gable	Asphalt	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category:	Agriculture/Subsistence
Resource Type:	Smoke/Meat House
NR Resource Type:	Building
Date of Construction:	ca 1790
Date Source:	Site Visit
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Domestic
Other ID Number:	*No Data*

Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The smokehouse is a one-story, frame building supported by a brick foundation. The exterior walls are sheathed in weatherboard siding, and the side gable roof is covered with wood shingles.

March 2023: The smokehouse does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #2

Resource Category: Domestic
Resource Type: Shed - Vehicle
NR Resource Type: Building
Date of Construction: ca 1940
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The one-story, frame vehicle shed is mostly obscured from view from the point of survey. Visible features include a shed roof with projecting hood covered with seamed metal, and at least one exterior wall sheathed in weatherboard siding. There is also a shed-roofed side addition.

March 2023: The vehicle shed does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #3

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1950
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*

Number of Stories:	1.0
Condition:	Fair
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Euro-American
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2014: The northern shed is mostly obscured from view from the point of survey. The building appears to be a one-story, frame structure with exterior walls sheathed in vertical board siding, and a gable roof covered with seamed metal.

March 2023: Based on the previous description of the building, the shed was not observed.

Secondary Resource #4

Resource Category:	Domestic
Resource Type:	Shed
NR Resource Type:	Building
Date of Construction:	ca 1790
Date Source:	Site Visit
Historic Time Period:	Early National Period (1790 - 1829)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	1.0
Condition:	Fair
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Euro-American
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2014: The northeastern shed is a one-story, frame structure with a shed roof and exterior walls sheathed in weatherboard siding.

March 2023: The resource thought to be a shed, appears to have functioned as the kitchen noted during the 1969 survey or as a wash house. The shed roof noted in 2014 is the ell of the one-story, gable-roofed building. The building also features a weatherboard exterior, modern metal roof, exterior end brick chimney, six-light wood-framed window and five cross-panel wood entry door.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #5

Resource Category:	Domestic
Resource Type:	Shed
NR Resource Type:	Building
Date of Construction:	ca 1950
Date Source:	Site Visit
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic, Subsistence/Agriculture
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	1.0
Condition:	Fair
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Euro-American
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2014: The eastern shed is a one-story, frame, multi-bay building. The exterior walls are sheathed in vertical board siding, and the side gable roof is covered with seamed metal. One bay is open.

March 2023: The shed currently functions as an equine shelter. Sections of the vertical wood boards appear to have been removed since the previous survey; however, the building remains substantially unchanged otherwise.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #6

Resource Category: Agriculture/Subsistence
Resource Type: Animal Shelter/Kennel
NR Resource Type: Building
Date of Construction: ca 1940
Date Source: Site Visit
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The animal shelter is a one-story, metal-framed structure.

March 2023: The building noted above appears to be located to the southeast of Barn #3 and northeast of Barn #4. The building; however, is a one-and-a-half-story, wood-frame building clad in weatherboards with a gable roof. The building was only partially visible from the point of survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #7

Resource Category: Agriculture/Subsistence
Resource Type: Barn
NR Resource Type: Building
Date of Construction: ca 1930
Date Source: Site Visit
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 2.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The barn is a two-story, single bay building with a front gable roof covered with seamed metal, and exterior walls sheathed in vertical board siding. Two shed-roofed wings extend off each side. Wood doors on sliding metal rails are visible at each entrance.

March 2023: The barn does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #8

Resource Category: Agriculture/Subsistence
Resource Type: Barn
NR Resource Type: Building
Date of Construction: ca 1930
Date Source: Site Visit
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 2.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The barn is a two-story, single bay building with a front gable roof covered with seamed metal, and exterior walls sheathed in vertical board siding. Two shed-roofed wings extend off each side. Wood doors on sliding metal rails are visible at each entrance.

March 2023: The barn does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #9

Resource Category: Agriculture/Subsistence
Resource Type: Barn
NR Resource Type: Building
Date of Construction: ca 1930
Date Source: Site Visit
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The barn is a one-story, frame building with exterior walls sheathed in vertical board siding, and a gable roof covered with seamed metal.

March 2023: The barn does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment

Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #10

Resource Category: Agriculture/Subsistence
Resource Type: Barn
NR Resource Type: Building
Date of Construction: ca 1930
Date Source: Site Visit
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2014: The barn is a one-story, frame building with exterior walls sheathed in vertical board siding, and a gable roof covered with seamed metal.

March 2023: The barn does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #11

Resource Category: Agriculture/Subsistence
Resource Type: Pump House
NR Resource Type: Structure
Date of Construction: ca 1960
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: *No Data*
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Euro-American
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The pump house (or possibly well house) is a low, one-story, masonry building with gable roof clad in metal.

Secondary Resource #12

Resource Category: Agriculture/Subsistence
Resource Type: Shed
NR Resource Type: Building
Date of Construction: ca 2015
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)

Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023. The shed is a one-story, frame building with board-and-batten siding and a metal-clad shed roof with overhang.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Board-and-Batten

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

No Data

Project Bibliographic Information:

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

Surveyor's NR Criteria Recommendations:

C - Distinctive Characteristics of Architecture/Construction

Event Type: DHR Staff: Potentially Eligible

DHR ID: 046-0031
Staff Name: Andrea Burke
Event Date: 5/1/2015
Staff Comment

DHR File No. 2011-2071; Potentially Eligible under Criteria C

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: 2011-2071
Investigator: Emily Lindtveit
Organization/Company: Stantec 2034
Photographic Media: Digital

Survey Date: 3/10/2014
Dhr Library Report Number: JC-328
Project Staff/Notes:
No Data
Project Bibliographic Information:
A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia
Surveyor's NR Criteria Recommendations:
C - Distinctive Characteristics of Architecture/Construction

Event Type: Survey:Phase I/Reconnaissance

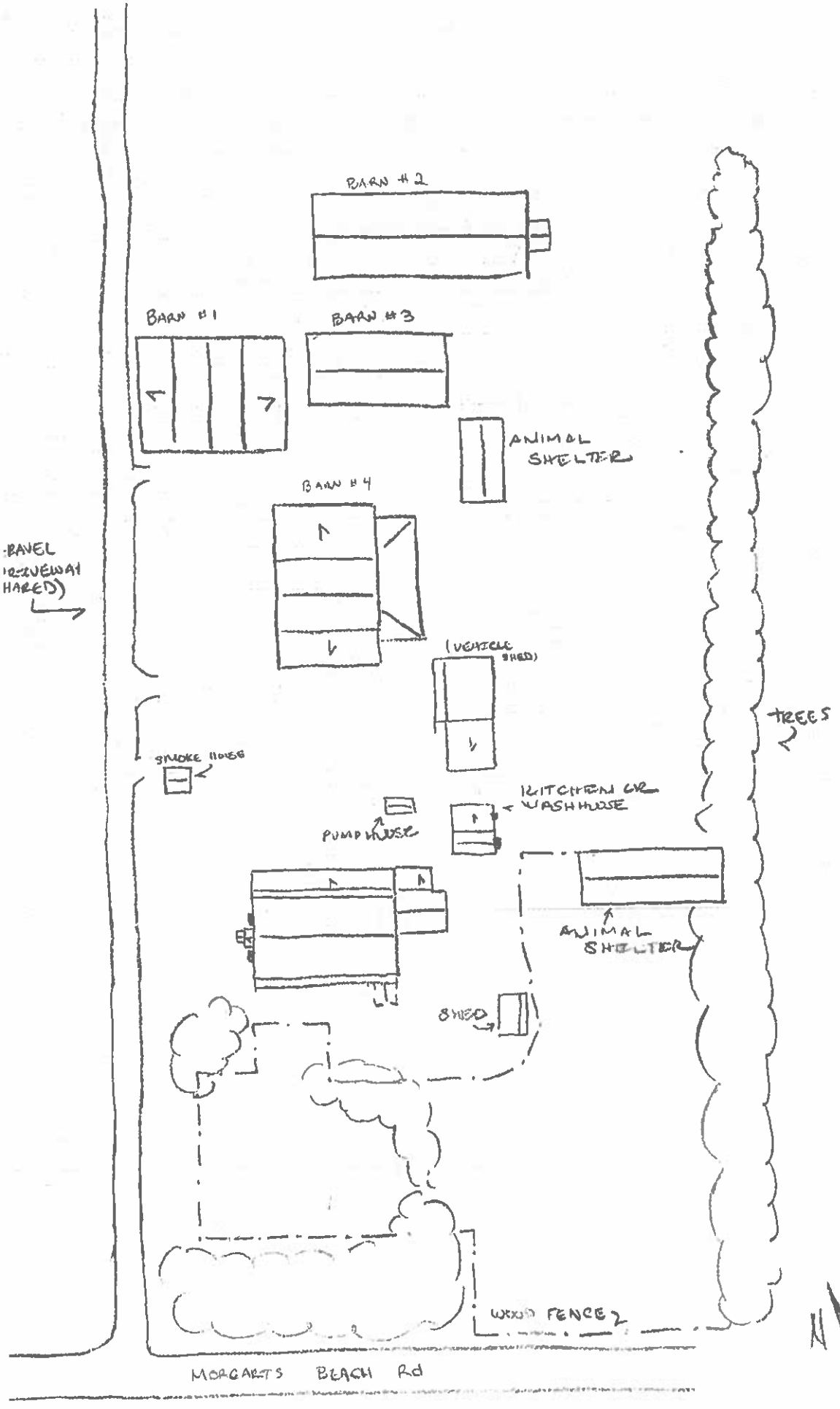
Project Review File Number: *No Data*
Investigator: Calder C. Loth
Organization/Company: VA Dept. of Historic Resources
Photographic Media: Film
Survey Date: 5/1/1969
Dhr Library Report Number: *No Data*
Project Staff/Notes:
VHLC staff member - later form filled out by another staff member (unattributed - ca 1970)
Surveyor's NR Criteria Recommendations:
C - Distinctive Characteristics of Architecture/Construction

Bibliographic Information

Bibliography:

King, Helen Haverty
"Historic Isle of Wight"
2007 (page 27)

Property Notes:
No Data



046-0031
FOXTAIL FARMS
16303 MORGARTS BEACH RD
ISLE OF WIGHT, VA
MARCH 8, 2023
O MCCARTY
N.T.S.

Property Information

Property Names

Name Explanation	**Name**
Function/Location	Farmhouse, 7428 Clifton Lane

Property Evaluation Status

DHR Staff: Not Eligible

Property Addresses

Current - 7428 Clifton Lane

County/Independent City(s):	Isle of Wight (County)
Incorporated Town(s):	*No Data*
Zip Code(s):	23430
Magisterial District(s):	*No Data*
Tax Parcel(s):	13-01-003
USGS Quad(s):	BACONS CASTLE

Additional Property Information

Architecture Setting: Rural

Acreage: 150

Site Description:

2005: This farmstead is situated at the north terminus of Clifton Lane. The building faces south. The area is characterized by open agricultural fields and farmsteads.

There is a dairy northeast of the dwelling. There is a barn southwest of the dwelling. There is a crib east of the dairy. There is a tenant house southeast of the dwelling. North of the tenant house is a kitchen foundation. Southeast of the tenant house is shed.

September 2014: The house is situated far back from and facing the road on a level lot surrounded by a manicured lawn edged by tree lines. Expansive agricultural fields lie between the house and the road. A long straight gravel drive, named Clifton Lane, leads from the road to the front of the house. An offshoot of the drive accesses a modern trailer located to the northeast of the house. A coop, a dairy, and a shed are located northeast of the house and west of the trailer. Two sheds are located northeast of the house and trailer. A corn crib is locates to the east of the house and trailer. A tenant house, a standing chimney and a vehicle shed are located southeast of the house. A modern garden shed is located south-southeast of the house. A modern faux privy, a barn, and a ruinous modern greenhouse are located southwest of the house.

March 2023: The landscape surrounding the core buildings has grown significantly with a barn as the only resource now visible from the public ROW.

Surveyor Assessment:

2005: This is a Queen Anne-style of house. The Queen Anne style appeared in the United States in 1880 from England and became a predominant architectural style concurrently with the Colonial Revival style. Its origins are derived from Jacobean architecture and early medieval sources. Unlike the Colonial Revival, which **emphasized simplicity** and United **States heritage, the Queen** Anne style was highly ornate with asymmetrical proportions, varying **material treatment and steeply** pitched **roofs. Towers were also** common and exhibited panels, shingling, varying window forms, varying **articulate cornices** and conical, **octagonal** or **pyramidal roofs** crowned by finials. Shingles of varying cuts and windows exhibiting stained glass and panes of varying forms and sizes were common. In addition, rounded and canted bays were common on wall planes allowing for asymmetrical roof forms and additional articulation on wall planes. Aside from the highly ornate exterior, the asymmetry of the style was continued on the interior. The plan of the style was open and the exterior bays figured prominently in the formal spaces of the house. In addition, fireplaces were not regulated to the center of a wall plane but appear in corners, and off-center on wall planes.

The Queen Anne style became a predominant architectural style concurrently with the Colonial Revival style. Its origins are derived from Jacobean architecture and early medieval sources. Unlike the Colonial Revival, which emphasized simplicity and United States heritage, the Queen Anne style was highly ornate with asymmetrical proportions, varying material treatment and steeply pitched roofs. Towers were also common and exhibited panels, shingling, varying window forms, varying articulate cornices and conical, octagonal or pyramidal roofs crowned by finials. Shingles of varying cuts and windows exhibiting stained glass and panes of varying forms and sizes were common. In addition, rounded and canted bays were common on wall planes allowing for asymmetrical roof forms and additional articulation on wall planes. Aside from the highly ornate exterior, the asymmetry of the style was continued on the interior. The plan of the style was open and the exterior bays figured prominently in the formal spaces of the house. In addition, fireplaces were not regulated to the center of a wall plane but appear in corners, and off-center on wall planes.

September 2014: The architectural resource is typical of the late nineteenth century in Isle of Wight County and in the opinion of the surveyor should not be considered individually eligible for the NRHP under Criterion A, B, C or D. There is no known association with important people or events and the resource is a typical example of this time period. In addition, the design is common, the materials stock, and the building has been altered from its original appearance.

March 2023: The resource, though generally reflective of the turn of the twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of

Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category:	Domestic
Resource Type:	Single Dwelling
NR Resource Type:	Building
Not Observed:	This resource was not observed during the last survey.
Date of Construction:	ca 1905
Date Source:	Site Visit/Written Data
Historic Time Period:	Reconstruction and Growth (1866 - 1916)
Historic Context(s):	Architecture/Community Planning, Domestic, Subsistence/Agriculture
Other ID Number:	*No Data*
Architectural Style:	Vernacular
Form:	*No Data*
Number of Stories:	2.0
Condition:	Good
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

May 2005: This dwelling has a brick foundation and wood frame structural system clad in vinyl siding. The roof is cross-gable clad in asphalt shingles. The roof features a boxed cornice, raking cornices and cornice returns. The façade is symmetrical and dominated by a projecting canted bay topped with a gable roof. The canted bay features a single-bay porch with bracketed turned posts. The roof is clad in asphalt shingles. The canted bay contains the single-leaf entrance door which has three panels and one light. The door is surmounted by a transom. The windows on the dwelling are 2/2 wood double-hung sash. There are interior brick chimneys at the east and west gable ends. A one-story side-gabled roof addition is appended to the dwelling at a slight angle. The addition has a brick foundation and wood frame structural system clad in vinyl siding. There is an exterior brick chimney at the west end which is joined to the interior brick chimney at the east end of the dwelling. The addition was construction in two stages and features a slightly lower roofline on the east end. There is an interior brick chimney at the east end. The windows on the addition are 2/2 wood double-hung sash. There is a one-bay gabled-roof porch on the south façade. A gabled-roof one-story addition is appended at the north end.

September 2014: The house remains largely unchanged since the previous survey. The condition of the vinyl siding has slightly deteriorated. In addition to the previously recorded aspects, several additional features were noted. It was observed that the east addition features a secondary entry accessed by a single bay porch with a front gable roof supported by turned posts, that the rear elevation features two projecting canted bays with pyramidal roofs, that the gable roof ell addition that extends off the rear elevation features a secondary entry and an interior brick flue, and that the hipped roof addition that extends off the rear elevation may be an enclosed porch and sits on a brick pier foundation infilled with brick. Additionally, it was noticed that the screening has been removed from the front porch, although the framing from the screens remains.

March 2023: The dwelling is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Roof	Gable, Side	Asphalt	Shingle
Chimneys	Interior	Brick	Bond, American
Windows	Sash, Double-Hung	Wood	2/2
Structural System and Exterior Treatment	Frame	Wood	Siding, Vinyl
Foundation	Solid/Continuous	Brick	Bond, American
Porch	1-story	Wood	Screened

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Secondary Dwelling
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1910
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Architecture/Community Planning, Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: Vernacular
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Neglect, Transportation Expansion, Vacant
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

May 2005: There is a tenant house with a wood frame structural system clad in weatherboard. The building has a brick pier foundation and gable roof clad in asphalt shingles. There is a double-leaf entrance at the north end of the west elevation. The windows are 6/6 wood double-hung sash.

September 2014: The condition of the tenant house has deteriorated since the previous survey and is now surrounded by overgrown brush and small trees. The tenant house is currently used for storage. The gable roof addition which previously extended off the north elevation and featured a two-leaf door has been removed. The house is now accessed by a centrally located recessed panel wood door which pierces the north elevation. It was additionally observed that the house roof features exposed rafter ends. A standing brick chimney is located just north of the tenant house with the firebox facing west. Some brickwork at the top of the firebox has collapsed.

March 2023: The dwelling is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #2

Resource Category: Domestic
Resource Type: Kitchen
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1910
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Deteriorated
Threats to Resource: Demolition, Deterioration, Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

May 2005: The kitchen has only a brick foundation and brick chimney remaining.

September 2014: The chimney stack is extant and is located to the north of the tenant house. The building, as evidenced by the chimney, was

one story in height and constructed with a gable roof. The large firebox shows signs of structural collapse. A stove pipe hole is located on the opposite side of the chimney stack from the firebox and suggests the building had at least two rooms.

March 2023: The kitchen is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Unknown	Unknown	Not Visible

Secondary Resource #3

Resource Category: DSS Legacy
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1910
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Architecture/Community Planning, Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: Vernacular
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Neglect, Public Utility Expansion, Structural Failure
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

May 2005: The shed features a wood frame structural system and brick pier foundation. It is one story with a 6-light casement window. An open bay is appended to the south elevation.

September 2014: The shed, based on the above description, appears to be unchanged since the previous survey. The condition has deteriorated; however. The shed is a one-story frame structure clad with weatherboard on the west elevation and vertical boards on the others. The side gable roof is covered by asphalt paper and is in near ruinous condition with large holes on the southern slope. The south elevation is pierced by a narrow central door opening. A ruinous and collapsed open shed roof addition extends off the north elevation. The shed is in very poor condition.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard
Structural System and Exterior Treatment	Wood Frame	Wood	Vertical Board

Secondary Resource #4

Resource Category: Agriculture/Subsistence
Resource Type: Comcrib
NR Resource Type: Structure
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1910
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Architecture/Community Planning, Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: Vernacular
Form: *No Data*
Number of Stories: *No Data*
Condition: Good

Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

May 2005. The crib feature a wood frame structural system clad in horizontal boards. The building rests on a brick pier foundation. The roof is gable clad in standing-seam metal. The walls taper toward the ground. There is a single-leaf door on the south elevation.

September 2014: The corn crib has been altered since the previous survey. The brick piers have been replaced with concrete block piers and a single-bay one-story frame addition has been appended to the south elevation. The addition is clad with board-and-batten siding and has a side gable roof covered with corrugated metal. The addition sits on slender poured concrete piers. A dutch door pierces the west elevation of the addition which is accessed by wood stairs.

March 2023: The corn crib is no longer visible from the public ROW.

Secondary Resource #5

Resource Category: Agriculture/Subsistence
Resource Type: Barn
NR Resource Type: Building
Date of Construction: ca 1910
Date Source: Site Visit/Written Data
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: Vernacular
Form: *No Data*
Number of Stories: 2.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

May 2005. The barn is two-stories with a brick pier foundation and wood structural system clad in weatherboard. The roof is gable clad in standing-seam metal. There are wings appended to the east and west elevation. A shed-roofed shelter is appended to the north elevation.

September 2014: The barn is largely unchanged since the previous survey. The barn is a single-bay two-story frame structure clad in corrugated metal on the south elevation and weatherboard on the side and rear elevations. The front gable roof is covered in seamed metal and the barn rests on a brick pier foundation. The facade is pierced by a central vertical board door with a window opening covered by a sheet metal shutter piercing the second story above the door. One story single-bay shed roof side additions extend off the east and west elevations and feature T-111 siding on the side elevations. An open post-in-ground shed roof addition extends off the rear elevation. The shed roof is supported by log posts. The west end of the rear addition has been enclosed with horizontal boards.

March 2023: The barn does not appear to have been significantly altered since the previous survey.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard
Structural System and Exterior Treatment	Wood Frame	Metal	Siding

Secondary Resource #6

Resource Category: Agriculture/Subsistence
Resource Type: Dairy
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 1910
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: Vernacular

Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Neglect, Other, Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

May 2005: The dairy features an elevated brick foundation. A vertical board door pierces the foundation at the west corner of the south elevation. The building is wood frame clad in weatherboard and is topped by a side-gable roof clad in standing-seam metal. There is a centrally-placed single-leaf vertical board door. An open shelter is appended to the east elevation.

September 2014: The dairy is largely unchanged from the previous survey, although is in a slightly deteriorated condition. Several boards are missing from the siding. The elevated brick foundation is degraded. In large sections of the brickwork the mortar has eroded almost entirely from the joints and several brick bats are eroded or spalled. The east elevation brickwork is especially deteriorated. Heavy termite damage was also noticed throughout the framing timbers, and especially in the wood sill of the east elevation. Additionally, it was observed that the side gable roof is covered in corrugated metal.

March 2023: The dairy is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #7

Resource Category: Agriculture/Subsistence
Resource Type: Chicken House/Poultry House
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Neglect, Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: The coop is a small modern frame structure clad in plywood with a shed roof covered in seamed metal. A narrow hinged plywood door pierces the west elevation. A long rectangular hinged panel on the south elevation provides access to the nesting boxes.

March 2023: The chicken coop is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Siding

Secondary Resource #8

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)

Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: This modern shed located to the northeast of the house is a single-bay one-story frame structure clad in T-111 siding with an overhanging shed roof covered in asphalt shingle. The shed sits on a concrete pad.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Siding

Secondary Resource #9

Resource Category: Domestic
Resource Type: Mobile Home/Trailer
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: The trailer is a modern one-story six-bay frame structure clad in corrugated metal siding with a side arched roof covered in sheet metal. The raised foundation is not visible. Fenestration consists of one-by-one sliding metal windows. The trailer appears to have replaced the tenant house as the secondary dwelling on the property.

March 2023: The trailer is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Unknown	Metal	Siding

Secondary Resource #10

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic

Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: This shed is located to the rear of the trailer and is a single-bay modern frame structure clad in weatherboard with an overhanging front gable roof covered in corrugated metal. The shed sits on concrete piers.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #11

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: This small low modern shed is located adjacent to and to the rear of the other trailer associated shed. The shed is a single-bay frame structure clad in plywood with a shallowly pitched shed roof covered in sheet metal.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Siding

Secondary Resource #12

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic
Other ID Number: *No Data*

Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: This garden shed located to the south-southeast of the house is a one-story single-bay frame structure clad in board-and-batten siding with an overhanging front gable roof covered in corrugated metal and features exposed rafter ends. Fenestration consists of a vertical board door and six-light hopper wood windows.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Board-and-Batten

Secondary Resource #13

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Poor
Threats to Resource: Neglect, Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: This shed is styled as a faux privy and may have been constructed to function as a landscape folly. The shed is a small narrow single-bay frame structure clad in rustic weatherboards with a front gable roof. The roof appears to be unfinished with spaced weatherboards on the rafters, but lacking roofing material. The south elevation also appears to be unfinished with missing weatherboard siding. The shed is being subsumed by vines and brush.

March 2023: The shed is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Secondary Resource #14

Resource Category: Agriculture/Subsistence
Resource Type: Greenhouse/Conservatory
NR Resource Type: Building
Not Observed: This resource was not observed during the last survey.
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Subsistence/Agriculture

Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Ruinous
Threats to Resource: Erosion, Neglect, Public Utility Expansion, Vacant
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

September 2014: The ruinous greenhouse is largely subsumed by brush. The greenhouse appears to consist of a lumber frame with a shed roof; however, appears to have not been completed.

March 2023: The greenhouse is no longer visible from the public ROW.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Unknown	Not Visible

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

No Data

Project Bibliographic Information:

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAI-025 Solar Project, Isle of Wight County, Virginia.

Event Type: DHR Staff: Not Eligible

DHR ID: 046-5189
Staff Name: Andrea Burke
Event Date: 5/1/2015
Staff Comment

DHR File No. 2011-2071

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: 2011-2071
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 9/18/2014

Dhr Library Report Number: JC-419

Project Staff/Notes:

Sandra DeChard, Ellen Brady
Addendum to the Phase I Cultural Resources Survey of the Proposed Dominion Virginia Power Skiffes Creek to Surry 500 kV Transmission Line in James City, Isle of Wight and Surry Counties, Virginia
Stantec Consulting Services, Inc. -- October 24, 2014
DHR Report No. JC-419

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: David, Kimble
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 5/1/2005
Dhr Library Report Number: *No Data*

Project Staff/Notes:

No Data

Project Bibliographic Information:

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

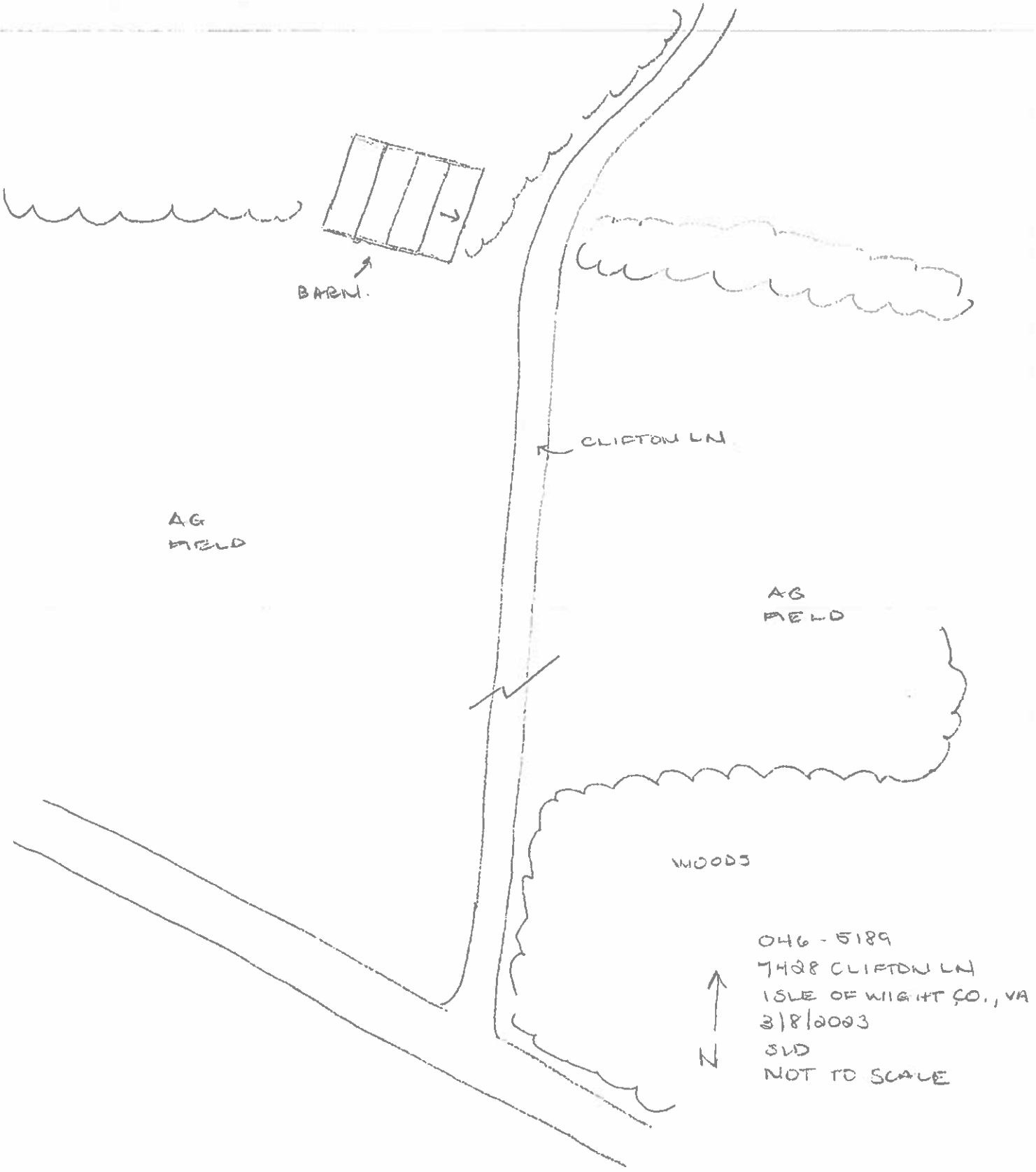
Bibliographic Information

Bibliography:

No Data

Property Notes:

Name: Mary Wynne et ux
Address 1: 7428 Clifton Lane
City: Smithfield
State: Virginia
ZIP: 23430
Owner Relationship: Owner of property


BARN
CLIFTON LN
AG
FIELD
AG
FIELD
WOODS
046 - 5189
7408 CLIFTON LN
ISLE OF WIGHT CO., VA
3/18/2003
SLD
N
NOT TO SCALE

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8736 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8736 Old Stage Highway

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

March 2023: The house is located back from the road down a long, dirt driveway within a relatively level landscape. Surrounding the house is a lawn dotted with trees. A fenced in pasture is located in front of the house with wooded areas to the southwest and southeast of the dwelling. Six outbuildings were visible on the property at the time of the survey and include a chicken coop, shed, and what appears to be a vehicle shed located to the southwest of the house, a shed and well house to the north, and a small building which appears to be a pump house to the southeast of the house within a garden area.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1950
Date Source: Local Records
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*

Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The house is a one-story, four-bay, frame dwelling supported on what appears to be a brick and concrete block foundation. The exterior walls are sided in vinyl with the side gable roof with patterned shingles. The dwelling also features an exterior end brick chimney and brick flue with corbeled caps, a modern entry door, gable-roofed wing, and six-over-six vinyl sash windows.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Exterior End	Brick	Flue
Chimneys	Exterior End	Brick	Stretcher Bond
Foundation	Solid/Continuous	*No Data*	*No Data*
Roof	Side Gable	*No Data*	*No Data*
Structural System and Exterior Treatment	Wood Frame	Vinyl	Siding

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The shed is a modern, frame building with T-111 siding and a side gable roof clad in asphalt shingles. The building also features a narrow, two-bay porch.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Plywood/Particle Board	Siding

Secondary Resource #2

Resource Category: Domestic
Resource Type: Well House
NR Resource Type: Building
Date of Construction: pre 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic

Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The well house is a low, concrete block building with gable roof clad in asphalt shingles.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Masonry	Concrete	Block

Secondary Resource #3

Resource Category: Domestic
Resource Type: Shed
NR Resource Type: Building
Date of Construction: ca 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The shed is a modern, metal building with shed roof.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Unknown	Metal	Siding

Secondary Resource #4

Resource Category: Agriculture/Subsistence
Resource Type: Chicken House/Poultry House
NR Resource Type: Building
Date of Construction: pre 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate

Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The chicken coop is a one-story, frame, screened-in building with gable roof clad in corrugated metal. The coop is attached to a smaller, board-and-batten shed with metal-clad gable roof.

Secondary Resource #5

Resource Category: Agriculture/Subsistence
Resource Type: Pump House
NR Resource Type: Structure
Date of Construction: ca 2010
Date Source: Site Visit
Historic Time Period: Post Cold War (1992 - Present)
Historic Context(s): Domestic, Subsistence/Agriculture
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: *No Data*
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The pump house is a modern, frame building sided in T-111 with a gable roof clad in asphalt shingles.

Secondary Resource #6

Resource Category: Domestic
Resource Type: Shed - Vehicle
NR Resource Type: Building
Date of Construction: pre 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The building is partially obscured from the point of survey by the house but appears to function as a vehicle or equipment shed. The walls are at least partially open and the gable roof is clad in metal.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	*No Data*	*No Data*

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

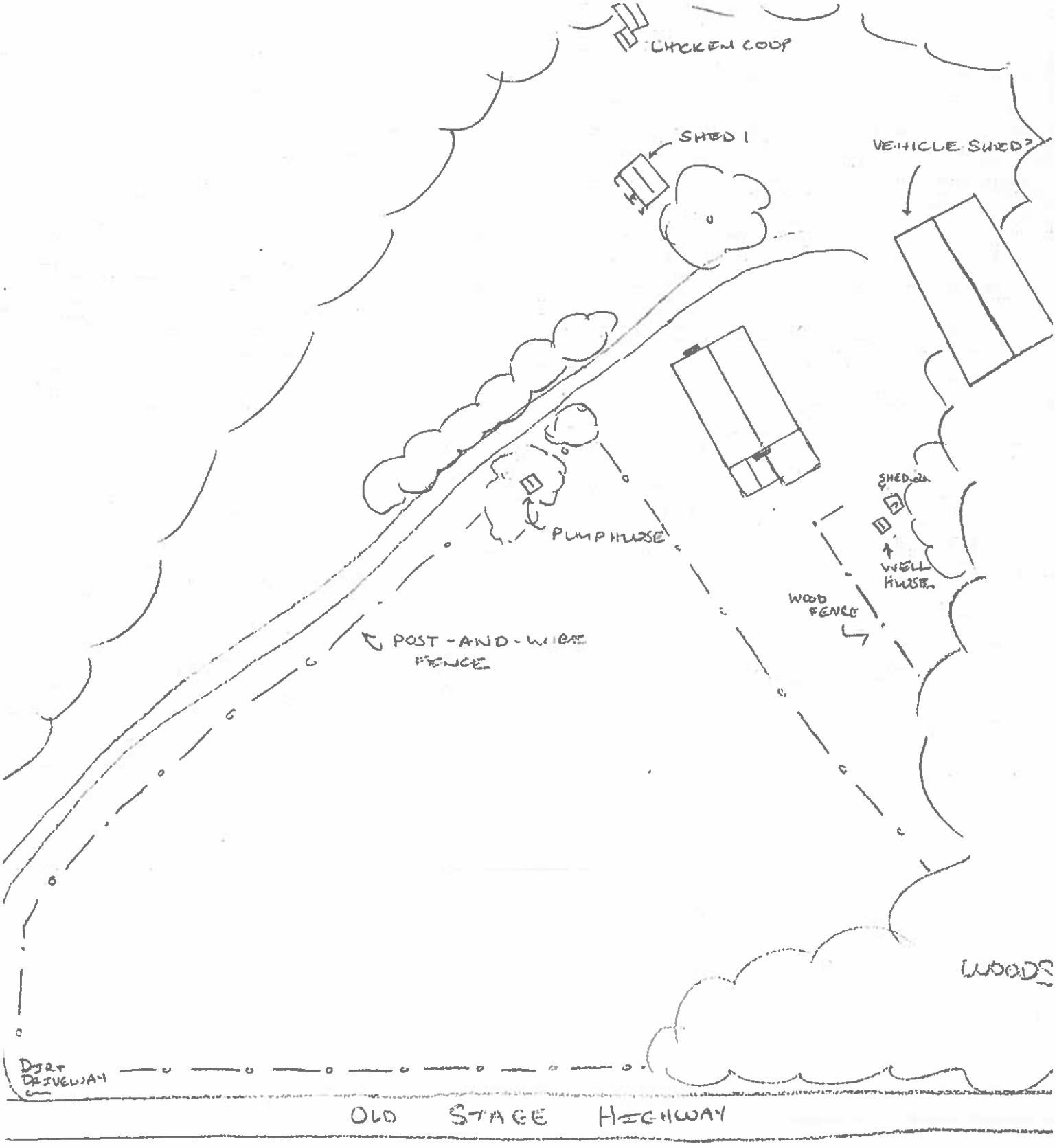
CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:
No Data
Project Bibliographic Information:
A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

Bibliographic Information

Bibliography:
Isle of Wight County Online Tax Assessment Records.
Property Notes:
No Data



046-5715
N
8736 OLD STAGE HIGHWAY
ISLE OF WIGHT, VA
MARCH 8, 2023
O. MCCARTY
N.T.S

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8837 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8837 Old Stage Highway

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

March 2023: The house sits back from the road within a relatively level lot and is surrounded by a lawn dotted with large trees, shrubs and gardens. A tree line is located beyond the yard to the east, northeast, and north as well as along the road. A gravel driveway provides access to the garage to the northeast of the house.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1958
Date Source: Local Records
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*

Number of Stories: 1.5
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The house is a one-and-a-half-story dwelling with one-story, gable-roofed wing with perpendicular one-story wing. The exterior of the dwelling is brick veneer and the front and side gable roofs are clad in asphalt shingles. The dwelling also features a metal, shed-roofed entry porch with ornate cast metal supports over the front entry with a metal awning over the secondary entrance, interior brick chimney, and one-over-one vinyl and two-over-two wood sash windows.

Exterior Components

Component	Component Type	Material	Material Treatment
Foundation	Solid/Continuous	*No Data*	*No Data*
Porch	Portico/Entry Porch	*No Data*	Cast Metal Supports
Roof	Front Gable	Asphalt	*No Data*
Structural System and Exterior Treatment	Wood Frame	Brick	Veneer
Windows	Double-hung	Vinyl	*No Data*
Chimneys	Interior Slope	Brick	Stretcher Bond

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Garage
NR Resource Type: Building
Date of Construction: ca 1980
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 2.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The garage is a two-story, two-bay, frame building with vinyl siding and an asphalt shingle-clad gambrel roof.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Vinyl	Siding

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:
No Data
Project Bibliographic Information:
A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

Bibliographic Information

Bibliography:
Isle of Wight County Online Tax Assessment Records.
Property Notes:
No Data

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8821 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8821 Old Stage Highway

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

March 2023: The house sits back from the road on an open, level lot with a tree line to the west and north. A dirt and gravel driveway leads from the road, passed the western gable end of the house and provides access to the garage to the north.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1970
Date Source: Local Records
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: Ranch
Form: *No Data*

Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The house is a one-story, L-shaped dwelling with rusticated brick exterior walls and a cross-gable roof clad in asphalt shingles. A one-story, shed-roofed porch with ornate cast metal supports extends along the western and southern elevations. The dwelling also features an exterior end rusticated brick chimney, Chicago-style window, triple single-light entry doors, and one-over-one wood sash windows.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Exterior End	Brick	Stretcher Bond
Foundation	Solid/Continuous	*No Data*	*No Data*
Porch	Wrap-Around	*No Data*	Cast Metal Supports
Roof	Cross Gable	Asphalt	*No Data*
Structural System and Exterior Treatment	Unknown	Brick	Rusticated
Windows	Double-hung	Wood	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Garage
NR Resource Type: Building
Date of Construction: pre 1980
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.5
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The building is currently used as a garage and is a one-and-half-story, single-bay, frame building with board-and-batten siding and front gable roof clad in asphalt shingles. The building is supported by a concrete block foundation and also features a modern retractable garage bay door, one-story, shed-roofed wing with additional garage bay, and a hayloft door.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Board-and-Batten

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

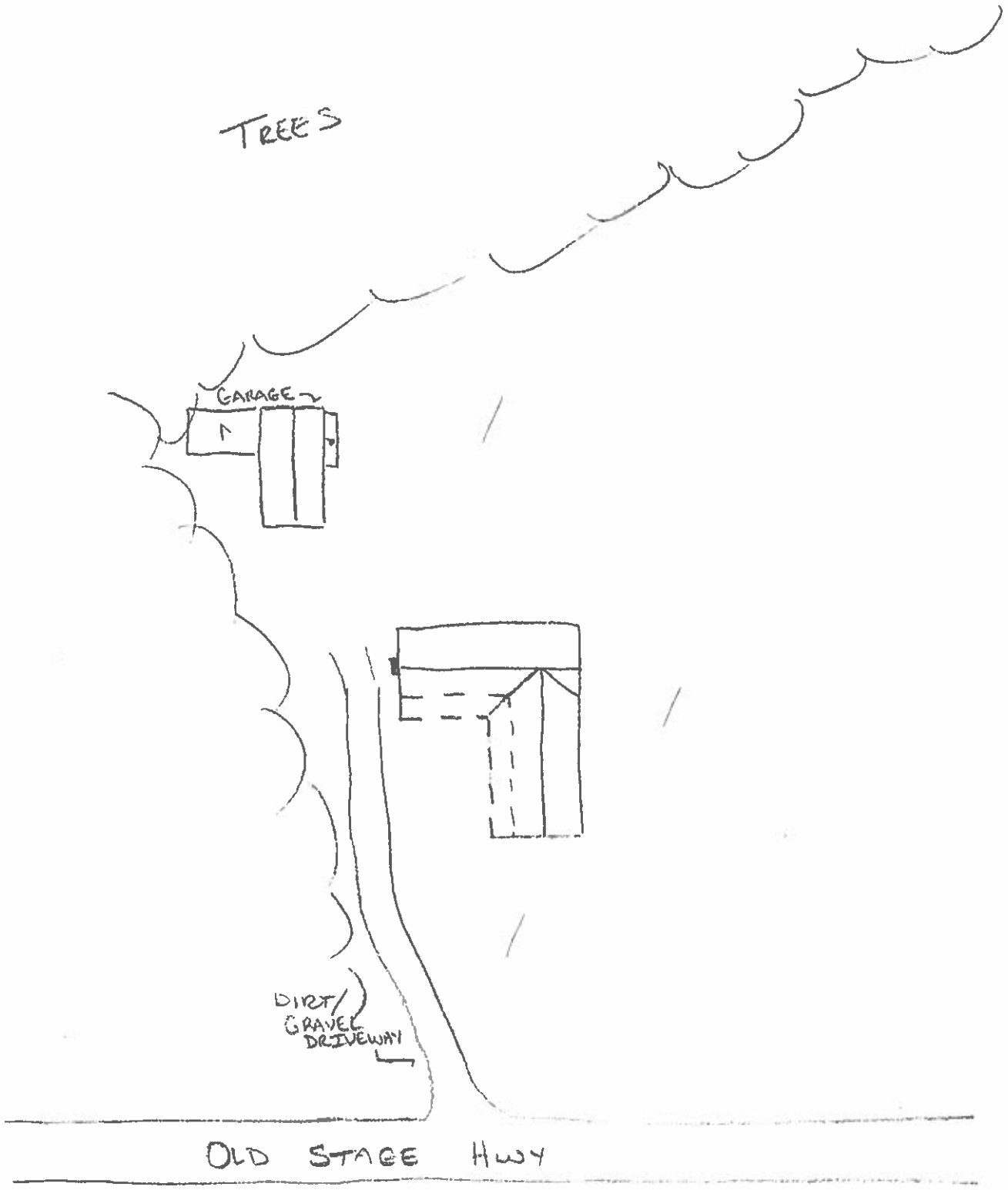
CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:
No Data
Project Bibliographic Information:
A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VA1-025 Solar Project, Isle of Wight County, Virginia.

Bibliographic Information

Bibliography:
Isle of Wight County Online Tax Assessment Records.
Property Notes:
No Data



N

046-5717
8821 Old Stage Highway
Isle of Wight, Virginia
March , 2023
O. McCarthy
N.T.S.

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8785 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8785 Old Stage Highway

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

March 2023: The house sits back from the road on a relatively level lot and is surrounded by a lawn dotted with mature trees with wooded areas beyond to the northeast, north and southeast. A shared gravel driveway leads from the road and provides access to a carport. The driveway continues passed the south side of the house to the adjoining property. Aside from the carport immediately to the west, a shed is located to the southeast of the dwelling.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1956
Date Source: Local Records
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: Ranch

Form:	*No Data*
Number of Stories:	1.0
Condition:	Good
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The house, which is partially obscured from the point of survey by trees, is a one-story, frame dwelling with one-story, gable-roofed wing. The exterior is clad in vinyl with a section of the facade in brick veneer. The cross-gable roof is sheathed in asphalt shingles and a large brick chimney projects through the front roof slope. Other visible features include a two-over-two horizontally divided wood sash window and a Chicago-style window.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Interior Slope	Brick	Stretcher Bond
Foundation	Solid/Continuous	*No Data*	*No Data*
Roof	Cross Gable	Asphalt	*No Data*
Structural System and Exterior Treatment	Wood Frame	Vinyl	Siding
Structural System and Exterior Treatment	Wood Frame	Brick	Veneer
Windows	Double-hung	Wood	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category:	Domestic
Resource Type:	Carport
NR Resource Type:	Structure
Date of Construction:	ca 1980
Date Source:	Site Visit
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	*No Data*
Condition:	Good
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The carport is a modern, metal structure.

Secondary Resource #2

Resource Category:	Domestic
Resource Type:	Shed
NR Resource Type:	Building
Date of Construction:	ca 1956
Date Source:	Site Visit
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*

Number of Stories: 1.0
Condition: Fair
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The shed is a one-story, frame building supported by brick piers with what appears to be concrete block in-fill. The exterior is sheathed in weatherboards with the shed roof clad in corrugated metal. The building also features a one-over-one wood sash window.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

No Data

Project Bibliographic Information:

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia

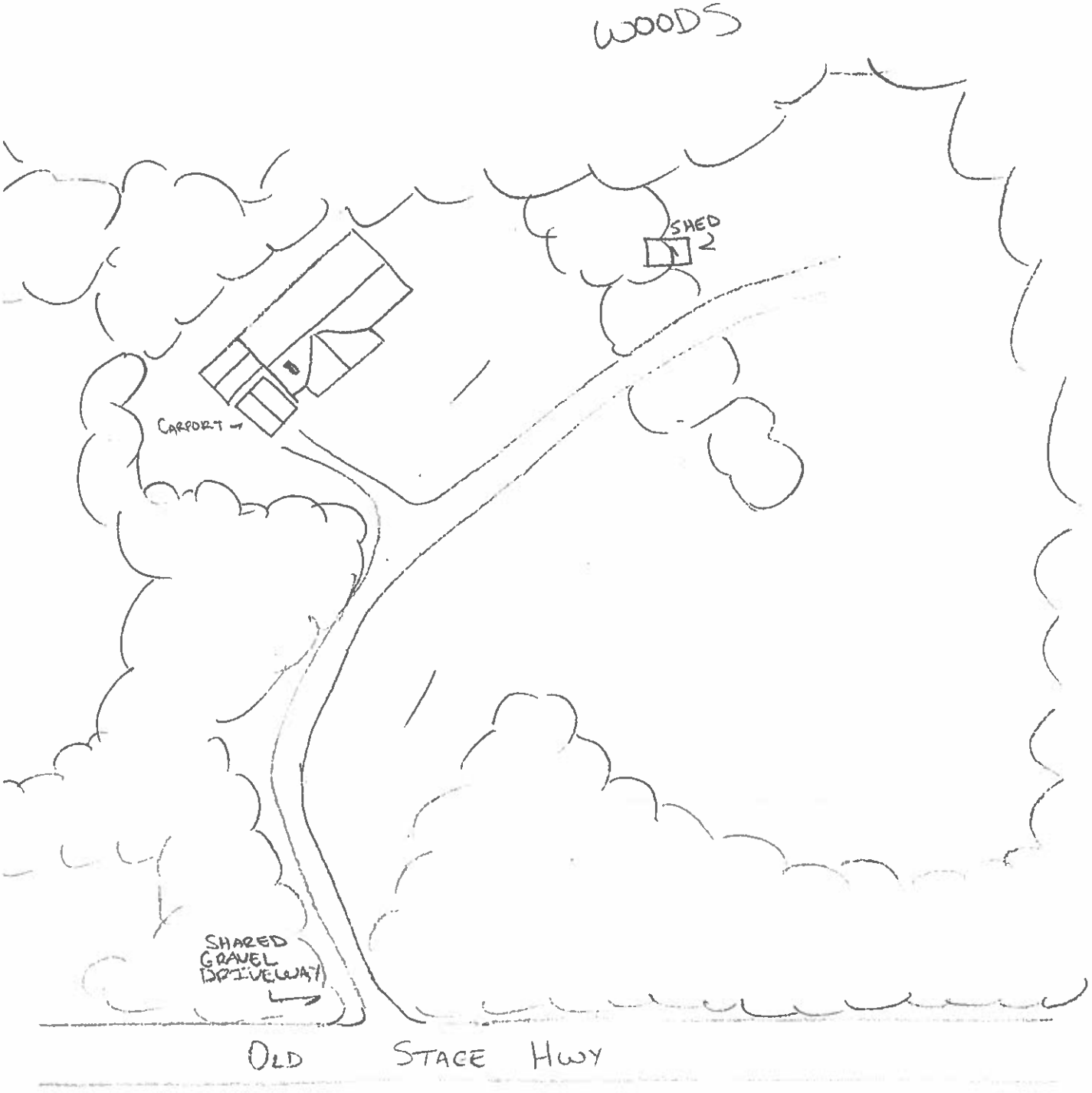
Bibliographic Information

Bibliography:

Isle of Wight County Online Tax Assessment Records.

Property Notes:

No Data



N

044-5718
8785 OLD STAGE HIGHWAY
ISLE OF WIGHT, VIRGINIA
MARCH 8, 2023
O. McCARTY
N.T.S.

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8731 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8731 Old Stage Highway

County/Independent City(s):	Isle Of Wight (County)
Incorporated Town(s):	*No Data*
Zip Code(s):	23430
Magisterial District(s):	*No Data*
Tax Parcel(s):	*No Data*
USGS Quad(s):	BACONS CASTLE

Additional Property Information

Architecture Setting:	Rural
Acreage:	*No Data*

Site Description:

March 2023: The house sits back from the road on a relatively level lot and is surrounded by areas of lawn dotted with mature trees. A circular gravel driveway is located in front of the house and branches to the northeast and provides access to the garage and carport located to the north of the house. A third outbuilding, a vehicle/equipment shed, is located to the northwest of the dwelling.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category:	Domestic
Resource Type:	Single Dwelling
NR Resource Type:	Building
Date of Construction:	1950
Date Source:	Local Records
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	Minimal Traditional
Form:	*No Data*

Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The dwelling, constructed in 1950, incorporates typical characteristics of the style including limited ornamentation and essentially no eaves. The dwelling also features a cross-gable roof clad in asphalt shingles. The dwelling has been altered with the replacement of its original siding and windows with vinyl. Additional features include a brick foundation, one-story, shed-roofed and hipped-roof wing, exterior end brick chimney, and shed-roofed hood over the front entry.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Exterior End	Brick	Stretcher Bond
Foundation	Solid/Continuous	Brick	Stretcher Bond
Roof	Cross Gable	Asphalt	*No Data*
Structural System and Exterior Treatment	Wood Frame	Vinyl	Siding
Windows	Double-hung	Vinyl	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Garage
NR Resource Type: Building
Date of Construction: ca 1950
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The garage is a one-story, frame building supported by a concrete block foundation. The exterior is clad in vinyl. The garage also features a front gable roof and an off-center, retractable garage bay door.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Vinyl	Siding

Secondary Resource #2

Resource Category: Domestic
Resource Type: Carport
NR Resource Type: Structure
Date of Construction: ca 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*

Architectural Style: No discernible style
Form: *No Data*
Number of Stories: *No Data*
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The carport is a modern, open, frame structure with metal-clad shed roof.

Secondary Resource #3

Resource Category: Domestic
Resource Type: Shed - Vehicle
NR Resource Type: Building
Date of Construction: ca 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The vehicle/equipment shed is a modern, open, frame structure with metal-clad shed roof.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	*No Data*	*No Data*

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Sandra DeChard
Organization/Company: Stantec 2034
Photographic Media: Digital
Survey Date: 3/8/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

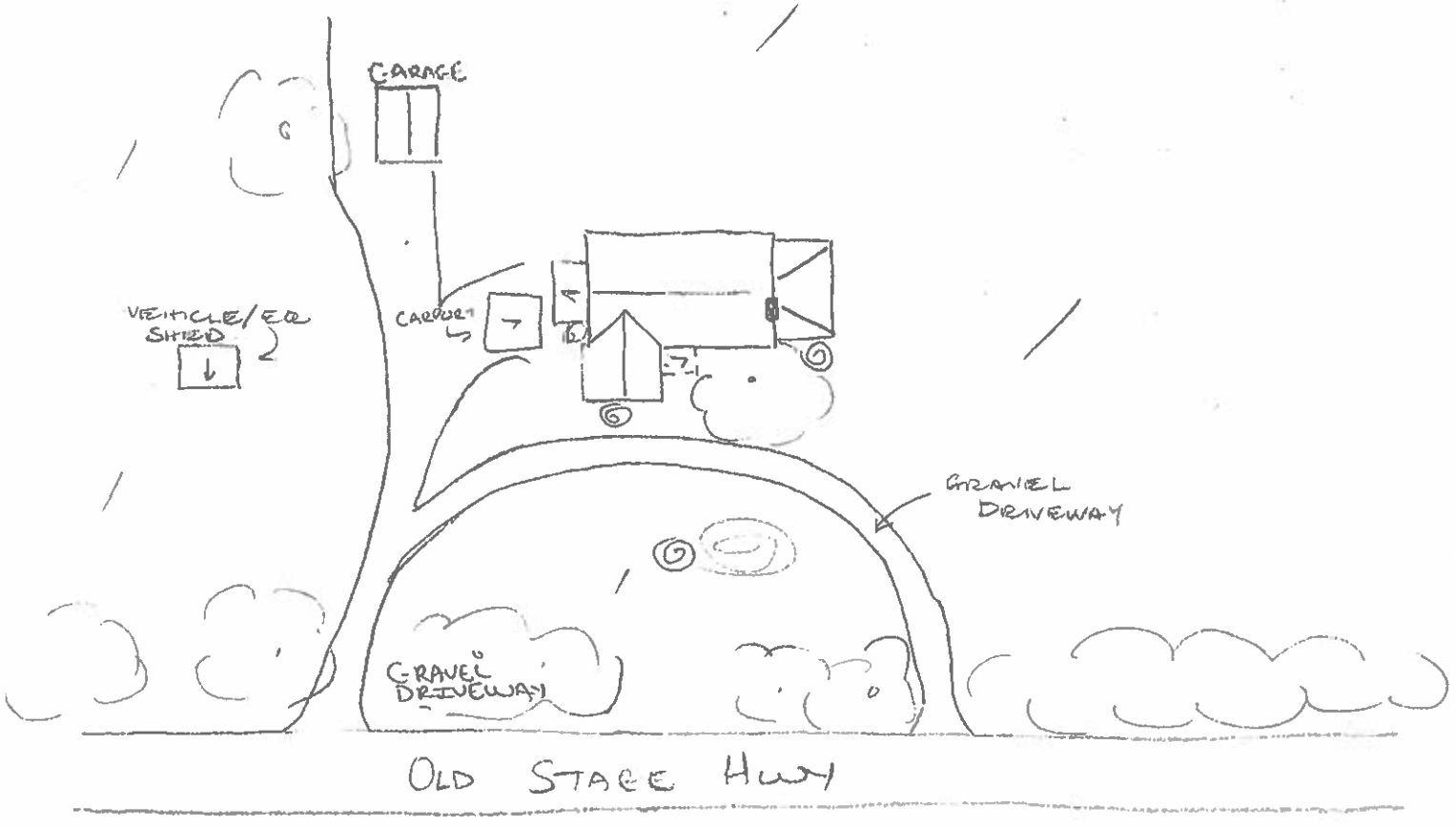
No Data

Project Bibliographic Information:
A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

Bibliographic Information

Bibliography:
Isle of Wight County Online Tax Assessment Records

Property Notes:
No Data



N

046-5719
87831 Old Stage Highway
Isle of Wight, Virginia
March 8, 2023
O. McCarty
N.T.S.

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 8699 Old Stage Highway

Property Evaluation Status

Property Addresses

Current - 8699 Old Stage Highway

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23430
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): BACONS CASTLE

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*

Site Description:

March 2023: The house sits back from the road on a relatively level lot and is surrounded by remnants of a lawn which is dotted by mature trees. Remnants of a circular gravel driveway are also visible, which also branches to the northwest and runs passed the southeast gable end of the dwelling. An area of woods is located to the northwest and behind the dwelling. Beyond the wooded area to the northwest is an area which has been clear cut which has also exposed a shed. Two additional secondary resources were visible and include a pump house immediately to the west of the house and a collapsed structure to the north.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the early to mid-twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1930
Date Source: Local Records
Historic Time Period: World War I to World War II (1917 - 1945)
Historic Context(s): Domestic
Other ID Number: *No Data*

Architectural Style:	Craftsman
Form:	Bungalow
Number of Stories:	1.5
Condition:	Fair
Threats to Resource:	Neglect, Public Utility Expansion, Vacant
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The bungalow is architecturally intact but appears to have been abandoned. The one-and-a-half-story, three-bay dwelling is frame construction and is supported by a brick foundation. Projecting from the front roof slope of the side gable roof are two gable-roofed dormers and visible above the ridge line of the roof is a brick flue with corbelled cap. A concrete block flue is located off the wing. The exterior walls are clad in weatherboards and a one-story, hipped-roof, once screened-in porch extends across the façade. The northwestern end of the porch has been incorporated into the narrow, hipped-roof wing off the dwelling's northwest gable end. Additional features include six-over-one wood sash windows and bracketed eaves.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Interior Central	Brick	Flue
Foundation	Solid/Continuous	Brick	Stretcher Bond
Porch	1-Story Full-Width	Wood	Posts
Roof	Side Gable	Asphalt	*No Data*
Chimneys	Exterior End	Concrete	Block
Structural System and Exterior Treatment	Wood Frame	Wood	Weatherboard
Windows	Double-hung	Wood	*No Data*
Dormer	Gable	*No Data*	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category:	Domestic
Resource Type:	Shed
NR Resource Type:	Building
Date of Construction:	pre 1960
Date Source:	Site Visit
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	1.0
Condition:	Fair
Threats to Resource:	Public Utility Expansion
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The shed was once located in a wooded area and is a small, one-story, frame building with aluminum siding, front gable roof clad in metal, and a six-light, wood-framed window.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Wood Frame	Aluminum	Siding

Secondary Resource #2

Resource Category:	Agriculture/Subsistence
Resource Type:	Pump House
NR Resource Type:	Structure

Date of Construction:	ca 1980
Date Source:	Site Visit
Historic Time Period:	The New Dominion (1946 - 1991)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	*No Data*
Condition:	Poor
Threats to Resource:	Neglect, Public Utility Expansion
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The pump house is a one-story, frame building with plywood siding which has partially rotted, and a front gable roof covered in asphalt roll.

Secondary Resource #3

Resource Category:	Domestic
Resource Type:	Shed - Vehicle
NR Resource Type:	Building
Date of Construction:	pre 1940
Date Source:	Site Visit
Historic Time Period:	World War I to World War II (1917 - 1945)
Historic Context(s):	Domestic
Other ID Number:	*No Data*
Architectural Style:	No discernible style
Form:	*No Data*
Number of Stories:	1.0
Condition:	Ruinous
Threats to Resource:	Public Utility Expansion, Structural Failure
Cultural Affiliations:	Indeterminate
Cultural Affiliation Details:	*No Data*

Architectural Description:

March 2023: The building has collapsed but may have been used as a vehicle shed. Its close proximity to the house would suggest a domestic rather than agricultural function. The building appears to have been partially clad in weatherboards and partially in plywood with what appears to have been a shed roof covered in asphalt roll. The building also appears to have had two open bays.

Historic District Information

Historic District Name:	*No Data*
Local Historic District Name:	*No Data*
Historic District Significance:	*No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number:	*No Data*
Investigator:	Sandra DeChard
Organization/Company:	Stantec 2034
Photographic Media:	Digital
Survey Date:	3/8/2023

Dhr Library Report Number: *No Data*

Project Staff/Notes:

No Data

Project Bibliographic Information:

A Phase I Cultural Resources Survey of Approximately 20 Acres Associated with the VAL-025 Solar Project, Isle of Wight County, Virginia.

Bibliographic Information

Bibliography:

Isle of Wight County Online Tax Assessment Records.

Property Notes:

No Data

Donald Sadler, MA

Project Archaeologist

Mr. Sadler has over 23 years of professional experience as an archaeologist. He has excavated on sites across Virginia, including Jamestown, as well as Greece, Bermuda, Georgia and Maryland, on both academic and professional projects. He has over a decade of experience as the primary field archaeologist supervising excavations at the Phase I, II and III levels involving the prehistoric and Euro-American history of the Chesapeake region. His duties at have included Phase I and II evaluations as a field technician and Field Supervisor. He has also assisted Senior Principal Investigators in report writing, management summaries, and historic research. Donnie has experience in historic ceramic analysis, 18th-century material culture analysis, managing archaeological collections, and database management.

EDUCATION

Master of Arts, Historical Archaeology, College of William and Mary, Williamsburg, Virginia, 2006

Bachelor of Arts, Anthropology with Honors, minor in History, College of William & Mary, Williamsburg, Virginia, 2001

CERTIFICATIONS & TRAINING

HAZWOPER 40 hour Certificate, Statewide, Virginia, 2018

Confined Space Awareness Training, Statewide, Virginia, 2016

RPA certified course "Metal Detecting for the Archaeologist", Nationwide, US, 2015

PROJECT EXPERIENCE

Data Recovery of Site 44JC0664, James City County, Virginia

Donald oversaw the data recovery effort for Site 44JC0664, a Colonial era domestic site with a Civil War encampment component. Donald managed all field staff, monitored mechanical excavations, participated in feature excavation, and participated in photodocumentation of the site as well as the production of scale drawings. The site was situated within an active construction zone and Donald coordinated with on-site contractors and ensured that all staff followed safety protocol. Donald is currently synthesizing the recovered data and writing a detailed technical report describing the results of the investigation.

Documentary Research for the Sammons Cemetery, Albemarle County, Virginia

Documentary Research for the Sammons Cemetery Report on file at the Virginia Department of Transportation (VDOT) in Richmond, Virginia.

City of Fredericksburg - Phase I Archaeological Survey, Phase II Evaluation, and Phase III Data Recovery for the Proposed Courthouse Facility at the Intersection of Princess Anne and Charlotte Streets, (Southeastern Quadrant of Block 42), City of Fredericksburg, Virginia

Three-stage archaeological investigation of a historic domestic site in the City of Fredericksburg in advance of the construction of a new Courthouse facility. The project resulted in the identification of 18th and 19th century domestic deposits including a Civil War period cellar dating to 1863. Work included archaeological fieldwork, extensive historic research, site interpretation, and final reporting. Also included was the development of an interpretive display featuring the sites to satisfy public participation requirements and highlight the significance of the lot and the site. Responsibilities included field supervision and direction for all fieldwork, field notes, and reporting.

Phase IA/Stage I Analysis for the Proposed Dominion Virginia Power Warrenton-Wheeler-Gainesville 230 kV Transmission Line Project, Fauquier and Prince William Counties, Virginia

Donald managed a cultural resources crew for the completion of a Phase IA/Stage I Cultural Resources Assessment for the proposed ~ 20 mile Warrenton-Wheeler-Gainesville 230 kV Transmission line project.

A Phase I Cultural Resources Survey of Approximately 9.4 Miles of the Proposed Dominion Virginia Power Dahlgren 230 kV Transmission Line*, King George County, Virginia

Donald and crew conducted a Phase I Cultural Resources Survey of a proposed Dominion Power 230kV utility line in King George County, Virginia. The proposed route of the Dahlgren line covers a distance of approximately 9.4 miles. Work included archaeological and architectural survey for the APE defined by the project for the entire corridor.

Donald Sadler, MA

Project Archaeologist

Stantec

A Phase I Cultural Resources Survey of Approximately 39.0 Miles of Proposed Improvements to the Dominion Virginia Power 500 kV Transmission Line from the Lexington Substation to the Dooms Substation, Augusta and Rockbridge Counties, Virginia

Donald and crew conducted a Phase I Cultural Resources Survey of a proposed Dominion Power 230kV utility line in August and Rockbridge counties, Virginia. The proposed route of the Lexington to Doom line covers a distance of approximately 39 miles. Work included archaeological and architectural survey for the APE defined by the project for the entire corridor.

Benns Church Substation Rebuild Project, Isle of Wight County, Virginia

Donald directed the field effort for a Phase I survey of approximately 3.332 acres associated with the Dominion Virginia Power Benns Church Substation Rebuild Project and Phase II evaluation of Site 44IW0275, a Woodland period temporary camp site. Responsibilities included directing field staff in systematic shovel testing and test unit excavation, photodocumentation of the project APE and Site 44IW0275, and the production of scale drawings associated with the Phase II evaluation effort.

Dahlgren 230 kV Transmission Line Project, King George County, Virginia

Mr. Sadler led the field effort for a Phase I survey of approximately 9.4 miles associated with the Dominion Virginia Power Dahlgren 230 kV Transmission line project in King George County, Virginia. Mr. Sadler was responsible for crew management, coordination with local landowners, systematic shovel testing, and recordation.

VDOT - Archaeological Survey for Proposed Improvements to I-64, Segment 2, James City and York Counties, Virginia

Archaeological survey support for proposed improvements to Segment 2 of the I-64 improvement project in James City and York Counties Virginia. The project included archaeological survey of approximately 7 miles of proposed roadway improvements and expansion. The project included traditional archaeological survey as well as metal detecting for military related resources. Responsibilities included field supervision and direction for all fieldwork, field notes, and reporting.

US Coast Guard Training Facility, Yorktown – Archaeological Monitoring for Water Line Replacement*, Yorktown, Virginia

As subconsultant to TetraTech Tesoro, Donald provided archaeological monitoring for the replacement of a water line supporting the USCG TRACEN facility. The water line crossed the NRHP-listed Yorktown National Battlefield. Services included daily on-site monitoring, recordation of soil profiles and conditions and documentation of archaeological deposits.

Fort Monroe – On-call Archaeological Support Services, Fort Monroe, Hampton, Virginia

Donald provided on-call archaeological support services to the Fort Monroe Authority, Hampton, Virginia. Fort Monroe is a former Army Base a portion of which was transferred to the Commonwealth of Virginia in 2011. Services provided included emergency response services. Phase I level archaeological survey, archaeological monitoring, and reporting.

Cemetery Verification and Delineation Study for Site 44KG0223 along the Proposed Dominion Virginia Power Dahlgren 230 kV Transmission Line, King George County, Virginia

Donald led the field effort, monitoring mechanical excavations to identify potential grave shaft features and overseeing the metal detecting effort. The project proved that the site did not extend into the proposed transmission line right-of-way.

Cemetery Removal and Reburial at the Abberly at Stafford Development, Stafford County, Virginia

Donald assisted with a cemetery documentation and excavation of 29 burial features at Abberly in Stafford County, Virginia. The project included documentation, removal and reburial of the cemetery. Responsibilities included directing the field effort and documenting and removing burial features.

Cemetery Recovery for the Abberly at Stafford Development, Stafford County, Virginia

Donald led the field effort, monitoring mechanical excavations to identify potential grave shaft features and overseeing and participating in the archaeological recovery of human remains. Donald managed field staff during the recovery effort and assisted with the reburial effort.

** denotes projects completed with other firms*

Sandra DeChard

Senior Architectural Historian

Stantec

Ms. Sandra DeChard is an Architectural Historian with over 25 years of experience in cultural resources as an architectural historian and archaeologist working in Virginia, North Carolina, Georgia, Pennsylvania, Delaware, New Jersey, Maryland, Arizona, California, Washington, Oregon, Illinois, Massachusetts, and New Hampshire. Her experience includes large- and small-scale architectural Phase I level surveys for transmission line corridors and transportation infrastructure as well as cost share projects in conjunction with local municipalities, Phase II level survey, stabilization plans, historic structures reports, and National Register of Historic Places nominations. Her range of experience also extends to detailed historical research and archival review, scaled architectural drawings and other technical drawings, signage and heritage tourism brochures, as well as museum displays. Additionally, Sandra was a founding member and Chairperson of the Martinsville, Virginia Architectural Review Board and has lectured on various Art, Art History, and Architectural topics as educator in humanities and as a guest speaker.

Sandra's current responsibilities at Stantec include architectural surveys at the Phase I and II levels, managerial tasks associated with architectural investigations, writing and editing technical reports, consultation with and representation of clients before state and national review agencies, and developing and managing project budgets and scopes of work.

EDUCATION

M.A. Preservation Studies, Architectural History, Boston University, Boston, Massachusetts, 2000

B.S. Interior Design, University of Delaware, Newark, Delaware, 1989

CERTIFICATIONS & TRAINING

Section 106 Certification, Richmond, Virginia, 2014

PROJECT EXPERIENCE

Transmission & Distribution, Transmission Lines

Dominion Energy Virginia – A Phase I Cultural Resources Survey of Approximately 7.39 Miles Associated with the Fudge Hollow to Low Moor Line #112 138 kV Transmission Line Partial Rebuild, City of Covington, Alleghany County, Virginia

Ms. DeChard served as Senior Architectural Historian for the project which included the documentation of 124 resources at a Phase I level within the defined APE of the project. The project also included the evaluation of the resources for NRHP eligibility.

Dominion Energy Virginia – A Phase I Cultural Resources Survey of Approximately 14.5 Miles Associated with the Proposed Valley to Dooms 500 kV Rebuild Project in Augusta County, Virginia

Ms. DeChard served as Senior Architectural Historian for the project which included the documentation of 306 resources at a Phase I level within the defined APE of the project. The project also included the evaluation of the resources for NRHP eligibility.

Roadways

NCDOT – Historic Structures Survey Report T.I.P. No. U-6077, Widening of SR 4315/Kernersville Road from SR 2632/Sedge Garden Road to Harmon Creek Road, Forsyth County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of two resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

** denotes projects completed with other firms*

NCDOT – Historic Structures Survey Report for T.I.P. No. U-3609B, Widening US 13 (Berkeley Boulevard) from SR 1003 (New Hope Road) to SR 1572 (Saulston Road) in the City of Goldsboro, Wayne County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of two resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

NCDOT – Building Inventory for TIP# U-5863, Widen NC 133 (Castle Hayne Road) from I-140/US17 (Wilmington Bypass) to SR 1310 (Division Drive, New Hanover County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included building inventory of 136 resources within the area of potential effect for the proposed road improvements.

NCDOT – Historic Structure Survey for TIP# R-5743B, Widen US 23/US441 from US 64 to SR 1652 (Wide Horizon Drive)/SR1152 (Belden Circle) to South of SR1649 (Prentiss Bridge Road), Franklin, Macon County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of five resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

VDOT – A Phase I Architectural Survey for the Proposed Cochran Mill Road Bridge Replacement, Loudoun County, Virginia

Sandra served as architectural historian for the survey. The survey included the documentation of three resources at a Phase I level including the bridge as well as two resources immediately adjacent to and in view of the Cochran Mill Road Bridge.

VDOT – An Architectural Survey for the Route 15/29 Bridge Replacement*, Culpeper County, Virginia

Ms. DeChard served as Architectural Historian for the survey. The survey entailed the recordation of three resources, including the bridge, within the study area. Evaluations of NRHP eligibility for each resource were also conducted.

Bridges

City of Atlanta- Architectural Survey of the Powers Ferry Road Bridge over Nancy Creek, Powers Ferry Road, Atlanta, Georgia

Ms. DeChard served as Senior Architectural Historian, Principal Investigator for the survey. The survey documented the bridge at a Phase I level and utilized historic background research as well as an architectural evaluation of the resource's integrity in order to make a recommendation of the bridge's NRHP eligibility.

VDOT – Page County Bridge National Register of Historic Places Nomination Form*, Page County, Virginia

Ms. DeChard conducted detailed research and authored the National Register of Historic Places (NRHP) nomination form for the Page County Bridge, Page County, Virginia.

** denotes projects completed with other firms*

Brynn Stewart, MA

Program Manager/Senior Principal Investigator

Stantec

Brynn is the Program Manager/Senior Principal Investigator for Cultural Resources in Stantec's Williamsburg, Virginia, office. She has over 18 years of experience in cultural resources management. Brynn meets the Secretary of the Interior's standards and guidelines for a professional archaeologist. She has served as a Principal Investigator and Project Archaeologist on numerous transportation and energy-related projects as well as private development projects.

Brynn manages in-house technical staff, supervises technical document preparation, and provides quality control and peer review for cultural resources studies. Her expertise includes all phases of cultural resource management (archaeological assessments and Phase I, II, and III excavations) in compliance with local, state, and federal laws and regulations. Brynn's experience includes managerial tasks associated with all aspects of cultural resource management projects such as consultation with and representation of clients before state and national review agencies, writing and editing technical reports, preparing and managing project budgets, and developing and implementing archaeological research designs.

Brynn also has experience in the processing and analysis of artifact collections with special interest in Colonial-era ceramics and lithic analysis and the development and production of interpretive materials including pamphlets and exhibits.

EDUCATION

Master of Arts, Anthropology, University of Nevada, Las Vegas, Nevada, 2009

Bachelor of Arts, Anthropology, Washington College, Chestertown, Maryland, 2004

CERTIFICATIONS & TRAINING

OSHA Excavation Safety: Satisfies 29 CFR 1926.650

OSHA Confined Space Safety: Satisfies 29 CFR 1910.246, 29 CFR 1926.1001, 29 CFR 1915.1001

PROJECT EXPERIENCE

Ore Bank Undergrounding Project, Rockingham County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with the Civil War Trust and will author the technical report upon completion of on-going investigations.

Abberly at South Campus Development, Stafford County, Virginia (Principal Investigator)

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. She directed pre-fieldwork planning, managed field personnel, and participated in Phase II evaluation of Site 44ST1141. Brynn synthesized data collected during evaluation and served as the lead author of the resulting technical report.

Data Recovery of Sites 44PW1305 and 44PW1306 for the Eagles Pointe Landbay A Section 2 Development Project, Prince William County, Virginia

Brynn is serving as Principal Investigator for this on-going project. She developed the scope of work and budget prior to the awarding of the project. Brynn coordinated with the client and the County Archaeologist on the Data Recovery Plan she developed. She has managed field personnel and coordinated with the VDHR to procure both an Anticipatory Permit and a Burial Permit for the excavation of a single burial identified within Site 44PW1306. Brynn coordinated the placement of public notice as part of the Burial Permit and gave a presentation concerning the burial feature to the Prince William County Historical Commission, which served as a public meeting as a result of responses received for the said public notice. Brynn is currently coordinating the reburial of the recovered remains with a local cemetery and will author the resulting technical report.

* *denotes projects completed with other firms*

Brynn Stewart, MA

Program Manager/Senior Principal Investigator

Stantec

Data Recovery of Site 44JC0662, James City County, Virginia

Brynn served as Principal Investigator, directing pre-fieldwork planning and overseeing the field effort. Brynn participated in feature excavation. She coordinated the field effort with the client as well as site inspectors and was responsible for coordinating with local Native American tribal representatives with an interest in the project. Brynn participated in shovel testing and monitoring activities, synthesized the data collected during the project, and served as lead author on the resulting technical report.

Poplar Grove National Cemetery Archaeological Investigations and Monitoring, Dinwiddie County, Virginia

Brynn served as Principal Investigator, coordinating with the NPS and field staff. The NPS conducted rehabilitation at the cemetery, including the replacement of 5,700 headstones, rehabilitation of the Superintendent's lodge, restoration of site furniture and signs, replacement of the flagpole and site utilities, preservation of the cemetery wall, and rehabilitation of the landscape. Brynn participated in shovel testing and monitoring activities, synthesized the data collected during the project, and served as lead author on the resulting technical report.

Berkmar Data Recovery, Charlottesville, Virginia

Brynn served as Principal Investigator, assisting in the development of a scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with client representatives, conducting excavations, compiling and interpreting fieldwork results, on-going lithic analysis, and is in the process of co-authoring the resulting technical report.

Trowbridge-Pantego Transmission Line Project, Washington and Beaufort Counties, North Carolina

Brynn served as Principal Investigator, coordinating with Project Managers and field personnel. Brynn directed pre-fieldwork planning and was responsible for compiling and interpreting fieldwork results. She is currently in the process of co-authored the resulting technical report.

Fredericksburg Courthouse Project, City of Fredericksburg, Virginia

Brynn served as Principal Investigator, directing pre-fieldwork planning and managing field personnel during Phase I, Phase II, and Phase III investigations of eighteenth-century through nineteenth-century deposits. She also participated in fieldwork, synthesized data collected during all three phases of work, and served as the lead author of the resulting technical report. She helped develop and produce a public exhibit of artifacts on display in the new Courthouse.

Dominion Virginia Power Splice Pit within the Colonial National Historic Park, James City County, Virginia

Brynn served as Principal Investigator, leading the field effort and interpreting data post-field effort. She also authored the resulting technical report.

Mosby Substation (Laydown Yard and Storm Water Management Basin Area) Project, Loudoun County, Virginia

Brynn served as Principal Investigator, managing the field effort and interpreting data post-field effort. She also authored the resulting technical report.

Goose Creek to Loudoun 500kV Transmission Line Improvement Project, Loudoun County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with client representatives, compiling fieldwork results, interpreting sites, entering site data into V-CRIS, and co-authoring the resulting technical report.

Warren County Power Station Proposed Auxiliary Parking Lot, Warren County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for compiling fieldwork results and authoring the resulting technical report.

** denotes projects completed with other firms*

ISLE of WIGHT COUNTY MUSEUM

March 11, 2024

Virginia Department of Historic Resources
Adrienne Birge-Wilson, Architectural Historian, Review & Compliance Division
2801 Kensington Avenue
Richmond, Virginia 23321

Dear Ms. Birge-Wilson,

This letter acknowledges that Dawood, on behalf of solar projects Pivot Solar Sites VAL025 and VAL035, intends to contribute $15,000 towards the restoration of Isle of Wight County's 1950s Nike-Ajax missile. This is the largest artifact in the collection of the Isle of Wight County Museum. It was accessioned in 2019 after it was donated to us by the City of Hampton, Virginia. Once restored, it will contribute to the historic interpretation of Carrollton-Nike Park, the former site of the U.S. Army's Nike-Ajax Missile Launch Site N-75L and an historic district listed on the National Register of Historic Places.

The Carrollton-Nike Missile Battery was operational by 1954 and was one of eight batteries that made up the Norfolk Defense Area. Each battery consisted of two areas: a launch area and a control area. These two sites were connected by an underground cable system that enabled communication.

In the event of an impending attack on Hampton Roads, all area batteries prepared to fire under the direction of the central command at Fort Monroe. At Carrollton, troops manned their stations ready to deploy their 27 missiles. Once fired, a missile was guided to the target by its radar system.

When the U.S. Army developed nuclear-tipped Nike-Hercules missiles, Carrollton-Nike and four other batteries in the Norfolk Defense Area became obsolete. The U.S. Army operated this location as a radio relay site from 1961 to 1971. In 1972, Isle of Wight County obtained it – and the former control site located at Jones Creek - to develop the facilities in place today.

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

ISLE of WIGHT COUNTY MUSEUM

We are very pleased to receive this generous grant for our restoration project from Dawood/Pivot at the approval and encouragement of the Virginia Department of Historic Resources. With mitigation not feasible as per your requirements, this substitution will positively impact the preservation of Isle of Wight County history.

Our acceptance of this grant does not represent approval or recommended approval of the project, but know that this rare opportunity is greatly valued.

As Dawood moves forward with Pivot Solar Sites VAL025 and VAL035, please do let me know if you visit the area. I would be pleased to offer you a tour of Carrollton-Nike Park and share our progress with the restoration of the Nike-Ajax missile.

Kind regards,

J.L. England
Isle of Wight County Museum Director
Isle of Wight County Historic Resources Manager

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

ISLE of WIGHT COUNTY MUSEUM

MEMORANDUM

TO: Jeryl R. Phillips, Assistant Director/Planning & Zoning

FROM: Jennifer England
Director, Isle of Wight County Museum
Historic Resources Manager, Isle of Wight County

RE: Conditional Use Permit Application (CUP-6-23)
VAL025/Elk Development, LLC
8699 Old Stage Highway, Tax Map/Parcel #13-01-005

DATE: May 22, 2023

After reviewing the **Phase I Cultural Resource Survey of the 20 Acres Associated with the VAL-025 Solar Project** as prepared by Stantec Consulting Services Inc. for Dawood Engineering Inc. on behalf of Pivot Energy with reference to Conditional Use Permit Application (CUP-6-23), the Isle of Wight County Museum/Isle of Wight County Department of Historic Resources agrees with the conclusions of the report.

While the acreage to be developed as a solar energy facility has been plowed and utilized as farmland for many years, the project's location is sited within the viewshed of several historic resources. As such, to mitigate the effects of the proposed project, vegetative screening should be planted to shield the c. 1790 Bourne-Turner House, located at 16303 Morgarts Beach Road, as well as the Keystone Segment of the Captain John Smith National Historic Trail Historic District.

Additionally, should this project proceed, a plan for construction and installation should be evaluated to ensure that no adverse effects will ensue for these sites or the Old Stage Highway Cemetery located immediately to the east of the proposed project.

The potential, however, on the project site for archaeological artifacts is likely. If the landowner is willing, the Isle of Wight County Museum should be considered a repository for discovered artifacts and future finds on this site as they could further the interpretation or discovery of Isle of Wight County history.

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Travis A. Voyles
Secretary of Natural and Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

M E M O R A N D U M

To: Robert B. Hickox, III M.S.
Pivot Energy

From: Adrienne Birge-Wilson, Architectural Historian (804) 482-6092
Review and Compliance Division

Subject: VAL-025 Solar Project, Isle of Wight (DHR File No. 2023-3719) and VAL-035 Solar Project, Isle of Wight (DHR File No. 2023-3718)

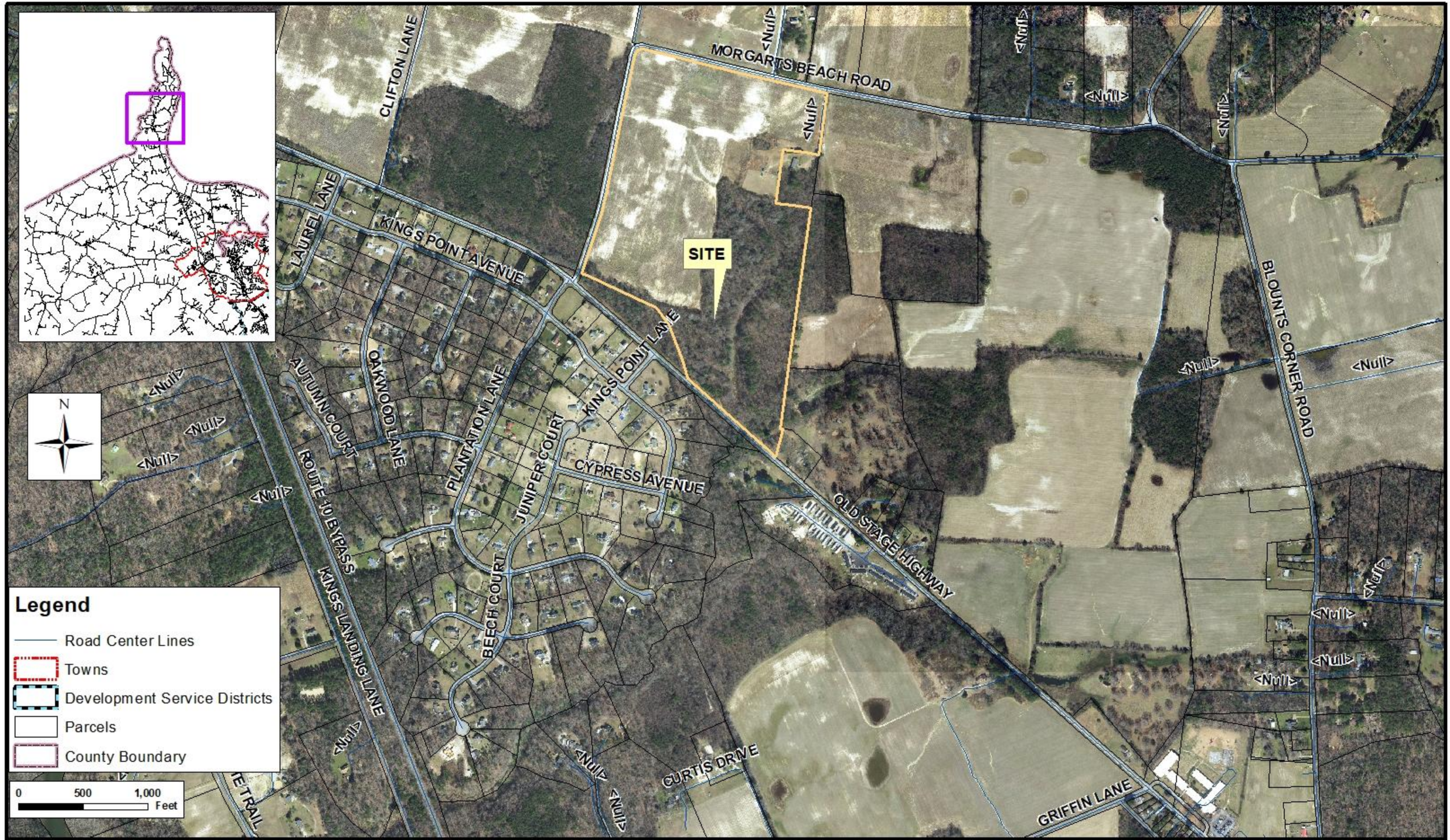
Comments:
We received communication from the Isle of Wight County Museum that your company intends to contribute $15,000 towards the restoration of Isle of Wight County's 1950s Nike-Ajax missile. DHR approves of the mitigation for the above referenced projects. Please provide a receipt or confirmation of payment after the transaction, to close out the mitigation item.

4/30/2024

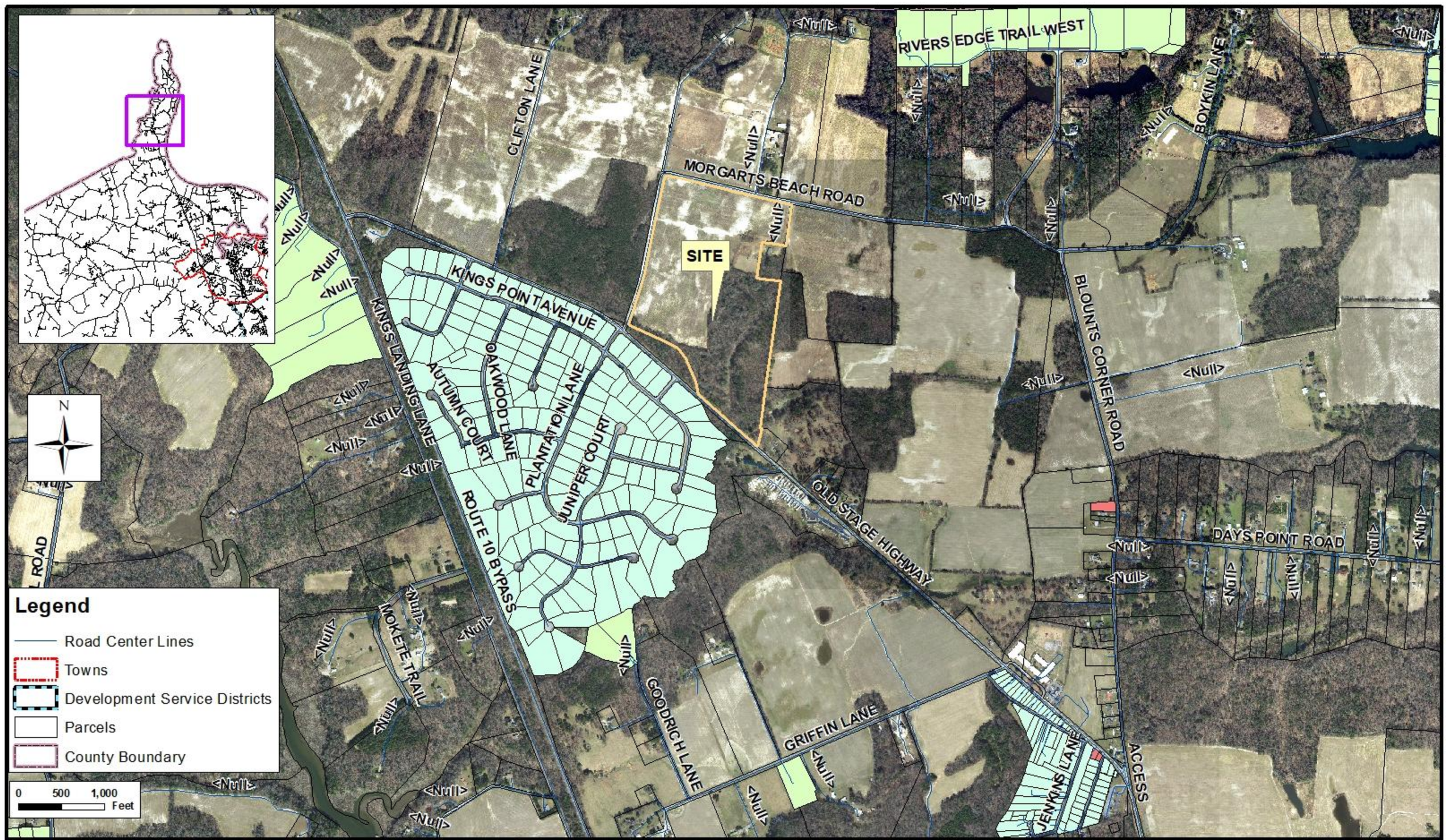
CUP-6-23 - Conditional Use Permit- Location Map



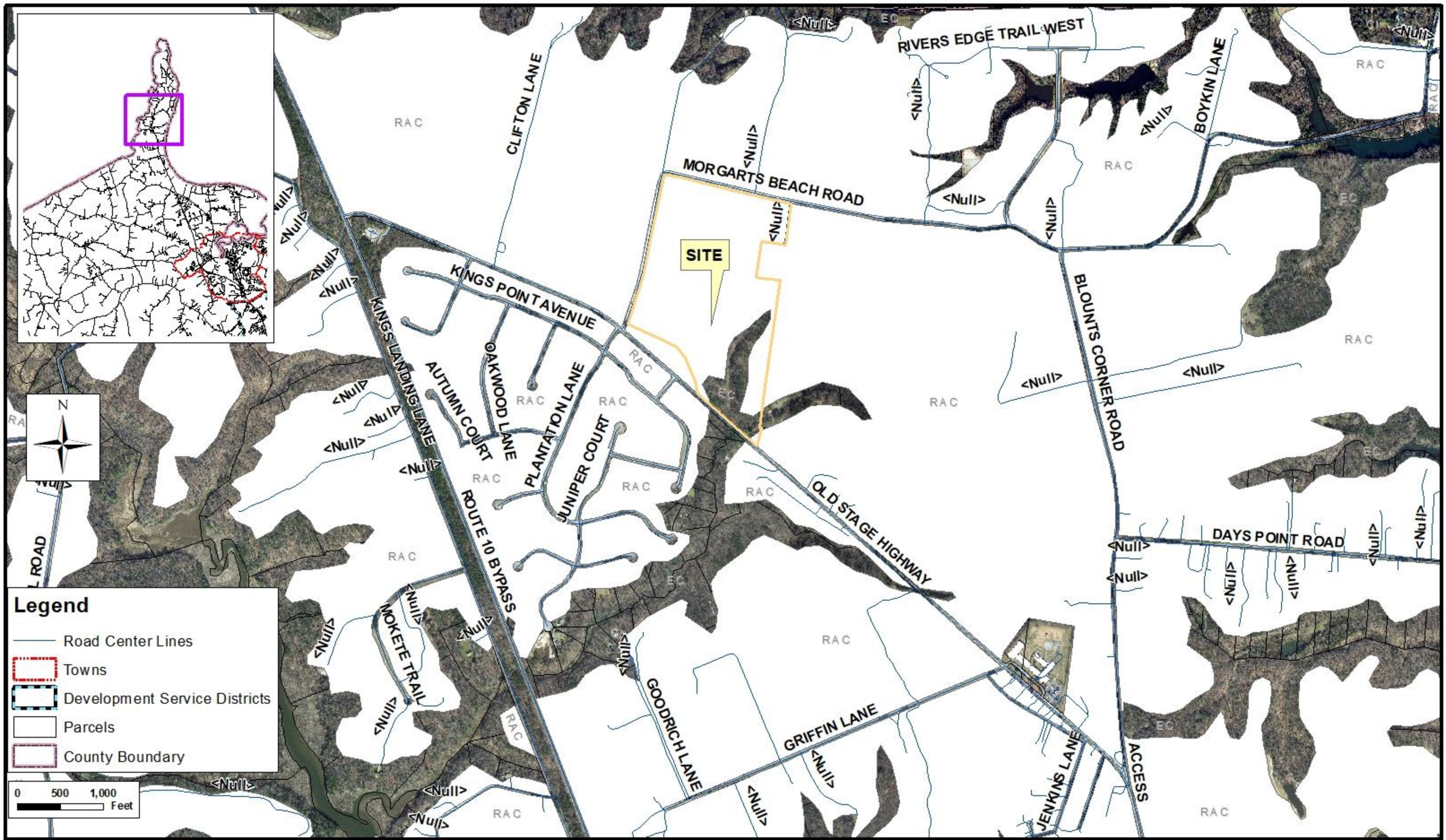
CUP-6-23 - Conditional Use Permit- Location Closeup Map



CUP-6-23 - Conditional Use Permit- Zoning Map



CUP-6-23 - Conditional Use Permit- Land Use Map



VAL025 - Ecological Core Areas



April 24, 2024

1:18,041

0 0.13 0.25 0.5 mi

0 0.17 0.35 0.7 km

Adjacent States

Ecological Cores

C1: Outstanding

C2: Very High

C3: High

C4: Moderate

C5: General

Esri Community Maps Contributors, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US

Sycamore Cross A and B Solar Projects with Approved Solar Energy Generation Facilities as of 6/13/24

PROJECT	DEVELOPED AREA (PER CUP)	PRIME FARMLAND /SOILS OF STATEWIDE IMPORTANCE*	% OF TOTAL PRIME SOILS (rounded)	LOCATION	% OF TOTAL FARMLAND**	TOTAL MW	APPROVAL DATE
Woodland	180	124	0.10%	Longview	0.22%	20	2015
Solidago	170	170	0.14%	Redhouse	0.21%	20	2018
Ho-Fel	330	315	0.26%	Lees Mill	0.41%	55	2019; Amended 2023
Windsor PV1	630	630	0.52%	Windsor	0.78%	85	2019; Amended in 2021
Cavalier	500	500	0.41%	Hardy	0.62%	240	2021
Nuby Run	20	20	0.02%	Orbit	0.02%	2	2022
Carver	637	297	0.24%	Windsor	0.79%	71	Approved 7/23/2023
Prairie Solar	152	152	0.12%	Longview	0.19%	20	Approved 8/17/23
Courthouse Solar	18	18	0.01%	Route 258	0.02%	3	Approved February 2024
Old Stage (Proposed)	27.32	27.32	0.02%	Burwells Bay/Moonlight	0.03%	3	Under Review
TOTAL	**2,664**	**2,253**	**1.84%**		**3.30%**	**519**	

Prime soils include Prime Farmland, Prime, If Drained, and Soils of Statewide Importance – 122,296 total acres in County

****Total active agricultural lands as of 2017 Census of Agriculture – 80,672 acres***

PLANNING REPORT

APPLICATION:

Application of Elk Development, LLC, applicant, and William Pennie, Jr. and Teresa L. Crocker, property owners, for a conditional use permit for a major utility service, specifically a 3.0 MW utility-scale solar energy generation facility, on approximately 27.32 acres on a 94.21-acre tract located on Old Stage Highway with tax parcel number 13-01-005 in the Rural Agricultural Conservation (RAC) zoning district

ELECTION DISTRICT:

District 3

LOCATION:

The proposed project is located at 8699 Old Stage Highway (Rte.10). The access road to the site is located on Morgarts Beach Road. To the west of the site is the Keystone Segment of the Captain John Smith National Historic Trail. To the north is the historic resource known as the 1790 Bourne-Turner House located at 16303 Morgarts Beach Road. There is an area of residential development to the northeast. There is additional scattered residential development to the south along Old Stage Highway. A property location map is attached to this staff report.

BACKGROUND:

The 27.32-acre project is situated on a parcel consisting of approximately 94.21 acres primarily consisting of agricultural fields. The property is in the RAC zoning district. Not all acreage comprising this parcel is proposed for the solar facility. Based on the project area, 27.32 acres of crops will be removed from production. Approximately 23 acres will be in the fenced area of the solar facility project area. The subject property has never been developed and has been used historically for agriculture. Of the acreage included in the project area, six of the acres are considered prime farmland, with four of those acres included inside the fenced area.

DESCRIPTION:

The applicant has proposed a three-megawatt (MW) solar energy generation facility in the west portion of the property. An existing electric line that bisects the project area along Old Stage Highway will serve as the interconnection point. The project will consist of solar panels along with their racking systems and metal posts, inverters, and fencing.

A perimeter fence will encompass the solar panels and ancillary equipment and is required to be harmonious with the rural agricultural and historical character of the County. The site will bolster the existing vegetation to the east with a ten-foot landscape buffer along that same portion of the site. Screening around the remainder of the site will be in accordance with the County's requirements. An internal access drive made from an all-weather aggregate base will provide access to the arrays. The southern boundary of the site is located in the Highway Corridor Overlay District (HCOD).

<u>Public Facility Impacts</u>:

The applicant has proposed to use Morgarts Beach Road via Old Stage Hwy (Rt.10). Approximately 1300 feet of unpaved road on Morgarts Beach is proposed to reach the entrance to the site. Any roadway damage within the right-of-way that occurs after project construction begins will be documented and analyzed by both the applicant and VDOT. All costs for damage repairs will be paid by the applicant. The approved truck route will be monitored and enforced as a condition of approval, with permit revocation an option if violations occur.

In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by construction traffic and noise generation.

To ensure adequate provision of emergency services, the Fire Rescue Department has reviewed this application and has no concerns at this time. The applicant is required to submit an emergency response plan with the submission of the preliminary site development plan. The plan shall include a training program to be provided, at the discretion of the County, to County emergency responders concerning safety for on-site emergency response. The applicant shall install a Knox Box or other remote access technology at the facility access gates.

Environmental Assessment:

The project lies within the in the County's Chesapeake Bay Preservation Area (CBPA) Overlay District. There are no impacts proposed to any wetlands or watercourse with this proposal. If approved, wetlands are required to be confirmed by USACE during the site plan approval process.

No impacts to threatened or endangered species under the jurisdiction of the Virginia Department of Conservation and Recreation (DCR) are anticipated because of the proposed project. There are no impacts to identified ecological core areas. The applicant states that no tree removal is proposed as part of the project.

Historic Resources:

A Phase 1 Cultural Resources Survey of the project area was conducted by Stantec. This report was sent by the applicant to the Virginia Department of Historic Resources (VDHR) for their review and concurrence with the survey findings and recommendations. A letter from VDHR was provided with the application and is included as an attachment to this staff report. The letter was provided as technical assistance to assess potential impacts on historic properties.

During the archaeological survey, a shovel test was positive for cultural material. Three radial shovel tests were excavated at 25-foot intervals to determine the bounds of the newly identified cultural resource, with no radial shovel tests positive for additional cultural material. One new isolated archaeological site find (2607-IF1) was identified during this investigation. By definition, isolated archaeological find 2607-IF1 is not eligible for listing to the national registry of historic places (NRHP). No further archaeological work Is recommended within the Project Area.

The architectural survey identified a total of ten individual resources located within the architectural study area, defined as the project area and a 0.5-mile radius around the project area. Four of the identified resources included previously recorded resources and six newly recorded resources.

One of these resources, known as the Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006), had a federal determination of eligibility prior to the survey and was therefore not resurveyed. Other surveyed resources consisted of farms and single-family dwellings with associated outbuildings. The Bourne-Turner House (OHR #046-0031) had been determined as potentially eligible for listing in the NRHP by OHR in 2015. Based on the current survey, it is recommended that the resource maintain its NRHP eligibility status as the house and secondary resources retain integrity and appear to have not been significantly altered since the previous survey.

The Old Stage Highway Cemetery (OHR #046-5636), is not visible from the public right of-way and was therefore not able to be resurveyed. Based on the circumstances, the resource was considered eligible for environmental review. The Bourne-Turner house is roughly 1100 feet from the project area. The Old Stage Highway Cemetery is approximately 725 feet. The boundary of the Captain John Smith National Historic Trail is just a few feet from the project area. The study made a determination that the visual impact from the solar facility could negatively impact the Trail resource by changing the historic viewshed from the Trail. Current Ordinance requirements include a minimum 250 foot setback from historic or cultural resources as well as three rows of landscaping of staggered heights to screen the facility. Although the concept plan does not show this required setback, staff would like to state for the record that this will be required at site plan submittal and the concept plan as shown does not currently comply with this requirement.

The remaining resources surveyed during the current project are generally reflective of the late nineteenth to mid-twentieth century development of Isle of Wight County and lack direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP. As such, it is recommended that the resources are not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey. Mitigation was proposed in the Phase study. A mitigation memo has been attached to this report from VDHR.

Economic Impact Assessment:

According to the applicant's economic impact study, the proposed facility would generate approximately $226,500 in cumulative county revenue over a 25-year operational life and approximately $325,900 in cumulative county revenue over a 35-year operational life based on both projected real estate and machinery and tax revenues. In contrast, projected real estate tax revenue on the current agricultural land use over a 25 year period is $6,700 and a total of $8,900 over 35 years. The report also includes projected revenues resulting from construction activity on the site, but due to its temporary nature, it is not included in the staff report.

According to the 2022 Census of Agriculture (USDA-NASS), Isle of Wight County has 212 farms totaling 80,316 aces of land. The average farm size is 379 acres. The average annual market value of agricultural products sold per farm is $346,011, or $912.96 per acre. Using the same data to derive market values for crops cultivated on 27.32 acres to be converted for this project, the farmland generates an estimated $24,942.07 in market value.

Currently, agriculture and silviculture are two of the County's top industries. This project would be the tenth solar energy generation facility in the County and represents a subtraction of approximately .03% of the County's cultivated land (USDA-NASS, 2017). A table showing the previously approved and proposed solar energy facilities is attached to the staff report.

Staff also sent the project's fiscal impact analysis to the Commissioner of Revenue for review. The rollback estimate should be updated based on the total lease area rather than just the solar facility acreage. The acreage subject to the Conditional Use Permit would be reassessed for real estate taxes at $15,000 per acre.

Viewshed Analysis:

An effects evaluation, in addition to the Phase I architectural survey, was conducted for NRHP-listed, eligible, and potentially eligible properties that may be affected by the proposed project. Two resources were assessed for effects and included the potentially eligible Bourne-Turner House (OHR #046-0031) and the portion of the NRHP-eligible Keystone Segment Historic District of the Captain John Smith National Historic Trail (DHR #500-0006) within the current architectural study area. One resource, the Old Stage Highway Cemetery (DHR #046-5636), had not been evaluated for NRHP eligibility but was not visible from the public ROW. Based on the current proposed project area and the existing landscape, it is recommended that the proposed project would have an adverse effect on the Bourne-Turner House (OHR #046-0031) and the portion of the Keystone Segment of the Captain John Smith National Historic Trail Historic District (DHR #500-0006) located within the current architectural study area. The proposed project would have no effect on the Old Stage Highway Cemetery (DHR #046-5636). Mitigation in the form of a donation to the Isle of Wight County Museum has been accepted by VDHR.

COMPREHENSIVE LAND USE PLAN:

The future recommended land use designation for these properties is Rural Agricultural Conservation (RAC) and Environmental Conservation (EC) under the adopted Comprehensive Plan. Appropriate uses for the RAC land use designation include agriculture, horticulture, forest lands, and scattered low-density residential uses. Other uses such as resource extraction and utility-scale solar facilities are also permitted when appropriately sited with a Conditional Use Permit. Appropriate uses for the EC land use designation include wetlands, farms, forest uses, open space, and limited park facilities.

Solar energy facilities are considered compatible with RAC land use when properly sited and with the application of appropriate development criteria.

The areas designed as EC are outside of the proposed project area and should be preserved due to environmental constraints unless site-specific analysis demonstrates there are no environmental concerns in a specific area. In order to be consistent with the goals of the Comprehensive Plan, the proposed use will require screening landscaping and appropriate fencing to minimize its visual impacts on the surrounding area.

ORDINANCE REVIEW:

The zoning district classification for the subject parcels is RAC. The RAC zoning district is intended to preserve and protect areas of the County that are predominantly in agricultural and forestal uses and to maintain the existing land base to support those activities.

The applicant proposes to establish a three MW utility scale solar energy facility which is classified as a major utility service use type in the Zoning Ordinance. These facilities are permitted as conditional uses in the RAC zoning district and may be considered compatible with appropriate conditions to mitigate any potential negative impacts on the surrounding community.

The parcel is located just outside of 500-foot Highway Corridor Overlay District (HCOD) boundary line. Equipment is shown outside of the HCOD boundary line. At a minimum, the project will be required to meet the minimum setbacks of 75 feet from adjacent property lines and 125 feet from residential use parcels as required by the Zoning Ordinance. There is also a 250-foot setback requirement for all inverters and electrical equipment. The Ordinance also requires a minimum setback of 250 feet from any historical or cultural resource.

Following approval of the CUP request, the applicant will be required to submit a site plan application for review and approval that demonstrates compliance with all current plan criteria contained in Section 5-5003.M.4, supplemental use regulations for utility scale solar energy facilities, of the Zoning Ordinance.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use permit application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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 designated 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 described in the Zoning Ordinance, the Board may impose

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 be applicable;
2. Traffic conditions, including facilities for pedestrians, such as sidewalks and parking facilities; the access of vehicles to roads; peak period 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 of 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, theatres, 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 impacts, the effect on sensitive natural features, and opportunities for recreation and open space; and,
10. The preservation of cultural and historic resources or landmarks.

Following approval of the CUP, the applicant will be required to submit a site plan for review and approval in accordance with the Zoning Ordinance requirements and conditions of approval.

AGENCY REVIEW:

The application was forwarded to the following departments for their review:

Economic Development: The department stated it had no concerns.
Environmental Planner: All concerns addressed with the conditional use permit. Further information will be required at site plan review.
Commissioner of Revenue: Rollback estimates should be based on the entire acreage of the entire lease area not just the acreage of the solar facility. The acreage subject to the Conditional Use Permit would be reassessed at $15,000 per acre.
Emergency Services: Staff will work with applicant during site plan review on required Emergency Response Plan to include annual training.
Utility Services: Staff will review site plan for compliance with State Stormwater regulations.
Isle of Wight County Museum: Please see attached memo.
Virginia Department of Transportation (VDOT): No concerns at this time.
Please note that, should the conditional use permit be approved, the project will be subject to site plan review and approval from all necessary agencies.

STAFF CONCLUSIONS:

Strengths:
1. The proposed use would generate additional nonresidential tax revenue for future public service and facility needs for the County.

Weaknesses:
1. The proposed use would remove agricultural land from production.

2. Temporary impacts to residential development in the area from construction traffic and noise is expected during the construction phase.
3. There are adverse impacts to several historical resources without appropriate setbacks and screening. The concept plan does not demonstrate the ability to comply with current Ordinance requirements.
4. The facility as proposed is not appropriately sited as recommended for the designated future recommended RAC area in the Comprehensive Plan.

STAFF RECOMMENDATION:

Based on the weaknesses listed above, staff recommends denial of the CUP request. However, should the CUP be approved, staff recommends the following conditions: 1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads. 2) No improvements shall be located closer than 250 feet from boundary of the Keystone Segment of the Captain John Smith Trail. 3) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR. 4) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process. 5) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response. 6) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility. 7) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times. 8) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing. 9) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project. 10) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 11) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results. 12) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	6/14/2024
Concept Plan	Backup Material	5/20/2024
Narrative	Backup Material	6/14/2024
Transportation Route	Backup Material	5/20/2024
Economic Impact Analysis	Backup Material	6/14/2024

Visual Impact Analysis	Backup Material	5/20/2024
Wetland Study	Backup Material	5/22/2024
Threatened and Endangered Species Assesssment	Backup Material	5/22/2024
Phase 1 Study	Backup Material	5/20/2024
Isle of Wight County Musuem Response	Backup Material	5/20/2024
Mitigation Memo DHR	Backup Material	5/20/2024
Location Map	Backup Material	5/20/2024
Location Closeup Map	Backup Material	5/20/2024
Zoning Map	Backup Material	5/20/2024
Land Use Map	Backup Material	5/20/2024
Ecological Core map	Backup Material	5/22/2024
Solar Facility Table	Backup Material	6/18/2024

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[x] Conditional Use Permit (Are applicant proposed conditions attached?): x Yes _____ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): _____ Yes _____ No

Proposed Use or Activity: _____

_____

B. PROJECT DESCRIPTION:

Project Name: VAL025

Property Address (if any): 8699 OLD STAGE HWY, SMITHFIELD, VA 23430

Election District: 3

Comprehensive Plan Designation: RURAL AGRICULTURAL CONSERVATION

The use permit will apply to 22.62 acres out of 94.21 total acres

Tax Parcel Identification # 13-01-005 Number of acres to be effected: 22.62

Tax Parcel Identification # _____ Number of acres to be effected: _____

Tax Parcel Identification # _____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water _____ Private Well _____

Public Sewer _____ Private Septic _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): ELK DEVELOPMENT, LLC

Address: 6865 DEERPATH ROAD, SUITE 330

City, State, Zip Code: ELKRIDGE, MD, 21075

Phone No.: 570-847-7555 Email: rhickox@pivotenergy.net Fax No.: _____

Property Owner(s) Name(s): CROCKER WILLIAM PENNIE JR & TERESA L

Address: 16338 MORGARTS BEACH RD

City, State, Zip Code: SMITHFIELD, VA 23430

Phone No.: 757-651-9280 Email: fnhrugershooter@gmail.com Fax No.: _____

_____ 5/16/2024

Applicant Signature **Date**

_____ 24 MAR 23

Owner Signature *if different* **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: _____ Fees Paid: _____

Tax Query: [ ] Current [ ] Delinquent Distribution Date: _____

Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: _____

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided. **The required number of copies may be reduced with permission of the Zoning Administrator.**

- ☒ Application: Ten (10) copies of the original, executed application, one (1) digital copy of all application documents, and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page 3 of the application.
- ☒ The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☒ Ten (10) copies of a statement of the reasons for seeking such permit and if applicable, a statement of conditions.
- ☒ Ten (10) copies of a narrative description of the property which shall include the Tax Parcel Identification
- ☒ Ten (10) copies of a concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:
    - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
    - Title of drawing
    - Date of drawing
    - Existing wood line
    - North arrow
    - Scale bar
    - Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
    - Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
    - Street names including route number and width(s) of the right-of-way(s)
    - Ten (10) full size copies, with one (1) reduced 11-inch X 17-inch copy and a digital copy shall be submitted

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

☒ Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

☒ A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

☒ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

Jon Fitzpatrick

Printed or Typed Name

Signature

16/05/2024

Date

Pivot Energy



Conditional Use Permit Application for: Elk Development, LLC's

(a holding Company of Pivot energy)

VAL025- Old Stage Highway Project

Pivot Energy
1601 Wewatta St., # 700
Denver, CO 80202

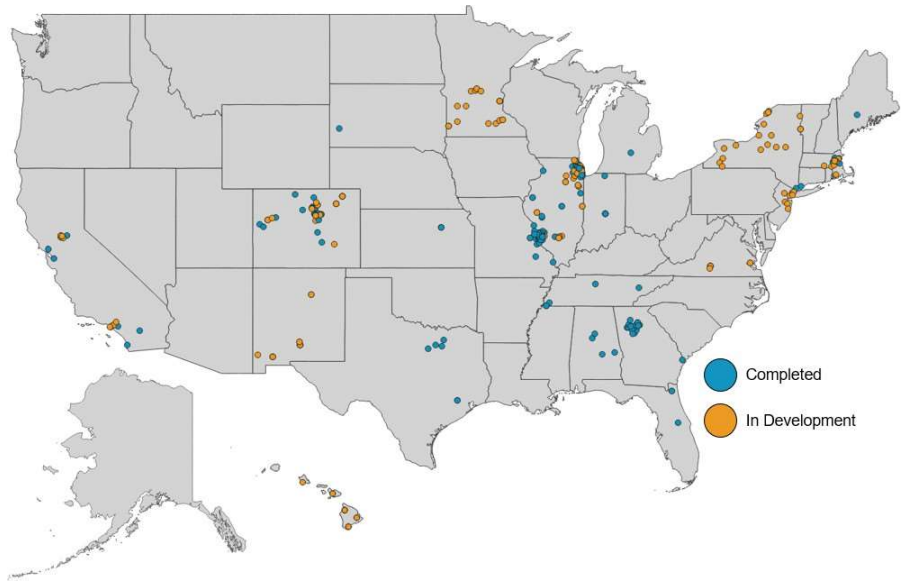
Executive Summary

Elk Development, LLC, a holding company of, Pivot Energy is pleased to apply for a Conditional Use Permit (CUP) from the County of Isle of Wight for Elk Development, LLC's VAL025- Old Stage Highway Project (aka: Old Stage) (the Project). This Project represents a small, solar photovoltaic (PV) facility totalling three (3) megawatts in capacity as measured in alternating-current (AC). The proposed project is located at 8699 Old Stage Hwy, Smithfield, Virginia. The subject parcel is identified as tax parcel 13-01-005 owned by William Pennie Jr & Teresa L Crocker. The site is accessed off Morgarts Beach Rd (SR 673), approximately 3.5-miles north of Smithfield. The site is in the Rural Agriculture Conservation (RAC) zoning district in Isle of Wight County. Hardy Elementary School is located approximately 0.7 miles southeast of the subject parcel. There are no recreation facilities within 1-mile of the site.

This project will positively impact the local community by employing local labor, decarbonizing the local grid, offering a discount to local subscribing Dominion customers, and providing increased resources to the County over the life of the project. Pivot's lead developer on this project, Robert Hickox, has previous experience permitting similar solar projects in Virginia. With a strong development and customer relationship background in small utility, commercial, and community solar projects, Pivot continues to expand its offerings throughout the solar industry by working with low-income communities, residential renters and homeowners, agricultural customers, local businesses, & local government organizations.

Prior Solar Development Success:

Recently Completed and Ongoing Projects



Community Solar Development Experience

Background on Pivot Energy

Pivot Energy is a turnkey solar developer of commercial and industrial solar projects founded in 2009 and headquartered in Denver, Colorado. Pivot has become a national leader in commercial and industrial solar projects, with hundreds of successful projects completed for many small, mid-sized and Fortune 500 companies, as well as for nonprofit, government, and military organizations.

Pivot Energy has built or developed the most community solar projects of any developer in Colorado and has expanded to build projects nationwide over the last several years. Our development team works in conjunction with our EPC team to plan a project for success from the beginning and execute in a timely manner. Pivot will provide turnkey development of the community solar garden, from initial site planning and engineering to system design, construction, commissioning, and customer subscriptions.

Pivot Energy is a certified B Corps, using a triple bottom line approach to measure our progress on more than just a financial basis. Our goal is to achieve balance between three, sometimes opposing, ends of People, Planet, and Profit. B Corps, or Benefit Corporations, are redefining success in business to include benefits to workers, society, and the environment. We aim to balance these measures in all aspects of our projects to bring widespread benefit to multiple areas of the community.

Certified B Corporation

Experience with Developing and Operating Similar Solar Facilities

Pivot Energy has invested heavily in both the Colorado community solar market as well as community and commercial solar nationally. Our company also has community solar projects either under construction or in development in states including Minnesota, Illinois, New York, New Mexico, Virginia, and more totaling well over 150MW.

In Colorado Pivot has become the largest community solar developer having built or in process of developing more than 70 MW of community solar. Pivot Energy is also one of the only developers to never abandon a community solar project with a 100% success rate post-bid. Our team's experience is deeply rooted in development having built many of the early projects at previous companies and then coming together as a team of industry experts to accelerate community solar development, construction, and customer adoption throughout the country.

Pivot Energy's SunCentral team has also become the largest and most all-encompassing subscription manager in Colorado with thousands of residential customers and serving more than 16MW of low-income customer capacity throughout Colorado. We are proud that our SunCentral management platform is so widely used by the market. Our team regularly communicates with MPEI to not only manage customers within the market but also look for ways to improve how utilities and developers can communicate and operate to continuously provide better experiences to the end customer and bring projects to successful completion.

Pivot Energy Acquisition by ECP

As of June 1, 2021 Pivot Energy is wholly owned by Energy Capital Partners (ECP)[1]. Founded in 2005, ECP is a leading investor across energy transition, electrification and decarbonization infrastructure assets, including power generation, renewables and storage solutions, environmental infrastructure and efficiency & reliability assets facilitating the energy transition. The ECP team, comprised of 53 people with 500 years of collective industry experience, deep expertise and extensive relationships, has consummated more than 60 transactions over the last 10 years, representing more than $45 billion of enterprise value.

More information on the acquisition available at: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

ECP has extensive experience in energy infrastructure with portfolio companies including Sunnova and Calpine. The investment in Pivot Energy by ECP allows for Pivot to not only develop solar assets and manage customers through our SunCentral platform but to maintain ownership of the assets through their full life. Additionally, Pivot Energy is a part of ECP's continued commitment to Environmental, Social, and Governance (ESG) goals and their expansion into renewable energy. Pivot Energy is ECP's first certified B Corporation and, as noted in their 2021 ESG Report highlights ECP's "ability to source attractive investments that have positive benefits from both a social justice and environmental standpoint."[2]

More information on ECP's ESG goals available at:
https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

In addition to the funding from ECP, Pivot Energy is nearing closing with both our tax equity partner and back leverage partner for our 2024 project portfolio that this project would be placed into. Pivot Energy is in final negotiations with a single tax equity partner that we have chosen as well as a single back leverage partner which are allowing us to get industry leading terms and cost of capital to make these projects very financially efficient.

In August 2022, Pivot Energy acquires SGC Power a Maryland-based community solar developer, who develops, and designs solar projects that produce long-term lease income for property owners while providing affordable clean energy to surrounding communities.

More information on the acquisition available at: Pivot Energy Announces Acquisition of Maryland-Based Community Solar Developer SGC Power (prnewswire.com)

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[1] PR Newswire – ECP Announces Acquisition of Pivot Energy: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

[2] Energy Capital Partners (ECP) – ESG Report: https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

Selected Customer List

Our customer list includes small, midsized, and Fortune 500 companies, as well as utilities, nonprofits, governments, and military institutions.



Project Design

Elk Development, LLC seeks to develop Old Stage with a collective nameplate capacity up to 3MWac. The clean energy generated by the solar array will be delivered to Dominion Energy's grid (the Grid) at 12kV, 3 phase distribution line along Old Stage Hwy. The Project is designed to be a community solar project that would offer a discount to local Dominion customers on their utility bill once operational. The system will be installed at 8699 Old Stage Hwy in Isle of Wight County. The subject parcel is identified as tax parcel 13-01- 005 owned by William Pennie Jr & Teresa L Crocker. The site is accessed off Morgarts Beach Rd (SR 673), approximately 3.5-miles north of Smithfield. The property consists of woodland and agricultural fields. The site is in the Rural Agriculture Conservation (RAC) zoning district.

Old Stage will be comprised of approximately 7,770 solar PV panels from Tier 1 manufacturers. Elk Development and Pivot Energy only uses crystalline solar panel using silicon and inert borophosphosilicate glass on their solar facilities. These panel are recyclable and do not have the potential toxic effects of cadmium-telluride panels (CDTe).

Standard additional equipment includes single axis tracker components, DC to AC inverters, medium-voltage transformers and control cabinets, project switchgear, meters, and the attachment facilities to the current local grid.

These panels will be mounted to a single-axis tracking (SAT) system designed to maximize the panel production by following the rising and setting of the sun. This SAT system includes linked horizontal steel support beams known as torque tubes, with a centrally located drive train system. The rows will be 22 feet apart (center-to-center) and the square footage of the panels will account for approximately 24% of the total Project acreage. The racking system will be affixed to pile-driven metal beams at a depth of approximately 10 feet. At full tilt, the maximum height of any panel will be under fifteen feet (15').

The solar panels in each row will be wired together into a circuit. There will be a DC to AC string inverter for approximately every 3 rows, typically mounted on a piling adjacent to the tracker structure. Once the inverter converts the panels DC power to AC, this power will be transmitted from the string inverters via three-phase direct-buried cables (at a depth of approximately 4.5 feet) and aggregated at the AC collection switch gear before moving to the medium-voltage transformer. This transformer will be mounted on a concrete slab alongside project switchgear and control cabinet. After the transformer steps up the electric power voltage to match the existing Grid, the power is transmitted to the Project's protective recloser and metering equipment before connecting with Dominion's powerlines.

An internal access drive made from all-weather aggregate base will provide access to the array. This Site access will be restricted by a perimeter security fence in compliance with Federal and State regulations. Manual swing gates will be built at the main entrance and other required entry points as determined by maintenance crews and/or safety personnel. National Electric Code Standards for safety and signage will be met or exceeded.

The project will be obscured from view by providing fence and using natural and planted vegetative buffers will meet or exceed the standards outlined by the County of Isle of Wight's ordinance.

Environmental Impact

Land Use

The project area is currently open agricultural field. Woodland areas exist on the subject parcel outside the project limits. The site is bounded on three sides by woodland and agricultural fields with a dwelling to the north. A residential neighborhood is located south of the property across Old Stage Hwy. The site fronts on Old Stage Hwy (BUS VA-10) to the south and Morgarts Beach Rd (SR 673) to the west and north.

Topography

The site topography can be described as fairly flat coastal plain. The site predominately slopes gently eastward with some low spots on the property. There are no steep slopes within the project area. A topographic survey of the project area was performed by Dawood Engineering, Inc. in October and November 2022. The streams and wetlands within the project area were delineated by Dawood Engineering, Inc. in October 2022. The vertical datum used is the North American Vertical Datum 1988 (NAVD 88). The horizontal datum is the North American Datum 1983 (NAD 83), Virginia State Plane Coordinate System.

Soils

The soil delineation for this project was completed using the United States Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Soil types expected within the subject parcel include Slagle fine sandy loam (18A, 18B), Yemassee fine sandy loam (23), Emporia fine sandy loam (5A, 5B), Chipley sand (4), Nawney loam (10), and Nevarc and Remlik soils (11E). Of these, 11E is a highly erodible soil, 5B and 18B are potentially highly erodible, and 4, 5A, 10, 18A, and 23 are not highly erodible. Soils 5A, 5B, 18A, and 18B are prime farmland. Soils 23 are prime farmland if drained. Soils 4, 10, and 11E are not prime farmland.

As indicated by the Virginia Department of Energy geological mapping, the site is underlain by the Charles City Formation (Qcc). This formation varies from 0-55 feet or more in thickness and consists of light- to medium-gray and light- to dark-yellowish and reddish-brown sand, silt, and clay composing surficial deposits of riverine terraces and coast-parallel plains. This unit is adjacent to, and inset below, the Windsor Formation and older deposits.

Wetlands & Receiving Waters

Pivot Energy has engaged a qualified environmental professional to conduct a field delineation to confirm that the site is designed away from the few identified, isolated wetlands to ensure no negative environmental impact. A summarized copy of this report is included in our application packet. Runoff from the subject parcel drains to Lawson Creek, or one of its tributaries. Lawson Creek flows through the eastern edge of the property. Lawson Creek is a tributary of Pagan River in the James River basin.

Wildlife Habitats

Coordination with various state and federal agencies determined no adverse impacts to threatened or endangered species are anticipated as a result of the project. Refer to the Threatened and Endangered Species Assessment prepared by Dawood Engineering, Inc for additional information.

Cultural and Historical Resources

A Phase I Cultural Resources Survey was completed by Stantec Consulting Services. Inc. in February and March 2023. No previously recorded archaeological nor architectural sites are located within the project area. One new isolated archaeological find, a whiteware body sherd, was identified. The find is not eligible for listing to the NRHP. One new architectural resource was identified on the subject parcel outside the project limits but was determined not eligible for listing in the NRHP. Three resources located within 0.5 miles of the project were considered eligible or potentially eligible for listing in the NRHP. Refer to the Cultural Resource Assessment prepared by Dawood Engineering, Inc for additional information.

State Agency Diligence

Before solar projects in Virginia can begin construction, they must be vetted by the Virginia Department of Environmental Quality (VADEQ) regulation process in the form of permits by rule (PBR). This state-level oversight ensures that conditions and standards necessary to protect the Commonwealth's natural resources are met by a proposed project. This review, in coordination with the Virginia Department of Historic Resources, the Virginia Department of Wildlife Resources, and the Virginia Department of Conservation and Recreation analyze the proposal for potential impacts on wildlife, historic resources, prime farmland, and environmental impact.

The thorough diligence involved in securing VADEQ's PBR—and any subsequent mitigation measures required—offer strong protection for localities considering a project like ours. The land use decision within our CUP application is only the first of many steps a project must satisfy before submitting for a building permit.

Construction

Construction of the solar energy system, including access road and interconnection to the electric grid, is to occur in three phases. The first phase of the project is anticipated to take 6 months to complete and will consist of construction of 1 MW of solar panels, electrical switch gear, site preparation, fencing, access road, and vegetative buffers. As Dominion Energy approves the interconnection of the second and third 1MW section of solar panels (both currently in study by the utility) they will be installed.

Construction of first phase is scheduled to start in September 2024. Finish date of the third phase is anticipated to be in April 2025. This schedule is based on the latest available information. Actual dates may vary based on regulatory requirements, weather, and other unforeseen issues. It is anticipated that onsite work will be conducted during the standard workweek (Monday through Friday) when workers will be onsite from 7:00AM to 5:00PM (10 hours). In the event of inclement weather, missed weekdays may be occasion made up on Saturdays to maintain construction schedules.

Construction activities associated with the project include establishing access, material delivery and storage, loading and hauling, construction of racking system with driven posts for foundations, mounting of solar modules, construction of equipment pads, installing equipment, trenching underground cable ductbanks, backfill and compaction, installing utility poles and aerial power lines, installing security fencing, and revegetation.

Construction of the solar energy system and site appurtenances is to occur in sections to limit disturbed area. The following is a general estimation of duration of the activities associated with the project. Some will occur simultaneously as work progresses. Estimated timing of the construction activities are as follows:

- Sediment control devices are to be installed in each area before any upslope earth disturbance commences. It is anticipated installing the sediment control devices will take approximately 1 week.
- Access road construction is anticipated to take roughly 1 week.
- Construction of the racking system and installation of solar modules will take approximately 4 months.
- Construction of the equipment pad and installation of equipment will take approximately 3 weeks.
- Trenching and cable installation will take approximately 6 weeks.
- Installing the poles and overhead power lines, including the interconnection, will take approximately 2 weeks.
- Final restoration, including seeding and mulching, is to be completed immediately as improvements are finished in each area. It is anticipated final restoration will take approximately 2 weeks.
- Sediment control devices are to be removed once the upslope area has been permanently stabilized. This should take less than 1 week.

Operations and Maintenance

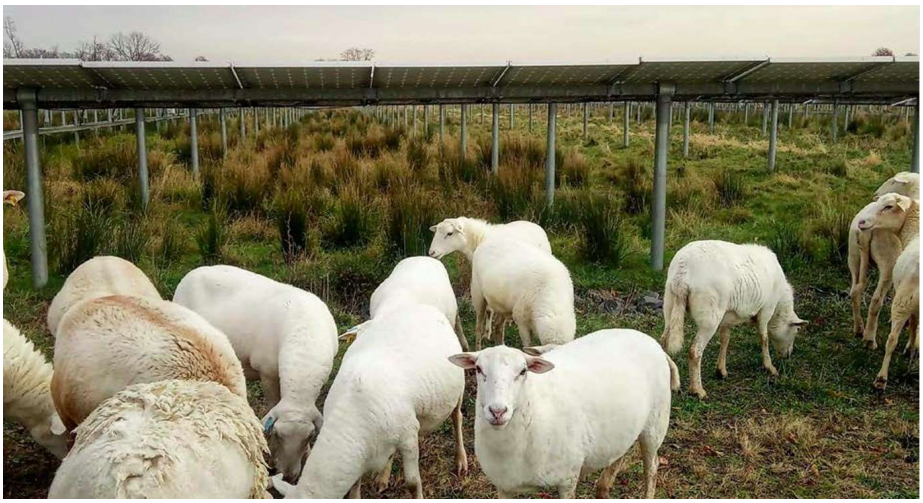
After construction is complete, we anticipate minimal site access requirements for Project maintenance activities. At a minimum, the Project will undergo two annual preventative maintenance checks, once in the spring (~April) and once in the fall (~August). While all products installed on site are of the highest quality per industry standard testing practices & classifications, occasional dispatch to site may be required to correct outages on an as-needed basis. Corrective activities such as this may add two to four site access instances each year.

As the long-term owners & operators of the proposed Project, our team will also actively monitor site performance 24/7 and will address any issues in a timely manner. Based on performance impact, our contracted O&M providers will respond within 24, 48, or 72 hours depending on the outage type. Our sites are unmanned regularly unless maintenance is required, which would occur between Monday – Friday from 8 AM – 5 PM.

Average rainfall in the County of Orbit Rd. anticipated to be adequate for natural cleaning of the panels. Vegetative ground cover will be managed during the growing season in compliance with local requirements, including but not limited to land use permit specifications, water management plans, and site access agreements.

Solar Grazing – Vegetative Maintenance through Dual Ag Use

“Solar Grazing” is a method of vegetation control for solar sites that utilizes livestock. Sheep are best suited due to their size and grazing behavior. Ground cover is established with a “Fuzz and Buzz” mix that is conducive to grazing as well as pollinating. Projects such as the proposed Old Stage. would contract with local sheep farmers to move onto site in the Spring, care for them during grazing season, and move off site in the Winter. Sheep are excellent at grazing under panels where mowing is more labor intensive. The perimeter fence protects sheep from predators and solar panels provide shelter from rain, wind, and direct sun on hot days.



Pivot Energy has established a partnership with United Agrivoltaics to help lead our Solar Grazing initiatives. With a network of sites across the country and partners in Solar Grazing since 2015, United Agrivoltaics will assist Pivot Energy in a vegetative maintenance plan for this dual use.

Impacts and Mitigations

Water – No on-site source of potable water will be required during construction or operations for Old Stage. If any on-site water source is required during construction or operation, it will be supplied by the host Project and sourced off-site. No new well will be dug for this project.

Sound – The majority of sound associated with the proposed Project will occur during construction. This is expected to be the result of material deliveries to the Property and support beam installation for the array. Impacts from noise are mitigated from a selected site that has few abutting neighbors and restricted hours of construction operations.

Once operational, Old Stage will be practically inaudible. At a distance of 3ft from the security fence, our inverters and racking equipment create a sound comparable to a home HVAC unit. These sound measurements fall to less than 50dB at only 50ft from the perimeter—equivalent to background noise in the County.

Glare – No glare hazard is expected during construction or operations. Our Tier I panels are treated with anti-glare coating and are designed to absorb as much sunlight as possible. The setbacks and robust vegetative screening from neighbors will further obscure any visual impact of the proposed Project.

Odor – Our EPC team will store, collect, and dispose of any solid construction material waste to prevent any odors from the Site, mitigating any impact on neighboring properties. No detectable odors are produced from the solar array components during operations.

Dust – Possible dust occurrence during operations is most likely to result from delivery or construction trucks on the Site. This will be mitigated by spraying water on dry dirt and enforcing a 5 MPH speed limit within the construction area. Minimal vehicle or foot traffic during operations and vegetative groundcover will naturally mitigate against concerns for dust.

Security and Access – The perimeter fence around the array will be no taller than 8 feet in height and contain no barbed wire. This fence will be black or another neutral color with final design approval to be sought from the Planning Director. The gates within the fence will remain locked while access will be coordinated through our operations and maintenance personnel. Our Site will provide a "Knox Box" to provide 24/7 access for local emergency personnel. The Applicant will ensure suitable access from Pocket Road is maintained for fire or other emergency vehicles.

Removal

At the end of the Project's life, it will be decommissioned and removed from the Property. Formal notice of end of operations will be sent to County via Certified Mail. The Project will then be completely removed from the Property and reasonably restored to previous condition within 365 days of receipt of notice. Old Stage would expect County approval of our decommissioning plan—to include posting of surety funds—prior to building permit issuance. We have included a preliminary decommissioning cost estimate in our submission.

Economic Development

Jobs

To the extent possible, Old Stage will source local materials and labor for the construction and maintenance of the project. We estimate that this project will create approximately 30 new construction positions and 1-2 operations positions. Operations jobs will be focused on facility upkeep with responsibilities such as vegetation management, equipment repair, and component maintenance. Typical cadence for site maintenance is every two to three months.

Increased County Revenue

Additionally, this project's lease revenue would provide direct fiscal benefit to the County. This has been outlined in a report commissioned from MAGNUM ECONOMIC's *"VAL025 - OLD STAGE HIGHWAY ECONOMIC AND FISCAL CONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA*". This report has been included in our application.

Regulatory Conformance

Virginia Code § 15.2-2232 requires that the Board of Supervisors makes a determination as to whether or not the general location, character, and extent of a proposed solar energy facility is in substantial accord with the locality's adopted comprehensive plan.

The Project includes construction of an approximately 22.62-acre solar farm (including buffer areas) within the existing field. Existing woodland and buildings are to remain. The proposed development is shown on the concept plan included with the conditional use application. A solar energy system (utility service/major) is a permissible use by conditional use within the RAC district. This statement has been prepared to show the proposed use will conform to the standards of the Zoning Ordinance. We believe the standards of section 1-1017 (Conditional Uses) have been met and respectively request the conditional use be granted. The standards for review and the conditions and guarantees have been addressed as follows:

Zoning Ordinance Section 1-1017.H – Standards for review of a conditional use application

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;*
   The adverse effects of the proposed use on the public health, safety, and general welfare would be minimal. The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable federal, state, and local requirements and in general conformance with manufacturer recommendations and industry standards. All proposed equipment is to be readily accessible for fire and police protection. Measures, such as vegetative screening and security fencing, are proposed to mitigate any potential adverse effects and limit access.
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;*
   The proposed use is compatible with the other uses in the area providing energy for the neighborhood and will not be injurious nor substantially impair the use of other property in the area. Existing and proposed screening will limit the visual impact from adjacent property and roadways.
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;*
   The proposed use does not require permanent water supply or sewage disposal. With established vegetation beneath and around the solar panels, the existing storm drainage facilities should be adequate and will be supplemented with further management facilities as needed during Site Plan Review. A short gravel access road is to be constructed to provide direct access to the solar energy system. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards.
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;*
   Traffic generated by the use should be negligible consisting of the occasional inspection or maintenance vehicle. A gravel drive from the public roadway is to be constructed to provide access directly to the solar farm.

5. *That the proposed conditional use is not contrary to the goals and objectives of the Isle of Wight County comprehensive Plan;*

The proposed use is consistent with the comprehensive plan. As stated in the plan, a solar farm is an appropriate use for the Rural Agricultural Conservation area. The use is consistent with the priority to protect natural resources and rural lifestyle and the policy to facilitate non-residential development. Converting the area from an agricultural field has the potential to reduce the amount of stormwater runoff, increasing groundwater quantity, by changing the ground cover. This would also potentially improve the quality of surface water and groundwater by reducing the use of fertilizers and pesticides. The combination of natural and supplemental screening and fencing to be maintained around the solar panels will preserve the rural character of the area.

"Require facilities to be located adjacent or close to existing electric transmission lines."
The project proposes to interconnect to the Dominion three-phase powerlines that run across the property's road frontage along Old Stage Hwy.

"Require facilities to be located outside of DSDs."
The project is sited on a property that is approximately 7.0 miles away from the nearest DSD (Newport).

"Avoid or minimize impact to prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively."
The parcel being used takes up only 22.62. acres of cropland out the 94 acre property, which will continue to be farmed. Given the average farm size of 340 acres and over 80,000 total farm acres in Isle of Wight County, Old Stage presents a negligible impact on farmlands, which it more than offsets by providing homes with clean, locally generated power.

Additionally Pivot Energy promotes as a standard the use of sheep grazing as vegetation control on the site, which will allow the land to continue to function as agricultural lands.

"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 sight with a resource location) or within the Highway Corridor Overlay district."
The proposed existing, mature vegetative buffer along Old Stage Hwy will provide complete screening of the site from the public.

The Comprehensive Plan also outlines several Policy themes with Action Items associated toward those ends. Below are some of the more applicable selections regarding solar projects and our determination of the project would fit.

Preserve: Protect water quality from sedimentation and pollutants carried by runoff through the continued enforcement of the local stormwater management program.
Before final site plan approval, Pivot Energy must secure confirmation from the Virginia Department of Environmental Quality that the designed stormwater management features will meet or exceed the rates of current property use. Verification of this confirmation will safeguard against any degradation of local stormwater management as a result of the project.

Shape: Protect rural historic landscapes by ensuring development is consistent with existing community character through performance criteria for new development.

The vegetative screening plans provided offer mature, existing bufferings required by the solar ordinance. Exceeding the vegetative screening standard by this degree shows the specific focus on existing community character.

Serve: Encourage collaboration with the private sector to provide integrated infrastructure in the most efficient way possible.

Serve: Design and develop public facilities, wherever possible, that take advantage of alternative energy sources and conserve energy in operations.

Serve: Ensure all major utility service use types mitigate any potential negative impacts to the character and future viability of surrounding land uses.

The Old Stage project offers alternative energy sourced power generation for the local community, financed by private investment, to the net fiscal benefit for the county. By designing vegetative buffering that exceeds the county requirement for solar projects in its particular location, Old Stage is sited respectfully to local character and land uses while allowing the site landowner to exercise his property rights.

Educate: Continue to grow programs that enhance job skills of County residents needed by employers.

Pivot has contacted SHINE to coordinate plans for community colleges and academic institutions across Virginia so we can increase access to solar training programs across the state.

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;*

   The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable regulations.

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.*

   The proposed use at this location will not result in a saturation of similar uses in the same neighborhood. The only other known solar farms in the county are at Oliver Farms and Bennetts Creek Nursery located approximately 9-miles south of the site off VA-10/VA-32 near the county line with Suffolk. There are two other proposed solar projects approximately 10-miles south of this project. One project is currently under construction on Redhouse Road. Another project is approved but not yet constructed on Orbit Road.

   Proximity to three phase power lines and substations limits the available areas suitable for the installation of solar projects. After this site is constructed the electrical infrastructure supporting these facilities will be built out and not able to support further development.

Zoning Ordinance Section 1-1017.I – Conditions and guarantees

1. *The number of persons living or working in the immediate area and the proposed hours of operation, as may applicable.*

   N/A - No persons are to be located on-site. Any necessary maintenance personnel will be stationed elsewhere. Operations will be continuous while the sun is shining though personnel will generally only be onsite during inspections and maintenance.

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;*
   The nature of the proposed use, the site layout, and its relation to access streets are such that both pedestrian and vehicular traffic should not conflict with the normal traffic of the neighborhood. Traffic should be minimal utilizing a proposed gravel drive for access. Adequate parking is proposed for the occasional need. Fencing is proposed to restrict access.

3. *The orderly growth of the neighborhood and community and the fiscal impact on the county;*
   The proposed use is of such location, size, and character that, in general, it will be in harmony with the appropriate and orderly growth of the neighborhood and will not be detrimental to the orderly growth of adjacent properties. The proposed use will a provide supplementary energy source for the community. Traffic will be minimal and sufficient landscaping is proposed to screen adjacent properties. The proposed use will not have a significant fiscal impact on the county, other than the increase in tax base due to the change in use.

4. *The effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise upon the use of surrounding properties;*
   The proposed use, under normal operations, is not expected to produce any significant effects that would adversely impact the surrounding properties. Solar panels are designed to absorb light, with any glare to be minimized by the angle and tilt of the panels. Additionally, the proposed screening will further obscure any glare to adjacent roads and properties. All equipment is to be designed and operated in accordance with Federal, State, and local regulations. The solar panels will produce virtually no noise, vibrations, fumes, smoke, gas, dust, or odors. The system equipment is not expected to generate meaningful noise levels, vibrations, fumes, smoke, gas, dust, or odors. The location of the solar panels and equipment within the parcel and the use of vegetative screening will reduce the effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise from the use adversely impacting 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;*
   The proposed use would not create undue impacts to police, fire protection, or ambulance services. Fencing is proposed to restrict access and standard fire safety measures are to be utilized to reduce fire hazards. All proposed equipment is to be readily accessible for fire and police protection. Emergency response service to the site is to be facilitated through the construction of a new access road. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards. The proposed use does not require sewerage, water, or waste disposal services.

6. *The degree to which the development is consistent with generally accepted engineering and planning principles and practices;*
   The developer intends to design, construct, operate, inspect, and maintain the proposed development to be 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;*
   The nearest such public facility is the Hardy Elementary School approximately 0.7-miles southeast of the subject parcel.

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;*
   The proposed use does not conflict with the purposes set forth in the ordinance nor comprehensive plan. The proposed use is consistent with the comprehensive plan. Due to the nature of the use, the effect on the roads, parks, schools, sewers, water, population, and recreation should be negligible. The use does not involve the construction of facilities that would directly cause an increase in population or increase the demand for public facilities and services.
9. *The environmental impact, the effect on sensitive natural features, and opportunities for recreation and open space;*
   N/A – Any adverse environmental impact from the proposed use is negligible. The proposed construction area is limited to the existing farm field. The development will not result in the loss or damage of any sensitive feature. Recreation and open space aren't applicable to this development as it will not result in additional residents.
10. *The preservation of cultural and historic resources or landmarks.*
    There are no known cultural or historic resources or landmarks within the project area. The proposed construction area is limited to the existing access and farm field. One new architectural resource, a house, was identified on the subject parcel outside the project limits. Three historical resources are located near the project, a cemetery across Morgarts Beach Road west of the project, a house on the parcel north of the project site, and the Captain John Smith Historic Trail north of the project area. Existing and proposed screening will minimize any adverse impact to these resources. Mitigation for any adverse effect of the proposed project on the resources is being coordinated with the Virginia Department of Historic Resources.

ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-06-23, TO ESTABLISH A MAJOR UTILITY SERVICE, SPECIFICALLY A THREE MW UTILITY-SCALE SOLAR ENERGY GENERATION FACILITY ON APPROXIMATELY 22 ACRES LOCATED ON OLD STAGE HIGHWAY AND MORGARTS BEACH ROAD ON TAX PARCEL NUMBER 13-01-005 ZONED RURAL AGRICULTURAL CONSERVATION

WHEREAS, Elk Development, LLC, applicant, and William Pennie, Jr. and Teresa L Crocker, property owners, have requested the issuance of a conditional use permit for a 3 MW utility scale solar energy generation facility on 22 acres with tax parcel number 13-01-005 which land is depicted on Exhibit "A"; 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,

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", "Property Map" and Exhibit "B," "Conditions of Approval," are attached hereto and are hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the proposal for a conditional use permit (CUP-06-23) as submitted or modified with conditions herein, the expressed purpose of which is to permit a major utility service, specifically a 3 MW utility-scale solar energy generation 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property is hereby approved for the property subject to the attached

conditions in Exhibit "B" and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a 3MW utility scale solar energy generation facility on 22 acres 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

ISSUE:

Application (CUP-7-23) of Elk Development, LLC, Applicant, and William Sawyer, Property Owner, for a Conditional Use Permit for a Major Utility Service, Specifically a Three Megawatt Utility-Scale Solar Energy Generation Facility, on Approximately 28.84 Acres Located on Orbit Road in the Rural Agricultural Conservation Zoning District and a Request to Withdraw 22.02 Acres from the Courthouse Agricultural and Forestal District

BACKGROUND:

Elk Development, LLC, applicant, and William Sawyer, property owner, submitted application (CUP-7-23) for a conditional use permit for a major utility service, specifically a three megawatt utility-scale solar energy generation facility on approximately 28.84 acres located on Orbit Road on tax parcel number 39-01-026 in the Rural Agricultural Conservation zoning district. The application includes a request to withdraw 22.02 acres from the Courthouse Agricultural and Forestal District.

The 28.44-acre project is situated on a parcel consisting of approximately 228.308 acres primarily consisting of agricultural fields. The property is in the RAC zoning district. Not all acreage comprising this parcel is proposed for the solar facility. Based on the project area, 27 acres of corn will be removed from production. Approximately 19 acres will be in the fenced area for the solar facility project area. The subject property has never been developed and has been used historically for agriculture. Of the acreage included in the project area, 11.0 of the acres are considered prime farmland, and approximately 17 acres of the project area are considered prime if drained.

On October 4, 2023, the Agricultural and Forestal District Advisory Committee held a public meeting to consider the withdrawal of approximately eighteen acres of land from the Courthouse Agricultural/Forestal District. The Committee recommended approval of the request.

A full analysis of the consistency of the application with the County's plans and ordinances is attached to this staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

At its July 23rd meeting the Planning Commission recommended denial of the application with a vote of seven in favor of the motion and two against the motion (7-2).

Staff recommends denial of the project based on the identified weaknesses of the application.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	7/9/2024
Concept Plan	Backup Material	7/9/2024
Narrative	Backup Material	7/9/2024
Transportation Route	Backup Material	7/9/2024
Economic Impact Analysis	Backup Material	7/9/2024
Visual Impact Analysis	Backup Material	7/9/2024
Wetland Study	Backup Material	7/9/2024
Threatened and Endangered Species	Backup Material	7/9/2024
Phase 1 Study	Backup Material	7/9/2024
Isle of Wight County Musuem Response	Backup Material	7/12/2024
Mitigation Memo DHR	Backup Material	5/20/2024
Solar Facility Table	Backup Material	6/18/2024
Location Map	Backup Material	7/11/2024
Location Closeup Map	Backup Material	7/11/2024
Zoning Map	Backup Material	7/11/2024
Land Use Map	Backup Material	7/11/2024
PC Staff Report	Backup Material	8/1/2024
Ordinance	Ordinance	8/5/2024

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[x] Conditional Use Permit (Are applicant proposed conditions attached?): x Yes _____ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): _____ Yes _____ No

Proposed Use or Activity: Solar Energy Generation Facility

B. PROJECT DESCRIPTION:

Project Name: VAL035

Property Address (if any): 18213 ORBIT RD, WINDSOR, VA 23487

Election District: 4

Comprehensive Plan Designation: RURAL AGRICULTURAL CONSERVATION

The use permit will apply to 28.44 acres out of 228.308 total acres

Tax Parcel Identification # 39-01-026 Number of acres to be effected: 228.308

Tax Parcel Identification # _____ Number of acres to be effected: _____

Tax Parcel Identification # _____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water _____ Private Well _____

Public Sewer _____ Private Septic _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): ELK DEVELOPMENT, LLC (a wholly owned subsidiary of Pivot Energy)

Address: 6865 DEERPATH ROAD, SUITE 330

City, State, Zip Code: ELKRIDGE, MD, 21075

Phone No.: 570-847-7555 Email: rhickox@pivotenergy.net (project manager) Fax No.:

Property Owner(s) Name(s): SAWYER W C

Address: PO BOX 245

City, State, Zip Code: CARROLL TON, VA 23314

Phone No.: 757-870-1982 Email: Fax No.:

5/16/2024

Applicant Signature **Date**

3-21-23

Owner Signature ***if different*** **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: _____ Fees Paid: _____
Tax Query: [ ] Current [ ] Delinquent Distribution Date: _____
Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: _____

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant ELK DEVELOPMENT, LLC

Address 6865 DEERPATH ROAD, SUITE 330
Street

ELKRIDGE MD 21075
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
18213 ORBIT RD	AGRICULTURE FIELDS & WOODLAND
WINDSOR VA 23487	

OTHER OWNERS OF AFFECTED REAL ESTATE

(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
SAWYER W C	PO BOX 245
	CARROLLTON, VA 23314

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes[ ] No[X]
If yes, names of members:

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct, and true.

Applicant: _____ Applicant: _____ Date: _____
Printed or Typed Name Signature

Commonwealth of Virginia
County of Isle of Wight

Subscribed and sworn to before me_____,
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia, this_____day of_____, 20_____.

_____
Notary Public

My Commission Expires_____

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided**. The required number of copies may be reduced with permission of the Zoning Administrator.**

- ☐ Application: Ten (10) copies of the original, executed application, one (1) digital copy of all application documents, and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page 3 of the application.

- ☐ The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.

- ☐ Ten (10) copies of a statement of the reasons for seeking such permit and if applicable, a statement of conditions.

- ☐ Ten (10) copies of a narrative description of the property which shall include the Tax Parcel Identification

- ☐ Ten (10) copies of a concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:
  - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
  - Title of drawing
  - Date of drawing
  - Existing wood line
  - North arrow
  - Scale bar
  - Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
  - Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
  - Street names including route number and width(s) of the right-of-way(s)
  - Ten (10) full size copies, with one (1) reduced 11-inch X 17-inch copy and a digital copy shall be submitted

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

☒ Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

☒ A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

☒ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

Jon Fitzpatrick

Printed or Typed Name

Signature

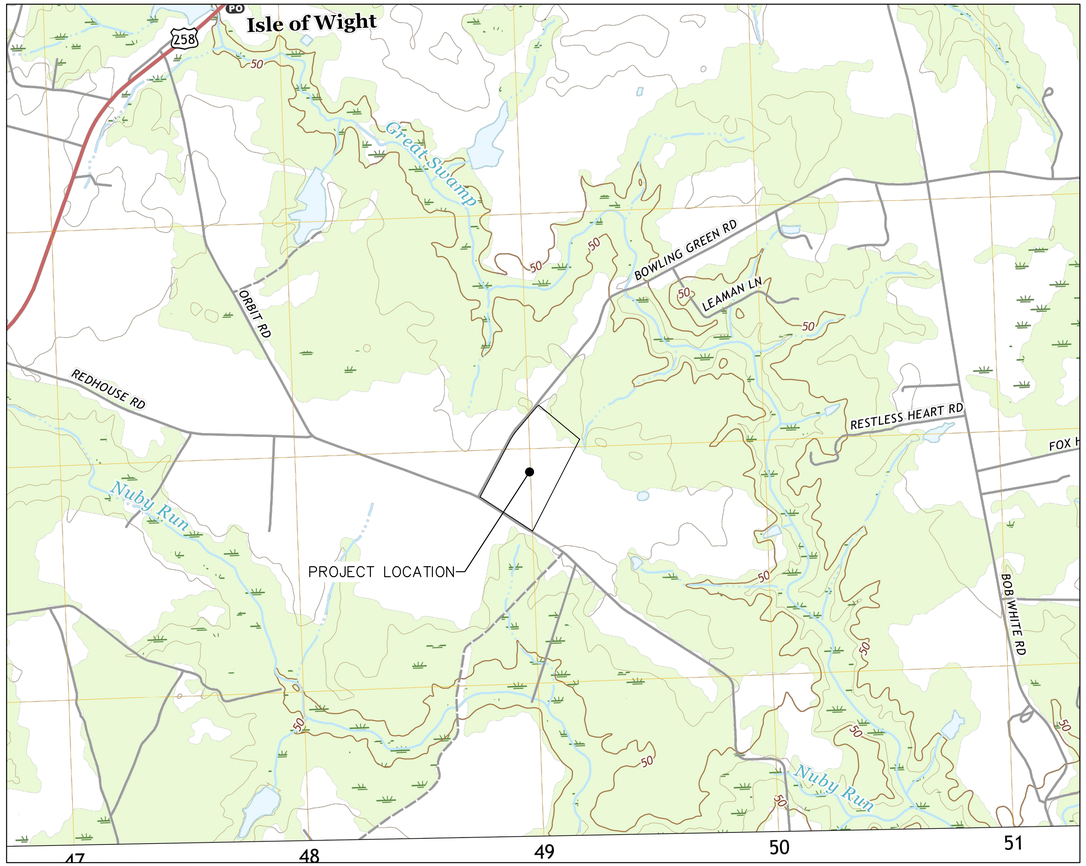
16/05/2024

Date

CONDITIONAL USE CONCEPT PLAN

VAL035
Solar Energy System

18213 ORBIT ROAD, WINDSOR
NEWPORT MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA



SOURCE: USGS QUADRANGLE MAP – SMITHFIELD, VA 2019

VICINITY MAP

1000 0 1000 2000
SCALE: 1" = 1000'

GENERAL NOTES

1. SOLAR PANEL AND ELECTRICAL LAYOUT AND DESIGN PROVIDED BY PIVOT ENERGY, 6865 DEERPATH ROAD, STE 330, ELKRIDGE, MD 21075. 410-779-9377
2. SITE PLANS AND DESIGN PERFORMED BY DAWOOD ENGINEERING, INC., 11 GRANDVIEW CIRCLE, SUITE 116, CANONSBURG, PA 15317, 855-432-9663.
3. THE DEVELOPER SHALL COMPLY WITH ALL APPLICABLE COUNTY ORDINANCES IN EFFECT AT TIME OF SUBMISSION OF THE PLAN.
4. SITE DEVELOPMENT PLAN APPROVAL DOES NOT RELIEVE THE OWNER FROM ALL APPLICABLE SIGN REGULATIONS. ALL PROPOSED ON-SITE SIGNAGE SHALL CONFORM TO THE COUNTY ORDINANCES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER IN WRITING.
6. NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF ANY EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH THE EASEMENT AGREEMENT.
7. ALL EXISTING UTILITIES HAVE BEEN SHOWN IN ACCORDANCE WITH THE AVAILABLE INFORMATION. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN. ADDITIONAL UTILITIES MAY BE ENCOUNTERED.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES AND WILL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES AND STRUCTURES AT ALL TIMES.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AND COMPLETELY AT HIS EXPENSE.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COPY OF ALL PERMITS RELATED TO THE CONSTRUCTION SHOWN ON THESE PLANS ON THE JOB SITE AT ALL TIMES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC SAFETY AS MANDATED BY DOT, OSHA, DEQ AND OTHER AGENCIES.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL.
13. RESTRICTION ON CONSTRUCTION ACTIVITIES SHALL APPLY FROM FEBRUARY 15 THROUGH JULY 31 WHERE LOCATED WITHIN 0.5-MILE OF A COLONIAL WATERBIRD COLONY. THE OWNER SHALL BE NOTIFIED IF ANY COLONIAL WATERBIRD COLONIES ARE IDENTIFIED ON SITE. THE OWNER SHALL BE RESPONSIBLE FOR COORDINATION WITH THE VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES.
14. IN ACCORDANCE WITH ISLE OF WIGHT ZONING ORDINANCE 5-5003, SECTION M.4.h., CONTRACTOR SHALL INSPECT AND VIDEO DOCUMENT ALL SECONDARY ROADS TO BE UTILIZED BY CONSTRUCTION VEHICLES PRIOR TO STARTING CONSTRUCTION AND AGAIN AFTER CONSTRUCTION IS COMPLETE. ALL ROADS DAMAGED BY SOLAR FARM CONSTRUCTION TO BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

SURVEY NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED ON FIELD SURVEY PERFORMED BY DAWOOD ENGINEERING, INC. IN OCTOBER AND NOVEMBER 2022.
2. THE LEGAL RIGHT-OF-WAY ON VA-637 VARIES, BASED ON SURVEY PLAT CABINET 2 SLIDE 189 PAGE 9 OF ISLE OF WIGHT COUNTY RECORDS.
3. THE LEGAL RIGHT-OF-WAY ON SR 644 IS 40 FEET, BASED ON DB 058372 PG 301.
4. VERTICAL CONTROL IS BASED ON NAVD 88 GEOID 18.
5. HORIZONTAL CONTROL IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM-SOUTH ZONE, NAD83 (2011) (EPOCH 2010.00).
6. ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE BASED UPON SURFACE FEATURES AND RECORD DRAWINGS PROVIDED. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM LOCATION SHOWN HEREON. ADDITIONAL BURIED UTILITIES AND STRUCTURES MAY BE ENCOUNTERED.
7. THE SITE IS NOT SITUATED WITHIN A FLOOD HAZARD AREA ACCORDING TO FEMA FLOOD INSURANCE RATE MAP PANEL NUMBER 51093C0150E, EFFECTIVE DATE 12/2/2015.
8. A FIELD DELINEATION OF WETLAND HABITATS WAS CONDUCTED BY DAWOOD ENGINEERING, INC. IN OCTOBER 2022. THE WETLANDS AND WATERCOURSES IDENTIFIED HAVE BEEN DELINEATED ON THE SURVEY.

LAND OWNERS

PARCEL 39-01-026
W. C. SAWYER

SOURCE OF TITLE

INSTRUMENT #80000378
RECORDED IN ISLE OF WGHT COUNTY
ON JANUARY 23, 2008
GRANTEE: W. C. SAWYER
GRANTOR: JLB, LLC

LEGEND
(TYPICAL ALL PLAN SHEETS)

- R/W Right of Way
- ℄ Center Line
- R Record
- F Found
- U Used
- B Book
- P Page
- I.P. Fnd. Iron Pin Found
- Pipe. Fnd. Pipe Found
- Stone Fnd. Stone Monument Found
- I.P. Mon. Fnd. Iron Pin Monument Found
- Mon. Fnd. Concrete Monument Found
- Axle Found
- Fence Post Found
- Angle Iron Found
- Mag Nail Found
- Railroad Spike Found
- Benchmark
- Bollard
- Road Sign
- Post Or Pole
- Handicapped Parking
- Electric Vault
- Electric Meter
- Electric Pole
- Guy Wire
- Light Post/Pole
- Telephone Manhole
- Cable Box
- Water Meter
- Water Manhole
- Water Spigot
- Water Valve
- Sanitary Sewer Cleanout
- Sanitary Sewer Manhole
- Gas Meter
- Gas Valve
- Gas Marker
- Gas Test Station
- Storm Sewer Inlet
- Storm Sewer Manhole
- Parcel Boundary Line
- Legal Right-Of-Way Line
- Center Line
- Edge Of Bituminous Paving
- Edge Of Gravel
- Curb
- Fence Line
- Guide Rail
- Building Line
- Tree Line
- E Overhead Electric Line
- UE Underground Electric Line
- T Overhead Telephone Line
- UT Underground Telephone Line
- CTV Overhead Cable TV
- UCTV Underground Cable TV
- W Water Line
- SS Sanitary Sewer Line
- G Gas Line
- Storm Sewer Line
- Water Edge / Stream
- Wetlands
- XXX Soil Type and Limits
- Minor Contour
- Major Contour

PLAN SHEET INDEX:

C1 ..... COVER SHEET
C2 ..... PROPERTY PLAT
C3 ..... NEARBY RESOURCES MAP
C4 ..... ENVIRONMENTAL SITE ASSESSMENT PLAN
C5 ..... EXISTING CONDITIONS SITE PLAN
C6 ..... SITE DEVELOPMENT PLAN

VISIT va811.com Dig With CARE

CALL 811 BEFORE YOU DIG
ALLOW REQUIRED TIME FOR MARKING
RESPECT THE MARKS
EXCAVATE CAREFULLY

THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT, AS AMENDED, REQUIRES THREE BUSINESS DAYS NOTICE TO UTILITIES BEFORE YOU DIG, DRILL OR BLAST. DIAL 8-1-1 OR 1-800-552-7001 NOT LESS THAN 3 BUSINESS DAYS NOR MORE THAN 15 BUSINESS DAYS PRIOR TO THE EXCAVATION OF A WORK AREA.

VIRGINIA ONE CALL SYSTEM TICKET NUMBER
DESIGN TICKET No.: A306001945-00A DATE: 3/01/23

LIST OF PUBLIC UTILITIES

COMPANY: DOMINION EAST DISTRIBUTIO (DOM409)
CONTACT: UTILIQUEST
804-286-1721
IN EVENT OF DAMAGE CALL: 866-366-4357

COMPANY: VERIZON (VZN757)
CONTACT: UTILIQUEST
757-315-8119
IN EVENT OF DAMAGE CALL: 888-483-1233

LISTING OF REQUIRED PERMITS

- ISLE OF WGHT COUNTY APPROVALS
  CONDITIONAL USE
  SITE DEVELOPMENT PLAN
- VDOT LAND USE PERMIT (LUP-CEI) FOR DRIVEWAY CONSTRUCTION WITHIN BOWLING GREEN ROAD RIGHT-OF-WAY
- VDOT LAND USE PERMIT (LUP-UT) FOR UTILITY INSTALLATION WITHIN ORBIT ROAD RIGHT-OF-WAY (BY DOMINION)
- VDEQ VPDES (VAR10) FOR LAND DISTURBANCE EXCEEDING 1-ACRE
- USACE/VMRC/VDEQ JOINT PERMIT FOR WETLAND DISTURBANCE

REVISIONS

NO.	DATE	DESCRIPTION
1	9/21/23	PER OWNER AND COUNTY COMMENTS
2	11/21/23	PER COUNTY COMMENTS

DOCUMENT PREPARED BY:
DAWOOD
11 Grandview Circle, Suite 116, Canonsburg, PA 15317
t. 724.746.0730 www.dawood.cc

SCALE:

DOCUMENT PREPARED FOR:
ELK DEVELOPMENT, LLC
6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL035 Solar Energy System
18213 ORBIT ROAD, WINDSOR
NEWPORT MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
COVER SHEET

DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-TI
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C1

O:\2022\JOBS\2200547-03\LD\CAD\DRAWINGS\2200547O3-LD-SK-TI
November/21/2023 9:15 AM

SITE AREA TABULATION		
PARCEL SIZE	6,624,959 SF	152.09 AC
PROJECT AREA LIMITS OF CONSTRUCTION	1,256,284 SF	28.84 AC
PROPOSED LAND DISTURBANCE	TBD	TBD
PROPOSED TREE CLEARING	NONE	
PROJECT AREA ACREAGE:	EXISTING	PROPOSED
SOLAR FARM (FENCED AREA)	0	19.64 AC (68%)
OPEN SPACE	28.44 AC (99%)	8.77 AC (31%)
BUILDING AREA	0.16 AC	0.16 AC
IMPERVIOUS COVERAGE	0.27 AC	0.36 AC
MOUNTED SOLAR PANELS	n/a	5.07 AC
FENCING	0.14 AC	0.32 AC
LANDSCAPING	n/a	3.08 AC
POINT OF INTERCONNECTION	n/a	0.08 AC
CROPS (CORN)	26.64 AC	0
PASTURE	0	0
WOODLAND	0	0
PARCEL AREA ACREAGE:	EXISTING	PROPOSED
CROPS (CORN)	118 AC	91 AC
PASTURE	0	0
WOODLAND	25 AC	25 AC

NET DEVELOPABLE ACREAGE *		
GROSS SOLAR LEASE AREA	28.71 Acres	
TIDAL WETLANDS	0	AT 100%
100-YEAR FLOODPLAINS	0	AT 100%
RESOURCE PROTECTION AREAS (INCLUDING 100-FT BUFFER)	0.74	AT 100%
NON-TIDAL WETLANDS	0.86	AT 50%
SLOPES >15% BUT <30%	0.18	AT 50%
SLOPES >30%	0.16	AT 100%
POWER TRANSMISSION LINE EASEMENTS	0	AT 100%
GAS TRANSMISSION LINE EASEMENTS	0	AT 100%
STREET RIGHT-OF-WAY, EXISTING OR PLANNED, PUBLIC OR PRIVATE	28.71	AT 20%
SOLAR LEASE AREA NET DEVELOPABLE AREA *	21.63 Acres	
* NDA CALCULATIONS FOR SOLAR LEASE AREA ONLY. NDA OUTSIDE THE SOLAR LEASE AREA HAS NOT BEEN DETERMINED		

LANDSCAPING AND SCREENING REQUIREMENTS	
TOTAL SITE REQUIREMENTS	
8-1003.B.	MINIMUM 25% EVERGREEN SPECIES MINIMUM 50% NATIVE SPECIES MINIMUM 15% LANDSCAPE SURFACE RATIO
LANDSCAPING ZONE REQUIREMENTS	
8-1005.F.1.	60' WIDE FRONTAGE ZONE 1.75 POINTS / LF MINIMUM 60% NON-ORNAMENTAL MAXIMUM 50% EVERGREEN
8-1005.F.2.	10' WIDE BUFFER ZONE 0.9 POINTS / LF (ADJ. TO RES. STRUCTURE) 0.45 POINTS / LF (NOT ADJ.) ONE PEDESTRIAN BREAK PER 50 LF (MIN. 6' WIDE)
8-1005.F.5.	10' WIDE SCREENING ZONE 0.8 POINTS / LF NOT INCLUDING FENCES/BERMS/WALLS
SOLAR ENERGY REQUIREMENTS	
5-5003.M.4.e.i.	PUBLIC ROAD 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF TREES AND SHRUBS AT MAXIMUM 8-FT ON CENTER
5-5003.M.4.e.ii.	ABUTTING RESIDENTIAL PARCEL 50' WIDE BUFFERYARD THREE STAGGERED ROWS OF LARGE AND SMALL CANOPY TREES AND MEDIUM SHRUBS AT MAXIMUM 8-FT ON CENTER

ZONING REQUIREMENTS / SITE DATA		
TAX PARCEL	39-01-026	
ZONING DISTRICT	RURAL AGRICULTURAL CONSERVATION (RAC) DISTRICT	
EXISTING LAND USE	AGRICULTURE	
PROPOSED LAND USE	AGRICULTURE	SOLAR ENERGY SYSTEM (UTILITY SERVICE/MAJOR)
WATER/WASTEWATER	EXISTING TO REMAIN	N/A
SITE ACCESS	ORBIT ROAD (VA-637)	BOWLING GREEN ROAD (VA-644)
REQUIRED LOT SIZE	40,000-SF	
ACTUAL LOT SIZE PER USE	123.38 AC	28.71 AC
TOTAL LOT SIZE	152.09 AC	
REQUIRED LOT WIDTH	150-FT	
ACTUAL LOT WIDTH	1520 FT	
REQUIRED LOT FRONTAGE	120-FT	
ACTUAL LOT FRONTAGE	2130 FT (SR 637) + 1529 FT (SR 644)	
MINIMUM FRONT SETBACK	60-FT	SOLAR ENERGY SYSTEMS: 75-FT ALL PROPERTY LINES (125-FT FROM RESIDENTIAL PARCELS)
MINIMUM SIDE SETBACK	15-FT (ONE SIDE) 35-FT (BOTH SIDES) (15-FT ACCESSORY STRUCTURES)	
MINIMUM REAR SETBACK	35-FT (5-FT ACCESSORY STRUCTURES)	
MAXIMUM BUILDING HEIGHT	LESSOR OF 35-FT OR 3-STORIES	
ACTUAL BUILDING HEIGHT	< 35 FT	N/A
MAXIMUM HEIGHT FOR GROUND-MOUNTED SOLAR PANELS	15-FT AT MAXIMUM TILT (EXCEPT FOR VEGETATION MANAGEMENT OR FOR INSPECTION, MAINTENANCE, OR REPAIR)	
MAXIMUM SOUND FROM SOLAR ENERGY SYSTEM	60 DbA (A-WEIGHTED DECIBELS) AS MEASURED AT ANY PARCEL LINE	
MINIMUM STORMWATER MANAGEMENT FACILITY SETBACK	20-FT FROM PUBLIC RIGHT-OF-WAY, PROPERTY LINES, EASEMENTS, OR ANY BUILDING	

REVISIONS		
NO.	DATE	DESCRIPTION
1	9/21/23	PER OWNER AND COUNTY COMMENTS
2	11/21/23	PER COUNTY COMMENTS

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DAWOOD
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SCALE: 1" = 200'

DOCUMENT PREPARED FOR:
ELK DEVELOPMENT, LLC
6865 DEERPATH ROAD, SUITE 330
ELKRIDGE, MD 21075
410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL035 Solar Energy System
18213 ORBIT ROAD, WINDSOR
NEWPORT MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
PROPERTY PLAT

DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-0A
DRAWN BY	CWW
CHECKED BY	JTP

SHEET NO
C2

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November 21, 2023 9:17 AM

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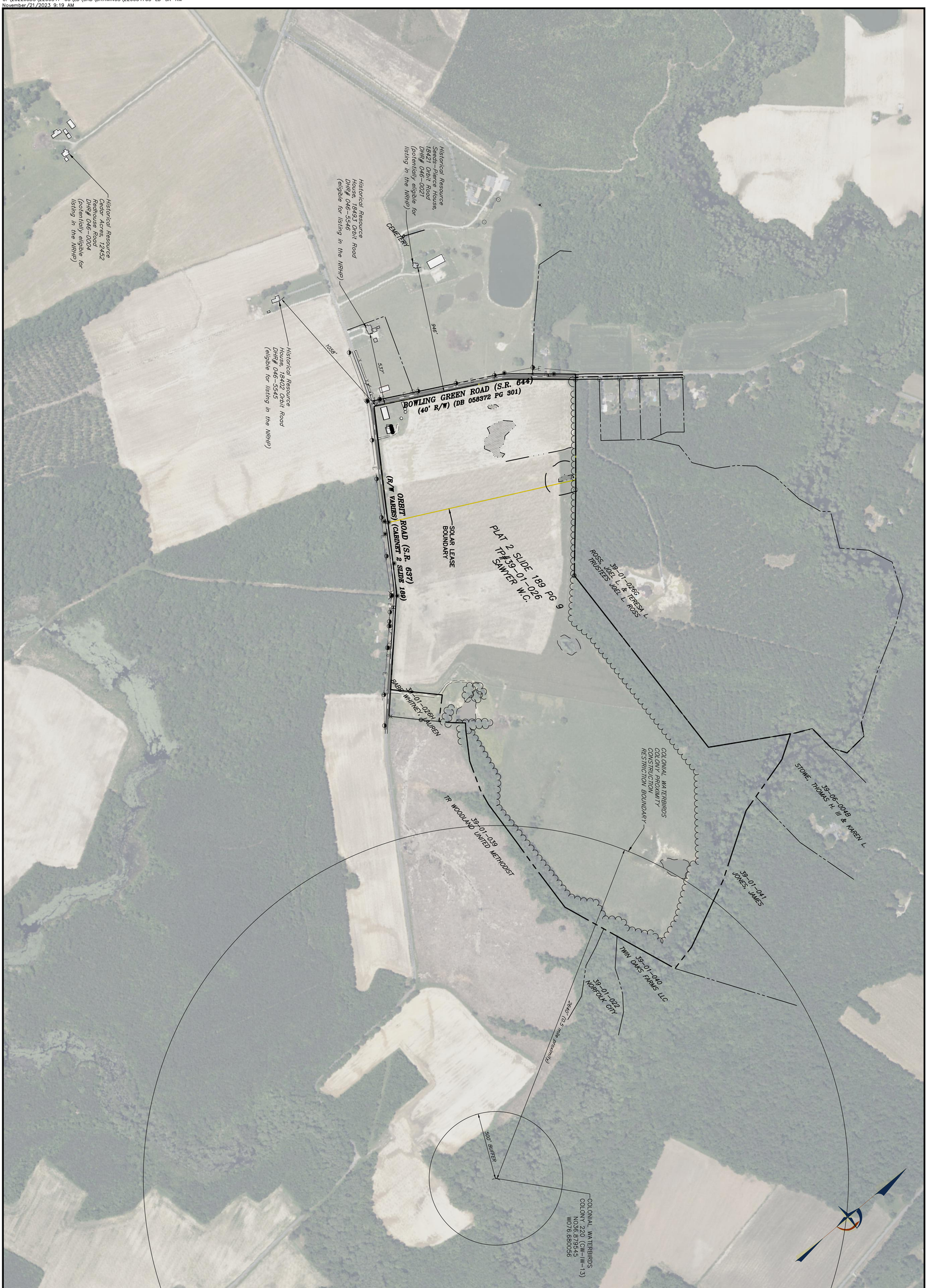

DRAWING TITLE	NEARBY RESOURCES MAP
DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-RM
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C3

CONDITIONAL USE CONCEPT PLAN
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VAL035 Solar Energy System
18213 ORBIT ROAD, WINDSOR
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SCALE:
300 0 300 600
SCALE: 1" = 300'

REVISIONS		
NO.	DATE	DESCRIPTION
1	9/21/23	PER OWNER AND COUNTY COMMENTS
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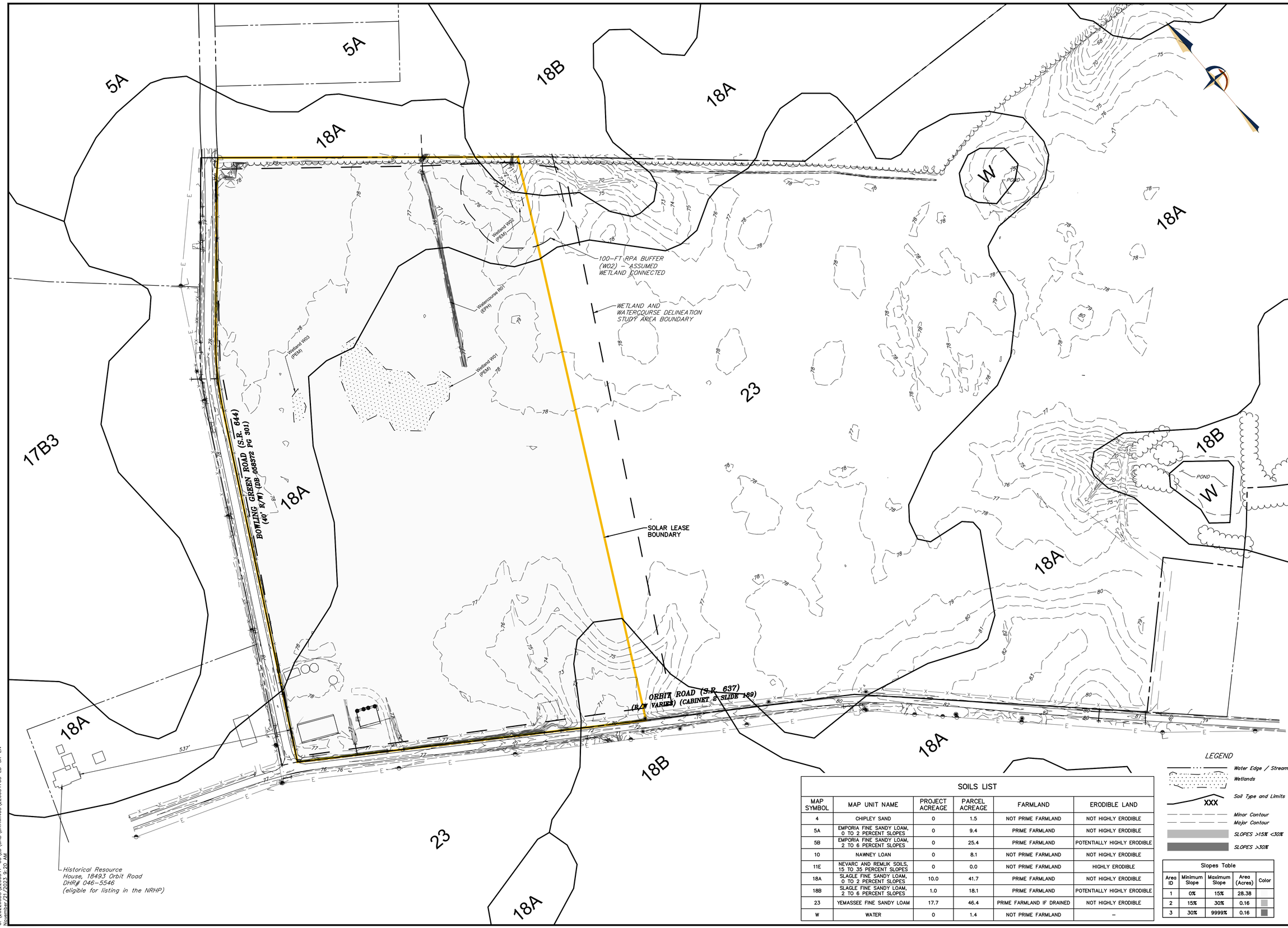

SOILS LIST					
MAP SYMBOL	MAP UNIT NAME	PROJECT ACREAGE	PARCEL ACREAGE	FARMLAND	ERODIBLE LAND
4	CHIPLEY SAND	0	1.5	NOT PRIME FARMLAND	NOT HIGHLY ERODIBLE
5A	EMPORIA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0	9.4	PRIME FARMLAND	NOT HIGHLY ERODIBLE
5B	EMPORIA FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	0	25.4	PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
10	NAWNEY LOAN	0	8.1	NOT PRIME FARMLAND	NOT HIGHLY ERODIBLE
11E	NEVARC AND REMLIK SOILS, 15 TO 35 PERCENT SLOPES	0	0.0	NOT PRIME FARMLAND	HIGHLY ERODIBLE
18A	SLAGLE FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	10.0	41.7	PRIME FARMLAND	NOT HIGHLY ERODIBLE
18B	SLAGLE FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	1.0	18.1	PRIME FARMLAND	POTENTIALLY HIGHLY ERODIBLE
23	YEMASSEE FINE SANDY LOAM	17.7	46.4	PRIME FARMLAND IF DRAINED	NOT HIGHLY ERODIBLE
W	WATER	0	1.4	NOT PRIME FARMLAND	–

LEGEND

- Water Edge / Stream
- Wetlands
- Soil Type and Limits (XXX)
- Minor Contour
- Major Contour
- SLOPES >15% <30%
- SLOPES >30%

Slopes Table				
Area ID	Minimum Slope	Maximum Slope	Area (Acres)	Color
1	0%	15%	28.38	
2	15%	30%	0.16	
3	30%	9999%	0.16	

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0 100 200

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NEWPORT MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
ENVIRONMENTAL SITE ASSESSMENT PLAN

DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-EN
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C4

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November 21, 2023 9:20 AM

RAC
RURAL AGRICULTURAL CONSERVATION
ZONING DISTRICT

RR
RURAL RESIDENTIAL
ZONING DISTRICT

APPROXIMATE
ZONING DISTRICT
BOUNDARY, TYP.

39-01-026G
ROSS, JOEL L. & TERESA L.
TRUSTEES JOEL L. ROSS

5A
18A
18B
17B3
23

BOWLING GREEN ROAD (S.R. 644)
(40' R/W) (DB 058972 PG 301)

4.5' WOOD FENCE
ASPHALT
SHARE THE ROAD
STOP
537'

INVERT 12" RCP – 77.28
INVERT 12" CMP – 77.21
INVERT 12" CMP – 74.83
INVERT 12" RCP – 77.52
INVERT 12" RCP – 77.44
INVERT 12" RCP – 77.16
INVERT 12" RCP – 77.28
POLE HL57
INVERT 12" RCP – 76.40
INVERT 12" RCP – 76.17
INVERT 15" CPP – 75.26
INVERT 15" CPP – 75.34
INVERT 15" CPP – 75.59
INVERT 15" RCP – 76.11
POLE HL22
INVERT 15" RCP – 76.10
INVERT 10" RCP – 77.04
INVERT 10" RCP – 76.91
INVERT 15" RCP – 76.59
INVERT 15" CPP – 76.44
POLE GK49
INVERT 15" CPP – 76.73
INVERT 15" CPP – 76.36
POLE GK60
INVERT 15" CPP – 76.25
INVERT 8" RCP – 76.32
INVERT 8" RCP – 76.37
INVERT 12" RCP – 76.18
INVERT 15" RCP – 76.
INVERT 15" RCP – 75.96
INVERT 12" RCP – 75.52
POLE GJ37
INVERT 12" RCP – 75.57
INVERT 12" RCP – 74.42
INVERT 15" RCP – 75.53
INVERT 15" RCP – 75.90
POLE GJ99
POLE 345 F246 GJ33
POLE FJ17
INVERT 15" SLPP – 74.41
INVERT 15" SLPP – 74.64
INVERT 12" SLPP – 71.19
INVERT 15" SLPP – 70.95
INVERT 15" RCP – 69.99
INVERT 15" RCP – 69.47
POLE HJ88
POLE HJ64
POLE IH38
INVERT 15" RCP – 78.54
INVERT 15" RCP – 79.02
POLE JH33
POLE JH04
POLE M1918/JGDOM86
POLE JH31
INVERT 15" CPP – 77.94
INVERT 12" RCP – 79.86
POLE JG85
POLE KC23
INVERT 15" CPP – 78.18
INVERT 12" RCP – 79.29
INVERT 12" RCP – 78.92

Wetland W02 (PEM)
Wetland W03 (PEM)
Wetland W01 (PEM)
Watercourse R01 (EPH)
DITCH H
FARM FIELD
POND W

100-FT RPA BUFFER
(W02) – ASSUMED
WETLAND CONNECTED

WETLAND AND
WATERCOURSE DELINEATION
STUDY AREA BOUNDARY

PLAT 2 SLIDE 189 PG 9
TP#39-01-026
SAWYER W.C.

SOLAR LEASE
BOUNDARY

ORBIT ROAD (S.R. 637)
(64' VARIES) (CABINET 2 SLIDE 189)

39-01-026H
BABB WHITNEY, LAUREN

BARN
ORBIT LODGE

Historical Resource
House, 18493 Orbit Road
DHR# 046-5546
(eligible for listing in the NRHP)

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SCALE: 1" = 100'
0 100 200

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410-779-9377

CONDITIONAL USE CONCEPT PLAN
FOR
VAL035 Solar Energy System
18213 ORBIT ROAD, WINDSOR
NEWPORT MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

DRAWING TITLE
EXISTING
CONDITIONS
SITE PLAN

DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-EC
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C5

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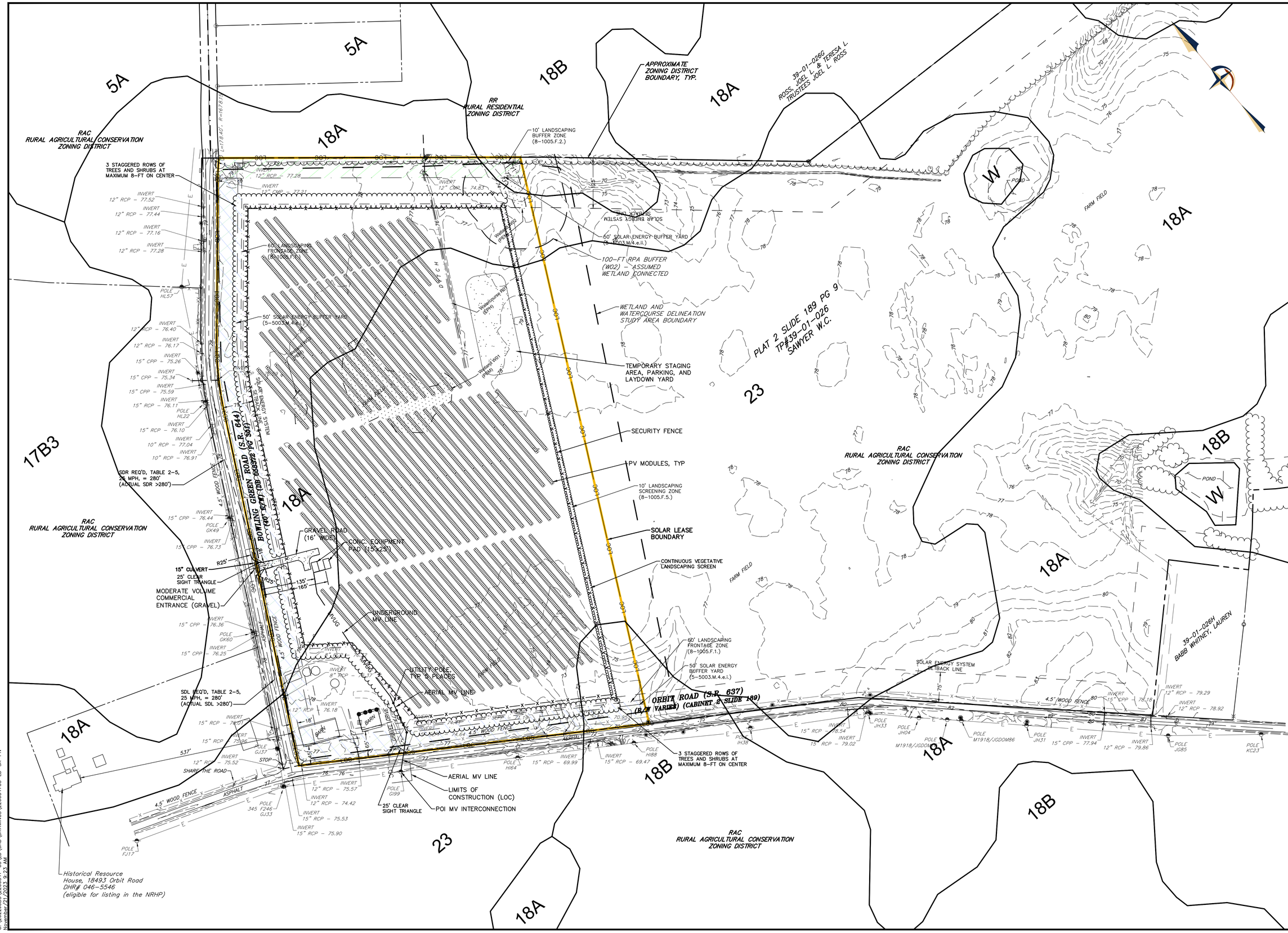

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DRAWING TITLE
SITE
DEVELOPMENT
PLAN

DATE	MARCH 29, 2023
JOB NO.	2200547.03
FILE NAME	LD-SK-PN
DRAWN BY	CWW
CHECKED BY	JTP
SHEET NO	C6

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November/21/2023 9:23 AM

Pivot Energy



Conditional Use Permit Application for: Elk Development, LLC's

(a holding Company of Pivot energy)

VAL035- Orbit Road Project

Pivot Energy
1601 Wewatta St., # 700
Denver, CO 80202

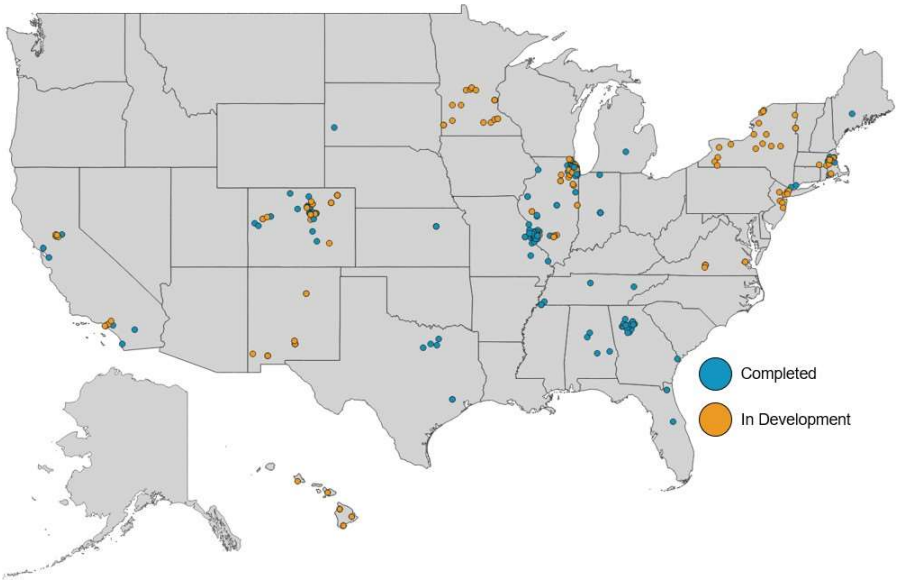
Executive Summary

Elk Development, LLC, a holding company of, Pivot Energy is pleased to apply for a Conditional Use Permit (CUP) from the County of Isle of Wight for Elk Development, LLC's VAL035- Orbit Road Project (aka: Orbit Rd.) (the Project). This Project represents a small, solar photovoltaic (PV) facility of three (3) megawatts in capacity as measured in alternating-current (AC). The proposed project is located at 18213 Orbit Rd, Windsor, Virginia. The subject parcel is identified as tax parcel 39-01-026 owned by W. C. Sawyer. The site is to be accessed off Bowling Green Rd (VA-644), approximately 1.6-miles south of the intersection with Courthouse Hwy (US-258) near Isle of Wight. The site is in the Courthouse Agricultural and Forestal District and Rural Agriculture Conservation (RAC) zoning district in Isle of Wight County. There are no schools or recreation facilities within 1-mile of the site. The Isle of Wight Academy is approximately 1.1-miles northwest of the site. The parcel is 228.3 acres, the project will encompass 28.84 acres (leased area) of the parcel with 19.64 within the fence line and 27 acres of land coming out of production (Please see Plan Drawing C2 for full tabulation of acrage).Pivot Energy Energy has made a formal request to the District to remove the 20 acres.

This project will positively impact the local community by employing local labor, decarbonizing the local grid, offering a discount to local subscribing Dominion customers, and providing increased resources to the County over the life of the project. Pivot's lead developer on this project, Robert Hickox, has previous experience permitting similar solar projects in Virginia. With a strong development and customer relationship background in small utility, commercial, and community solar projects, Pivot continues to expand its offerings throughout the solar industry by working with low-income communities, residential renters and homeowners, agricultural customers, local businesses, & local government organizations.

Prior Solar Development Success:

Recently Completed and Ongoing Projects



Community Solar Development Experience

Background on Pivot Energy

Pivot Energy is a turnkey solar developer of commercial and industrial solar projects founded in 2009 and headquartered in Denver, Colorado. Pivot has become a national leader in commercial and industrial solar projects, with hundreds of successful projects completed for many small, mid-sized and Fortune 500 companies, as well as for nonprofit, government, and military organizations.

Pivot Energy has built or developed the most community solar projects of any developer in Colorado and has expanded to build projects nationwide over the last several years. Our development team works in conjunction with our EPC team to plan a project for success from the beginning and execute in a timely manner. Pivot will provide turnkey development of the community solar garden, from initial site planning and engineering to system design, construction, commissioning, and customer subscriptions.

Pivot Energy is a certified B Corps, using a triple bottom line approach to measure our progress on more than just a financial basis. Our goal is to achieve balance between three, sometimes opposing, ends of People, Planet, and Profit. B Corps, or Benefit Corporations, are redefining success in business to include benefits to workers, society, and the environment. We aim to balance these measures in all aspects of our projects to bring widespread benefit to multiple areas of the community.

Certified B Corporation

Experience with Developing and Operating Similar Solar Facilities

Pivot Energy has invested heavily in both the Colorado community solar market as well as community and commercial solar nationally. Our company also has community solar projects either under construction or in development in states including Minnesota, Illinois, New York, New Mexico, Virginia, and more totaling well over 150MW.

In Colorado Pivot has become the largest community solar developer having built or in process of developing more than 70 MW of community solar. Pivot Energy is also one of the only developers to never abandon a community solar project with a 100% success rate post-bid. Our team's experience is deeply rooted in development having built many of the early projects at previous companies and then coming together as a team of industry experts to accelerate community solar development, construction, and customer adoption throughout the country.

Pivot Energy's SunCentral team has also become the largest and most all-encompassing subscription manager in Colorado with thousands of residential customers and serving more than 16MW of low-income customer capacity throughout Colorado. We are proud that our SunCentral management platform is so widely used by the market. Our team regularly communicates with MPEI to not only manage customers within the market but also look for ways to improve how utilities and developers can communicate and operate to continuously provide better experiences to the end customer and bring projects to successful completion.

Pivot Energy Acquisition by ECP

As of June 1, 2021 Pivot Energy is wholly owned by Energy Capital Partners (ECP)[1]. Founded in 2005, ECP is a leading investor across energy transition, electrification and decarbonization infrastructure assets, including power generation, renewables and storage solutions, environmental infrastructure and efficiency & reliability assets facilitating the energy transition. The ECP team, comprised of 53 people with 500 years of collective industry experience, deep expertise and extensive relationships, has consummated more than 60 transactions over the last 10 years, representing more than $45 billion of enterprise value.

More information on the acquisition available at: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

ECP has extensive experience in energy infrastructure with portfolio companies including Sunnova and Calpine. The investment in Pivot Energy by ECP allows for Pivot to not only develop solar assets and manage customers through our SunCentral platform but to maintain ownership of the assets through their full life. Additionally, Pivot Energy is a part of ECP's continued commitment to Environmental, Social, and Governance (ESG) goals and their expansion into renewable energy. Pivot Energy is ECP's first certified B Corporation and, as noted in their 2021 ESG Report highlights ECP's "ability to source attractive investments that have positive benefits from both a social justice and environmental standpoint."[2]

More information on ECP's ESG goals available at:
https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

In addition to the funding from ECP, Pivot Energy is nearing closing with both our tax equity partner and back leverage partner for our 2024 project portfolio that this project would be placed into. Pivot Energy is in final negotiations with a single tax equity partner that we have chosen as well as a single back leverage partner which are allowing us to get industry leading terms and cost of capital to make these projects very financially efficient.

In August 2022, Pivot Energy acquires SGC Power a Maryland-based community solar developer, who develops, and designs solar projects that produce long-term lease income for property owners while providing affordable clean energy to surrounding communities.

More information on the acquisition available at: Pivot Energy Announces Acquisition of Maryland-Based Community Solar Developer SGC Power (prnewswire.com)

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[1] PR Newswire – ECP Announces Acquisition of Pivot Energy: https://www.prnewswire.com/news-releases/ecp-announces-acquisition-of-pivot-energy-301303505.html

[2] Energy Capital Partners (ECP) – ESG Report: https://www.ecpgp.com/system/uploads/fae/file/asset/136/ECP_ESG_Report_2021_Web.pdf

Selected Customer List

Our customer list includes small, midsized, and Fortune 500 companies, as well as utilities, nonprofits, governments, and military institutions.



Project Design

Elk Development, LLC seeks to develop Orbit Rd with a collective nameplate capacity up to 3MWac. The clean energy generated by the solar array will be delivered to Dominion Energy's grid (the Grid) at 12kV, 3 phase distribution line along Orbit Road. The Project is designed to be a community solar project that would offer a discount to local Dominion customers on their utility bill once operational. The system will be installed at 18213 Orbit Rd in Isle of Wight County. The subject parcel is identified as tax parcel 39-01-026 owned by W. C. Sawyer. The site is to be accessed off Bowling Green Rd (VA-644), approximately 1.6-miles south of the intersection with Courthouse Hwy (US-258) near Isle of Wight. The property consists of woodland and agricultural fields with some farm buildings. The site is in the Rural Agriculture Conservation (RAC) zoning district.

Orbit Rd. will be comprised of approximately 7,770 solar PV panels from Tier 1 manufacturers. Elk Development and Pivot Energy only uses crystalline solar panel using silicon and inert borophosphosilicate glass on their solar facilities. These panel are recyclable and do not have the potential toxic effects of cadmium-telluride panels (CDTe).

Standard additional equipment includes single axis tracker components, DC to AC inverters, medium-voltage transformers and control cabinets, project switchgear, meters, and the attachment facilities to the current local grid.

These panels will be mounted to a single-axis tracking (SAT) system designed to maximize the panel production by following the rising and setting of the sun. This SAT system includes linked horizontal steel support beams known as torque tubes, with a centrally located drive train system. The rows will be 22 feet apart (center-to-center) and the square footage of the panels will account for approximately 24% of the total Project acreage. The racking system will be affixed to pile-driven metal beams at a depth of approximately 10 feet. At full tilt, the maximum height of any panel will be under fifteen feet (15').

The solar panels in each row will be wired together into a circuit. There will be a DC to AC string inverter for approximately every 3 rows, typically mounted on a piling adjacent to the tracker structure. Once the inverter converts the panels DC power to AC, this power will be transmitted from the string inverters via three-phase direct-buried cables (at a depth of approximately 4.5 feet) and aggregated at the AC collection switch gear before moving to the medium-voltage transformer. This transformer will be mounted on a concrete slab alongside project switchgear and control cabinet. After the transformer steps up the electric power voltage to match the existing Grid, the power is transmitted to the Project's protective recloser and metering equipment before connecting with Dominion's powerlines.

An internal access drive made from all-weather aggregate base will provide access to the array. This Site access will be restricted by a perimeter security fence in compliance with Federal and State regulations. Manual swing gates will be built at the main entrance and other required entry points as determined by maintenance crews and/or safety personnel. National Electric Code Standards for safety and signage will be met or exceeded.

The project will be obscured from view by providing fence and using natural and planted vegetative buffers will meet or exceed the standards outlined by the County of Isle of Wight's ordinance.

Environmental Impact

Land Use

The project area is currently agricultural field that is rented and has been farmed for cotton and corn in prior years. Farm buildings and woodland areas exist on the subject parcel outside the project limits and will be maintained during construction. The remainder of the site will still be farmed. The site is bounded by woodland and agricultural fields with some dwellings. The site fronts on Orbit Rd (VA-637) to the south and Bowling Green Rd (VA-644) to the west. Existing utilities onsite are unknown. Overhead power lines are located along the adjacent public roadways.

Topography

The site topography can be described as fairly flat coastal plain. The site predominately slopes gently eastward with some ponds and low spots on the property. Other than a few isolated berms and channels, there are no steep slopes within the project area. A topographic survey of the project area was performed by Dawood Engineering, Inc. in October and November 2022. The streams and wetlands within the project area were delineated by Dawood Engineering, Inc. in October 2022. The vertical datum used is the North American Vertical Datum 1988 (NAVD 88). The horizontal datum is the North American Datum 1983 (NAD 83), Virginia State Plane Coordinate System.

Soils

The soil delineation for this project was completed using the United States Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Soil types expected within the subject parcel include Slagle fine sandy loam (18A, 18B), Yemassee fine sandy loam (23), Emporia fine sandy loam (5A, 5B), Chipley sand (4), Nawney loam (10), and Nevarc and Remlik soils (11E). Of these, 11E is a highly erodible soil, 5B and 18B are potentially highly erodible, and 4, 5A, 10, 18A, and 23 are not highly erodible. Soils 5A, 5B, 18A, and 18B are prime farmland. Soils 23 are prime farmland if drained. Soils 4, 10, and 11E are not prime farmland.

As indicated by the Virginia Department of Energy geological mapping, the site is underlain by the Windsor Formation (QTw) and Chesapeake Goup (Tc). The Windsor Formation varies from 0-40 feet thick and consists of gray and yellowish to reddish-brown sand, gravel, silt, and clay constituting surficial deposits of extensive plain and coeval, fluvial-estuarine terraces. The Chesapeake Group varies from 0-600 feet thick and consists of fine to coarse, quartzose sand, silt, and clay; variably shelly and diatomaceous, deposited mainly in shallow, inner- and middle-shelf waters.

Wetlands & Receiving Waters

Pivot Energy has engaged a qualified environmental professional to conduct a field delineation to confirm that the site is designed away from the few identified, isolated wetlands to ensure no negative environmental impact. A summarized copy of this report is included in our application packet. Runoff from the subject parcel drains to Great Swamp, or one of its tributaries. Several unnamed streams and ponds are located on the parcel. Great Swamp flows through the eastern edge of the property. Great Swamp is a tributary of Western Branch Reservoir in the James River basin.

Wildlife Habitats

Coordination with various state and federal agencies determined no adverse impacts to threatened or endangered species are anticipated as a result of the project. Documented colonial waterbird colonies

containing great blue herons are within 1 mile of the project area. No colonial waterbird colonies have been identified at the project site. Should any be found, further coordination with the Virginia Department of Wildlife Resources will be required. Refer to the Threatened and Endangered Species Assessment prepared by Dawood Engineering, Inc for additional information.

Cultural and Historical Resources

A Phase I Cultural Resources Survey was completed by Stantec Consulting Services. Inc. in February and March 2023. No previously recorded archaeological nor architectural sites are located within the project area. No new isolated archaeological finds or new archeological sites were identified. No new architectural resources were identified within the project area. Four historical resources located within 0.5 miles of the project were considered eligible or potentially eligible for listing in the NRHP. Refer to the Cultural Resource Assessment prepared by Dawood Engineering, Inc for additional information.

State Agency Diligence

Before solar projects in Virginia can begin construction, they must be vetted by the Virginia Department of Environmental Quality (VADEQ) regulation process in the form of permits by rule (PBR). This state-level oversight ensures that conditions and standards necessary to protect the Commonwealth's natural resources are met by a proposed project. This review, in coordination with the Virginia Department of Historic Resources, the Virginia Department of Wildlife Resources, and the Virginia Department of Conservation and Recreation analyze the proposal for potential impacts on wildlife, historic resources, prime farmland, and environmental impact.

The thorough diligence involved in securing VADEQ's PBR—and any subsequent mitigation measures required—offer strong protection for localities considering a project like ours. The land use decision within our CUP application is only the first of many steps a project must satisfy before submitting for a building permit.

Construction

Construction of the solar energy system, including access road and interconnection to the electric grid, is to occur in one phase. The project is anticipated to take 6 months to complete. Construction is scheduled to start in September 2024. Finish date is anticipated to be in April 2025. This schedule is based on the latest available information. Actual dates may vary based on regulatory requirements, weather, and other unforeseen issues. It is anticipated that onsite work will be conducted during the standard workweek (Monday through Friday) when workers will be onsite from 7:00AM to 5:00PM (10 hours). In the event of inclement weather, missed weekdays may be occasion made up on Saturdays to maintain construction schedules.

Construction activities associated with the project include establishing access, material delivery and storage, loading and hauling, construction of racking system with driven posts for foundations, mounting of solar modules, construction of equipment pads, installing equipment, trenching underground cable ductbanks, backfill and compaction, installing utility poles and aerial power lines, installing security fencing, and revegetation.

Construction of the solar energy system and site appurtenances is to occur in sections to limit disturbed area. The following is a general estimation of duration of the activities associated with the project. Some will occur simultaneously as work progresses. Estimated timing of the construction activities are as follows:

- Sediment control devices are to be installed in each area before any upslope earth disturbance commences. It is anticipated installing the sediment control devices will take approximately 1 week.
- Access road construction is anticipated to take roughly 1 week.
- Construction of the racking system and installation of solar modules will take approximately 4 months.
- Construction of the equipment pad and installation of equipment will take approximately 3 weeks.
- Trenching and cable installation will take approximately 6 weeks.
- Installing the poles and overhead power lines, including the interconnection, will take approximately 2 weeks.
- Final restoration, including seeding and mulching, is to be completed immediately as improvements are finished in each area. It is anticipated final restoration will take approximately 2 weeks.
- Sediment control devices are to be removed once the upslope area has been permanently stabilized. This should take less than 1 week.

Operations and Maintenance

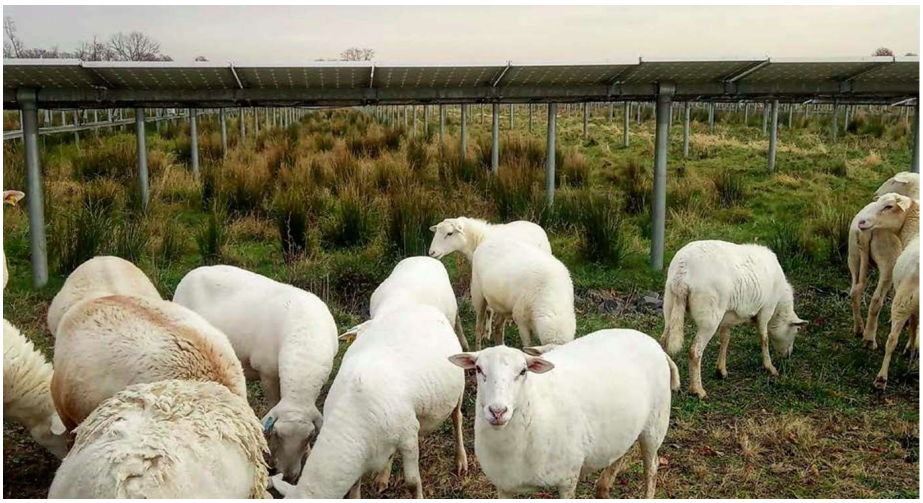
After construction is complete, we anticipate minimal site access requirements for Project maintenance activities. At a minimum, the Project will undergo two annual preventative maintenance checks, once in the spring (~April) and once in the fall (~August). While all products installed on site are of the highest quality per industry standard testing practices & classifications, occasional dispatch to site may be required to correct outages on an as-needed basis. Corrective activities such as this may add two to four site access instances each year.

As the long-term owners & operators of the proposed Project, our team will also actively monitor site performance 24/7 and will address any issues in a timely manner. Based on performance impact, our contracted O&M providers will respond within 24, 48, or 72 hours depending on the outage type. Our sites are unmanned regularly unless maintenance is required, which would occur between Monday – Friday from 8 AM – 5 PM.

Average rainfall in the County of Orbit Rd. anticipated to be adequate for natural cleaning of the panels. Vegetative ground cover will be managed during the growing season in compliance with local requirements, including but not limited to land use permit specifications, water management plans, and site access agreements.

Solar Grazing – Vegetative Maintenance through Dual Ag Use

“Solar Grazing” is a method of vegetation control for solar sites that utilizes livestock. Sheep are best suited due to their size and grazing behavior. Ground cover is established with a “Fuzz and Buzz” mix that is conducive to grazing as well as pollinating. Projects such as the proposed Orbit Rd. would contract with local sheep farmers to move onto site in the Spring, care for them during grazing season, and move off site in the Winter. Sheep are excellent at grazing under panels where mowing is more labor intensive. The perimeter fence protects sheep from predators and solar panels provide shelter from rain, wind, and direct sun on hot days.



Pivot Energy has established a partnership with United Agrivoltaics to help lead our Solar Grazing initiatives. With a network of sites across the country and partners in Solar Grazing since 2015, United Agrivoltaics will assist Pivot Energy in a vegetative maintenance plan for this dual use.

Additionally, Pivot is currently evaluating dual harvest crop production on all of our portfolio sites. Depending on site characteristics, tenant farmer availability. Pivot seeks to prioritize crops for hay/alfalfa production, herbs, or cover crop mixes.

Impacts and Mitigations

Water – No on-site source of potable water will be required during construction or operations for Orbit Rd.. If any on-site water source is required during construction or operation, it will be supplied by the host Project and sourced offsite. No new well will be dug for this project.

Sound – The majority of sound associated with the proposed Project will occur during construction. This is expected to be the result of material deliveries to the Property and support beam installation for the array. Impacts from noise are mitigated from a selected site that has few abutting neighbors and restricted hours of construction operations.

Once operational, Orbit Rd. will be practically inaudible. At a distance of 3ft from the security fence, our inverters and racking equipment create a sound comparable to a home HVAC unit. These sound measurements fall to less than 50dB at only 50ft from the perimeter—equivalent to background noise in the County.

Glare – No glare hazard is expected during construction or operations. Our Tier I panels are treated with anti-glare coating and are designed to absorb as much sunlight as possible. The setbacks and

robust vegetative screening from neighbors will further obscure any visual impact of the proposed Project.

Odor – Our EPC team will store, collect, and dispose of any solid construction material waste to prevent any odors from the Site, mitigating any impact on neighboring properties. No detectable odors are produced from the solar array components during operations.

Dust – Possible dust occurrence during operations is most likely to result from delivery or construction trucks on the Site. This will be mitigated by spraying water on dry dirt and enforcing a 5 MPH speed limit within the construction area. Minimal vehicle or foot traffic during operations and vegetative groundcover will naturally mitigate against concerns for dust.

Security and Access – The perimeter fence around the array will be no taller than 8 feet in height and contain no barbed wire. This fence will be black or another neutral color with final design approval to be sought from the Planning Director. The gates within the fence will remain locked while access will be coordinated through our operations and maintenance personnel. Our Site will provide a “Knox Box” to provide 24/7 access for local emergency personnel. The Applicant will ensure suitable access from Pocket Road is maintained for fire or other emergency vehicles.

Removal

At the end of the Project’s life, it will be decommissioned and removed from the Property. Formal notice of end of operations will be sent to County via Certified Mail. The Project will then be completely removed from the Property and reasonably restored to previous condition within 365 days of receipt of notice. Orbit Rd. would expect County approval of our decommissioning plan—to include posting of surety funds—prior to building permit issuance. We have included a preliminary decommissioning cost estimate in our submission.

Economic Development

Jobs

To the extent possible, Orbit Rd. will source local materials and labor for the construction and maintenance of the project. We estimate that this project will create approximately 30 new construction positions and 1-2 operations positions. Operations jobs will be focused on facility upkeep with responsibilities such as vegetation management, equipment repair, and component maintenance. Typical cadence for site maintenance is every two to three months.

Increased County Revenue

Additionally, this project’s lease revenue would provide direct fiscal benefit to the County. This has been outlined in a report commissioned from MAGNUM ECONOMIC’s *“VAL035- ORBIT ROAD ECONOMIC AND FISCALCONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA*”. This report has been included in our application.

Regulatory Conformance

Virginia Code § 15.2-2232 requires that the Board of Supervisors makes a determination as to whether or not the general location, character, and extent of a proposed solar energy facility is in substantial accord with the locality's adopted comprehensive plan.

The Project includes construction of an approximately 20-acre solar farm within the existing field. Existing woodland and buildings are to remain. The proposed development is shown on the concept plan included with the conditional use application. A solar energy system (utility service/major) is a permissible use by conditional use within the RAC district. This statement has been prepared to show the proposed use will conform to the standards of the Zoning Ordinance. We believe the standards of section 1-1017 (Conditional Uses) have been met and respectively request the conditional use be granted. The standards for review and the conditions and guarantees have been addressed as follows:

Zoning Ordinance Section 1-1017.H – Standards for review of a conditional use application

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;*
   Any effects of the proposed use on the public health, safety, and general welfare would be minimal. The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable federal, state, and local requirements and in general conformance with manufacturer recommendations and industry standards. All proposed equipment is to be readily accessible for fire and police protection. Measures, such as vegetative screening and security fencing, are proposed to mitigate any potential adverse effects and limit access.
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;*
   The proposed use is compatible with the other uses in the area providing energy for the neighborhood and will not be injurious nor substantially impair the use of other property in the area. Existing and proposed screening will limit the visual impact from adjacent property and roadways. There are similar solar projects in the immediate area of the site. Proximity to three phase power lines and substation which limits the available areas suitable for the installation of solar projects.
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;*
   The proposed use does not require permanent water supply or sewage disposal. With established vegetation beneath and around the solar panels, the existing storm drainage facilities should be adequate and will be supplemented with further management facilities as needed during Site Plan Review. A short gravel access road is to be constructed to provide direct access to the solar energy system. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards.
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;*

Traffic generated by the use would be negligible consisting of the occasional inspection or maintenance vehicle. A gravel drive from the public roadway is to be constructed to provide access directly to the solar farm.

5. *That the proposed conditional use is not contrary to the goals and objectives of the Isle of Wight County comprehensive Plan;*

The proposed use is consistent with the comprehensive plan. As stated in the plan, a solar farm is an appropriate use for the Rural Agricultural Conservation area. The use is consistent with the priority to protect natural resources and rural lifestyle and the policy to facilitate non-residential development. Converting the area from an agricultural field has the potential to reduce the amount of stormwater runoff, increasing groundwater quantity, by changing the ground cover. This would also potentially improve the quality of surface water and groundwater by reducing the use of fertilizers and pesticides. The combination of natural and supplemental screening and fencing to be maintained around the solar panels will preserve the rural character of the area.

"Require facilities to be located adjacent or close to existing electric transmission lines."
The project proposes to interconnect to the Dominion three-phase powerlines that run across the property's road frontage along Orbit Rd.

"Require facilities to be located outside of DSDs."
The project is sited on a property that is approximately 4.0 miles away from the nearest DSD (Windsor).

"Avoid or minimize impact to prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively."
The parcel being used takes up only 20 acres of the 228 acre property, which will continue to be farmed. Given the average farm size of 340 acres and over 80,000 total farm acres in Isle of Wight County, Orbit Rd presents a negligible impact on farmlands, which it more than offsets by providing homes with clean, locally generated power.

Additionally Pivot Energy promotes as a standard the use of sheep grazing as vegetation control on the site, which will allow the land to continue to function as agricultural lands.

"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 sight with a resource location) or within the Highway Corridor Overlay district."
A the proposed planted vegetative buffer along Orbit and Bowling Green will provided complete screening of the site from the public. The Comprehensive Plan also outlines several Policy themes with Action Items associated toward those ends. Below are some of the more applicable selections regarding solar projects and our determination of the project would fit.

Preserve: Protect water quality from sedimentation and pollutants carried by runoff through the continued enforcement of the local stormwater management program.
Before final site plan approval, Pivot Energy must secure confirmation from the Virginia Department of Environmental Quality that the designed stormwater management features will meet or exceed the rates of current property use. Verification of this confirmation will safeguard against any degradation of local

stormwater management as a result of the project.

Shape: Protect rural historic landscapes by ensuring development is consistent with existing community character through performance criteria for new development.
The vegetative screening plans provided offer planted bufferings required by the solar ordinance. Exceeding the vegetative screening standard by this degree shows the specific focus on existing community character and ensuring Orbit Rd is a mindful neighbor.

Serve: Encourage collaboration with the private sector to provide integrated infrastructure in the most efficient way possible.
Serve: Design and develop public facilities, wherever possible, that take advantage of alternative energy sources and conserve energy in operations.
Serve: Ensure all major utility service use types mitigate any potential negative impacts to the character and future viability of surrounding land uses.

The Orbit Road project offers alternative energy sourced power generation for the local community, financed by private investment, to the net fiscal benefit for the county. By designing vegetative buffering that exceeds the county requirement for solar projects in its particular location, Orbit Rd is sited respectfully to local character and land uses while allowing the site landowner to exercise his property rights.

Educate: Continue to grow programs that enhance job skills of County residents needed by employers.

Pivot has contacted SHINE to coordinate plans for community colleges and academic institutions across Virginia so we can increase access to solar training programs across the state.

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;*

The developer intends to design, construct, operate, inspect, and maintain the proposed development to meet or exceed all applicable regulations.

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.*

The proposed use at this location will not result in a saturation of similar uses in the same general neighborhood. In this area, the surrounding “neighborhood” consists primarily of large-scale agricultural tracts zoned Rural Agricultural Conservation. The proposed project will be located on an approximately 18-acre portion of a larger 228+ acre parcel. The remainder of the parcel will be retained for agricultural use. There is one other approved solar energy project (Nuby Run Solar) located at the intersection of Courthouse Highway and Route 644 (Redhouse Road). At their closest point, these two projects would be located over a half-mile from each other and would be separated by intervening agricultural and residential parcels. One other approved solar project (New Leaf Solar) is located further up Courthouse Highway past the Route 692 intersection on the other side of Isle of Wight County Courthouse and Poor House Road. Proximity to three phase power lines and substation which limits the available areas suitable for the installation of solar projects. After this site is constructed the electrical infrastructure supporting these facilities will be built out and not able to support further development.

The site area for the Elk Development Project would be over a mile from the New Leaf Solar Project and the intervening area contains wooded tracts and open farmland. See below, a screenshot aerial illustration of the proposed project and land uses in the surrounding area. While the approval of the Elk Development Project would result in one additional solar facility in the area, the applicant does not believe the project would lead to a “saturation” of solar projects

in the area. To the contrary, the area would remain primarily agricultural in use and the Elk Development would likely be neither seen nor heard from public rights-of-way or nearby residential uses.



Zoning Ordinance Section 1-1017.I – Conditions and guarantees

1. *The number of persons living or working in the immediate area and the proposed hours of operation, as may applicable;*

   N/A - No persons are to be located on-site. Any necessary maintenance personnel will be stationed elsewhere. Operations will be continuous while the sun is shining though personnel will generally only be onsite during inspections and maintenance.

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;*
   The nature of the proposed use, the site layout, and its relation to access streets are such that both pedestrian and vehicular traffic would not conflict with the normal traffic of the neighborhood. Traffic would be minimal utilizing a proposed gravel drive off Bowling Green Road for access. Adequate parking is proposed for the occasional need. Fencing is proposed to restrict access.

3. *The orderly growth of the neighborhood and community and the fiscal impact on the county;*
   The proposed use is of such location, size, and character that, in general, it will be in harmony with the appropriate and orderly growth of the neighborhood and will not be detrimental to the orderly growth of adjacent properties. The proposed use will a provide supplementary energy source for the community. Traffic will be minimal and sufficient landscaping is proposed to screen adjacent properties. The proposed use will not have a significant fiscal impact on the county, other than the increase in tax base due to the change in use.

4. *The effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise upon the use of surrounding properties;*
   The proposed use, under normal operations, is not expected to produce any significant effects that would adversely impact the surrounding properties. Solar panels are designed to absorb light, with any glare to be minimized by the angle and tilt of the panels. Additionally, the proposed screening will further obscure any glare to adjacent roads and properties. All equipment is to be designed and operated in accordance with Federal, State, and local regulations. The solar panels will produce virtually no noise, vibrations, fumes, smoke, gas, dust, or odors. The system equipment is not expected to generate significant noise levels, vibrations, fumes, smoke, gas, dust, or odors. The location of the solar panels and equipment within the parcel and the use of vegetative screening will reduce the effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise from the use adversely impacting 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;*
   The proposed use would not create undue impacts to police, fire protection, or ambulance services. Fencing is proposed to restrict access and standard fire safety measures are to be utilized to reduce fire hazards. All proposed equipment is to be readily accessible for fire and police protection. Emergency response service to the site is to be facilitated through the construction of a new access road. Connection to the existing power lines in the adjacent roadway is to be provided in conformance with the electric company and regulatory standards. The proposed use doesn't require sewerage, water, or waste disposal services.

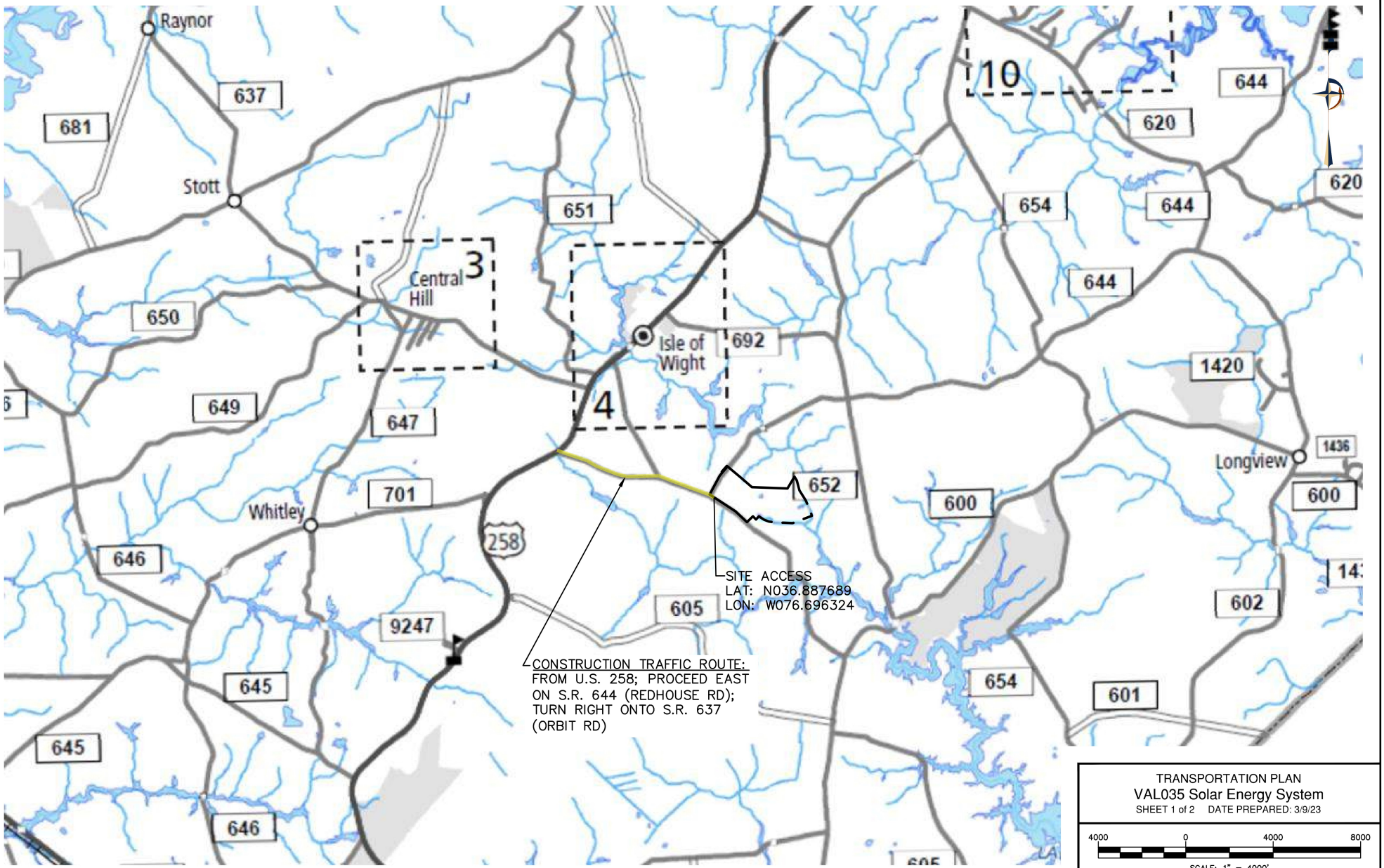
6. *The degree to which the development is consistent with generally accepted engineering and planning principles and practices;*
   The developer intends to design, construct, operate, inspect, and maintain the proposed development to be consistent with generally accepted engineering and planning principles and practices.

7. *The structures in the vicinity such as schools, houses of worship, theaters, hospitals, and similar places of public use;*
   The nearest such public facility is the Isle of Wight Academy approximately 1.1-miles northwest of the site.

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;*
   The proposed use does not conflict with the purposes set forth in the ordinance nor comprehensive plan. The proposed use is consistent with the comprehensive plan. Due to the nature of the use, the effect on the roads, parks, schools, sewers, water, population, and recreation would be negligible. The use does not involve the construction of facilities that would increase the local population or the demand for public facilities and services.

9. *The environmental impact, the effect on sensitive natural features, and opportunities for recreation and open space;*
   Any environmental impact from the proposed use would be negligible. The proposed construction area is limited to the public right-of-way and existing farm field. Two unconnected wetlands totaling approximately 0.9-acres are within the project limits and will be impacted by installation and operation of solar panels and underground cables. Recreation and open space are not applicable to this development as it will not result in additional residents.

10. *The preservation of cultural and historic resources or landmarks.*
    There are no known cultural or historic resources or landmarks within the project area. The proposed construction area is limited to the public right-of-way and existing farm field. Four historical resources are located west of the project area, the closest over 500-feet away. Existing and proposed screening will minimize any adverse impact to these resources. Mitigation for any adverse effect of the proposed project on the resources is being coordinated with the Virginia Department of Historic Resources.



TRANSPORTATION PLAN
VAL035 Solar Energy System
SHEET 1 of 2 DATE PREPARED: 3/9/23

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SCALE: 1" = 4000'

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VAL035- ORBIT ROAD

ECONOMIC AND FISCAL CONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA



Prepared for

Pivot Energy

MAY 2024

MANGUM economics

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About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Information Technology:** Working with some of the largest names in the industry, to date the Mangum Team has produced analyses of the economic and fiscal impact of data centers at the state and local level across the country.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 29 GW of proposed solar, wind, battery storage, and hydro projects spanning twenty-seven states. Among those projects was Dominion Energy's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. Most recently, we were called upon by Henrico County to provide an analysis of the proposed $2.3 billion Green City "net-zero eco district." The Mangum Team has also authored multiple economic development plans, including identifying industries that were likely recruitment targets because of the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Orbit Road project would make to Isle of Wight County, Virginia. The primary findings from that assessment are as follows:

1) **VAL035- Orbit Road (Orbit Road) is a proposed 3-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located near Orbit Road and Bowling Green Road in Isle of Wight County, Virginia. The total actively used, fenced-in solar site including a solar buffer would be approximately 28.84 acres of agricultural land.**

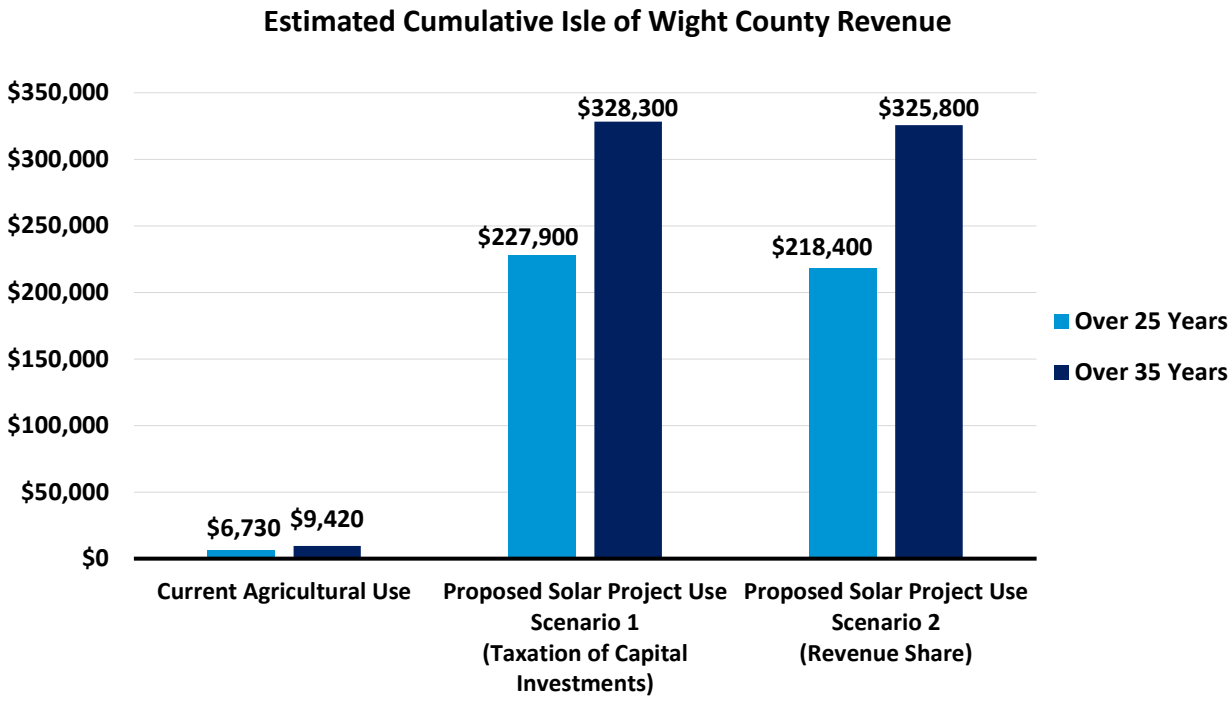
2) **The proposed Orbit Road project would make an economic contribution to Isle of Wight County:**

   - The proposed Orbit Road project would provide an estimated one-time pulse of economic activity to Isle of Wight County during its construction phase supporting approximately:
     - 3 jobs.
     - $98,000 in associated wages and benefits.
     - $180,500 in economic output.
   - The proposed Orbit Road project would provide an estimated annual economic impact to Isle of Wight County during its ongoing operational phase supporting approximately:
     - < 1 job.
     - $19,300 in associated wages and benefits.
     - $63,900 in economic output.

3) **The Orbit Road project would have a significantly greater fiscal impact on Isle of Wight County than the property generates in its current agricultural use:**

   - $24,000 in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.
   - The proposed Orbit Road project would generate approximately $227,900 in cumulative county revenue over a 25-year operational life and approximately $328,300 in cumulative county revenue over a 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments (Scenario 1).
   - The proposed Orbit Road project would generate approximately $218,400 in cumulative county revenue over a 25-year operational life and approximately $325,800 in cumulative county revenue over a 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance (Scenario 2).

- In the property's current agricultural use, it would generate approximately $6,730 in cumulative county revenue over 25 years and approximately $9,420 in cumulative county revenue over 35 years.



The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good 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 VAL035- Orbit Road (Orbit Road) project would make to Isle of Wight County, Virginia. This report was commissioned by Pivot Energy and produced by Mangum Economics.

The Project

Orbit Road is a proposed 3-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located near Orbit Road and Bowling Green Road in Isle of Wight County, Virginia. The total actively used, fenced-in solar site including a solar buffer would be approximately 28.84 acres of agricultural land.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Orbit Road project would make to Isle of Wight County. The 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 Orbit Road project, the analysis employs a regional economic impact model called IMPLAN.[1] 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 Orbit Road project purchases goods and services – or when 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 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

[1] IMPLAN is produced by IMPLAN Group, LLC.

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 Orbit Road 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

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Orbit Road project would have on Isle of Wight County.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The Orbit Road project would employ approximately 50 full-time equivalent construction workers. Approximately 80 percent of those workers would be from Virginia, but are assumed to be from outside of Isle of Wight County.[2]
- The out-of-state workers would stay in the county during the construction period.
- Per diem spending for in-state workers would be approximately $15.[3]
- Per diem spending for out-state workers would be approximately $139.[4]
- All construction expenditures are assumed to take place during a six-month period.[5]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Orbit Road project would not provide a direct impact to Isle of Wight County because the construction labor is assumed to be from outside of the county.[6]

[2] Data Source: Pivot Energy.
[3] Data Source: U.S. General Services Administration.
[4] Data Source: U.S. General Services Administration.
[5] Data Source: Pivot Energy.
[6] Per diem spending is considered a household (employee) to business transaction and is therefore not a direct impact.

Taking into account the per diem spending of the construction workers, the total estimated one-time impact on Isle of Wight County would support approximately: 1) 3 jobs, 2) $98,000 in wages and benefits, 3) $180,500 in economic output, and 4) $24,000 in state and local tax revenue.

Table 1: Estimated One-Time Economic and Fiscal Impact on Isle of Wight County from Construction of the Orbit Road Project

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	-	-	-
2nd Round Indirect and Induced Economic Activity	3	$98,000	$180,500
Total Economic Activity	**3**	**$98,000**	**$180,500**
Fiscal Impact			
State and Local Tax Revenue			**$24,000**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

This portion of the section assesses the annual economic and fiscal impact that the proposed Orbit Road project would have on Isle of Wight County during its operational phase.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The Orbit Road project would spend approximately $53,000 each year for maintenance and repair, vegetative control, and other operational expenditures.[7]
- The Orbit Road project would make confidential lease payments to landowners.[8]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Orbit Road project would directly support approximately: 1) < 1 job, 2) $13,800 in wages and benefits, and 3) $41,800 in economic output to Isle of Wight County.

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on Isle of Wight County would be approximately: 1) < 1 job, 2) $19,300 in wages and benefits, and 3) $63,900 in economic output.

[7] Data Source: Pivot Energy.
[8] Data Source: Pivot Energy.

Table 2: Estimated Annual Economic Impact on Isle of Wight County from the Ongoing Operation of the Orbit Road Project

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	< 1	$13,800	$41,800
2nd Round Indirect and Induced Economic Activity	< 1	$5,500	$22,100
Total Economic Activity	**< 1**	**$19,300**	**$63,900**

Fiscal Impact Assumptions

The analysis is based on the following assumptions:

- Total capitalized investment in machinery and tools in the Orbit Road project is estimated to be approximately $6.1 million.[9]
- The approximately 28.84 actively used, fenced-in acres including a solar buffer would be removed from the land use program and reassessed at a solar use assessment value of $15,000 per acre.[10]
- The initial interconnection request for Orbit Road was filed in 2021.[11]
- Tax rates are assumed to remain constant throughout the analysis.
- The Orbit Road project's total generation capacity would be 3 MW AC.[12]
- The Orbit Road project would become operational in 2025.[13]

Fiscal Impact

This portion of the section quantifies the direct fiscal contribution that the proposed Orbit Road project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Orbit Road project would generate for Isle of Wight County over a 25-year period and a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Orbit Road would generate for Isle of Wight County from taxes levied on the capital investment in machinery and tools, while Scenario 2 tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

[9] Data Source: Derived from data provided by Pivot Energy.
[10] Data Source: Isle of Wight County staff and Pivot Energy.
[11] Data Source: Pivot Energy.
[12] Data Source: Pivot Energy.
[13] Data Source: Pivot Energy.

Reassessment of Property

Table 3 details the increased tax revenue associated with reassessing the 28.84-acre solar site as solar use property. The county real estate tax revenue from the fenced-in acreage after reassessment is estimated to be approximately $3,070 per year, for a cumulative total of approximately $76,800 over a 25-year operational life and approximately $107,500 over a 35-year operational life. Adding one-time rollback taxes of approximately $3,130 increases that cumulative total to approximately $79,900 over 25 years and approximately $110,600 over 35 years. In contrast, the property currently generates approximately $270 per year for the county, for a cumulative total of approximately $6,730 over 25 years and approximately $9,420 over 35 years.

Table 3: Estimated County Revenue Generated by the Proposed Orbit Road Project over 25 Years and 35 Years from Real Estate Taxes

	Over 25 Years	Over 35 Years
Estimated Increased Appraised Value of Property[14]	$432,600	$432,600
Isle of Wight County Real Estate Tax Rate[15]	0.0071	0.0071
Annual County Real Estate Tax – Solar Use	$3,070	$3,070
Revenue over Operational Life	**$76,800**	**$107,500**
One-time Rollback Taxes[16]	**$3,130**	**$3,130**
Total Cumulative Revenue over Operational Life	**$79,900**	**$110,600**

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment in Machinery and Tools

Table 4 separately details the additional annual revenue that the proposed Orbit Road project would generate for Isle of Wight County over a 25-year period and a 35-year period from taxes levied on capital investment in machinery and tools. 1) the taxable portion of capital investments based on the stepdown local tax exemption pursuant to Virginia Code §58.1-2606.1[17], times 2) Isle of Wight County's depreciation guidelines for machinery and tools[18], times 3) Isle of Wight County's real estate tax rate of $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.1.[19]

[14] Calculated as 28.84 acres times $15,000 per acre.
[15] Data Source: Isle of Wight County's Commissioner of Revenue's office.
[16] Rollback taxes are computed as the difference between the current land use value assessment tax and the tax on the fair market value for the affected acreage for five complete tax years plus the current year. Does not account for changes in assessment values over time.
[17] Virginia Code §58.1-2606.1 stipulates that solar facilities 5MW or less are subject to a stepdown exemption from local property taxes if the project is approved by the locality on or after July 1, 2022. The amount of the exemption is 80 percent in the first five years, 70 percent in years six through ten, and 60 percent thereafter.
[18] Because Orbit Road would be independently owned and does not meet the definition of an "Electric Supplier" because it is under 25 MW, it would be assessed locally.
[19] Data Source: Isle of Wight County's Commissioner of Revenue's office. Pursuant to Virginia Code §58.1-2606.1, Orbit Road would be taxable at a rate not exceeding the county's real estate tax rate.

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Orbit Road project would be approximately $3,480 in the project's first year of operation, with that figure projected to increase to approximately $6,960 in year 11 of the project as the value of the exemption is reduced for a cumulative total of approximately $148,000 over 25 years and approximately $217,600 over 35 years.

Table 4: Estimated County Revenue by Proposed Solar Investment Over 25 Years and 35 Years

Year	Total Capital Investment Subject to Exemption[20]	Depreciated Value of Taxable Capital Investment[21]	Additional Annual County Tax Revenue Solar Investment[22]
1	$6,130,600	$490,448	$3,480
2	$6,130,600	$490,448	$3,480
3	$6,130,600	$490,448	$3,480
4	$6,130,600	$490,448	$3,480
5	$6,130,600	$490,448	$3,480
6	$6,130,600	$735,672	$5,220
7	$6,130,600	$735,672	$5,220
8	$6,130,600	$735,672	$5,220
9	$6,130,600	$735,672	$5,220
10	$6,130,600	$735,672	$5,220
11	$6,130,600	$980,896	$6,960
12	$6,130,600	$980,896	$6,960
13	$6,130,600	$980,896	$6,960
14	$6,130,600	$980,896	$6,960
15	$6,130,600	$980,896	$6,960
16	$6,130,600	$980,896	$6,960
17	$6,130,600	$980,896	$6,960
18	$6,130,600	$980,896	$6,960
19	$6,130,600	$980,896	$6,960
20	$6,130,600	$980,896	$6,960
21	$6,130,600	$980,896	$6,960
22	$6,130,600	$980,896	$6,960
23	$6,130,600	$980,896	$6,960
24	$6,130,600	$980,896	$6,960
25	$6,130,600	$980,896	$6,960

[20] Data Source: Pivot Energy.

[21] Accounts for Isle of Wight County's depreciation guidelines for Machinery and Tools. Also accounts for the stepdown exemption from local property taxes pursuant to Virginia Code §58.1-2606.1 for projects 5 MW or less and approved by a locality after July 1, 2022. The amount of the exemption is 80 percent in the first five years, 70 percent in years six through ten, and 60 percent thereafter.

[22] Calculated pursuant to Virginia Code §58.1-2606.1. Because Orbit Road would be independently owned and does not meet the definition of an "Electric Supplier" because it is under 5 MW, it would be taxed at the Isle of Wight County real estate tax rate of $0.71 per $100.

Year	Total Capital Investment Subject to Exemption[20]	Depreciated Value of Taxable Capital Investment[21]	Additional Annual County Tax Revenue Solar Investment[22]
CUMULATIVE TOTAL OVER 25 YEARS			**$148,000**
26	$6,130,600	$980,896	$6,960
27	$6,130,600	$980,896	$6,960
28	$6,130,600	$980,896	$6,960
29	$6,130,600	$980,896	$6,960
30	$6,130,600	$980,896	$6,960
31	$6,130,600	$980,896	$6,960
32	$6,130,600	$980,896	$6,960
33	$6,130,600	$980,896	$6,960
34	$6,130,600	$980,896	$6,960
35	$6,130,600	$980,896	$6,960
CUMULATIVE TOTAL OVER 35 YEARS			**$217,600**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

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 Orbit Road project would make to Isle of Wight County over its operational life under Scenario 1. As these data indicate, that cumulative total is approximately $227,900 over 25 years and approximately $328,300 over 35 years.

Table 5: Estimated Cumulative County Tax Revenue from the Proposed Orbit Road Project under Scenario 1

	Over 25 Years	Over 35 Years
County Real Estate Tax Revenue	$79,900	$110,600
County Revenue from Taxation of Capital Investments	$148,000	$217,600
TOTAL Cumulative Revenue	**$227,900**	**$328,300**

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Orbit Road project would generate for Isle of Wight County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636. The Virginia Code currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect on July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026. Section 58.1-3660 further stipulates that capital investment associated with the solar project will be exempt from taxation if the county adopts an energy revenue share ordinance.

Table 6 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 3 MW AC and an assumed commissioning date of 2025, a revenue share ordinance would generate approximately $138,500 over a 25-year operational life and approximately $215,200 over a 35-year operational life.

Table 6: Estimated County Revenue Generated from Revenue Share Ordinance over 25 Years and 35 Years[23]

Year	MW	Payment per MW with Escalator	Annual County Revenue
1	3	$1,400	$4,200
2	3	$1,540	$4,620
3	3	$1,540	$4,620
4	3	$1,540	$4,620
5	3	$1,540	$4,620
6	3	$1,540	$4,620
7	3	$1,694	$5,082
8	3	$1,694	$5,082
9	3	$1,694	$5,082
10	3	$1,694	$5,082
11	3	$1,694	$5,082
12	3	$1,863	$5,590
13	3	$1,863	$5,590
14	3	$1,863	$5,590
15	3	$1,863	$5,590
16	3	$1,863	$5,590
17	3	$2,050	$6,149
18	3	$2,050	$6,149
19	3	$2,050	$6,149
20	3	$2,050	$6,149
21	3	$2,050	$6,149
22	3	$2,255	$6,764

[23] Data Source: Pivot Energy.

Year	MW	Payment per MW with Escalator	Annual County Revenue
23	3	$2,255	$6,764
24	3	$2,255	$6,764
25	3	$2,255	$6,764
CUMULATIVE TOTAL OVER 25 YEARS			**$138,500**
27	3	$2,480	$7,441
28	3	$2,480	$7,441
29	3	$2,480	$7,441
30	3	$2,480	$7,441
31	3	$2,480	$7,441
32	3	$2,728	$8,185
33	3	$2,728	$8,185
34	3	$2,728	$8,185
35	3	$2,728	$8,185
CUMULATIVE TOTAL OVER 35 YEARS			**$215,200**

**Totals may not sum due to rounding.*

Scenario 2: Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Orbit Road project would make to Isle of Wight County over its operational life. As these data indicate, that cumulative total is approximately $218,400 over 25 years and approximately $325,800 over 35 years.

Table 7: Estimated Cumulative County Revenue from the Proposed Orbit Road Project over 25 Years and 35 Years under Scenario 2

	Over 25 Years	Over 35 Years
County Real Estate Tax Revenue	$79,900	$110,600
County Revenue from Revenue Share Ordinance	$138,500	$215,200
TOTAL Cumulative Revenue	**$218,400**	**$325,800**

Current Agricultural Use

This section provides a benchmark for the previous estimates of the fiscal contribution that the proposed Orbit Road project would make to Isle of Wight County by estimating the fiscal contribution that the site makes to the county in its current agricultural use.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- The proposed Orbit Road project would be situated on an approximate 28.84-acre tract of agricultural land of which 27 acres are used to produce cotton.[24]

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 8, in its current agricultural use the proposed Orbit Road project site directly supports approximately: 1) < 1 job, 2) $7,300 in wages and benefits, and 3) $19,200 in economic output to Isle of Wight County.

Taking into account the economic ripple effects that direct impact generates, on average, the total annually supported impact on Isle of Wight County is approximately: 1) < 1 job, 2) $11,400 in wages and benefits, and 3) $29,600 in economic output.

Table 8: Total Estimated Annual Economic Impact of the Orbit Road Project Site on Isle of Wight County – Current Agricultural Use[25]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	< 1	$7,300	$19,200
2nd Round Indirect and Induced Economic Activity	< 1	$4,100	$10,400
Total Economic Activity	**< 1**	**$11,400**	**$29,600**

**Totals may not sum due to rounding.*

Fiscal Impact Assumptions

- The current assessment value of the affected acreage is approximately $37,900.[26]

[24] Data Source: Pivot Energy.
[25] Calculations based data from the U.S. Department of Agriculture and IMPLAN Group, LLC for Virginia.
[26] Data Source: Derived from Isle of Wight County's property card database.

Fiscal Impact

Table 9 details the estimated tax revenue that the proposed Orbit Road site generates for Isle of Wight County in its current agricultural use. As the data in Table 9 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $270 per year, for a cumulative total of approximately $6,730 over 25 years and approximately $9,420 over 35 years.

Table 9: Estimated County Revenue Generated by the Proposed Orbit Road Project Site over 25 Years and 35 Years from Real Estate Taxes – Current Agricultural Use

	Over 25 Years	Over 35 Years
Estimated Assessed Value of Property – Current Agricultural Use[27]	$37,900	$37,900
Isle of Wight County Real Estate Tax Rate[28]	0.0071	0.0071
Estimated Annual County Real Estate Tax – Current Agricultural Use	$270	$270
Total Cumulative Revenue over Operational Life	**$6,730**	**$9,420**

**Totals may not sum due to rounding.*

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.

[27] Data Source: Derived from Isle of Wight County's property card database.
[28] Data Source: Isle of Wight County's Commissioner of Revenue's office.



KEY MAP
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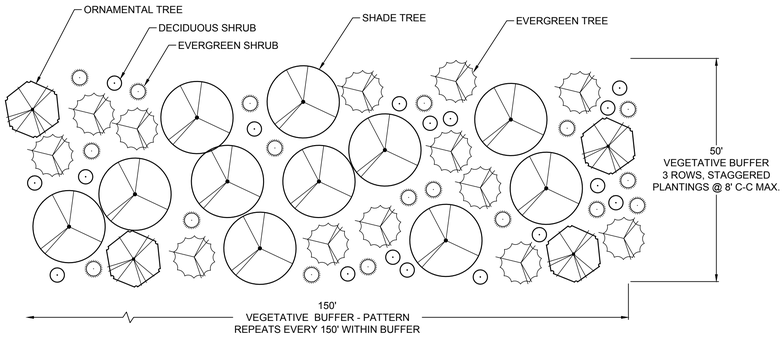

PROPOSED LANDSCAPE BUFFER | VIEW 1
NOT TO SCALE



EXISTING CONDITIONS | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED TIME OF PLANTING | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 5 YEAR GROWTH | VIEW 1
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 10 YEAR GROWTH | VIEW 1
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LANDSCAPE PLAN
FOR
VAL035 Solar Energy System
18213 ORBIT ROAD, WINDSOR
NEWPORT MAGISTERIAL DISTRICT, ISLE OF WIGHT CO., VA

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- VIEW 1 -

DATE	JULY 14, 2023
JOB NO.	2200574.03
FILE NAME	LD-LA-VA
DRAWN BY	TKM
CHECKED BY	JTP
SHEET NO	VA-1

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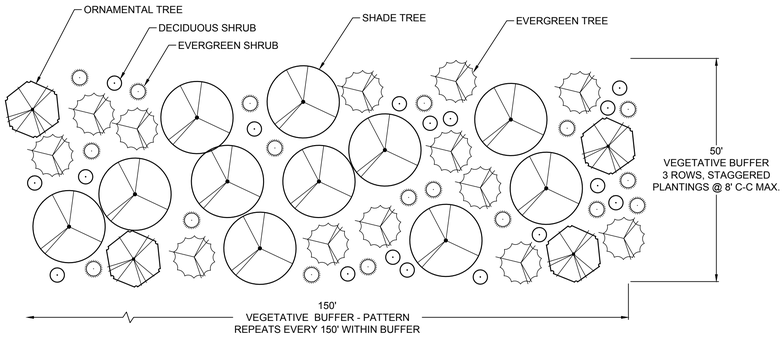

PROPOSED LANDSCAPE BUFFER | VIEW 2
NOT TO SCALE



EXISTING CONDITIONS | VIEW 2
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED TIME OF PLANTING | VIEW 2
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 5 GROWTH | VIEW 2
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PROPOSED LANDSCAPE BUFFER | ESTIMATED 10 YEAR GROWTH | VIEW 2
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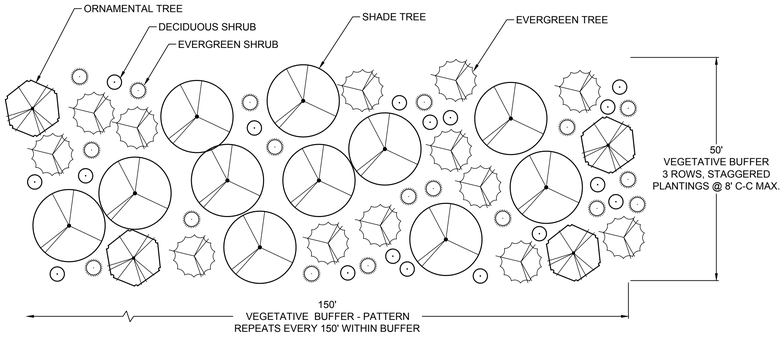

PROPOSED LANDSCAPE BUFFER | VIEW 3
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EXISTING CONDITIONS | VIEW 3
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED TIME OF PLANTING | VIEW 3
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 5 GROWTH | VIEW 3
NOT TO SCALE



PROPOSED LANDSCAPE BUFFER | ESTIMATED 10 YEAR GROWTH | VIEW 3
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SHEET NO	VA-3

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EASTERN RED CEDAR

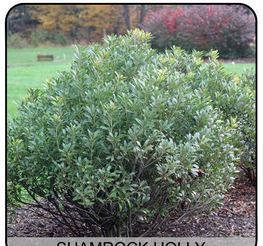

GREEN GIANT ARBORVITAE

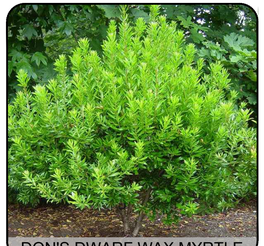

FLOWERING DOGWOOD


RED SUNSET RED MAPLE


WINTERBERRY HOLLY


RED TWIG DOGWOOD


SHAMROCK HOLLY


DON'S DWARF WAX MYRTLE


PIN OAK


WINTER KING HAWTHORNE

PLANT PALETTE

DECIDUOUS TREES

QUERCUS PALUSTRIS (PIN OAK)
HEIGHT: 50-70 FT
SPREAD: 40-60 FT
GROWTH RATE: +1-2 FT/YEAR

ACER RUBRUM ' RED SUNSET'
HEIGHT: 40-50 FT
SPREAD: 30-40 FT
GROWTH RATE: + 2 FT/YEAR

EVERGREEN TREES

JUNIPERUS VIRGINIANA (EASTERN RED CEDAR)
HEIGHT: 30-65 FT
SPREAD: 8-25 FT
GROWTH RATE: + 1-2 FT/YEAR

THUJA PLICATA ' GREEN GIANT"
HEIGHT: 40-60 FT
SPREAD: 12-15 FT
GROWTH RATE: + 2-3 FT/YEAR

ORNAMENTAL TREES

CORNUS FLORIDA (FLOWERING DOGWOOD)
HEIGHT: 15-30 FT
SPREAD: 15-30 FT
GROWTH RATE: + 1-2 FT/YEAR

CRATAEGUS VIRIDIS ' WINTER KING'
HEIGHT: 25-35 FT
SPREAD: 25-35 FT
GROWTH RATE: + 1-2 FT/YEAR

EVERGREEN SHRUBS

MYRICA CERIFERA ' DONS DWARF'
HEIGHT: 3-4 FT
SPREAD: 4-6 FT

ILEX GLABRA ' SHAMROCK'
HEIGHT: 3-4 FT
SPREAD: 3-4 FT

DECIDUOUS SHRUBS

CORNUS STOLONIFERA ' ARTIC FIRE'
HEIGHT: 3-5 FT
SPREAD: 3-5 FT
ILEX VERTICILLATA ' NANA'
HEIGHT: 3-12 FT
SPREAD: 3-12 FT

NOTE: TREES SHALL BE INSTALLED AT 6' - 8' HEIGHT MINIMUM. SHRUBS SHALL BE INSTALLED AT 24-30" HEIGHT MINIMUM. THE PROPOSED VEGETATION DEPICTED IN THIS EXHIBIT ARE FOR CONCEPT PURPOSES ONLY. FINAL PLANT SPECIES WILL BE DETERMINED WITH FINAL DESIGN.

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VAL035: WATER QUALITY IMPACT ASSESSMENT

Isle of Wight County, Virginia

Prepared by:

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Prepared For:
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Revised June 2023

Summary

Dawood has completed a water quality impact assessment for the proposed VAL035 Solar Energy System Project (Project). The major water quality impact assessment was performed in conformance with Appendix B-1 Article 4, Section 4003 of the Isle of Wight County, Virginia Code. The assessment performed identifies the impacts of the proposed land development and disturbances on resources within and surrounding the Project area. The Site Plan included with the Conditional Use Permit application provides an overview of existing and proposed site characteristics and conditions.

1. Site Plan

A Site Plan is included in the Conditional Use Permit Application.

a. No tidal wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, tidal shores, water bodies with perennial flow; therefore, no Resource Protection Areas (RPAs) are located within the proposed Project Area. One RPA was identified and delineated for a palustrine emergent (PEM) wetland outside of the proposed Project area. The RPA boundary is denoted on the Existing Conditions Plan. As the Project is entirely located within the Chesapeake Bay watershed, the Project area is classified as a Resource Management Area.

b. As no RPAs are located within the project area, no encroachments into these zones are proposed.

c. While no RPAs are located within the proposed Project area, Best Management Practices (BMPs) have been and are proposed to be implemented to protect the Resource Management Area (RMA) in which the Project is located. These BMPs include: limiting the project area to prevent the need for clearing of trees, implementation of an invasive species management plan, proposed restoration following construction activities with native plant species, implementation of a VADEQ approved Erosion and Sedimentation Control Plan, Stormwater Management Plan, and Stormwater Pollution Prevention Plan and project siting to minimize and avoid, where possible, direct and potential indirect impacts to water resources and other habitat that may support threatened and/or endangered species.

d. Land use within the proposed Project area is entirely agricultural. Therefore, the only vegetation that exists within the Project area is actively managed row-crop (e.g., cotton, soybean) during the growing season and herbaceous cover-crop during the non-growing season. No trees, scrub-shrub, or herbaceous vegetation within an RPA is proposed to be removed or impacted by the Project.

e. A VADEQ approved Erosion and Sedimentation Control Plan will be implemented during Project construction. Conversion of vegetative cover from row-crop to perennial herbaceous cover through restoration of the proposed project area with native seed mixes will reduce the risk of long-term erosion and sediment run-off.

2. Hydrogeological Assessment

a. Hydrogeological Description

Topography

Site elevations in the project area range from approximately 75 to 80 feet above mean sea level. Topography within the proposed project and on surrounding land is relatively level with a majority of the site ranging from 0 to 4% slopes. The northern segment of the proposed Project area is gently sloping to the northeast and the southern segment gently sloping toward the southeast.

Soils

A review of the project area on the Natural Resources Conservation Service's Web Soil Survey denoted that four soil units are located within the proposed project area: Slagle fine sandy loam (18A and 18B), and Yemassee fine sandy loam (23). Soil series unit 18B is classified as potentially highly erodible land (PHEL) in Isle of Wight County. Soil series units 18A and 23 are classified as not highly erodible land (NHEL) in Isle of Wight County. More detailed information has been included in the table below. Soil series unit boundaries are shown on the attached Existing Condition Site Plan.

Table 1. Summary of Site Soils

Map Unit Symbol	Map Unit Name	Depth to Lithic Bedrock (cm)[1]	Depth of Water Table (cm)	Flooding Frequency Class	Ponding Frequency Class
18A	Slagle fine sandy loam, 0 to 2 percent slopes	>200	69	None	None
18B	Slagle fine sandy loam, 2 to 6 percent slopes	>200	76	None	None
23	Yemassee fine sandy loam	>200	38	None	None

[1] Depth to Lithic Bedrock was determined by using the "Dominant Component" Aggregation Method, which returns the attribute value associated with the component with the highest percent composition in the map unit.

Hydrology

Surface water on the site is conveyed to Great Swamp and Nuby Run, tributaries to Lake Burnt Mills. Lake Burnt Mills and tributaries thereto are classified as Class III waters with a Special Standard of PWS per Title 9, Agency 25, Chapter 260 of the VA Code. Two palustrine emergent (PEM) wetlands are located within the proposed Project area. No other surface water or groundwater resources were identified within the proposed project area. One ephemeral watercourse is located along the northeastern limit of the Project. Additionally, one PEM wetland is located approximately 200-feet northeast of the proposed Project.

Geology

The Project area is underlain by the Windsor Formation of the Tertiary-Quaternary period. This formation is comprised by gray and yellowish- to reddish-brown sand, gravel, silt, and clay. This unit constitutes surficial deposits of extensive plain (altitude 85-95 feet.) seaward of Surry scarp and of coeval, fluvial-estuarine terraces west of scarp. The fining upward sequence beneath plain consists of a basal pebbly sand grading upward into cross-bedded, quartzose sand and massive, clayey silt and silty

clay; lower and upper parts of sequence were deposited, respectively, in shallow-marine or open-bay and restricted-bay or lagoonal environments. In terraces west of Surry scarp, fluvial-estuarine deposits comprise muddy, coarse, trough cross-bedded sand and gravel grading upward to sandy silt and clay. Thickness is 0 to 40 feet. A review of the Virginia DCR's Natural Heritage Data Explorer indicates that the proposed project is not located within karst bedrock.

b. Hydrogeological Impacts

Topography

Impacts to site topography will result from grading activities associated with the proposed Project. Changes to topography will, overall, be relatively minor and not result in significant changes to that which exists currently. Overall, no adverse impacts to the site surface drainage are proposed nor anticipated.

Soils

Topsoil will be stripped, stockpiled, and used for restoration in areas where roads, pads, and utility trenching are proposed. These management practices will prevent the compaction of topsoil in construction areas where the threat exists and provide for suitable material to reestablish vegetation during the restoration phase. In areas where pads, roads, or utility trenching is proposed, subsoils will be compacted to reduce the risk of future settling and need for additional maintenance activities that may result in additional disturbance. Areas where compaction will be performed are limited within the overall Project area. Piles/posts for the PV modules will be driven to reduce the impacts to soils. Timber mats will be utilized in wetland areas to reduce the disturbance and compaction of wetland soils, where practical. Overall, impacts to soil are not anticipated to result in adverse effects.

Hydrology

As noted, site surface drainage will be maintained and consistent with pre-construction pathways. A VADEQ approved Erosion and Sedimentation Control Plan, Stormwater Pollution Prevention Plan and Stormwater Management Plan will be implemented by the project to ensure maintenance of water quality and quantity are maintained during and following the proposed Project.

Impacts to two PEM wetlands are proposed by the Project. Impacts include piles for the mounted PV modules and trenching for installation of electric transmission wires. Impacts will be minimized to the extent possible by driving steel piles into the native soils. No additional fill materials are proposed within the delineated wetland areas. Trenching will be performed through the wetland resources to install the transmission wires needed to support the project's intended purpose. As noted, topsoil stripping will be performed in these areas and stockpiled for use during restoration activities. During restoration, wetland areas will be restored to their pre-construction grades to reestablish hydrological functions. No impacts to waterbodies outside of the Project area are proposed. As such, no adverse impacts to hydrology within the Project area or to surrounding areas is anticipated.

Geology

Piles will be driven into bedrock to ensure solid foundation for the mounted PV modules. Otherwise, no disturbance or impacts to the geology underlaying the Project area is proposed. No blasting is proposed for the Project. Therefore, no adverse impacts to the geology underlaying the Project and surrounding area are anticipated.

c. Disturbances

i. Two palustrine emergent (PEM) wetlands are proposed to be disturbed by the Project. Both wetland areas are currently located within an actively managed agricultural field and therefore are disturbed by both soil tilling and vegetation management practices. As noted, the Project will strip and stockpile topsoil within these resources to be utilized for restoration to pre-construction grades. Steel piles will be driven, and no fill materials are proposed to be utilized within the wetlands. Restoration activities, including seeding with native seed mixes, will help to restore wetland functions. Overall, land use associated with the Project is expected to improve such functions as annual soil disturbances will not occur and vegetative management will be limited to preventing the growth of woody species. As such, native wetland flora will have the opportunity to proliferate within the resources. Soil disturbance within wetland resources will also be minimized with the use of timber mats during construction activities, where practical, to reduce the risk of both topsoil and subsoil compaction.

   Alternative project alignments were considered to avoid wetland impacts; however, there is no alignment that fulfills the project's intended purpose without impacting wetland resources. The wetlands proposed to be impacted are isolated wetlands that are consistently disturbed by agricultural activities. As such, both wetlands provide little to no functional benefits to the local and regional ecosystems. Proposed impacts were minimized to the extent practicable, and erosion and sediment controls will be utilized during the construction period to further mitigate for potential impacts. Additionally, restoration of the resources following construction will provide a means to reestablish a native vegetative community.

   Furthermore, siting of the proposed project within the agricultural field provided means to avoid tree-clearing, which would have greater environmental impact to the local ecosystem. Efforts were made to lease nearby and adjoining lands to avoid potential wetland impacts; however, those lands were already leased by other solar developers and therefore unavailable for the proposed project.

ii. Surface drainage from the site will be maintained both during and following construction consistent with that which exists currently within the Project area. A VADEQ approved Erosion and Sedimentation Control Plan, Stormwater Pollution Prevention Plan, and Stormwater Management Plan will be implemented to ensure no adverse effects to the quantity and quality of surface runoff from the site. Therefore, no adverse impacts to the supply of water to wetlands, streams, lakes, rivers, or other waterbodies within or downgradient of the Project area are proposed or anticipated.

iii. As noted, disturbed wetland areas will be restored to their pre-construction grades to ensure the maintenance of their hydrological characteristics. Additionally, cessation of soil disturbing activities associated with normal agricultural practices will allow for a consistent hydrological regime within both resources following the completion of construction and restoration activities.

iv. No off-site fill material is proposed to be utilized by the Project and no fill materials are proposed for use within waterbodies.

v. No dredging is proposed by the Project.

vi. Pollutant loads in runoff based on existing and proposed land uses were estimated for total Phosphorus and total Nitrogen. The table below documents estimated pollutant loads in runoff from the Project area based on pre-development and post-development land use conditions:

Development Stage	Total Phosphorus (lb/yr)	Total Nitrogen (lb/yr)
Pre-Construction	13.34	95.41
Post Construction	14.06	100.58

vii. The Project proposes a total increase in impervious surfaces of 0.4%. Post-construction impervious surfaces include a gravel road and concrete pads.

viii. No forest, woodland, or scrub-shrub vegetative communities will be cleared for the Project. Therefore, total clearing for the Project is 0%.

ix. The Project is proposed to be completed in one phase. Construction is expected to begin in June 2024 and be completed in November 2024.

x. The following permits/approvals are required from federal, state, or local agencies for the proposed Project:

- USACE/VADEQ/VMRC/Local Wetlands Board
  - Standard Joint Permit
- VADEQ
  - VPDES (VAR10) for Land Disturbance > 1-acre
  - Solar Permit-by-Rule (PBR) – *de minimis*
- VDOT
  - Land Use Permit (LUP-UT) for Utility Installation
- Isle of Wight
  - Conditional Land Use Permit
  - Site Development Plan

d. Mitigation Measures

i. Disturbance mitigation/minimization measures proposed to be implemented by the Project include: protective fencing along resource boundaries outside of the Project area to prevent unauthorized access or disturbance to such resources, use of timber mats in wetland areas to minimize impacts to wetland soils, perimeter controls to reduce sediment pollution from the project area, and stormwater management BMPs which may include grass filter strips, grass channels, dry swales, bioretention, infiltration practices, and/or extended detention.

ii. A stormwater management system for nonpoint source quality and quantity control in compliance with Chapter 14A of Isle of Wight County's Stormwater Management Ordinance will be implemented by the Project.

3. Vegetation Assessment

a. Woody Plant Materials

Forested areas surrounding the proposed Project area are denoted on the attached Site Plan. Trees greater than 8-inch diameter at breast height (DBH) are located within these surrounding woodlands. No trees or woody vegetation is located within the proposed Project area.

b. Impacts to Vegetation

i. All areas proposed to be disturbed are covered by herbaceous vegetation. Herbaceous vegetation (row-crop or cover crop) will be cleared or disturbed during construction activities. All such clearing/disturbance will occur within the Project's Limit of Construction.

ii. No tree or woody species clearing, or removal is proposed by the Project.

iii. Herbaceous vegetation proposed to be removed will be the crop present within the agricultural field. This will be entirely dependent upon field conditions and the landowner's planting schedule. It is anticipated, based on the proposed construction period, that the vegetation to be removed will either be a cover crop (e.g., clover, ryegrass, oats) or planted row-crop (e.g., corn, soybean, cotton).

c. Mitigation Measures

i. No trees or woody vegetation is proposed to be removed or cleared for the Project. Therefore, replanting is not considered applicable. A tree screening will be utilized by the project.

ii. Disturbed areas are to be seeded with low maintenance native species ground cover meeting the requirements of the Virginia Erosion and Sediment Control Handbook. Buffer yards to be provided in accordance with the County Zoning Ordinance, existing vegetation in the buffer yards to be supplemented as needed.

iii. No trees are located within the Project area and tree clearing is not proposed; therefore, any significant trees in vicinity to the Project area are not proposed be disturbed. Vegetation present within the project area is herbaceous and comprised by agricultural species; therefore, no significant species are anticipated to be disturbed. Restoration of the Project area will include planting with native seed species to promote the reestablishment of herbaceous vegetation within the Project area to assist with reducing runoff rates and pollutant runoff loads.

iv. Native species seed mixes in conformance with Virginia Erosion and Sediment Control Handbook will be utilized by the Project. Seed mixes will be included on the VADEQ approved Erosion and Sedimentation Control Plan.

4. Shoreline and Bank Stabilization Projects

The proposed Project does not propose shoreline or bank stabilization.

5. Construction Phasing

The Project is proposed to be completed in a single phase.

VAL035: THREATENED AND ENDANGERED SPECIES ASSESSMENT

Isle of Wight County, Virginia

Prepared by:

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Revised June 2023

Summary

Dawood has performed desktop surveys, reviewed publicly available maps and information, and coordinated with state and federal agencies to determine if the proposed VAL035 Solar Facility Project has the potential to impact threatened or endangered species. A review for threatened and endangered species within or potentially impacted by the project area was coordinated with United States Fish and Wildlife Service (USFWS) via the IPaC system, with Virginia Department of Conservation and Recreation (DCR) via an Information Services Order Form, with Virginia Department of Wildlife Resources (DWR) via a VaFWIS system review and email coordination, and with the National Oceanic and Atmospheric Administration (NOAA) via email. No impacts to threatened and/or endangered species are proposed or anticipated as a result of the project. A summary of identified threatened and endangered species within the proposed project area and agency coordination is below.

USFWS

The USFWS species list generated by the IPaC system noted one endangered species (Northern Long-eared Bat) and one candidate species (Monarch Butterfly) potentially within the proposed project area. No response from the Service was received in the 30-day period determined by USFWS; therefore, the conclusions of the Consistency Letter are deemed appropriate.

Northern Long-eared Bat

A "may affect" determination was issued by USFWS for the Northern Long-eared Bat; however, the USFWS Consistency Letter states that any take that would occur is not prohibited under ESA Section 4(d). Neither tree-clearing or disturbance of caves is proposed by the project. Therefore, no take of this species is proposed nor anticipated as a result of the project. Additionally, a review of the NLEB Winter Habitat and Roost Trees mapper maintained by VA Department of Game and Inland Fisheries does not denote any hibernaculum or known maternity roost trees within or in proximity to the proposed project area.

Monarch Butterfly

The proposed project area is an actively managed agricultural field and lacks potential habitat (e.g., milkweed and flowering plants) for the species. Therefore, no impacts to this species are proposed or anticipated. Additionally, enhancement of the proposed project area with native pollinator plant species will improve the potential to support this species.

Migratory Birds

Migratory birds are not anticipated to be impacted by the proposed project. General measures and habitat protection will be implemented by the proposed project in accordance with USFWS Nationwide Standard Conservation Measures to reduce impacts to migratory bird species. Such measures include, but are not limited to: no proposed tree-clearing, proper management of waste, limiting project impacts to already disturbed lands, implementing an Erosion and Sedimentation Control Plan, and restoration with native plant species.

Virginia Department of Wildlife Resources

A 2-mile radius search via the VaFWIS system was used to develop an Initial Project Assessment (IPA) Report. Per the IPA there are no confirmed federal threatened, endangered, candidate or state threatened or endangered species within the proposed project area. The IPA identified three Colonial Water Bird Colonies within the 2-mile radius. Coordination with Virginia DWR was performed to ensure no potential impacts to threatened and endangered species were anticipated

as a result of the proposed project. The response email from DWR, dated March 17, 2023, indicates there are no anticipated adverse impacts to species under their jurisdiction from the proposed work.

Colonial Water Bird Survey

Three colonial water bird surveys for three colonies (Southside, Smithfield, Isle of Wight; Southside, Windsor, Isle of Wight; and Great Swamp) are documented within 2-miles of the proposed project area. In accordance with the DWR's Solar Energy Facility Construction and Operation Recommendations coordination with USFWS and DWR should occur if the proposed project is located within 0.5-mile of the colony. The nearest colony is the Southside, Smithfield, Isle of Wight colony, which according to The Center for Conservation Biology's CCB Mapping Portal is located approximately 0.9-mile southeast of the proposed project area. As such, the proposed project area is located outside of the 0.5-mile buffer zone for all documented colonies. Mapped locations for colonies are included in Enclosure B. In accordance with the recommendation, no disturbance to natural forested habitat and enhancement of existing vegetation within the proposed project area via restoration with native plant species is proposed.

Virginia Department of Conservation and Recreation

Consultation with the Virginia Department of Conservation and Recreation (DCR) was performed via their Information Services Order Form to determine if the proposed project had the potential to impact species under their jurisdiction. Per the DCR response letter, dated 03/10/2023, no impacts to species under their jurisdiction are anticipated as a result of the proposed project. DCR does recommend the development of an invasive species management plan for the project and planting of native species following construction activities. Such activities will be included for the proposed project to maximize benefits to native pollinators. The DCR response letter is included in Enclosure C.

NOAA

Project details were provided to NOAA via email. NOAA stated that although four species of sea turtles, shortnose sturgeon, and Atlantic sturgeon originating from five Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its rivers and tributaries, direct and/or indirect impacts to these species are not anticipated. The email response from NOAA's Brian D Hopper is included as Enclosure D.

Coastal Avian Protection Zone (CAPZ)

The proposed VAL035 project is not located within a Coastal Avian Protection Zone (CAPZ). Therefore, no impacts to protected species within a CAPZ are anticipated as a result of the proposed project.

Enclosure A: USFWS - IPaC Species List & Consistency Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project code: 2023-0042996
Project Name: VAL035

February 08, 2023

Subject: Consistency letter for the 'VAL035' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Jacob Yealy:

The U.S. Fish and Wildlife Service (Service) received on February 08, 2023 your effects determination for the 'VAL035' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will

first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

VAL035

2. Description

The following description was provided for the project 'VAL035':

> Construction of a solar photovoltaic energy system and associated site improvements including solar panels, equipment, cables, interconnection to the existing power lines, and access road.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.88926415,-76.69480106979492,14z



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

4. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

5. Will the action involve Tree Removal?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project Code: 2023-0042996
Project Name: VAL035

February 08, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Project Code: 2023-0042996
Project Name: VAL035
Project Type: Power Gen - Solar
Project Description: Construction of a solar photovoltaic energy system and associated site improvements including solar panels, equipment, cables, interconnection to the existing power lines, and access road.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.88926415,-76.69480106979492,14z



Counties: Isle of Wight County, Virginia

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

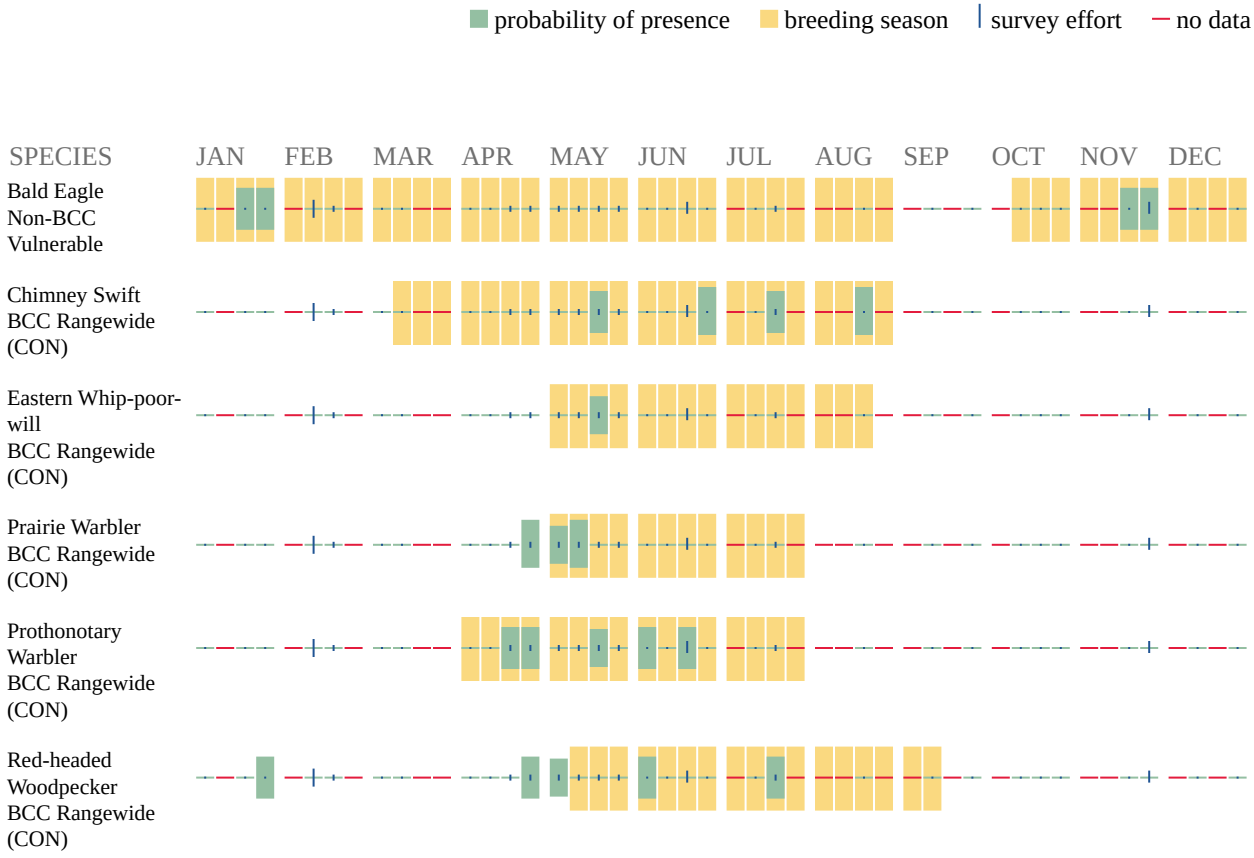
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

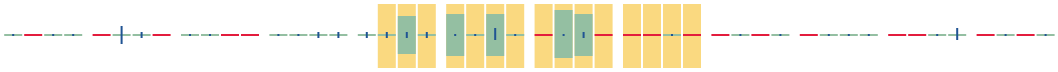
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Wood Thrush
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPaC User Contact Information

Agency:	Dawood Engineering, Inc.
Name:	Jacob Yealy
Address:	4250 Crums Mill Road
Address Line 2:	Suite 301
City:	Harrisburg
State:	PA
Zip:	17112
Email	jacob.yealy@dawood.net
Phone:	7179651521

Enclosure B: VaFWIS Initial Project Assessment, CCB Map & VA DWR Response

VaFWIS Initial Project Assessment Report Compiled on 3/15/2023, 8:28:09 AM

Help

Known or likely to occur within a **2 mile radius around point 36.8886520 -76.6943938** in **093 Isle of Wight County, VA**

View Map of Site Location

479 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 29) (29 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta		BOVA
040144	FTST	Ia	Knot, red	Calidris canutus rufa		BOVA
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
020052	SE	IIa	Salamander, eastern tiger	Ambystoma tigrinum		BOVA
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus		Habitat
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei		BOVA,Habitat
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin		BOVA,Habitat
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA
070131		Ic	Isopod, Phreatic	Caecidotea phreatica		BOVA
020063		IIa	Toad, oak	Anaxyrus quercicus		BOVA,Habitat
020002		IIa	Treefrog, barking	Hyla gratiosa		BOVA
040052		IIa	Duck, American black	Anas rubripes		BOVA
040033		IIa	Egret, snowy	Egretta thula		BOVA
040029		IIa	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA
040140		IIa	Woodcock, American	Scolopax minor		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA

To view **All 479 species** View 479

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need;
III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.;
b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Colonial Water Bird Survey (3 records)

View Map of All Query Results
Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Southside, Smithfield, Isle of Wight	1	May 17 2013	1			Yes
Southside, Windsor, Isle of Wight	1	May 17 2013	1			Yes
Great Swamp	1	Apr 28 2003	1			Yes

Displayed 3 Colonial Water Bird Survey

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species (4 Species)

View Map of Combined Terrestrial Habitat Predicted for 4 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Yes
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes

Public Holdings:

N/A

Compiled on 3/15/2023, 8:28:09 AM I1466871.0 report=IPA searchType= R dist= 3218 poi= 36.8886520 -76.6943938

PixelSize=64; Anadromous=0.019056; BECAR=0.017559; Bats=0.018322; Buffer=0.062259; County=0.05384; Impediments=0.018739; Init=0.095089; PublicLands=0.02062; SppObs=0.255327; TEWaters=0.023823; TierReaches=0.036824; TierTerrestrial=0.111719; Total=0.873508; Tracking_BOVA=0.176525; Trout=0.021967

Colonial Water Bird Survey Southside, Smithfield, Isle of Wight

36,53,19.1 -76,41,39.8 is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
Yes No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
Yes No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Search, Observation, Position

Map Overlay Legend

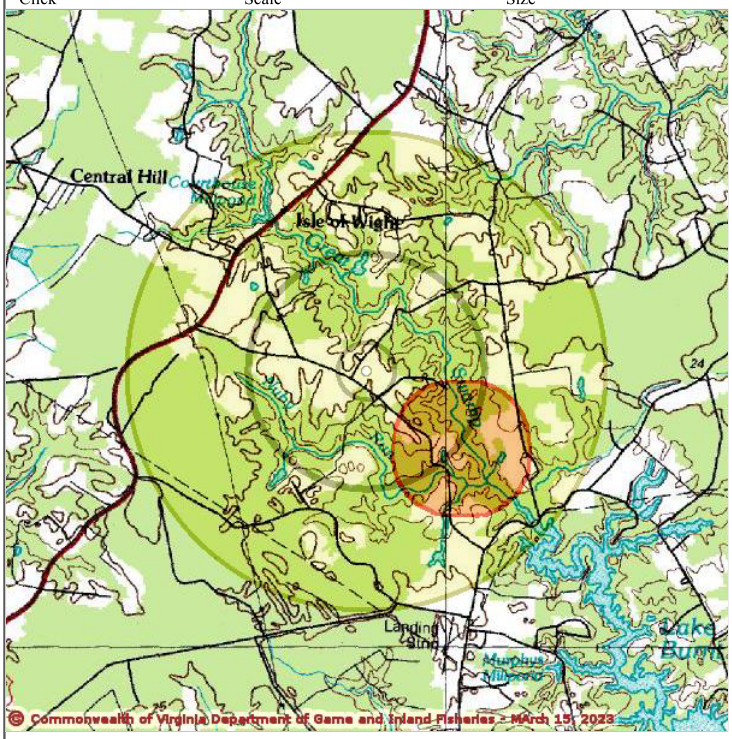
Position Rings 1 mile and 1/4 mile at the Search Point

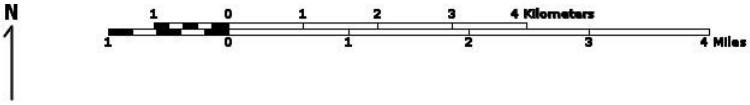
2 mile radius Search Area

Data Observation Site

back | Refresh Browser Page

Map Click: Pan Id M | Map Scale: In Zoom Out | Screen Size: Small Size Big | Help





Point of Search 36,53,19.1 -76,41,39.8
Map Location 36,53,19.1 -76,41,39.8

Select **Coordinate System:**
- (•) Degrees,Minutes,Seconds Latitude - Longitude
- ( ) Decimal Degrees Latitude - Longitude
- ( ) Meters UTM NAD83 East North Zone
- ( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 344216 and top 4088661. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic http://www.national.geographic.com/topo
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-15 08:32:09 (qa/qc March 21, 2016 12:20 - tn=1466871.0 dist=3218 I)
$poi=36.8886520 -76.6943938$query=select xy.x,xy.y,xy.offset_x,xy.offset_y, cc.High_TE from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs a on a.obsID = xy.obsID and case when CHARINDEX('Colony_Name=',a.Comments)>0 then SUBSTRING(a.Comments,CHARINDEX('Colony_Name=',a.Comments)+12, case when CHARINDEX(';',a.Comments,CHARINDEX('Colony_Name=',a.Comments)) > 12 then CHARINDEX(';',a.Comments,CHARINDEX('Colony_Name=',a.Comments)) - CHARINDEX('Colony_Name=',a.Comments)-12 else LEN(a.Comments)-CHARINDEX('Colony_Name=',a.Comments)-11 end) when CHARINDEX('Colony Name: ',a.Comments)>0 then SUBSTRING(a.Comments,CHARINDEX('Colony Name: ',a.Comments)+13, case when CHARINDEX(';',a.Comments,CHARINDEX('Colony Name:',a.Comments)) > 13 then CHARINDEX(';',a.Comments,CHARINDEX('Colony Name:',a.Comments)) -CHARINDEX('Colony Name:',a.Comments)-13 else LEN(a.Comments)-CHARINDEX('Colony Name:',a.Comments)-12 end) when SUBSTRING(a.Comments,1,13) = 'Colony Name =' then SUBSTRING(a.Comments,15,LEN(a.Comments)-14) else a.LocDescrip end = 'Southside, Smithfield, Isle of Wight' join vafwis_tables.dbo.cvSppObs_cc cc on cc.obsID = xy.obsID join vafwis_tables.dbo.sourceDB_Code sc on sc.sourceDB = a.sourceDB and sc.t_sourceDB like '%Colonial%'

Colonial Water Bird Survey Southside, Windsor, Isle of Wight

36,53,19.1 -76,41,39.8 is **the Search Point**

Display	**Item Location** is
at center	not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

Map Overlay Legend

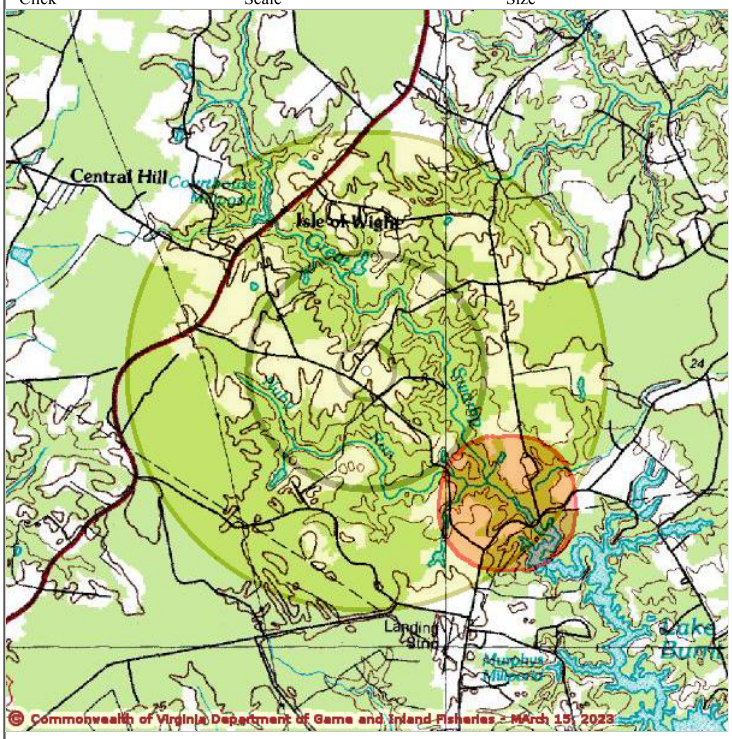
Position Rings 1 mile and 1/4 mile at the Search Point

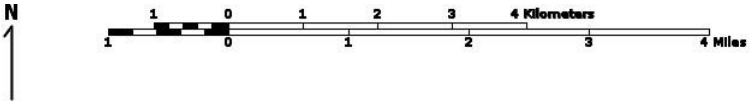
2 mile radius Search Area

Data Observation Site

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





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( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 344216 and top 4088661. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic http://www.national.geographic.com/topo
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-15 08:33:42 (qa/qc March 21, 2016 12:20 - tn=1466871.0 dist=3218 I)
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Colonial Water Bird Survey Great Swamp

36,53,19.1 -76,41,39.8
is **the Search Point**

Display at center	**Item Location** is not at map center

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles radius

Search Point is at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, Observation

Map Overlay Legend

Position Rings 1 mile and 1/4 mile at the Search Point

2 mile radius Search Area

Data Observation Site

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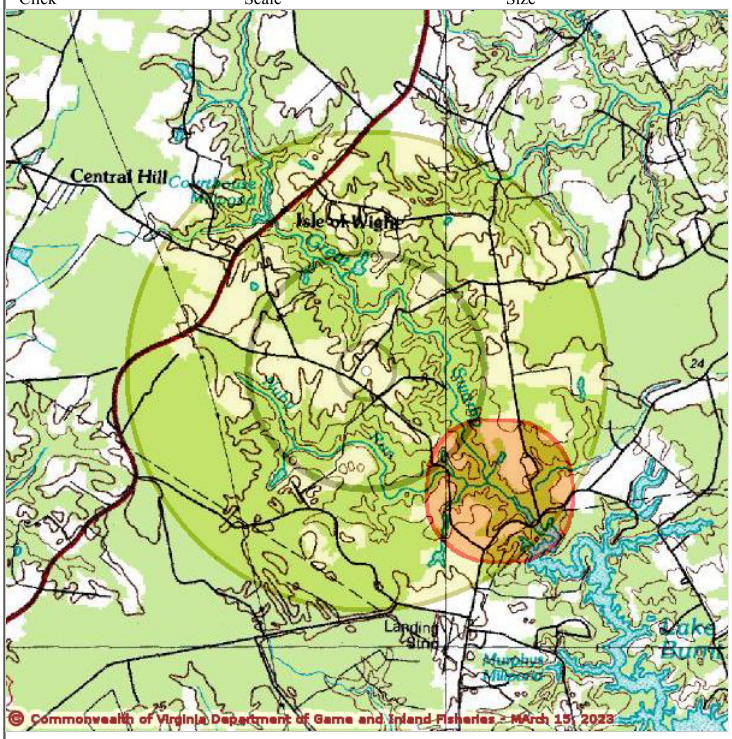

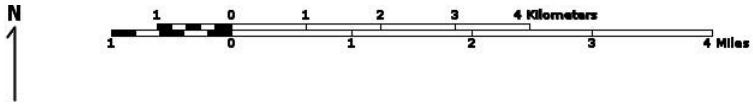

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Select **Coordinate System:**
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map assembled 2023-03-15 08:34:08 (qa/qc March 21, 2016 12:20 - tn=1466871.0 dist=3218 I)
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CCB Mapping Portal



Layers: Colonial Waterbirds 2013

Map Center [longitude, latitude]: [-76.69186592102051, 36.88984963563157]

Map Link:
https://ccbbirds.org/maps/#layer=Colonial+Waterbirds+2013&zoom=15&lat=36.88984963563157&lng=-76.6918
6592102051&legend=legend_tab_88b838c8-e51a-11e4-b5d2-0e0c41326911&base=World+Imagery+%28ESRI%29

Report Generated On: 03/15/2023

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the Data Use Agreement to ensure compliance with our data use policies. For additional data access questions, view our Data Distribution Policy, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Jacob Yealy

From: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Sent: Friday, March 17, 2023 11:46 AM
To: Jacob Yealy
Subject: ESSLog# 42854_VAL035 Solar_DWR_AEM20230317

Categories: Filed by Newforma

ATTENTION: This e-mail is from outside the organization. DO NOT click links or open attachments unless you confirm the incoming address of the sender.

Mr. Yealy,
We have reviewed the subject project that proposes to construct a solar facility in Isle of Wight County. We do not currently document any listed wildlife or designated resources under our jurisdiction from the project area. Therefore, we do not anticipate adverse impacts upon such species or resources to result from the proposed work.

We document colonial waterbird colonies containing great blue herons from the project area, near the headwaters of Lake Burnt Mills. We generally recommend a time of year restriction on construction activities located within 0.5 mile of a colony from February 15 through July 31 of any year. We also recommend that a 500-ft naturally vegetated, undisturbed buffer be left on the colony to ensure habitat suitability into the future. If any colonial waterbird colonies are identified on site, we recommend additional coordination with us to ensure its protection.

To further minimize impacts upon wildlife, we recommend review of and adherence to the solar facility development, operation, and fencing recommendations included within the document found here: https://dwr.virginia.gov/wp-content/uploads/media/Solar-Energy-Facility-Guidance.pdf

Thank you, Amy

Amy Martin
(she/her/hers)
Manager, Wildlife Information and Environmental Services
P 804.481.5296
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

_*

Jacob Yealy

From: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Sent: Monday, June 5, 2023 12:20 PM
To: Jacob Yealy
Subject: RE: ESSLog# 42854_VAL035 Solar_DWR_AEM20230317

Categories: Filed by Newforma

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Jacob,
Yes, that's correct.

Amy

Amy Martin
(she/her/hers)
Manager, Wildlife Information and Environmental Services
P 804.481.5296
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

From: Jacob Yealy <Jacob.Yealy@dawood.net>
Sent: Friday, June 2, 2023 10:30 AM
To: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Subject: RE: ESSLog# 42854_VAL035 Solar_DWR_AEM20230317

Good morning, Amy,

We received a comment during our project's county review regarding the Colonial Waterbird Colonies. I want to confirm that I did not misinterpret your response below regarding the potential to impact species.

Based on a review of the IPA & CCB Mapping portals (documents attached) our project appears to be outside the 0.5-mile buffer for the colonies mapped during the 2013 surveys. Based on IPA & CCB, it appears no new colonies were mapped in 2018.

Can you please confirm that the time of year restriction is not applicable to the project area (roughly shown as the pink polygon on the .png attached)? I interpreted your statement saying, if we were to discover a colonial waterbird colony within that 0.5-mile range, then the seasonal restriction and natural vegetation buffer would then apply.

Thanks,

Jacob Yealy
Ecologist
Dawood Engineering, Inc.
Jacob.Yealy@dawood.net

Office: 717-732-8576
Mobile: 717-965-1521

From: Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>
Sent: Friday, March 17, 2023 11:46 AM
To: Jacob Yealy <Jacob.Yealy@dawood.net>
Subject: ESSLog# 42854_VAL035 Solar_DWR_AEM20230317

ATTENTION: This e-mail is from outside the organization. DO NOT click links or open attachments unless you confirm the incoming address of the sender.

Mr. Yealy,
We have reviewed the subject project that proposes to construct a solar facility in Isle of Wight County. We do not currently document any listed wildlife or designated resources under our jurisdiction from the project area. Therefore, we do not anticipate adverse impacts upon such species or resources to result from the proposed work.

We document colonial waterbird colonies containing great blue herons from the project area, near the headwaters of Lake Burnt Mills. We generally recommend a time of year restriction on construction activities located within 0.5 mile of a colony from February 15 through July 31 of any year. We also recommend that a 500-ft naturally vegetated, undisturbed buffer be left on the colony to ensure habitat suitability into the future. If any colonial waterbird colonies are identified on site, we recommend additional coordination with us to ensure its protection.

To further minimize impacts upon wildlife, we recommend review of and adherence to the solar facility development, operation, and fencing recommendations included within the document found here: https://dwr.virginia.gov/wp-content/uploads/media/Solar-Energy-Facility-Guidance.pdf

Thank you, Amy

Amy Martin
(she/her/hers)
Manager, Wildlife Information and Environmental Services
P 804.481.5296
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CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dwr.virginia.gov

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Enclosure C: VA DCR Coordination Letter

Travis A. Voyles
Secretary of Natural and Historic Resources

Matthew S. Wells
Director

Andrew W. Smith
Chief Deputy Director

Frank N. Stovall
Deputy Director for Operations

Darryl Glover
Deputy Director for Dam Safety, Floodplain Management and Soil and Water Conservation

Laura Ellis
Deputy Director for Administration and Finance

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

March 10, 2023

Jacob Yealy
Dawood Engineering
4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Re: VAL035 Solar

Dear Mr. Yealy:

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

DCR 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. For screening zones outside the perimeter fencing, DCR recommends native species appropriate for the region be used. 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/home/showpublisheddocument?id=2466. 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).

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

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months (September 10, 2023) has passed before it is utilized.

A fee of $90.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (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 http://vafwis.org/fwis/ or contact Amy Martin at (804-367-2211) or amy.martin@dwr.virginia.gov.

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

Sincerely,

Tyler Meader

Tyler Meader
Natural Heritage Locality Liaison

CC: Susan Tripp, DEQ
Randy R. Keaton, Isle of Wight County Administrator

Enclosure D: NOAA ESA Section 7 Map & Coordination Email

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,544.77 acres

Feb 9 2023 13:56:07 Eastern Standard Time



Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	0	0	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

Jacob Yealy

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Friday, February 24, 2023 7:07 AM
To: Jacob Yealy
Subject: Re: ESA Section 7 Coordination

Categories: Filed by Newforma

ATTENTION: This e-mail is from outside the organization. DO NOT click links or open attachments unless you confirm the incoming address of the sender.

On Thu, Feb 16, 2023 at 7:43 AM Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov> wrote:

Hi Jacob,

I apologize for the late response. Your email and attachments dated February 9, 2023, regarding three solar facility development projects in Virginia, requested information on the presence of ESA-listed species under our jurisdiction.

Although four species of sea turtles, shortnose sturgeon, and Atlantic sturgeon originating from five Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its rivers and tributaries, based on the location the project and information you provided in your email and attachments, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should there be additional changes to the project plans or new information becomes available that changes the basis for this determination, further coordination should be pursued. Please contact me (brian.d.hopper@noaa.gov), should you have any questions regarding these comments. If you have any questions regarding essential fish habitat, please contact Dave O'Brien (david.l.obrien@noaa.gov, 804-684-7828).
.

Regards,
-Brian

On Mon, Feb 13, 2023 at 10:17 AM NMFS.GAR ESA.Section7 - NOAA Service Account <nmfs.gar.esa.section7@noaa.gov> wrote:

Incoming tech assistance request

---------- Forwarded message ---------
From: **Jacob Yealy** <Jacob.Yealy@dawood.net>
Date: Thu, Feb 9, 2023 at 2:06 PM
Subject: ESA Section 7 Coordination
To: NMFS.GAR.ESA.Section7@noaa.gov <NMFS.GAR.ESA.Section7@noaa.gov>

Hello,

I am working on the T&E coordination for 3 solar facility development projects in Virginia. We're looking to verify that our projects have no potential to impact threatened or endangered species. A review of the Section 7 ESA Mapper was performed for each of the projects (attached). One of these (VAL025) has listed species and critical habitat near the project area. Another (VAL032) shows that the Section 7 Consultation Area is just outside of that 1-mile buffer, while the last (VAL035) has no Section 7 areas nearby.

Can you please confirm what materials are needed to perform a project review to ensure no potential impacts for the VAL025 project & that neither the VAL032 or VAL035 projects require further coordination with NOAA?

Thanks,

Jacob Yealy

Ecologist

Dawood Engineering, Inc.

Jacob.Yealy@dawood.net

Office: 717-732-8576

Mobile: 717-965-1521

--

Brian D. Hopper
Protected Resources Division
NOAA Fisheries
Greater Atlantic Regional Fisheries Office
200 Harry S Truman Parkway
Suite 460
Annapolis, MD 21401
240-628-5420
Brian.D.Hopper@noaa.gov
http://www.greateratlantic.fisheries.noaa.gov/

--

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Greater Atlantic Regional Fisheries Office
200 Harry S Truman Parkway
Suite 460
Annapolis, MD 21401
240-628-5420
Brian.D.Hopper@noaa.gov
http://www.greateratlantic.fisheries.noaa.gov/



*

VAL035: CULTURAL RESOURCE ASSESSMENT

Isle of Wight County, Virginia

Prepared by:

DAWOOD
ENGINEERS ▸ PLANNERS ▸ SURVEYORS
4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Prepared For:
Elk Development, LLC
6865 Deerpath Road, Suite 330
Elkridge, MD 21075

SUMMARY

Phase I cultural resources surveys have been completed for the proposed Project. Shovel test pits were excavated at 15-meter intervals within the proposed limits-of-disturbance (LOD). No significant archaeological sites were identified within the Project Area. In addition, architectural surveys have been completed for the proposed Project. The Project area is a really flat and open landscape, and the solar field is close to three of the four potentially eligible resources documented. The Project proposes to install a tree screen along the western border of the project area and along a portion of the southwestern border to mitigate for such impacts. The archaeological and architectural survey findings will be submitted to Virginia's Department of Historical Resources for review and concurrence. A copy of the Phase I Cultural Resources Survey Report is attached.

A Phase I Cultural Resources Survey of Approximately 18 Acres Associated with the VAL-035 Solar Project, Isle of Wight County, Virginia

March 30, 2023

Prepared for:

Dawood Engineering, Inc.,
Attn: Mr. Kevin Rucker
4250 Crums Mill Road, Suite 301
Harrisburg, PA 17112

Prepared by:

Donald Sadler, Project Archaeologist

Sandra DeChard, Senior Architectural Historian

and

Brynn Stewart, Senior Principal Investigator

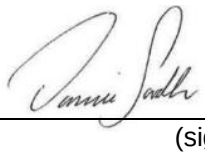
Stantec Consulting Services Inc.
5209 Center Street
Williamsburg VA 23188
(757) 220-6869

A PHASE I CULTURAL RESOURCES SURVEY OF APPROXIMATELY 18 ACRES ASSOCIATED WITH THE VAL-035 SOLAR PROJECT, ISLE OF WIGHT COUNTY, VIRGINIA

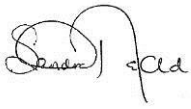
The conclusions in the Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the Client and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

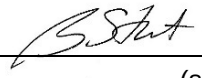
This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by  (signature)

Donald Sadler, MA, Project Archaeologist

Prepared by 

Sandra DeChard, Senior Architectural Historian

Reviewed by  (signature)

Brynn Stewart, MA, Senior Principal Investigator

Approved by  (signature)

Seth Mitchell, MA, RPA, Principal Archaeologist

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Executive Summary

From February 20 to March 2, 2023, Stantec Consulting Services Inc. (Stantec) conducted a Phase I cultural resources survey of approximately 18 acres associated with the proposed 3 megawatt (MW) VAL-035 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located northeast of the junction of Orbit Road (Route 637) and Bowling Green Road (Route 644). Private property borders the Project Area to the north and east. The Project Area comprises a relatively level fallow corn field. The work was conducted on behalf of Dawood Engineering, Inc. (Dawood).

The Phase I cultural resources survey was designed to locate and identify cultural resources within the defined Project Area, defined as the entire approximately 18-acre Project parcel, and to obtain sufficient information to make recommendations regarding their potential eligibility for listing to the National Register of Historic Places (NRHP).

Archaeological Survey

During the archaeological survey, Stantec conducted pedestrian survey of the entire Project Area concurrently with systematic subsurface testing. A total of 320 shovel tests were excavated at 50-foot intervals along 14 transects (Transects A–N) spaced 50 feet apart throughout the Project Area. One shovel test was not excavated due to its location in standing water. No shovel tests were positive for cultural material and no new isolated archaeological finds or new archaeological sites were identified during the investigation. ***Stantec recommends that no further archaeological investigation is necessary within the Project Area.***

Architectural Survey

A total of six individual resources were located within the architectural Study Area, defined as the Project Area and a 0.5-mile radius around the Project Area, and included five previously recorded and one newly recorded resource. Four of the five previously recorded resources have been determined potentially eligible for listing in the NRHP. Of these, two have been determined by DHR to be potentially eligible for listing (DHR #046-0004 and #046-0021) and two are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546). These four resources were surveyed in 2019 and were not resurveyed as part of the current project but were evaluated for potential visual effects of the proposed Project to each resource. One previously recorded resource was determined not eligible for listing in the NRHP (DHR #046-5646). The resource was also surveyed in 2019 and was also not resurveyed.

One newly documented resource was surveyed during the current project and is generally reflective of the mid- to late twentieth century development of Isle of Wight County and lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey. ***No further work is recommended for the newly recorded resource as part of the Project.***



Effects Evaluation

An effects evaluation was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed Project. Four properties were assessed for effects and include the potentially eligible Cedar Acres (DHR #046-0004) and Seeds-Pierce House (DHR #046-0021) and two dwellings which are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546). Based on the current proposed Project Area and the existing landscape it is recommended that the proposed Project would have an **Adverse Effect** on all four resources. ***Based on the effects evaluation, it is likely DHR will require mitigation for Adverse Effect of the proposed Project. Suggested mitigation may potentially be vegetative screening*** (Appendix A).

Effects Evaluation of NRHP Eligible and Potentially Eligible Properties

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
046-0004	Cedar Acres, 12452 Redhouse Road	1798	Determined Potentially Eligible in 2019	Adverse Effect
046-0021	Seed-Pierce House, 18421 Orbit Road	1844	Determined Potentially Eligible in 2019	Adverse Effect
046-5545	House, 18402 Orbit Road	1906	Considered Eligible for Environmental Review Purposes in 2019	Adverse Effect
046-5546	House, 18493 Orbit Road	1950	Considered Eligible for Environmental Review Purposes in 2019	Adverse Effect

Abbreviations

amsl	above mean sea level
CHG	Cultural Heritage Group, Inc.
Dawood	Dawood Engineering, Inc.
DHR	Virginia Department of Historic Resources
GPS	Global Positioning System
H&P	Hurt & Proffitt
MW	megawatt
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
ROW	Right-of-Way
SCC	State Corporation Commission
Stantec	Stantec Consulting Services Inc.
STP	shovel test pit
USDI	United States Department of the Interior
V-CRIS	Virginia Cultural Resource Information System
VDOT	Virginia Department of Transportation

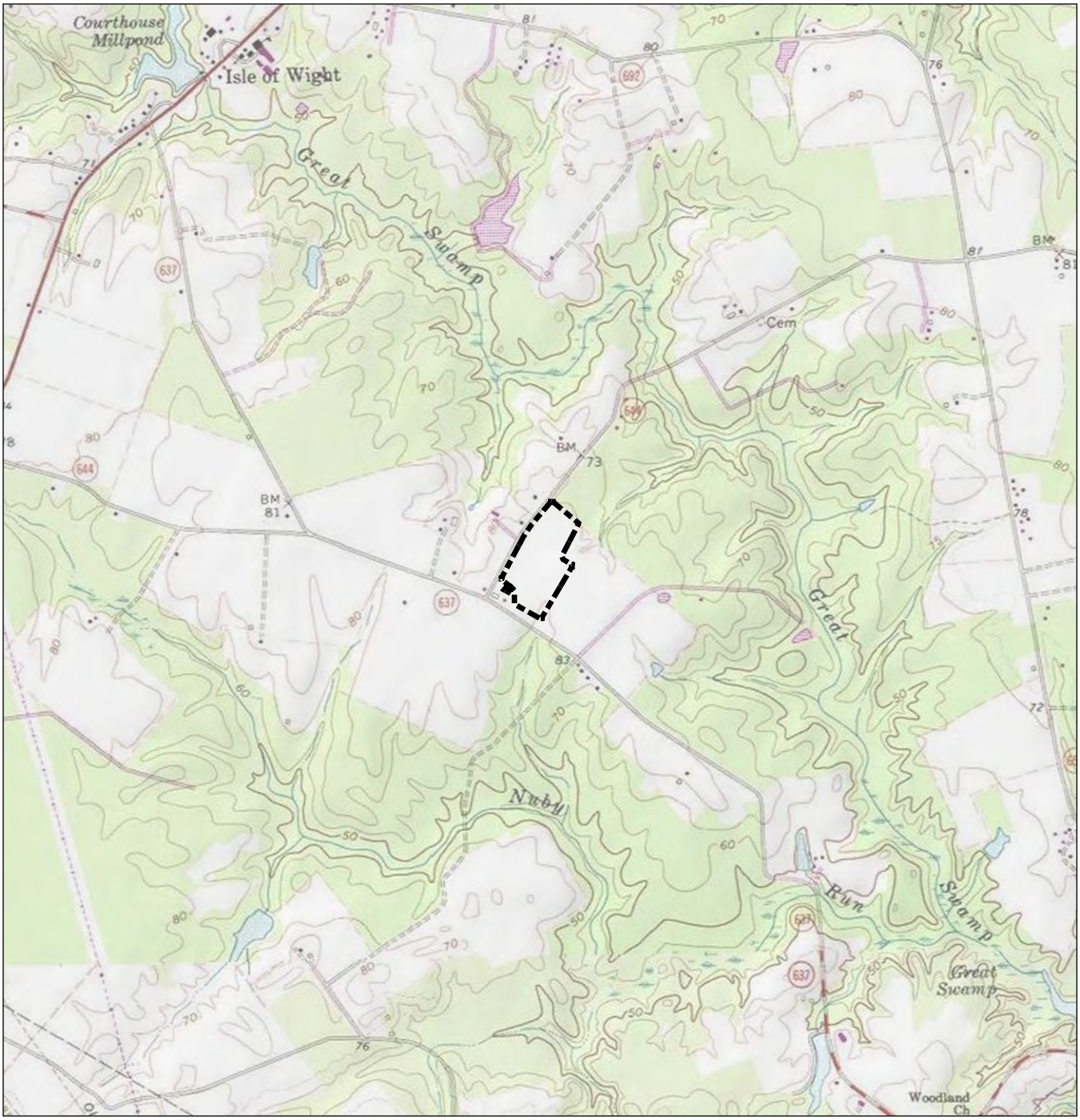


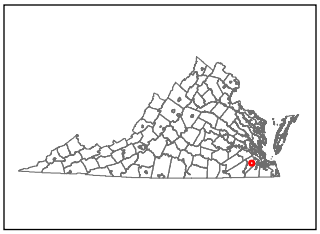
1.0 INTRODUCTION

From February 20 to March 2, 2023, Stantec Consulting Services Inc. (Stantec) conducted a Phase I cultural resources survey of approximately 18 acres associated with the proposed 3 megawatt (MW) VAL-035 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located northeast of the junction of Orbit Road (Route 637) and Bowling Green Road (Route 644). Private property borders the Project Area to the north and east. The Project Area comprises a relatively level fallow corn field (Figure 1). The work was conducted on behalf of Dawood Engineering, Inc. (Dawood).

The cultural resources investigations described herein were conducted as part of the State Corporation Commission (SCC) application process. Additionally, all cultural resources services detailed herein were conducted pursuant to the National Historic Preservation Act of 1966, as amended, the Archeological and Historic Preservation Act of 1974, Executive Order 11593, and relevant sections of 36 CFR 60 and 36 CFR 800. The Stantec Project Managers directing this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9). The cultural resources fieldwork component of these investigations will conform to the qualifications specified in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983) and the DHR's *Guidelines for Conducting Historic Resources Survey in Virginia* (2017).

Senior Principal Investigator Brynn Stewart oversaw the project. Project Archaeologist Donald Sadler and Senior Architectural Historian Sandra DeChard co-authored the resulting technical report. Project Archaeologist Donald Sadler directed the fieldwork and was assisted in the field by Archaeological Technician Mark Jacobs. Senior Architectural Historian Sandra DeChard oversaw the architectural fieldwork conducted by Architectural Historian Technician Olivia McCarty. GIS Analyst Elise Ljiko prepared the report graphics and project maps. Copies of all field notes, maps, correspondence, and historical research materials are on file at Stantec's office in Richmond, Virginia.





Project Area

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Smithfield, VA Quadrangle 1991

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
195602610
Dawood Engineering, Inc.
VAL035 Solar Project

Figure No.
1

Title
Project Location Map

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2.0 PHYSICAL AND ENVIRONMENTAL CONTEXT

2.1 INTRODUCTION

The Project Area is located northeast of the junction of Orbit Road (Route 637) and Bowling Green Road (Route 644) in Isle of Wight County, Virginia, and comprises a relatively flat recently fallow corn field. The Project Area is bounded by Orbit Road to the south, Bowling Green Road to the west, a private property fence line to the north, and privately-owned agricultural fields to the east. Drainage ditches are present along the northern and southern ends of the Project Area and a former ditch, which appear to have been infilled and utilized for access, extends southwest to northeast through the eastern portion of the Project Area.

2.2 GEOLOGY AND TOPOGRAPHY

The Project Area is located within the Coastal Plain physiographic province in the James River drainage basin. The Coastal Plain province is generally characterized by lowlands, with some elevated areas present, which are deeply dissected by drainages that trend mostly to the southeast, towards the Atlantic Ocean (Teifke 1973). Elevations within the Project Area range from approximately 55 to 66 feet above mean sea level (amsl).

The pre-Holocene geology of the Virginia Coastal Plain consists of igneous and metamorphic rocks of Precambrian and Paleozoic age overlain by a series of sedimentary deposits dating to the Cretaceous period. Geologists have divided the Cretaceous through Quaternary sedimentary deposits into five categories: Lower Cretaceous, Upper Cretaceous, Paleocene, Eocene, and Miocene (Teifke 1973). Beginning as early as the Late Cretaceous, a cycle of transgression and regression related to glacial activities and consequent sea level fluctuation is responsible for the formation of these sedimentary layers in the Coastal Plain. These layers have been named the Mattaponi (Upper Cretaceous/Paleocene), Nanjemoy (Eocene), Calvert (Eocene/Miocene), and Yorktown (Miocene) formations (Teifke 1973:10-11).

The Quaternary has been characterized by the continued deposition of clays, silts, sands, gravels, and peat bogs. The Late Pleistocene-Holocene geology of the Virginia Coastal Plain has mostly been characterized by marine transgression onto the land, filling what is today known as the Chesapeake Bay. Sedimentary systems affecting the area include fluvial and marine-estuarine depositional systems. Fluvial forces included overbank flow and stream meander resulting in alluvial deposition. Marine-estuarine soil deposition occurs during hurricanes, tidal floods, and longshore currents (Onuschak 1973:111-124).

The Project Area is situated on the Bacons Castle Formation, comprised of gray, yellowish-orange, and reddish-brown sand, gravel, silt, and clay that constitutes surficial deposits of high plains extending from Richmond eastward to the Surry Scarp. Within the Project Area, the unit consists of massive to thick-bedded pebble and cobble gravel, grading upward into cross-bedded, pebble sand and sandy, clayey silt (Rader and Evans 1993).

2.3 HYDROLOGY

The Project Area is drained by Nuby Run. Nuby Run flows into the Great Swamp, which drains into Lake Burnt Mills and the Western Branch Reservoir. This drainage system flows into the Nansemond River, a tributary of the James River. The James River flows into the Chesapeake Bay and thence to the Atlantic Ocean.

2.4 SOIL MORPHOLOGY

Soils within the Project Area ranged from somewhat poorly drained to moderately well drained, with moderately well drained soils dominating. Table 1 presents the soil types found within the Project Area and serves as a key to Figure 2.

Table 1 Key to the Soils Map

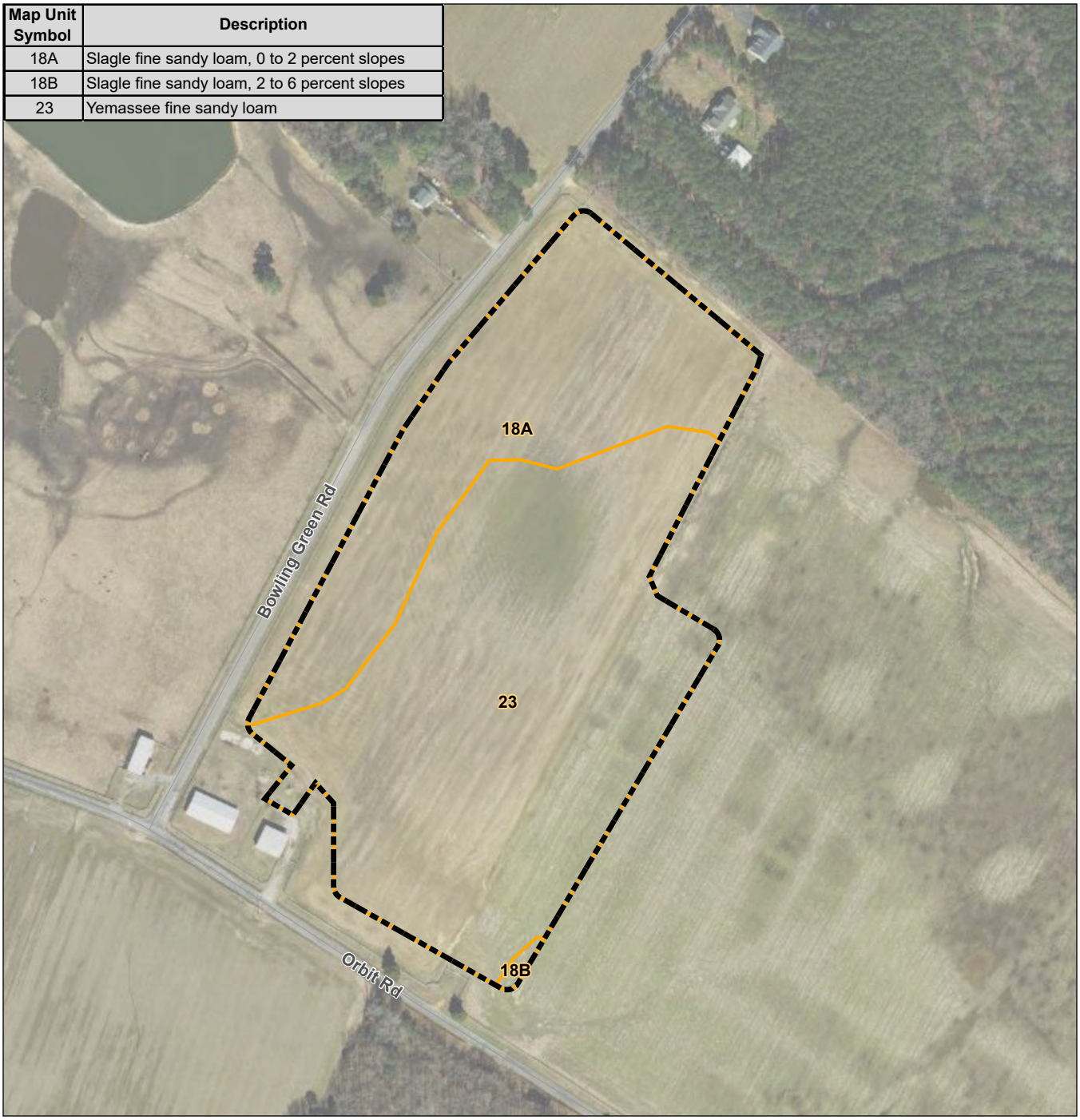
Symbol	Map Unit Name	Percent Slope	Drainage Description
18A	Slagle fine sandy loam	0–2	Moderately Well Drained
18B	Slagle fine sandy loam	2–6	Moderately Well Drained
23	Yemassee fine sandy loam	0–2	Somewhat Poorly Drained

2.5 NATURAL RESOURCES

Floral and faunal communities in southeastern Virginia have changed considerably over the past 10,000 years. This environmental change was linked to the warming trend that caused glaciers to melt and sea levels to rise. By the Early Holocene, beech, hemlock, and birch were the dominant species, and the former pine spruce forests of the Late Pleistocene became less common. In general, a mixed hardwood forest dominated the Mid-Holocene and included hazelnut, alder, maple, black gum, beech, ash, and walnut (Dent 1995:86). Stands of oak and hickory were also common during this period, and hickory nuts appear to have been a significant element of the diet of Mid-Holocene occupants of the Coastal Plain (Whyte 1990:126).

After 5,000 years ago, the climate of the Chesapeake Bay region became increasingly drier, and white oak continued to be the dominate forest species, with pine becoming increasingly more common. Additionally, legumes and arrowwood joined elderberry and blueberry as significant understory species. By approximately 1,700 years ago, the region became wetter and cooler, and mixed hardwood vegetation combined with an increase in pine, particularly in the lower Tidewater area, dominated the regional flora (Dent 1995:86-88).

Map Unit Symbol	Description
18A	Slagle fine sandy loam, 0 to 2 percent slopes
18B	Slagle fine sandy loam, 2 to 6 percent slopes
23	Yemassee fine sandy loam





Project Area
Soils

0 150 300 Feet

(At original document size of 8.5x11)
1:3,600

N

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau, USDA NRCS SSURGO Soil Survey, VDOT
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project 195602610
Dawood Engineering, Inc.
VAL035 Solar Project

Figure No.
2

Title
Soils Map

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Wetland environs have also undergone considerable change over time as sea level fluctuations have created, destroyed, and recreated new estuaries and tidal flats. Cypress and white cedar were the most common trees in the wetland areas of the region during the prehistoric period, a trend that has continued into the present. While cordgrasses were prominent in estuarine areas, sedges and other grasses dominated freshwater wetlands. These grasses would have played an essential role in the lives of the region's indigenous population (Dent 1995:91-92).

The unique freshwater/saltwater environment found in the local estuary system has served to create a wide degree of faunal diversity in the region. By approximately 2,000 to 3,000 years ago, human populations would have enjoyed an ecosystem similar to that of today. A wide variety of fish and shellfish species coupled with numerous avian species would have allowed prehistoric inhabitants of the area to exploit an abundant food base. Likewise, the cultivation of plants such as corn, beans, and squash, and the hunting of mammalian species would have completed a tremendously diverse diet. Oysters, crabs, fresh and saltwater clams, shrimp, mussels, bass, flounder, shad, herring, snapper, sturgeon, and bluefish were among the important riverine and estuary fauna of the tidewater area that native inhabitants of the region would have exploited (Dent 1995; Stevens 1991).

3.0 CULTURAL CONTEXT

Virginia's Native American prehistory is typically divided into three main periods: Paleoindian; Archaic; and Woodland. These divisions are based on changes in material culture and settlement systems. In more recent decades, the possibility of human presence in the region that predates the Paleoindian period has moved from remote to probable. For this reason, a Pre-Clovis discussion precedes the traditional tripartite division of Virginia's Native American history. The seventeenth-through twentieth-century historical overview follows the DHR (2017) guidelines. The cultural context, as defined by the *Secretary of the Interior's Standards and Guidelines for Archaeology* and Chapter3 of the DHR's 2017 guidelines, provides the historic, social, and environmental information required for evaluation of any cultural resources present within the Project Area.

3.1 PRE-CLOVIS (? –13,000 BC)

The 1927 discovery of a fluted point in the ribs of an extinct species of bison at Folsom, New Mexico proved that ancient North Americans had immigrated during the Pleistocene. It did not, however, establish the precise timing of the arrival of humans in the Americas, nor did it adequately resolve questions about the lifestyle of those societies (Meltzer 1988:2-3). Both the stratigraphic record and the radiocarbon assays from several sites, including the Cactus Hill site in Sussex County, Virginia (44SX0202), suggest the possibility of human occupation of North America before the fluted point makers appeared on the scene (McAvoy and McAvoy 1997). Buried strata at the Cactus Hill Site have returned radiocarbon dates of 15,000 years ago from strata situated below levels containing fluted points (McAvoy and McAvoy 1997:165). To date only a handful of pre-Clovis sites have been identified in North America, including in Pennsylvania, Virginia, and New Mexico. Though the likelihood of identifying pre-Clovis sites within the Project Area is extremely low.

3.2 PALEOINDIAN PERIOD (PRIOR TO 8000 BC)

In the decades following the discovery at Folsom, New Mexico, the association of fluted points with the bones of large, extinct mammals, in particular mastodons, on the western plains coupled with the scarcity of other Paleoindian sites, led to the inference that the Paleoindian subsistence strategy centered on the pursuit of big game. This picture, however, exaggerates the reliance of western Paleoindian groups on large game, and appears to be of limited relevance to eastern Paleoindian life. The archaeological data from Virginia compiled by Dr. Ben McCary records numerous discoveries of fluted points, but no unambiguous association between extinct large game and fluted points (Boyd 1989:139). A similar situation occurs throughout the eastern United States. For this reason, many archaeologists now hold that eastern Paleoindians were generalized foragers (e.g., Grayson and Meltzer 2003; but see Fiedel and Haynes 2004).

Most large Paleoindian sites in the southeastern United States are quarry or quarry-related (Meltzer 1988:21), though multiple band aggregation sites also occur (McAvoy 1992:145). Recognizable sites most often result from long-term habitation or repeated use of the same location. It follows from the presence of primarily quarry or quarry-related sites that stone outcrops were regularly revisited. Though the full range of available lithic resources was used to manufacture fluted points (e.g., Phelps 1983), a number of studies have noted a focus on cryptocrystalline materials (e.g., chert, jasper, chalcedony) (Gardner 1974, 1989; Goodyear 1979). The recovery of cryptocrystalline materials at locations far removed from quarries indicates exchange, extensive group movement, or both characterized the Paleoindian era. In addition, the very limited differences between sites and within sites suggest that most people had access to all available resources, while the small size of most Paleoindian sites indicates group size generally was limited to extended families.

3.3 ARCHAIC PERIOD (8000–1200 BC)

The Archaic began with the northward retreat of periglacial environments and the appearance of archaeological assemblages lacking fluted points. In the Chesapeake Bay region, a shift from moist, cool conditions to a warmer, drier climate accompanied the glacial retreat. In response to changing climatic conditions, in particular the receding icesheets, Chesapeake Bay sea levels rose continuously from roughly 15,000 years ago to the present. Simultaneously, local subsidence of the earth's crust also may have contributed to the formation of the Chesapeake Bay. Between 15,000 and 14,000 years ago, the waters of the Atlantic began to submerge portions of the continental shelf. For every 30 centimeters (approximately 1 foot) of sea level rise, approximately 510 meters (approximately 1,673 feet) of the shelf were inundated. Ten thousand years ago the sea began to flood the mouth of the ancestral Susquehanna River, located near the present-day mouth of the Chesapeake Bay. Sea level rose at 0.2 centimeter (approximately 0.1 inch) per year between 8000 and 3000 years ago. At 8000 years ago, the head of the ancestral bay was near Smith Island, at 5000, near Annapolis, and by 3000 years ago, it had reached the Sassafras River. Numerous archaeologists suggest that the stabilization of water levels in the bay at this time provided the necessary conditions for the development of extensive shellfish beds and habitats favorable for anadromous fish (e.g., Waselkov 1982). After approximately 1000 BC, sea level rise slowed to approximately 0.12 centimeter/year, and Chesapeake Bay approached its present contours (Dent 1995:69-95).

In addition, in contrast with the broad similarity among Paleoindian point forms, distinct style zones developed during the Early and Middle Archaic (8000–3500 BC). The Atlantic Coast/Southeastern stylistic sequence was not characteristic of the Midwest (Ford 1974:392). In addition, increased use of locally available lithics occurred between 8000 and 3500 BC (Custer 1990:36; Sassaman et al. 1988:85-88). The reduction of the size of style zones and the focus on local lithic materials implies contracting social networks and incipient territories, possibly a reaction to population growth (Anderson and Hanson 1988:271). Despite changes in patterns of mobility and point form, numerous archaeologists argue on environmental (Custer 1990:2-8) and subsistence (Smith 1986) grounds for continuity in social dynamics between 10,000 and 6,000 BC. From this point of view, Dalton through Lecroy populations exhibited "general similarities and regional habitat-related variation in settlement-subsistence patterns and material

culture assemblages" (Smith 1986:10). Band-level social organization involving seasonal movements corresponding to the seasonal availability of resources and, in some instances, shorter-interval movement characterized Archaic societies.

Reliance on ground-stone technology increased during the Archaic period. New tool categories associated with the Archaic include celts, net sinkers, pestles, pecked stones, and axes Archaic knappers also produced chipped-stone versions of celts and axes and, near the end of the Late Archaic, labor-intensive vessels carved from soapstone quarried in the Piedmont formed an important part of assemblages (Geier 1990; McLearen 1991).

3.3.1 Early Archaic (8000–6500 BC)

Corner- and side-notched points with serrated blades predominate at the beginning of the Early Archaic period, reflecting innovation in hafting technology and, possibly, the invention of the atlatl. Notched point forms include Palmer and Kirk Corner-Notched and, in localized areas, various side-notched types. Around 7000 BC, a variety of bifurcate base projectile point forms appeared in the Middle Atlantic region. In eastern Virginia, LeCroy points constitute the majority of bifurcate forms (Dent 1995; Justice 1995). Despite the shift in point form over time some researchers portray the Early Archaic as a continuation of the Paleoindian period, characterized by reliance on cryptocrystalline lithic material and similar settlement and subsistence patterns (Gardner 1989). Early Archaic sites are still locally uncommon at this time, and it is during the Middle Archaic period that a proliferation of sites occurs in the region (Gardner 1982, 1986).

3.3.2 Middle Archaic (6500–3000 BC)

The appearance of stemmed projectile points and a shift towards more expedient use of stone marks the beginning of the Middle Archaic across much of the Atlantic Slope and Southeast (Amick and Carr 1996:43-45; Justice 1995). In this area of Virginia, the most common Middle Archaic projectile point types are (from oldest to most recent) LeCroy, Stanly, Morrow Mountain, and Guilford, followed by the side-notched Halifax type sometime after 3500 BC. This latter type is generally one of the most abundant found in upland interior settings; however, it is possible that many riverine sites of the period are hidden under alluvial sediment. Informal modified flakes to some extent replaced formal unifacial tools, and local materials constitute a greater percentage of Middle Archaic assemblages than had been true of earlier time periods. Sites occur throughout the landscape, including beneath the now-inundated Chesapeake Bay (Blanton 1996; Dent 1995:173-178).

An analysis of components from the Piedmont (Klein and Klatka 1991) indicates only slightly higher use of interior uplands over riverine settings during the Middle Archaic period and, within the riverine settings such as the present Project Area, there is a fully equal use of both alluvial landforms (floodplains/low terraces) and upland landforms/bluffs adjacent to the rivers (Klein and Klatka 1991:155). However, a repetition of this pattern in the Project Area, located within the Valley and Ridge region, would be dependent on geomorphological conditions: i.e., artifacts indicating the entire span of the Middle Archaic could be present on all landforms, unless the alluvial bottoms are restricted to sediments of too recent an

age to contain deposits of such antiquity. Where sediments are too young, however, evidence of Middle Archaic presence should be concentrated on old, stable landforms lying as close as possible to the river and its small tributary streams.

3.3.3 Late Archaic (3000–1200 BC)

Stemmed and notched knife and spear point forms, including various large, broad-bladed stemmed knives and projectile points (e.g., Savannah River, Susquehanna, Perkiomen points), rank among the most distinctive and securely dated Late Archaic point forms (Coe 1964; Dent 1995; Justice 1995; Ritchie 1971). Marked increases in population, and, in some areas, decreased mobility appear to characterize the Late Archaic throughout eastern North America. Locally, the increase in the number of Halifax and Savannah River components and sites relative to the preceding periods suggests population rose in Virginia between about 3500 BC and ca. 1200 BC.

Mouer (1991a:262) believes it likely that “at least intensive harvesting of wild seeds,” if not the beginnings of domestication, characterized Transitional through Early Woodland times (ca. 2000–500 BC) in the Chesapeake Bay region, as it did in the Midwest. The process, however, did not proceed at an even rate across the Eastern Woodlands or the Middle Atlantic Region (Stewart 1995:184-5). Yarnell (1976:268), for example, states that sunflower, sump weed, and possibly goosefoot may have been cultivated as early as 2000 BC. In the lower Little Tennessee River valley, the remains of squash have been found in Late Archaic Savannah River contexts (ca. 2400 BC), with both squash and gourd recovered from Iddins period contexts of slightly more recent date (Chapman and Shea 1981:70). Experiments with domestication in the Mid-Continent indicate the possibility, even the likelihood, that the inhabitants of the Middle Atlantic cultivated small grains and other plants (Hodges 1991:228-230; Mouer 1991b:259-263). “Scant” evidence for early cultivation appears in the archaeological record from Virginia, however (Mouer 1991a:259; Gallivan and McKnight 2006).

Soapstone bowls are a well-known feature of Late Archaic exchange systems (McLearen 1991:107-8). In addition, Stewart (1989:52) argues for broad-based exchange of "artifacts made from jasper, argillite, rhyolite, ironstone, soapstone, Midwestern lithics, obsidian, marine shell and copper" throughout the Middle Atlantic region during the Late Archaic. Thus, Late Archaic society clearly differed from that of earlier times. The production and wide-spread exchange of utilitarian and ritually important, labor-intensive goods does not fit the expected archaeological signature of highly egalitarian foragers. Rather, a social order exhibiting some sort of status differences among individuals or groups (Mouer 1991a:265) and somewhat restricted group movement (Stewart 1989:57) likely existed. Still, sites dating to the Late Archaic occur frequently throughout Virginia and the Middle Atlantic region. Late Archaic sites occur in greater numbers and in a wider range of environments than sites associated with the Early and Middle Archaic periods (Klein and Klatka 1991).

3.4 WOODLAND PERIOD (1200 BC–AD 1600)

Increasing use of ceramic technology, a growing dependence upon horticulture, and a shift toward greater sedentism characterize the Woodland period. Most researchers divide the Woodland period into



three sub-periods (Early Woodland, Middle Woodland, and Late Woodland), based primarily on stylistic and technological changes observed in ceramic wares and projectile points, as well as shifts in settlement patterns (e.g., Gardner 1982). Not all researchers agree with this tripartite subdivision, however.

3.4.1 Early Woodland (1200–500 BC)

The onset of the Woodland period traditionally correlates with the appearance of ceramics (Willey and Phillips 1958:118). Early theorists linked ceramics with agriculture, though few continue to support this position (cf. reviews in Egloff 1991; Hodges 1991). Rather, the evolution of subsistence and technological systems (e.g., Gardner 1982) and various aspects of pan-Eastern interaction (e.g., Egloff 1991; Klein 1997) currently are believed to underlie the evolution of ceramic containers.

The steatite-tempered Marcey Creek type and variants containing other mineral inclusions appear to date between 1200 and 800 BC (Egloff 1991:244-5). Manson (1947) unearthed flat-bottomed, plain sherds and cord-marked sherds with conoidal bases, both of which included soapstone-temper, in the uppermost of two distinct strata at the Marcey Creek Site. The lowermost level contained narrow variants of Savannah River points, termed Holmes Points by Gardner (1986), and soapstone bowls, suggesting that soapstone-tempered sherds post-date bowls of soapstone (but see Sassaman 1999). Earlier Slattery (1946) had identified similar sherds at a site on Seldon Island, along the Potomac River to the northeast of Leesburg, along with sand-and-grit tempered sherds. Though friable sand-and-grit-tempered Accokeek Creek and Elk Island ceramics appear subsequent to Marcey Creek, associated C-14 on stratified sites, dates range from 1100 through 500 BC. Klein and Stevens (1996) cite regional data to support the proposition that, while the thickness, amount of temper, and size of temper in quartz/sand-tempered, cord-marked ceramics shifted over time, similar pots continued in use into Middle Woodland times.

Small bifaces and expedient tools such as drills, perforators, scrapers and utilized flakes regularly appear in Early Woodland assemblages. Other lithic artifacts reported on Early Woodland sites in the Chesapeake region include bipolar flakes, hammerstones, net sinkers, mortars, and pestles (McLearen 1991). Also noted on sites in the region are tools of bone, and projectile points manufactured from antler, bone, turkey spurs, and shark's teeth (Waselkov 1982). The increased number of sites dating to the Early Woodland, coupled with the recognition of structures, features, and activity areas at some sites, suggests rising population size in the Chesapeake region (e.g., Mouer 1991b:38-9; Stewart 1995:183). In contrast, noting that the addition of pottery to stone adds temporally diagnostic artifacts to the archaeological record, Fiedel (2001:106–7) observes that more sites are expected to appear in the archaeological record during Woodland times. Furthermore, the various Broadspears, dating to the Terminal Archaic (ca. 2000–1000 BC), may represent a curated technology (Barber and Tolley 1984), while replication experiments suggest stemmed bifaces similar to Early Woodland types rank among the easiest forms to produce using quartz (Bourdeau 1981). Therefore, a shift from a curated, less commonly discarded biface form, to points easily produced from a ubiquitous material accompanied the appearance of ceramics. Thus, the absence of a dramatic swell in the number of sites, coupled with decreased representation of diagnostic point forms, indicates a demographic trough or at best a flat demographic curve characterized the period.

In general, sparse concentrations of artifacts characterize Early Woodland sites (Mouer 1990:160-174; Stewart 1998:2). Regardless, the preservation of an extensive accumulation of Early Woodland artifacts suggests the existence of a unique geomorphological, and probably social, setting. Overall, the data appear to indicate a return to the mobile, egalitarian social organization characteristic of Early and Middle Archaic times (Klein 2003). Even at large Early Woodland sites post-dating AD 800, very limited evidence of long-distance exchange or the manufacture of labor-intensive artifacts comparable to the soapstone exchange of the Terminal Archaic appears.

3.4.2 Middle Woodland (500 BC–AD 900)

Popes Creek net-impressed ceramics appear after roughly 500 B.C., marking the beginning of the Middle Woodland I period (500 BC−AD 200) (Blanton 1992:72-3; Egloff and Potter 1982:99). Cord-marked ceramics and stemmed points, however, continued in use for some time after AD 500 (McLearen 1992:44-5), for example, lumps the period between 3000 BC and AD 1000 under the rubric Woodland I based on the similarity in adaptation and the presence of considerable variation in the form of contemporaneous stemmed and notched points.

Net-impressed surface treatments occur on a variety of ceramic types manufactured during Middle Woodland times. Pope's Creek ceramics first appear after 500 BC, with the start of the Middle Woodland (Blanton 1992:72-3; Egloff and Potter 1982:99). Early Woodland cord-marked ceramics and stemmed projectile points are found in Middle Woodland contexts, suggesting a continuation of Early Woodland technologies (McLearen 1992:44-5). The Prince George and Varina types appear to represent a continuum of development in the technology used to produced Popes Creek sherds, rather than dramatically different types (Mouer et al. 1986).

The appearance of assemblages containing significant amounts of durable ceramics after 500 BC indicates a shift in the organization of production occurred during the Middle Woodland periods (Brown 1986, 1989). In addition to the advantages of ceramic vessels as cooking pots, ceramic production contrasts with the manufacture of baskets and wooden bowls in its embrace of economies of scale. Rather than a start-and-stop process that fits well into odd bits of time, ceramic production required greater scheduling and continued attention over an extended period of time. Shifts in the scheduling of work, therefore, accompanied the transition from Early to Middle Woodland times.

Broad-spectrum hunting-fishing-gathering continued to characterize the region as a whole throughout the Middle Woodland period. Shellfish, anadromous and resident fishes, deer, waterfowl, and turkey ranked high among the important fauna in the Middle Woodland diet. Various nuts, amaranth, and chenopod seeds also appear to be important resources during this period. After 300 BC, large shell middens containing dense concentrations of artifacts become increasingly common, indicating repeated use of at least one type of site. Middens and the presence of houses at a number of sites indicate longer stays, though populations remained far from sedentary (Gallivan 2003). People continued to reside for much of the year in relatively small settlements, and interior storage features rarely occur on Middle Woodland sites (Gallivan 2003:75-98).

3.4.3 Late Woodland (AD 900–1600)

Intensified use of cultivated plants, particularly maize, beans, and squash, distinguished the Late Woodland adaptation from that of earlier periods. European accounts describe a heavy reliance on slash-and-burn agricultural methods. In addition to cultigens and shellfish, Late Woodland peoples throughout the region continued to rely on various mammals, fish, and birds for sustenance (Dent 1995:251). Perhaps as a consequence of the greater importance of cultigens in the diet, access to expanses of arable land ranks among the most important factors influencing site selection (Dent 1995; Potter 1993).

Small, triangular arrow points, generally believed to reflect the widespread use of the bow-and-arrow, form the overwhelming majority of Late Woodland projectile points. Triangular points include the Levanna, Madison, Roanoke, and Clarksville types, which vary in size and base form. Point size may also decrease over time (Coe 1964; Potter 1993; Ritchie 1971). Shell beads and copper beads became important ornaments and symbols during the Late Woodland period, primarily in the last few centuries prior to the arrival of European colonists. Powhatan's Mantle, a deerskin cloak decorated with thousands of small marginella beads sewn into various patterns, reflects the use of shell beads as symbols of identity and status. Pendants and gorgets made of shell were also common. Of note, five engraved shell masks, decorated with a traditional Southeastern "forked/weeping eye" motif were found in a seventeenth-century burial on the floodplain of the Potomac River in Stafford County. Three of the five masks exhibit similarities to masks recovered from sites in the Southeastern U.S. (Smith and Smith 1989), possibly an indication of long-distance trade. Bone also was used to manufacture beads, as well as utilitarian items such as pins, fishhooks, and points.

Late Woodland populations constructed palisaded villages. In addition, Native American settlements included nucleated villages lacking palisades, dispersed hamlets, and temporary camps. Work by Potter (1993), Hodges and Hodges (1994), and Mouer et al. (1992) suggest that dispersed villages were common throughout Virginia. Housing varied throughout this region: some sites show evidence of longhouses located adjacent to the palisade, while elsewhere, short, oval structures have been unearthed (Dent 1995; Gallivan 2003; Hodges and Hodges 1994; Mouer et al. 1992; Potter 1993; Stephenson 1963).

The large base camps, hamlets, and villages are typically located on bluffs, terraces, or high floodplains adjacent to rivers or major tributaries. Small seasonal camps and non-seasonally based satellite camps supporting nearby sedentary villages and hamlets are located along smaller streams in the interior. Limited concentrations and sparse scatters of lithics and ceramics typically characterized these campsites. The majority of the Late Woodland sites that had been recorded at the time of the Barber et al. (1992) study were located along the major high order streams and rivers, consistent with the ethnohistoric evidence (e.g., Rountree et al. 2007). By the end of the Late Woodland Period, Dent (1995) notes that a generally unoccupied buffer zone appears to have been maintained between the Powhatan on the inner Coastal Plain and the Monacan west of the fall line. According to Dent, this, and other similar buffer zones throughout the Chesapeake region, may have been game preserves or just "...the result the tendency of chiefdoms to nucleate populations for the purposes of control."



3.5 SETTLEMENT TO SOCIETY (1600–1750)

In May 1607, a small group of Englishmen under the authority of the Virginia Company of London arrived at Jamestown Island, where they established the first permanent English settlement in the New World. English contact with Native Americans living in what is now Isle of Wight County occurred in 1608 when Captain John Smith purchased 20 bushels of corn from the Warrosquoyacke people. Smith and other early settlers contacted the Warrosquoyacke on several occasions as their villages were located along the James River near Pagan Point (Boddie 1938).

The first English settlers in what is now Isle of Wight County included Captain Christopher Lawne, Sir Richard Worsley, Nathaniel Basse, and John Hobson. Soon after their arrival at Jamestown in April 1619, a settlement was established on the south shore of the James River at Lawne's Creek, near the current boundary between Isle of Wight and Surry counties (Morrison 1907). Lawne's plantation was known as Warrosquoyacke, after the local Indian group. Lawne represented his plantation at the first meeting of the House of Burgesses in 1619; however, Lawne and most of the settlers on his plantation died within the year. After Lawn's death, the plantation was renamed Isle of Wight Plantation for the English island where a number of the early settlers were from (Morrison 1907). Edward Bennett was granted a patent along the Pagan River in 1621, and was soon followed by Nathaniel Basse, who settled at Basse's Choice. These Southside settlements were devastated and suffered the loss of 53 colonists the following year during the Powhatan uprising and massacre of 1622. Sir George Yeardley led a punitive expedition later in the year against the Warrosquoyacke and Nansemond, which helped to open the south shore of the James to increasing settlement. When Virginia's first counties were created in 1634, Warrosquoyacke County encompassed the Isle of Wight (Hiden 1957). Warrosquoyacke was divided in 1647 between Isle of Wight to the west, and Upper and Lower Norfolk counties to the east. Early settlement of the county centered round the James River's south shore and both the east and west shores of Pagan Creek (King 1993). In the 1623-1624 census, only 53 people lived at Warrosquoyacke as settlers were hesitant to return after the 1622 massacre (Boddie 1938; Morrison 1907).

As early as 1632, The Old Brick Church, now known locally as Old Saint Lukes Church, was constructed. Though the exact date of construction is not known, a church was extant at least by 1638. A deed registering the conveyance of 100 acres to John Marshall references the church and that the parcel was bound by a deep swamp (Jones Creek) (King 1993). John Fulgham, also in 1638, deeded one acre of land to the Lower Parish vestry which was described as the land on which the church stood and that it was located near a deep swamp. This information further confirms the presence of the church in 1638 (King 1993). In addition to confirming the location of the Old Brick Church, these deeds also reference the "main road" which appears to generally follow the current course of Route 10 between Smithfield and Suffolk. The colonial settlement of Isle of Wight County focused on the major rivers and especially along the James and Pagan rivers near Smithfield.

3.6 COLONY TO NATION (1751–1789)

The latter half of the eighteenth century brought widespread changes to the American colonies. The French and Indian War, which began on the Virginia frontier in 1753, caused Britain to levy new taxes and



to impose new restrictions upon settlement of new territories in 1763. Parliamentary Acts restricted free trade and navigation, imposed unpopular taxes on items such as molasses (1733) and sugar (1764), and the Stamp Act of 1765 coupled with the doubling of the Export Tax the year before put severe strains on Northern merchants. The trickle-down effect on Southern planters was apparent. Tobacco prices were persistently low, the economy sluggish, and the dependence and indebtedness to British merchants was growing. The complaints of these southern planters, their northern merchants, and the western land speculators helped to "unite" an otherwise diverse continent into what would become a country (Sadler 2006:24; Billings 1975).

Isle of Wight's economy in the second half of the eighteenth century still centered around tobacco cultivation, despite the fact that the Southside's sandy soils were never particularly conducive to growing it. By the later years of the eighteenth century, however, Isle of Wight's farmers were beginning to diversify their crops and explore alternative products. Touring the Smithfield area in 1783, German visitor Johann David Schoeff commented that:

> "…the coast is nearer here, one has passed the tobacco country proper, the plant not thriving on the poorer sandy soil of the region, but tobacco is brought hither from more distant parts; on the other hand, the extensive pine forests supply a different sort of produce, namely tar, pitch and turpentine, which with salted hog meat are the most important articles for export of this place" (King 1993:194).

Isle of Wight County was the scene of several military actions during the seventeenth and eighteenth centuries. In 1676, the county was the scene of Bacon's Rebellion and during the Revolutionary War, British troops passed through the county (Morrison 1907). As with most other parts of Virginia, Isle of Wight's citizens' loyalties were divided, as revolution grew imminent in the 1770s. A considerable number of English and Scots immigrants resided in Isle of Wight, and when they left the county—willingly or not—their lands were considered escheated and sold to their more "patriotic" neighbors. A number of local men joined the Princess Anne District Battalion in 1775 and fought at Kempsville and Portsmouth. Later in the war, Isle of Wight men served in the 7th, 8th, and 9th companies of the 4th Virginia Regiment of Foot. No major battles were fought in Isle of Wight during the War of Independence, though British Lt. Col. Banastre Tarleton led a raid against the Isle of Wight courthouse in Smithfield in 1781. Tarleton succeeded in damaging the building, however, the court records were not lost to the attack, as they had recently been removed and hidden (King 1993:60-65).

3.7 EARLY NATIONAL PERIOD (1790–1829)

At the close of the Revolutionary War, residents across the state of Virginia entered a long period of social, political, and economic change. The rural economy based primarily in tobacco prior to the war was changed radically as farmland had been exhausted and the Capital moved to Richmond. It was not long before a small group of Virginians dedicated to "scientific agriculture" helped to usher in a new era of productive farming. In his series of essays entitled *Arator*, Caroline County's John Taylor demonstrated the benefits of four-field crop rotation, in which soils could be improved significantly by rotating corn,



wheat, fertilizer, and clover. Similarly, in the early 1820s, Edmund Ruffin publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Other agricultural improvements included contour plowing to reduce erosion, cast iron plows, threshing machines, and corn shellers (Kaplan 1993:87-88).

Despite the obvious benefits of the transition from tobacco to grain crops, the farming methods of the late eighteenth and early nineteenth centuries continued to have a deleterious effect on exhausted soils. Under the traditional three-crop rotation system, a field first would be planted in corn, the following year in wheat, then left unplowed the third year to provide grazing for cattle and hogs. Recognizing the need for improved agricultural practices, Loudoun County farmer John A. Binns spearheaded the agricultural reform movement in Virginia. His 1803 Treatise on Practical Farming, which won the admiration of President Thomas Jefferson, outlined a formula for improving crop yields that would come to be known as the “Loudoun System.” In his widely read book, Binns recommended deep plowing, the use of gypsum to restore soil productivity, and revising the old crop rotation pattern to include a third year of clover (Poland 1976:84-88).

The first federal census of 1790 recorded that Isle of Wight County had a total population of 9,028, including 4,786 (53.0 percent) whites, 3,867 (43 percent) black slaves, and 375 (4 percent) free blacks. The total population of Isle of Wight grew little between 1790 and 1830, when county residents numbered 10,517. The number of free blacks, however, increased more than 300 percent over this same period (King 1993:139). During this period, Isle of Wight made the transition from an economy predominantly reliant upon tobacco as the cash crop to one characterized by diversified farming and the exploitation of the county’s timber resources. The most important local products now included wheat, corn, oats, Irish potatoes, sweet potatoes, peas, beans, hogs, and forest products. By the 1830s, Isle of Wight farmers were also growing enough cotton to support two local factories (King 1993:198).

3.8 ANTEBELLUM PERIOD (1830–1860)

From 1830 to 1860, the population of Isle of Wight County remained virtually constant at around 5,000 inhabitants. Slavery was not as important to the social and economic makeup as in other Tidewater counties in the antebellum period, and Isle of Wight was also home to a significant number of free slaves before Emancipation. By 1860, there were 1,370 free blacks residing in the county; together they held 2,965 acres of land, a modest average of 44.25 acres per adult male (King 1993:146). Nevertheless, the institution of slavery differentiated Virginia from points north. Wealthy Virginians renewed their commitment to slavery. Other Anglo-Americans, however, became less likely to own slaves than during the earlier years of the Republic.

An agricultural and economic depression characterized much of this era, at least until the 1840s and 1850s. Wheat prices declined sharply. In addition, the completion of the Erie Canal opened the market to mid-western grains. Though agitation for the construction of canals had begun at the end of the previous century, it was not until 1833 that the Chesapeake and Ohio Canal opened from Harpers Ferry to Georgetown (Keller 2000:24).

In order to compete with and for western commerce, the State borrowed heavily to invest in railroad and road construction between 1840 and 1860 (Willis 1986:425). In general, farm economies prospered during the 1850s as wheat prices rose. This period also witnessed the introduction and general use of animal-powered agricultural machinery (Parker 1986:90).

3.9 CIVIL WAR (1861–1865)

Isle of Wight County's economy had never been heavily oriented toward slave labor, and many of its citizens questioned the wisdom of fighting a sectional conflict to protect what they perceived to be the interests of large slave owners. However, when war was finally declared, many Isle of Wight men willingly took up arms to defend the Confederacy, some joining the Surry Light Artillery Company, and others the Isle of Wight Grays, which became Company D of the 16th Virginia Infantry Regiment (King 1993:164-66).

When Federal Major General Benjamin Butler seized Newport News in May 1861, Confederate General Robert E. Lee quickly realized the threat posed to Suffolk, an important junction of the Southside railroad lines connecting the port of Norfolk with Petersburg and Richmond. Immediately Lee ordered local commander Brigadier General Benjamin Huger to strengthen the region's defenses, and to erect or expand a number of fortifications along the Nansemond River and the south side of the James River in Isle of Wight County. On May 14, 1862, several Federal gunboats came up the James, and fired on Fort Boykin, an important Southside fortification located on Burwell's Bay, several miles west of Smithfield. Overwhelmed by the longer range of the Union guns, the Confederate defenders of Fort Boykin abandoned the defenses, destroying their guns and the fort's buildings in the process. After this engagement, Huger withdrew his forces from the Southside forts, and it is likely that the battery near Ragged Island was abandoned by late May 1862 (Cormier 1989:22-23; King 1993:168- 174).

Isle of Wight County saw few direct military engagements during the course of the war, the most significant being the Battle of Smithfield of January 31−February 1, 1864, in which a minor Union assault against the town was repulsed by its Confederate defenders. Living in a sort of no-man's-land, Isle of Wight's citizens were harried by frequent Federal cavalry raids, which frequently resulted in the appropriation of supplies and the destruction of property. An 1864 resolution of the county's justices succinctly outlined the hardships faced by Isle of Wight citizens during the war years:

> Whereas on account of the exposed condition of the county, being beyond the lines of the Confederate Army and subject to frequent and destructive raids of the enemy and the difficult and embarrassed communication with other sections of the state, our people, in a great measure, are dependent upon their own resources for an adequate supply of the necessities of life. And whereas, on account of the loss of almost our entire slave population, and the loss of a number of our free labor, and the conscription of white men between the ages of eighteen and forty-five to recruit the ranks of our armies, there is a great scarcity of productive labor, and whereas any further extension of conscription within the limits of this county will but result in the paralyzing of production and great suffering and hardships upon those who will be left at home...all other business is



> suspended in the county and, our people with scarcely an exception, are engaged in the cultivation of the soil (King 1993:179-80).

3.10 RECONSTRUCTION AND GROWTH (1866–1916)

Four years of civil war also had a devastating effect on Isle of Wight County, though it certainly suffered less than other parts of the Commonwealth. The county was left poorer in the wake of the conflict: agricultural life was hampered by the lack of draft animals and the poor condition of long-neglected fields; and it was difficult for most former slave owners to come to terms, both emotionally and financially, with emancipation. The county's population also dropped considerably in the immediate postwar years. In 1860, Isle of Wight's residents numbered nearly 10,000; by 1870, the population had dropped by almost 20 percent, to 8,320. After the war, both black and white residents left Isle of Wight in large numbers, many seeking work in nearby cities. Physically, economically, socially, and politically, the landscape of the county had been irrevocably altered in a short period of time (King 1993:139, 146).

Agricultural changes in Isle of Wight County, including the remarkable growth of peanut and soybean production, spurred population growth in the county toward the end of the nineteenth century, and by 1890 the county's population had well exceeded its pre-war levels. In the early twentieth century, Isle of Wight farmers profited from an expanding truck-farming market, supplying the growing cities of Newport News and Norfolk with a variety of fresh fruits and vegetables. The meat packing industry also grew considerably during this period, introducing the famed "Smithfield ham" to a national market (King 1993).

3.11 WORLD WAR I TO WORLD WAR II (1917–1945)

This era also saw frequent and rapid change in Isle of Wight County. For example, electric power became available to the majority of rural residents after 1939, when the Community Electric Cooperative first began raising power lines. But, perhaps the most significant local development witnessed during this period was the construction of the James River Bridge, officially opened by President Calvin Coolidge on November 17, 1928. Virtually overnight, the bridge ended Isle of Wight's relative isolation from Hampton Roads' growing urban centers. County businessman and booster Albert Sidney Johnson was instrumental in getting the main north-south U.S. highway (Route 17) routed through Isle of Wight via the James River Bridge and across the new Crittenden and Nansemond River bridges to Portsmouth and Norfolk. Initially the bridge tolls were high enough to discourage daily commuting to the Peninsula, but ready access to the region's cities still proved a significant stimulus to the local economy, despite the onset of the Depression (King 1993:214 and 227-28).

3.12 THE NEW DOMINION (1946–PRESENT)

Isle of Wight grew at an unprecedented rate after the Second World War, and today the county has a total of 28,500 residents, more than double the population at the turn of the twentieth century. In 1975, the state took over the James River Bridge and removed the tolls; as a result, Isle of Wight County quickly developed into a bedroom community of Newport News, with residential developments springing up along



the Route 17 corridor. Despite this increasing residential growth, the majority of Isle of Wight County remains predominantly rural in character (King 1993).



4.0 HISTORIC MAP REVIEW

Historic maps were reviewed as part of the background research conducted for the archaeological survey. Online map repositories, including the Library of Congress, the United States Geological Survey (USGS) Historical Topographic Map Explorer, the online David Rumsey Map Collection hosted by Cartography Associates, and state and county maps of Virginia compiled online at www.mapgeeks.org were examined to identify historic maps which depict the Project Area. The details and observations from this review are summarized in Tables 2 and 3.

Table 2 Summary of Observations for Historic Maps

Figure	Year	Observations, Property and Adjoining Sites
3	1624	John Smith's early map of Virginia depicts the general vicinity of the Project Area as being located within the territory of the Powhatan, in the wider vicinity of the Native American village of the Warrosquoyacke. However, the map provides no details for the immediate Project Area vicinity.
4	1755	This map illustrates the general location of the Project but does not offer significant detail. The wider region includes major waterways, roads, towns, and plantations, often located along the James River.
5	1781	This map illustrates the marches of Lord Cornwallis through the Project Area vicinity during the American Revolution. One marching route was located south of the Project Area; however, three are no details depicted for the Project Area itself. Major waterways, towns, and plantations are shown in the wider region.
6	1827	Major waterways and roadways are depicted on this map as well as Smithfield Courthouse to the northwest of the Project Area. In the wider region, churches and towns are also shown. However, the map does not provide any detail for the Project Area vicinity.
7	1864	This map appears to depict the junction near the Project Area, as well as its location in relation to Isle of Wight Court House. A stream is shown in the immediate vicinity of the Project Area, which is depicted as open land with small areas of woodland in the general vicinity. Farmsteads are shown along roadways in the wider region.
8	1891	This map depicts major waterways and roadways as well mills, churches, and farmsteads. Farmsteads often include landowner or resident names. While there is no detail provided for the Project Area, the nearby intersection is shown as are farmsteads in the immediate vicinity.

Table 3 Summary of Observations for USGS Topographic Maps

Figure	Year/Quad	Scale	Observations, Property and Adjoining Sites
9	1919 Smithfield, Virginia	1:62,500	This map depicts the Project Area vicinity as primarily rural with sparse occupation. Roadways are shown adjacent to the Project Area, which is depicted as open land with woodland at the northern end. A structure is shown near the southwest corner of the Project Area in the general location of the barn which stands there today.
10	1945 Smithfield, Virginia	1:31,680	This map continues to show the Project Area vicinity as predominately agricultural with sparse occupation. A structure is still show in the general location of the extant barn just southwest of the Project Area. The Project Area itself is shown as entirely open with woodland to the east and north.

HISTORIC MAP REVIEW



Figure 3 Detail from *Virginia Discovered and Described*, Depicting the Project Area Vicinity (Smith and Hole 1624; Library of Congress Geography and Maps Division).

HISTORIC MAP REVIEW

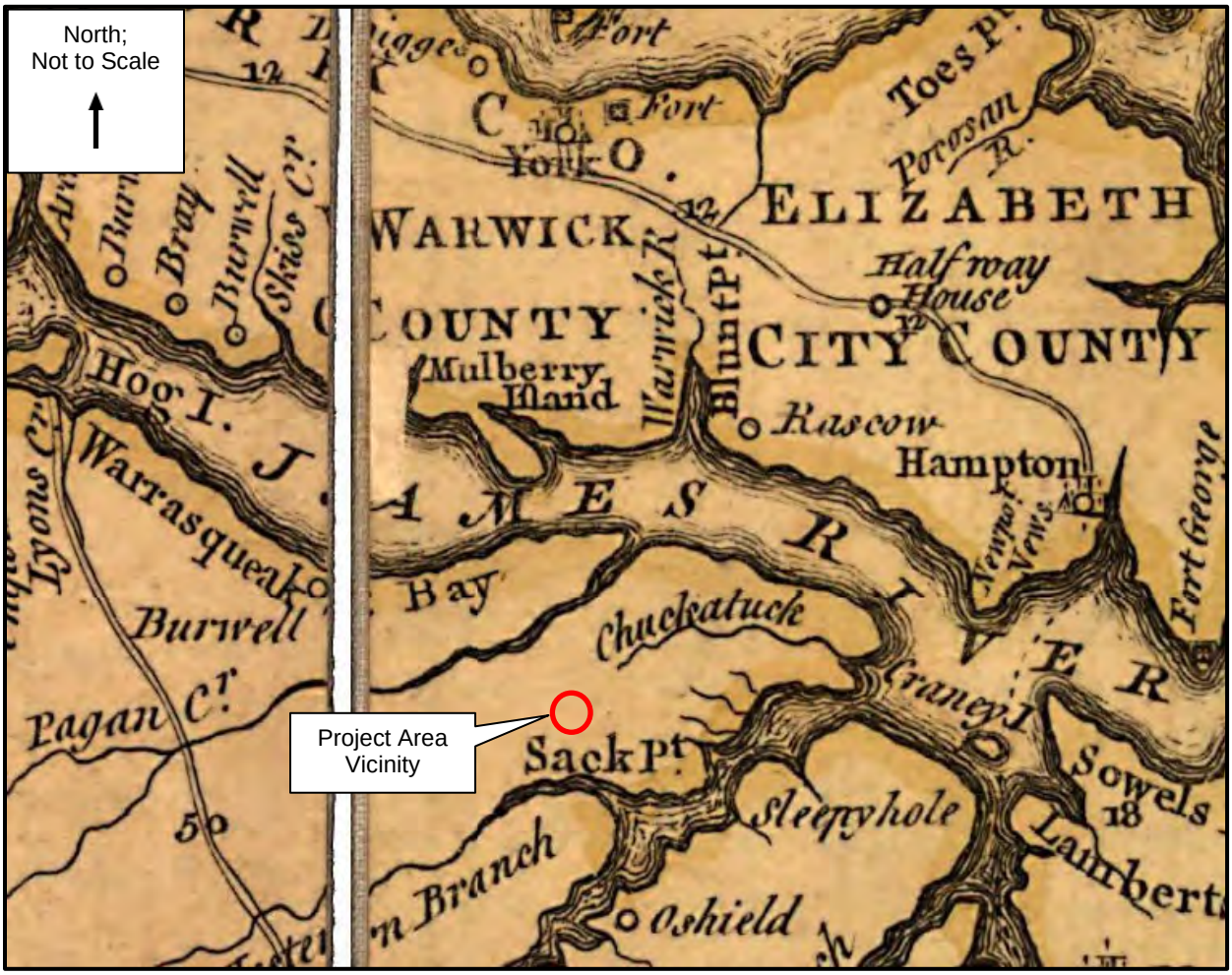


Figure 4 Detail of *A Map of the Inhabited Part of Virginia, Containing the Whole Province of Maryland with Part of Pensilvania, New Jersey and North Carolina* Depicting the Project Area Vicinity (Fry et al. 1755; Library of Congress Geography and Map Division).

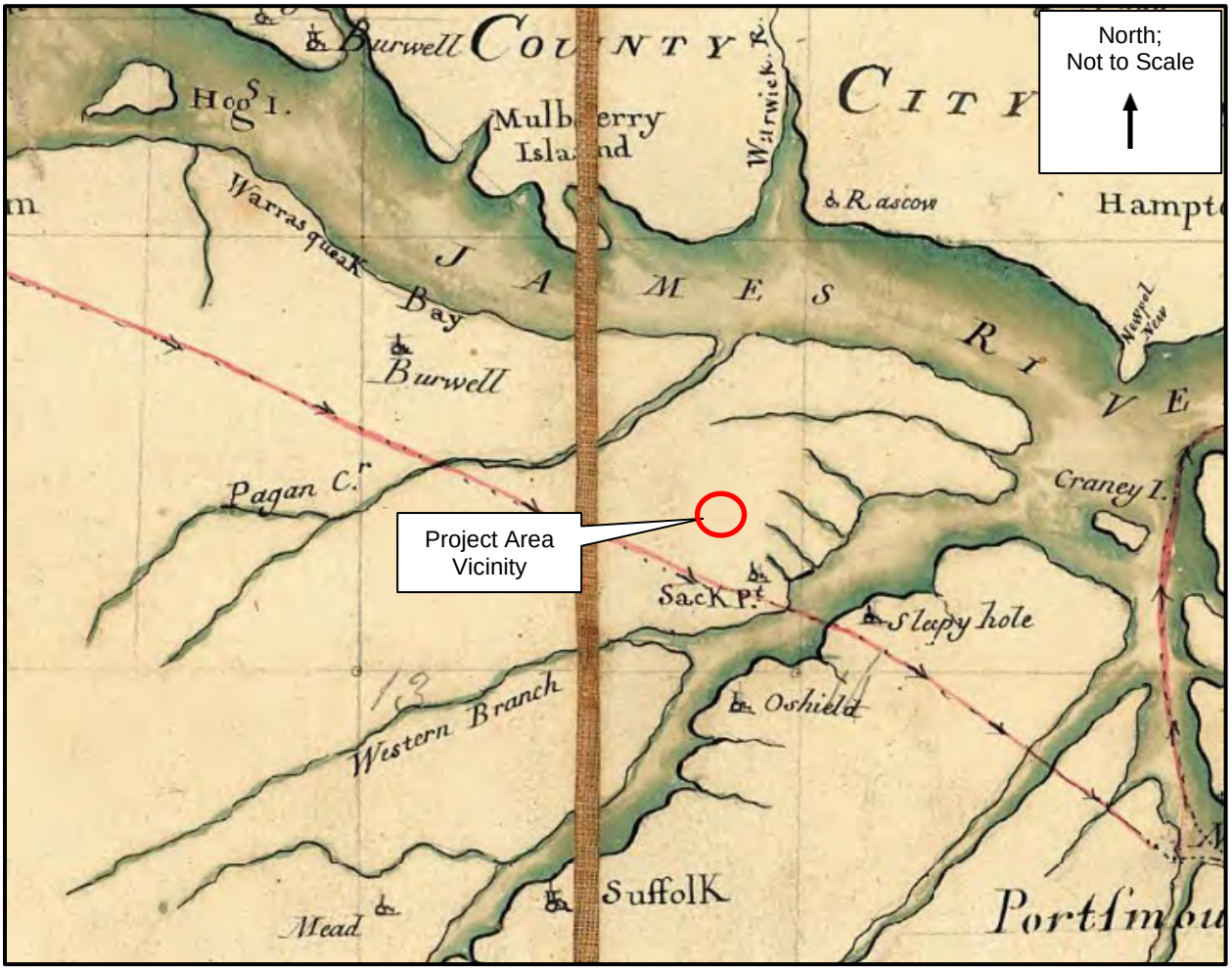


Figure 5 Detail of *Campagne en Virginie du Major General m'is de LaFayette…* Depicting the Project Area Vicinity (Chesnoy and Lafayette 1781; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

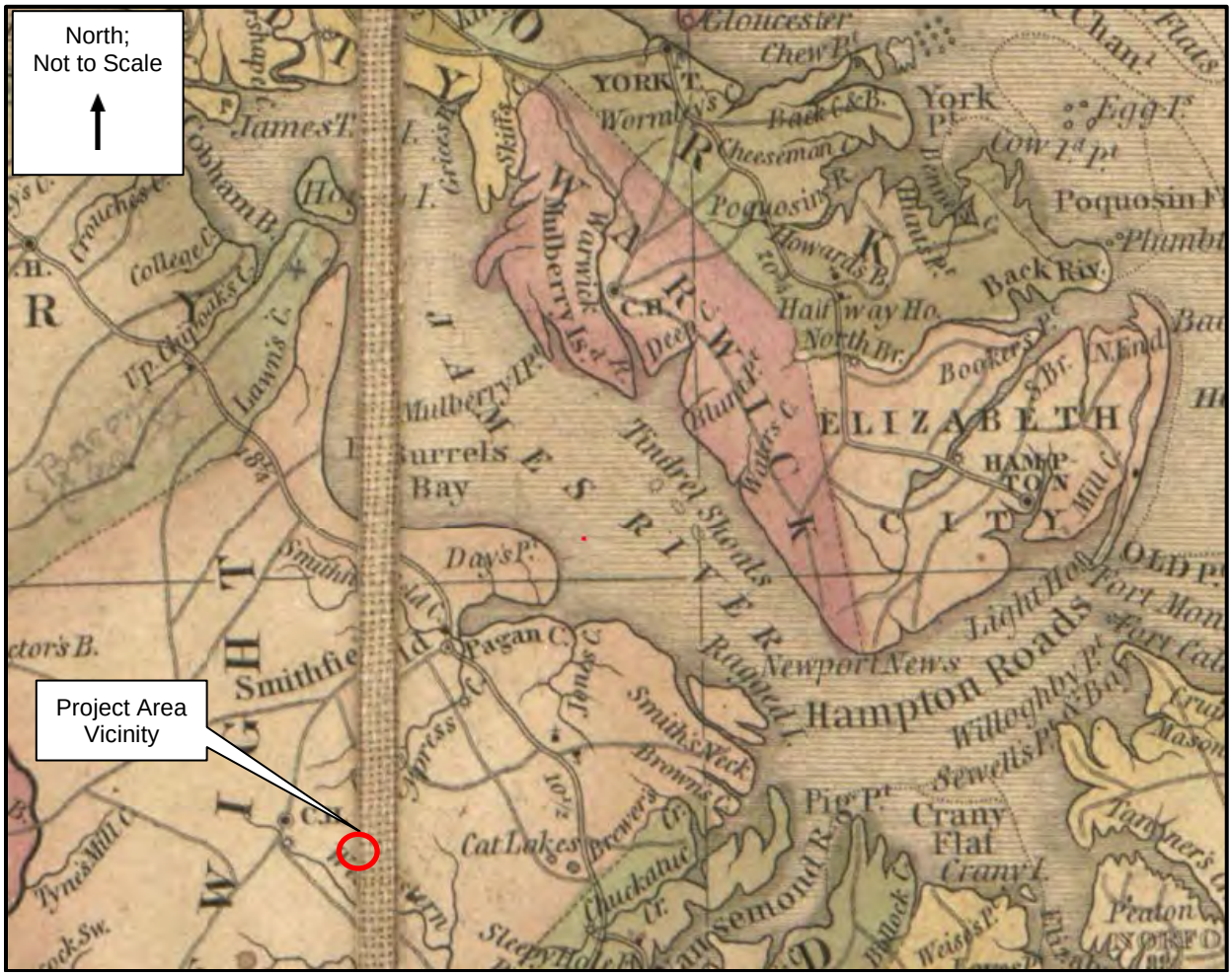


Figure 6 Detail of *A Map of the State of Virginia…* Depicting the Project Area Vicinity (Böÿe 1827; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

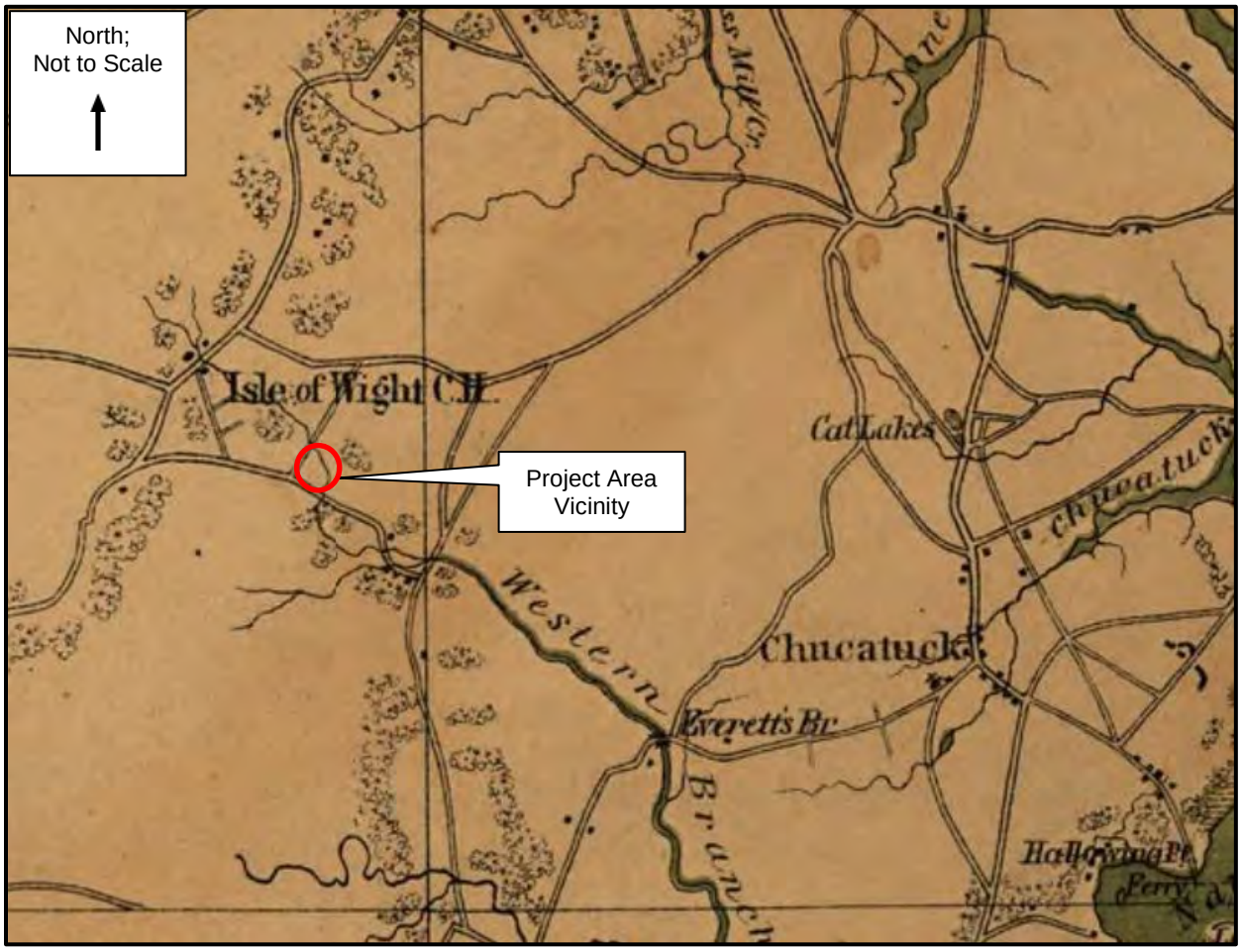


Figure 7 Detail of *Military map of south-eastern Virginia* Depicting the Project Area Vicinity (Lindenkohl 1864; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

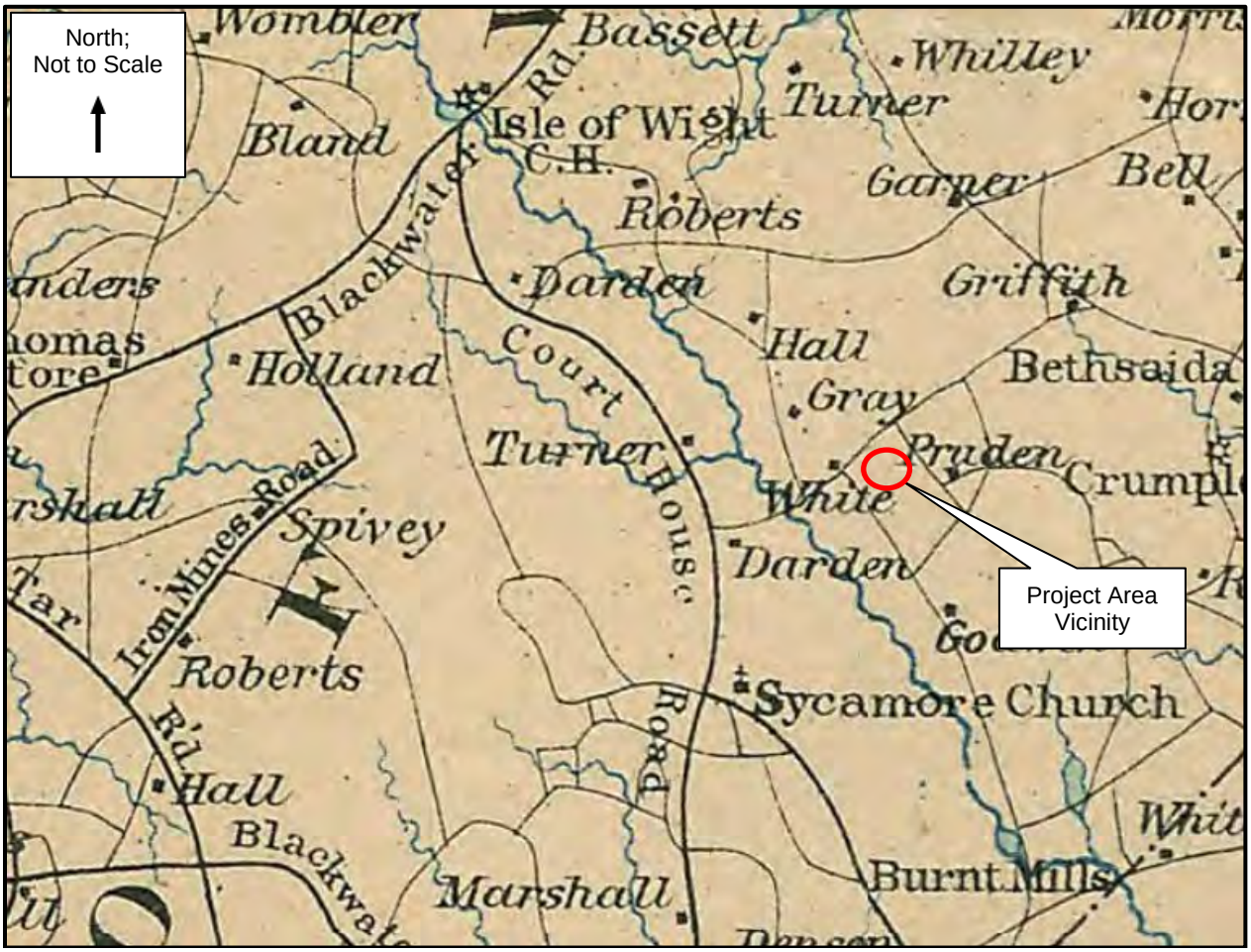


Figure 8 Detail of *Preliminary map of a part of the south side of James River, Va.: from surveys and reconnaissances* Depicting the Project Area Vicinity (Campbell et al. 1891; Library of Congress Geography and Map Division).

HISTORIC MAP REVIEW

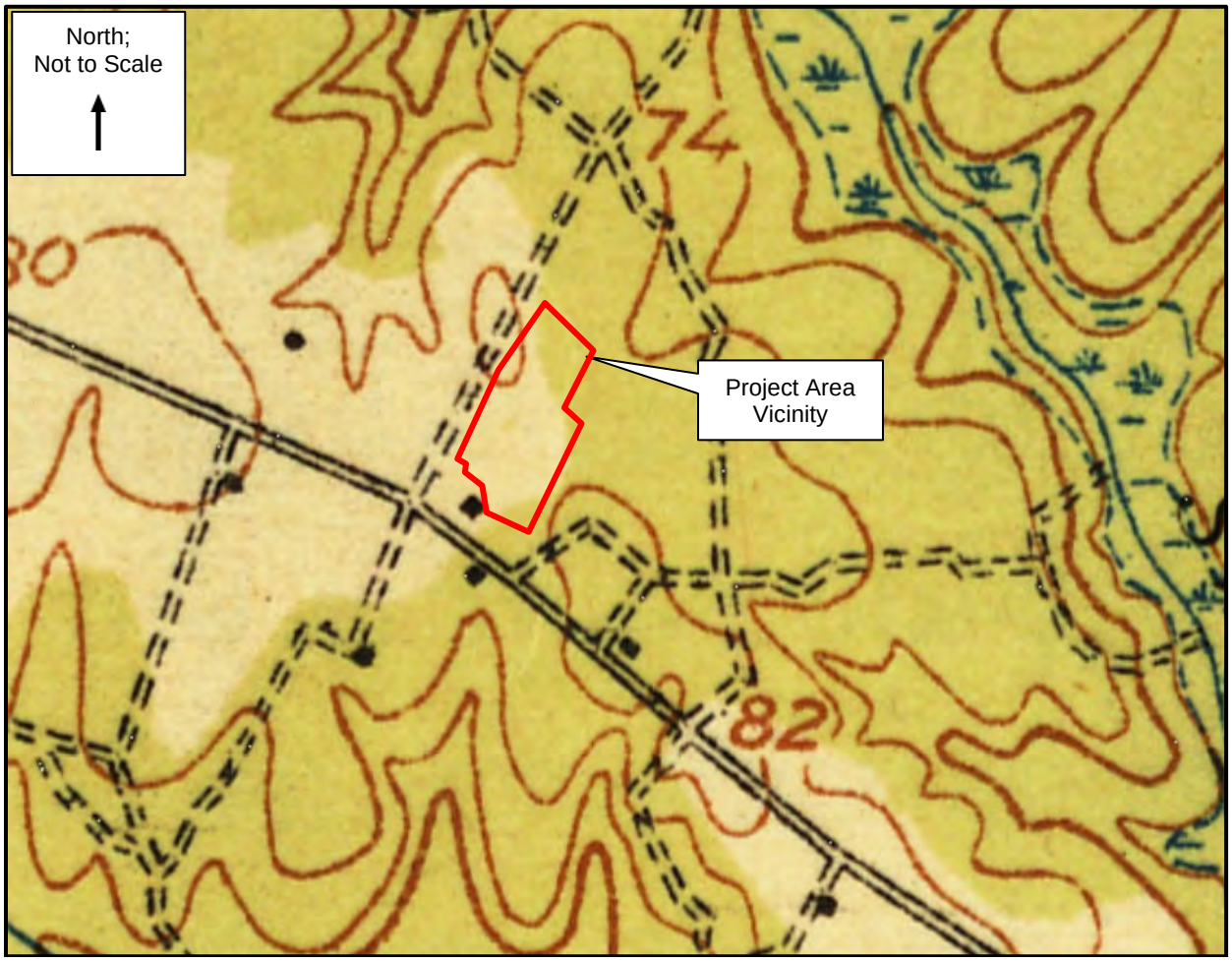


Figure 9 Detail of the 1919 *Smithfield, Virginia* 7.5 Minute Topographic Map Depicting the Project Area (USGS 1919; http://historicalmaps.arcgis.com/usgs/, Accessed 2023).

HISTORIC MAP REVIEW

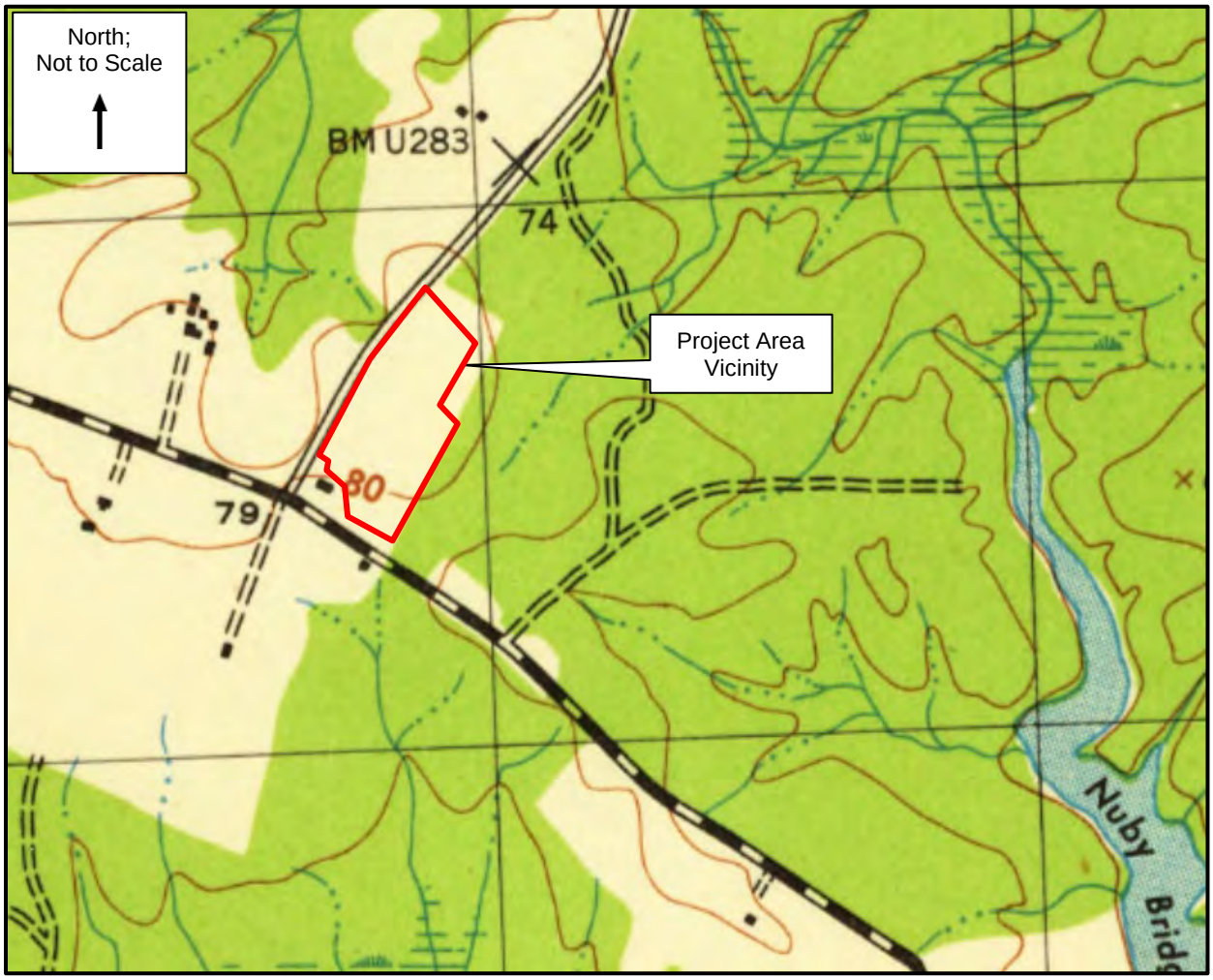


Figure 10 Detail of the 1945 *Smithfield, Virginia* 7.5 Minute Topographic Map Depicting the Project Area (USGS 1945; http://historicalmaps.arcgis.com/usgs/, Accessed 2023).

5.0 RESEARCH DESIGN

5.1 OBJECTIVES

The Phase I cultural resources survey was designed to locate and identify archaeological resources within the Project Area, as well as to document any standing structures 50 years of age or older located within the Project Area and within a 0.5-mile radius of the Project Area. Stantec designed the survey to obtain sufficient information to make recommendations about the research potential of identified cultural resources based on the resource's potential eligibility for listing on the NRHP. A cultural resource is gauged to be significant if it meets at least one of four NRHP criteria:

A. Associated with significant events in the broad patterns of national history.

B. Associated with the lives of persons significant in our past.

C. Representative of a type, period, or method of construction, or the work of a master.

D. Capable of yielding important information about the past.

Criterion D typically applies to archaeological sites. In order to be capable of yielding important information about the past, generally a site must possess artifacts, soil strata, structural remains, or other cultural features that make it possible to test historical hypotheses, corroborate and amplify currently available information, or reconstruct the sequence of the local archaeological record.

5.2 PREVIOUS INVESTIGATIONS

5.2.1 Previous Cultural Resources Surveys

No previously conducted cultural resource surveys have occurred within the Project Area.

5.2.2 Archaeological Sites

No previously recorded archaeological sites are located within the Project Area. Four previously recorded archaeological sites are located within a 1-mile radius of the Project Area (Table 4; Figure 11). All four sites are historic and have been determined to be not eligible for listing on the NRHP.

Table 4 Previously Identified Archaeological Sites within a 1-Mile Radius of the Project Area

Resource	Resource Type	Association	Reference	NRHP Status
44IW0311	Medical Office	1900–1938	CHG 2019	Not Eligible (DHR 2019)
44IW0324	Farmstead	Late 19th to Early 20th c.	H&P 2021	Not Eligible (DHR 2022)
44IW0325	Outbuilding	Historic Unknown	H&P 2021	Not Eligible (DHR 2022)

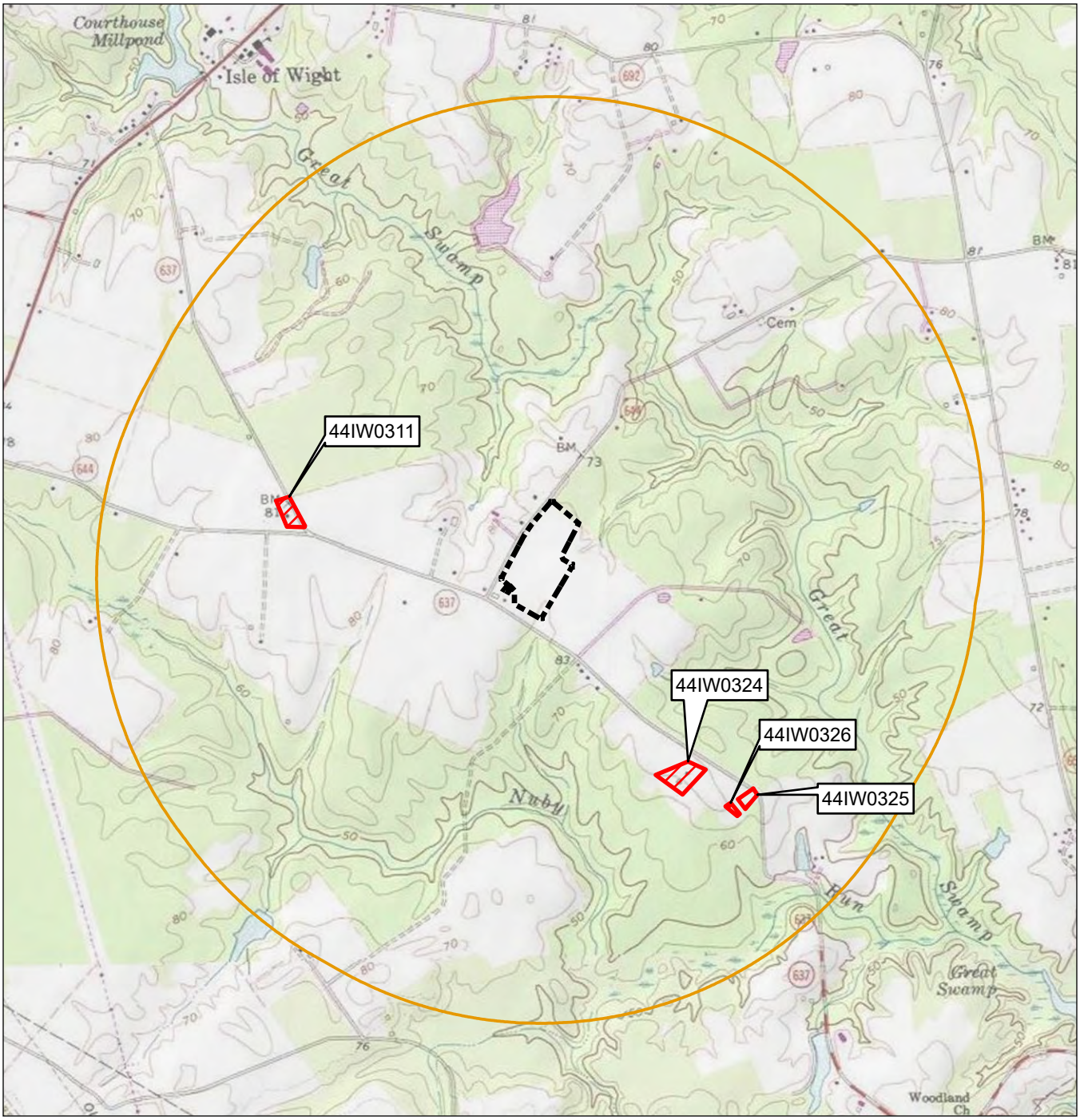
Resource	Resource Type	Association	Reference	NRHP Status
44IW0326	Artifact Scatter	Late 19th to Early 20th c.	H&P 2021	Not Eligible (DHR 2022)

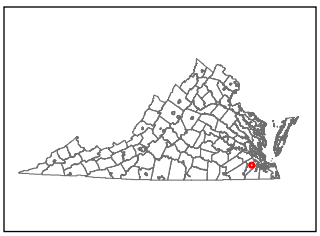
5.2.3 Architectural Resources

No previously identified architectural resources are located within the Project Area. Seven previously identified architectural resources are located within a 1-mile radius of the Project Area (Table 5; Figure 12). These resources include four houses ranging in date from 1798 to 1963, a cemetery, a farm, and a bridge. Two resources have been determined to be potentially eligible for listing in the NRHP (DH E#046-004 and #046-0021) and two resources have been considered eligible for listing on the NRHP for environmental review purposes only (DHR #046-5545 and #046-5547). The remaining three resources have been determined to be not eligible for NRHP inclusion.

Table 5 Previously Recorded Architectural Resources within a 1-Mile Radius of the Project Area

DHR #	Resource	Date	Reference	NRHP Recommendation
046-0004	Old Whitley Farm	1798	CHG 2019; Wiggins 1958	Potentially Eligible (DHR 2019)
046-0021	Seeds-Pierce House	1844	CHG 2019 Williams 1968; Wiggins 1958	Potentially Eligible (DHR 2019)
046-5310	Bridge #6045, Orbit Rd	c. 1945	VDOT 2011	Not Eligible (DHR 2011)
046-5545	Dwelling, 18402 Orbit Road	1906	CHG 2019	Eligible (DHR 2019)
046-5546	Dwelling, 18493 Orbit Road	1950	H&P 2021; CHG 2019	Eligible (DHR 2022)
046-5547	Whitley Family Cemetery	Pre-1865	CHG 2019	Not Eligible (DHR 2019)
046-5646	House, 18688 Orbit Road	1963	H&P 2021	Not Eligible (DHR 2022)





Project Area
1-Mile Buffer
Archaeological Site

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc. U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Smithfield, VA Quadrangle 1991

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
Dawood Engineering, Inc.
VAL035 Solar Project

195602610

Figure No.
11

Title
Previously Identified Archaeological Sites within a 1-Mile Radius of the Project Area

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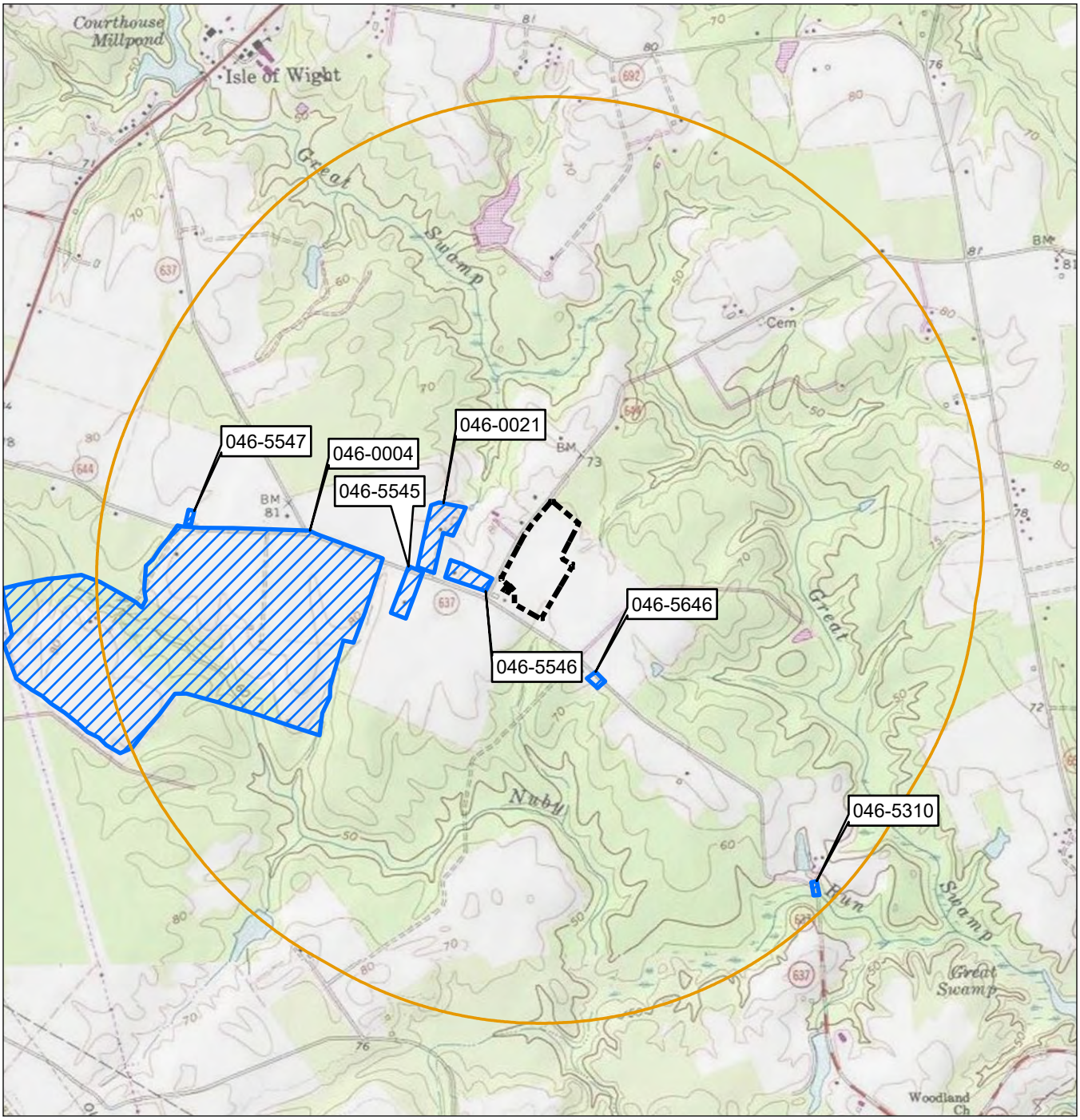

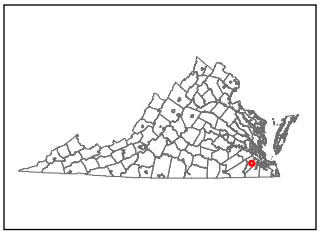

Project Area
1-Mile Buffer
Architectural Resource

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Stantec

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., U.S. Census Bureau, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Topographic map © USGS 7.5 Minute Series Topographic Map, Smithfield, VA Quadrangle 1991

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project
Dawood Engineering, Inc.
VAL035 Solar Project

195602610

Figure No.
12

Title
Previously Identified Architectural Resources within a 1-Mile Radius of the Project Area

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6.0 SURVEY METHODOLOGY

6.1 ARCHAEOLOGICAL SURVEY

6.1.1 Shovel Testing

Stantec field archaeologists conducted systematic pedestrian survey across the entire Project Area in conjunction with systematic shovel testing. Shovel tests were excavated at 50-foot intervals along 14 transects (Transects A–N) spaced 50 feet apart throughout the Project Area. Shovel testing was not conducted in areas exhibiting 15 percent or greater slope, that were wet or waterlogged, or exhibited obvious disturbances.

All shovel tests measured approximately 1.25 feet (15 inches) in diameter and were excavated to sterile subsoil. Soil from all shovel tests was passed through 1/4-inch mesh screen. For each excavated shovel test, the stratigraphic profile was recorded with complete descriptions using Munsell color designators (Munsell Color 1994) and U. S. Department of Agriculture soil texture terminology (Soil Survey Staff 1999).

- A (Topsoil or surface vegetation) – Organic or humus layer consisting of grass, leaf litter, or other surface materials.
- Ap (Plow Zone) – A horizon soils that have been impacted by plowing and agricultural practice; usually an organic layer that has formed through decomposition of A horizon soils mixed with leftover organic matter from agricultural practices.
- E (eluviated) – Leached of clay, minerals, and organic matter, leaving a concentration of sand and silt particles of quartz or other resistant materials – missing in some soils but often found in older soils and forest soils. Often interpreted as a transition layer between A and B horizon soils; often present in intact archaeological site settings and is representative of a living surface.
- B (B Horizon [Subsoil]) – Rich in minerals that leached (moved down) from the A or E horizons and accumulated here. Typically denoted as the culturally sterile B Horizon (Subsoil) as deposits tend to predate human occupation.

All pertinent data including: the site location, the location of features, any permanent landmarks, the topography, the vegetation, any disturbed areas, and the location of surface survey and subsurface tests was digitally collected utilizing ESRI's Collector for ArcGIS installed on Apple iPads enabled with GPS location services and supplemented by a Trimble R1 GPS Receiver. Field survey notes were collected by Stantec's Project Archaeologists and Crew Chief documenting daily progress, conditions, and access issues.

6.1.2 Definitions

This field survey used two designations for archaeological resources: the *archaeological site* and the *isolated archaeological find*. An *archaeological site* is regarded as any apparent location of human activity not limited to simple loss, casual or single-episode discard, and having sufficient archaeological evidence to indicate that further testing would produce interpretable archaeological data. Three artifacts related temporally or functionally within a spatially restricted area constitute an archaeological site (DHR 2017: Chapter 6, page 1). In contrast, an *isolated archaeological find* is defined as an area marked by surface indications and little else; containing three or fewer artifacts of a similar period; and/or representing an area reflecting simple loss, casual, or single-episode discard, all of which retain a low potential for providing additional interpretable archaeological data. By definition, archaeological resources of this type are not eligible for listing in the NRHP because they lack the ability to provide significant information about the prehistoric or historic past.

6.1.3 Laboratory Methods

Typically, all archaeological data and specimens collected during an archaeological survey are transported to Stantec's laboratory in Richmond, Virginia, for processing and analysis. However, no cultural material was identified during this investigation.

6.1.4 Expected Results – Archaeological Site Identification

Native American sites are generally found within 1,000 to 1,500 feet of a significant water source, on moderately well- to well-drained soils on low relief landforms. The Project Area is located across a relatively level to gently rolling landform between Great Swamp to the north and Nuby Run to the south and is in close proximity to the heads of three unnamed branches extending from these waterways. While no Native American archaeological sites have been previously identified within a 1-mile radius of the Project Area, this may reflect a lack of archaeological survey in the region rather than a lack of sites. However, more than half of the Project Area comprises Yennesee fine sandy loam, which is somewhat poorly drained, and standing water was present near the center of the Project Area. This may suggest that while the Project Area could have been attractive for short-term use (i.e., resource procurement, temporary camping, etc.) that it may have been poorly suited for long-term occupation. Therefore, there is a low to moderate probability for the Project Area to contain Native American resources.

The Project Area is situated within a fallow corn field. As historic map review has shown the vicinity of the Project Area has largely reminded rural and undeveloped throughout its documented history. Much of the Project Area comprises relatively level, moderately well-drained land; however, more than half of the Project Area includes somewhat poorly drained soils and standing water was observed near the central portion. Four previously identified historic archaeological sites are within 1 mile of the Project Area. Those previously recorded historic sites with recorded temporal affiliations date generally from the late nineteenth to the twentieth century. All four sites, which include a medical office, a farmstead, an outbuilding, and an artifact scatter, are located along Bowling Green Road (Route 644). Historic map review has provided little to no evidence of occupation within the Project Area itself, though a structure



does appear just outside of the Project Area in the early twentieth century. The Project Area appears to have been utilized primarily as agricultural land for much of the nineteenth and twentieth centuries and the somewhat poorly drained nature of much of the Project Area may have made it unattractive as a residential location. There is a low to moderate probability of identifying additional historic resources within the Project Area. Should sites be identified they are likely to date to the nineteenth and twentieth centuries.

6.2 ARCHITECTURAL SURVEY

Architectural survey included systematic identification and recordation of historic architectural resources dating to 50 years or older located within the Project Area within a 0.5 -mile radius of the Project Area. The documentation effort consisted of resurveying and re-evaluating previously recorded resources for NRHP eligibility and newly surveying architectural resources dating from 1973 or earlier. The documentation for both newly and previously recorded resources included noting architectural features on designated survey forms for each building/structure visible on the property and preparing sketch maps depicting the primary resource in relation to secondary resources, if any, and prominent landscape features. Additionally, all visible resources present on the property were photographed. The Phase I architectural survey was conducted from public right-of-way (ROW) only unless permission was specifically granted by the owner at the time of the field survey. In some cases, resources were not visible or were only partially visible from the public ROW due to vegetation and/or distance and therefore limited architectural survey of those resources was possible.

6.2.1 Definitions

Architectural resources include all standing structures or buildings that are 50 years or older. Potential eligibility of architectural resources requires that one or more of the National Register of Historic Places Criteria, such as association with significant events in the broad patterns of national history (Criterion A), association with the lives of persons significant in our past (Criterion B), and/or representative of a type, period, or method of construction, or the work of a master (Criterion C), be met. Where individual structures do not meet these National Register criteria, but constitute a cohesive group of related buildings, a potential NRHP district may be considered.

6.3 REPORT PREPARATION

The results of the archival research, fieldwork, and laboratory analysis were synthesized and summarized within this report. The report describes the results of each of these facets of the Phase I survey research and is illustrated by selected maps and drawings. Appendix A presents architectural resource survey mapping and Appendix B presents architectural V-CRIS forms. Appendix C presents resumes for key personnel.



7.0 ARCHAEOLOGICAL SURVEY RESULTS

7.1 INTRODUCTION

The Project Area is located northeast of the junction of Orbit Road (Route 637) and Bowling Green Road (Route 644) and comprises a relatively level corn field that appeared fallow. Light grass was present over the majority of the Project Area though ground visibility was greater than 50 percent in some locations. Standing water was present in low lying locations within the Project Area. An infilled drainage ditch, which appears to have been utilized for access, extends southwest to northeast through the eastern portion of the Project Area (Figures 13–20).



Figure 13 View from the Southwestern Corner of the Project Area; View to the North.



Figure 14 View from Northwestern Corner of the Project Area; View to the Southeast.



Figure 15 View from Northeastern Corner of the Project Area; View to the East.



Figure 16 View from Central Portion of the Project Area; View to the South.



Figure 17 View from Southeastern Corner of the Project Area; View to the North.

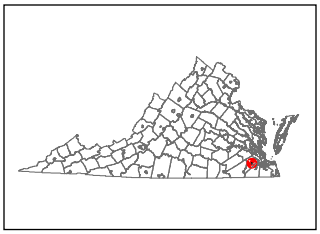


Figure 18 Ground Visibility in Western Portion of the Project Area; View to the South.



Figure 19 Standing Water in the Western Portion of the Project Area; View to the South.





Primary Negative
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Project Area
5-Foot Contour

0 100 200 Feet

(At original document size of 8.5x11)
1:2,400

N

Notes
1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., Stantec, U.S. Census Bureau, VDOT
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

Stantec

Project Location
Isle of Wight County, Virginia

Prepared by ECL on 2023-03-03
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

Client/Project 195602610
Dawood Engineering, Inc.
VAL035 Solar Project

Figure No.
20

Title
Archaeological Base Map

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7.2 SHOVEL TESTING

A total of 320 shovel tests were excavated at 50-foot intervals along 14 transects (Transects A–N) spaced 50 feet apart throughout the Project Area. One shovel test (STP K14) was not excavated due to its location in standing water. Shovel testing also did not occur within the in-filled ditch/access extending southwest to northeast through the eastern portion of the Project Area. No shovel tests were positive for cultural material and no new isolated archaeological finds or new archaeological sites were recorded during the investigation (see Figure 20).

A representative shovel test profile for the majority of the Project Area consisted of two strata (STP H10). Stratum I was characterized as a layer of 10YR4/2 dark grayish-brown sandy clay loam (Ap Horizon), which extended in depth from approximately 0 to 0.4 foot below ground surface. Underlying Stratum I was Stratum II, a layer of 10YR5/3 brown sandy clay (Subsoil). Stratum II was excavated from approximately 0.4 to 0.8 foot below ground surface (Table 6).

Table 6 STP H10 Soil Profile

Stratum	Depth (ft.)	Color	Soil Type/Texture	Interpretation
I	0−0.4	10YR4/2 Dark Grayish Brown	Sandy Clay Loam	Ap Horizon
II	0.4−0.8	10YR5/3 Brown	Sandy Clay	Subsoil

7.3 ARCHAEOLOGICAL RESULTS

No shovel tests were positive for cultural material and no new isolated archaeological finds or new archaeological sites were recorded during the Phase I investigation. ***No further archaeological investigations are recommended for the Project Area.***

8.0 ARCHITECTURAL SURVEY RESULTS

The Phase I architectural survey was conducted by Stantec on March 8, 2023. The documentation of these historic resources was conducted pursuant to the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* [United States Department of the Interior {USDI} 1983]) and state (*Guidelines for Conducting Historic Resources Investigations in Virginia* [DHR 2017]) guidelines.

8.1 PHASE I ARCHITECTURAL SURVEY

One newly recorded and five previously recorded individual resources were located within the architectural Survey Area (Tables 7 and 8). Four of the previously recorded resources have been determined potentially eligible for listing in the NRHP. Two have been determined by DHR to be potentially eligible for listing (DHR #046-0004 and #046-0021) and two are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546). These four resources were surveyed in 2019 and were not resurveyed as part of the current project but were evaluated for potential visual effects of the proposed Project to each resource. One previously recorded resource was determined not eligible for listing in the NRHP (DHR #046-5646). The resource was also surveyed in 2019 and was not resurveyed during the current investigation (Table 7). The surveyed resources consisted of farms and single dwellings with associated outbuildings.

Table 7 Previously Recorded Architectural Resources within the Survey Area

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey
046-0004	Cedar Acres, 12452 Redhouse Road	1798	Determined Potentially Eligible in 2019
046-0021	Seed-Pierce House, 18421 Orbit Road	1844	Determined Potentially Eligible in 2019
046-5545	House, 18402 Orbit Road	1906	Considered Eligible for Environmental Review Purposes in 2019
046-5546	House, 18493 Orbit Road	1950	Considered Eligible for Environmental Review Purposes in 2019
046-5646	House, 18688 Orbit Road	1963	Determined Not Eligible for Listing in the NRHP in 2019

Table 8 Newly Recorded Architectural Resources within the Architectural Survey Area

DHR #	Resource Name	Date
046-5714	House, 18668 Orbit Road	1973

The architectural style classifications used to categorize the resources surveyed conform to those accepted by the NRHP and detailed in *A Field Guide to American Houses* (McAlester and McAlester 1998). The single domestic resource surveyed was constructed in the Ranch style.

8.1.1 Dwelling Types

8.1.1.1 Ranch-Style

The Ranch-style, the popularity of which is evident in the many planned developments of the 1950s and 1960s, originated in 1930s California. The style became dominant in the 1940s with the increased dependence on the automobile. Prior to the 1940s, many urban and suburban dwellers resided in compact houses on small lots and walked to the streetcar lines. The increasing popularity of the automobile allowed people to move further out from the city and indulge in more expansive lots. The Ranch house's design allowed a lateral expansion of dwellings, emphasizing the façade, and could fit on larger residential lots with more open space between houses (McAlester and McAlester 1993:479).

The Ranch-style house (DHR #046-5714), which is typical of its style, was constructed in 1973 and is a one-story, five-bay, frame dwelling with engaged carport. The exterior is brick veneer on the facade with vinyl siding on the remaining elevations. The dwelling is supported by a concrete block foundation and the cross-gable roof has been clad in asphalt shingles. The dwelling also features a modern entry door and single and paired six-over-six vinyl sash windows (Figure 21). A mid-to late twentieth century well house and poured concrete well were also located on the property.



Figure 21 Ranch-Style Dwelling (DHR #046-5714), 18668 Orbit Road, View Looking South.

8.2 VISUAL EFFECTS EVALUATION

An effects evaluation, in addition to the Phase I architectural survey, was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed Project. Four properties were assessed for effects and include the potentially eligible Cedar Acres (DHR #046-0004) and Seeds-Pierce House (DHR #046-0021) and two dwellings which are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546).

8.2.1 Cedar Acres (DHR #046-0004)

The house on the property of Cedar Acres was built in two sections. The original section, according to the previous survey, was constructed in 1798 as a one-and-a-half-story, two-bay, frame dwelling with the two-story, three-bay section added in the mid-nineteenth century. The exterior is sided in weatherboards and the side gable roof in standing seam metal. Large, exterior end brick chimneys are located off each gable end. The dwelling also features a single-bay, hipped-roof porch sheltering the front entry and six-over-nine, nine-over-nine, and three-over-six wood sash windows (Figure 22). Secondary resources on the property include a mid-nineteenth century shed, and four turn-of-the-twentieth century barns. The resource was determined potentially eligible in 2019 by DHR as an example of rural vernacular architecture which reflects the agricultural development of this area of Isle of Wight County (DHR Site Files).

The dwelling and secondary resources on the property are located back from the road within an open, relatively level landscape (Appendix A). A large tree is located to the northwest of the dwelling with an area of woods to the south/southwest. While the buildings on the property are located outside of the 0.5-mile radius of the Project Area, the landscape is open and unobstructed to the northeast looking towards the proposed solar field. At its closest point, the northeastern corner of the property is approximately 1,568 feet to the southwest of the proposed Project and will have a direct view of the solar panels on the parcel (Figures 23 and 24). Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the NRHP potentially eligible Cedar Acres (DHR #046-0004).



Figure 22 Cedar Acres (DHR #046-0004), View Looking Southwest.



Figure 23 View from Cedar Acres (DHR #046-0004), Looking East towards Solar Parcel from Viewpoint (VP) 5.



Figure 24 View from Cedar Acres (DHR #046-0004), Looking East towards Solar Parcel from VP 6.

8.2.2 Seeds-Pierce House (DHR #046-0021)

The Seeds-Pierce House (DHR #046-0021) was constructed around 1844 and is a two-story, three-bay, frame dwelling with weatherboard siding and a gable roof clad in asphalt shingles. A large, shouldered, exterior brick chimney with corbeled cap is located off each gable end and a raised single-bay entry porch. The dwelling is supported by a raised, brick foundation and is also raised on brick piers. A small, shed-roofed porch extends from the northwestern gable end. Fenestration includes six-over-six sash windows (Figure 25). Secondary resources on the property include a mid-twentieth century barn. The resource was determined potentially eligible in 2019 by DHR as an example of rural vernacular architecture which reflects the agricultural development of this area of Isle of Wight County (DHR Site Files).

The dwelling and secondary resources on the property are located back from the road within an open, relatively level landscape (Appendix A). Several large trees are located behind the house and a post-and-rail fence encloses a pasture to the southeast of the dwelling. At its closest point, as mapped in the DHR's Virginia Cultural Resources Information System (V-CRIS), the property is approximately 821 feet to the northwest of the proposed Project and will have a direct view of the solar panels on the parcel (Figure 26). Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the NRHP potentially eligible Seeds-Pierce House (DHR #046-0021).



Figure 25 Seeds-Pierce House (DHR #046-0021), View Looking North.



Figure 26 View from Seeds-Pierce House (DHR #046-0021), Looking East towards Solar Parcel from VP 3.

8.2.3 House (DHR #046-5545)

The house, constructed in 1906 according to tax data, is a two-story, five-bay, vernacular frame dwelling with aluminum siding and a metal-clad side gable roof. A one-story, five-bay, hipped-roof porch with turned wood posts extends across the façade and a two-story ell with one-story wing extends from the rear. The dwelling also features interior end brick chimneys with corbeled caps (Figure 27). Secondary resources on the property include two mid-twentieth century domestic outbuildings of unspecified function and a mid-twentieth century animal shelter. The resource was determined eligible for the purposes of environmental review in 2019 by DHR and is an example of mid-twentieth century rural architecture which reflects the agricultural development of this area of Isle of Wight County (DHR Site Files).

The dwelling and secondary resources on the property are located back from the road within an open, relatively level landscape (Appendix A). Several large trees are located around the house with a tree line to the northwest and shrubs along either side of the driveway. Beyond the immediate area of the dwelling are open agricultural fields. At its closest point, the property is approximately 1,023 feet to the southwest of the proposed Project and will have a direct view of the solar panels on the parcel (Figure 28). Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the NRHP eligible House (DHR #046-5545).



Figure 27 House (DHR #046-5545), View Looking Southwest.



Figure 28 View from House (DHR #046-5545), Looking Northeast towards Solar Parcel from VP 4.

8.2.4 House (DHR #046-5546)

The house is a one-and-a-half-story, three-bay, Colonial Revival, Cape Cod-style dwelling constructed in 1950. The exterior is brick with the side gable roof clad in asphalt shingles. Two gable-roofed dormers project from the front roof slope and one-story wing has been added off the southwest gable end. An exterior brick chimney with corbeled cap and a narrow, one-story, gable-roofed porch are located off the northwest gable end. The dwelling also features a gable-roofed entry porch, Chicago-style windows, a single-leaf entry door flanked by sidelights and an elliptical transom, and six-over-six sash windows (Figure 29). Secondary resources on the property include a gazebo and two mid-twentieth century sheds. Also, part of the property is a metal vehicle shed and small utilitarian shed located at the corner of Orbit and Bowling Green roads. The resource was determined eligible for the purposes of environmental review in 2019 by DHR and is an example of mid-twentieth century rural architecture which reflects the agricultural development of this area of Isle of Wight County (DHR Site Files).

The dwelling and secondary resources near the dwelling are located back from the road within an open, relatively level landscape (Appendix A). Several large trees are located around the house. The lawn surrounding the dwelling is enclosed by a vinyl fence with agricultural fields located beyond. The two additional secondary resources are located immediate adjacent to the road within an open landscape. The dwelling is approximately 575 feet to the west of the proposed Project with the closest point of the property, based on the tax parcel is approximately 75 feet to the northwest. The property, due to its open landscape and close proximity to the proposed solar site, will have a direct view of the solar panels on the

parcel (Figures 30 and 31). Based on the fieldwork, it is anticipated that the proposed Project will have an **Adverse Effect** on the NRHP eligible House (DHR #046-5546).



Figure 29 House (DHR 046-5546), View Looking Northeast.

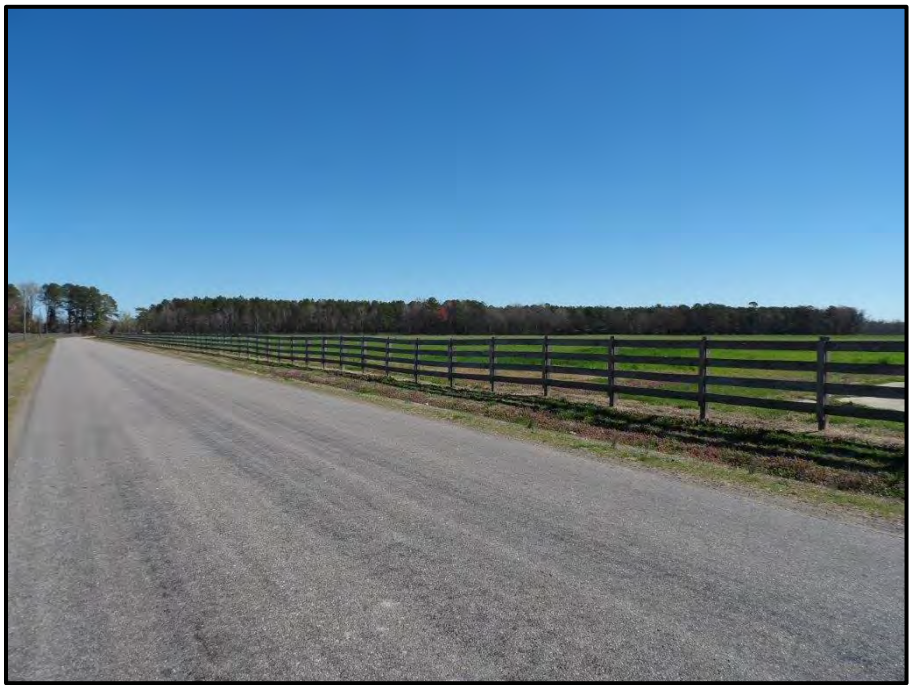

Figure 30 View from House (DHR #046-5546), Looking Northeast towards Solar Parcel from VP 1.



Figure 31 View from House (DHR #046-5546), Looking East towards Solar Parcel from VP 2.

9.0 CONCLUSIONS AND RECOMMENDATIONS

From February 20 to March 2, 2023, Stantec conducted a Phase I cultural resources survey of approximately 18 acres associated with the proposed 3 MW VAL-035 Solar Project (Project) in Isle of Wight County, Virginia. The Project is located northeast of the junction of Orbit Road (Route 637) and Bowling Green Road (Route 644). Private property borders the Project Area to the north and east. The Project Area comprises a relatively level fallow corn field.

The Phase I cultural resources survey was designed to locate and identify cultural resources within the defined Project Area, defined as the entire approximately 8-acre Project parcel, and to obtain sufficient information to make recommendations regarding their potential eligibility for listing to the NRHP.

9.1 ARCHAEOLOGICAL SURVEY RESULTS

During the archaeological survey, Stantec conducted pedestrian survey of the entire Project Area concurrently with systematic subsurface testing. A total of 320 shovel tests were excavated at 50-foot intervals along 14 transects (Transects A–N) spaced 50 feet apart throughout the Project Area. One shovel test was not excavated due to its location in standing water. No shovel tests were positive for cultural material and no new isolated archaeological finds or new archaeological sites were identified during the investigation. ***Stantec recommends that no further archaeological investigation is necessary within the Project Area.***

9.2 ARCHITECTURAL SURVEY RESULTS

A total of five individual resources were located within the architectural Study Area, defined as the Project Area and a 0.5-mile radius around the Project Area, and included five previously recorded and one newly recorded resource. Four of the five previously recorded resources have been determined potentially eligible for listing in the NRHP. Of these, two have been determined by DHR to be potentially eligible for listing (DHR #046-0004 and #046-0021) and two are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546). These four resources were surveyed in 2019 and were not resurveyed as part of the current project but were evaluated for potential visual effects of the proposed Project to each resource. One previously recorded resource was determined not eligible for listing in the NRHP (DHR #046-5646). The resource was also surveyed in 2019 and was also not resurveyed.

One newly documented resource was surveyed during the current project and is generally reflective of the mid-to late twentieth century development of Isle of Wight County and lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP (Table 9). Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.

The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resource does not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area and are commonly represented in Isle of Wight County.

The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of Isle of Wight County. Although limited information about the owners of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.

The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C and is of a common architectural style. In addition, the resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the dwelling represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

No further work is recommended for the newly recorded resource as part of the VAL035 Solar project.

Table 9 NRHP Recommendations for Architectural Resources Surveyed within the Survey Area

DHR #	Resource Name	Date	NRHP Recommendation as a Result of the Survey
045-5714	House, 18668 Orbit Road	1973	Recommended Not Eligible for Listing on the NRHP

9.3 EFFECTS EVALUATION

An effects evaluation was conducted for NRHP-listed, eligible, and potentially eligible properties which may be affected by the proposed VAL035 Solar Site Project. Four properties were assessed for effects and include the potentially eligible Cedar Acres (DHR #046-0004) and Seeds-Pierce House (DHR #046-0021) and two dwellings which are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546; Table 10). Based on the current proposed Project Area and the existing landscape it is recommended that the proposed Project would have an **Adverse Effect** on all four resources. ***Based on the effects evaluation, it is likely DHR will require mitigation for Adverse Effect of the proposed project. Suggested mitigation may potentially be vegetative screening*** (Appendix A).

Table 10 Effects Evaluation of NRHP Eligible and Potentially Eligible Properties

DHR #	Resource Name	Date	NRHP Status/ DHR Recommendation Prior to Survey	Effects Assessment
046-0004	Cedar Acres, 12452 Redhouse Road	1798	Determined Potentially Eligible in 2019	Adverse Effect
046-0021	Seed-Pierce House, 18421 Orbit Road	1844	Determined Potentially Eligible in 2019	Adverse Effect
046-5545	House, 18402 Orbit Road	1906	Considered Eligible for Environmental Review Purposes in 2019	Adverse Effect
046-5546	House, 18493 Orbit Road	1950	Considered Eligible for Environmental Review Purposes in 2019	Adverse Effect

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APPENDICES

Appendix A ARCHITECTURAL RESOURCES MAPPING

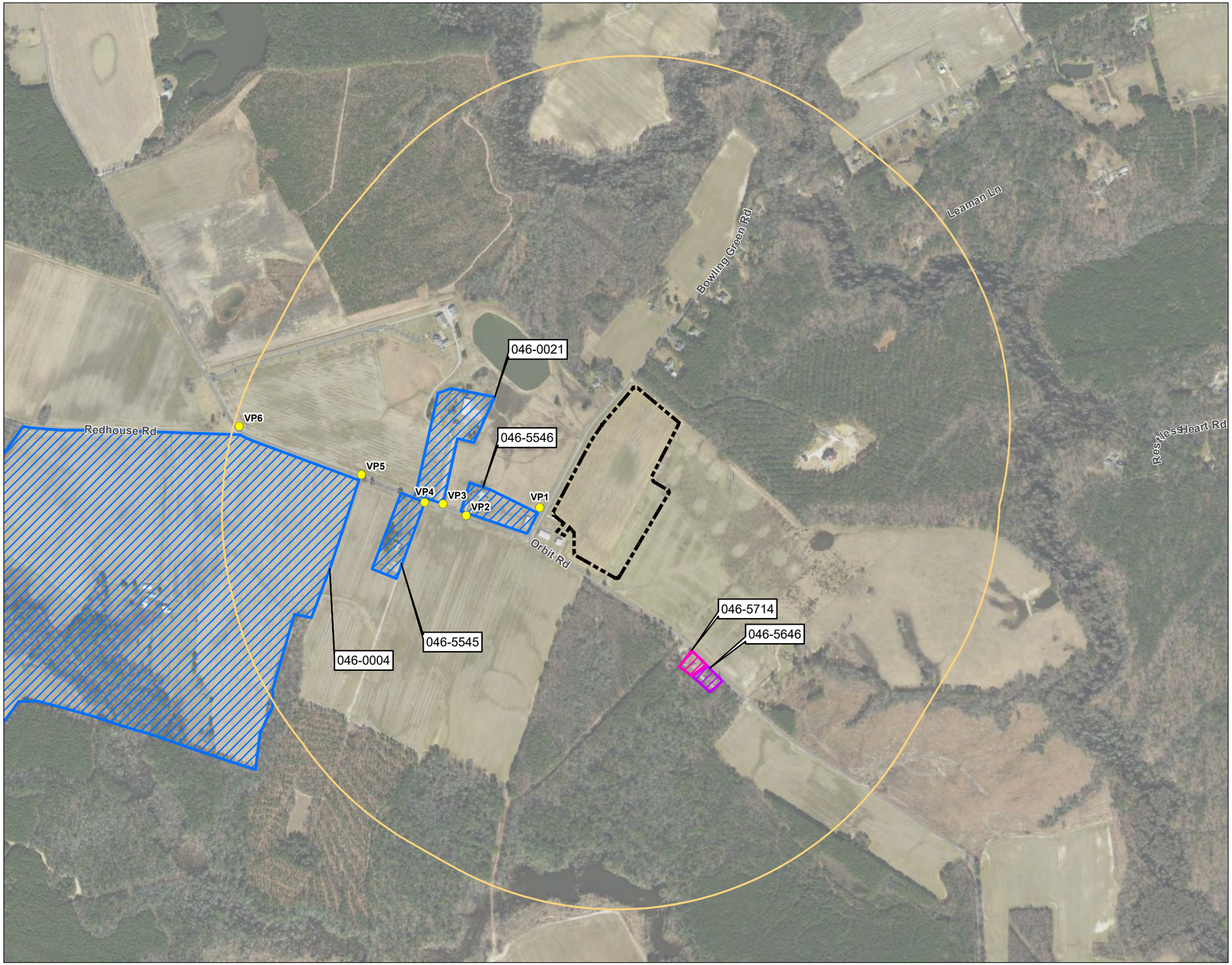


Figure No.

Appendix A

Title

Architectural Resources Map

Client/Project 195602610

Dawood Engineering, Inc.
VAL035 Solar Project

Project Location

Isle of Wight County, Virginia

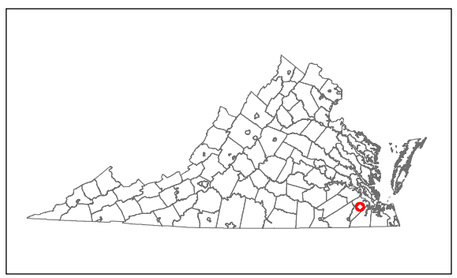
Prepared by ECL on 2023-03-29
TR by JMH on 2023-03-29
IR by BSS on 2023-03-29

N

0 800 1,600 Feet

(At original document size of 11x17)
1:9,600

- View Point
- Project Area
- 0.5- Mile Buffer
- Newly Recorded Architectural Resource
- Not Eligible - Not Resurveyed
- Architectural Resource Viewshed Only



Notes

1. Coordinate System: NAD 1983 StatePlane Virginia South FIPS 4502 Feet
2. Data Sources: Dawood Engineering, Inc., Stantec, U.S. Census Bureau, VDOT, Virginia Department of Historic Resources, Virginia Cultural Resources Information System (VCRIS)
3. Orthoimagery © Virginia Geographic Information Network (VGIN)

Stantec

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

Appendix B ARCHITECTURAL V-CRIS FORMS

Property Information

Property Names

Name Explanation	Name
Function/Location	House, 18668 Orbit Road

Property Evaluation Status

Property Addresses

Current - 18668 Orbit Road

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23487
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): SMITHFIELD

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

March 2023: The house sits back from the road within an open, level landscape and is surrounded by a lawn with woods located at the rear of the property. A gravel driveway leads from the road to the engaged carport and a well and well house are located to the north of the house.

Surveyor Assessment:

March 2023: The resource, though generally reflective of the mid-to late twentieth century development of Isle of Wight County, lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing on the NRHP. As such, it is recommended that the resource is not individually eligible for listing on the NRHP. Criterion D, typically associated with archaeological sites, was not considered in evaluating the architectural resources documented during the survey.
The resource, under NRHP Criterion A does not individually express any distinctive themes relating to the development of Isle of Wight County and does not contribute significantly to the county's growth. It is recommended therefore that the resources do not meet the criteria necessary for individual listing on the NRHP under Criterion A as the properties were constructed in response to the general development of the area.
The resource surveyed does not appear to be associated with any known individuals who made significant contributions to the historical development of the Isle of Wight County. Although limited information about the occupants of the property is known, it does not appear that the occupants would be considered of transcendent importance to the Nation's history and therefore the resource does not meet the criteria necessary for listing on the NRHP under Criterion B.
The resource does not appear to have significant architectural integrity for listing on the NRHP under Criterion C. The resource is utilitarian in design and does not embody distinctive characteristics of a type, period, or method of construction nor does the building represent the work of a master. It is therefore recommended that the resource surveyed does not meet the criteria necessary for listing on the NRHP under Criterion C.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
NR Resource Type: Building
Date of Construction: 1973
Date Source: Local Records
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: Ranch
Form: *No Data*

Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The house is a one-story, five-bay, frame dwelling with engaged carport. The exterior is brick veneer on the facade with vinyl siding on the remaining elevations. The dwelling is supported by a concrete block foundation and the cross gable roof has been clad in asphalt shingles. The dwelling also features a modern entry door and single and paired six-over-six vinyl sash windows.

Exterior Components

Component	Component Type	Material	Material Treatment
Foundation	Solid/Continuous	Concrete	Block
Roof	Cross Gable	Asphalt	*No Data*
Structural System and Exterior Treatment	Wood Frame	Brick	Veneer
Windows	Double-hung	Vinyl	*No Data*

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Well
NR Resource Type: Structure
Date of Construction: pre 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: *No Data*
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

March 2023: The well is a low poured concrete structure with poured concrete cap.

Secondary Resource #2

Resource Category: Domestic
Resource Type: Well House
NR Resource Type: Building
Date of Construction: pre 1990
Date Source: Site Visit
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*
Number of Stories: 1.0
Condition: Good
Threats to Resource: Public Utility Expansion
Cultural Affiliations: Indeterminate

Cultural Affiliation Details: *No Data*

Architectural Description:

March 2023: The well house is a low, concrete block structure with asphalt shingle-clad gable roof.

Exterior Components

Component	Component Type	Material	Material Treatment
Structural System and Exterior Treatment	Masonry	Concrete	Block

Historic District Information

Historic District Name: *No Data*

Local Historic District Name: *No Data*

Historic District Significance: *No Data*

CRM Events

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*

Investigator: Sandra DeChard

Organization/Company: Stantec 2034

Photographic Media: Digital

Survey Date: 3/8/2023

Dhr Library Report Number: *No Data*

Project Staff/Notes:

No Data

Project Bibliographic Information:

Phase I Cultural Resources Survey of Approximately 18 Acres Associated with the VAL-035 Solar Farm, Isle of Wight County, Virginia.

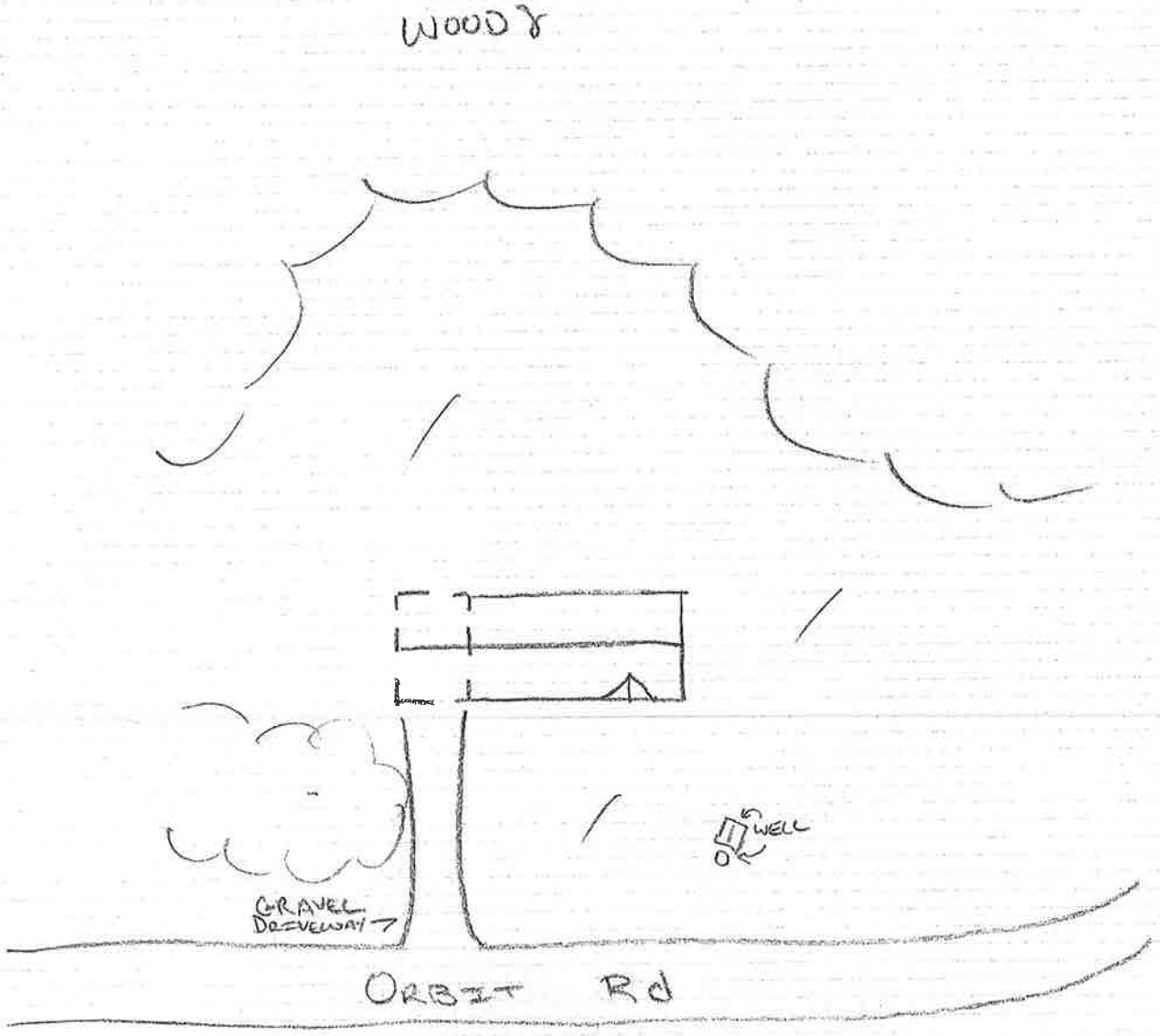
Bibliographic Information

Bibliography:

Phase I Cultural Resources Survey of Approximately 18 Acres Associated with the VAL-035 Solar Farm, Isle of Wight County, Virginia

Property Notes:

No Data



046 - 5714
18668 ORBIT Rd
ISLE OF WRIGHT
MARCH 8, 2023
O. MCCARTHY
N.T.S.

Appendix C KEY PERSONNEL RESUMES

Donald Sadler, MA

Project Archaeologist

Mr. Sadler has over 23 years of professional experience as an archaeologist. He has excavated on sites across Virginia, including Jamestown, as well as Greece, Bermuda, Georgia and Maryland, on both academic and professional projects. He has over a decade of experience as the primary field archaeologist supervising excavations at the Phase I, II and III levels involving the prehistoric and Euro-American history of the Chesapeake region. His duties at have included Phase I and II evaluations as a field technician and Field Supervisor. He has also assisted Senior Principal Investigators in report writing, management summaries, and historic research. Donnie has experience in historic ceramic analysis, 18th-century material culture analysis, managing archaeological collections, and database management.

EDUCATION

Master of Arts, Historical Archaeology, College of William and Mary, Williamsburg, Virginia, 2006

Bachelor of Arts, Anthropology with Honors, minor in History, College of William & Mary, Williamsburg, Virginia, 2001

CERTIFICATIONS & TRAINING

HAZWOPER 40 hour Certificate, Statewide, Virginia, 2018

Confined Space Awareness Training, Statewide, Virginia, 2016

RPA certified course “Metal Detecting for the Archaeologist”, Nationwide, US, 2015

PROJECT EXPERIENCE

Data Recovery of Site 44JC0664, James City County, Virginia

Donald oversaw the data recovery effort for Site 44JC0664, a Colonial era domestic site with a Civil War encampment component. Donald managed all field staff, monitored mechanical excavations, participated in feature excavation, and participated in photodocumentation of the site as well as the production of scale drawings. The site was situated within an active construction zone and Donald coordinated with on-site contractors and ensured that all staff followed safety protocol. Donald is currently synthesizing the recovered data and writing a detailed technical report describing the results of the investigation.

Documentary Research for the Sammons Cemetery, Albemarle County, Virginia

Documentary Research for the Sammons Cemetery. Report on file at the Virginia Department of Transportation (VDOT) in Richmond, Virginia.

City of Fredericksburg - Phase I Archaeological Survey, Phase II Evaluation, and Phase III Data Recovery for the Proposed Courthouse Facility at the Intersection of Princess Anne and Charlotte Streets, (Southeastern Quadrant of Block 42), City of Fredericksburg, Virginia

Three-stage archaeological investigation of a historic domestic site in the City of Fredericksburg in advance of the construction of a new Courthouse facility. The project resulted in the identification of 18th and 19th century domestic deposits including a Civil War period cellar dating to 1863. Work included archaeological fieldwork, extensive historic research, site interpretation, and final reporting. Also included was the development of an interpretive display featuring the sites to satisfy public participation requirements and highlight the significance of the lot and the site. Responsibilities included field supervision and direction for all fieldwork, field notes, and reporting.

Phase IA/Stage I Analysis for the Proposed Dominion Virginia Power Warrenton-Wheeler-Gainesville 230 kV Transmission Line Project, Fauquier and Prince William Counties, Virginia

Donald managed a cultural resources crew for the completion of a Phase IA/Stage I Cultural Resources Assessment for the proposed ~ 20 mile Warrenton-Wheeler-Gainesville 230 kV Transmission line project.

A Phase I Cultural Resources Survey of Approximately 9.4 Miles of the Proposed Dominion Virginia Power Dahlgren 230 kV Transmission Line*, King George County, Virginia

Donald and crew conducted a Phase I Cultural Resources Survey of a proposed Dominion Power 230kV utility line in King George County, Virginia. The proposed route of the Dahlgren line covers a distance of approximately 9.4 miles. Work included archaeological and architectural survey for the APE defined by the project for the entire corridor.

** denotes projects completed with other firms*

Donald Sadler, MA

Project Archaeologist

A Phase I Cultural Resources Survey of Approximately 39.0 Miles of Proposed Improvements to the Dominion Virginia Power 500 kV Transmission Line from the Lexington Substation to the Dooms Substation, Augusta and Rockbridge Counties, Virginia

Donald and crew conducted a Phase I Cultural Resources Survey of a proposed Dominion Power 230kV utility line in August and Rockbridge counties, Virginia. The proposed route of the Lexington to Doom line covers a distance of approximately 39 miles. Work included archaeological and architectural survey for the APE defined by the project for the entire corridor.

Benns Church Substation Rebuild Project, Isle of Wight County, Virginia

Donald directed the field effort for a Phase I survey of approximately 3.332 acres associated with the Dominion Virginia Power Benns Church Substation Rebuild Project and Phase II evaluation of Site 44IW0275, a Woodland period temporary camp site. Responsibilities included directing field staff in systematic shovel testing and test unit excavation, photodocumentation of the project APE and Site 44IW0275, and the production of scale drawings associated with the Phase II evaluation effort.

Dahlgren 230 kV Transmission Line Project, King George County, Virginia

Mr. Sadler led the field effort for a Phase I survey of approximately 9.4 miles associated with the Dominion Virginia Power Dahlgren 230 kV Transmission line project in King George County, Virginia. Mr. Sadler was responsible for crew management, coordination with local landowners, systematic shovel testing, and recordation.

VDOT - Archaeological Survey for Proposed Improvements to I-64, Segment 2, James City and York Counties, Virginia

Archaeological survey support for proposed improvements to Segment 2 of the I-64 improvement project in James City and York Counties Virginia. The project included archaeological survey of approximately 7 miles of proposed roadway improvements and expansion. The project included traditional archaeological survey as well as metal detecting for military related resources. Responsibilities included field supervision and direction for all fieldwork, field notes, and reporting.

US Coast Guard Training Facility, Yorktown – Archaeological Monitoring for Water Line Replacement*, Yorktown, Virginia

As subconsultant to TetraTech Tesoro, Donald provided archaeological monitoring for the replacement of a water line supporting the USCG TRACEN facility. The water line crossed the NRHP-listed Yorktown National Battlefield. Services included daily on-site monitoring, recordation of soil profiles and conditions and documentation of archaeological deposits.

Fort Monroe – On-call Archaeological Support Services, Fort Monroe, Hampton, Virginia

Donald provided on-call archaeological support services to the Fort Monroe Authority, Hampton, Virginia. Fort Monroe is a former Army Base a portion of which was transferred to the Commonwealth of Virginia in 2011. Services provided included emergency response services, Phase I level archaeological survey, archaeological monitoring, and reporting.

Cemetery Verification and Delineation Study for Site 44KG0223 along the Proposed Dominion Virginia Power Dahlgren 230 kV Transmission Line, King George County, Virginia

Donald led the field effort, monitoring mechanical excavations to identify potential grave shaft features and overseeing the metal detecting effort. The project proved that the site did not extend into the proposed transmission line right-of-way.

Cemetery Removal and Reburial at the Abberly at Stafford Development, Stafford County, Virginia

Donald assisted with a cemetery documentation and excavation of 29 burial features at Abberly in Stafford County, Virginia. The project included documentation, removal and reburial of the cemetery. Responsibilities included directing the field effort and documenting and removing burial features.

Cemetery Recovery for the Abberly at Stafford Development, Stafford County, Virginia

Donald led the field effort, monitoring mechanical excavations to identify potential grave shaft features and overseeing and participating in the archaeological recovery of human remains. Donald managed field staff during the recovery effort and assisted with the reburial effort.

** denotes projects completed with other firms*

Sandra DeChard

Senior Architectural Historian

Ms. Sandra DeChard is an Architectural Historian with over 25 years of experience in cultural resources as an architectural historian and archaeologist working in Virginia, North Carolina, Georgia, Pennsylvania, Delaware, New Jersey, Maryland, Arizona, California, Washington, Oregon, Illinois, Massachusetts, and New Hampshire. Her experience includes large- and small-scale architectural Phase I level surveys for transmission line corridors and transportation infrastructure as well as cost share projects in conjunction with local municipalities, Phase II level survey, stabilization plans, historic structures reports, and National Register of Historic Places nominations. Her range of experience also extends to detailed historical research and archival review, scaled architectural drawings and other technical drawings, signage and heritage tourism brochures, as well as museum displays. Additionally, Sandra was a founding member and Chairperson of the Martinsville, Virginia Architectural Review Board and has lectured on various Art, Art History, and Architectural topics as educator in humanities and as a guest speaker.

Sandra's current responsibilities at Stantec include architectural surveys at the Phase I and II levels, managerial tasks associated with architectural investigations, writing and editing technical reports, consultation with and representation of clients before state and national review agencies, and developing and managing project budgets and scopes of work.

EDUCATION

M.A. Preservation Studies, Architectural History, Boston University, Boston, Massachusetts, 2000

B.S. Interior Design, University of Delaware, Newark, Delaware, 1989

CERTIFICATIONS & TRAINING

Section 106 Certification, Richmond, Virginia, 2014

PROJECT EXPERIENCE

Transmission & Distribution, Transmission Lines

Dominion Energy Virginia – A Phase I Cultural Resources Survey of Approximately 7.39 Miles Associated with the Fudge Hollow to Low Moor Line #112 138 kV Transmission Line Partial Rebuild, City of Covington, Alleghany County, Virginia

Ms. DeChard served as Senior Architectural Historian for the project which included the documentation of 124 resources at a Phase I level within the defined APE of the project. The project also included the evaluation of the resources for NRHP eligibility.

Dominion Energy Virginia – A Phase I Cultural Resources Survey of Approximately 14.5 Miles Associated with the Proposed Valley to Dooms 500 kV Rebuild Project in Augusta County, Virginia

Ms. DeChard served as Senior Architectural Historian for the project which included the documentation of 306 resources at a Phase I level within the defined APE of the project. The project also included the evaluation of the resources for NRHP eligibility.

Roadways

NCDOT – Historic Structures Survey Report T.I.P. No. U-6077, Widening of SR 4315/Kernersville Road from SR 2632/Sedge Garden Road to Harmon Creek Road, Forsyth County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of two resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

** denotes projects completed with other firms*

Sandra DeChard

Senior Architectural Historian

NCDOT – Historic Structures Survey Report for T.I.P. No. U-3609B, Widening US 13 (Berkeley Boulevard) from SR 1003 (New Hope Road) to SR 1572 (Saulston Road) in the City of Goldsboro, Wayne County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of two resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

NCDOT – Building Inventory for TIP# U-5863, Widen NC 133 (Castle Hayne Road) from I-140/US17 (Wilmington Bypass) to SR 1310 (Division Drive, New Hanover County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included building inventory of 136 resources within the area of potential effect for the proposed road improvements.

NCDOT – Historic Structure Survey for TIP# R-5743B, Widen US 23/US441 from US 64 to SR 1652 (Wide Horizon Drive)/SR1152 (Belden Circle) to South of SR1649 (Prentiss Bridge Road), Franklin, Macon County, North Carolina

Ms. DeChard served as Architectural Historian for the project which included an intensive level survey of five resources within the area of potential effect for the proposed road improvements. The project also included a National Register of Historic Places eligibility evaluation for each of the resources surveyed.

VDOT – A Phase I Architectural Survey for the Proposed Cochran Mill Road Bridge Replacement, Loudoun County, Virginia

Sandra served as architectural historian for the survey. The survey included the documentation of three resources at a Phase I level including the bridge as well as two resources immediately adjacent to and in view of the Cochran Mill Road Bridge.

VDOT – An Architectural Survey for the Route 15/29 Bridge Replacement*, Culpeper County, Virginia

Ms. DeChard served as Architectural Historian for the survey. The survey entailed the recordation of three resources, including the bridge, within the study area. Evaluations of NRHP eligibility for each resource were also conducted.

Bridges

City of Atlanta- Architectural Survey of the Powers Ferry Road Bridge over Nancy Creek, Powers Ferry Road, Atlanta, Georgia

Ms. DeChard served as Senior Architectural Historian, Principal Investigator for the survey. The survey documented the bridge at a Phase I level and utilized historic background research as well as an architectural evaluation of the resource's integrity in order to make a recommendation of the bridge's NRHP eligibility.

VDOT – Page County Bridge National Register of Historic Places Nomination Form*, Page County, Virginia

Ms. DeChard conducted detailed research and authored the National Register of Historic Places (NRHP) nomination form for the Page County Bridge, Page County, Virginia.

** denotes projects completed with other firms*

Brynn Stewart, MA

Program Manager/Senior Principal Investigator

Brynn is the Program Manager/Senior Principal Investigator for Cultural Resources in Stantec's Williamsburg, Virginia, office. She has over 18 years of experience in cultural resources management. Brynn meets the Secretary of the Interior's standards and guidelines for a professional archaeologist. She has served as a Principal Investigator and Project Archaeologist on numerous transportation and energy-related projects as well as private development projects.

Brynn manages in-house technical staff, supervises technical document preparation, and provides quality control and peer review for cultural resources studies. Her expertise includes all phases of cultural resource management (archaeological assessments and Phase I, II, and III excavations) in compliance with local, state, and federal laws and regulations. Brynn's experience includes managerial tasks associated with all aspects of cultural resource management projects such as consultation with and representation of clients before state and national review agencies, writing and editing technical reports, preparing and managing project budgets, and developing and implementing archaeological research designs.

Brynn also has experience in the processing and analysis of artifact collections with special interest in Colonial-era ceramics and lithic analysis and the development and production of interpretive materials including pamphlets and exhibits.

EDUCATION

Master of Arts, Anthropology, University of Nevada, Las Vegas, Nevada, 2009

Bachelor of Arts, Anthropology, Washington College, Chestertown, Maryland, 2004

CERTIFICATIONS & TRAINING

OSHA Excavation Safety: Satisfies 29 CFR 1926.650

OSHA Confined Space Safety: Satisfies 29 CFR 1910.246, 29 CFR 1926.1001, 29 CFR 1915.1001

PROJECT EXPERIENCE

Ore Bank Undergrounding Project, Rockingham County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with the Civil War Trust and will author the technical report upon completion of on-going investigations.

Abberly at South Campus Development, Stafford County, Virginia (Principal Investigator)

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. She directed pre-fieldwork planning, managed field personnel, and participated in Phase II evaluation of Site 44ST1141. Brynn synthesized data collected during evaluation and served as the lead author of the resulting technical report.

Data Recovery of Sites 44PW1305 and 44PW1306 for the Eagles Pointe Landbay A Section 2 Development Project, Prince William County, Virginia

Brynn is serving as Principal Investigator for this on-going project. She developed the scope of work and budget prior to the awarding of the project. Brynn coordinated with the client and the County Archaeologist on the Data Recovery Plan she developed. She has managed field personnel and coordinated with the VDHR to procure both an Anticipatory Permit and a Burial Permit for the excavation of a single burial identified within Site 44PW1306. Brynn coordinated the placement of public notice as part of the Burial Permit and gave a presentation concerning the burial feature to the Prince William County Historical Commission, which served as a public meeting as a result of responses received for the said public notice. Brynn is currently coordinating the reburial of the recovered remains with a local cemetery and will author the resulting technical report.

** denotes projects completed with other firms*

Brynn Stewart, MA

Program Manager/Senior Principal Investigator

Data Recovery of Site 44JC0662, James City County, Virginia

Brynn served as Principal Investigator, directing pre-fieldwork planning and overseeing the field effort. Brynn participated in feature excavation. She coordinated the field effort with the client as well as site inspectors and was responsible for coordinating with local Native American tribal representatives with an interest in the project. Brynn participated in shovel testing and monitoring activities, synthesized the data collected during the project, and served as lead author on the resulting technical report.

Poplar Grove National Cemetery Archaeological Investigations and Monitoring, Dinwiddie County, Virginia

Brynn served as Principal Investigator, coordinating with the NPS and field staff. The NPS conducted rehabilitation at the cemetery, including the replacement of 5,700 headstones, rehabilitation of the Superintendent's lodge, restoration of site furniture and signs, replacement of the flagpole and site utilities, preservation of the cemetery wall, and rehabilitation of the landscape. Brynn participated in shovel testing and monitoring activities, synthesized the data collected during the project, and served as lead author on the resulting technical report.

Berkmar Data Recovery, Charlottesville, Virginia

Brynn served as Principal Investigator, assisting in the development of a scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with client representatives, conducting excavations, compiling and interpreting fieldwork results, on-going lithic analysis, and is in the process of co-authoring the resulting technical report.

Trowbridge-Pantego Transmission Line Project, Washington and Beaufort Counties, North Carolina

Brynn served as Principal Investigator, coordinating with Project Managers and field personnel. Brynn directed pre-fieldwork planning and was responsible for compiling and interpreting fieldwork results. She is currently in the process of co-authored the resulting technical report.

Fredericksburg Courthouse Project, City of Fredericksburg, Virginia

Brynn served as Principal Investigator, directing pre-fieldwork planning and managing field personnel during Phase I, Phase II, and Phase III investigations of eighteenth-century through nineteenth-century deposits. She also participated in fieldwork, synthesized data collected during all three phases of work, and served as the lead author of the resulting technical report. She helped develop and produce a public exhibit of artifacts on display in the new Courthouse.

Dominion Virginia Power Splice Pit within the Colonial National Historic Park, James City County, Virginia

Brynn served as Principal Investigator, leading the field effort and interpreting data post-field effort. She also authored the resulting technical report.

Mosby Substation (Laydown Yard and Storm Water Management Basin Area) Project, Loudoun County, Virginia

Brynn served as Principal Investigator, managing the field effort and interpreting data post-field effort. She also authored the resulting technical report.

Goose Creek to Loudoun 500kV Transmission Line Improvement Project, Loudoun County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for coordinating with client representatives, compiling fieldwork results, interpreting sites, entering site data into V-CRIS, and co-authoring the resulting technical report.

Warren County Power Station Proposed Auxiliary Parking Lot, Warren County, Virginia

Brynn served as Principal Investigator, developing a proposed scope of work and budget prior to the awarding of the project. Brynn directed pre-fieldwork planning and managed field personnel. She was responsible for compiling fieldwork results and authoring the resulting technical report.

** denotes projects completed with other firms*

ISLE of WIGHT COUNTY MUSEUM

March 11, 2024

Virginia Department of Historic Resources
Adrienne Birge-Wilson, Architectural Historian, Review & Compliance Division
2801 Kensington Avenue
Richmond, Virginia 23321

Dear Ms. Birge-Wilson,

This letter acknowledges that Dawood, on behalf of solar projects Pivot Solar Sites VAL025 and VAL035, intends to contribute $15,000 towards the restoration of Isle of Wight County's 1950s Nike-Ajax missile. This is the largest artifact in the collection of the Isle of Wight County Museum. It was accessioned in 2019 after it was donated to us by the City of Hampton, Virginia. Once restored, it will contribute to the historic interpretation of Carrollton-Nike Park, the former site of the U.S. Army's Nike-Ajax Missile Launch Site N-75L and an historic district listed on the National Register of Historic Places.

The Carrollton-Nike Missile Battery was operational by 1954 and was one of eight batteries that made up the Norfolk Defense Area. Each battery consisted of two areas: a launch area and a control area. These two sites were connected by an underground cable system that enabled communication.

In the event of an impending attack on Hampton Roads, all area batteries prepared to fire under the direction of the central command at Fort Monroe. At Carrollton, troops manned their stations ready to deploy their 27 missiles. Once fired, a missile was guided to the target by its radar system.

When the U.S. Army developed nuclear-tipped Nike-Hercules missiles, Carrollton-Nike and four other batteries in the Norfolk Defense Area became obsolete. The U.S. Army operated this location as a radio relay site from 1961 to 1971. In 1972, Isle of Wight County obtained it – and the former control site located at Jones Creek - to develop the facilities in place today.

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

ISLE of WIGHT COUNTY MUSEUM

We are very pleased to receive this generous grant for our restoration project from Dawood/Pivot at the approval and encouragement of the Virginia Department of Historic Resources. With mitigation not feasible as per your requirements, this substitution will positively impact the preservation of Isle of Wight County history.

Our acceptance of this grant does not represent approval or recommended approval of the project, but know that this rare opportunity is greatly valued.

As Dawood moves forward with Pivot Solar Sites VAL025 and VAL035, please do let me know if you visit the area. I would be pleased to offer you a tour of Carrollton-Nike Park and share our progress with the restoration of the Nike-Ajax missile.

Kind regards,

J.L. England
Isle of Wight County Museum Director
Isle of Wight County Historic Resources Manager

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

ISLE of WIGHT COUNTY MUSEUM

MEMORANDUM

TO: Trenton S. Blowe
Planner 1, Planning & Zoning, Isle of Wight County

FROM: Jennifer England
Director, Isle of Wight County Museum
Historic Resources Manager, Isle of Wight County

RE: Pivot Solar Facility – 18213 Orbit Road
Conditional Use Permit Application (CUP-07-23), 2nd Submittal
Tax Map No. 39-01-026

DATE: November 22, 2023

After reviewing the Cultural Resource Assessment prepared by Dawood for Elkwood Development LLC for the proposed Pivot Solar Facility on 18213 Orbit Road, the Isle of Wight County Museum/Isle of Wight County Department of Historic Resources is comfortable with the findings of the report.

No further archaeological work is necessary.

With the analysis of the architectural resources within the viewshed of the proposed project – specifically the four eligible/potentially eligible for the National Register of Historic Places structures (046-004, 046-0021, 046-555 and 046-5546) - vegetative screening is strongly encouraged as it will mitigate the solar facility's visual impact to the area.

While the area has been farmed for decades, the potential on the project site for archaeological artifacts is a possibility. If the landowner is willing, the Isle of Wight County Museum should be considered a repository for discovered artifacts and future finds on this site as they could further the interpretation or discovery of Isle of Wight County history.

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Travis A. Voyles
Secretary of Natural and Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

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M E M O R A N D U M

To: Robert B. Hickox, III M.S.
Pivot Energy

From: Adrienne Birge-Wilson, Architectural Historian (804) 482-6092
Review and Compliance Division

Subject: VAL-025 Solar Project, Isle of Wight (DHR File No. 2023-3719) and VAL-035 Solar Project, Isle of Wight (DHR File No. 2023-3718)

Comments:
We received communication from the Isle of Wight County Museum that your company intends to contribute $15,000 towards the restoration of Isle of Wight County's 1950s Nike-Ajax missile. DHR approves of the mitigation for the above referenced projects. Please provide a receipt or confirmation of payment after the transaction, to close out the mitigation item.

4/30/2024

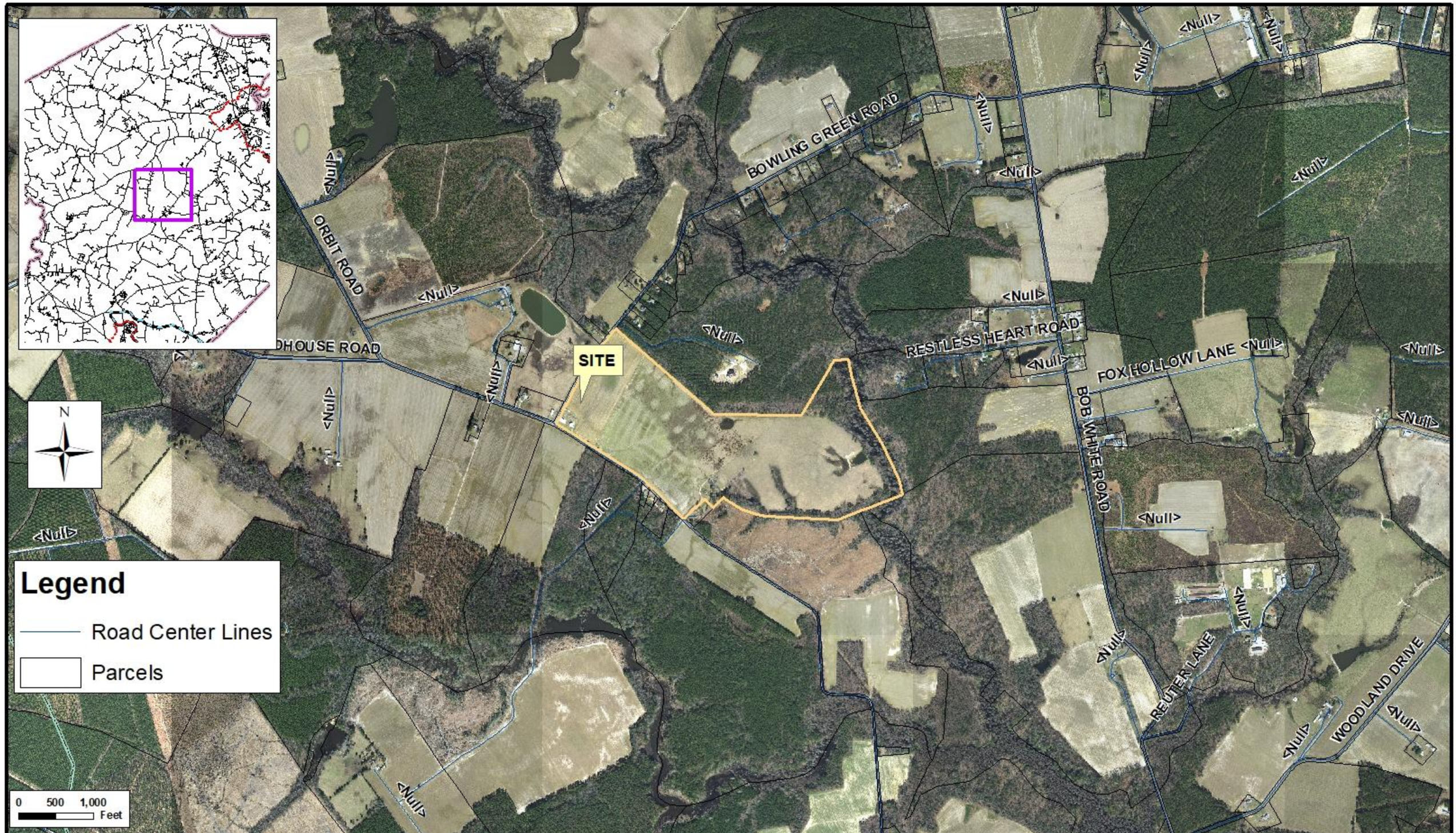
Sycamore Cross A and B Solar Projects with Approved Solar Energy Generation Facilities as of 6/13/24

PROJECT	DEVELOPED AREA (PER CUP)	PRIME FARMLAND /SOILS OF STATEWIDE IMPORTANCE*	% OF TOTAL PRIME SOILS (rounded)	LOCATION	% OF TOTAL FARMLAND**	TOTAL MW	APPROVAL DATE
Woodland	180	124	0.10%	Longview	0.22%	20	2015
Solidago	170	170	0.14%	Redhouse	0.21%	20	2018
Ho-Fel	330	315	0.26%	Lees Mill	0.41%	55	2019; Amended 2023
Windsor PV1	630	630	0.52%	Windsor	0.78%	85	2019; Amended in 2021
Cavalier	500	500	0.41%	Hardy	0.62%	240	2021
Nuby Run	20	20	0.02%	Orbit	0.02%	2	2022
Carver	637	297	0.24%	Windsor	0.79%	71	Approved 7/23/2023
Prairie Solar	152	152	0.12%	Longview	0.19%	20	Approved 8/17/23
Courthouse Solar	18	18	0.01%	Route 258	0.02%	3	Approved February 2024
Old Stage (Proposed)	27.32	27.32	0.02%	Burwells Bay/Moonlight	0.03%	3	Under Review
TOTAL	**2,664**	**2,253**	**1.84%**		**3.30%**	**519**	

Prime soils include Prime Farmland, Prime, If Drained, and Soils of Statewide Importance – 122,296 total acres in County

****Total active agricultural lands as of 2017 Census of Agriculture – 80,672 acres***

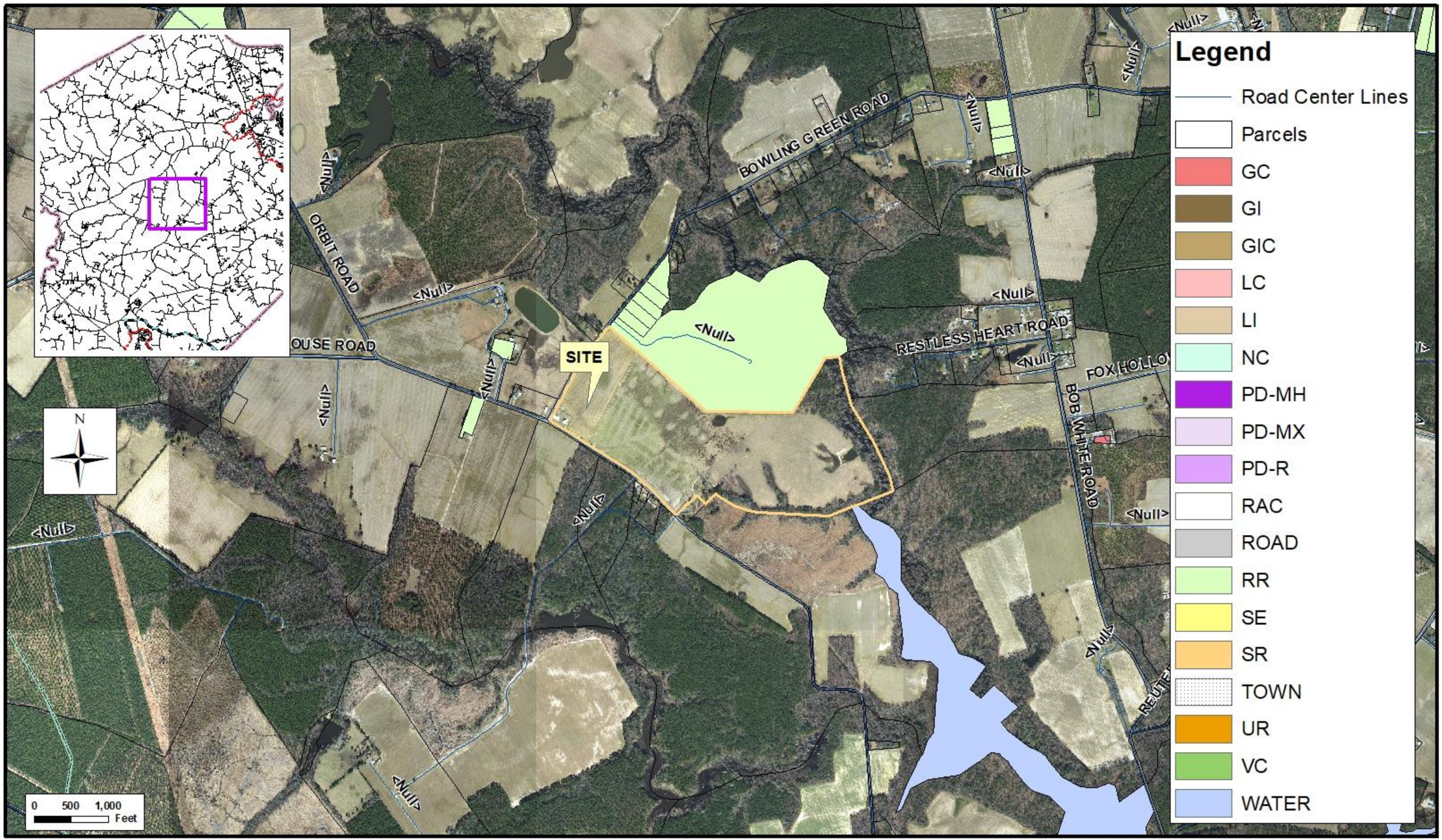
CUP-7-23 - Conditional Use Permit- Location Map



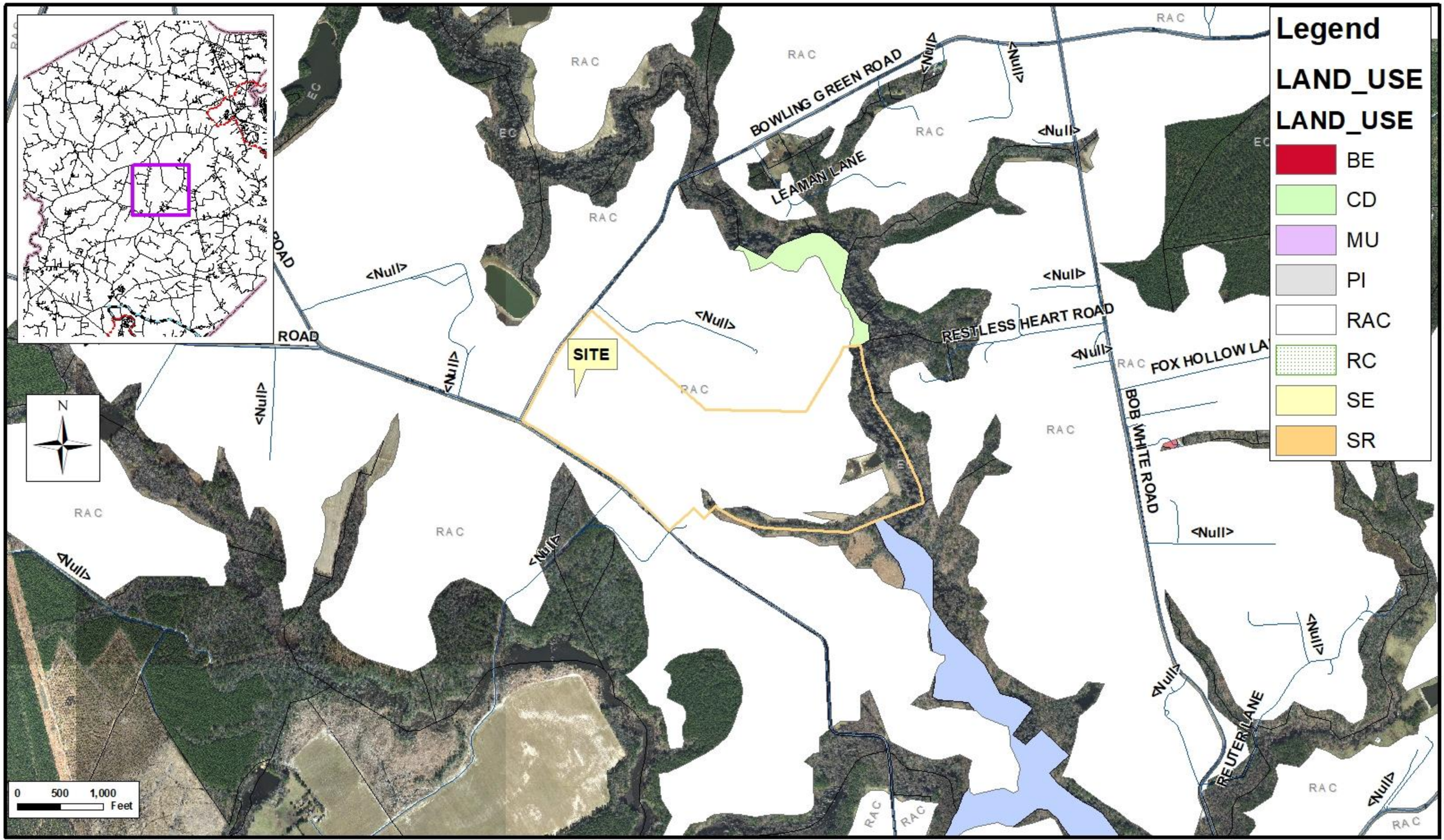
CUP-7-23 - Conditional Use Permit- Closeup Map



CUP-7-23 - Conditional Use Permit- Zoning Map



CUP-7-23 - Conditional Use Permit- Land Use Map



PLANNING REPORT

APPLICATION:

Application (CUP-7-23) of Elk Development, LLC, applicant, and William Sawyer, property owner, for a conditional use permit for a major utility service, specifically a three megawatt utility-scale solar energy generation facility on approximately 28.84 acres located on Orbit Road on tax parcel number 39-01-026 in the Rural Agricultural Conservation zoning district. The application includes a request to withdraw 22.02 acres from the Courthouse Agricultural and Forestal District.

ELECTION DISTRICT:

District 4

LOCATION:

The proposed project is located at 18213 Orbit Road (Rte. 637). The access road to the site is located on Bowling Green Road. To the west of the site is the location of the historic home known as the Seed-Pierce House. To the north, there is residential development along Bowling Green Road. There is an approved solar facility known as Nuby Run to the southeast. There is additional scattered residential development to the south along Orbit Road. A property location map is attached to this staff report.

BACKGROUND:

The 28.44-acre project is situated on a parcel consisting of approximately 228.308 acres primarily consisting of agricultural fields. The property is in the RAC zoning district. Not all acreage comprising this parcel is proposed for the solar facility. Based on the project area, 27 acres of corn will be removed from production. Approximately 19 acres will be in the fenced area for the solar facility project area. The subject property has never been developed and has been used historically for agriculture. Of the acreage included in the project area, 11.0 of the acres are considered prime farmland, and approximately 17 acres of the project area are considered prime if drained.

On October 4, 2023, the Agricultural and Forestal District Advisory Committee held a public meeting to consider the withdrawal of approximately eighteen acres of land from the Courthouse Agricultural/Forestal District. The Committee recommended approval of the request.

DESCRIPTION:

The applicant has proposed a three megawatt (MW) solar energy generation facility in the western portion of the property. An electrical line that bisects the project area along Orbit Road will serve as the interconnection point. The project will consist of solar panels along with their racking systems, metal posts, inverters, and fencing.

A perimeter fence will encompass the solar panels and ancillary equipment and is required to be harmonious with the rural agricultural and historical character of the County. The site will include a 50 feet landscape buffer along the western, southern, and northern portions of the site. Screening around the remainder of the site will be in accordance with the County's requirements. An internal access drive made from an all-weather aggregate base will provide access to the arrays.

Public Facility Impacts:

The applicant has proposed to access the site from an entrance on Bowling Green Road via Orbit Road (Rt. 637) for construction. The applicant will use Route 258 to access Orbit Road. Orbit Road is a one-lane secondary road. There is a very little space on the shoulder of Orbit Road, so passing construction traffic may be difficulty during certain times of day. Any roadway damage within the right-of-way that occurs after project construction begins will be documented and analyzed by both the applicant and VDOT. All costs for damage repairs will be paid by

the applicant. The approved truck route will be monitored and enforced as a condition of approval, with permit revocation an option if violations occur.

In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by construction traffic and noise generation. To ensure adequate provision of emergency services, the Fire Rescue Department has reviewed this application and has no concerns at this time. The applicant is required to submit an emergency response plan with the submission of the preliminary site development plan. The plan shall include a training program to be provided, at the discretion of the County, to emergency responders concerning safety for on-site emergency response. The applicant shall install a Knox Box or other remote access technology at the facility access gates.

Environmental Assessment:

The project lies within the Chesapeake Bay Preservation Area (CBPA) Overlay District. There are impacts to two palustrine emergent (PEM) wetlands proposed by this project. Both wetland areas are currently located within an actively managed agricultural field. Per the water quality impact assessment (WQIA), proposed impacts were minimized to the extent practicable, and erosion and sediment controls will be utilized during the construction period to further mitigate for potential impacts. Additionally, restoration of the resources following construction will provide a means to reestablish a native vegetative community. If approved, wetlands are required to be confirmed by USACE during the site plan approval process.

No impacts to threatened or endangered species under the jurisdiction of the Virginia Department of Conservation and Recreation (DCR) are anticipated because of the proposed project. The eastern portion of the parent parcel is within the 500' boundary for colonial waterbirds. Correspondence with the Department of Wildlife Resources (DWR) stated that the project area will not impact this boundary. There are no impacts on identified ecological core areas.

Historic Resources:

A Phase 1 Cultural Resources Survey of the project area was conducted by Stantec. This report was sent by the applicant to the Virginia Department of Historic Resources (VDHR) for their review and concurrence with the survey findings and recommendations. A letter from VDHR was provided with the application and is included as an attachment to this staff report. The letter was provided as technical assistance to assess potential impacts on historic properties.

During the architectural survey, no shovel tests were positive for cultural material and no new isolated archaeological finds or new archaeological sites were identified during the investigation.

A total of six individual resources were located within the architectural study area, defined as the project area, and a 0.5-mile radius around the project area. There are five previously recorded resources and one newly recorded resource. Four of the five previously recorded resources have been determined as potentially eligible for listing in the National Register of Historic Places (NRHP). One newly documented resource was surveyed during the current project and is generally reflective of the mid-to-late twentieth-century development of Isle of Wight County and lacks direct and/or important associations under Criterion A, B, or C for historical significance necessary for listing in the NRHP.

All of the resources considered eligible or potentially eligible are historic homes. The Seeds-Pierce house is approximately 946' from the project area, historic resource #046-5546 is approximately 537' from the project area, historic resource 046-5545 is approximately 1058' from the project area, the Cedar Acres home is located approximately 3000' from the project area. A mitigation memo has been attached to this report from VDHR.

Economic Impact Assessment:

According to the applicant's economic impact study, the proposed facility would generate approximately $ 227,900 in cumulative county revenue over a 25-year operational life and approximately $ 328,300 in cumulative

county revenue over a 35-year operational life based on both projected real estate and machinery and tax revenues. In contrast, the projected real estate tax revenue on the current agricultural land use over 25 years is $6,730, and a total of $9,420 over 35 years. The report also includes projected revenues resulting from construction activity on the site, but due to its temporary nature, it is not included in the staff report.

According to the 2022 Census of Agriculture (USDA-NASS), Isle of Wight County has 212 farms totaling 80,316 acres of land. The average farm size is 379 acres. The average annual market value of agricultural products sold per farm is $346,011, or $912.96 per acre. Using the same data to derive market values for crops cultivated on 28.44 acres to be converted for this project, the farmland generates an estimated $ 25,964.58 in market value. Staff also sent the project's fiscal impact analysis to the Commissioner of Revenue for review. The rollback estimate should be updated based on the total lease area rather than just the solar facility acreage. The acreage subject to the Conditional Use Permit would be reassessed for real estate taxes at $15,000 per acre.

Viewshed Analysis:

An effects evaluation was conducted for NRHP-listed, eligible, and potentially eligible properties that may be affected by the proposed project. Four properties were assessed for effects and include the potentially eligible Cedar Acres (DHR #046-0004) and Seeds-Pierce House (DHR #046-0021) and two dwellings that are considered eligible for environmental review purposes (DHR #046-5545 and #046-5546). Based on the results of the phase I study, the project would have adverse effects on all four of the previously listed resources. Mitigation in the form of a donation to the Isle of Wight County Museum has been accepted by VDHR.

COMPREHENSIVE LAND USE PLAN:

The recommended land use designation for these properties is Rural Agricultural Conservation (RAC) on the future recommended land use map in the County Comprehensive Plan.

Appropriate uses for the RAC land use designation include agriculture, horticulture, forest lands, and scattered low-density residential uses. Other uses such as resource extraction and utility-scale solar facilities are also permitted when appropriately sited with a Conditional Use Permit. Solar energy facilities are considered compatible with RAC land use when properly sited and with the application of appropriate development criteria.

Because the project proposes to use roads which are not suitable for heavy construction traffic, staff has concerns about whether the facility is appropriately sited.

ORDINANCE REVIEW:

The zoning district classification for the subject parcels is RAC. The RAC zoning district is intended to preserve and protect areas of the County that are predominantly in agricultural and forestal uses and to maintain the existing land base to support those activities.

The applicant proposes to establish a three MW utility-scale solar energy facility which is classified as a major utility service use type in the Zoning Ordinance. These facilities are permitted as conditional uses in the RAC zoning district and may be considered compatible with appropriate conditions to mitigate any potential negative impacts on the surrounding community.

At a minimum, the project will be required to meet the minimum setbacks of 75 feet from adjacent property lines and 125 feet from residential use parcels as required by the Zoning Ordinance. There is also a 250-foot setback requirement for all inverters and electrical equipment. The Ordinance also requires a minimum setback of 250 feet from any historical or cultural resource.

Following approval of the CUP request, the applicant will be required to submit a site plan application for review

and approval that demonstrates compliance with all current plan criteria contained in Section 5-5003.M.4, supplemental use regulations for utility-scale solar energy facilities, of the Zoning Ordinance.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use permit application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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 designated 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 described in the Zoning Ordinance, the Board may impose 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 be applicable;
2. Traffic conditions, including facilities for pedestrians, such as sidewalks and parking facilities; the access of vehicles to roads; peak period 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 of 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, theatres, 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 impacts, the effect on sensitive natural features, and opportunities for recreation and open space; and,
10. The preservation of cultural and historic resources or landmarks.

It is the opinion of staff, that the solar facility would result in a saturation of similar uses in the same general neighborhood. The Solidago solar facility is constructed on Redhouse Road approximately 0.6 miles from the project area. There is another approved but not constructed solar facility located to the southeast known as Nuby Run. The Nuby run facility is located approximately 0.5 miles from the project area. If approved, the applicant will be required to submit a site plan for review and approval in accordance with the Zoning Ordinance requirements and conditions of approval.

AGENCY REVIEW:

The application was forwarded to the following departments for their review:

Economic Development: The department stated it had no concerns.
Environmental Planner: All concerns addressed with the conditional use permit application. Further information will be required at site plan review.
Commissioner of Revenue: Rollback estimates should be based on the entire acreage of the entire lease area not just the acreage of the solar facility. The acreage subject to the Conditional Use Permit would be reassessed at $15,000 per acre.
Emergency Services: Staff will work with applicant during site plan review on required Emergency Response Plan to include annual training.
Utility Services: Staff will review site plan for compliance with State Stormwater regulations.
Isle of Wight County Museum: Please see attached memo.
Virginia Department of Transportation (VDOT): No concerns at this time.
Please note that, should the conditional use permit be approved, the project will be subject to site plan review and approval from all necessary agencies.

STAFF CONCLUSIONS:

Strengths:

1. The proposed use would generate additional nonresidential tax revenue for future public service and facility needs for the County.

Weaknesses:

1. The proposed use would remove agricultural land from production.
2. Temporary impacts to residential development in the area from construction traffic and noise is expected during the construction phase.
3. There are adverse impacts to several historical resources. The mitigation proposed does not directly affect the neighboring properties.
4. The proposed construction traffic route utilizes narrow rural roadways with limited pull-off and passing areas.
5. The facility would result in a saturation of uses in the same general neighborhood.

STAFF RECOMMENDATION:

Based on the weaknesses listed above, staff recommends denial of the CUP request. However, should the CUP be approved, staff recommends the following conditions: 1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads. 2) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR. 3) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process. 4) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response. 5) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility. 6) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times. 7) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing. 8) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved

with the project. 9) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 10) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results. 11) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	7/9/2024
Concept Plan	Backup Material	7/9/2024
Narrative	Backup Material	7/9/2024
Transportation Route	Backup Material	7/9/2024
Economic Impact Analysis	Backup Material	7/9/2024
Visual Impact Analysis	Backup Material	7/9/2024
Wetland Study	Backup Material	7/9/2024
Threatened and Endangered Species	Backup Material	7/9/2024
Phase 1 Study	Backup Material	7/9/2024
Isle of Wight County Musuem Response	Backup Material	7/12/2024
Mitigation Memo DHR	Backup Material	5/20/2024
Solar Facility Table	Backup Material	6/18/2024
Location Map	Backup Material	7/11/2024
Location Closeup Map	Backup Material	7/11/2024
Zoning Map	Backup Material	7/11/2024
Land Use Map	Backup Material	7/11/2024

ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-07-23, TO ESTABLISH A MAJOR UTILITY SERVICE, SPECIFICALLY A THREE MW UTILITY-SCALE SOLAR ENERGY FACILITY ON APPROXIMATELY 28 ACRES LOCATED ON ORBIT ROAD WITH TAX PARCEL NUMBER 39-01-026 ZONED RURAL AGRICULTURAL CONSERVATION, AND TO WITHDRAW APPROXIMATELY 22 ACRES FROM THE COURTHOUSE AGRICULTURAL AND FORESTAL DISTRIC.

WHEREAS, Elk Development, LLC, applicant, and William Sawyer, property owner, has requested the issuance of a conditional use permit for approximately 28 acres on tax parcel number 39-01-026 which land is depicted on Exhibit "A"; and,

WHEREAS, William Sawyer , property owner, has also requested the withdrawal of 22 acres on tax map parcel number 39-01-026 from the Courthouse Agricultural and Forestal District, which land is also depicted on Exhibit "A"; 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,

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", "Property Map", and Exhibit "B," "Conditions of Approval" are attached hereto and are hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the application for a conditional use permit (CUP-07-23) as submitted or modified with conditions herein, the expressed purpose of which is to permit a major utility service, specifically a 3 MW utility-scale solar energy 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property, subject to the attached conditions in Exhibit "B" and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a 3MW major utility service solar energy generation facility on 28 acres 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

ISSUE:

Ordinance to Repeal Chapter 14A - Stormwater Management Repeal and Reenact Chapter 6 - Erosion and Sedimentation Control, Appendix B-2 Coastal Primary Sand Dune Ordinance and Chapter 17 Wetlands Zoning

BACKGROUND:

At the Board's Work Session on August 1, 2024, County staff advised that the Department of Environmental Quality recently approved the County's request to be removed from the Virginia Stormwater Management Program. The County Attorney's Office proposes that Chapter 14 be repealed.

Additionally, the Code of Virginia was recently amended, requiring the County to adopt model ordinances for erosion and sedimentation control, wetlands zoning, and coastal primary sand dunes. The County Attorney's Office proposes Chapter 6, 17 and Appendix B2 be repealed and the model ordinances be adopted.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Hold a public and adopt an ordinance to amend the County Code.

ATTACHMENTS:

Description	Type	Upload Date
Ordinance	Ordinance	8/6/2024

AN ORDINANCE TO AMEND THE ISLE OF WIGHT COUNTY CODE BY REPEALING CHAPTER 14A – STORMWATER MANAGEMENT AND REPEALING AND REENACTING CHAPTER 6. - EROSION AND SEDIMENT CONTROL, APPENDIX B-2. - COASTAL PRIMARY SAND DUNE ORDINANCE, AND CHAPTER 17. - WETLANDS ZONING

WHEREAS, The Virginia Department of Environmental Quality rescinded the County's MS4 designation in 2016 and has recently approved the County's request to opt out of the Virginia Stormwater Management Program and implement a Virginia Erosion and Sediment Control Program: and

WHEREAS, the Code of Virginia was recently amended, requiring the County to adopt model ordinances for erosion and sedimentation control, wetlands zoning, and coastal primary sand dunes; and

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has deemed it necessary and appropriate to update its current ordinances in order to more clearly set forth local ordinances for the benefit of the public, in order to accurately reflect current practices, to correct inaccuracies, and conform to those provisions set forth in the Code of Virginia (1950, as amended).

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that Chapter 14A. STORMWATER MANAGEMENT is hereby repealed.

NOW, THEREFORE, BE IT FURTHER ORDAINED by the Isle of Wight County Board of Supervisors, Virginia, that CHAPTER 6. - EROSION AND SEDIMENT CONTROL of the Isle of Wight County Code be repealed and reenacted as follows:

CHAPTER 6. - EROSION AND SEDIMENT CONTROL

Sec. 6.1. - Purpose of chapter.

A. This ordinance shall be known as the 'Erosion and Sediment Control Ordinance of Isle of Wight County." The purpose of this ordinance is to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources of the County by establishing requirements for the effective control of soil erosion, sediment deposition and non-agricultural runoff and by establishing procedures whereby these requirements shall be administered and enforced.

B. This ordinance is authorized by § 62.1-44.15:54 of the Code of Virginia.

Sec. 6.2 . -Definitions.

The following words and terms, when used in this ordinance, shall have the following meanings, unless the context clearly indicates otherwise.

"Agreement in lieu of a plan" means a contract between the County and the owner that specifies conservation measures that must be implemented to comply with the requirements of this ordinance for the construction of a (i) single-family detached residential structure or (ii) farm building or structure on a parcel of land with a total impervious cover percentage, including the impervious cover from the farm building or structure to be constructed, of less than five percent; this contract may be executed by the County in lieu of formal site plan.

"Applicant" means any person submitting an erosion and sediment control plan for approval in order to obtain authorization for land-disturbing activities to commence.

"Board" means the State Water Control Board.

"Certified inspector for ESC" means an employee or agent of the VESCP authority who (i) holds a certificate of competence from the department in the area of project inspection or (ii) is enrolled in the department's training program for project inspection and successfully completes such program within one year after enrollment.

"Certified plan reviewer for ESC" means an employee or agent of the VESCP authority who (i) holds a certificate of competence from the department in the area of plan review, (ii) is enrolled in the department's training program for plan review and successfully completes such program within one year after enrollment, or (iii) is licensed as a professional engineer, architect, landscape architect, land surveyor pursuant to Article 1 (§ 54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia, or professional soil scientist as defined in § 54.1-2200.

"Certified program administrator for ESC" means an employee or agent of the VESCP authority who holds a certification from the department in the classification of program administrator or (ii) is enrolled in the department's training program for program administration and successfully completes such program within one year after enrollment.

"Chesapeake Bay Preservation Act" means Article 2.5 (§ 62.1-44.15:67 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.

"Chesapeake Bay Preservation Area" means any land designated by a local government pursuant to Part III (9VAC25-830-70 et seq.) of the Chesapeake Bay Preservation Area Designation and Management Regulations and § 62.1-44.15:74 of the Code of Virginia. A Chesapeake Bay Preservation Area shall consist of a Resource Protection Area and a Resource Management Area as defined in the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830).

"Clearing" means any activity which removes the vegetative ground cover including, root mat removal or topsoil removal.

"County" means the County of Isle of Wight

"Department" means the Virginia Department of Environmental Quality.

"District" or "Soil and Water Conservation District" refers to the Peanut Soil and Water Conservation District, a political subdivision of this Commonwealth organized in accordance with the provisions of Articles 3 (section 10.1-506, et seq.) of Chapter 5 of Title 10.1 of the Code of Virginia as amended.

"Erosion and sediment control plan" or "plan" means a document containing material for the conservation of soil and water resources of a unit or group of units of land. It may include appropriate maps, an appropriate soil and water plan inventory and management information with needed interpretations, and a record of decisions contributing to conservation treatment. The plan shall contain all major conservation decisions to ensure that the entire unit or units of land will be so treated to achieve the conservation objectives.

"Erosion impact area" means an area of land that is not associated with a current land-disturbing activity but is subject to persistent soil erosion resulting in the delivery of sediment onto neighboring properties or into state waters. This definition shall not apply to any lot or parcel of land of 10,000 square feet or less used for residential purposes or to shorelines where the erosion results from wave action or other coastal processes.

"Farm building or structure" means the same as that term is defined in § 36-97 of the Code of Virginia and also includes any building or structure used for agritourism activity, as defined in § 3.2-6400, and any related impervious surfaces including roads, driveways, and parking areas.

"Excavating" means any digging, scooping or other methods of removing earth materials.

"Filling" means any depositing or stockpiling of earth materials.

"Grading" means any excavating or filling of earth material or any combination thereof, including the land in its excavated or filled conditions.

"Land disturbance" or “land-disturbing activity” means a man-made change to the land surface that may result in soil erosion or has the potential to change its runoff characteristics, including the clearing, grading, excavating, transporting, and filling of land.

"Land-disturbing permit or approval" means a permit or an approval allowing a land-disturbing activity to commence issued by County after the requirements of § 62.1-44.15:55 of the Code of Virginia have been met.

"Natural channel design concepts" means the utilization of engineering analysis and fluvial geomorphic processes to create, rehabilitate, restore, or stabilize an open conveyance system for the purpose of creating or recreating a stream that conveys its bank full storm event within its banks and allows larger flows to access its bank full bench and its floodplain.

"Owner" means the same as provided in § 62.1-44.3 of the Code of Virginia. For a land-disturbing activity that is regulated under Article 2.4 (§ 62.1-44.15:51 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia and this ordinance, "owner" also includes the owner or owners of the freehold of the premises or lesser estate therein, mortgagee or vendee in possession, assignee of rents, receiver, executor, trustee, lessee, or other person, firm, or corporation in control of a property.

"Peak flow rate" means the maximum instantaneous flow from a prescribed design storm at a particular location.

"Percent impervious" means the impervious area within the site divided by the area of the site multiplied by 100.

"Permittee" means the person to whom the permit is issued.

"Person" means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, county, city, town, or other political subdivision of the Commonwealth, governmental body, including a federal or state entity as applicable, any interstate body, or any other legal entity.

"Responsible Land Disturber" or "RLD" means an individual holding a certificate issued by the department who is responsible for carrying out the land-disturbing activity in accordance with the approved erosion and sediment control plan. The RLD may be the owner, applicant, permittee, designer, superintendent, project manager, contractor, or any other project or development team member. The RLD must be designated on the erosion and sediment control plan or permit as defined in the Virginia Erosion
and Stormwater Management Regulation (9VAC25-875) as a prerequisite for engaging in land disturbance. The RLD must be designated on the erosion and sediment control plan or permit as defined in this ordinance as a prerequisite for engaging in land disturbance.

"Runoff volume" means the volume of water that runs off the land development project from a prescribed storm event.

"Single-family detached residential structure" means a noncommercial dwelling that is occupied exclusively by one family.

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Transporting" means any moving of earth materials from one place to another place other than such movement incidental to grading, when such movement results in destroying the vegetative ground cover either by tracking or the buildup of earth materials to the extent that erosion and sedimentation will result from the soil or earth materials over which such transporting occurs. (Optional or local definition.)

"Virginia Erosion and Sediment Control Program" or "VESCP" means a program approved by the department that is established by a VESCP authority for the effective control of soil erosion, sediment deposition, and nonagricultural runoff associated with a land-disturbing activity to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources and shall include such items where applicable as local ordinances, rules, policies and guidelines, technical materials, and requirements for plan review, inspection, and evaluation consistent with the requirements of the Erosion and Sediment Control Law (ESCL).

"Virginia Erosion and Sediment Control Program authority" or "VESCP authority," for purposes of this ordinance means Isle of Wight County that has been approved by the department to operate a Virginia Erosion and Sediment Control Program in accordance with Article 2.4 (§ 62.1-44.15:51 et seq.) of Chapter 3.1, the State Water Control Law, of Title 62.1 of the Code of Virginia.

“VESCP plan-approving authority" means the County of Isle of Wight Utility Services Department, as may be assisted by consulting services, responsible for determining the adequacy of a plan submitted for land-disturbing activities on a unit or units of lands and for approving plans.

"VPDES Permit" means a General VPDES (Virginia Pollutant Discharge Elimination System) Permit for Discharges of Stormwater from Construction Activities, 9VAC25-880, issued by the department pursuant to § 62.1-44.15 of the Code of Virginia for stormwater discharges from a land-disturbing activity.

Sec. 6.3. - Local Erosion and Sediment Control Program.

Pursuant to § 62.1-44.15:54 of the Code of Virginia, the County hereby establishes a Virginia Erosion and Sediment Control Program (VESCP) and adopts the regulations promulgated by the Board (for the effective control of soil erosion and sediment deposition to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources). In accordance with § 62.1-44.15:52 of the Code of Virginia, any plan approved prior to July 1, 2014 that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels.

A. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements for natural and man-made channels shall be satisfied by compliance with water quantity requirements specified 9VAC25-875-600, unless such land-disturbing activities are in accordance with the grandfathering provisions of 9VAC25-875-490.

B. Pursuant to § 62.1-44.15:53 of the Code of Virginia, an erosion control plan shall not be approved until it is reviewed by a certified plan reviewer for ESC. Inspections of land disturbing activities shall be conducted by a certified inspector for ESC. The Erosion and Sediment Control Program of Isle of Wight County shall contain a certified program administrator for ESC, a certified plan reviewer for ESC, and a certified inspector for ESC (who may be the same person.)

C. The County hereby designates the County's Utility Services Department as the VESCP plan-approving authority.

D. The program and regulations provided for in this ordinance shall be made available for public inspection at the office of the Utility Services Department.

Sec. 6.4. - Regulated Land-Disturbing Activities.

A. Land-disturbing activities that meet one of the criteria below are regulated as follows:

1. Land-disturbing activity that disturbs 10,000 or [smaller area specified by the locality] square feet or more not in an area of a locality designated as a Chesapeake Bay Preservation Area, and not part of a common plan of development or sale, is subject to criteria defined in Article 2 (9VAC25-875-540 et seq.) of Part V of the Virginia Erosion and Stormwater Management Regulation (Regulation).

2. Land-disturbing activity that disturbs 2,500 or smaller area specified by the locality square feet or more and in an area of a locality designated as a Chesapeake Bay Preservation Area is subject to criteria defined in Article 2 (9VAC25-875-540 et seq.) and Article 3 (9VAC25-875-570 et seq.) of Part V unless Article 4 (9VAC25-875-670 et seq) of Part V of the Regulation is applicable, as determined in accordance with 9VAC25-875-480 and 9VAC25-875-490.

Sec. 6.5. - Activities Not Required to Comply With The ESCL

A. Notwithstanding any other provisions of the Erosion and Sediment Control Law for Localities Not Administering a Virginia Erosion and Stormwater Management Program (ESCL), the following activities are not required to comply with the ESCL unless otherwise required by federal law:

1. Disturbance of a land area of less than 10,000 square feet in size or less than 2,500 square feet in an area designated as a Chesapeake Bay Preservation Area pursuant to the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq. of the Code of Virginia)];

2. Minor land-disturbing activities such as home gardens and individual home landscaping, repairs, and maintenance work.

3. Installation, maintenance, or repair of any individual service connection.

4. Installation, maintenance, or repair of any underground utility line when such activity occurs on an existing hard surfaced road, street, or sidewalk, provided the land disturbing activity is confined to the area of the road, street, or sidewalk that is hard surfaced.

5. Installation, maintenance, or repair of any septic tank line or drainage field unless included in an overall plan for land-disturbing activity relating to construction of the building to be served by the septic tank system.

6. Permitted surface or deep mining operations and projects, or oil and gas operations and projects conducted pursuant to Title 45.2 of the Code of Virginia.

7. Clearing of lands specifically for bona fide agricultural purposes; the management, tilling, planting, or harvesting of agricultural, horticultural, or forest crops; livestock feedlot operations; agricultural engineering operations, including construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage, and land irrigation; or as additionally set forth by the board in regulations. However, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is reforested artificially or naturally in accordance with the provisions of Chapter 11 (§ 10.1-1100 et seq.) of Title 10.1 of the Code of Virginia or is converted to bona fide agricultural or improved pasture use as described in subsection B of § 10.1-1163 of the Code of Virginia.

8. Installation of fence and signposts or telephone and electric poles and other kinds of posts or poles.

9. Shoreline erosion control projects on tidal waters when all of the land-disturbing activities are within the regulatory authority of and approved by local wetlands boards, the Virginia Marine Resources Commission, or the United States Army Corps of Engineers; however, any associated land that is disturbed outside of this

exempted area shall remain subject to the ESCL and the regulations adopted pursuant thereto.

10. Land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, the VESCP authority shall be advised of the disturbance within seven days of commencing the land-disturbing activity, and compliance with the administrative requirements of subsections 1.6, 1.7 and 1.8 of this ordinance are required within 30 days of commencing the land-disturbing activity.

11. Discharges to a sanitary sewer or a combined sewer system that are not from a land disturbing activity; and

12. Repair or rebuilding of the tracks, rights-of-way, bridges, communication facilities, and other related structures and facilities of a railroad company.

Sec. 6.6. - Submission and Approval of Plans; Contents Of Plans.

A. Except as provided herein, no person may engage in any regulated land-disturbing activity until he or she has submitted to the County an erosion and sediment control plan for the regulated land-disturbing activity and such plan has been approved by the County. No approval to begin a land disturbing activity will be issued unless evidence of VPDES permit coverage is obtained where it is required.

Where the land-disturbing activity results from the construction of a (i) single-family detached residential structure or (ii) farm building or structure on a parcel of land with a total impervious cover percentage, including the impervious cover from the farm building or structure to be constructed, of less than five percent, an agreement in lieu of a plan may be substituted for an erosion and sediment control plan if executed by the County.

B. The standards contained within the "Virginia Erosion and Stormwater Management
Regulation (9VAC25-875)" and the Virginia Stormwater Management Handbook, as amended and are to be used by the applicant when making a submittal under the provisions of this ordinance and in the preparation of an erosion and sediment control plan. The VESCP plan-approving authority, in considering the adequacy of a submitted plan, shall be guided by the same standards, regulations and guidelines. When the standards vary between the publications, the Virginia Erosion and Stormwater Management Regulation shall take precedence.

C. The VESCP plan-approving authority shall review erosion and sediment control plans submitted to it and grant written approval within 60 days of the receipt of the plan if it determines that the plan meets the requirements of the Erosion and Sediment Control Law for Localities not Administering a Virginia Erosion and Stormwater Management Program and 9VAC25-875, and if the person responsible for carrying out the plan certifies that he or she will properly perform the erosion and sediment control measures included in the plan and will comply with the provisions of this ordinance. In addition, as a prerequisite to engaging in the land-disturbing activities shown on the approved plan, the person responsible for carrying out the plan shall provide the name of the responsible land disturber to the VESCP authority, as required by 9VAC25-875-300 and 9VAC25-875-550 , who will be in charge of and responsible for carrying out the land-disturbing activity. Failure to provide the name of the responsible land disturber, prior to

engaging in land-disturbing activities may result in revocation of the approval of the plan and the person responsible for carrying out the plan shall be subject to the penalties provided in this ordinance.

D. When the plan is determined to be inadequate, written notice of disapproval stating the specific reasons for disapproval shall be communicated to the applicant within 45 days. The notice shall specify such modifications, terms and conditions that will permit approval of the plan. If no action is taken within 45 days, the plan shall be deemed approved, and the person authorized to proceed with the proposed activity.

E. The County shall act on any erosion and sediment control plan that has been previously disapproved within 45 days after the plan has been revised, resubmitted for approval, and deemed adequate.

F. The County may require changes to an approved plan when:

1. The inspection reveals that the plan is inadequate to satisfy applicable regulations; or

2. The person responsible for carrying out the plan finds that because of changed circumstances or for other reasons the approved plan cannot be effectively carried out, and proposed amendments to the plan, consistent with the requirements of this ordinance, are agreed to by the VESCP plan-approving authority and the person responsible for carrying out the plans.

G. Variances: The VESCP plan-approving authority may waive or modify any of the standards that are deemed to be inappropriate or too restrictive for site conditions, by granting a variance. A variance may be granted under these conditions:

1. At the time of plan submission, an applicant may request a variance to become part of the approved erosion and sediment control plan. The applicant shall explain the reasons for requesting variances in writing. Specific variances which are allowed by the VESCP plan-approving authority shall be documented in the plan.

2. During construction, the person responsible for implementing the approved plan may request a variance in writing from the VESCP plan-approving authority. The VESCP plan-approving authority shall respond in writing either approving or disapproving such a request. If the VESCP plan-approving authority does not approve a variance within 10 days of receipt of the request, the request shall be considered to be disapproved. Following disapproval, the applicant may resubmit a variance request with additional documentation.

3. The County shall consider variance requests judiciously, keeping in mind both the need of the applicant to maximize cost effectiveness and the need to protect off-site properties and resources from damage.

H. In order to prevent further erosion, the County may require approval of a plan for any land identified in the local program as an erosion impact area.

I. When a land-disturbing activity will be required of a contractor performing construction work pursuant to a construction contract, the preparation, submission, and approval of an erosion and sediment control plan shall be the responsibility of the owner.

J. As an alternative to submitting soil erosion control and stormwater management plans pursuant to § 62.1-44.15:34 of the Code of Virginia to the County, any person engaging in more than one jurisdiction in the creation and operation of a wetland mitigation or stream restoration bank that has been approved and is operated in accordance with applicable federal and state guidance, laws, or regulations for the establishment, use, and operation of (i) a wetlands mitigation or stream restoration bank, pursuant to a mitigation banking instrument signed by the Department, the Marine Resources Commission, or the U.S. Army Corps of Engineers, or (ii) a stream restoration project for purposes of reducing nutrients or sediment entering state waters may submit standards and specifications for Department approval that describe how land-disturbing activities shall be conducted.

Sec. 6.7. - Erosion and Sediment Control Plan; Contents of Plans.

A. An erosion and sediment control plan shall be filed for a development and the buildings constructed within, regardless of the phasing of construction. The erosion and sediment control plan shall be consistent with the criteria, techniques, and methods in 9VAC25875-560. The erosion and sediment control plan shall contain all major conservation decisions to ensure that the entire unit or units of land will be so treated to achieve the conservation objectives in 9VAC25-875-560. The erosion and sediment control plan may include:

1. Appropriate maps.

2. An appropriate soil and water plan inventory and management information with needed interpretations; and

3. A record of decisions contributing to conservation treatment.

B. The person responsible for carrying out the plan shall provide the name of an individual holding a certificate who will be in charge of and responsible for carrying out the land disturbing activity to the VESMP authority. The VESMP authority may waive the Responsible Land Disturber certificate requirement for an agreement in lieu of a plan in accordance with § 62.1-44.15:34 or § 62.1-44.15:55 of the Code of Virginia.

C. If individual lots or sections in a residential development are being developed by different property owners, all land-disturbing activities related to the building construction shall be covered by an erosion and sediment control plan or an "Agreement in Lieu of a Plan" signed by the property owner.

D. Land-disturbing activity of less than 10,000 square feet on individual lots in a residential development shall not be considered exempt from the provisions of the VESMA, ESCL, or this ordinance if the total land-disturbing activity in the development is equal to or greater than 10,000 square feet.

Sec. 6.8. - Permits; Fees; Security For Performance.

A. Agencies authorized under any other law to issue grading, building, or other permits for activities involving land-disturbing activities shall not issue any such permit unless the applicant submits with his application an approved erosion and sediment control plan, certification that the plan will be followed and evidence of VPDES permit coverage where it is required.

B. No person may engage in any land-disturbing activity until he or she has acquired a land-disturbing permit (unless the proposed land-disturbing activity is specifically exempt from the provisions of this ordinance), has paid the fees, and has posted the required bond.

C. An administrative fee as set forth in the Isle of Wight County Uniform Fee Schedule, as adopted by the Board of Supervisors, as it may be amended, shall be paid to the County at the time of submission of the erosion and sediment control plan.

D. No land-disturbing permit shall be issued until the applicant submits with his or her application an approved erosion and sediment control plan or agreement in lieu of an approved erosion and sediment control plan and certification that the plan will be followed.

E. All applicants for permits shall provide to the County a performance bond with surety, cash escrow, or an irrevocable letter of credit acceptable to the County Attorney, to ensure that measures could be taken by the County at the applicant's expense should the applicant fail, after proper notice, within the time specified to initiate or maintain appropriate conservation measures required of him or her by the approved plan as a result of his land-disturbing activity.

The amount of the bond or other security for performance shall not exceed the total of the estimated cost to initiate and maintain appropriate conservation action based on unit price for new public or private sector construction in the locality and a reasonable allowance for estimated administrative costs and inflation which shall not exceed twenty-five percent of the cost of the conservation action. Should it be necessary for the County to take such conservation action, the County may collect from the applicant any costs in excess of the amount of the surety held. Within sixty (60) days of adequate stabilization, as determined by the Utility Services Department in any project or section of a project, such bond, cash escrow or letter of credit, or the unexpended or unobligated portion thereof, shall be either refunded to the applicant or terminated, based upon the percentage of stabilization accomplished in the project or project section. These requirements are in addition to all other provisions relating to the issuance of permits and are not intended to otherwise affect the requirements for such permits.

Sec. 6.9. - Monitoring, Reports, and Inspections.

A. The responsible land disturber, as provided by § 62.1-44.15:52, shall be in charge of and responsible for carrying out the land-disturbing activity and provide for periodic inspections of the land-disturbing activity. The person responsible for carrying out the plan shall monitor the land-disturbing activity. The person responsible for carrying out the plan will maintain records of these inspections and maintenance, to ensure compliance with the approved plan and to determine whether the measures required in the plan are effective in controlling erosion and sedimentation.

B. The Utility Services Department shall periodically inspect the land-disturbing activity in accordance with 9VAC25-875-330 to ensure compliance with the approved plan and to determine whether the measures required in the plan are effective in controlling erosion and sedimentation. The owner, permittee, or person responsible for carrying out the plan shall be given notice of the inspection and shall such inspection in accordance with § 62.1-44.15:60 and the land-disturbing permit.

If the Utility Services Department determines that there is a failure to comply with the plan, notice to comply may be served upon the permittee or person responsible for carrying out the plan. Such notice shall be served by delivery by facsimile, e-mail, or other technology; by mailing with confirmation of delivery to the address specified in the permit application or in the plan certification, if available, or in the land records of the locality; or by delivery at the site of the land-disturbing activities to the agent or employee supervising such activities.

The notice to comply shall specify the measures needed to comply with the land disturbance approval conditions or shall identify the plan approval or land-disturbance approval needed to comply with this article and shall specify a reasonable time within which such measures shall be completed. Upon failure to comply within the specified time, any plan approval or land-disturbance approval may be revoked and the permittee or person responsible for carrying out the plan shall be subject to the penalties provided by this ordinance.

C. Upon issuance of an inspection report denoting a violation of § 62.1-44.15:55 of the Code of Virginia, the Utility Services Department may, in conjunction with or subsequent to a notice to comply as specified in this ordinance, issue an order requiring that all or part of the land-disturbing activities permitted on the site be stopped until the specified corrective measures have been taken.

If land-disturbing activities have commenced without an approved plan, the Utility Services Department may issue an order requiring that all of the land-disturbing activities be stopped until an approved plan or any required permits are obtained.

Where the alleged noncompliance is causing or is in imminent danger of causing harmful erosion of lands or sediment deposition in waters within the watersheds of the Commonwealth, or where the land-disturbing activities have commenced without an approved plan, such a stop work order may be issued without regard to whether the alleged violator has been issued a notice to comply as specified in this ordinance. Otherwise, such an order may be issued only after the alleged violator has failed to comply with such a notice to comply.

The stop-work order shall be served in the same manner as a notice to comply and shall remain in effect for a period of seven days from the date of service pending application by the County or permit holder for appropriate relief to the Circuit Court of Isle of Wight County. The County shall serve such order for disturbance without an approved plan upon the owner by mailing with confirmation of delivery to the address specified in the land records. The order shall be posted on the site where the disturbance is occurring and shall remain in effect until permits and plan approvals are secured, except in such situations where an agricultural exemption applies.

If the alleged violator has not obtained an approved plan within seven days from the date of service of the stop work order, the Utility Services Department may issue an order to the owner requiring that all construction and other work on the site, other than corrective measures, be stopped until an approved plan has been obtained. Such an order shall be served upon the

owner by mailing with confirmation of delivery to the address specified in the plan or the land records of the County.

The owner may appeal the issuance of an order to the Circuit Court of Isle of Wight.

Any person violating or failing, neglecting or refusing to obey an order issued by Utility Services Department may be compelled in a proceeding instituted in the Circuit Court of Isle of Wight County to obey same and to comply therewith by injunction, mandamus or other appropriate remedy.

Upon completion and approval of corrective action or obtaining an approved plan, the order shall immediately be lifted.

Nothing in this section shall prevent the Utility Services Department from taking any other action authorized by this ordinance or other applicable laws.

Sec. 6.10. - Penalties, Injunctions, and Other Legal Actions.

A. Any person who has violated or failed, neglected, or refused to obey any order, notice, or requirement of the County, any condition of a land-disturbance approval, or any provision of this ordinance shall, upon a finding of the District Court of Isle of Wight County, be assessed a civil penalty. The civil penalty for any one violation shall be not less than $100 nor more than $1,000, except that the civil penalty for commencement of land-disturbing activities without an approved plan shall be $1,000. Each day during which the violation is found to have existed shall constitute a separate offense. In no event shall a series of specified violations arising from the same operative set of facts result in civil penalties which exceed a total of $10,000, except that a series of violations arising from the commencement of land-disturbing activities without an approved plan for any site shall not result in civil penalties which exceed a total of $10,000.

B. The Utility Services Department, or the owner of property which has sustained damage, or which is in imminent danger of being damaged, may apply to the Circuit Court of Isle of Wight County to enjoin a violation or a threatened violation of §§ 62.1-44.15:55 or 62.1-44.15:58 of the Code of Virginia, without the necessity of showing that an adequate remedy at law does not exist.
However, an owner of property shall not apply for injunctive relief unless (i) he has notified in writing the person who has violated the local program, and the program authority, that a violation of the local program has caused, or creates a probability of causing, damage to his property, and (ii) neither the person who has violated the local program nor the program authority has taken corrective action within fifteen days to eliminate the conditions which have caused, or create the probability of causing, damage to his property.

C. In addition to any criminal or civil penalties provided under this ordinance, any person who violates any provision of the Erosion and Sediment Control Law may be liable to Isle of Wight County in a civil action for damages.

D. Without limiting the remedies which may be obtained in this section, any person violating or failing, neglecting, or refusing to obey any injunction, mandamus or other remedy obtained pursuant to this section shall be subject, in the discretion of the court, to a civil penalty not to exceed $2,000 for each violation. A civil action for such violation or failure may be brought by the County.

Any civil penalties assessed by a court shall be paid into the treasury of Isle of Wight County, except that where the violator is the locality itself, or its agent, the court shall direct the penalty to be paid into the state treasury.

E. With the consent of any person who has violated or failed, neglected or refused to obey any regulation or condition of a permit or any provision of this ordinance, or order of the County, the County may provide for the payment of civil charges for violations in specific sums, not to exceed the limit specified in Subsection D of this section. Such civil charges shall be instead of any appropriate civil penalty which could be imposed under Subsection A or D.

F. The Commonwealth's Attorney shall, upon request of the County, take legal action to enforce the provisions of this ordinance.

Sec. 6.11. - Appeals and Judicial Review.

A. Final decisions of the County under this ordinance shall be subject to review by the Isle of Wight County Circuit Court, provided an appeal is filed within 30 days from the date of any written decision adversely affecting the rights, duties, or privileges of the person engaging in or proposing to engage in land-disturbing activities.

NOW, THEREFORE, BE IT FURTHER ORDAINED by the Isle of Wight County Board of Supervisors, Virginia, that APPENDIX B-2. - COASTAL PRIMARY SAND DUNE ORDINANCE of the Isle of Wight County Code be repealed and reenacted as follows:

APPENDIX B-2. - COASTAL PRIMARY SAND DUNE ORDINANCE.

Sec. 1001. – Title, Purpose, and Authority.

The governing body of Isle of Wight County, acting pursuant to Chapter 14 (§ 28.2-1400 et seq.) of Title 28.2 of the Code of Virginia, adopts this ordinance regulating the use and development of coastal primary sand dunes. Whenever coastal primary sand dunes are referred to in this ordinance, such references shall also include beaches.

Sec. 1002. – Definitions.

As used in this ordinance, unless the context requires a different meaning:

"Beach" means the shoreline zone comprised of unconsolidated sandy material upon which there is a mutual interaction of the forces of erosion, sediment transport, and deposition that extends from the low water line landward to where there is a marked change in either material composition or physiographic form such as a dune, bluff, or marsh, or where no such change can be identified, to the line of woody vegetation (usually the effective limit of stormwaves), or the nearest impermeable man-made structure, such as a bulkhead, revetment, or paved road.

"Coastal primary sand dune" or "dune" means a mound of unconsolidated sandy soil that is contiguous to mean high water, whose landward and lateral limits are marked by a change in grade from 10 percent or greater to less than 10 percent, and upon which is growing any of the following species: American beach grass (Ammophila breviligulata); beach heather (Hudsonia

tomentosa); dune bean (Strophostyles spp.); dusty miller (Artemisia stelleriana); saltmeadow hay (Spartina patens); seabeach sandwort (Honckenya peploides); sea oats (Uniola paniculata); sea rocket (Cakile edentula); seaside goldenrod (Solidago sempervirens); Japanese sedge or Asiatic sand sedge (Carex kobomugi); Virginia pine (Pinus virginiana); broom sedge (Andropogon virginicus); and short dune grass (Panicum amarum). For purposes of this ordinance, "coastal primary sand dune" shall not include any mound of sand, sandy soil, or dredge spoil deposited by any person for the purpose of temporary storage, beach replenishment, or beach nourishment, nor shall the slopes of any such mound be used to determine the landward or lateral limits of a coastal primary sand dune.

"Commission" means the Virginia Marine Resources Commission.

"Commissioner" means the Commissioner of Marine Resources.

"County," means the governing body of Isle of Wight County.

"Governmental activity" means any of the services provided by the Commonwealth or a county, city, or town to its citizens for the purpose of maintaining public facilities, including but not limited to, such services as constructing, repairing, and maintaining roads; providing street lights and sewage facilities; supplying and treating water; and constructing public buildings.

"Wetlands board" or "board" means the board created pursuant to § 28.2-1303 of the Code of Virginia.

Sec. 1003. – Permitted uses.

The following uses of and activities in dunes are authorized if otherwise permitted by law:

1. The construction and maintenance of noncommercial walkways that do not alter the contour of the coastal primary sand dune;

2. The construction and maintenance of observation platforms that are not an integral part of any dwelling and that do not alter the contour of the coastal primary sand dune;

3. The planting of beach grasses or other vegetation for the purpose of stabilizing coastal primary sand dunes;

4. The placement of sand fences or other material on or adjacent to coastal primary sand dunes for the purpose of stabilizing such features, except that this provision shall not be interpreted to authorize the placement of any material that presents a public health or safety hazard;

5. Sand replenishment activities of any private or public concern, provided no sand shall be removed from any coastal primary sand dune unless authorized by lawful permit;

6. The normal maintenance of any groin, jetty, riprap, bulkhead, or other structure designed to control beach erosion that may abut a coastal primary sand dune;

7. The normal maintenance or repair of existing roads, highways, railroad beds, and facilities of the United States, this Commonwealth or any of its counties or cities, or of any person, provided no coastal primary sand dunes are altered;

8. Outdoor recreational activities, provided the activities do not alter the natural contour of the coastal primary sand dune or destroy the vegetation growing thereon;

9. The conservation and research activities of the Commission, Virginia Institute of Marine Science, Department of Wildlife Resources, and other conservation-related agencies;

10. The construction and maintenance of aids to navigation that are authorized by governmental authority;

11. Activities pursuant to any emergency declaration by the governing body of any local government or the Governor of the Commonwealth or any public health officer for the purposes of protecting the public health and safety;

12. Governmental activity in coastal primary sand dunes owned or leased by the Commonwealth or a political subdivision thereof; and

13. The construction of living shoreline projects authorized pursuant to a general permit developed under subsection B of § 28.2-104.1.

Sec. 1004. – Application for permitted uses-generally.

A. Any person who desires to use or alter any coastal primary sand dune within this county, other than for the purpose of conducting the activities specified in § 3 of this ordinance, shall first file an application directly with the wetlands board or with the Commission.

B. The permit application shall include the following: the name and address of the applicant; a detailed description of the proposed activities and a map, drawn to an appropriate and uniform scale, showing the area of dunes directly affected, the location of the proposed work thereon, the area of any proposed fill and excavation, the location, width, depth, and length of any disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances or facilities, including those on adjacent uplands; a description of the type of equipment to be used and the means of equipment access to the activity site; the names and addresses of owners of record of adjacent land; an estimate of cost; the primary purpose of the project; any secondary purposes of the project, including further projects; the public benefit to be derived from the proposed project; a complete description of measures to be taken during and after the alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require.

C. A nonrefundable processing fee shall accompany each permit application. The fee shall be set by the applicable governing body with due regard for the services to be rendered, including the time, skill, and administrator's expense. No person shall be required to file two separate applications for permits if the proposed project will require permits under this ordinance and Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia. Under those circumstances, the fee shall be established pursuant to this ordinance.

Sec. 1005. – Same-Public inspection.

All applications, maps, and documents submitted shall be open for public inspection at the Isle of Wight County Department of Planning and Zoning.

Sec. 1006. – Same-notice of hearing.

Not later than 60 days after receipt of a complete application, the wetlands board shall hold a public hearing on the application. The applicant, local governing body, Commissioner, owner of record of any land adjacent to the coastal primary sand dunes in question, the Virginia Institute of Marine Science, the Department of Wildlife Resources, the State Water Control Board, the Department of Transportation, and any governmental agency expressing an interest in the application shall be notified of the hearing. The Commission or board shall mail or email these notices not less than 20 days prior to the date set for the hearing. The board shall also (i) cause notice of the hearing to be published at least once in the seven days prior to such hearing in a newspaper of general circulation in this county; (ii) post a notice of the hearing on its website at least 14 days prior to such hearing; and (iii) provide a copy of such notice to the Commission for submittal to the Virginia Regulatory Town Hall. The costs of publication shall be paid by the applicant. In the event that the board submits a correct and timely notice for publication and the newspaper fails to publish the notice or publishes the notice incorrectly, the board shall be deemed to have met the notice requirements of this subsection so long as the notice is published in the next available edition of such newspaper.

Sec. 1007. – Same-decision of board.

A. Approval of a permit application shall require the affirmative vote of three members of a five-member board or four members of a seven-member board.

B. The chairman of the board, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. Any person may appear and be heard at the public hearing. Each witness at the hearing may submit a concise written statement of his testimony. The board shall make a record of the proceeding, which shall include the application, any written statements of witnesses, a summary of statements of all witnesses, the findings and decision of the board, and the rationale for the decision.

C. The board shall make its determination within 30 days of the hearing. If the board fails to act within that time, the application shall be deemed approved. Within 48 hours of its determination, the board shall notify the applicant and the Commissioner of its determination. If the board fails to make a determination within the 30-day period, it shall promptly notify the applicant and the Commission that the application is deemed approved.

D. If the board's decision is reviewed or appealed, the board shall transmit the record of its hearing to the Commissioner. Upon a final determination by the Commission, the record shall be returned to the board. The record shall be open for public inspection at the Isle of Wight County Department of Planning and Zoning.

Sec. 1008. – Permit bond; revocation or suspension of permit.

The board may require a reasonable bond or letter of credit in an amount and with surety and conditions satisfactory to it, securing to the Commonwealth compliance with the conditions and limitations set forth in the permit. The board may, after a hearing held pursuant to this ordinance, suspend or revoke a permit if the applicant has failed to comply with any of the conditions or limitations set forth in the permit or has exceeded the scope of the work described in the application. The board may, after a hearing, suspend a permit if the applicant fails to comply with the terms and conditions set forth in the application.

Sec. 1009. – Responsibility of board.

In fulfilling its responsibilities under this ordinance, the board shall preserve and protect coastal primary sand dunes and beaches and prevent their despoliation and destruction. However, whenever practical, the board shall accommodate necessary economic development in a manner consistent with the protection of these features.

Sec. 1010. – Same-Basis for decision to approve, etc.; granting of approval or denial.

A. In deciding whether to grant, grant in modified form, or deny a permit, the board shall consider the following:

1. The testimony of any person in support of or in opposition to the permit application;

2. The impact of the proposed development on the public health, safety, and welfare; and

3. The proposed development's conformance with standards prescribed in § 28.2-1408 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1401 of the Code of Virginia.

B. The board shall grant the permit if all of the following criteria are met:

1. The anticipated public and private benefit of the proposed activity exceeds its anticipated public and private detriment.

2. The proposed development conforms with the standards prescribed in § 28.2-1408 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1401 of the Code of Virginia.

3. The proposed activity does not violate the purposes and intent of this ordinance or Chapter 14
(§ 28.2-1400 et seq.) of Title 28.2 of the Code of Virginia.

C. If the board finds that any of the criteria listed in subsection B of this section are not met, the board shall deny the permit application but allow the applicant to resubmit the application in modified form.

Sec. 1011. – Permits; generally.

A. The permit shall be in writing and signed by the chairman of the board. A copy of the permit shall be transmitted to the Commissioner.

B. No permit shall be granted without an expiration date established by the board. Upon proper application, the board may extend the permit expiration date.

Sec. 1012. – Permit affect.

No permit granted by a wetlands board shall in any way affect the right of any person to seek compensation for any injury in fact incurred by him because of the permitted activity.

Sec. 1013. – Violations.

Any person who knowingly, intentionally, or negligently violates any order, rule or regulation of the commission or wetlands board, any provision of Chapter 14, Article 2 of Title 28.2 of the Code of Virginia, or of this Coastal Primary Sand Dune Zoning Ordinance, enacted pursuant to Chapter 14, Article 2 of Title 28.2 of the Code of Virginia, or any provision of a permit granted pursuant to Chapter 14, Article 2 of Title 28.2 of the Code of Virginia is guilty of a Class I misdemeanor. Following a conviction, every day the violation continues is a separate offense.

Sec. 1014. - Injunctions.

Upon the petition of the commission or the wetlands board to the Circuit Court of the Isle of Wight County, Virginia, the court may enjoin the unlawful act and order the defendant to take any steps necessary to restore, protect, and preserve the dunes or beaches involved. This remedy shall be exclusive of and in addition to any criminal penalty which may be imposed under Section 28.2-1418 of the Code of Virginia.

Sec. 1015. - Penalties.

A. Without limiting the remedies which may be obtained under this appendix B-2, any person who violates any provision of this appendix B-2 or who violates or fails, negates, or refuses to obey any commission or wetlands board notice, order, rule, or regulation, or permit condition authorized by this appendix B-2 shall, upon such finding by an appropriate circuit court, be assessed a civil penalty not to exceed twenty-five thousand dollars ($25,000.00) for each day of violation. Such civil penalties may, at the discretion of the court assessing them, be directed to be paid into the treasury of the county, city, or town in which the violation occurred for the purpose of abating environmental damage to or restoring dunes or beaches therein, in such a manner as the county may, by order, direct, except that where the violator is the county, city or town itself, or its agent, the court shall direct the penalty to be paid into the state treasury.

B. Without limiting the remedies which may be obtained under this appendix B-2, and with the consent of any person who has violated any provision of this appendix B-2 or who has violated or failed, neglected, or refused to obey any commission or wetlands board order, rule, regulation or permit condition authorized by this appendix B-2, the commission or wetlands board may provide, in an order issued by the commission or wetlands board against such person, for the one-time payment of civil charges for each violation in specific sums, not to exceed ten thousand dollars ($10,000.00) for each violation under subsection a. of this section. Civil charges may be in addition to the cost of any restoration ordered by the commission or wetlands board.

NOW, THEREFORE, BE IT FURTHER ORDAINED by the Isle of Wight County Board of Supervisors, Virginia, that CHAPTER 17. - WETLANDS ZONING of the Isle of Wight County Code be repealed and reenacted as follows:

CHAPTER 17. - WETLANDS ZONING

Sec. 17-1. - Title, Purpose and Authority.

The governing body of Isle of Wight County, acting pursuant to Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia, adopts this ordinance regulating the use and development of wetlands.

Sec. 17-2. - Definitions.

As used in this ordinance, unless the context requires a different meaning:

"Back Bay and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Virginia Beach, North Bay, and Knotts Island: Back Bay north of the Virginia-North Carolina state line; Capsies Creek north of the Virginia-North Carolina state line; Deal Creek; Devil Creek; Nawney Creek; Redhead Bay, Sand Bay, Shipps Bay, North Bay, and the waters connecting them; Beggars Bridge Creek; Muddy Creek; Ashville Bridge Creek; Hells Point Creek; Black Gut; and all coves, ponds, and natural waterways adjacent to or connecting with the above-named bodies of water.

"Commission" means the Virginia Marine Resources Commission.

"Commissioner" means the Commissioner of Marine Resources.

"Governmental activity" means any of the services provided by this county to its citizens for the purpose of maintaining this county, including but not limited to such services as constructing, repairing, and maintaining roads; providing sewage facilities and street lights; supplying and treating water; and constructing public buildings.

"Nonvegetated wetlands" means unvegetated lands lying contiguous to mean low water and between mean low water and mean high water, including those unvegetated areas of Back Bay and its tributaries and the North Landing River and its tributaries subject to flooding by normal and wind tides but not hurricane or tropical storm tides.

"North Landing River and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Pleasant Ridge, Creeds, and Fentress: the North Landing River from the Virginia-North Carolina line to Virginia Highway 165 at North Landing Bridge; the Chesapeake and Albemarle Canal from Virginia Highway 165 at North Landing Bridge to the locks at Great Bridge; and all named and unnamed streams, creeks, and rivers flowing into the North Landing River and the Chesapeake and Albemarle Canal except West Neck Creek north of Indian River Road, Pocaty River west of Blackwater Road, Blackwater River west of its forks located at a point approximately 6400 feet due west of the point where Blackwater Road crosses the Blackwater River at the village of Blackwater, and Millbank Creek west of Blackwater Road.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

"Vegetated wetlands" means lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range at the site of the proposed project in the county, city, or town in question, and upon which is growing any of the following species: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay
(Spartina patens), saltgrass (Distichlis spicata), black needlerush (Juncus roemerianus), saltwort
(Salicornia spp.), sea lavender (Limonium spp.), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), sea oxeye (Borrichia frutescens), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), sea rocket (Cakile edentula), southern wildrice (Zizaniopsis miliacea), cattail
(Typha spp.), three-square (Scirpus spp.), buttonbush (Cephalanthus occidentalis), bald cypress (Taxodium distichum), black gum (Nyssa sylvatica), tupelo (Nyssa aquatica), dock (Rumex spp.), yellow pond lily (Nuphar sp.), marsh fleabane (Pluchea purpurascens), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), smartweed (Polygonum sp.), arrowhead (Sagittaria spp.), sweet flag (Acorus calamus), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Vegetated wetlands of Back Bay and its tributaries" or "vegetated wetlands of the North Landing River and its tributaries" means all marshes subject to flooding by normal and wind tides but not hurricane or tropical storm tides, and upon which is growing any of the following species:
saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), black needlerush (Juncus roemerianus), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), cattail (Typha spp.), three-square (Scirpus spp.), dock (Rumex sp.), smartweed (Polygonum sp.), yellow pond lily (Nuphar sp.), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), arrowhead (Sagittaria sp.), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Wetlands" means both vegetated and nonvegetated wetlands.

"Wetlands board" or "board" means a board created pursuant to § 28.2-1303 of the Code of Virginia.

Sec. 17-3. - Permitted uses.

The following uses of and activities in wetlands are authorized if otherwise permitted by law:

A. The construction and maintenance of noncommercial catwalks, piers, boathouses, boat shelters, fences, duck blinds, wildlife management shelters, footbridges, observation decks, and shelters and other similar structures, provided that such structures are so constructed on pilings as to permit the reasonably unobstructed flow of the tide and preserve the natural contour of the wetlands;

B. The cultivation and harvesting of shellfish, and worms for bait;

C. Noncommercial outdoor recreational activities, including hiking, boating, trapping, hunting, fishing, shellfishing, horseback riding, swimming, skeet and trap shooting, and shooting on shooting preserves, provided that no structure shall be constructed except as permitted in subdivision 1 of this section;

D. Other outdoor recreational activities, provided they do not impair the natural functions or alter the natural contour of the wetlands;

E. Grazing, haying, and cultivating and harvesting agricultural, forestry, or horticultural products;

F. Conservation, repletion, and research activities of the Commission, the Virginia Institute of Marine Science, the Department of Wildlife Resources and other conservation-related agencies;

G. The construction or maintenance of aids to navigation that are authorized by governmental authority;

H. Emergency measures decreed by any duly appointed health officer of a governmental subdivision acting to protect the public health;

I. The normal maintenance and repair of, or addition to, presently existing roads, highways, railroad beds, or facilities abutting on or crossing wetlands, provided that no waterway is altered and no additional wetlands are covered;

J. Governmental activity in wetlands owned or leased by the Commonwealth or a political subdivision thereof;

K. The normal maintenance of man-made drainage ditches, provided that no additional wetlands are covered. This subdivision does not authorize the construction of any drainage ditch; and

L. The construction of living shoreline projects authorized pursuant to a general permit developed under subsection B of § 28.2-104.1.

Sec. 17-4. - Application for permitted uses – generally.

A. Any person who desires to use or develop any wetland within this county, other than for the purpose of conducting the activities specified in Section 3 of this ordinance, shall first file an application for a permit directly with the wetlands board or with the Commission.

B. The permit application shall include the following: the name and address of the applicant; adetailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth, and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances or facilities, including those on adjacent uplands; a statement indicating whether use of a living shoreline as defined in § 28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination; a description of the type of equipment to be used and the means of equipment access to the activity site; the names and addresses of owners of record of adjacent land and known claimants of water rights in or

adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; any secondary purposes of the project, including further projects; the public benefit to be derived from the proposed project; a complete description of measures to be taken during and after the alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require.

C. A nonrefundable processing fee shall accompany each permit application. The fee shall be set by the applicable governing body with due regard for the services to be rendered, including the time, skill, and administrator's expense involved.

Sec. 17- 5. - Same-Public inspection.

All applications, maps, and documents submitted shall be open for public inspection at the Isle of Wight County Department of Planning and Zoning and specified in the public notice for public hearing required under Section 6 of this ordinance.

Sec. 17- 6. - Same-notice of hearing.

Not later than 60 days after receipt of a complete application, the wetlands board shall hold a public hearing on the application. The applicant, local governing body, Commissioner, owner of record of any land adjacent to the wetlands in question, known claimants of water rights in or adjacent to the wetlands in question, the Virginia Institute of Marine Science, the Department of Wildlife Resources, the State Water Control Board, the Department of Transportation, and any governmental agency expressing an interest in the application shall be notified of the hearing. The Commission or board shall mail or email these notices not less than 20 days prior to the date set for the hearing. The board shall also (i) cause notice of the hearing to be published at least once in the seven days prior to such hearing in a newspaper of general circulation in this county; (ii) post a notice of the hearing on its website at least 14 days prior to such hearing; and (iii) provide a copy of such notice to the Commission for submittal to the Virginia Regulatory Town Hall. The published notice shall specify the place or places within this county where copies of the application may be examined. The costs of publication shall be paid by the applicant. In the event that the board submits a correct and timely notice for publication and the newspaper fails to publish the notice or publishes the notice incorrectly, the board shall be deemed to have met the notice requirements of this subsection so long as the notice is published in the next available edition of such newspaper.

Sec. 17- 7. - Same-decision of board.

A. Approval of a permit application shall require the affirmative vote of three members of a five-member board or four members of a seven-member board.

B. The chairman of the board, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. Any person may testify at the public hearing. Each witness at the hearing may submit a concise written statement of his testimony. The board shall make a record of the proceeding, which shall include the application, any written statements of witnesses, a summary of statements of all witnesses, the findings and decision of the board, and the rationale for the decision.

C. The board shall make its determination within 30 days of the hearing. If the board fails to act within that time, the application shall be deemed approved. Within 48 hours of its

determination, the board shall notify the applicant and the Commissioner of its determination. If the board fails to make a determination within the 30-day period, it shall promptly notify the applicant and the Commission that the application is deemed approved. For purposes of this section, "act" means taking a vote on the application. If the application receives less than four affirmative votes from a seven-member board or less than three affirmative votes from a five-member board, the permit shall be denied.

D. If the board's decision is reviewed or appealed, the board shall transmit the record of its hearing to the Commissioner. Upon a final determination by the Commission, the record shall be returned to the board. The record shall be open for public inspection at the same office as was designated under Section 5 of this ordinance.

Sec. 17- 8. - Permit bond; revocation or suspension of permit.

The board may require a reasonable bond or letter of credit in an amount and with surety and conditions satisfactory to it, securing to the Commonwealth compliance with the conditions and limitations set forth in the permit. The board may, after a hearing held pursuant to this ordinance, suspend or revoke a permit if the applicant has failed to comply with any of the conditions or limitations set forth in the permit or has exceeded the scope of the work described in the application. The board may, after a hearing, suspend a permit if the applicant fails to comply with the terms and conditions set forth in the application.

Sec. 17- 9. - Responsibility of board.

In fulfilling its responsibilities under this ordinance, the board shall preserve and prevent the despoliation and destruction of wetlands within its jurisdiction while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including the provisions of guidelines and minimum standards promulgated by the Commission pursuant to §28.2-1301 of the Code of Virginia.

Sec. 17- 10. - Same-Basis for decision to approve, etc.; granting of approval or denial.

A. In deciding whether to grant, grant in modified form, or deny a permit, the board shall consider the following:

1. The testimony of any person in support of or in opposition to the permit application;

2. The impact of the proposed development on the public health, safety, and welfare; and

3. The proposed development's conformance with standards prescribed in § 28.2-1308 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.

B. The board shall grant the permit if all of the following criteria are met:

1. The anticipated public and private benefit of the proposed activity exceeds its anticipated public and private detriment.

2. The proposed development conforms with the standards prescribed in § 28.2-1308 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.

3. The proposed activity does not violate the purposes and intent of this ordinance or Chapter 13
(§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia.

C. If the board finds that any of the criteria listed in subsection B of this section are not met, the board shall deny the permit application but allow the applicant to resubmit the application in modified form.

Sec. 17- 11. - Permits; generally.

A. The permit shall be in writing and signed by the chairman of the board or his authorized representative. A copy of the permit shall be transmitted to the Commissioner.

B. No permit shall be granted without an expiration date established by the board. Upon proper application, the board may extend the permit expiration date.

Sec. 17- 12. - Affect of permit.

No permit granted by a wetlands board shall in any way affect the applicable zoning and land use ordinances of this county or the right of any person to seek compensation for any injury in fact incurred by him because of the proposed activity.

Sec. 17-12. - Violations; penalty.

Any person who knowingly, intentionally or negligently violates any order, rule or regulation of the wetlands board of Isle of Wight County, Virginia, or any provision of this chapter, or any provision of a permit granted pursuant to this chapter, shall be guilty of a Class I misdemeanor. Following a conviction, every day the violation continues is a separate offense.

Adopted this 15th day of August, 2024.

_____
Joel C. Acree, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Discussion of Items for 2025 Legislative Priorities

BACKGROUND:

Staff will briefly review and discuss the County's proposed legislative strategy and requests the Board provide any suggested items for inclusion in the 2025 Legislative Agenda.

Items previously included in the list of legislative priorities are:

- Additional Sales Tax for Educational Purposes
- Education Funding Support from the Commonwealth
- Limited Residential Lodging Act
- Unfunded Mandates
- Transportation Funding
- Proffer/Impact Fee Legislation
- Public Notice Advertisement
- HB2175 – Fire Services Funding

BUDGETARY IMPACT:

None

RECOMMENDATION:

Per the Board's discussion and direction.

ATTACHMENTS:

Description	Type	Upload Date
2024 Legislative Priority List	Backup Material	5/22/2024
Local Clerks Fees	Backup Material	7/29/2024

DRAFT ISLE OF WIGHT COUNTY
2024 LEGISLATIVE PRIORITY LIST

LOCAL ISSUES

- Additional Sales Tax for Educational Purposes
- Education Funding Support from the Commonwealth
- Limited Residential Lodging Act
- Unfunded Mandates
- Transportation Funding
- Proffer/Impact Fee Legislation
- Public Notice Advertisement
- HB2175 – Fire Services Funding

ADDITIONAL SALES TAX FOR EDUCATION PURPOSES

ISSUE:

The Code of Virginia authorizes "the qualifying locality" to impose an additional local sales and use tax at a rate not to exceed one percent, as determined by the governing body, if initiated by a resolution of the local governing body and **approved by the voters at a referendum**. The bill requires the governing body to specify in the enacting ordinance the time period, not to exceed 20 years, for which the tax would be imposed. Revenue from the tax shall be used solely for capital projects for new construction or major renovation of schools in the locality enacting the tax.

The bill removes the limit on the amount that "the qualifying locality" may appropriate to an incorporated town that has not complied with the provisions of its charter relating to the elections of local officials. Under current law, such amount is limited to the amount the town would have received from local sales and use tax for educational purposes if such election had been held.

In the Code of Virginia, § 58.1-602, "qualifying locality" currently means Charlotte County, Gloucester County, Halifax County, Henry County, Mecklenburg County, Northampton County, Patrick County, Pittsylvania County, or the City of Danville.

COUNTY POSITION:

Isle of Wight County urges the General Assembly to adopt legislation to amend the Code of Virginia (§ 58.1-602) to add "Isle of Wight County" as a qualifying locality for the purpose of imposing an additional local sales and use tax at a rate not to exceed one percent, as determined by the governing body to be used solely for capital projects for new construction or major renovation of schools.

EDUCATION FUNDING SUPPORT FROM THE COMMONWEALTH

ISSUE:

The Joint Legislative Audit and Review Commission (JLARC) has previously produced reports relative to state and local funding of the Standard of Quality (SOQ) for primary and secondary education in Virginia. In this regard, the Isle of Wight County remains concerned about the following issues:

- Localities pay 100 percent of the cost of teachers and other instructional expenses beyond the minimum requirements of the state Standards of Quality, which represents significant costs to localities.
- School divisions spend significantly less to operate and maintain facilities than in the past due to unfunded mandates from the State.

It is essential for the state to fully fund its constitutional responsibilities and all mandates associated with K-12 public education. Full state funding should be achieved without reduction to other parts of state public education budgets or to the other core services. Should state general funding diminish, local autonomy should be increased and state education mandates reduced.

COUNTY POSITION:

Isle of Wight County supports full State funding for public education, including the Standards of Quality (SOQ) as previously recommended by the Board of Education, where these recommendations coincide with prevailing local practice; targeted incentive programs; capital and maintenance support; and teacher salaries. Full State funding should be achieved without reduction to other parts of State public education budgets or to other core services. The State must recognize that local school divisions continue to spend billions of dollars above the required local effort.

The County opposes proposals to divert State or local education funds from local school divisions.

LIMITED RESIDENTIAL LODGING ACT

ISSUE:

The Limited Residential Lodging Act (the Act) allows persons to rent out their primary residences or portions thereof for charge for periods of less than 30 consecutive days or do so through a hosting platform. Localities are preempted from adopting ordinances or zoning restriction prohibiting such short-term rentals, but authorized to adopt ordinances requiring persons renting their primary residences to have a minimum of $500,000 of liability insurance, prohibiting persons from renting their primary residences if they fail to pay applicable taxes, and requiring persons renting their primary residences to register with the locality. A hosting platform must register with the Department of Taxation to collect and remit all applicable taxes on behalf of the property owner using the hosting platform. The bill defines "limited residential lodging," "booking transaction," and "hosting platform" and provides for penalties for violations of the Act. The bill contains a reenactment clause and directs the Virginia Housing Commission to convene a work group to further study the issues presented in the bill and make recommendations for consideration by the 2017 Session of the General Assembly.

COUNTY POSITION:

The General Assembly should adopt legislation that provides localities the ability to ensure the safety, well-being and use of property by persons renting properties, as well as adjacent and neighboring property owners.

Isle of Wight County is **opposed** to any legislation that would exempt short-term rental rooms or entire residences through booking platforms such as AirBnB from local zoning regulations.

UNFUNDED MANDATES

ISSUE:

Unfunded mandates placed on localities by the State have detrimentally affected local tax rates and the ability of local governments to address local needs and priorities.

There are many programs required by the State to be implemented at the local level. Several of these programs are inadequately funded or not funded at all by the State. Unfunded mandates place a financial burden on localities to implement those programs. The problem is further exacerbated when existing funding from the State to provide programs is unexpectedly reduced or eliminated, but the requirement to provide the program still exists.

When funding for a mandated program is altered, the mandate should be suspended until full funding is restored. When legislation with a cost to localities is passed by the General Assembly, the cost should be borne by the Commonwealth, and the legislation should contain a sunset clause providing that the mandate is not binding on localities until funding by the Commonwealth is provided.

The Commonwealth provides operational funding for certain Constitutional required governmental functions via the State Compensation Board. In this regard, the Compensation Board establishes minimum salaries for certain positions funded by the State. As competition for qualified employees has intensified at the State and local levels, so has the need to adjust salaries and the funding for those Compensation Board-funded positions.

The funding provided to localities by the Compensation Board for many positions at the local level is woefully inadequate, particularly those positions assigned to law enforcement functions within the local Sheriff's offices.

It should be noted and emphasized that providing insufficient funding for State responsibilities and services, such that State agencies require local funding supplements to provide those services is also an unfunded mandate.

COUNTY POSITION:

The County requests that the General Assembly adequately fund the State's share for required programs that must be implemented at the local level.

The County requests that the General Assembly adequately fund the State's share for required programs that must be implemented at the local level and/or eliminate the service requirement of the mandate.

The County requests that the General Assembly review and appropriate increased funding for Compensation Board funded positions, particularly those positions assigned to law enforcement functions within the local Sheriff's offices.

TRANSPORTATION FUNDING

ISSUE:

Isle of Wight County appreciates the funding provided by the State to address the transportation needs of the Commonwealth; however, funding falls woefully short of fully addressing the construction, repair, and maintenance needs of Virginia's highway system, particularly as it relates to secondary roads.

COUNTY POSITION:

The General Assembly should take the appropriate actions necessary to increase funding for the Six-Year Secondary Road Plan.

The General Assembly should closely monitor and evaluate the implementation of "Smart Scale" and all other processes employed in recent years for distributing transportation funds.

Isle of Wight County supports innovative regional funding solutions to address transportation construction, repair, and maintenance needs throughout the Commonwealth.

PROFFER/IMPACT FEES

ISSUE:

Many localities in the Commonwealth have used voluntary proffers as a means of ensuring that the impacts of new residential developments on public infrastructure and public services are not borne solely by existing residents of the impacted community.

In 2016, the General Assembly adopted legislation that provides that *no locality shall (i) request or accept any unreasonable proffer in connection with a rezoning or a proffer condition amendment as a condition of approval of a new residential development or new residential use or (ii) deny any rezoning application or proffer condition amendment for a new residential development or new residential use where such denial is based in whole or in part on an applicant's failure or refusal to submit an unreasonable proffer or proffer condition amendment.*

During the 2019 General Assembly Session, language was added to clarify that nothing should be interpreted to prohibit communications between an applicant or owner and the locality or to prohibit presentation, analysis, or discussion of the potential impacts of new residential development or other new residential use on the locality's public facilities.

COUNTY POSITION:

Isle of Wight County supports changes to the conditional zoning law to allow greater flexibility in the process for determining impacts (operational and capital) to be addressed when considering an application for development. Isle of Wight County also supports legislation that grants localities additional tools to adequately meet increasing needs for public services driven by new development without burdening current residents with the cost of new growth through increased real estate taxes. Such additional tools may include broad impact fee authority for all counties, and adequate public facilities provisions.

PUBLIC NOTICE ADVERTISEMENT

ISSUE:

The Code of Virginia requires localities to utilize a "newspaper of general circulation" in that locality as the primary source for public notification. Many public notices are "wordy" and relatively lengthy because of statutorily required language and the annual costs associated with public notifications are significant.

As subscriptions to hard-copy newspapers continue to decline and the use of electronic media (websites, social media, etc.) increases, electronic means of communication offer more options and a greater reach for public notification.

COUNTY POSITION:

The County requests the General Assembly to adopt legislation to authorize the use of electronic media as the primary source for public notification or amend the statutory requirements for the language used in newspaper ads such that a brief description could be provided in newspapers with a more complete description/notification provided on the locality's website.

HB2175 - FIRE SERVICES FUNDING

ISSUE:

The 2023 General Assembly directed the Secretary of Public Safety and Homeland Security (the Secretary) to establish a work group to study existing fire service needs, analyze sustainability of current funding, and review alternative funding models from other states. The work group was charged with creating a needs assessment survey that analyzes existing fire service needs, the sustainability of current funding, any gaps in current funding, how other states fund fire and EMS services, and best practices from other states.

The Secretary was further directed to report the work group's findings and any recommendations to the Chairmen of the House Committee on General Laws and the Senate Committee on General Laws and Technology.

COUNTY POSITION:

The County requests the General Assembly to adopt legislation in alignment with the findings of the work group.

RESTORING THE 1/3 TO THE COMMONWEALTH 2/3 TO THE LOCALITY DISTRIBUTION OF EXCESS CLERK'S FEES AS REQUIRED BY THE CODE OF VIRGINIA

Virginia Circuit Court Clerks collect fees in accordance with VA Code Section 17.1-275. Virginia law (Section 17.1-283) requires clerks to report the amount of the fees collected and requires them to be paid to the Commonwealth.

Clerks' offices with larger populations ofen collect more in clerk's fees than the State Compensation Board budgets for their expenses. Those offices are deemed to be in excess.

Virginia Code Section 17.1-285 states that localities are entitled to 2/3 of excess clerks' fees. In 2009, during a fiscal crisis, language was inserted in the state budget that reduced the localities' share of excess fees from 2/3 to 1/3. Even though 17.1-285 is unchanged to this day and the fiscal crisis has abated, the following budget language changing the distribution of excess clerk's fees remains in the state budget:

§ 3-5.05 DISPOSITION OF EXCESS FEES COLLECTED BY CLERKS OF THE CIRCUIT COURTS

- Notwithstanding §§ 15.2-240, 15.2-639, 15.2-848, 17.1-285, and any other provision of law general or special, effective July 1, 2009, the Commonwealth shall be entitled to two-thirds of the excess fees collected by the clerks of the circuit courts as required to be reported under § 17.1-283.
- Excess clerk's fees distributed to local governments can be spent without restrictions on their use.
- In localities with larger populations, excess fees may be used to augment the operations of circuit court clerks' offices ensuring those offices can provide excellent service to the public.
- The cost of the change in the split of excess fees to a medium sized locality, such as Hanover County, is easily over one million dollars since 2009.
- In FY23, around 25 clerks' offices out of 120 were in excess. Following is a report prepared by the State Compensation Board showing the 2/3 to the Commonwealth, 1/3 to the local government distribution of excess clerk's fees among the localities having excess fees. Note: In accordance with the Code of Virginia, the Commonwealth's arrangement with cities of Richmond, Newpoert News, and Roanoke with respect to the clerk's fees is different from other localities.

§ 17.1-285. Payment of excess.

A. The Commonwealth shall be entitled to one-third of the excess fees collected by clerks as required to be reported under § 17.1-283 and the governing body of the county or city shall be entitled to two-thirds of the excess fees collected unless otherwise provided by law. The

Compensation Board shall determine on an annual basis by June 30 of each year the methods by which excess fees shall be disbursed.

B. All of the excess paid into the state treasury by the clerks of the Supreme Court of Virginia and the Court of Appeals shall be retained therein.

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
Statement of Cash Accountability - June 2024	Backup Material	8/12/2024
Incidents by Zone Map - July 2024	Backup Material	8/12/2024
Incidents by Zone Data - July 2024	Backup Material	8/12/2024
Museum Report - July 2024	Backup Material	8/15/2024

Local Roots. Global Reach.

ISLE OF WIGHT
COUNTY, VIRGINIA

STATEMENT OF CASH ACCOUNTABILITY
June 2024

Institution	Instrument	Rate	Balance	Previous Year Balance
	Cash			
	Petty Cash		$2,350.00	$2,300.00
SUB TOTAL			**$2,350.00**	**$2,300.00**
	Checking Accounts			
Bank of America	General Fund Checking	2.28%	$16,091,340.95	$27,097,449.91
Bank of America	School General Fund Checking	2.28%	$4,377,777.19	$2,205,890.88
Bank of America	DSS General Fund Checking	2.28%	$2,786,537.45	$2,602,389.58
Bank of America	County Payroll Account	2.38%	$138,445.42	$98,807.60
Bank of America	School Payroll Account	2.38%	$3,881.09	$424.41
Bank of America	DSS Payroll Account	2.38%	$35.86	$3,180.84
SUB TOTAL			**$23,398,017.96**	**$32,008,143.22**
	Investments			
Bank of America	Emergency Fund Checking	2.38%	$2,707.23	$2,644.45
LGIP	General Fund Investment	5.55%	$18,007,255.18	$20,007,603.41
VIP	VIP Long Term	5.44%	$82,290.97	$78,813.85
VIP	VIP Short Term	5.44%	$23,586,913.89	$8,797,419.75
SUB TOTAL			**$41,679,167.27**	**$28,886,481.46**
	Restricted Funds			
Bank of America	School Escrow Fund	0.00%	$0.00	$0.00
Bank of America	General Recoupment Funds	0.00%	$11,444.13	$15,098.57
Bank of America	Special Welfare Funds	0.60%	$34,122.02	$0.00
Bank of America	Special Welfare Donated Funds	2.38%	$8,727.45	$18,445.98
Bank of America	Special Welfare Child Support	2.35%	$0.45	$248.64
Bank of America	School's Camp Foundation	2.38%	$25,867.89	$25,316.90
Towne Bank	School Food Service Funds	0.10%	$1,602,062.87	$1,496,187.91
BNY Mellon	Pace Funds		$2,114,544.61	$2,217,570.48
Bank of America	County Escrow Fund	2.38%	$4,514.26	$10,790.05
Bank of America	Opioid Funds	0.20%	$106,297.42	$0.00
Towne Bank	School Healthcare		$1,944,266.00	$0.00
SUB TOTAL			**$5,851,847.10**	**$3,783,658.53**
	Bond Proceeds--Invested in SNAP			
	2016 Bond	5.48%	$163,931.97	$236,699.44
	2016 Bond Interest	5.48%	$247,673.56	$223,251.31
	2020A Bond	5.48%	$0.00	$3,815,415.50
	2020A Bond Interest	5.48%	$0.00	$511,563.75
	2022 GO Bond	5.48%	$4,326,421.22	$12,042,004.60
	2022 GO Bond Interest	5.48%	$1,325,299.96	$775,264.33
SUB TOTAL			**$6,063,326.71**	**$17,604,198.93**
TOTAL OF ALL FUNDS			**$76,994,709.04**	**$82,284,782.14**

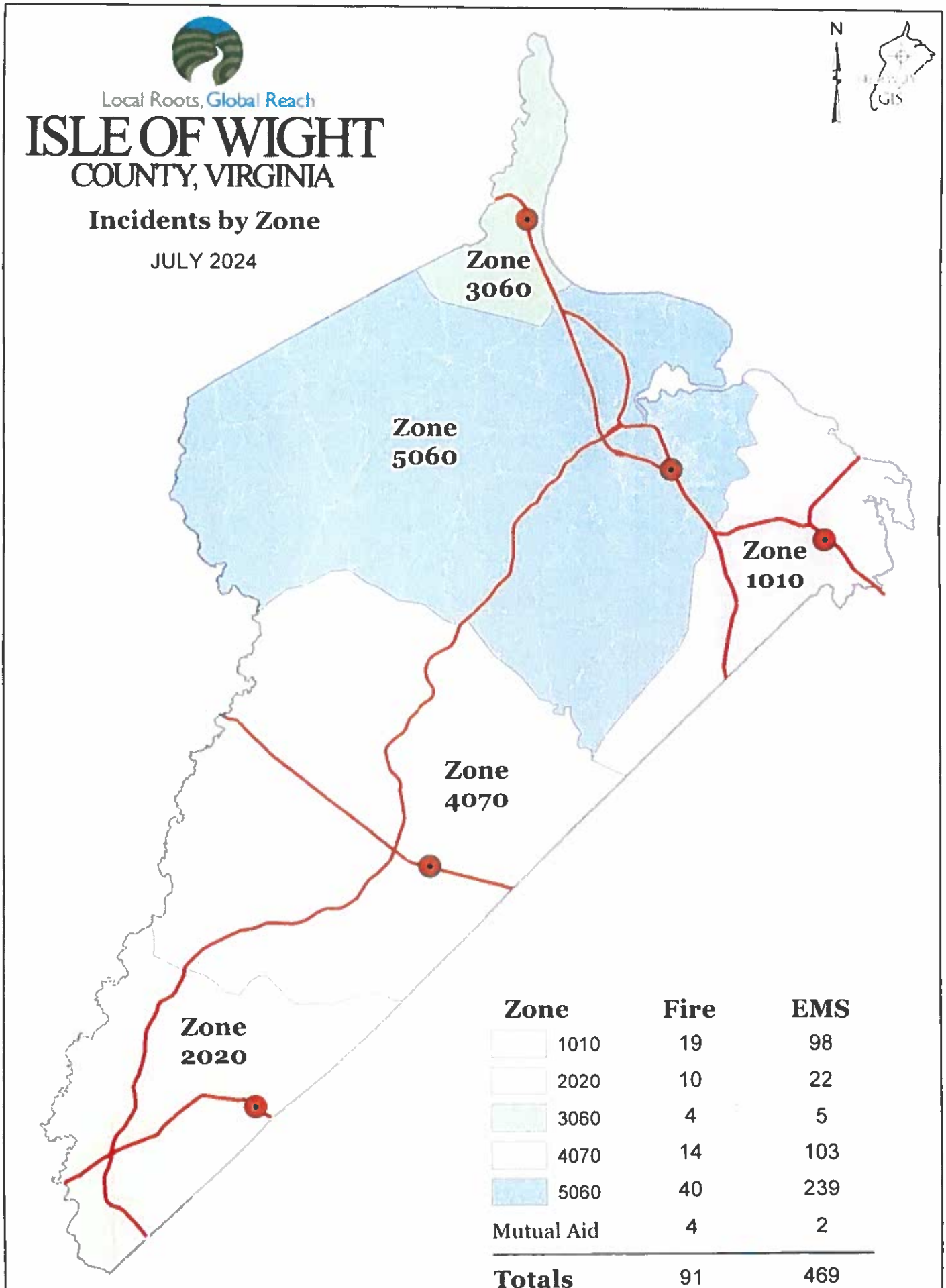
Julie Slye, Treasurer

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

Incidents by Zone

JULY 2024



Zone	Fire	EMS
1010	19	98
2020	10	22
3060	4	5
4070	14	103
5060	40	239
Mutual Aid	4	2
Totals	91	469

ISLE OF WIGHT

Incidents by Zone - July 2024

Agency: IWFR, Event date/Time range: 07/01/2024 00:00:00 - 07/31/2024 23:59:59

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	MEDIC STANDBY	1	0	1	50%	0:00:00	0:00:00	4:06:23	4:06:23	4:06:23
	Subtotals for EMS	**1**	**0**	**1**	**50%**	**0:00:00**	**0:00:00**	**4:06:23**	**4:06:23**	**4:06:23**
	FIRE DEPT COMMUNITY RELATIONS	1	0	1	50%	0:00:00	1:05:24	0:00:04	1:05:28	1:05:28
	Subtotals for FIRE	**1**	**0**	**1**	**50%**	**0:00:00**	**1:05:24**	**0:00:04**	**1:05:28**	**1:05:28**
	Totals for	**2**	**0**	**2**	**100%**	**0:00:00**	**1:05:24**	**2:03:14**	**5:11:51**	**2:35:56**
1010	ABDOMINAL PAIN	0	1	1	1%	0:00:53	0:08:53	1:17:08	1:26:54	1:26:54
	ABRASIONS BRUISES ETC	0	1	1	1%	0:01:12	0:06:04	0:58:05	1:05:21	1:05:21
	ACCIDENT UNKNOWN INJURIES	0	8	8	7%	0:00:52	0:04:24	0:41:30	6:14:14	0:46:47
	ACCIDENT WITH INJURIES	0	1	1	1%	0:00:14	0:00:00	0:14:30	0:14:44	0:14:44
	ALARM - MEDICAL	0	4	4	3%	0:02:33	0:09:03	0:06:12	0:59:00	0:14:45
	ALLERGIC REACTIONS	0	2	2	2%	0:01:38	0:09:49	1:02:03	2:26:59	1:13:30
	ASSAULT WITH INJURIES	0	1	1	1%	0:00:04	0:00:00	0:00:00	0:15:58	0:15:58
	BACK PAIN (NON TRAUMATIC)	0	1	1	1%	0:00:57	0:02:21	1:11:00	1:14:18	1:14:18
	CARDIAC ARREST	0	1	1	1%	0:00:30	0:04:27	1:37:21	1:42:18	1:42:18
	CHEST PAIN	0	7	7	6%	0:00:55	0:06:41	0:45:37	5:24:58	0:46:25
	CHILD OR ANIMAL LOCKED IN CAR	0	1	1	1%	0:00:05	0:09:51	0:20:18	0:30:14	0:30:14
	DIABETIC PROBLEMS	0	1	1	1%	0:02:18	0:05:40	0:30:03	0:38:01	0:38:01
	DIFFICULTY BREATHING	0	9	9	8%	0:01:34	0:06:36	1:00:35	10:18:50	1:08:46
	DROWNING	0	1	1	1%	0:00:04	0:00:00	0:00:00	0:04:56	0:04:56
	FALLS AND RELATED INJURIES	0	11	11	9%	0:01:31	0:08:17	0:42:01	9:30:01	0:51:49
	HEADACHE	0	1	1	1%	0:00:04	0:11:27	1:21:30	1:33:01	1:33:01
	HEART PROBLEMS	0	4	4	3%	0:01:01	0:09:03	0:41:13	3:25:11	0:51:18

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	HEAT AND COLD EXPOSURE	0	1	1	1%	0:00:51	0:02:37	0:56:48	1:00:16	1:00:16
	LIFT ASSIST	0	3	3	3%	0:01:18	0:06:44	0:23:12	1:33:43	0:31:14
	MEDIC STANDBY	1	0	1	1%	0:00:00	0:00:00	0:43:44	0:43:44	0:43:44
	OVERDOSE	0	1	1	1%	0:02:38	0:07:08	1:39:51	1:49:37	1:49:37
	PAIN	0	4	4	3%	0:01:34	0:09:24	0:50:18	4:05:05	1:01:16
	PSYCHIATRIC PROBLEMS	0	3	3	3%	0:00:09	0:06:56	1:30:14	4:51:58	1:37:19
	SEIZURE	0	2	2	2%	0:00:34	0:05:57	1:23:41	3:00:22	1:30:11
	SICK / ILL OR RESCUE	0	23	23	20%	0:01:35	0:06:53	1:13:17	29:51:42	1:21:26
	STROKE	0	3	3	3%	0:01:05	0:05:36	1:02:23	3:27:14	1:09:05
	UNCONSCIOUS OR FAINTING	0	2	2	2%	0:00:53	0:04:37	0:34:28	1:19:54	0:39:57
	Subtotals for EMS	**1**	**97**	**98**	**84%**	**0:01:02**	**0:06:53**	**0:54:41**	**98:48:33**	**0:57:54**
	ARCING WIRES DOWN POWER LINES	1	0	1	1%	0:00:18	0:06:28	0:03:29	0:10:15	0:10:15
	ASSIST BOATER	0	1	1	1%	0:00:21	0:10:09	0:17:02	0:27:32	0:27:32
	CARBON MONOXIDE ALARM	0	3	3	3%	0:01:22	0:06:56	0:11:39	0:59:50	0:19:57
	FIRE ALARM	0	10	10	9%	0:01:27	0:06:24	0:03:26	1:43:15	0:10:20
	FIRE DEPT COMMUNITY RELATIONS	1	1	2	2%	0:00:42	0:00:00	0:17:44	0:36:10	0:18:05
	FIRE OTHER NOT LISTED	1	0	1	1%	0:00:05	0:00:00	0:08:18	0:08:23	0:08:23
	TRASH OR DUMPSTER FIRE	0	1	1	1%	0:02:25	0:00:00	0:00:00	0:17:45	0:17:45
	Subtotals for FIRE	**3**	**16**	**19**	**16%**	**0:00:57**	**0:07:29**	**0:10:16**	**4:23:10**	**0:16:02**
	Totals for 1010	**4**	**113**	**117**	**100%**	**0:01:01**	**0:06:59**	**0:46:05**	**103:11:43**	**0:49:17**
2020	ABDOMINAL PAIN	0	1	1	3%	0:01:08	0:12:38	0:40:33	0:54:19	0:54:19
	ALARM - MEDICAL	0	1	1	3%	0:02:55	0:08:16	0:02:11	0:13:22	0:13:22
	ATTEMPT SUICIDE	0	1	1	3%	0:01:47	0:09:53	0:44:38	0:56:18	0:56:18
	BLEEDING/HEMORRHAGING	0	1	1	3%	0:02:02	0:13:22	0:29:12	0:44:36	0:44:36
	DIFFICULTY BREATHING	0	2	2	6%	0:01:40	0:07:22	1:28:48	3:15:40	1:37:50
	FALLS AND RELATED INJURIES	0	5	5	16%	0:02:39	0:09:44	0:49:23	5:08:55	1:01:47

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	PAIN	0	2	2	6%	0:02:12	0:13:02	0:56:32	2:23:32	1:11:46
	SEIZURE	0	1	1	3%	0:00:44	0:02:34	1:03:56	1:07:14	1:07:14
	SICK / ILL OR RESCUE	0	6	6	19%	0:01:32	0:09:41	0:44:45	5:35:51	0:55:59
	STROKE	0	2	2	6%	0:01:52	0:09:42	0:41:22	1:45:50	0:52:55
	Subtotals for EMS	**0**	**22**	**22**	**69%**	**0:01:51**	**0:09:37**	**0:46:08**	**22:05:37**	**0:57:37**
	ARCING WIRES DOWN POWER LINES	0	1	1	3%	0:01:27	0:05:59	1:14:54	1:22:20	1:22:20
	CAR FIRE	0	1	1	3%	0:02:26	0:09:19	0:54:57	1:06:42	1:06:42
	FIRE ALARM	0	2	2	6%	0:02:34	0:09:05	0:03:22	0:30:02	0:15:01
	FIRE DEPT COMMUNITY RELATIONS	0	1	1	3%	0:01:11	0:13:16	0:14:16	0:28:43	0:28:43
	FIRE OTHER NOT LISTED	0	4	4	13%	0:01:14	0:06:24	0:18:43	1:45:24	0:26:21
	STRUCTURE FIRE	0	1	1	3%	0:01:30	0:10:58	0:10:10	0:22:38	0:22:38
	Subtotals for FIRE	**0**	**10**	**10**	**31%**	**0:01:44**	**0:09:10**	**0:29:24**	**5:35:49**	**0:40:18**
	Totals for 2020	**0**	**32**	**32**	**100%**	**0:01:48**	**0:09:27**	**0:39:51**	**27:41:26**	**0:51:07**
3060	ACCIDENT WITH ENTRAPMENT	0	1	1	11%	0:01:11	0:08:17	1:23:56	1:33:24	1:33:24
	BACK PAIN (NON TRAUMATIC)	0	1	1	11%	0:00:57	0:16:53	1:16:13	1:34:03	1:34:03
	BLEEDING/HEMORRHAGING	0	1	1	11%	0:00:42	0:00:00	0:02:58	0:03:40	0:03:40
	PAIN	0	1	1	11%	0:02:43	0:07:16	1:18:22	1:28:21	1:28:21
	SICK / ILL OR RESCUE	0	1	1	11%	0:01:30	0:16:25	1:24:51	1:42:46	1:42:46
	Subtotals for EMS	**0**	**5**	**5**	**56%**	**0:01:25**	**0:12:13**	**1:05:16**	**6:22:14**	**1:16:27**
	BRUSH FIRE	0	1	1	11%	0:02:01	0:00:00	0:00:00	0:02:03	0:02:03
	CARBON MONOXIDE ALARM	0	1	1	11%	0:02:07	0:19:07	0:35:03	0:56:17	0:56:17
	FIRE ALARM	0	1	1	11%	0:00:39	0:11:16	0:02:02	0:13:57	0:13:57
	STRUCTURE FIRE	0	1	1	11%	0:01:25	0:04:52	0:40:59	0:47:16	0:47:16
	Subtotals for FIRE	**0**	**4**	**4**	**44%**	**0:01:33**	**0:11:45**	**0:26:01**	**1:59:33**	**0:29:53**
	Totals for 3060	**0**	**9**	**9**	**100%**	**0:01:28**	**0:12:01**	**0:50:33**	**8:21:47**	**0:55:45**

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
4070	ABRASIONS BRUISES ETC	0	2	2	2%	0:00:53	0:14:19	0:25:22	1:21:08	0:40:34
	ACCIDENT UNKNOWN INJURIES	0	5	5	4%	0:01:15	0:06:11	1:18:04	7:07:32	1:25:30
	ACCIDENT WITH ENTRAPMENT	1	0	1	1%	0:00:18	0:09:57	0:54:21	1:04:36	1:04:36
	ACCIDENT WITH INJURIES	0	2	2	2%	0:00:44	0:08:33	0:51:11	2:00:56	1:00:28
	ALARM - MEDICAL	0	6	6	5%	0:02:02	0:10:41	0:12:30	2:31:16	0:25:13
	ALLERGIC REACTIONS	0	1	1	1%	0:00:48	0:07:24	0:17:46	0:25:58	0:25:58
	BACK PAIN (NON TRAUMATIC)	0	1	1	1%	0:01:45	0:15:02	0:13:26	0:30:13	0:30:13
	BLEEDING/HEMORRHAGING	0	1	1	1%	0:01:13	0:10:50	2:45:18	2:57:21	2:57:21
	CARDIAC ARREST	0	1	1	1%	0:00:52	0:11:53	2:02:20	2:15:05	2:15:05
	CHEST PAIN	2	3	5	4%	0:01:16	0:09:39	0:53:58	5:13:28	1:02:42
	DIABETIC PROBLEMS	0	3	3	3%	0:01:39	0:22:40	1:05:51	4:30:29	1:30:10
	DIFFICULTY BREATHING	0	13	13	11%	0:01:50	0:09:30	0:49:32	13:11:25	1:00:53
	FALLS AND RELATED INJURIES	0	11	11	9%	0:01:29	0:10:42	0:33:25	7:37:57	0:41:38
	FRACTURES OR BROKEN BONES	0	3	3	3%	0:01:14	0:11:57	1:05:24	3:55:46	1:18:35
	HEART PROBLEMS	0	1	1	1%	0:01:54	0:00:55	1:32:29	1:35:18	1:35:18
	HEAT AND COLD EXPOSURE	0	1	1	1%	0:03:09	0:00:00	0:00:00	0:06:41	0:06:41
	LIFT ASSIST	0	11	11	9%	0:01:20	0:11:09	0:19:04	5:47:12	0:31:34
	PAIN	0	7	7	6%	0:01:22	0:11:12	1:05:43	9:08:09	1:18:18
	PSYCHIATRIC PROBLEMS	0	3	3	3%	0:00:26	0:15:13	0:39:42	2:01:13	0:40:24
	SICK / ILL OR RESCUE	1	16	17	15%	0:01:26	0:08:28	0:59:21	19:28:59	1:08:46
	STROKE	0	5	5	4%	0:01:16	0:08:22	1:05:19	6:14:49	1:14:58
	UNCONSCIOUS OR FAINTING	0	2	2	2%	0:01:20	0:19:20	1:30:38	3:42:35	1:51:18
	WELFARE CHECK	0	1	1	1%	0:00:06	0:14:41	0:28:22	0:43:09	0:43:09
	Subtotals for EMS	**4**	**99**	**103**	**88%**	**0:01:17**	**0:11:18**	**0:57:41**	**103:31:15**	**1:06:30**
	ARCING WIRES DOWN POWER LINES	1	1	2	2%	0:01:12	0:03:47	0:20:57	0:51:50	0:25:55
	BURNING COMPLAINT	0	2	2	2%	0:01:40	0:07:34	0:16:22	0:51:11	0:25:36

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	CAR FIRE	0	1	1	1%	0:01:30	0:05:09	0:34:03	0:40:42	0:40:42
	CARBON MONOXIDE ALARM	0	1	1	1%	0:03:47	0:04:35	0:16:29	0:24:51	0:24:51
	FIRE ALARM	0	6	6	5%	0:01:04	0:10:01	0:02:55	1:05:13	0:10:52
	SMELL OR ODOR OF SMOKE	0	1	1	1%	0:02:26	0:04:17	0:35:13	0:41:56	0:41:56
	STRUCTURE FIRE	0	1	1	1%	0:00:43	0:06:40	0:38:51	0:46:14	0:46:14
	Subtotals for FIRE	**1**	**13**	**14**	**12%**	**0:01:46**	**0:06:00**	**0:23:33**	**5:21:57**	**0:30:52**
	Totals for 4070	**5**	**112**	**117**	**100%**	**0:01:24**	**0:10:01**	**0:49:27**	**108:53:12**	**0:58:11**
5060	ABDOMINAL PAIN	0	4	4	1%	0:01:01	0:09:02	1:23:00	6:12:12	1:33:03
	ABRASIONS BRUISES ETC	0	6	6	2%	0:01:28	0:08:27	0:41:12	4:25:32	0:44:15
	ACCIDENT UNKNOWN INJURIES	0	6	6	2%	0:02:44	0:03:13	0:20:16	1:55:02	0:19:10
	ACCIDENT WITH ENTRAPMENT	0	1	1	0%	0:00:49	0:05:49	2:26:05	2:32:43	2:32:43
	ACCIDENT WITH INJURIES	0	1	1	0%	0:01:14	0:06:28	0:06:05	0:13:47	0:13:47
	ALARM - MEDICAL	0	12	12	4%	0:02:35	0:11:03	0:10:02	4:06:52	0:20:34
	ALLERGIC REACTIONS	1	5	6	2%	0:01:34	0:10:37	0:45:38	5:34:43	0:55:47
	AMPUTATIONS	0	1	1	0%	0:03:03	0:04:12	1:37:27	1:44:42	1:44:42
	BITE	0	1	1	0%	0:00:28	0:00:00	0:00:00	0:04:32	0:04:32
	BLEEDING/HEMORRHAGING	0	4	4	1%	0:01:24	0:11:35	0:38:36	3:26:22	0:51:36
	CARDIAC ARREST	0	3	3	1%	0:01:05	0:07:22	1:03:48	3:36:46	1:12:15
	CHEST PAIN	1	14	15	5%	0:01:23	0:10:17	1:08:37	19:53:55	1:19:36
	CHILD OR ANIMAL LOCKED IN CAR	0	1	1	0%	0:00:04	0:12:29	0:00:05	0:12:38	0:12:38
	CHOKING	0	1	1	0%	0:01:50	0:00:00	0:00:00	0:01:58	0:01:58
	DIABETIC PROBLEMS	0	2	2	1%	0:01:45	0:05:38	0:15:07	0:45:00	0:22:30
	DIFFICULTY BREATHING	0	22	22	8%	0:01:20	0:09:52	1:05:01	26:50:36	1:13:13
	FALLS AND RELATED INJURIES	0	30	30	11%	0:01:17	0:11:34	0:49:23	31:07:22	1:02:15

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	FRACTURES OR BROKEN BONES	0	1	1	0%	0:02:05	0:09:46	1:10:29	1:22:20	1:22:20
	HEART PROBLEMS	0	5	5	2%	0:01:08	0:11:00	0:24:34	3:03:34	0:36:43
	HEAT AND COLD EXPOSURE	0	2	2	1%	0:01:30	0:08:05	0:26:26	0:39:27	0:19:44
	LIFT ASSIST	0	23	23	8%	0:01:15	0:11:44	0:18:53	12:12:56	0:31:52
	MEDIC STANDBY	1	0	1	0%	0:00:10	0:10:15	0:12:01	0:22:26	0:22:26
	OBSTETRICS	0	1	1	0%	0:00:29	0:05:04	1:07:27	1:13:00	1:13:00
	PAIN	0	17	17	6%	0:01:56	0:10:36	0:54:01	18:51:36	1:06:34
	PSYCHIATRIC PROBLEMS	0	1	1	0%	0:00:10	0:16:11	0:33:14	0:49:35	0:49:35
	SEIZURE	0	7	7	3%	0:01:34	0:08:17	1:02:54	8:29:18	1:12:45
	SICK / ILL OR RESCUE	1	46	47	17%	0:01:28	0:09:48	0:56:06	53:08:58	1:07:51
	STROKE	0	6	6	2%	0:01:18	0:10:32	1:23:44	9:33:27	1:35:35
	UNCONSCIOUS OR FAINTING	0	8	8	3%	0:01:51	0:07:30	0:53:13	8:20:38	1:02:35
	WELFARE CHECK	0	4	4	1%	0:00:15	0:10:32	0:31:00	2:47:07	0:41:47
	Subtotals for EMS	**4**	**235**	**239**	**85%**	**0:01:20**	**0:09:11**	**0:48:01**	**233:39:04**	**0:53:35**
	ARCING WIRES DOWN POWER LINES	0	4	4	1%	0:01:32	0:07:51	0:33:15	2:50:30	0:42:38
	BURNING COMPLAINT	0	2	2	1%	0:00:54	0:06:44	0:04:25	0:24:04	0:12:02
	CARBON MONOXIDE ALARM	0	2	2	1%	0:01:03	0:09:33	0:19:04	0:59:20	0:29:40
	FIRE ALARM	0	21	21	8%	0:01:02	0:05:39	0:11:23	5:13:35	0:14:56
	FIRE DEPT COMMUNITY RELATIONS	2	0	2	1%	0:00:03	0:20:02	0:44:23	2:08:53	1:04:27
	FIRE OTHER NOT LISTED	0	1	1	0%	0:01:40	0:06:10	0:05:46	0:13:36	0:13:36
	RUPTURE GAS LINE	0	1	1	0%	0:00:30	0:04:36	1:10:09	1:15:15	1:15:15
	SMELL OR ODOR OF SMOKE	2	1	3	1%	0:01:32	0:07:35	0:16:57	1:09:05	0:23:02
	STANDBY	1	0	1	0%	0:00:01	0:00:00	3:19:53	3:19:54	3:19:54
	STRUCTURE FIRE	0	3	3	1%	0:01:37	0:05:37	0:33:09	2:01:11	0:40:24
	Subtotals for FIRE	**5**	**35**	**40**	**14%**	**0:00:59**	**0:08:12**	**0:43:50**	**19:35:23**	**0:51:35**

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	FIRE TEST CALL	0	1	1	0%	0:00:33	0:00:00	8:40:54	8:41:27	8:41:27
	Subtotals for TEST	**0**	**1**	**1**	**0%**	**0:00:33**	**0:00:00**	**8:40:54**	**8:41:27**	**8:41:27**
	Totals for 5060	**9**	**271**	**280**	**100%**	**0:01:14**	**0:08:56**	**0:59:04**	**261:55:54**	**1:04:30**
SOU	RESCUE MUTUAL AID	0	1	1	100%	0:02:41	0:12:08	1:07:55	1:22:44	1:22:44
	Subtotals for MUTA	**0**	**1**	**1**	**100%**	**0:02:41**	**0:12:08**	**1:07:55**	**1:22:44**	**1:22:44**
	Totals for SOU	**0**	**1**	**1**	**100%**	**0:02:41**	**0:12:08**	**1:07:55**	**1:22:44**	**1:22:44**
SUF	ABRASIONS BRUISES ETC	0	1	1	25%	0:00:32	0:17:56	0:01:25	0:19:53	0:19:53
	Subtotals for EMS	**0**	**1**	**1**	**25%**	**0:00:32**	**0:17:56**	**0:01:25**	**0:19:53**	**0:19:53**
	BACKFILL STATION	0	1	1	25%	0:01:26	0:20:25	3:19:44	3:41:35	3:41:35
	Subtotals for FIRE	**0**	**1**	**1**	**25%**	**0:01:26**	**0:20:25**	**3:19:44**	**3:41:35**	**3:41:35**
	FIRE MUTUAL AID	0	2	2	50%	0:01:22	0:30:49	1:29:31	2:46:38	1:23:19
	Subtotals for MUTA	**0**	**2**	**2**	**50%**	**0:01:22**	**0:30:49**	**1:29:31**	**2:46:38**	**1:23:19**
	Totals for SUF	**0**	**4**	**4**	**100%**	**0:01:07**	**0:23:03**	**1:36:53**	**6:48:06**	**1:48:16**

Isle of Wight County Museum &
Isle of Wight County Historic Resources



July 2024 Report

J.L. England, Museum Director & Isle of Wight County Historic Resources Manager

Isle of Wight County Museum 103 Main Street, Smithfield

- **VISITATION**: 926
- **The museum was closed on Thursday, July 4**.
- **SPECIAL EVENTS**
    - **July 1. Stick with Us to Celebrate National Postage Stamp Day.** Join us as we explore local history represented, sometimes indirectly, by official United States postage stamps. If you are a serious philatelist, amateur collector or just enjoy the beauty and wonderfulness of those small works of art seen daily on letters and other mail items, come out to the museum for an entertaining and educational trip through Isle of Wight County and U.S. history. 8 guests.
    - **July 12. NIGHT AT THE MUSEUM: The World's Oldest Ham's Birthday Sleepover.** Calling all well-loved teddy bears, dogs, unicorns and hippos for a NIGHT AT THE MUSEUM! The World's Oldest Ham's birthday is tomorrow, and he'd like nothing more than to have an evening of fun with some of his friends. Kids are encouraged to put on their PJs and bring their favorite stuffed animal or doll to the museum. Museum staff will read a bedtime story or two before our special guests are tucked in. Kids will head home, but their stuffed animal friends will stay the night. Pick up the overnight guests on the morning of the World's Oldest Ham's birthday while hearing about everyone's adventures. Representatives and books from Blackwater Regional Library will also be here to help us celebrate. 40 guests.
    - **July 13. HAMMY BIRTHDAY: The World's Oldest Ham's 122nd Birthday.** The World's Oldest Ham is turning 122, and as a Swiftie, he's planning to belt out, "I don't know about you, but I'm feeling 22!" at his annual birthday bash. So don your favorite pair of heart sunglasses, and dance down to the Isle of Wight County Museum to celebrate Hammy's birthday with games, the singing of *Hammy Birthday* and the cutting of cake. This is also the launch of our annual Pan Ham photo contest! Representatives and books from Blackwater Regional Library will also be here to help us celebrate. 100 guests.
    - **July 22. LUNCH & LEARN: John Sinclair v. General John Marshall, 1794.** Today is the 230th anniversary of the town's second most dramatic event - the confrontation

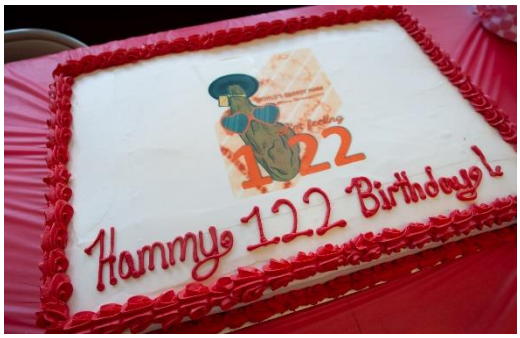












between accused "privateer" John Sinclair and U.S. Cavalry commander John Marshall, future Chief Justice of the U.S. Supreme Court. Join us to learn the details of this locally infamous engagement and then take a short walk down South Church Street to the actual scene of the drama. 27 guests.



- **LIVESTREAMING EVENTS.** We continue to connect with 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:
    - **July 2. LIVE at 12:05: A Ham-ful of Information about Ham**. From the steps of the Todd House, Kathy Mountjoy hosts a discussion of ham to include the World's Oldest Ham, Mallory Todd, the Todd Packing House, razorback hogs and how best to cook a ham. Learn more about the Todd House here in one of our old episodes of Behind These Walls: http://www.youtube.com/watch?v=uASh9cEjoIo...



    - **July 9. LIVE at 12:05: Stories in Stone at Ivy Hill Cemetery**...P.D. Gwaltney Jr. Today's episode with Kathy Mountjoy takes us to Ivy Hill Cemetery for a discussion of ham. Just in time for HAMMY BIRTHDAY: The World's Oldest Ham's 122nd Birthday!



    - **July 11. LIVE at 12:05: Hammy is Feeling 122-ooh-ooh!** The World's Oldest Ham AKA Hammy is turning 122 this weekend and we have plenty of fun in store! Join us at the museum Friday night for a Night at the Museum event. Bring your favorite doll or stuffed animal and tuck them in for a sleepover with Hammy beginning at 6 PM. On Saturday from 1 to 3 PM, join us for cake and a T. Swift's song "22" themed birthday party as Hammy turns (1)22! We will see you there.



    - **July 16. LIVE at 12:05: Stories in Stone at Ivy Hill Cemetery...James C. Sprigg.** James C. Sprigg Jr. owned Smithfield Ham and Products Co. for 56 years. While he had a rocky start, his ingenuity and marketing knowledge rocketed him to success.
    - **July 18. LIVE at 12:05: National Caviar Day.** A fishy discussion of caviar, sturgeon and the caviar business located in Rushmere in the late 1800s.



    - **July 23. LIVE at 12:05: Charles Henry Gray.** Kathy Mountjoy continues our ham theme this month by highlighting Charles Henry Gray. He was a former Smithfield Foods executive and the town's second Black councilman. A Smithfield employee for over 47 years, Charles Henry came up with the recipe while experimenting in his kitchen one night. Today, the ham's specific recipe remains a deeply

guarded secret but it gets its rich mellow flavor from a secret brown sugar seasoning mixture he developed.



- **July 25. LIVE at 12:05: 3D Scans of Artifacts in the Museum's Collection.** Virtual Curation Laboratory of Virginia Commonwealth University visited us last week to scan a few items in our collection. These scans are useful for museums for a number of reasons including having the ability to study objects in depth, for analysis before or after restoration, the ability to improve accessibility for scholars and museum visitors, replication and more. View a number of our scans on Sketchfab: https://shorturl.at/g4rxQ.
- **July 30. LIVE at 12:05: Stories in Ham.** Kathy Mountjoy highlights more Smithfield ham and pork history at the three bronze Lundeen statues of the Luters on the campus of Smithfield Foods.



- **MY ISLE: MEMORIES & RECOLLECTIONS**
  - This video series, launched in 2023, features residents and family members sharing stories of Isle of Wight County. **Airing on July 30 was Sidney Murphy on Trump Town Road.** View all episodes in this series on our YouTube Channel, Facebook page or website: www.historicisleofwight.com/my-isle-memories-and-reflections.html.

MY ISLE Memories & Recollections
Isle Of Wight County Museum
SMITHFIELD, VIRGINIA

- **BEHIND THESE WALLS**
  - This video series, launched in 2020, allows some of the county's most interesting structures to share their stories. View all episodes in this series on our YouTube Channel, Facebook page or website: www.historicisleofwight.com/behind-these-walls.html. **Currently in production is a feature on Sycamore Cross.**

Behind These Walls

- **GROUPS/TOURS/PROGRAMS**
  - July 11. Noble Care, Portsmouth. 3 guests.
  - July 29. Noble Care, Portsmouth. 4 guests.
- **GIFT SHOP**
  - Annual inventory was completed and sent to Budget/Finance.
  - New stock was ordered to include books, wooden bowls, pasta, etc.



- **EXHIBIT/PROJECT UPDATE**
  - **Historic Smithfield.** Awaiting installation of the Sinclair sign on South Church Street.
  - **Sprigg Wing, Phase II: Crops, Trade & Merchants.** The new timeline is in production!
  - **First Residents.** Awaiting mounting of longleaf pine tree branches.
  - **Civil War Trails.** A new sign at Fort Boykin is in production.
  - **Local Treasures**. Currently on display is the collection of **Robert Cox** showcasing artifacts recovered from one of Isle of Wight County's

early courthouses, the **Mount Holly Courthouse**. This exhibit concept displays the private collections of Isle of Wight County residents and/or those with a local connection. For more information and applications: www.historicisleofwight.com/local-treasures.html.

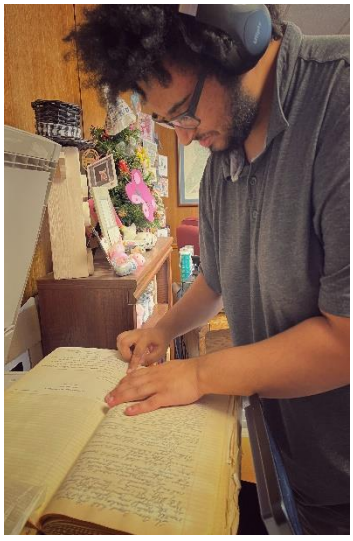
- **English Telephone Box**. Dishman Fabrications LLC of Yorktown installed the door and glass. Next step is the flooring, exhibit production and installation.
- **Steamboats & Life on the Water; Unusual Objects; Vietnam War Veterans in Isle of Wight County: Online Exhibit; Unsung Heroes of Isle of Wight County: Online Exhibit.** Under development.
- **ISLE Be Home for Christmas.** This book project is collecting photographs, postcards, stories, mementos, songbooks, recipes and more that detail the holiday season in Isle of Wight County. To be published in November 2024.
- **Nike-Ajax N-75.** A book about the former missile battery in Carrollton is in production. To be published in 2024.
- **Riverside Smithfield Hospital.** Concept designs were presented to Riverside on July 17.







- **ARTIFACTS**
  - On July 12, Virtual Curation Laboratory of Virginia Commonwealth University visited to 3D-scan a few objects in our collection including a circa 1835 plate from Four Square Plantation, the last Genuine Smithfield Ham and a 17th century butchered wolf femur.
  - Donations included photographs, jars, tools and a chunk of wood from the former Jericho Bridge.
  - Town of Smithfield Records. Digitization has begun. The first of eight books is complete. Books 2, 3 and 4 are in progress.
- **STAFF TRAINING AND REQUIREMENTS**
  - None.



Financials

• Gift Shop Sales:	$ 1,764.26
• Gift Shop Tax:	$ 105.97
• Donations:	$ 0.00
• Admission:	$ 1,067.00
• Program/Lecture Fees:	$ 0.00
Total Monthly Deposit:	**$ 2,937.23**

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. Our segments which are 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: 3.7K likes and 4.7K followers. Daily posts.
- **Facebook:** World's Oldest Ham: 323/342 likes/followers. Semi-weekly posts.
- **Facebook:** Town of Smithfield. Periodic posts, responses and maintenance.
- **Twitter.** @WorldsOldestHam. The world's oldest ham has his own account. 1,456 followers.
- **Instagram.** @Isleofwightcountymuseum. 1,154 followers.
- **YouTube.** Isle of Wight County Museum. 206 subscribers.
- **Google Reviews.** 4.7/5 overall rating.
- **TripAdvisor.** 4.5/5 star overall rating.
- **Yelp.** 4.5/5 star overall rating.
- **Foursquare/Swarm.** 7.3/10 rating.
- **EarthCam/HamCam.** Streaming views from March 28 through June 3: 101,203.



Media Coverage/Promotion/Advertising/Lobbying

- Various pieces in area publications to include calendars and events.
- **July 3. *Smithfield Times*.** Article: Commemorating 250 Years of Freedom: Livestock…Building Herds, Building Stock.
- **July 10: WAVY-TV 10, The Hampton Roads Show**. The Hampton Roads Show: Community Connection: Celebrating the World's Oldest Ham - https://www.wavy.com/hr-show/community-connection/community-connection-celebrating-the-worlds-oldest-ham/
- **July 10: *Gloucester-Mathews Gazette Journal***. Article: World's Oldest Ham celebrates 122nd birthday - https://www.gazettejournal.net/worlds-oldest-ham-celebrates-122nd-birthday/
- **July 14. 13 News Now**. Segment, YouTube: World's oldest ham turns 122 - https://www.youtube.com/watch?v=lSVT5rIw_-E and https://www.13newsnow.com/video/news/local/isle-of-wight-county/worlds-oldest-ham-turns-122-6p/291-358f9d75-5862-4156-8a91-1c69b467ff43

- **July 15: *Smithfield Times***. Article and online: Feeling 122: World's Oldest Ham celebrates 'birthday' - https://www.smithfieldtimes.com/2024/07/15/feeling-122-worlds-oldest-ham-celebrates-birthday/
- **July 17: *Smithfield Times***. Cutline: One for the ages (VCU 3D-scans the last Genuine Smithfield Ham); Cutline: Letting freedom ring.
- **July 31: *Smithfield Times***. Article: A rock of ages: Benn's 100-year history preserved in a cornerstone; Cutline: Channeling John Sinclair.

Outreach Lectures & Events

- July 18. Isle of Wight County Parks and Recreation RISE Junior Summer Camp, Carrollton Elementary School. Theme: Spices. 12 students.
- July 24. Isle of Wight County Parks and Recreation Summer Blast Summer Camp, Windsor Town Center. Theme: Pigs and Everything But the Squeal. 35 students.
- July 26. Isle of Wight County Parks and Recreaction Summer Blast Summer Camp, Carrollton-Nike Park. Theme: Pigs and Everything But the Squeal. 45 students.
- July 29. Princess Anne Camp 484, Sons of Confederate Veterans, Viriginia Beach. Theme: Civil War Foodstuffs. 40 guests.









Windsor Castle 705 Cedar Street, Smithfield

- **July 23. Bookworm Discoveries at Windsor Castle Park**. Join the Blackwater Regional Library and Isle of Wight County Museum at Windsor Castle Park for outdoor programming featuring themes of agriculture, nature and bugs! This fun and free opportunity to learn a little local history with STEAM themes while enjoying some fresh air and the chance to check out some books is perfect for bookworms of all ages. Theme: Exercise. 20 guests.



Fort Boykin 7410 Fort Boykin Trail, Isle of Wight County

- No updates.

Fort Huger 15080 Talcott Terrace, Isle of Wight County

- No updates.

Nike-Carrollton Park 13036 Nike Park Road, Carrollton

- **Nike-Ajax Missile Restoration.** Isle of Wight County Public Utilities is at work on the site plan for the missile. ECS Mid-Atlantic LLC completed the subsurface exploration, laboratory testing and geotechnical engineering analyses.

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: 2
- **July 6. 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, 17146 Monument Circle, Isle of Wight. 6 guests.

Meetings

- July 16. Town of Smithfield staff meeting.
- July 25. Benedict Arnold Campaign.

Other Events & Notable Information

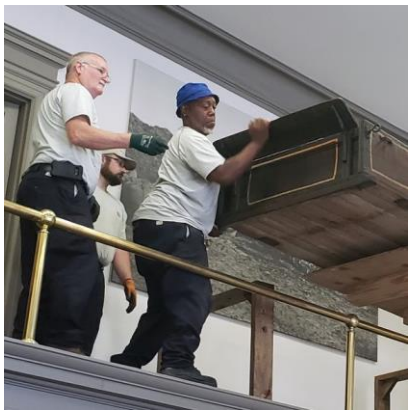
- **Volunteer Hours**: 209
- **Isle of Wight County Museum Economic Impact Survey for July 2024:**
  37.5% made a gift shop purchase
  57.6% indicated that they had lunch/dinner plans in Smithfield/Isle of Wight County
  68.4% indicated that they were planning to or had already shopped in Smithfield/Isle of Wight County
- **Isle of Wight County Department of Community Development & Planning**
  - Reviews for the following projects:
    - Oak Level Acres, Conditional Use Permit, CUP-6-24.

        - Garage Ministry Religious Assembly, CSUP-24-1.
        - Bryant Farms Wetland Restoration Project, PRE-24-3
- **Town of Smithfield Department of Community Development & Planning**
    - No updates.
- **Virginia American Revolution 250 Commission**
    - **July 4. Bell Ringing**. The Virginia American Revolution 250 Commemoration invited all Virginians to join in a statewide Independence Day bell-ringing ceremony as America gears up to celebrate its 250th birthday. Isle of Wight County rang its courthouse bell at 17130 Monument Circle thirteen times to symbolize the original thirteen colonies.



    - July 17. Quarterly locality meeting.
    - Smithfield Times Article Series: 2024-2026. Published July 3 was ***Commemorating 250 Years of Freedom:*** *Livestock…Building Herds, Building Stock.*
- **The Schoolhouse Museum**
    - No updates.
- **Ivy Hill Cemetery**
    - No updates.
- **Special Thanks to our Co-Workers**
    - Isle of Wight County Public Works has started the new fiscal year off with a bang at the Isle of Wight County Museum to include the refinishing and repairs of our basement flooring, the analysis and repairs to walls and the moving of a very heavy wagon in the museum's collection to the balcony.





Safety & Repairs

- July 11. Town of Smithfield Safety Committee meeting.

Selections from Our Website and Social Media

World's Oldest Ham @Worldsoldestham · Jul 7

Shark Week begins today. There are a few lurking around the museum! #SharkWeek



World's Oldest Ham @Worldsoldestham · Jul 26

The party continues! I continue to receive birthday cards for my 122nd birthday party! #BirthdayCelebration



ISSUE:

Application (CUP-8-23) of Sycamore Cross Solar, LLC, Applicant, for a Conditional Use Permit for a Major Utility Service, Specifically a 214 MW Utility-Scale Solar Energy Generation Facility and a Medium Voltage Line Known as Sycamore Cross A, on Approximately 1,795 Acres Located on Mill Swamp Road (Rte. 621) in the Rural Agricultural Conservation Zoning District as well as an Associated Application to Withdraw Approximately 860 Acres from the Moonlight Agricultural and Forestal District

BACKGROUND:

Sycamore Cross Solar, LLC has submitted an application for a Conditional Use Permit for a major utility service, specifically a 214 MW utility-scale solar energy generation facility and a medium voltage line known as Sycamore Cross A, on approximately 1,795 acres located on Mill Swamp (Rte. 621) on tax map numbers 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, and 27-01-004 in the Rural Agricultural Conservation zoning district as well as an associated application to withdraw approximately 860 acres that are part of tax map numbers 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 and 17-01-011 from the Moonlight Agricultural and Forestal District.

There are fourteen different parcels that are part of the proposed Sycamore Cross A utility scale solar energy generation facility project area which is adjacent to both Surry County on the north and Southampton County on the west. The project area is generally bounded by Surry County to the north, the Blackwater River and Southampton County to the west, White Hill Trail, Ramsey Road, and Mill Swamp Road on the east, and Rattlesnake Trail on the south. The project will have frontage on Mill Swamp Road (Rte. 621), Sycamore Cross Drive (Rte. 622), Ramsey Road (Rte. 622), Proctors Bridge Road (Rte. 621), White Hill Trail (Rte. 623), and Rattlesnake Trail (Rte. 646). The project area is adjacent to agricultural and forestal lands and single-family residences. The project lies approximately 2.5 miles west of the existing Cavalier Solar Project and the associated proposed Sycamore Cross B solar facility project area. Property location and proximity maps are attached to this staff report.

The proposed Sycamore Cross A solar project will consist of a 214 MW solar energy generation facility on 1,795 acres across thirteen parcels with one medium voltage easement-only parcel. The project will consist of solar photovoltaic

modules on a single axis tracker system and associated electrical equipment. The Project will utilize an existing substation location shared with the Cavalier Solar facility.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising Sycamore Cross A to the project's collector substation. The Sycamore Cross project is using the same utility corridor as Cavalier Solar. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar facility and that will interconnect the project's substation with the VEPCO Septa 500 kV Substation. The applicant states that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. These improvements are being completed as part of the Cavalier facility. As part of the site construction activities, one house is proposed for demolition at 14195 Rattlesnake Trail which was built in 1950. The applicant states that other structures may be considered for demolition to accommodate the final design of the solar facility, although none have been specifically identified in this application.

The project will serve the PJM (Pennsylvania-Jersey-Maryland) wholesale market. The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. The maximum facility output for both projects is 240 MW, which is also referred to as the "installed capacity", and the total project has rights to inject the full 240 MW into the grid. A redacted version of the interconnection service agreement is attached to the staff report.

The application anticipates construction of the project to begin in Spring 2025 and completed by the end of 2026. Construction activity is proposed between the hours of 7 a.m. and 7 p.m., Monday through Saturday.

This application accompanies the Sycamore Cross B solar energy generation facility CUP application, therefore the supporting studies cover both applications. Staff assessed the application for its consistency with the County's plans and ordinances as well as potential impacts to natural and cultural resources, public facilities and services. Unless otherwise noted, the following summary of the projected benefits, potential impacts and any mitigation measures proposed by the applicant cover both applications.

Public Facility Impacts:

The impacts of the proposed facility on public roads will occur primarily during construction and will be minimal once the use is established. In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by

construction traffic and noise generation.

The applicant has provided a proposed construction transportation route which has been reviewed by the Virginia Department of Transportation (VDOT), and they stated they had no concerns. The construction traffic route alternative plan is attached to the staff report.

The applicant has submitted three options for proposed construction traffic routes, each of which includes escorted heavy haul routes, a delivery route, and anticipated employee commuter routes. Sycamore Cross has suggested a preferred delivery route using Proctor's Bridge (Rte. 616) from Route 460 in Southampton County to Proctor's Bridge (Rte. 621) in Isle of Wight to a main staging area within the project site. From the staging area, deliveries will be escorted to various project areas on the local road network and back to the staging area. Factors used to determine Sycamore Cross Solar's preferred routing includes traffic counts, road characterizations as defined by VDOT, bridge capacities, road widths, current road conditions, challenges based on superelevation, and proximity to residences. The applicant states that construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

Staff expressed concerns to the applicant in regard to the narrowness of all three proposed routes as well as bridge capacity, lack of shoulders or passing areas, and proximity to residences. The roads surrounding the project site are not well suited to construction traffic. In addition, staff recommends that no construction should occur on Sundays by any party involved with the project, to include the solar developer, its contractors, and Dominion Energy contractors and that deliveries and hauling activities should occur outside of school bus traffic times.

Environmental Assessment:

The project lies within the Blackwater River watershed area and contains several types of sensitive environmental features, including wetlands, streams, and floodplains. According to the information the Department of Conservation and Recreation (DCR), 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 83, which represents a site of high

significance.

A wetland delineation performed by the applicant shows 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features located within the fenced area of the project. The applicant states they will continue to avoid and minimize impacts to these features through the site plan design phase of the project.

Review comments from DCR reveal there is a potential for rare and threatened species such as the Barking treefrog and the Eastern Big Eared Bat to occur in the project area. The proposed project will impact one or more ecological cores with very high (C2) to outstanding (Cl) ecological integrity.

Ecological core areas are classified into five categories of ecological integrity: C1 – Outstanding; C2 – Very High; C3 – High; C4 – Moderate; and C5 – General. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also increase for those cores and habitat fragments that contribute to water quality enhancement. In general, larger, more biologically diverse areas are given higher scores. DCR recommends avoidance of impacts to cores. However, when avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

According to the applicant, approximately 77 acres of very high value ecological cores, 32 acres of high value ecological cores, 3.3 acres of moderate value ecological cores, and 423.7 acres of general value ecological cores may be impacted by the Project. The Project does not intersect any outstanding value ecological cores. The applicant states that they have made a concerted effort to minimize impacts wherever possible.
Further investigation of these impacts is recommended and DCR-ONH can conduct a formal impact analysis upon request. This analysis would estimate impacts to cores and habitat fragments, providing an estimate of the total acreage of direct and indirect impacts of the project. A copy of DCR's review comments are attached to this letter.

The applicant's environmental assessment also identified the project's potential impacts to important forestland in the area. The Forest Conservation Value (FCV) model was designed by the Virginia Department of Forestry to identify forestland with the highest priority for conservation within Virginia with the intent to maximize the conservation efforts to the highest quality, most productive, and most vulnerable forestland within Virginia (DCR 2021). The classifications of the

values range from average to outstanding, indicating the value of forestlands for conservation (DCR 2021). The DCR FCV model indicated that approximately 1,254 acres of the Project study area were mapped as forest with approximately 213 acres categorized as outstanding priority for conservation, 293 acres as very high, and 384 acres categorized as high priority forestland for conservation.

Based on the current design of the project, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted. The applicant states they will consult with DCR in connection with the potential impact of outstanding, very high, and high value forestland.

When considering soil classifications inside the fence of the project, the project's environmental assessment states the USDA NRCS Web Soils Survey was queried to identify soils classified as prime approximately 895 acres of prime farmland soils were identified, an additional 433 acres are classified as prime farmland if drained, and approximately 109 acres of farmland of statewide importance were identified within the Project study area.

Based on the current design of the project, approximately 614 acres of prime farmland (26% of the Project study area), 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be impacted.

Staff has concerns with regard to the potential impacts to highly important environmental resources such as the Pouches Swamp stream conservation unit area and ecological core areas. Staff would recommend that no impacts be permitted to the stream conservation unit area, the C1-C3 ecological core areas, or the priority forest areas. In addition, staff would recommend that the applicant be required to conduct a formal impact analysis within the project area with DCR as recommended. A copy of the environmental impact assessment is attached to this report.

Historical Resources Assessment:

The applicant conducted a Phase IA archeological assessment of the project area, and it is attached to this report. Review comments from both the County's historic resources staff at the Isle of Wight County Museum as well as the Virginia Department of Historic Resources (VDHR) are also attached. Both agencies recommend that additional investigation is needed for the project site due to the high probability of archeological resources in the vicinity and known archeological

and architectural resources in the area.

As of the date of this staff report, the applicant confirmed that their cultural team has wrapped up field work and are working on a Phase IB report. The Phase IB survey is used to determine the presence or absence of cultural resources in the probable impact areas. The areas to be subjected to testing are selected on the basis of the data gathered in the Phase IA evaluation and the probable locations of ground disturbing activities. They have stated that they will share it with County staff, County Museum staff, and SCC staff along with submitting the report to VDHR for concurrence on findings and mitigating measures. They likely won't have that final report for another few weeks, so it is not possible to determine impacts to historical resources at this time.

Economic Impact Assessment:

According to the applicant's economic impact analysis, both Sycamore Cross A and Sycamore Cross B together encompass approximately 1,030 acres of active project area. The economic impact assessment states the projects will generate seven direct and indirect jobs in both Isle of Wight and Surry Counties, however, the report does not state whether they are permanent or full time jobs.

The report states that the project would involve an investment of $402.5 million in capital equipment and improvements to the existing property within Isle of Wight County. Both Sycamore Cross Solar projects would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million with the siting agreement in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use, representing a 29- to 39-fold increase over current use revenues. This is assuming the actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.

The applicant states that the 891 acres, or 35.8% of the project site, is currently used for crop production. This includes 221 acres of corn, 40 acres of cotton, 433 acres for soybeans, and 197 acres for peanuts.

According to the 2022 Census of Agriculture (USDA-NASS), Isle of Wight County has 212 farms totaling 80,316 aces of land. The average farm size is 379 acres. The average annual market value of agricultural products sold per farm is $346,011. Using the same data to derive market values for crops cultivated on 891 acres within the fenced area of this project, the farmland generates an estimated

$813,483 in market value.

Currently, agriculture and silviculture are two of the County's top industries. Both Sycamore Solar facilities together would be the tenth solar energy generation facility in the County and represents a subtraction of approximately 1.28% of the County's cultivated land (USDA-NASS, 2017). A table showing the previously approved and proposed solar energy facilities is attached to the staff report.

Viewshed Analysis:

The applicant provided several viewshed renderings comparing how the existing site looks currently to what it would look immediately after the landscaping buffers are planted and again at the time of maturity. The analysis includes perspectives from each of the project's road frontages. Current ordinance requirements include three rows of staggered landscaping along all street frontages and adjacent to residential properties and properties with historical and cultural significance. The viewshed perspective renderings are included as an attachment to the staff report.

According to County records, the fourteen properties associated with the project have historically been used for agricultural and forestal district. The general vicinity of the project is rural in nature with a few single family homes located on larger agricultural parcels. According the applicant, 891 acres of the project site area is currently used for crop production. While none of the properties are being used for livestock, the easement only parcel belongs to Carrolls Food of Virginia, LLC which is engaged in livestock production.

Several of the properties are within the Moonlight Agricultural and Forestal District. The Agricultural and Forestal Advisory Committee met on April 3, 2024, to consider the requests by the property owners of tax map numbers 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 and 17-01-011 to withdraw 860 acres from the Moonlight Agricultural and Forestal District. The Committee voted to recommend denial of the request by a vote of four members in favor of the motion and zero voting against (4-0).

A full analysis of the application's consistency with the County's Plans and Ordinances is included in the attached staff report. Staff identified the following strengths and weaknesses of the application:

Strengths:

1. The proposed use will generate additional nonresidential tax revenue for

needed public services and facilities.

Weaknesses:

1. The proposed use would remove agricultural land from production.
2. Temporary impact to residential development in the area from construction traffic and noise is expected during the construction phase.
3. The project may create impacts to archeological and architectural resources pending final study.
4. The project will impact identified ecological core areas, priority forest land, and prime farm soils.
5. Approval of the project would result in a multiplicity and saturation of similar uses other solar energy generation facilities nearby.
6. With no to minimal shoulders and deep ditches at several points along the proposed transportation route there may be safety issues that arise as construction vehicles meet along the route.
7. Due to poor transportation route alternatives and impacts to environmentally sensitive areas, the project's proposed location is not well suited and therefore is not consistent with the recommendations of the Comprehensive Plan.

Project Update as of August 5, 2024:

Following the July 11, 2024, regular meeting, the Board of Supervisors continued their discussion of the application until the next available regular meeting in order to obtain additional information on the ongoing noise study results, feedback from the Smithfield Volunteer Fire Department, proposed restrictions on construction traffic during school pick up and drop off times, and the component materials of the solar panels to be used onsite. The applicant will provide this information at the August 15, 2024, Board meeting.

The Board also requested that both staff's recommended conditions as well as the suggested changes from the applicant be combined in one document. The revised conditions dated August 7, 2024, are attached to this staff report.

The applicant submitted a Phase I archeological and architectural study on July 26, 2024. The new study is attached to this staff report.

Of the surveyed architectural resources, four are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated

dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century.

Of the surveyed archeological resources, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area

The study recommends screening and buffering to minimize visual impacts and disturbance for these resources. The report has been submitted to VDHR for review and concurrence. Any components of the proposed solar facility will require a 250 foot setback from any architectural and archeological resources that are potentially eligible for listing or require additional investigation. VDHR will make the final determination of which resources are eligible for listing or are recommended for additional investigation.

BUDGETARY IMPACT:

TBD

RECOMMENDATION:

The Planning Commission voted to recommend denial of the application by a vote of eight in favor of the recommendation and two voting against the motion (8-2).

Based on the identified weaknesses, staff also recommends denial of the Conditional Use Permit and the Moonlight AFD withdrawal request. However, should the CUP and withdrawal be approved staff recommends the following conditions:

1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2) The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.
3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended.
4) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.

5) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility.
8) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times.
9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project.
11) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are "Tier 1" modules, as established by the most recent "PV Module Tier 1 List" issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of

operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Planning Commission Staff Report	Backup Material	7/1/2024
Sycamore Cross A Application	Backup Material	5/17/2024
Project Narrative	Backup Material	5/17/2024
Sycamore Cross A Concept Plan	Backup Material	5/17/2024
Proximity Map to Cavalier	Backup Material	5/17/2024
Interconnect Agreement	Backup Material	5/17/2024
Construction traffic route alternative map	Backup Material	5/17/2024
DCR Review Letter	Cover Memo	5/19/2024
Environmental Assessment	Backup Material	5/20/2024
Phase IA Historical Resources Survey	Backup Material	5/20/2024
VDHR Comments	Backup Material	5/20/2024
Isle of Wight Museum Comments	Backup Material	5/20/2024
Economic Analysis	Backup Material	5/20/2024
Commissioner of Revenue Comments	Cover Memo	5/20/2024
Sycamore Cross A&B Farmland Table	Backup Material	5/20/2024
Viewshed Impact Analysis	Backup Material	5/20/2024
Ordinance	Ordinance	7/1/2024
Phase I historic resource study	Backup Material	8/5/2024
Revised Conditions Redline as of 8/7/24	Backup Material	8/7/2024
Final Revised Conditions 8/7/24	Backup Material	8/7/2024

PLANNING REPORT

APPLICATION:

Application (CUP-8-23) of Sycamore Cross Solar, LLC, applicant, for a Conditional Use Permit for a major utility service, specifically a 214 MW utility-scale solar energy generation facility and a medium voltage line known as Sycamore Cross A, on approximately 1,795 acres located on Mill Swamp (Rte. 621) on tax map numbers 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, and 27-01-004 in the Rural Agricultural Conservation zoning district as well as an associated application to withdraw approximately 860 acres that are part of tax map numbers 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 and 17-01-011 from the Moonlight Agricultural and Forestal District.

ELECTION DISTRICT:

D5

LOCATION:

There are fourteen different parcels that are part of the proposed Sycamore Cross A utility scale solar energy generation facility project area which is adjacent to both Surry County on the north and Southampton County on the west. The project area is generally bounded by Surry County to the north, the Blackwater River and Southampton County to the west, White Hill Trail, Ramsey Road, and Mill Swamp Road on the east, and Rattlesnake Trail on the south. The project will have frontage on Mill Swamp Road (Rte. 621), Sycamore Cross Drive (Rte. 622), Ramsey Road (Rte. 622), Proctors Bridge Road (Rte. 621), White Hill Trail (Rte. 623), and Rattlesnake Trail (Rte. 646). The project area is adjacent to agricultural and forestal lands and single-family residences. The project lies approximately 2.5 miles west of the existing Cavalier Solar Project and the associated proposed Sycamore Cross B solar facility project area. Property location and proximity maps are attached to this staff report.

BACKGROUND:

According to County records, the fourteen properties associated with the project have historically been used for agricultural and forestal district. The general vicinity of the project is rural in nature with a few single family homes located on larger agricultural parcels. According the applicant, 891 acres of the project site area is currently used for crop production. While none of the properties are being used for livestock, the easement only parcel belongs to Carrolls Food of Virginia, LLC which is engaged in livestock production.

Several of the properties are within the Moonlight Agricultural and Forestal District. The Agricultural and Forestal Advisory Committee met on April 3, 2024, to consider the requests by the property owners of tax map numbers 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 and 17-01-011 to withdraw 860

acres from the Moonlight Agricultural and Forestal District. The Committee voted to recommend denial of the request by a vote of four members in favor of the motion and zero voting against (4-0).

DESCRIPTION:

The proposed Sycamore Cross A solar project will consist of a 214 MW solar energy generation facility on 1,795 acres across thirteen parcels with one medium voltage easement-only parcel. The project will consist of solar photovoltaic modules on a single axis tracker system and associated electrical equipment. The Project will utilize an existing substation location shared with the Cavalier Solar facility.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising Sycamore Cross A to the project's collector substation. The Sycamore Cross project is using the same utility corridor as Cavalier Solar. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar facility and that will interconnect the project's substation with the VEPCO Septa 500 kV Substation. The applicant states that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. These improvements are being

completed as part of the Cavalier facility. As part of the site construction activities, one house is proposed for demolition at 14195 Rattlesnake Trail which was built in 1950. The applicant states that other structures may be considered for demolition to accommodate the final design of the solar facility, although none have been specifically identified in this application.

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This application accompanies the Sycamore Cross B solar energy generation facility CUP application, therefore the supporting studies cover both applications. Staff assessed the application for its consistency with the County's plans and ordinances as well as potential impacts to natural and cultural resources, public facilities and services. Unless otherwise noted, the following summary of the projected benefits, potential impacts and any mitigation measures proposed by the applicant cover both applications.

Public Facility Impacts:

The impacts of the proposed facility on public roads will occur primarily during construction and will be minimal once the use is established. In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by construction traffic and noise generation.

The applicant has provided a proposed construction transportation route which has been reviewed by the Virginia Department of Transportation (VDOT), and they stated they had no concerns. The construction traffic route alternative plan is attached to the staff report.

The applicant has submitted three options for proposed construction traffic routes, each of which includes escorted heavy haul routes, a delivery route, and anticipated employee commuter routes. Sycamore Cross has suggested a preferred delivery route using Proctor's Bridge (Rte. 616) from Route 460 in Southampton County to Proctor's Bridge (Rte. 621) in Isle of Wight to a main staging area within the project site. From the staging area, deliveries will be escorted to various project areas on the local road network and back to the staging area. Factors used to determine Sycamore Cross Solar's preferred routing includes traffic counts, road characterizations as defined by VDOT, bridge capacities, road widths, current road conditions, challenges based on superelevation, and proximity to residences. The applicant states that construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

Staff expressed concerns to the applicant in regard to the narrowness of all three proposed routes as well as bridge capacity, lack of shoulders or passing areas, and proximity to residences. The roads surrounding the project site are not well suited to construction traffic. In addition, staff recommends that no construction should occur on Sundays by any party involved with the project, to include the solar developer, its contractors, and Dominion Energy contractors and that deliveries and hauling activities should occur outside of school bus traffic times.

Environmental Assessment:

The project lies within the Blackwater River watershed area and contains several types of sensitive environmental features, including wetlands, streams, and floodplains. According to the information the Department of Conservation and Recreation (DCR), 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 B3, which represents

occurrences they contain. The Pouches Creek SCU has been given a biodiversity ranking of B3, which represents a site of high significance.

A wetland delineation performed by the applicant shows 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features located within the fenced area of the project. The applicant states they will continue to avoid and minimize impacts to these features through the site plan design phase of the project.

Review comments from DCR reveal there is a potential for rare and threatened species such as the Barking treefrog and the Eastern Big Eared Bat to occur in the project area. The proposed project will impact one or more ecological cores with very high (C2) to outstanding (Cl) ecological integrity.

Ecological core areas are classified into five categories of ecological integrity: C1 – Outstanding; C2 – Very High; C3 – High; C4 – Moderate; and C5 – General. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also increase for those cores and habitat fragments that contribute to water quality enhancement. In general, larger, more biologically diverse areas are given higher scores. DCR recommends avoidance of impacts to cores. However, when avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

According to the applicant, approximately 77 acres of very high value ecological cores, 32 acres of high value ecological cores, 3.3 acres of moderate value ecological cores, and 423.7 acres of general value ecological cores may be impacted by the Project. The Project does not intersect any outstanding value ecological cores. The applicant states that they have made a concerted effort to minimize impacts wherever possible.

Further investigation of these impacts is recommended and DCR-ONH can conduct a formal impact analysis upon request. This analysis would estimate impacts to cores and habitat fragments, providing an estimate of the total acreage of direct and indirect impacts of the project. A copy of DCR's review comments are attached to this letter.

The applicant's environmental assessment also identified the project's potential impacts to important forestland in the area. The Forest Conservation Value (FCV) model was designed by the Virginia Department of Forestry to identify forestland with the highest priority for conservation within Virginia with the intent to maximize the conservation efforts to the highest quality, most productive, and most vulnerable forestland within Virginia (DCR 2021). The classifications of the values range from average to outstanding, indicating the value of forestlands for conservation (DCR 2021). The DCR FCV model indicated that approximately 1,254 acres of the Project study area were mapped as forest with approximately 213 acres categorized as outstanding priority for conservation, 293 acres as very high, and 384 acres categorized as high priority forestland for conservation.

Based on the current design of the project, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted. The applicant states they will consult with DCR in connection with the potential impact of outstanding, very high, and high value forestland.

When considering soil classifications inside the fence of the project, the project's environmental assessment states the USDA NRCS Web Soils Survey was queried to identify soils classified as prime approximately 895 acres of prime farmland soils were identified, an additional 433 acres are classified as prime farmland if drained, and approximately 109 acres of farmland of statewide importance were identified within the Project study area.

Based on the current design of the project, approximately 614 acres of prime farmland (26% of the Project study area), 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be impacted.

Staff has concerns with regard to the potential impacts to highly important environmental resources such as the Pouches Swamp stream conservation unit area and ecological core areas. Staff would recommend that no impacts be permitted to the stream conservation unit area, the C1-C3 ecological core areas, or the priority forest areas. In addition, staff would recommend that the applicant be required to conduct a formal impact analysis within the

project area with DCR as recommended. A copy of the environmental impact assessment is attached to this report.

Historical Resources Assessment:

The applicant conducted a Phase IA archeological assessment of the project area, and it is attached to this report. Review comments from both the County's historic resources staff at the Isle of Wight County Museum as well as the Virginia Department of Historic Resources (VDHR) are also attached. Both agencies recommend that additional investigation is needed for the project site due to the high probability of archeological resources in the vicinity and known archeological and architectural resources in the area.

As of the date of this staff report, the applicant confirmed that their cultural team has wrapped up field work and are working on a Phase IB report. The Phase IB survey is used to determine the presence or absence of cultural resources in the probable impact areas. The areas to be subjected to testing are selected on the basis of the data gathered in the Phase IA evaluation and the probable locations of ground disturbing activities. They have stated that they will share it with County staff, County Museum staff, and SCC staff along with submitting the report to VDHR for concurrence on findings and mitigating measures. They likely won't have that final report for another few weeks, so it is not possible to determine impacts to historical resources at this time.

Economic Impact Assessment:

According to the applicant's economic impact analysis, both Sycamore Cross A and Sycamore Cross B together encompass approximately 1,030 acres of active project area. The economic impact assessment states the projects will generate seven direct and indirect jobs in both Isle of Wight and Surry Counties, however, the report does not state whether they are permanent or full time jobs.

The report states that the project would involve an investment of $402.5 million in capital equipment and improvements to the existing property within Isle of Wight County. Both Sycamore Cross Solar projects would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million with the siting agreement in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use, representing a 29- to 39-fold increase over current use revenues. This is assuming the actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.

The applicant states that the 891 acres, or 35.8% of the project site, is currently used for crop production. This includes 221 acres of corn, 40 acres of cotton, 433 acres for soybeans, and 197 acres for peanuts.

According to the 2022 Census of Agriculture (USDA-NASS), Isle of Wight County has 212 farms totaling 80,316 aces of land. The average farm size is 379 acres. The average annual market value of agricultural products sold per farm is $346,011. Using the same data to derive market values for crops cultivated on 891 acres within the fenced area of this project, the farmland generates an estimated $813,483 in market value.

Currently, agriculture and silviculture are two of the County's top industries. Both Sycamore Solar facilities together would be the tenth solar energy generation facility in the County and represents a subtraction of approximately 1.28% of the County's cultivated land (USDA-NASS, 2017). A table showing the previously approved and proposed solar energy facilities is attached to the staff report.

Viewshed Analysis:

The applicant provided several viewshed renderings comparing how the existing site looks currently to what it would look immediately after the landscaping buffers are planted and again at the time of maturity. The analysis includes perspectives from each of the project's road frontages. Current ordinance requirements include three rows of staggered landscaping along all street frontages and adjacent to residential properties and properties with historical and cultural significance. The viewshed perspective renderings are included as an attachment to the staff report.

COMPREHENSIVE LAND USE PLAN:

The future recommended land use designation for these properties is Rural Agricultural Conservation (RAC) and Environmental Conservation (EC) under the adopted Comprehensive Plan. Appropriate uses for the RAC land use designation include agriculture, horticulture, forest lands, and scattered low-density residential uses. Other uses such as resource extraction and utility-scale solar facilities are also permitted when appropriately sited. Appropriate uses for the EC land use designation include wetlands, farms, forest uses, open space, and limited park facilities.

Solar Energy facilities are considered compatible with the RAC land use when properly sited and with the application of appropriate development criteria. The area designated as EC should be preserved due to environmental constraints unless site-specific analysis demonstrates there are no environmental concerns in a specific area.

Staff has concerns about the appropriate siting of this facility due to the lack of suitable roads for construction traffic as well as impacts to agricultural land and sensitive environmental features.

ORDINANCE REVIEW:

The zoning district classification for the subject properties is Rural Agricultural Conservation (RAC). The RAC zoning district is intended to preserve an protect areas of the County that are predominantly in agricultural and forestall use and to maintain the existing land base to support those activities.

The applicant proposes to establish a 240 MW solar energy facility with both projects, which is classified as a major utility serve use type in the Zoning Ordinance. These facilities are permitted as conditional uses in the RAC, RR, and GC zoning districts and may be considered compatible with appropriate conditions to mitigate any potential negative impacts on the surrounding community.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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 described in the Zoning Ordinance, the Board may impose 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 reasonable foreseeable future

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 of landmarks.

Should the CUP be approved, the applicant will be required to submit a site plan for review and approval in accordance with Zoning Ordinance requirements and conditions of approval.

AGENCY REVIEW:

The application was forwarded to the following departments for their review:

- Fire Rescue: All concerns have been addressed in the application.
- Commissioner of the Revenue: Comments are attached separately.
- Sheriff's Department: Similar to the Moonlight project, there will be an increase in patrol during the construction phase and the traffic impacts on proposed transportation routes. These are primarily secondary roads with no to minimal shoulders and are also shared with farm vehicles. During the construction phase they will be bringing in heavy equipment and large vehicles which will require escorts or even road closures. Also, there being multiple sites there is a concern of the operation of heavy equipment on the roads from one parcel to another.
- County Attorney: Only include conditions that go above what is now required under the zoning ordinance.
- VDOT: All concerns have been addressed in the application.
- Isle of Wight County Museum: Comments are attached separately.

Please note that, should this CUP be approved, it will be subject to review and approval from all associated agencies during site plan review. The project will be required to comply with all Zoning Ordinance requirements in effect at the time of site plan submittal.

STAFF CONCLUSIONS:

Strengths:

1. The proposed use will generate additional nonresidential tax revenue for needed public services and facilities.

Weaknesses:

1. The proposed use would remove agricultural land from production.
2. Temporary impact to residential development in the area from construction traffic and noise is expected during the construction phase.
3. The project may create impacts to archeological and architectural resources pending final study.
4. The project will impact identified ecological core areas, priority forest land, and prime farm soils.
5. Approval of the project would result in a multiplicity and saturation of similar uses other solar energy generation facilities nearby.
6. With no to minimal shoulders and deep ditches at several points along the proposed transportation route there

may be safety issues that arise as construction vehicles meet along the route.

7. Due to poor transportation route alternatives and impacts to environmentally sensitive areas, the project's proposed location is not well suited and therefore is not consistent with the recommendations of the Comprehensive Plan.

STAFF RECOMMENDATION:

Based on the identified weaknesses, staff recommends denial of the Conditional Use Permit and the Moonlight AFD withdrawal request. However, should the CUP and withdrawal be approved staff recommends the following conditions: 1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads. 2) The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan. 3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended. 4) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR. 5) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process. 6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response. 7) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility. 8) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times. 9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing. 10) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project. 11) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results. 13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Sycamore Cross A Application	Backup Material	5/17/2024
Project Narrative	Backup Material	5/17/2024
Sycamore Cross A Concept Plan	Backup Material	5/17/2024
Proximity Map to Cavalier	Backup Material	5/17/2024
Interconnect Agreement	Backup Material	5/17/2024

Construction traffic route alternative map	Backup Material	5/17/2024
DCR Review Letter	Cover Memo	5/19/2024
Environmental Assessment	Backup Material	5/20/2024
Phase IA Historical Resources Survey	Backup Material	5/20/2024
VDHR Comments	Backup Material	5/20/2024
Isle of Wight Museum Comments	Backup Material	5/20/2024
Economic Analysis	Backup Material	5/20/2024
Commissioner of Revenue Comments	Cover Memo	5/20/2024
Sycamore Cross A&B Farmland Table	Backup Material	5/20/2024
Viewshed Impact Analysis	Backup Material	5/20/2024

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017*, Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance*,* as amended*.*

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[X] Conditional Use Permit (Are applicant proposed conditions attached?): X Yes _____ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?):_____Yes _____ No

Proposed Use or Activity: Civic Use (Utility/Major) Solar Farm

B. PROJECT DESCRIPTION:

Project Name: Sycamore Cross A

Property Address (if any): See Exhibit F

Election District: D5 (formerly Carrsville)

Comprehensive Plan Designation: Environmental Conservation and RAC

The use permit will apply to 1795 acres out of 2036 total acres

Tax Parcel Identification #See Attached Number of acres to be effected: _____

Tax Parcel Identification #_____ Number of acres to be effected: _____

Tax Parcel Identification #_____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water_____ Private Well _____

Public Sewer_____ Private Septic _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Sycamore Cross Solar, LLC

Address: 2180 South 1300 East, Suite 600

City, State, Zip Code: Salt Lake City, Utah 84106

Phone No.: 804-334-9882 Email: gregory.creswell@aes.com Fax No.: _____

Property Owner(s) Name(s): See Exhibit E

Address: _____

City, State, Zip Code: _____

Phone No.: _____ Email: _____ Fax No.: _____

_____ 4/29/24

Applicant Signature **Date**

See Exhibit G

Owner Signature *if different* **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: 5/2/2024 Fees Paid: *Revised

Tax Query: [ ] Current [ ] Delinquent Distribution Date: 5/2/2024

Posted/Date to Post: 5/15/2024

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: 5/2/2024

Sycamore Cross Part A, Parcels Within Project Boundaries

Tax Parcel Identification Number	Calculated Parcel Acres	Property Owner Name	Property Owner Address
09-01-001	82	WELLS CHRISTINE LORENZO	10106 WHITE HILL TRAILIVOR VA 23866
16-01-002	56	EVERETS PROPERTIES	6001 EVERETS ROAD, SUFFOLK, VA 23434
16-01-002A	83	SEWARD JEFFREY A & MELANIE D	435 BELLEVUE ROADELBERON VA 23846
16-01-003	382	BLUE SKY ENDEAVORS LLC	11356 SYCAMORE CROSS DR, IVOR
16-01-008	106	BLUE SKY ENDEAVORS LLC	2180 SOUTH 1300 EAST STE 500SALT LAKE CITY UT 84106
16-01-009	88	BLUE SKY ENDEAVORS LLC	2180 SOUTH 1300 EAST STE 500SALT LAKE CITY UT 84106
17-01-001	223	GORDON KATHLEEN H	1949 PINE LOG RDSKIPPERS VA 23879
17-01-002	3	GORDON KATHLEEN H	1949 PINE LOG RDSKIPPERS VA 23879
17-01-003	250	BLUE SKY ENDEAVORS LLC	2180 SOUTH 1300 EAST STE 500SALT LAKE CITY UT 84106
17-01-003C	226	BLUE SKY ENDEAVORS LLC	2180 SOUTH 1300 EAST STE 500SALT LAKE CITY UT 84106
17-01-011	72	HOLLEMAN WILLIAM JOSEPH	118 BARCROFT DR SMITHFIELD VA 23430
27-01-003	98	BLUE SKY ENDEAVORS LLC	2180 SOUTH 1300 EAST STE 500 SALT LAKE CITY UT 84106
27-01-004	126	GORDON KATHLEEN H	1949 PINE LOG RDSKIPPERS VA 23879

Anticipated Medium Voltage Easement Only Parcels, Isle of Wight Only

Tax Parcel Identification Number	Calculated Parcel Acres	Property Owner Name	Property Owner Address
16-01-005	176	CARROLLS FOODS OF VIRGINIA LLC ATT JORDAN HEATH	PO BOX 856 WARSAW NC 28398

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided. **The required number of copies may be reduced with permission of the Zoning Administrator.**

- ☑ Application: Ten (10) copies of the original, executed application, one (1) digital copy of all application documents, and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page 3 of the application.
- ☑ The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☑ Ten (10) copies of a statement of the reasons for seeking such permit and if applicable, a statement of conditions.
- ☑ Ten (10) copies of a narrative description of the property which shall include the Tax Parcel Identification
- ☑ Ten (10) copies of a concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:
    - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
    - Title of drawing
    - Date of drawing
    - Existing wood line
    - North arrow
    - Scale bar
    - Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
    - Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
    - Street names including route number and width(s) of the right-of-way(s)
    - Ten (10) full size copies, with one (1) reduced 11-inch X 17-inch copy and a digital copy shall be submitted

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

✓ Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

N/A A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

✓ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

Ben Saunders

Printed or Typed Name

Signature

4/29/24

Date

April 30, 2024

Central Permitting Office
c/o Amy Ring, AICP
Director, Planning and Zoning
Department of Community Development, Isle of Wight County
17140 Monument Circle, Suite 101
Isle of Wight, VA 23397

Re: Conditional Use Permit Application for the Sycamore Cross Solar Project, Fourth Submittal for Sycamore Cross A, Creation of and First Submittal for Sycamore Cross B

Dear Ms. Ring,

At your request, the Sycamore Cross Solar Project has been split into separate project areas, each requiring its own Conditional Use Permit (CUP). These two areas are referenced as Sycamore Cross A and Sycamore Cross B, and together are the entirety of Sycamore Cross Solar, the "Project."

Please find enclosed Sycamore Cross Solar, LLC's fourth submittal for a CUP application which has been amended to represent Sycamore Cross A and the first submittal for a CUP application for Sycamore Cross B, which together comprise a photovoltaic solar generation facility of up to 240 megawatts located in Isle of Wight and Surry Counties. All documentation for Sycamore Cross A and Sycamore Cross B can be found in previous Sycamore Cross A application submittals with the exception of the documentation in this submittal.

The following list of documents have been updated and supplied with this submittal to support previously submitted CUP application components and to create the required CUP application for Sycamore Cross B:

- Project Narrative (updated to reflect 2 project areas and 2 CUPs)
- Attachment A: Conditional Use Permit Application Packages
  - Amended CUP Application Package For Sycamore Cross A: Fourth Submittal
  - CUP Application Package For Sycamore Cross B: First Submittal
- Attachment C: Revised Proposed Conditions (to reflect two project areas and to add a condition to address Unanticipated Discoveries)
- Attachment D: Updated Conceptual Plan of Development (to delineate Sycamore Cross A from Sycamore Cross B)
- Attachment J: Visual Impact Assessment: Visual Simulations

Thank you for your guidance and assistance in bringing the project to this point. We look forward to working with you and your staff further to answer questions and offer any needed clarity as you complete your review. The AES team is available to meet or talk at your convenience. I can be reached using the contact information provided in the signature below.

Sincerely,

Gregory S. Creswell

Greg Creswell
Senior Project Development Manager
804-334-9882
Gregory.Creswell@aes.com

Project Narrative

PROJECT OVERVIEW

Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy (AES), is proposing to build a photovoltaic solar generation facility of up to 240 megawatts to be located in Isle of Wight and Surry Counties, Virginia (the "Project").

The total Project study area is approximately 2,488 acres across all or portions of 18 parcels in Isle of Wight and Surry Counties. The Project study area is shown on the orthoimagery and U.S. Geological Survey Project Location Maps (Figures 1 and 2). Within Isle of Wight County, the Project study area comprises portions of 15 project parcels totaling approximately 2,036 acres of predominantly undeveloped and agricultural land zoned RAC: Rural Agricultural Conservation. The RAC zoning district allows utility-scale solar facilities with approval of a Conditional Use Permit. The adjacent and adjoining properties represent similar land use to the Project study area, including agriculture, forested, historically managed area for silviculture use and residential use. The proposed Project satisfies the goals and objectives of the Isle of Wight County Comprehensive Plan. This is further discussed in Section 3 of this application.

At the request of Isle of Wight County, the project portions located in Isle of Wight have been split into two separate applications: Sycamore Cross A and Sycamore Cross B. Sycamore Cross A consists of 13 project parcels parcel totaling 1,795 acres, includes one medium voltage easement only parcel and will account for approximately 214 MWac. Sycamore Cross B consists of two project parcels totaling 240 acres, includes six medium voltage easement only parcels and will account for approximately 6 MWac. Tables showing which parcels are included with Sycamore Cross A and Sycamore Cross B are included with each application package (Attachment A). These two applications comprise the Isle of Wight portions of the Project.

The Conditional Use Permit application packages (Attachment A) and associated fees (Attachment B) are being submitted to Isle of Wight County in accordance with Section 1-1017, Conditional Uses and Section 5-5003, Supplementary use regulations for civic use types. Additionally, a list of proposed Conditional Use Permit conditions for the Project are included in Attachment C and further detailed throughout this document.

PROJECT APPLICANT

Sycamore Cross Solar, LLC is wholly owned by AES Clean Energy (AES). Since 1981, AES has been headquartered in the Commonwealth of Virginia. Our commitment is to provide clean and reliable energy in a way that benefits every Virginian. Currently, we operate 660 megawatts (MW) of renewable energy in Virginia, with an additional 240 MW of renewable energy permitted and in a phase of construction. These projects bring extensive economic benefits to their respective communities through the creation of hundreds of construction jobs at each site, stimulus of the local economy when we provide employment and buy from area businesses, and substantial tax

revenue generation that helps fund county services such as emergency response, public education, and the deployment of broadband.

Within Virginia, renewable energy development is critical to fulfill the promise of the Virginia Clean Economy Act of 2020 to transition the Commonwealth's electric grid to 100% clean energy by 2050. AES remains committed to working with our stakeholders to co-create and deliver the smarter, greener energy solutions that meet their needs, benefiting the local community and economy.

DESIGN

The Project will consist of solar photovoltaic modules on a single axis tracker system and associated electrical equipment and materials necessary to collect the energy produced. The system will be comprised of UL-listed components and installed according to the National Electric Code. The maximum panel height will be less than 15 feet above grade at maximum tilt in accordance with Article V Sec. 5-5003 of the Isle of Wight zoning ordinance. The facility will be secured by a 6-foot-tall chain link fence with 1-foot of barbed wire. Sound from the solar panels will not exceed 60 dBA in normal circumstances in accordance with Sec. 5-5003. Setback lines will comply with Sec. 5-5003. Due to setbacks, sound at property lines will likely be much lower than 60 dBA. Areas under the panels will be planted with local grasses and forbs, non-panel areas will be planted with wildlife- and pollinator-friendly vegetation to the extent practicable, and wildlife corridors will be maintained as shown in the Conceptual Plan of Development (Attachment D).

The Project will utilize an existing substation location shared with the Cavalier Solar project, which location is identified on Attachment D. The existing substation location pad has been built as part of the Cavalier Solar project. Additional civil work is not expected to complete the project substation for the Sycamore Cross project. Further, the interconnect with the Dominion Septa substation has been approved and will also be built as part of the Cavalier Solar project.

As of this submittal of the CUP applications, no operations or maintenance buildings are contemplated in the design. If included prior to a final design, all operations and maintenance buildings and related structures will incorporate materials, colors, textures, screening, and landscaping that will blend the facilities to the natural setting and surrounding structures. No signage of any type will be placed on the facility other than notices, warnings, and identification information required by law or as approved by the Zoning Administrator. Construction parking and staging signs will be clearly placed at ingress and egress points to direct traffic to the proper location. Appropriate warning signage will be placed on all towers, electrical equipment, and Project site ingress and egress points. Signs will be clearly marked at the Project site for emergency vehicle ingress and egress.

Consideration is being made for the potential demolition of structures to accommodate the design of Sycamore Cross Solar and to use the land most efficiently within the project area. As of this submittal of the CUP applications, the only improvement anticipated to be demolished is at the address 14195 Rattlesnake Trail on parcel 27-01-003. A photo of the structure can be found in Figure 6-46 of the Cultural Resource Assessment dated August 2023. In the event additional

structures are considered for demolition, a thorough review will be completed, and the required information submitted to Isle of Wight updating this list of properties for consideration. Additionally, prior to any demolition, Sycamore Cross Solar, LLC will elicit concurrence from VDHR on our architectural survey findings. Should any buildings be found to be of significance, avoidance and mitigation measures will be taken.

INTERCONNECTION

The Project will serve the PJM wholesale market. The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. Our maximum facility output is 240 MW, which is also referred to as the "installed capacity", and the Project has rights to inject the full 240 MW into the grid. A redacted version of the interconnection service agreement is included in Attachment E.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising the Project to the Project's collector substation. Siting of the Sycamore Cross project is using the same utility corridor as Cavalier Solar to limit any additional impact to view sheds. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar Project and that will interconnect the Project's substation with the VEPCO Septa 500 kV Substation. It should be noted that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. Said improvements are being completed and certificated as part of the Cavalier project.

LAND USE AND ZONING

The Project is located off Mill Swamp Road (State Rte. 621) on approximately 2,488 acres of 18 parcels in Isle of Wight and Surry Counties. Within Isle of Wight County, the Project study area comprises portions of 15 parcels totaling approximately 2,036 acres of predominantly undeveloped and agricultural land zoned RAC: Rural Agricultural Conservation. The fenced Project area will consist of 1,030 acres of the total Project study area acreage. The adjacent and adjoining properties are also zoned as RAC: Rural Agricultural Conservation and represent similar land use to the Project study area, including agriculture, forested, and land historically managed for silvicultural use (Attachment D).

The RAC zoning district allows utility-scale solar facilities with approval of a Conditional Use Permit. Furthermore, the proposed use fulfills the intent of the RAC district by preserving land which may be used in the future for additional agricultural and silvicultural activities. While in use by the proposed solar facility, the land cannot be sold for development of residential or commercial use, and the quality of the soil will likely be improved over the projected 35-year life of the Project as the land lays fallow.

Landowners for each participating parcel, as described in Attachment F, within the Project Site have provided Owner's Authority Letters (Attachment G). 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 (Attachment H) and a copy of the county tax records for the participating parcels (Attachment I).

VISUAL IMPACT

A Visual Impact Analysis was performed by Tetra Tech and is provided in Attachment J. This analysis determined that based on the proposed mitigating measures including landscaping and screening, the Project will have little to no impact on the existing viewshed. To ensure minimal viewshed impacts, the Project has implemented setbacks from adjoining parcels and residences in accordance with the County Ordinance; furthermore, the Conceptual Plan of Development (Attachment D) includes proposed landscaping and screening to be established and maintained within these buffers, as shown in the visual simulations included in Attachment I. This screening will be maintained and supplemented as necessary throughout the life of the Project.

TRAFFIC IMPACT

The Project anticipates construction of the Project to begin in Q2 2025 and is forecasted to be completed by Q4 2026. Construction will take place between the hours of 7 a.m. and 7 p.m., Monday through Saturday. Construction and decommissioning of the Project may cause temporary impacts to traffic flow in the direct vicinity of the Project site but will not adversely impact traffic during the normal operation phase of the Project.

Sycamore Cross Solar has been working in conjunction with Isle of Wight Planning and Zoning, Isle of Wight Transportation, and the VDOT Franklin Residency to develop a Construction Traffic Management Plan. Sycamore Cross has submitted three options for proposed construction traffic routes, each of which includes escorted heavy haul routes, a delivery route, and anticipated employee commuter routes. Mapping is included in Attachment K. Sycamore Cross has suggested a preferred delivery route using Route 616 to Route 621 from Ivor to a main staging area within the project site. From the staging area, deliveries will be escorted to various project areas and back to the staging area. Factors used to determine Sycamore Cross Solar's preferred routing includes traffic counts, road characterizations as defined by VDOT, bridge capacities, road widths, current road conditions, challenges based on superelevation, and proximity to residences.

Sycamore Cross Solar will refine and finalize the details of the Construction Traffic Management Plan in coordination with both the Virginia Department of Transportation (VDOT) Franklin residency and the County Transportation Department prior to Site Plan Approval. Construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

ECONOMIC IMPACT

The current zoning of the Project is RAC and the use is generally agricultural or timber. According to information obtained from participating landowners, 891 acres or 35.8% of the project site is currently used for crop production. This includes 221 acres (8.9%) that are being used for corn production, 40 acres (1.6%) used for cotton production, 433 acres (17.4%) used for soy

production, and 197 acres (7.9%) used for peanut production. No parcels are currently being used for livestock.

The Project will generate tax revenue for the County without increasing demand for public utilities or services, allowing increased investment in services and infrastructure. An Economic Impact Assessment was completed in September 2023 by Mangum Economics using the IMPLAN model. This assessment provides fiscal impacts based on taxation of capital investment and on the potential use of a Revenue Share Ordinance. Depending on the tax revenue stream the County chooses to pursue, the Project may provide between approximately $15.2 million and $20.1 million in tax revenue for Isle of Wight County. This is a 29 to 39 fold increase to County revenue versus current use revenue. Additionally, construction of the Project will create approximately 197 direct, indirect, and induced jobs during construction and 7 direct, indirect, and induced jobs during the operational phase. The Economic Impact Analysis assumes a commercial operation date of Q4 2026. A full Economic Impact Analysis is included in Attachment L.

ENVIRONMENTAL RESOURCES

The Project will avoid and mitigate any potential impacts to natural and cultural resources to the greatest extent possible. A summary of potential Project interactions with environmental resources is provided below. A full Environmental Resource Impact Analysis with further details is included in Attachment M.

Water Resources

Tetra Tech performed a wetland delineation of the Project site through several field surveys in October 2022 through June 2023. The project will minimize impacts to wetlands and floodplain to the extent reasonably possible. A 50-foot buffer area around water resources will be implemented, to the extent practicable, as shown for the majority of resources in the current Conceptual Plan of Development, Attachment B. In the event development is to occur within any wetland or floodplain, these areas will be designed and permitted to be compliant with all local, state, and federal requirements. AES acknowledges several project areas shown in the conceptual plan of development are within the FEMA 100-year floodplain. This design is conceptual and will be refined as additional studies are completed and regulatory coordination is finalized. All resources will be delineated and clearly flagged for avoidance during construction in areas where avoidance is possible.

Construction of the Project may cause temporary water quality impacts in the form of increased sediment runoff during land disturbing activities; however, best management practices will be implemented to avoid and minimize impacts to surface water features. Ultimately, the Project will likely lead to improved water quality in the area because runoff of pesticides and other inputs to or byproducts of farming will be reduced or eliminated. Soil testing will be performed prior to construction, after completion of construction, and every five years thereafter; results will be provided to the County Planning Department per Article V, Sec. 5-5003.M.4.f.

Threatened and Endangered Species

An initial desktop assessment performed by Tetra Tech identified several protected species as having the potential to occur within the Project study area. Field surveys of the Project study area were conducted in October 2022 through April 2023. These surveys identified potential presence of six protected species – the bald eagle *(Haliaeetus leucocephalus),* red-cockaded woodpecker *(Picoides borealis),* northern long-eared bat *(Myotis septentrionalis),* Rafinesque's eastern big-eared bat *(Corynorhinus rafinesquii macrotis)*, tri-color bat *(Perimyotis subflavus)*, and the yellow lance *(Elliptio lanceolata)*. Both the bald eagle and red-cockaded woodpecker were determined to be unlikely to be adversely affected by the Project. Suitable habitat was found on site for the other four species, and agency consultation was recommended. Additional presence/absence surveys have been conducted and coordination with federal and state agencies is ongoing to determine best avoidance, minimization, and mitigation measures.

Ecological Cores

Based on the current design, approximately 77 acres of very high value ecological cores, 32 acres of high value ecological cores, 3.3 acres of moderate value ecological cores, and 423.7 acres of general value ecological cores may be impacted by the Project. The Project does not intersect any outstanding value ecological cores. Ecological core data with the classification of high, very high, and outstanding have the greatest value of ecological biodiversity. Per the recommendations of the Department of Conservation and Recreation, potential impacts to ecological cores have been avoided and minimized to the extent practicable. Where unavoidable, potential impacts were limited to the edges of identified ecological cores.

HISTORICAL AND CULTURAL RESOURCES

A Phase 1A Cultural Resource Assessment and early coordination was completed by Dutton + Associates, LLC in August 2023. This analysis indicated that no National Register of Historic Places (NRHP) listed resources are present within the fenced Project area. There are three desktop mapped potential resources that are located within the fenced Project area. The Historical and Cultural Resources Report is included in Attachment N.

This report was submitted to Virginia Department of Historic Resources (VDHR) for concurrence on the predictive modeling and the proposed Phase 1b survey methodology on August 2, 2023. The VDHR provided comments regarding the proposed survey methodology August 14, 2023; to which the report was revised, finalized, and resubmitted on August 24, 2023, and the VDHR concurrence letter dated August 28, 2023 is included in Attachment Q.

The Phase 1B fieldwork, in accordance with the guidance provided by VDHR and outlined methodology in the Phase 1A assessment, was initiated in December 2023 and is ongoing at the time of this submittal of the CUP applications. The final Phase 1B will be provided to VDHR for concurrence on findings and recommendations.

AES will create an Unanticipated Discovery Plan which will be used during construction of the project to address any unexpected cultural discoveries on site. This plan will include emergency protections protocols, curation processing of cultural materials, disposition of cultural materials,

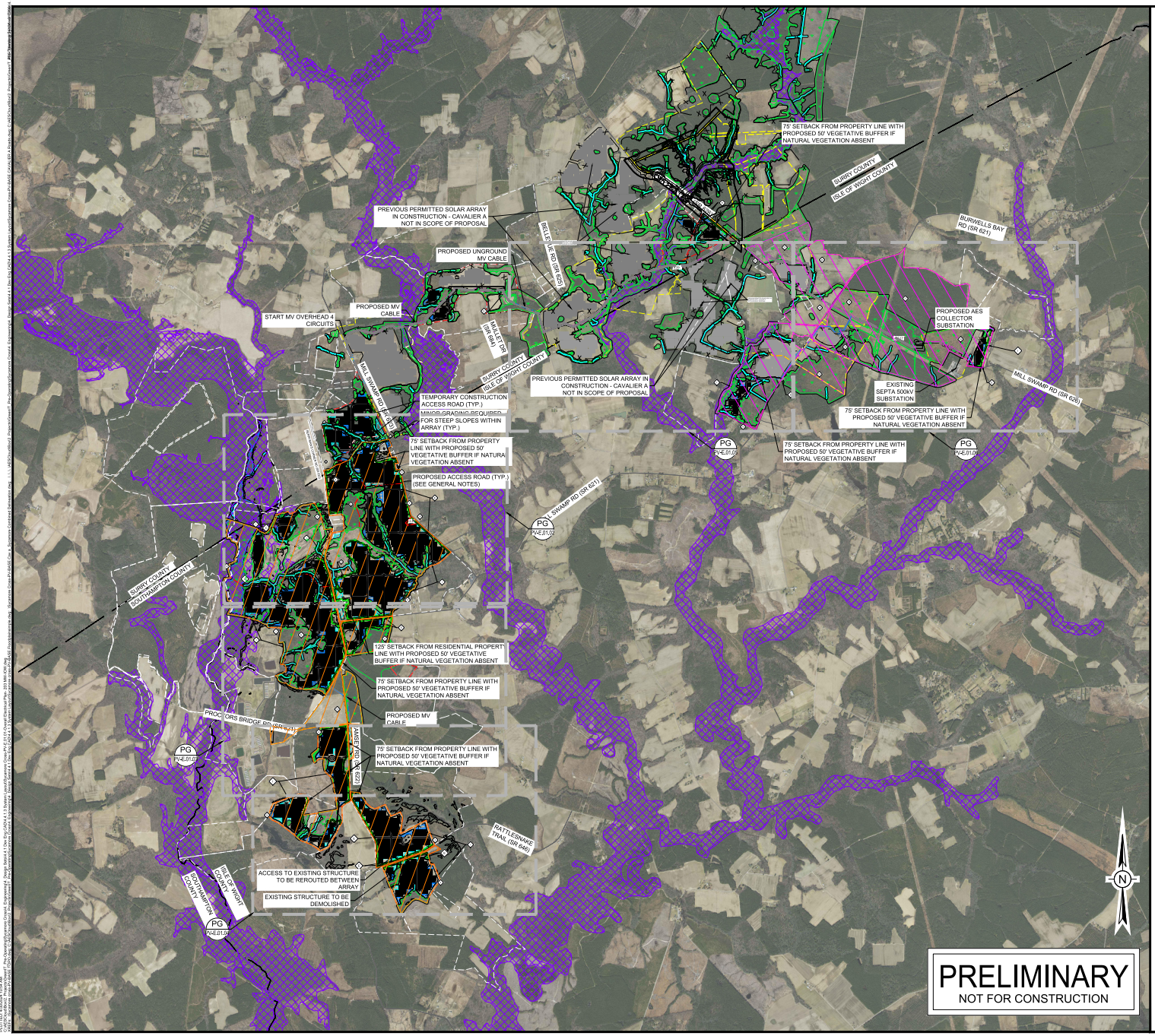
and a contact list including an on-call archaeologist, project contacts, and state/regional contacts.

LANDSCAPE STANDARDS

According to Isle of Wight County Code of Ordinances Appendix B Zoning Article VIII. Landscape and Screening Standards Section 8-1005-Landscaping Zones, there is a certain minimum number of required landscape points that vary based on the landscape zone assigned to an area, which include the: frontage zone, buffer zone, parking zone, foundation zone, and screening zone. The zone use type for the areas surveyed for this Project are likely categorized as a buffer zone, which requires the installation of a minimum of 45 points of landscaping per 500 square feet of buffer zone for civic use types. A tree canopy assessment was conducted to identify mature tree stands that would meet the requirements for tree preservation point credits. The project will provide approximately 2.8 million landscape points. The full Tree Canopy Survey Assessment is included in Attachment O.

DECOMMISSIONING

The operating period of the Project is anticipated to be approximately 35 years. At the end of the useful life of the Project, Sycamore Cross Solar, LLC, will be responsible for decommissioning the Project. Prior to final site plan approval, Sycamore Cross Solar, LLC will finalize and submit to the County a decommissioning plan and associated written agreement to decommission the Project equipment, facilities, and devices. The decommissioning security amount will be determined and posted based on an estimate provided in operational year 1 by a qualified third-party engineering firm. The decommissioning plan and associated security will not include a deduction for salvage value.



GENERAL NOTES

1. THIS DRAWING IS PRELIMINARY AND FOR ESTIMATING PURPOSES ONLY. IT IS NOT FOR CONSTRUCTION.
2. LOCATION OF ALL EXISTING ITEMS IS APPROXIMATE AND MUST BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
3. ALL SPECIFIED EQUIPMENT IS PRELIMINARY. FINAL EQUIPMENT SELECTION SHALL BE APPROVED BY OWNER.
4. 75' EQUIPMENT SETBACK FROM ALL PROPERTY LINES
5. 125' EQUIPMENT SETBACK FROM ALL RESIDENTIAL PARCELS
6. EXISTING WOOD LINE, EASEMENTS, ROW'S TO BE PROVIDED ONCE ALTA SURVEY COMPLETED.
7. ALL SITE ENTRANCES SHALL BE 20' WIDE AND TAPER TO 16' INTERNAL ACCESS ROADS

SHEET NOTES

- E — SITE ENTRANCE
- I — ISLE OF WIGHT COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT PROPERTY LINE
- MAJOR PUBLIC ROAD
- ROAD RIGHT-OF-WAY
- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 / OH-500 — EXISTING 500kV GEN-TIE
- OH-MV / OH-MV — 34.5kV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- SYCAMORE CROSS SOLAR A
- SYCAMORE CROSS SOLAR B
- MV / MV / MV — MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PARCELS WITHIN PROJECT BOUNDARIES

SHEET NOTE NUMBER	PARCEL TYPE	APPLICATION AREA	PARCEL ID	OWNER NAME
SYCAMORE CROSS SOLAR - A				
1	PROJECT	A	16-01-003	BLUE SKY ENDEAVORS LLC
2	PROJECT	A	27-01-003	BLUE SKY ENDEAVORS LLC
3	PROJECT	A	27-01-004	GORDON KATHLEEN H
4	PROJECT	A	16-01-009	BLUE SKY ENDEAVORS LLC
5	PROJECT	A	16-01-008	BLUE SKY ENDEAVORS LLC
6	PROJECT	A	16-01-002	EVERETS PROPERTIES INC
7	PROJECT	A	17-01-001	GORDON KATHLEEN H
8	PROJECT	A	17-01-011	HOLLEMAN WILLIAM JOSEPH
9	PROJECT	A	16-01-002A	SEWARD JEFFREY A & MELANIE D
10	PROJECT	A	09-01-001	WELLS CHRISTINE LORENZO
11	PROJECT	A	17-01-003	BLUE SKY ENDEAVORS LLC
12	PROJECT	A	17-01-003C	BLUE SKY ENDEAVORS LLC
13	EASEMENT ONLY	A	16-01-005	CARROLLS FOOD OF VIRGINIA LLC
14	PROJECT	A	17-01-002	GORDON KATHLEEN H
SYCAMORE CROSS SOLAR - B				
15	PROJECT	B	10-01-017	MILL SWAMP ROAD HOLDINGS LLC
16	PROJECT	B	11-01-015	BATTEN MITCHELL DELK
17	EASEMENT ONLY	B	11-01-005	476 LLC
18	EASEMENT ONLY	B	10-01-025	BARCROFT JEAN E SOLE TRUSTEE JEAN E BARCROFT LIVING TRUST
19	EASEMENT ONLY	B	10-01-030	MILL SWAMP ROAD HOLDINGS LLC
20	EASEMENT ONLY	B	10-01-028A	THACKER SHELTON L & ANN
21	EASEMENT ONLY	B	10-01-027	SEWARD MICHAEL A
22	EASEMENT ONLY	B	10-01-023	SEWARD MICHAEL A & EMILY B

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	12/28/2022	INITIAL 5% LAYOUT
8	07/24/2023	REVISED 5% LAYOUT
9	12/12/2023	REVISED 5% LAYOUT
10	4/6/2023	REVISED 5% LAYOUT
4	4/17/2023	REVISED 5% LAYOUT
5	4/28/2023	REVISED 5% LAYOUT
6	5/25/2023	REVISED DC:AC RATIO
7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MWAC

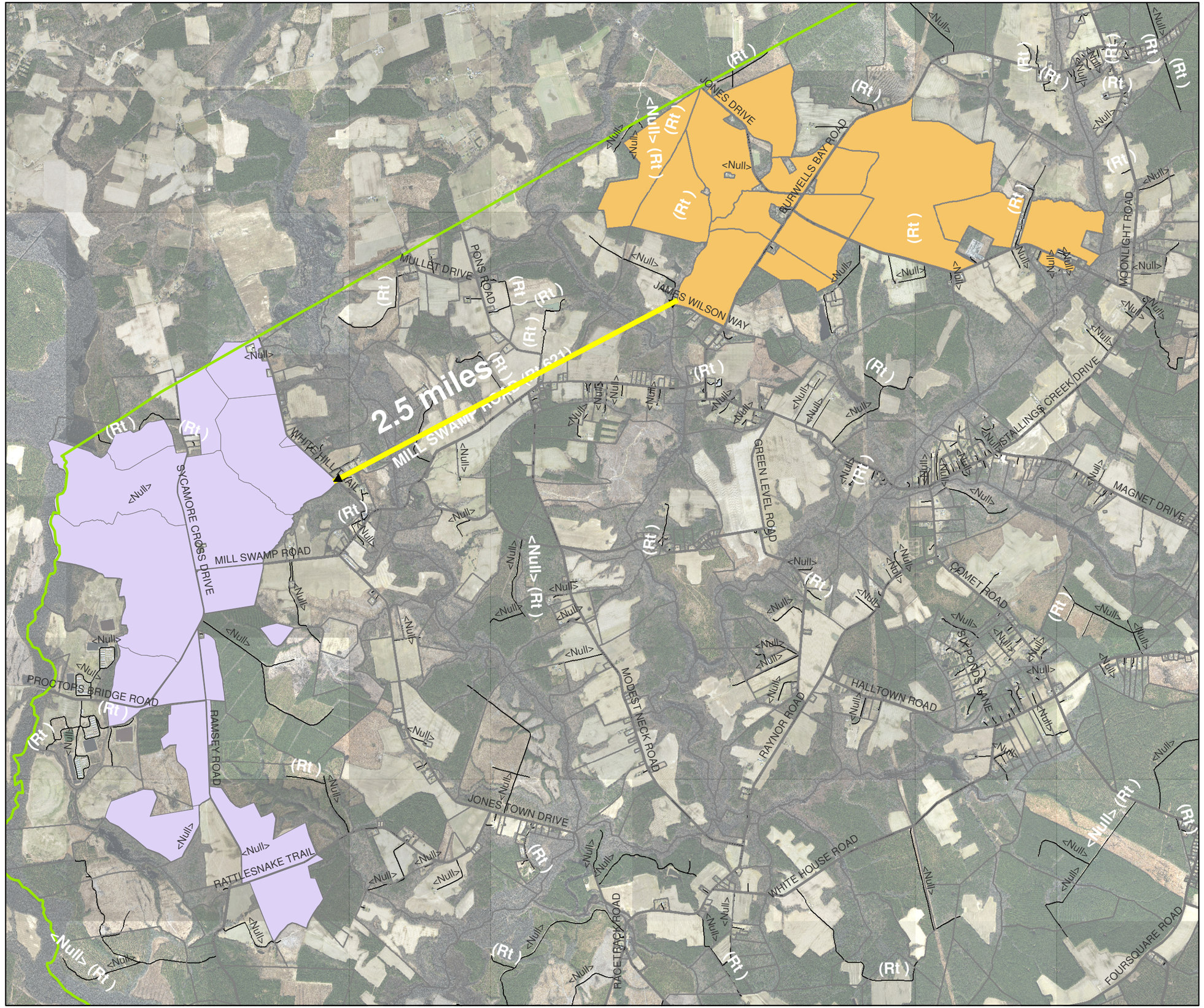
PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 1.000' 2.000' 3.000' 4.000'
1" = 2,000'

SHEET NO: PV-E.01.01
REV: 10

Legend

- Sycamore Cross A
- Parcels
- Cavalier



N

Service Agreement No. [ ]

(PJM Queue #AC2-141)

INTERCONNECTION SERVICE AGREEMENT
Among
PJM INTERCONNECTION, L.L.C.
And
ACE DEVELOPMENT COMPANY II, L.L.C.
And
VIRGINIA ELECTRIC AND POWER COMPANY

Pages 1 - 8 have been redacted

IN WITNESS WHEREOF, Transmission Provider, Interconnection Customer and Interconnected Transmission Owner have caused this ISA to be executed by their respective authorized officials.

(PJM Queue Position #AC2-141)

Transmission Provider: PJM Interconnection, L.L.C.

By: Jason Shoemaker | Manager, Interconnection Projects | 4/3/2023
Name | Title | Date

Printed name of signer: Jason Shoemaker

Interconnection Customer: ACE Development Company II, L.L.C.

By: Sean McBride | Authorized Person | 3/10/2023
Name | Title | Date

Printed name of signer: Sean McBride

Interconnected Transmission Owner: Virginia Electric and Power Company

By: Kevin Fields | Authorized Representative | 3/30/2023
Name | Title | Date

Printed name of signer: Kevin Fields

SPECIFICATIONS FOR
INTERCONNECTION SERVICE AGREEMENT
By and Among
PJM INTERCONNECTION, L.L.C.
And
ACE DEVELOPMENT COMPANY II, L.L.C.
And
VIRGINIA LECTRIC AND POWER COMPANY
(PJM Queue Position # AC2-141)

1.0 Description of generating unit(s)(the Customer Facility) to be interconnected with the Transmission System in the PJM Region:

a. Name of Customer Facility:

Sycamore Cross Solar

b. Location of Customer Facility:

Isle of Wight and Surry Counties, VA
37.0177790, -76.7441940

c. Size in megawatts of Customer Facility:

For Generation Interconnection Customer:

Maximum Facility Output of 240 MW

d. Description of the equipment configuration:

A ground-mounted, inverter-based, solar photovoltaic generating facility consisting of solar arrays, a collector system, and a 500/34.5/13.8 kV wye ground/wye ground/delta main power transformer with a rating of 213/240/267 MVA.

2.0 Rights

2.1 Capacity Interconnection Rights:

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of 168.2 MW.

2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit

total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.

2.3 Incremental Deliverability Rights:

Pursuant to Section 235 of the Tariff, Interconnection Customer shall have Incremental Deliverability Rights at each indicated Point of Interconnection in the following quantity(ies): None

2.4 Incremental Available Transfer Capability Revenue Rights:

Pursuant to Section 233 of the Tariff, Interconnection Customer shall have Incremental Available Transfer Capability Revenue Rights at each indicated Point of Interconnection in the following quantities: None

2.5 Incremental Auction Revenue Rights:

Pursuant to Section 231 of the Tariff, Interconnection Customer shall have Incremental Auction Revenue Rights in the following quantities: None

2.6 Incremental Capacity Transfer Rights:

Pursuant to Section 234 of the Tariff, Interconnection Customer shall have Incremental Capacity Transfer Rights between the following associated source(s) and sink(s) in the indicated quantities: None

3.0 Construction Responsibility and Ownership of Interconnection Facilities

a. Interconnection Customer.

(1) Interconnection Customer shall construct and, unless otherwise indicated, shall own the following Interconnection Facilities:

Upon achieving Milestone 6.7, a pro rata share of:

(a) One (1) 500 kV circuit breaker;
(b) 500 kV line extending from the high side of the main power transformer to the point of change of ownership with VEPCO; and
(c) Communication equipment to the Interconnected Transmission Owner bidirectional metering equipment.

(2) In the event that, in accordance with the Interconnection Construction Service Agreement, Interconnection Customer has exercised the Option to Build, it is hereby permitted to build in accordance with and subject to the conditions and limitations set forth in that Section, the following portions of the Transmission

Owner Interconnection Facilities which constitute or are part of the Customer Facility:

None

Ownership of the facilities built by Interconnection Customer pursuant to the Option to Build shall be as provided in the Interconnection Construction Service Agreement.

b. Interconnected Transmission Owner

Interconnected Transmission Owner shall construct and, unless otherwise indicated, shall own, the following:

Attachment Facilities pursuant to PJM Service Agreement No. 5757 (ISA for Queue Position No. AC1-161) and PJM Service Agreement No. 5810 (Construction Service Agreement for Queue Position No. AC1-161).

c. Additional Contingent Facilities which must be completed prior to Commercial Operation of the Generating Facility

PJM Network Upgrade N5483: Replace wave traps at both Ladysmith and Elmont Substations for the Ladysmith – Elmont 500kV line #574 to increase ratings to 2913 MVA (normal), 2913 MVA (emergency), and 3351 MVA (load dump).

PJM Network Upgrade N6647: Expand Septa 500 kV Substation by adding a 500 kV circuit breaker in the ring bus to create a new line position.

4.0 Subject to modification pursuant to the Negotiated Contract Option and/or the Option to Build under the Interconnection Construction Service Agreement, Interconnection Customer shall be subject to the estimated charges detailed below, which shall be billed and paid in accordance with Appendix 2, Section 11 of this ISA and the applicable Interconnection Construction Service Agreement.

4.1 Attachment Facilities Charge: $0

4.2 Network Upgrades Charge: $0

4.3 Local Upgrades Charge: $0

4.4 Other Charges: $0

4.5 Cost breakdown:

$0	Direct Labor
$0	Direct Material

$0 Indirect Labor
$0 Indirect Material

$ 0 Total

4.6 Security Amount Breakdown:

$0 Estimated Cost of Non-Direct Connection Local Upgrades and/or Non-Direct Connection Network Upgrades

plus $0 Estimated cost of the work (for the first three months after construction commences in earnest) on the required Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades

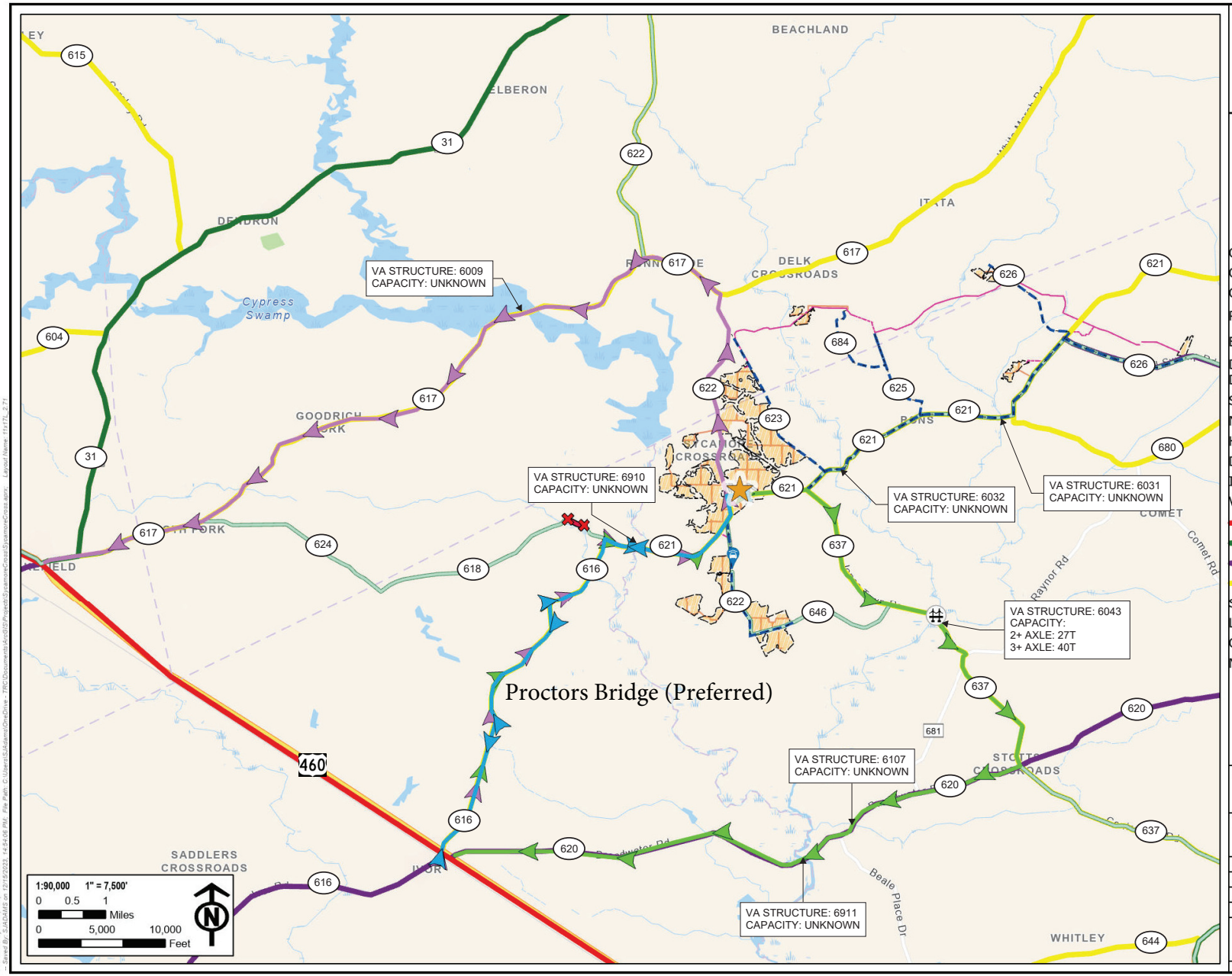
plus $0 Option to Build Security for Transmission Owner Attachment Facilities and Direct Connection Network Upgrades (including Cancellation Costs)

$0 Total Security required with ISA

less $0 Costs already paid by Interconnection Customer

$0 Total Security required with ISA

Pages 8 - 94 have been redacted



Legend

- Option One - Staging Delivery Route
- Option Two - Staging Delivery Route
- Option Three - Staging Delivery Route
- Primary Staging & Office Area
- Bridge on Route 637
- Daily Employee Parking & Shuttle Pick Up/ Drop Off
- Steep Superelevation
- No Delivery Truck Traffic
- Heavy Haul - Escorted Routes
- Daily Employee Traffic & Shuttle Routes
- Interior Array Roads
- VDOT Functional Classification
  - Other Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
- Solar Panel Arrays
- LOD
- Overhead Medium Voltage Lines
- Medium Voltage Lines (Underground)

PROJECT: AES CLEAN ENERGY
SYCAMORE CROSS SOLAR
TRAFFIC MANAGEMENT PLAN
ISLE OF WIGHT COUNTY, VA.

TITLE: **SITE OVERVIEW**

DRAWN BY:	S. ADAMS	PROJ. NO.:	576420.0000.0000
CHECKED BY:	D. PEETS		**FIGURE # 1**
APPROVED BY:	J. HENEGAR		
DATE:	DECEMBER 2023		

TRC
2200 S. MAIN ST.
SUITE A
BLACKSBURG, VA 24060

FILE: SycamoreCross.aprx

Coordinate System: Map Rotation:
Saved By: SJADAMS on 12/15/2023 14:54:06 PM File Path: C:\Users\SJAdams\OneDrive - TRC\Documents\ArcGIS\Projects\SycamoreCross\SycamoreCross.aprx Layout Name: 11x17L_2.71

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Chief Deputy Director

Frank N. Stovall
Deputy Director for Operations

Darryl Glover
Deputy Director for Dam Safety, Floodplain Management and Soil and Water Conservation

Laura Ellis
Deputy Director for Administration and Finance

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

July 20, 2023

Justin Ahn
Tetra Tech, Inc.
4101 Cox Road
Glen Allen, VA 23060

Re: Sycamore Cross Solar Project

Dear Mr. Ahn:

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 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 B3, which represents a site of high significance. The natural heritage resource associated with this site is:

Aquatic Natural Community (SC-Blackwater Second Order Stream) G2?/S2?/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.

In addition, according to a DCR biologist and predicted suitable habitat modeling, there is a potential for Barking treefrog (*Hyla gratiosa*, G5/S2S3/NL/NL) to occur in the project area if suitable habitat exists on site. The Barking treefrog ranges through the coastal plain from North Carolina to Florida and west to Mississippi and eastern Louisiana (NatureServe, 2009). There are disjunct populations in Delaware, Maryland, Kentucky and Tennessee, and southeastern Virginia (NatureServe, 2009). Across its range, it inhabits areas near shallow ponds in pine savannas and in low wet woods and swamps (Martof et al., 1980). In Virginia, this species breeds in fish-free vernal ponds (Pague & Young, 1991). When inactive during cold or dry seasons, they burrow under tree roots, vegetation, or in the soil; otherwise, this species is mostly arboreal and thus dependent on trees near the water (Pague & Young, 1991). Adult frogs feed on insects and other invertebrates; tadpoles consume primarily algae (VDGIF, 1993). Major threats to the Barking treefrog include continued logging of native pine, destruction of breeding ponds, and over collecting (Pague & Young, 1991).

Due to the potential for this site to support populations of Barking treefrog, DCR recommends an inventory for the resource 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.

DCR-Division of Natural Heritage biologists are qualified 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 availability and rates for field work.

Furthermore, according to predicted suitable habitat modeling, there is potential for Eastern big-eared bat (*Corynorhinus rafinesquii macrotis*, G3G4T3/S2/NL/LE) to occur in the project area if suitable habitat exists on site. The Eastern big-eared bat is 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 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).

DCR recommends avoiding tree removal in bottomland habitats and assessing any large potential roost trees and/or abandoned structures on the property for bat presence/absence. DCR also recommends coordination with DWR if removal of potential roost habitat for the Eastern big-eared bat becomes necessary to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

DCR 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. For screening zones outside the perimeter fencing, DCR

recommends native species appropriate for the region be used. 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/home/showpublisheddocument?id=2466. 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 impact Ecological Cores **(C2, C3, C5)** as identified in the Virginia Natural Landscape Assessment (https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: http://vanhde.org/content/map.

Ecological Cores are areas of at least 100 acres of continuous interior, natural cover that 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. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality (including drinking water recharge and protection, and erosion prevention), and air quality (including sequestration of carbon, absorption of gaseous pollutants, and production of oxygen). Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.

DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

The proposed project will impact one or more cores with very high (C2) to outstanding (C1) ecological integrity. Further investigation of these impacts is recommended and DCR-DNH can conduct a formal impact analysis upon request. This analysis would estimate impacts to cores and habitat fragments, providing an estimate of the total acreage of direct and indirect impacts of the project. For more information about the analysis and service charges, please contact Joe Weber, DCR Chief of Biodiversity Information and Conservation Tools at Joseph.Weber@dcr.virginia.gov.

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

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months (January 20, 2023) has passed before it is utilized.

A fee of $625.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (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 http://vafwis.org/fwis/ or contact Amy Martin at (804-367-2211) or amy.martin@dwr.virginia.gov.

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

Sincerely,

Tyler Meader

Tyler Meader
Natural Heritage Locality Liaison

Cc: Amy Martin, VDWR
Susan Tripp, DEQ
Randy R. Keaton, Isle of Wight County Administrator
Melissa Rollins, Surry County Administrator

Environmental Resource Impact Analysis

Sycamore Cross Solar Project
Isle of Wight and Surry Counties, Virginia

April 2023



Prepared for

AES Clean Energy Development, LLC
4200 Innslake Drive, Suite 302
Glen Allen, Virginia 23060

Prepared by

TETRA TECH
4101 Cox Road, Suite 120
Glen Allen, Virginia 23060

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Acronyms and Abbreviations

AMSL	Above Mean Sea Level
AES	AES Clean Energy Development, LLC
AJD	Approved Jurisdictional Determination
AMSL	Above Mean Sea Level
BECA	Bald Eagle Concentration Area
BGEPA	Bald and Golden Eagle Protection Act
CBPA	Chesapeake Bay Protection Area
CCB	Center for Conservation Biology
FEMA	Federal Emergency Management Act
FCV	Forest Conservation Value
FIRM	Flood Insurance Rate Map
IPaC	Information for Planning and Consultation
NHD	National Hydrography Dataset
NHDE	Natural Heritage Data Explorer
NLEB	northern long-eared bat
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
PJD	Preliminary Jurisdictional Determination
Project	Sycamore Cross Solar Project
RPA	Resource Protection Area
T&E	threatened and endangered
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
SSURGO	Soil Survey Geographic Database
Tetra Tech	Tetra Tech, Inc
VaFWIS	Virginia Fish and Wildlife Information Services
VDCR	Virginia Department of Conservation and Recreation

VDEQ	Virginia Department of Environmental Quality
VDWR	Virginia Department of Wildlife Resources
VMRC	Virginia Marine Resource Commission

1.0 PROJECT DESCRIPTION

Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy (AES), is conducting due diligence for a proposed commercial solar energy project, the Sycamore Cross Solar Project (Project), on approximately 2,226 acres of agricultural and undeveloped forested land (Project study area). Sycamore Cross Solar, LLC is proposing to utilize approximately 1,195 acres of the Project study area in connection with the Project (Fenceline Area) to generate up to 240 megawatts (MWac) of solar energy. The Project is located in Isle of Wight and Surry Counties, Virginia, as shown on the orthoimagery and topographic Project location maps (Figures 1 and 2, respectively). The Project is in the Blackwater Watershed (Hydrologic Unit Code 03010202; USGS 2022).

Sycamore Cross Solar, LLC, is pursuing a Conditional Use Permit (CUP) from Isle of Wight and Surry Counties in accordance with Section 5-5003.M.4 of the Isle of Wight County, Virginia, and Section 10-122 of the Surry County, VA, Code of Ordinances. A desktop Environmental Resource Impact Analysis was conducted to identify potential impacts to environmental and wildlife resources within the Project Area and applicable buffers from the Project study area to comply with Section 5-5003.M.4.vi of the Isle of Wight County Zoning Ordinance and to help support the Surry County CUP application.

Resources considered include watershed preservation areas, forest conservation, ecological cores, floodplains, wetlands, surface water, and federal and state listed threatened and endangered species. This impact assessment was based on preliminary site plans and avoidance and minimization measures that are anticipated to be implemented.

2.0 ENVIRONMENTAL RESOURCES

2.1 Terrestrial and Aquatic Resources

2.1.1 Federal and State Protected Lands

Based on a desktop review of data provided by Virginia Department of Conservation and Recreation (VDCR), no federal or state protected lands, including national or state forests or parks, wildlife management areas or recreational areas, are located within the Fenceline Area of the Project study area. Two conservation easements are mapped within a one-mile radius of the Project study area, including one Virginia Department of Forestry/VDCR managed easement located approximately 350 feet southwest of the southwestern portion of the Project study area and one National Resources Conservation Service (NRCS) managed easement located approximately 0.20 miles north of the eastern portion of the Project study area (VDCR 2023a). Additionally two designated conservation areas were identified approximately 0.65 miles southwest of the southwestern portion of the Project study area, including one conservation area managed by The Nature Conservancy, named Blackwater River and one conservation area managed by VDCR, named Blackwater Sandhills (VDCR 2023a). No additional conservation easements or areas were identified within a one-mile radius of the Project study area.

2.1.2 Chesapeake Bay Preservation Area

Existing Conditions

The Project is located within Isle of Wight and Surry Counties, which are both considered one of Virginia's 29 coastal counties and independent cities deemed "Tidewater Virginia" as outlined in 9VAC25-830-80; however, based on Appendix B-1, Article 3 of the Isle of Wight County Code of Ordinances, the Isle of Wight County Chesapeake Bay Preservation Area (CPBA) Mapper, Section 3-1400 of the Surry County Code of Ordinances, preliminary correspondence with the Surry County Planning and Community Development Department and preliminary correspondence with the Isle of Wight Planning and Zoning department, the Project study area is located within the Albemarle-Chowan watershed. Therefore, the Project is not subject to CBPA Resource Protection Areas.

Potential Impacts

The Project is not located within the Chesapeake Bay watershed and therefore, not subject to CBPA regulations.

2.1.3 Forest Conservation Value

Existing Conditions

The Forest Conservation Value (FCV) model was designed by the Virginia Department of Forestry to identify forestland with the highest priority for conservation within Virginia with the intent to maximize the conservation efforts to the highest quality, most productive, and most vulnerable forestland within Virginia (VDCR 2021). The classifications of the values range from average to outstanding, indicating the value of forestlands for conservation (VDCR 2021). The VDCR FCV model indicated that approximately 1,254 acres of the Project study area were mapped as forest with approximately 213 acres categorized as outstanding priority for conservation, 293 acres as very high, and 384 acres categorized as high priority forestland for conservation. VDCR FCV located within the Project study area are depicted as Figure 4

Potential Impacts

Based on the current design of the Project and the Fenceline Area, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted. A map depicting the FCV model within the Project study area is represented as Figure 4. Consultation with VDCR will be undertaken in connection with the potential impact of outstanding, very high, and high value forestland.

2.1.4 Ecological Cores

Existing Conditions

The VDCR developed ecological cores that classify lands based on environmental and species diversity, patch characteristics and context, and water quality benefits (VDCR 2018). The classifications of ecological cores range from general to outstanding based on a determination of ecological importance and characteristics (VCDR 2018). Ecological core data with the classification of high, very high, and outstanding have the greatest value of ecological biodiversity (VDCR 2018). VCDR ecological cores data indicates that approximately 357 acres of the Project study area are classified as very high, and approximately 162 acres are classified as high. No portion of the Project study area is classified as outstanding. The remaining portions of the Project study area are classified as either

general or is unclassified. Ecological cores located within the Project study area are depicted as Figure 5

Potential Impacts

Based on the current design of the Project and the Fenceline Area, approximately 94 acres of ecological cores classified as very high value will be impacted, and approximately 32 acres of high value ecological cores may be impacted. Wildlife corridors will be implemented in Project site design in order to reduce adverse impacts to these ecological cores. A map depicting the ecological core classifications within the Project study area is represented as Figure 5. Consultation with VDCR will be undertaken in connection with the potential impact of very high and high value ecological cores.

2.1.5 Floodplains

Existing Conditions

The floodplain data for the Project were obtained from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Number 51093C00653, effective December 2, 2015; 51093C0125E, effective December 2, 2015; 51093C0050E, effective December 2, 2015 and 51181C0225E, effective April 6, 2022 (FEMA 2015a, b, c, 2022). According to the FEMA FIRMs, Blackwater River, located on the western portion of the Project study area, is mapped as Zone A, with a one-percent annual chance flood hazard. The Project is in the Blackwater River – Terrapin Swamp (12-digit Hydrologic Unit Code [HUC] 030102020301), and Rattlesnake Swamp (HUC 030102020303) watershed. FEMA floodplain data is depicted on Figure 6.

Potential Impacts

There are no anticipated impacts to floodplains based on the current design of the Project. These areas will be included in Project design considerations as design evolves and will continue to be avoided to the greatest extent practicable. Additionally, any potential impacts will be permitted through the appropriate authorities having jurisdiction.

2.1.6 Topography and Soils

Existing Conditions

The topography within the Project study area is relatively flat, ranging from 50 feet above mean sea level (amsl) to 95 feet amsl (Figure 2). Very minimal steep slopes were identified, with slopes exceeding 25 percent mapped in small areas throughout the Project study area (Figure 7).

A review of the U.S. Department of Agriculture (USDA) NRCS Web Soil Survey was conducted to determine the erosivity of soils within the Project study area. The K factor is an index which quantifies the relative susceptibility of the soil to sheet and rill erosion. Values range from 0.02 for the least erodible soils to 0.64 for the most erodible, with any K factor value equal to or greater than 0.32 being considered moderately erodible. The USDA NRCS soil survey data indicates that approximately 23.7 percent of the Project study area is composed of moderate to highly erodible soils (Appendix A). A figure depicting the USDA NRCS soil series classification within the Project study area is attached as Figure 10.

The USDA NRCS Web Soils Survey was also queried to identify soils classified as prime farmland within the Project study area. Approximately 895 acres of prime farmland soils were identified, an additional 433 acres are classified as prime farmland if drained, and approximately 109 acres of farmland of statewide importance were identified within the Project study area. The remaining portions of the Project study area were not classified as prime farmland or farmland of statewide importance (Figure 9).

Potential Impacts

Construction of the Project may result in impacts on soil resources within the facility footprint. Ground-disturbing activities would include vegetation clearing and grubbing; excavating for foundations and footings; pile driving; stockpiling excavated material for backfilling; drilling rock to set foundations and footings; drilling and installing groundwater supply wells; grading for roads and staging and laydown areas; and installing stormwater best management practices (BMPs). The construction of other facilities, such as electrical substations and storage of equipment and parts, also would have the potential to result in adverse impacts on soil resources, because they involve some degree of ground disturbance. Soil contamination could also result from the release of contaminants related to the use of trucks and mechanical equipment, from improper storage and handling, and from the application of chemical stabilizers to control fugitive dust emissions. The extent of impact would depend on the size and design of the project and on site-specific factors, such as soil properties, slope (e.g., along gullies and on alluvial fan surfaces), vegetation, weather, and distance to surface water. The implementation of erosion and sediment control BMPs would minimize soil erosion and impacts to on-site and off-site resources.

Based on the current design of the Project and the Fenceline Area, approximately 614 acres of prime farmland (26% of the Project study area), 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be impacted.

Impacts to prime farmland soils are expected from the Project, as the areas of Prime Farmland soil on the site are centrally located where development activities will be concentrated. However, these impacts will be temporary in nature and beneficial to the quality of the soil. Over the life of the Project these soils will lay fallow, allowing reaccumulation of vital nutrients and organic matter; after the Project is decommissioned, the land may be converted into cropland that would benefit from this soil resting period. However, since the Project is not being completed by a Federal agency or with assistance from a Federal agency and will not irreversibly convert farmland to a nonagricultural use, the Project will not be subject to the Farmland Protection Policy Act (FPPA). Therefore, no form AD-1006 Farmland Conversion Impact Rating will be required.

2.1.7 Wetlands, Surface Waters, and Open Waters

Existing Conditions

A field wetland delineation was performed for the Project study area in January and April 2020, October 27, 2022, November 2-4, 2022, December 2, 9, 14-15, 20-21, 27-29, 2022, January 9-13, March 22-24 and 28-30, 2023 for wetland, stream, and open water features. 30,281 linear feet of streams features, 415 acres of wetlands, and 1.08 acres of open water features, including ponds, were identified within the Project study area. A portion of the delineated features in the northwestern

portion of the Project study area were confirmed for jurisdiction in the form of a USACE Preliminary Jurisdictional Determination (PJD) and an Approved Jurisdictional Determination (AJD) (NAO-2019-01204) in 2022 The remaining delineated water features identified within the Project study area were not confirmed for jurisdiction with the U. S. Army Corps of Engineers (USACE) and the Virginia department of the Environmental Quality (VDEQ), and/or Virginia Marine Resources Commission (VMRC) at the time of submittal of this analysis report. The Project plans to confirm all delineated features within the Project study area in the form of a USACE PJD and/or AJD. A figure depicting the delineated features within the Project study area is attached as Figure 8.

Potential Impacts

A utility-scale solar project can affect surface water and groundwater in several ways, including the use of water resources, modification of the natural surface water and groundwater flow systems, alteration of the interactions between groundwater and surface waters, contamination of aquifers, wastewater treatment either on- or off-site, and water quality degradation by runoff or excessive withdrawals, as well as from leaks and spills of chemicals used for the project. While some impacts on water resources (e.g., water use) are dependent upon the solar technologies themselves, impacts on water resources associated with land disturbance and construction activities would be expected to occur regardless of the type of solar technology used.

There are 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features located within the Fenceline Area. Through continued engineering and site design, the Project will avoid and minimize impacts to wetlands, surface waters, and open waters to the greatest extent practicable. Any impacts to wetlands, surface waters, and open waters will be permitted through the appropriate authorities having jurisdiction.

The Project has been designed to avoid and minimize impacts to wetlands and streams as they are currently mapped within the Fenceline Area and Project study area to the greatest extent practicable. A portion of the Project study area's delineated water resources delineation results have been confirmed by the USACE and VDEQ in the northeastern portion of the Project study area in the form of a Preliminary Jurisdictional Determination and an Approved Jurisdictional Determination (NAO-2019-01204) in 2022. The remaining water resources delineated within the Project study area have not yet been confirmed by the USACE, VDEQ, and/or the VMRC and are subject to change. Federal and state confirmation of the remaining unconfirmed water resources within the Project will be planned in the form of a USACE jurisdictional determination. Pending any changes to mapped features, impacts to jurisdictional features will be permitted through the USACE, VDEQ, and/or VMRC, and any requisite mitigation measures will be incorporated into the project.

Through the use of stormwater BMPs and erosion and sedimentation controls during construction, as well as routine stormwater inspections, no impacts to adjacent water resources are expected from the Project.

2.2 Wildlife Resources

Field visits at the Project study area were conducted on October 27, 2022; November 2–4, 2022; December 2, 9, 14–15, 20-21, 27–29, 2022; January 9–13, 2023; March 22–24, 28–30, 2023; and April 3, 2023. The results of this evaluation identified the potential presence of the following:

- One species protected by BGEPA and a listed bird species: bald eagle (*Haliaeetus leucocephalus*) and red-cockaded woodpecker (*Picoides borealis)*;
- Three species of bats: NLEB, Rafinesque's eastern big-eared bat *(Corynorhinus rafinesquii macrotis),* and tri-colored bat *(Perimyotis subflavus)*; and
- One mollusk species: yellow lance *(Elliptio lanceolata)*.

Potential impacts to these species as a result of implementation of the Project are discussed below.

2.2.1 Bald Eagle

Existing Conditions

The bald eagle is protected under the Bald and Golden Eagle Protection Act (BGEPA). Bald eagles prefer to nest in mature or old growth trees, snags, or cliffs near rivers, coastlines, lakes, and streams large enough to serve as a substantial food supply (USFWS 2007).

Several large bodies of water were identified on the USGS topographic map, specifically in the USFWS NWI and USGS NHD layers in the surrounding areas of the Project study area, and were noted during the site visit within the surrounding areas of the Project study area. Areas noted included Blackwater River, Mill Swamp, and an unnamed pond located in the western, eastern, and center portions of the Project study area, respectively (Figures 2 and 3).

Based on a review of the CCB Bald Eagle Nest Locator, the closest known bald eagle nest is approximately 7.1 miles south of the Project study area A, and 3.03 miles away from Project study area B. The USFWS BECA map did not indicate a bald eagle concentration area within the Project study area. During the January 2023 field survey, two adult bald eagles and one juvenile were observed feeding on carrion adjacent to the pond located in the northwestern portion of the Project study area.

Potential Impacts

Based on the observation of bald eagles, a "may effect-not likely to adversely affect" status was determined for the bald eagle in connection with the Project study area. Consultation with USFWS and VDEQ will be initiated; a subsequent bald eagle nest survey will be conducted if construction is anticipated to be conducted during the breeding season (October 1 through May 15). The appropriate buffers will be provided per the USFWS 2007 National Bald Eagle Management Guidelines (USFWS 2007).

2.2.2 Red-Cockaded Woodpecker

Existing Conditions

IPaC indicates that the red-cockaded woodpecker, which is a federally endangered and state endangered species, has the potential to occur within the Project study area (USFWS 2023a). The red-

cockaded woodpecker commonly inhabits mature pine trees that are generally 80 years old or older and are devoid of underbrush (USFWS 2023d).

Upon a review of aerial orthoimagery presented in Figure 1 and field verification of habitat, forested communities within the Project study area consist of mostly silviculture with pine plantations that are younger than 80 years old, as well as deciduous hardwood forests in riparian areas. During the January and March field surveys, pine trees were observed within the Project study area, however, the trees were observed to be less than 80 years of age.

Potential Impacts

Given the lack of suitable habitat, red-cockaded woodpecker constitutes a "no effect" status in connection with the Project study area.

2.2.3 Northern Long Eared Bat

Existing Conditions

The IPaC database (USFWS 2023a) indicated that the NLEB, a federally endangered and state-threatened species, has the potential to occur within the Project study area. The NLEB spend winters hibernating in caves and mines; during the summer, they roost singly or in colonies underneath bark, in cavities, or in crevices of trees both live and dead (USFWS 2023e). Foraging occurs on forested hillsides and ridges, occasionally over forest clearings, over water, and along tree-lined corridors. Mature forests may be an important habitat type for foraging. The VDWR NLEB mapping application shows that there are no known NLEB winter hibernacula or roost trees in the vicinity of the Project study area (VDWR 2023a). The nearest winter hibernacula and roosting habitat is located approximately 43.7 miles southeast of the Project study area and 40.1 miles southeast of Project study area B (VDWR 2023a). However, forested areas within the Project study area, especially along riparian corridors, provide potential suitable roosting and foraging habitat for the NLEB. Suitable trees were identified within forested areas in the Project study area during the field survey.

Potential Impacts

Given the suitable habitat on site, consultation with USFWS and VDWR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.4 Rafinesque's Eastern Big-eared Bat

Existing Conditions

The VDWR VaFWIS indicated that there are confirmed occurrences of the Rafinesque's eastern big-eared bat, which is a state endangered species, within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023c). The Rafinesque's eastern big-eared bat is known to roost in hollow trees and old buildings in the southeastern United States along the coast and in caves and mines within the Appalachian Mountains (VDWR 2022a) Additionally, the VDCR NHDE identified this species as possibly occurring within the following Project study area watersheds:

Blackwater River – Terrapin Swamp (12-digit Hydrologic Unit Code [HUC] 030102020301), and Rattlesnake Swamp (HUC 030102020303) (VDCR 2023b).

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.5 Tri-colored Bat

Existing Conditions

The VDWR VaFWIS indicated that there are confirmed occurrences of the state endangered tri-colored bat within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023b). It should be noted that the tri-colored bat was proposed on September 14, 2022 by the USFWS to be federally reclassified as endangered however, the rule has yet to be finalized at the completion of this report (87 FR 56381)(USFWS 2023f). The tri-colored bat is known to inhabit caves but is also known to inhabit hollow trees during the summer (VDWR 2022b). VDWR mapping shows that the nearest winter hibernacula and roosting habitat are located approximately 133.1 miles northwest of the western Project study area and 136.4 miles northwest of eastern Project study area. The wooded areas located within the Project study area, however, could provide suitable foraging and roosting habitat for the tri-colored bat between summer and fall.

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.6 Yellow Lance

Existing Conditions

The VDWR VaFWIS indicated confirmed occurrences of the yellow lance, which is a state threatened species, within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023c). The yellow lance is known to inhabit clean, coarse to medium-sized sandy substrate but can occasionally be located within gravel substrate; can be found in waters from main channels down to small streams (North Carolina Wildlife Resources Commission 2022). Based on a review of NHD and NWI data, depicted in Figure 3, Terrapin Swamp, Blackwater River, Mill Swamp, Stallings Creek, Pouches Swamp, and several unnamed tributaries were identified within the Project study area, which could be potential habitat for yellow lance.

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional species presence/absence surveys will be conducted prior to construction activities if deemed necessary by agencies.

2.2.7 Candidate Listed Species

Existing Conditions

The IPaC system identified the monarch butterfly (*Danaus plexippus*), a candidate species at the federal level, as having the potential to occur within the Project study area. Monarch butterflies migrate to temperate climates in eastern and western North America during the fall and breed at overwintering sites in February to March. Additionally, VaFWIS identified the Spotted Turtle (*Clemmys guttata*), a federal candidate species, as having the potential to occur within the Project study area. Spotted Turtles are found in shallow aquatic areas with vegetation (USFWS 2023d). Suitable habitat was observed on site, and a spotted turtle was observed in the Project study area- photos of which are included in the photolog (Attachment C).

Potential Impacts

At time of this analysis, both species above are listed as candidate species. As candidate species are not subject to review under the Endangered Species Act, presence of these species is not anticipated to be a constraint to the Project. Impacts to potential habitat, such as streams and riparian corridors, will be avoided to the greatest practicable extent. Should the two species be listed as state or federally threatened or endangered in the future, further measures to avoid or mitigate potential impacts to the two species will be enacted.

No federally listed critical habitat was documented on the USFWS Critical Habitat for Threatened and Endangered Species Mapper as occurring within the proposed Project study area or the vicinity. The western Project study area is approximately 44.5 miles southeast of the closest mapped critical habitat. The eastern Project study area is approximately 50.4 miles southeast of the closest mapped critical habitat.

2.3 Cultural and Aesthetic Resources

2.3.1 Cultural and Historic Resources

Existing Conditions

Dutton + Associates, LLC (Dutton) prepared a Phase IA Cultural Resource Assessment report dated March 2023 and a Phase I Cultural Resources Survey dated September 2019 for and area which includes the Project study area and Fenceline Area in which Dutton utilized desktop resources and limited field reconnaissance to identify potential resources and areas of historic and cultural potential within the Project study area and the adjacent properties. One previously identified archaeological site is present on a southwestern parcel within the Project study area, and seven dilapidated buildings and complexes remain extant in the Project study area but have not been assessed for eligibility for listing on the National Register of Historic Places (NRHP) or on the Virginia Landmark Register. Based on the information from the desktop assessment and field reconnaissance conducted by Dutton, areas of historic resource potential were identified within the Project study area. Approximately 123 acres were determined to be areas with high potential for historic resources; an additional 272 acres were identified as areas with moderate potential.

Additional information on cultural resources is included in the Desktop Cultural Resources Report.

Potential Impacts

Based on the preliminary review of cultural resources, coordination with VDHR will be conducted prior to Project construction activities (e.g. ground clearing or leveling) to determine the significance of dilapidated buildings and sensitive archaeological areas within the Project study area. Implementation of the Project would not have an adverse impact on any archaeological or architectural resources that are eligible or potentially eligible for listing on the NRHP; and no further work is expected to be necessary within the Project area. Many of the extant buildings and building complexes are excluded from the Project area with carve-out parcels, and the previously identified archaeological site will be avoided in Project design and construction. Consultation with the VDHR will be conducted to confirm that no additional archaeological or historic investigation are required for the Project.

2.3.2 Aesthetic Resources

Existing Conditions

The landscape surrounding the Project site is characterized by broad plains of terraces, sandy ridges, and broad but shallow valleys. The elevation within the Project site averages around 80 feet, and local relief is less than 30 feet. Mixed forest vegetation covers most undeveloped or non-agricultural areas, often limiting views to the immediate foreground (i.e., within half a mile of the viewer). Land use is primarily small agricultural fields and rural residences interspersed with large, forested areas. Views surrounding the Project area are dominated by cultivated open agricultural fields, dense woodlands, and scattered residences and agricultural buildings.

Additional detail is provided in the Conditional Use Permit application as Attachment J.

Potential Impacts

The Project would introduce low vertical, geometric elements that are gray in color (e.g., solar panels, fencing) into a rolling terrain landscape dominated by green vegetation and large patches of dense trees. Visual impacts would vary depending on several factors, such as the distance of the viewer from the Project and whether views toward the Project are unobstructed or screened by vegetation, terrain, or development. The views can be vastly different from one location to another, even in proximity, because of the rolling terrain and dense vegetation. Viewers in proximity to the Project may have unobstructed or partially screened views (primarily along Sycamore Cross Drive, Mill Swamp Road, and Beechland Road). The solar arrays and fencing would be installed in both existing cultivated and open fields, as well as within areas currently covered by pine timber lands which would be cleared for the Project. Therefore, tree removal would be a noticeable effect of the Project, in addition to direct views of Project components. Large-scale silviculture harvest is assumed to be a frequent occurrence in the area, and viewers are assumed to be familiar with the changes to views resulting from a timber stand being cleared.

No visual impacts would occur to identified designated scenic resources, and although the Sycamore Cross Solar facility would introduce new views of solar infrastructure from public roadways and a small number of private residents immediately adjacent to the Project site, visual effects are not expected to occur from viewpoints away from the immediate Project area. Additionally, the Project

will install landscape buffers consisting of trees and shrubs along rights of way and abutting residential parcels, per the Isle of Wight zoning code Section B. Article V. § 5-5003 Part 4e.

3.0 CONCLUSIONS

This Environmental Resource Impact Assessment identified the following environmental resources and associated potential impacts:

- 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features may be impacted by the are located within the Fenceline Area, however, no impacts to wetlands, streams or waterbodies are anticipated with the current Project design. These features will be included in the Project site plan and will be avoided to the greatest extent practicable. Any unavoidable impacts will be permitted through the proper regulators prior to construction.
- The western portion of the Project study area, along Blackwater River, is located within a FEMA flood zone with a one percent chance annual flood hazard. No impacts to floodplains are anticipated based on current Project design.
- Based on the current design of the Project and the Fenceline Area, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted.
- Based on the current design of the Project and the Fenceline Area, approximately 94 acres of ecological cores classified as very high value will be impacted, and approximately 32 acres of high value ecological cores will be impacted. Wildlife corridors will be implemented in Project design to mitigate potential habitat fragmentation.
- Based on the current design of the Project and the Fenceline Area, approximately 614 acres (26%) of prime farmland, 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be temporarily impacted. However, following decommissioning of the Project, the land may be returned to agricultural use with improved soil quality due to the resting of these soils over the life of the Project.
- Bald eagles were identified as potentially present within the Project study area and were observed during site visits; however, no recorded nests were identified within the Project study area or direct vicinity. Additional nest surveys will be conducted if construction is anticipated to occur within the breeding season, and appropriate buffers will be implemented as necessary.
- No suitable habitat is present within the Project study area for the red cockaded woodpecker, and no impacts to this species are anticipated.
- Suitable habitat is present within the Project study area for three listed bat species- NLEB, Rufinesque's bat, and tricolor bat. Agency coordination will be conducted; additional species presence surveys, such as acoustic surveys or mist-net surveys, will be conducted if deemed necessary prior to any tree-clearing activities.
- The yellow lance mussel is potentially present within the Project study area and direct vicinity in stream channels. Avoidance of streams will be implemented to the greatest extent

practicable; if any impacts to streams are unavoidable, agency coordination will be initiated and additional species presence surveys will be conducted prior to construction activities.

- Approximately 23.7 percent of the Project study area contains moderate to highly erodible soils. The implementation of erosion and sediment control BMPs would minimize soil erosion and impacts to on-site and off-site resources.

Additionally, the Environmental Resources Impact Analysis identified NLEB as federally-listed endangered and state-listed threatened, red-cockaded woodpecker as federally-listed endangered, eastern big-eared as state-listed endangered, tri-colored bat as state-listed endangered and federally proposed endangered, and yellow lance as federally-listed threatened and state-listed threatened species that have the potential to occur within and in the vicinity of the Project study area.

Potential impacts to threatened and endangered species and their habitats will be reduced by avoiding and minimizing Project impacts, including but not limited to excavation, tree removal, and fill activities, to potential habitat areas including wetlands, forested areas, streams, and riparian corridors. The Project plans to avoid these resources to the maximum extent possible and coordinate with USFWS, VDWR, and VDCR to determine the potential for further site-specific surveys.

The Project plans to avoid and minimize impacts to aquatic features to the greatest practicable extent. Coordination and permitting with the U.S. Army Corps of Engineers, Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission will be undertaken for planned potential impacts to aquatic features. Methods including utilizing temporary matting, staging of equipment in upland areas, and using best management practices during construction will be planned to avoid and minimize potential impacts to aquatic features.

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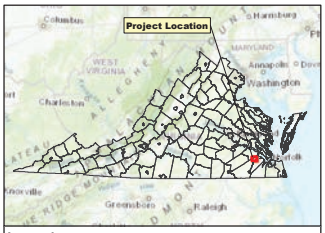
FIGURES





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

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Figure 1
Orthoimagery Project Location Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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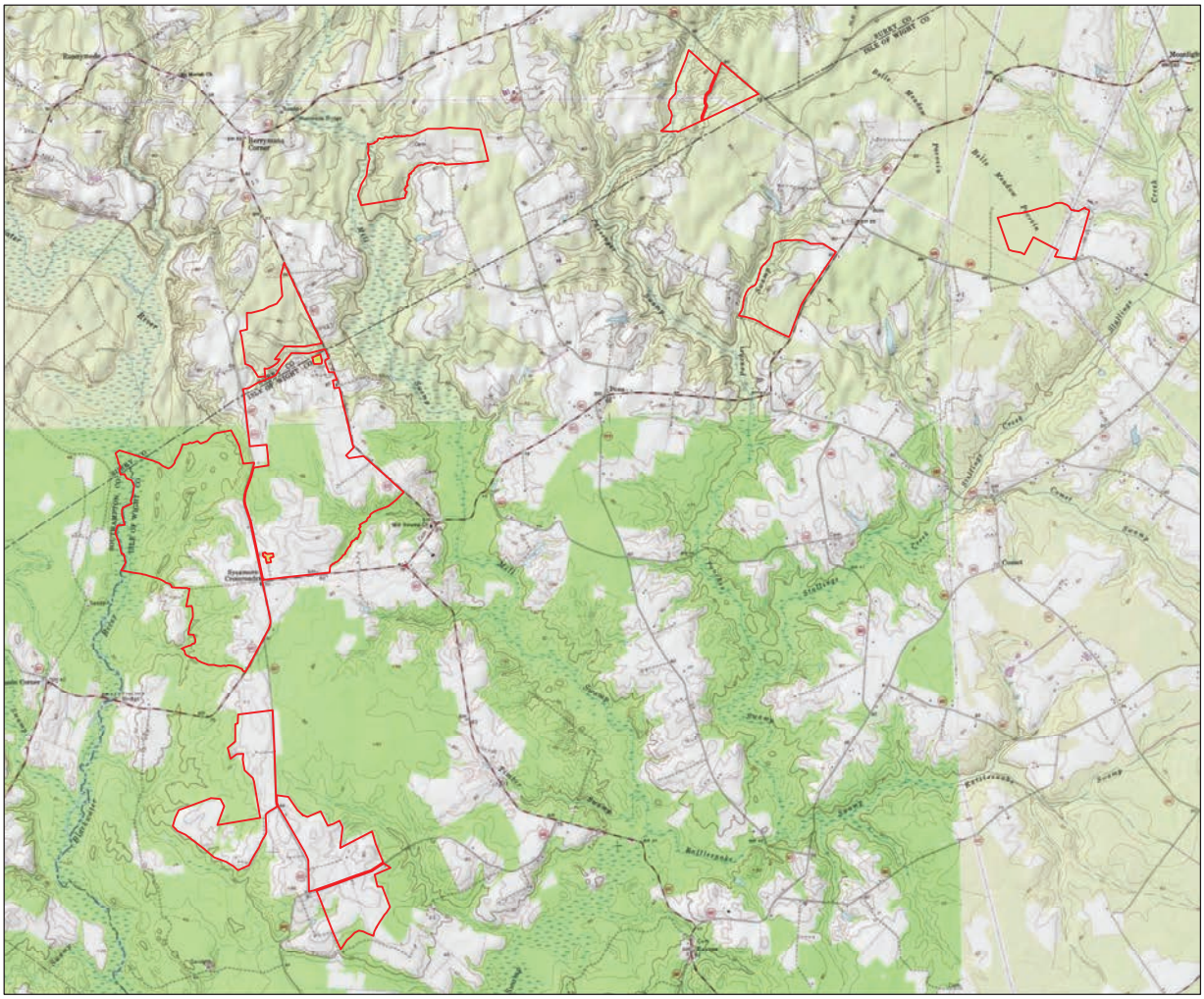

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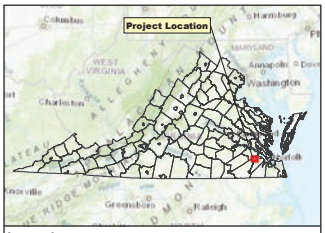

Legend

- Project Study Area
- Outside Project Study Area

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Figure 2
Topographic Project Location Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022; USGS Topo Quads - Dendron, Runnymede, Ivor, Raynor, 2023.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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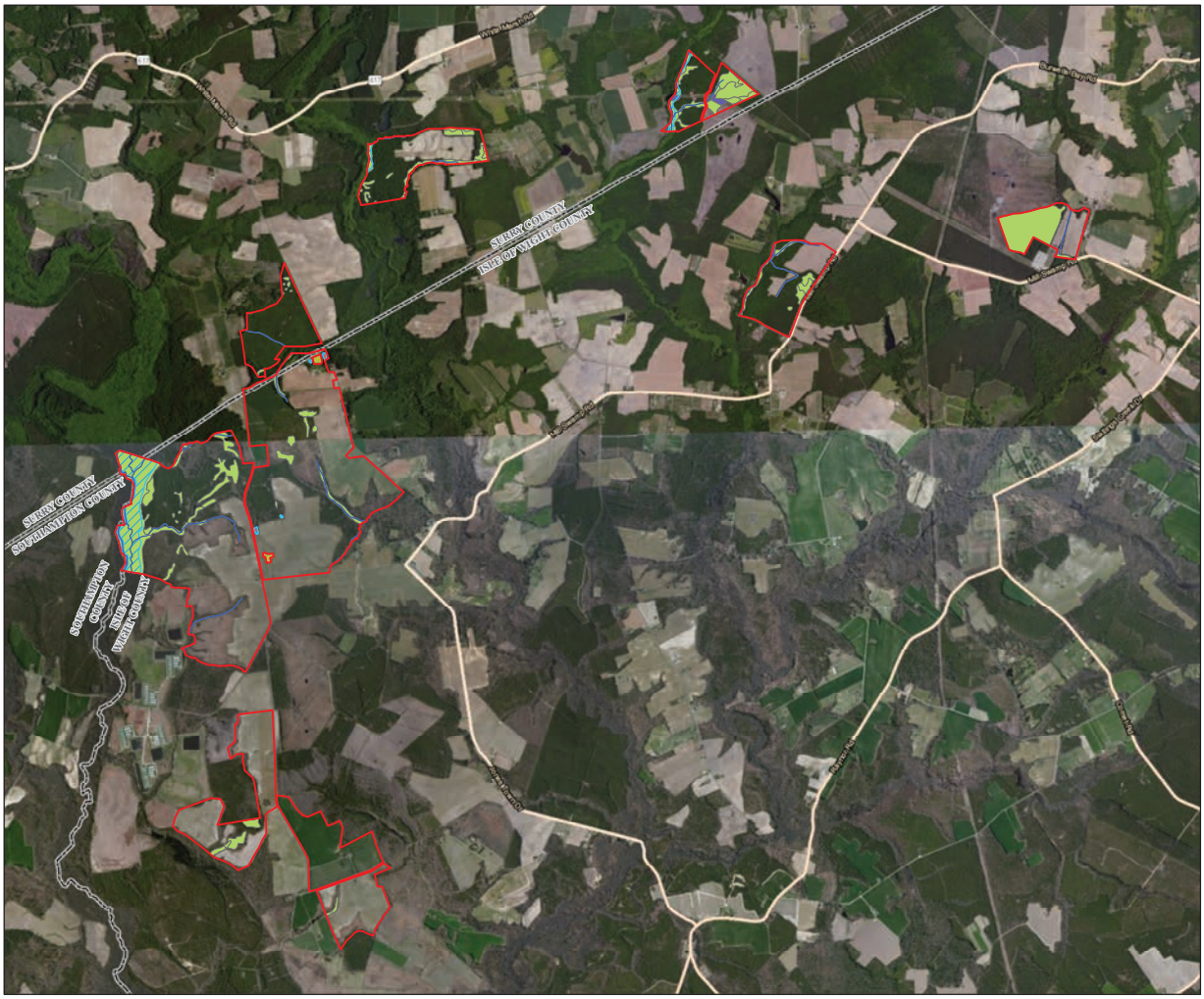

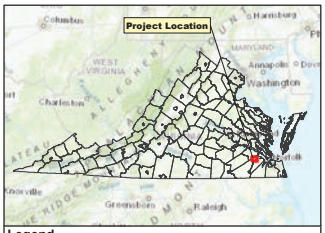

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- NHD Flowlines
- NHD Waterbodies

NWI Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

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Figure 3
NHD and NWI Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; NHD, 2022; NWI; 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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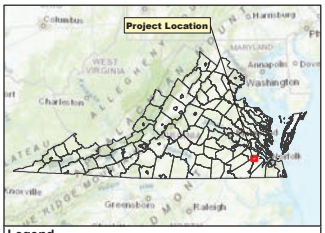

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

Forest Conservation Value

- 1: Average
- 2: Moderate
- 3: High
- 4: Very High
- 5: Outstanding

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Figure 4
VDCR Forest Conservation Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH | Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; VDCR, 2020.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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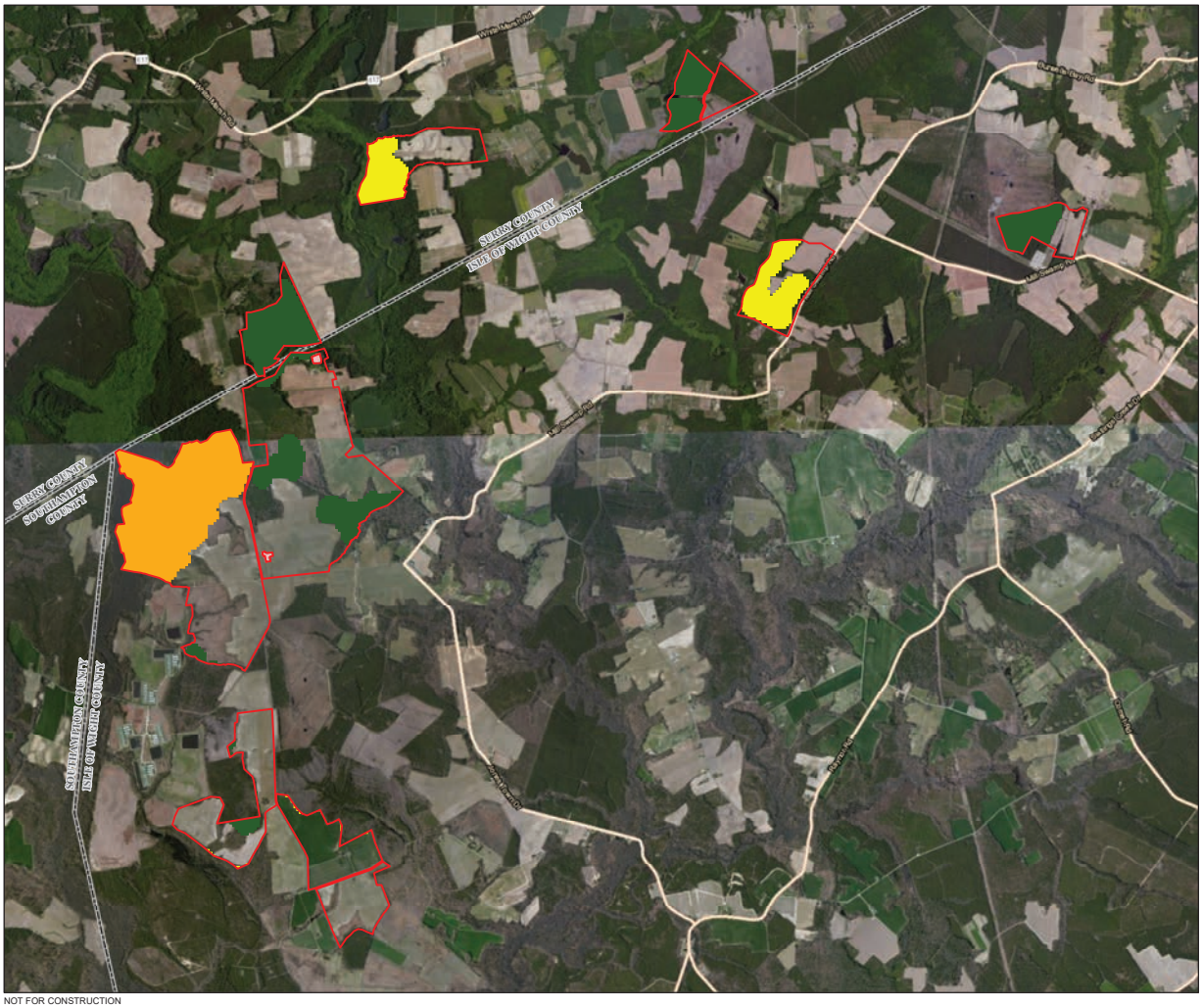

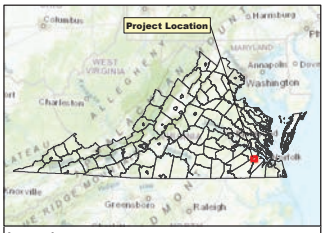

Legend

- Project Study
- Outside Project Study
- County Boundary

Core Rank

- C2: Very High
- C3: High
- C5: General

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Figure 5
VDCR Ecological Cores Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; VDCR, 2017.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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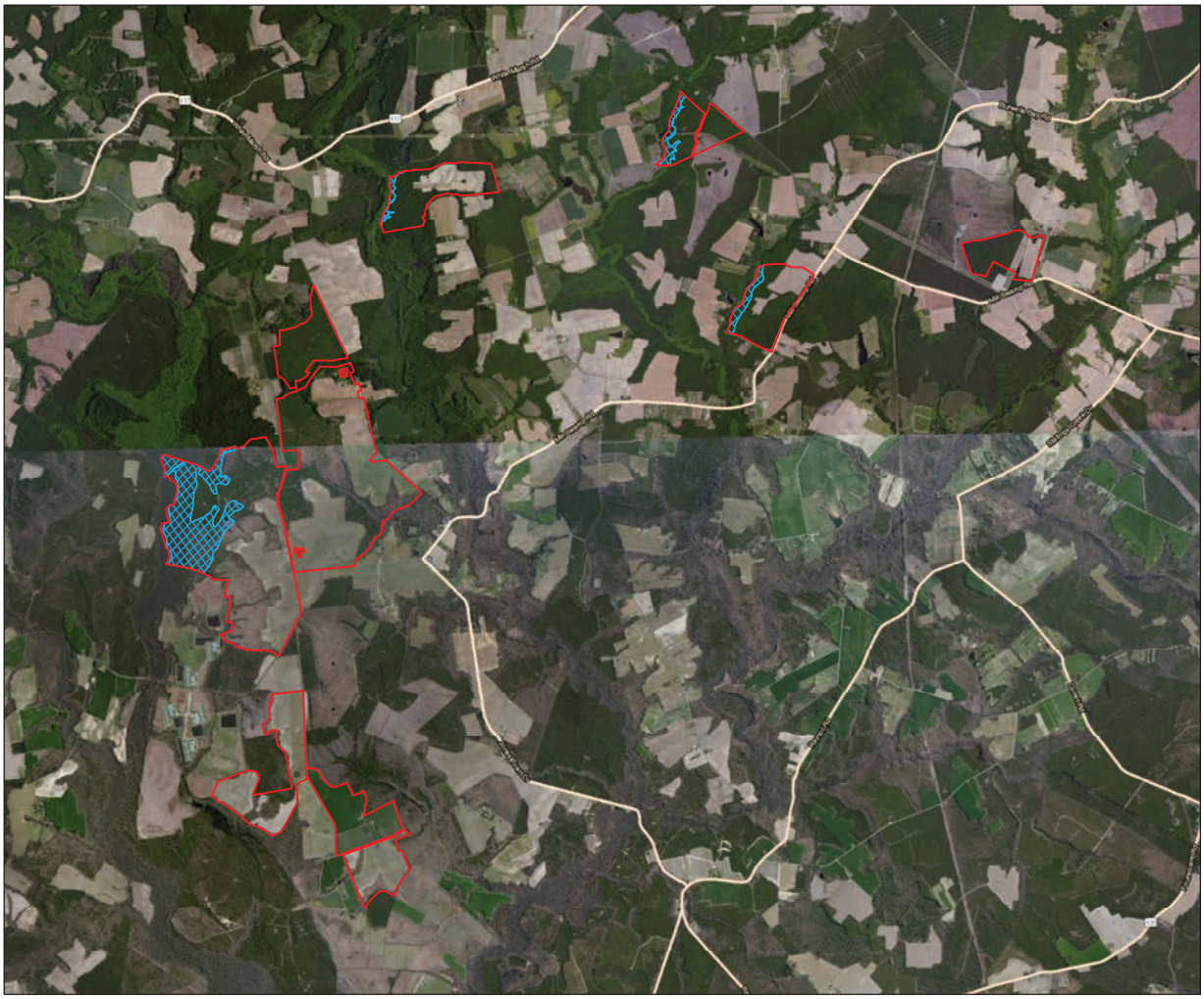

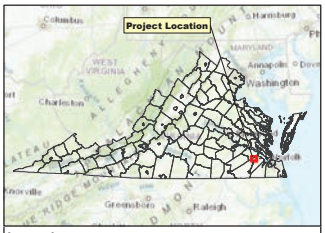

Legend

- Project Study Area
- Outside Project Study Area

FEMA Flood Risk

- 100-year Floodplain, 1% annual chance of flooding

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Figure 6
FEMA Flood Hazard Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/14/2023

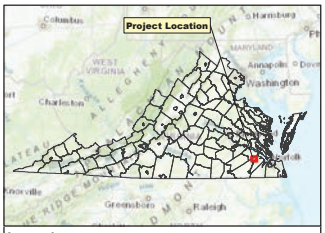
Source: Esri, et. al., 2022; AES, 2022; FEMA, 2022; FEMA FIRM number (FEMA FIRM Number 51093C0125E, effective December 2, 2015; 51093C0050E, effective December 1, 2015; and 51181C0225E, effective April 5, 2022); Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

i:\ES\Sycamore_Cross_Solar\GIS\Solar\MXD\20230412_Envir_Resource_Impact_Report\Figure_6_Sycamore_Cross_Solar_FEMA_Flood_Hazard_Map.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Steep Slope (>25%)

N
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0 0.25 0.5 1 Miles

Figure 7
Steep Slopes Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022, USGS, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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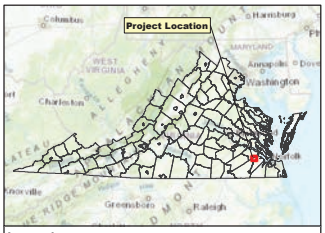

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Detail Map Page

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Figure 8

Delineated Aquatic Resources Features Map Overview Map

Sycamore Cross Solar Project

Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia Open Data Portal, 2022; Virginia GIS Clearinghouse, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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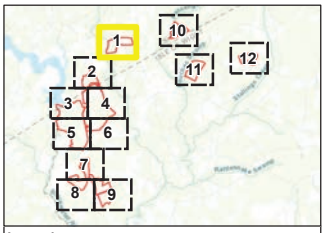

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 1 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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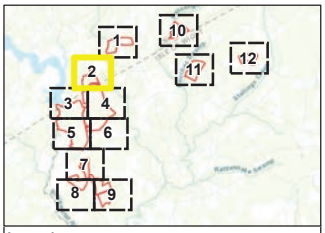

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 2 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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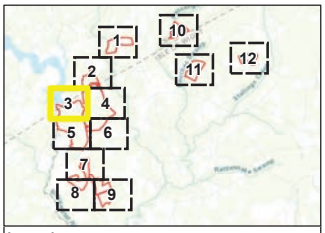

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 3 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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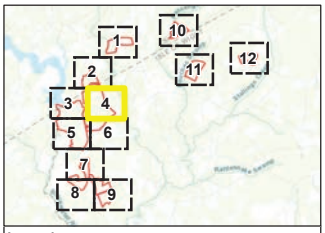

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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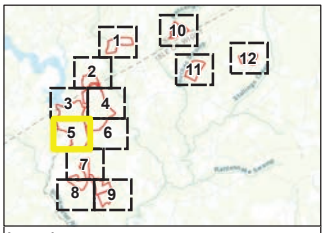

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 5 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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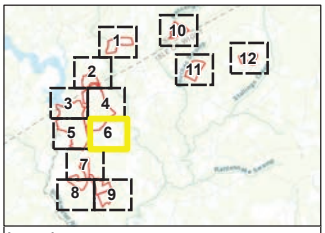

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 6 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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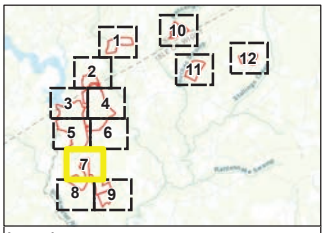

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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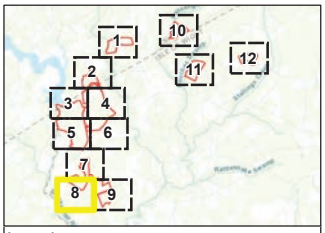

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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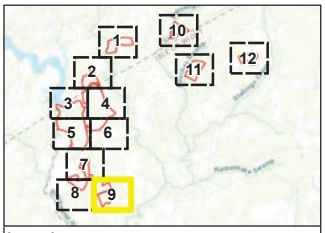

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 9 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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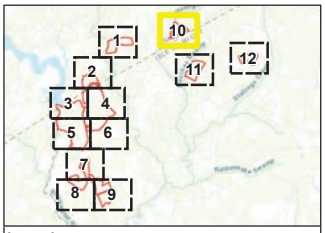

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 10 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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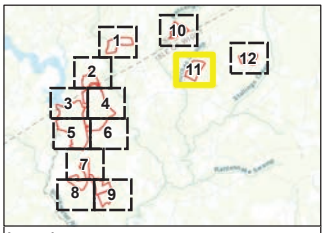


Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

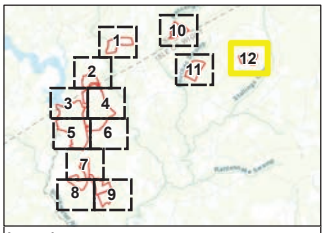
Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

\GIS\AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\20200412_Envir_Resource_Impact_Report\Figure_8_Sycamore_Cross_Solar_Delineated_Aquatic_Resources_Features_Detail.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 12 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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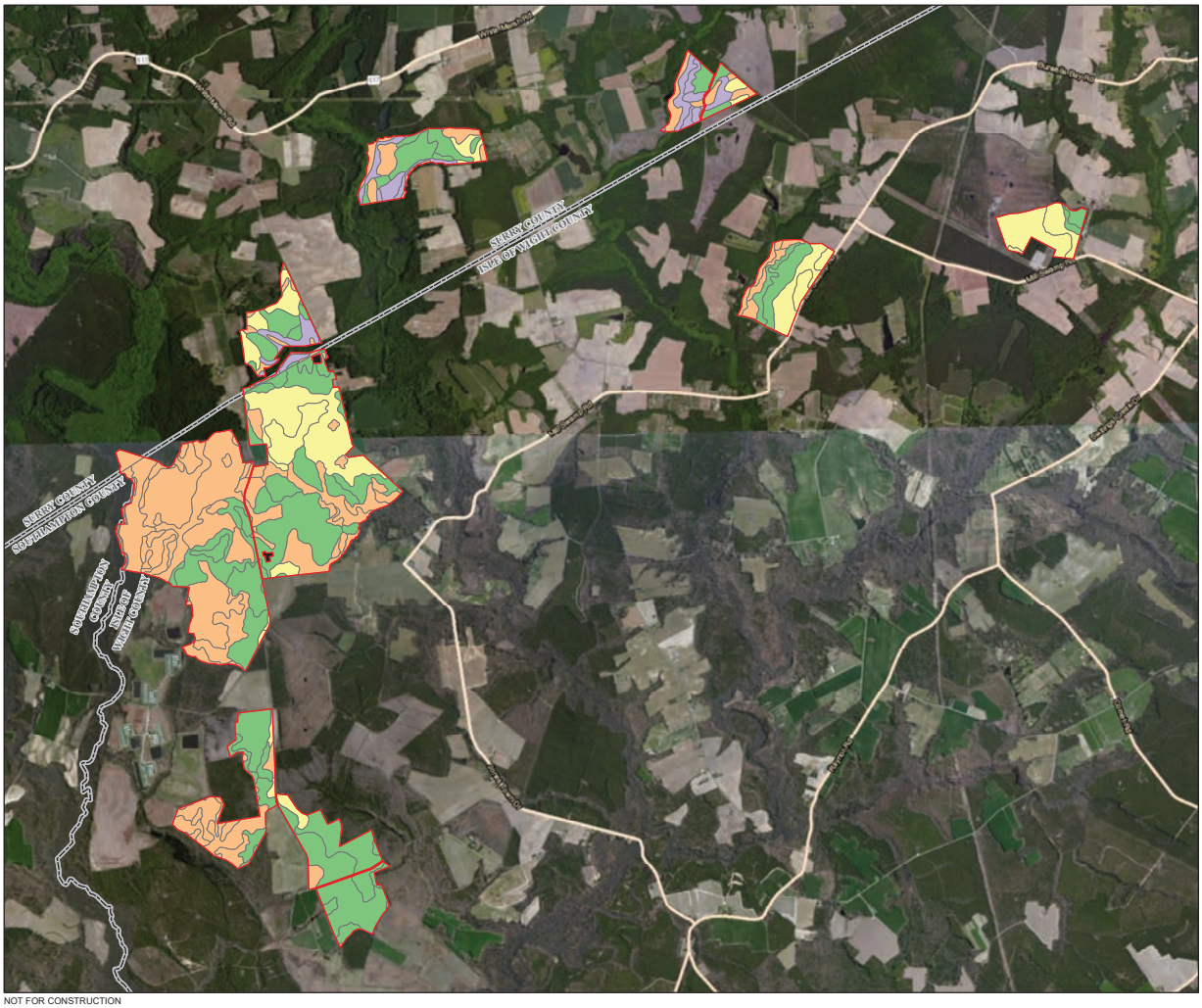

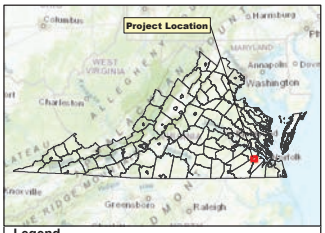

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

Farmland Class

- All areas are prime farmland
- Farmland of statewide importance
- Not prime farmland
- Prime farmland if drained

N
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0 0.25 0.5 1 Miles

Figure 9
Prime Farmland Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; NHD, 2022; NWI; 2022; USDA, 2022; NRCS, 2022; SSURGO, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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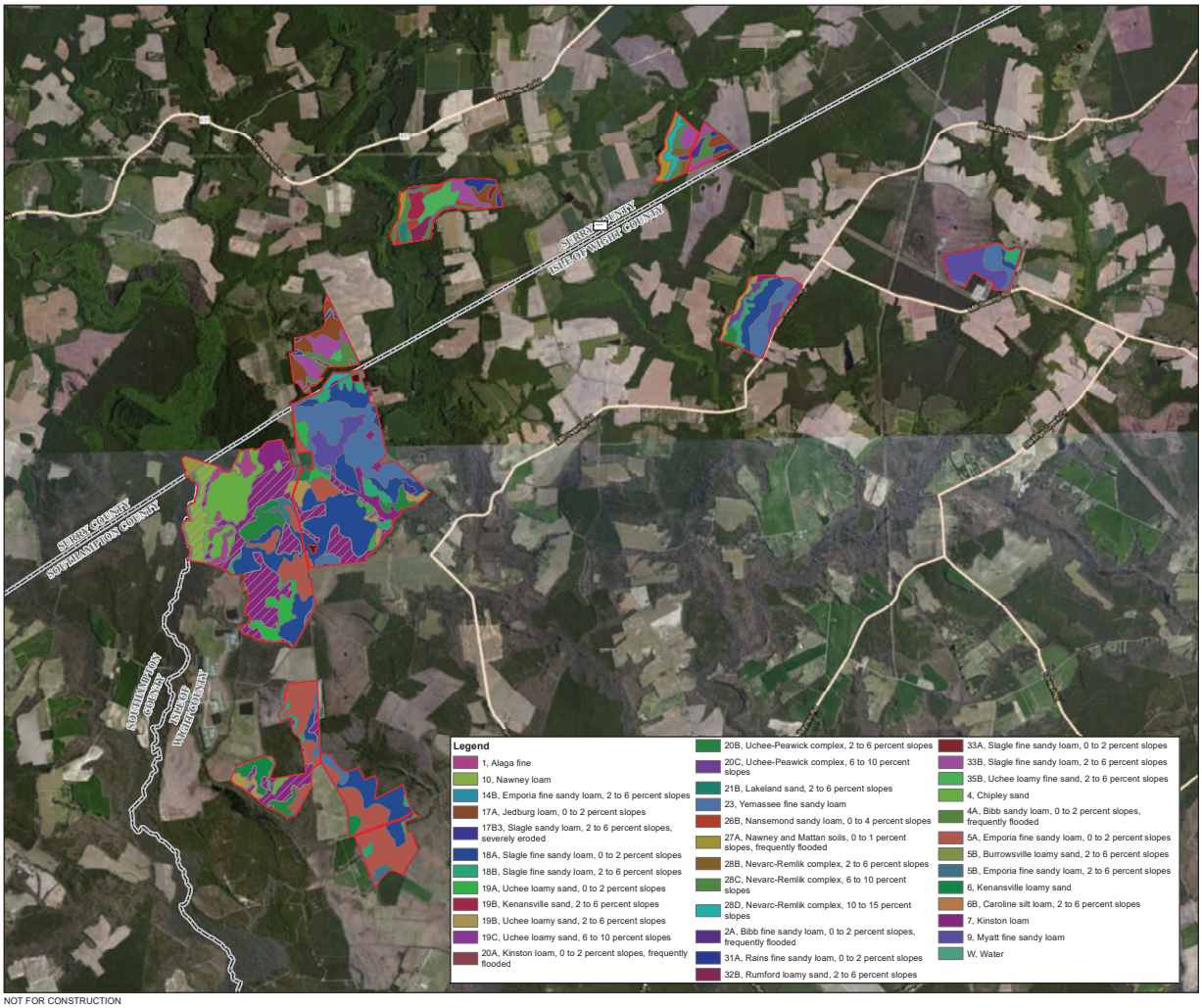

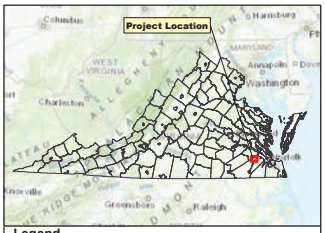

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Hydric Soil

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0 0.25 0.5 1 Miles

Figure 10
USDA-NRCS Soil Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; NHD, 2022; NWI; 2022; USDA, 2022; NRCS, 2022; SSURGO, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

GIS\AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\20230412_Enver_Resource_Impact_Report\Figure_10_Sycamore_Cross_Solar_Soils_Map.mxd

APPENDIX A: USDA-NRCS SOIL REPORT

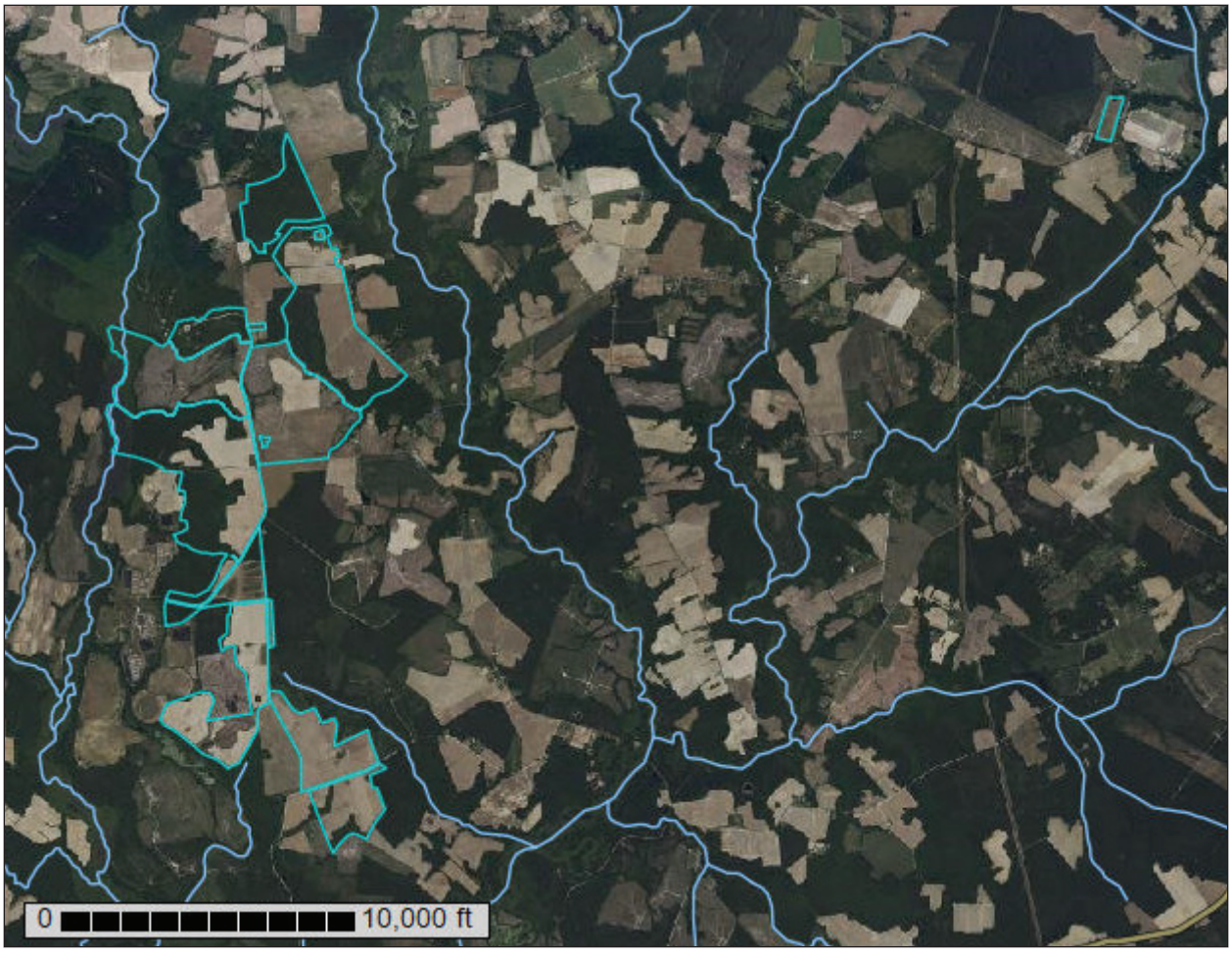
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Isle of Wight County, Virginia, Southampton County, Virginia, and Surry County, Virginia



March 31, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

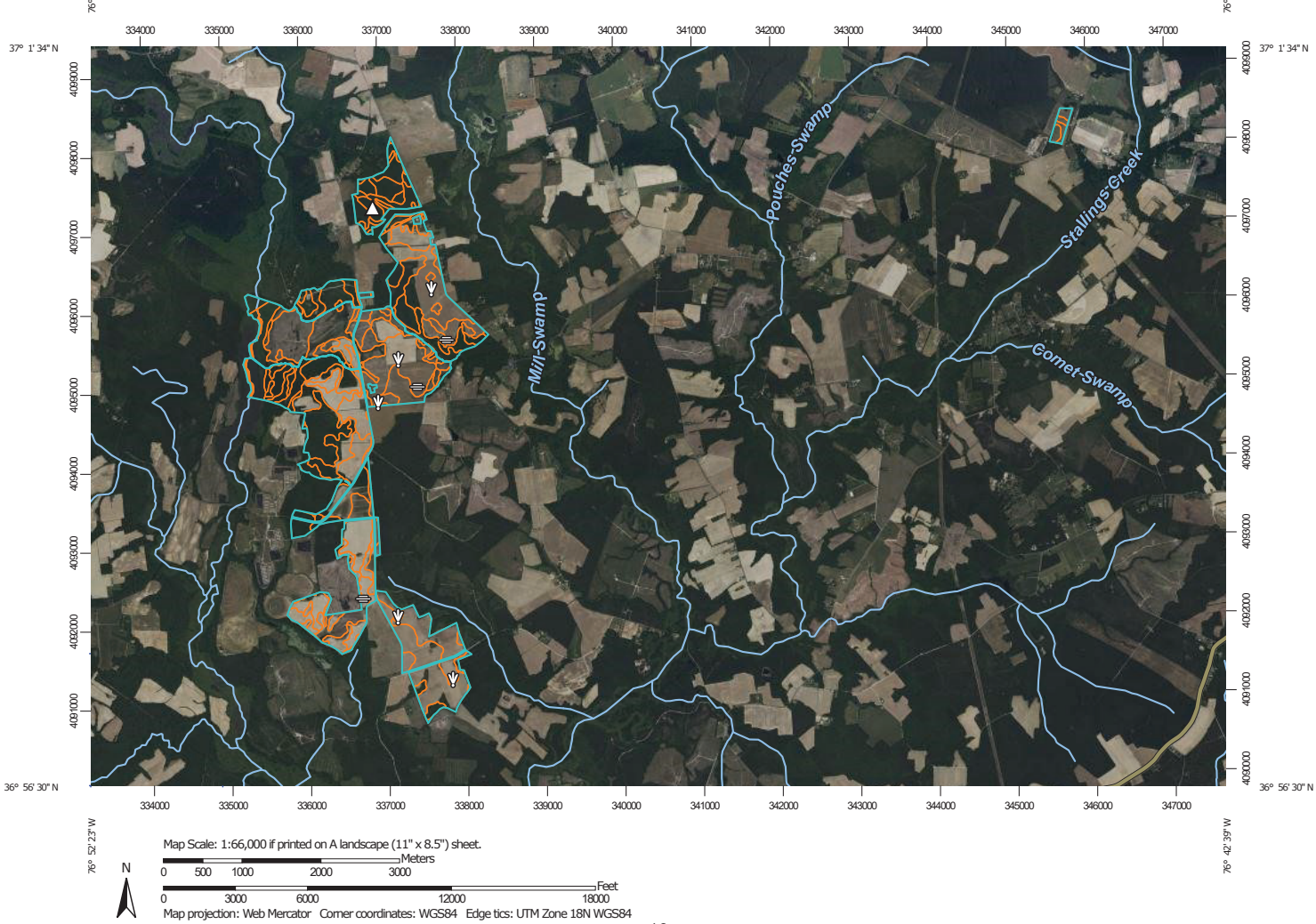
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Isle of Wight County, Virginia
Survey Area Data: Version 18, Aug 29, 2022

Soil Survey Area: Southampton County, Virginia
Survey Area Data: Version 21, Aug 22, 2022

Soil Survey Area: Surry County, Virginia
Survey Area Data: Version 19, Aug 22, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—Jul 13, 2022

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Alaga fine sand	29.3	1.6%
4	Chipley sand	116.0	6.2%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	274.8	14.6%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	21.0	1.1%
6	Kenansville loamy sand	41.6	2.2%
7	Kinston loam	367.5	19.5%
9	Myatt fine sandy loam	38.4	2.0%
10	Nawney loam	55.9	3.0%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	401.3	21.3%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	58.5	3.1%
19A	Uchee loamy sand, 0 to 2 percent slopes	61.1	3.2%
19B	Uchee loamy sand, 2 to 6 percent slopes	40.0	2.1%
19C	Uchee loamy sand, 6 to 10 percent slopes	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	57.2	3.0%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	9.3	0.5%
23	Yemassee fine sandy loam	155.4	8.3%
W	Water	4.1	0.2%
Subtotals for Soil Survey Area		**1,737.1**	**92.3%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	3.9	0.2%
W	Water	3.4	0.2%
Subtotals for Soil Survey Area		**7.3**	**0.4%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	40.2	2.1%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	6.9	0.4%
21B	Lakeland sand, 2 to 6 percent slopes	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	0.2	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	23.9	1.3%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	37.3	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	4.2	0.2%
Subtotals for Soil Survey Area		**136.5**	**7.3%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Isle of Wight County, Virginia

1—Alaga fine sand

Map Unit Setting

National map unit symbol: 404h
Elevation: 10 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Alaga and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alaga

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 3 inches: fine sand
H2 - 3 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Nawney

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

4—Chipley sand

Map Unit Setting

National map unit symbol: 4058
Elevation: 10 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Chipley and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chipley

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy marine deposits

Typical profile

H1 - 0 to 6 inches: sand
H2 - 6 to 60 inches: sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kinston
Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney
Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Leon
Percent of map unit: 4 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

5A—Emporia fine sandy loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 4059
Elevation: 20 to 150 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Emporia and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 33 inches: sandy clay loam
H3 - 33 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

5B—Emporia fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 405b
Elevation: 20 to 150 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 33 inches: sandy clay loam
H3 - 33 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

6—Kenansville loamy sand

Map Unit Setting

National map unit symbol: 405c
Elevation: 0 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days

Farmland classification: Not prime farmland

Map Unit Composition

Kenansville and similar soils: 80 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kenansville

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 41 inches: sandy loam
H3 - 41 to 60 inches: sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 8 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

7—Kinston loam

Map Unit Setting

National map unit symbol: 405d
Elevation: 50 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Kinston and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kinston

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

9—Myatt fine sandy loam

Map Unit Setting

National map unit symbol: 405g
Elevation: 0 to 100 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Myatt and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myatt

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 51 inches: sandy clay loam
H3 - 51 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

10—Nawney loam

Map Unit Setting

National map unit symbol: 404j
Elevation: 0 to 80 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Nawney and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nawney

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 44 inches: loam
H3 - 44 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

17B3—Slagle sandy loam, 2 to 6 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 404t
Elevation: 50 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Slagle and similar soils: 85 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: sandy loam
H2 - 4 to 25 inches: sandy clay loam
H3 - 25 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

18A—Slagle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 404v
Elevation: 50 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 85 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 25 inches: sandy clay loam
H3 - 25 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

18B—Slagle fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sgy1
Elevation: 70 to 330 feet
Mean annual precipitation: 32 to 51 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 158 to 206 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 83 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Riser, tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bt - 8 to 51 inches: sandy clay loam
C - 51 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

19A—Uchee loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 404y
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19B—Uchee loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 404z
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19C—Uchee loamy sand, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 4050
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20B—Uchee-Peawick complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 4052
Elevation: 20 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 45 percent
Peawick and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Peawick

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 70 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20C—Uchee-Peawick complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 4053
Elevation: 20 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 45 percent
Peawick and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Peawick

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 70 inches: clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

23—Yemassee fine sandy loam

Map Unit Setting

National map unit symbol: 4056
Elevation: 0 to 40 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Yemassee and similar soils: 85 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yemassee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 10 inches: fine sandy loam
H2 - 10 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 7 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 405h
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Southampton County, Virginia

4A—Bibb sandy loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: rnwb
Elevation: 0 to 110 feet
Mean annual precipitation: 42 to 54 inches
Frost-free period: 180 to 208 days
Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 95 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains, drainageways
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy and/or loamy alluvium

Typical profile

H1 - 0 to 8 inches: sandy loam
H2 - 8 to 50 inches: sandy loam
H3 - 50 to 84 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Chastain, frequently flooded

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: Yes

Myatt

Percent of map unit: 1 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Riser, tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: rnxs
Mean annual precipitation: 42 to 54 inches
Frost-free period: 180 to 208 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Swamps, lakes, perenial streams

Surry County, Virginia

5B—Burrowsville loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43fs
Elevation: 60 to 100 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Burrowsville and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Burrowsville

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 11 inches: loamy sand
H2 - 11 to 32 inches: fine sandy loam
H3 - 32 to 59 inches: fine sandy loam
H4 - 59 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

6B—Caroline silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43ft
Elevation: 90 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Caroline and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Caroline

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey marine sediments

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 14 inches: silt loam
H3 - 14 to 70 inches: clay
H4 - 70 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

14B—Emporia fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43gz
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 14 inches: loamy fine sand
H3 - 14 to 18 inches: fine sandy loam
H4 - 18 to 41 inches: sandy clay loam
H5 - 41 to 54 inches: sandy clay
H6 - 54 to 72 inches: stratified sandy loam to sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

17A—Jedburg loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43h4
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Jedburg and similar soils: 85 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jedburg

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 57 inches: loam
H3 - 57 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 6 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20A—Kinston loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43h9
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kinston and similar soils: 75 percent
Minor components: 21 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kinston

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 52 inches: sandy clay loam
H3 - 52 to 74 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 8 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Rains

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mattan

Percent of map unit: 1 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

21B—Lakeland sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hd
Elevation: 10 to 70 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy eolian sediments

Typical profile

H1 - 0 to 5 inches: sand
H2 - 5 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

27A—Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43hm
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Nawney and similar soils: 50 percent
Mattan and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nawney

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 44 inches: loam
H3 - 44 to 70 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Mattan

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic and loamy alluvial sediments

Typical profile

Oa1 - 0 to 14 inches: muck
Oa2 - 14 to 40 inches: muck
H3 - 40 to 48 inches: loamy sand
H4 - 48 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

28B—Nevarc-Remlik complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hx
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

28C—Nevarc-Remlik complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 43j0
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

28D—Nevarc-Remlik complex, 10 to 15 percent slopes

Map Unit Setting

National map unit symbol: 43j1
Elevation: 10 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 40 percent
Remlik and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

31A—Rains fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43j8
Elevation: 70 to 110 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Rains and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rains

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 12 inches: fine sandy loam
H2 - 12 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

33A—Slagle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43jg
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 80 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 41 inches: sandy clay loam
H3 - 41 to 70 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 2 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

33B—Slagle fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sgy1
Elevation: 70 to 330 feet
Mean annual precipitation: 32 to 51 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 158 to 206 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 83 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Riser, tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bt - 8 to 51 inches: sandy clay loam
C - 51 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

35B—Uchee loamy fine sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43jp
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 34 inches: loamy fine sand
H2 - 34 to 72 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

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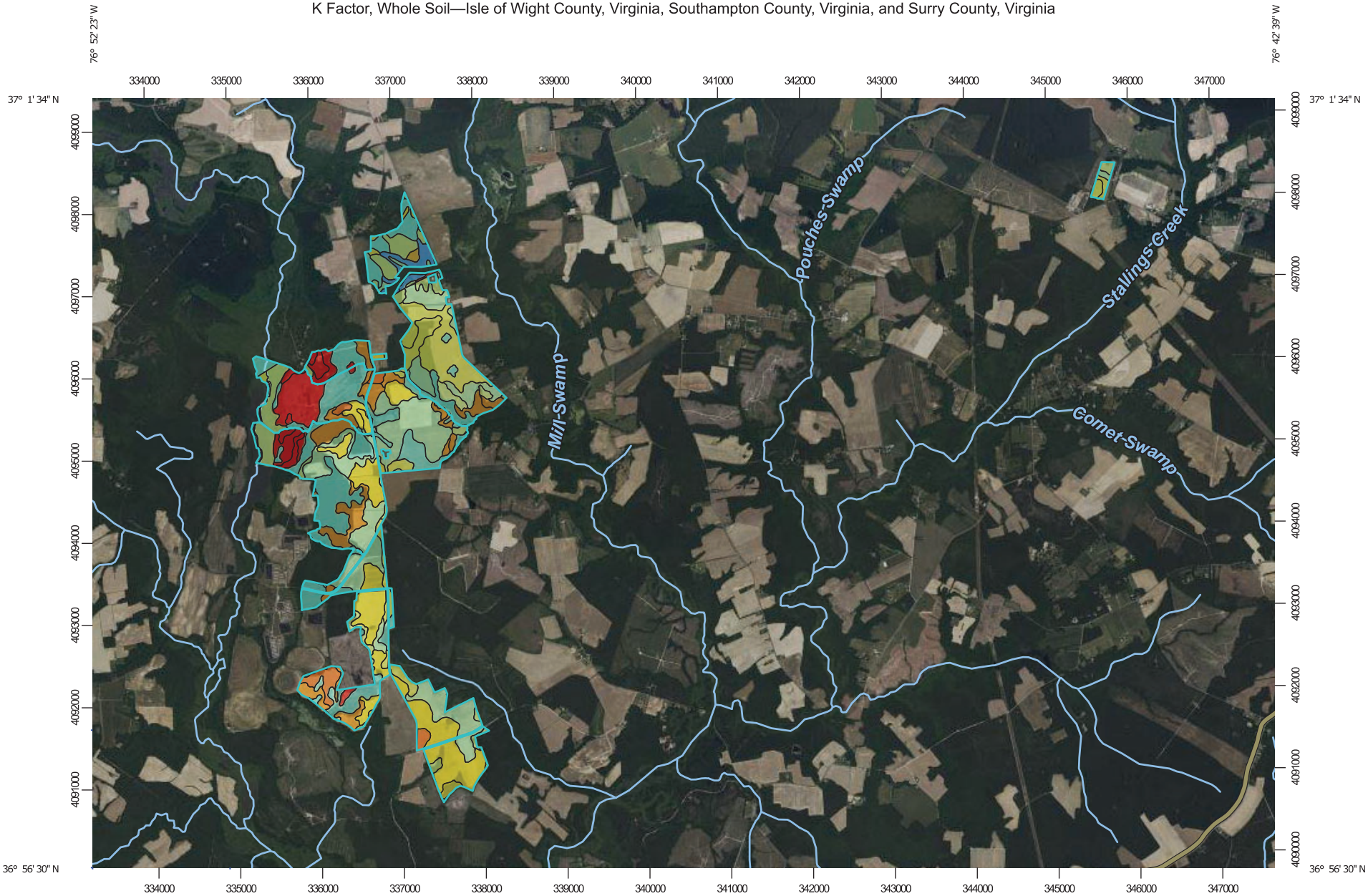


Map Scale: 1:66,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 500 1000 2000 3000

Feet
0 3000 6000 12000 18000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Isle of Wight County, Virginia
Survey Area Data: Version 18, Aug 29, 2022

Soil Survey Area: Southampton County, Virginia
Survey Area Data: Version 21, Aug 22, 2022

Soil Survey Area: Surry County, Virginia
Survey Area Data: Version 19, Aug 22, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—Jul 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	.02	29.3	1.6%
4	Chipley sand	.02	116.0	6.2%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	.17	274.8	14.6%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	.17	21.0	1.1%
6	Kenansville loamy sand	.05	41.6	2.2%
7	Kinston loam	.32	367.5	19.5%
9	Myatt fine sandy loam	.20	38.4	2.0%
10	Nawney loam	.24	55.9	3.0%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	.24	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	.28	401.3	21.3%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	.24	58.5	3.1%
19A	Uchee loamy sand, 0 to 2 percent slopes	.10	61.1	3.2%
19B	Uchee loamy sand, 2 to 6 percent slopes	.10	40.0	2.1%
19C	Uchee loamy sand, 6 to 10 percent slopes	.10	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	.10	57.2	3.0%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	.10	9.3	0.5%
23	Yemassee fine sandy loam	.20	155.4	8.3%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,737.1**	**92.3%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	.20	3.9	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	.10	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	.43	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	.24	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	.32	40.2	2.1%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	.28	6.9	0.4%
21B	Lakeland sand, 2 to 6 percent slopes	.02	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	.32	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	.43	0.2	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	.43	23.9	1.3%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	.43	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	.17	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	.24	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	.24	37.3	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	.15	4.2	0.2%
Subtotals for Soil Survey Area			**136.5**	**7.3%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

APPENDIX B: USFWS IPAC AND FEDERAL-LISTED SPECIES INFORMAL REVIEW

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project Code: 2023-0061833
Project Name: Sycamore Cross

March 29, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

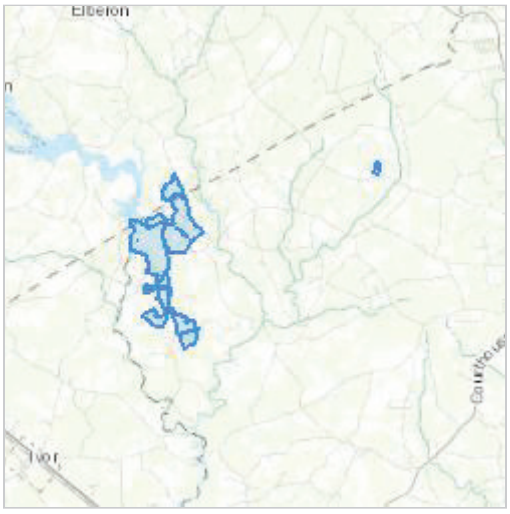
This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

PROJECT SUMMARY

Project Code: 2023-0061833
Project Name: Sycamore Cross
Project Type: Power Gen - Solar
Project Description: Sycamore Cross
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.985725,-76.84112557757788,14z



Counties: Isle of Wight , Southampton , and Surry counties, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

BIRDS

NAME	STATUS
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Brown-headed Nuthatch *Sitta pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12

(0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

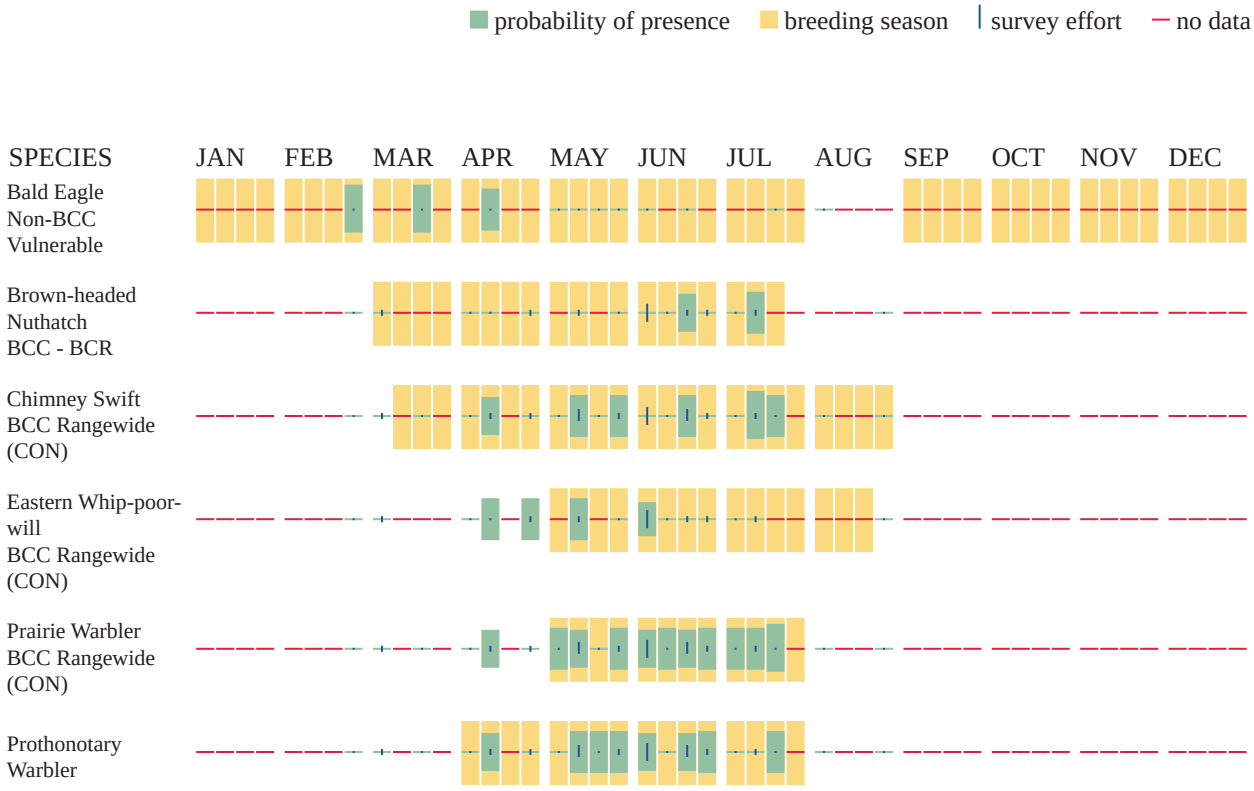
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

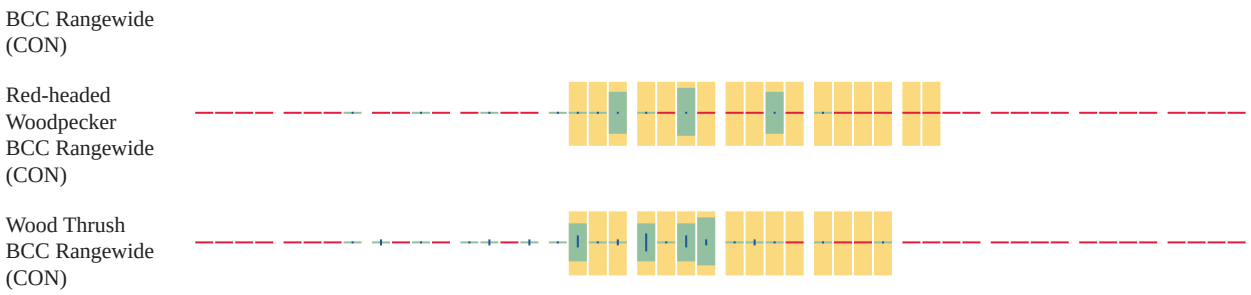
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list

of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical

Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPAC USER CONTACT INFORMATION

Agency:	Tetra Tech
Name:	Justin Ahn
Address:	4101 Cox Road
Address Line 2:	Suite 120
City:	Glen Allen
State:	VA
Zip:	23060
Email	justin.ahn@tetratech.com
Phone:	6105730764

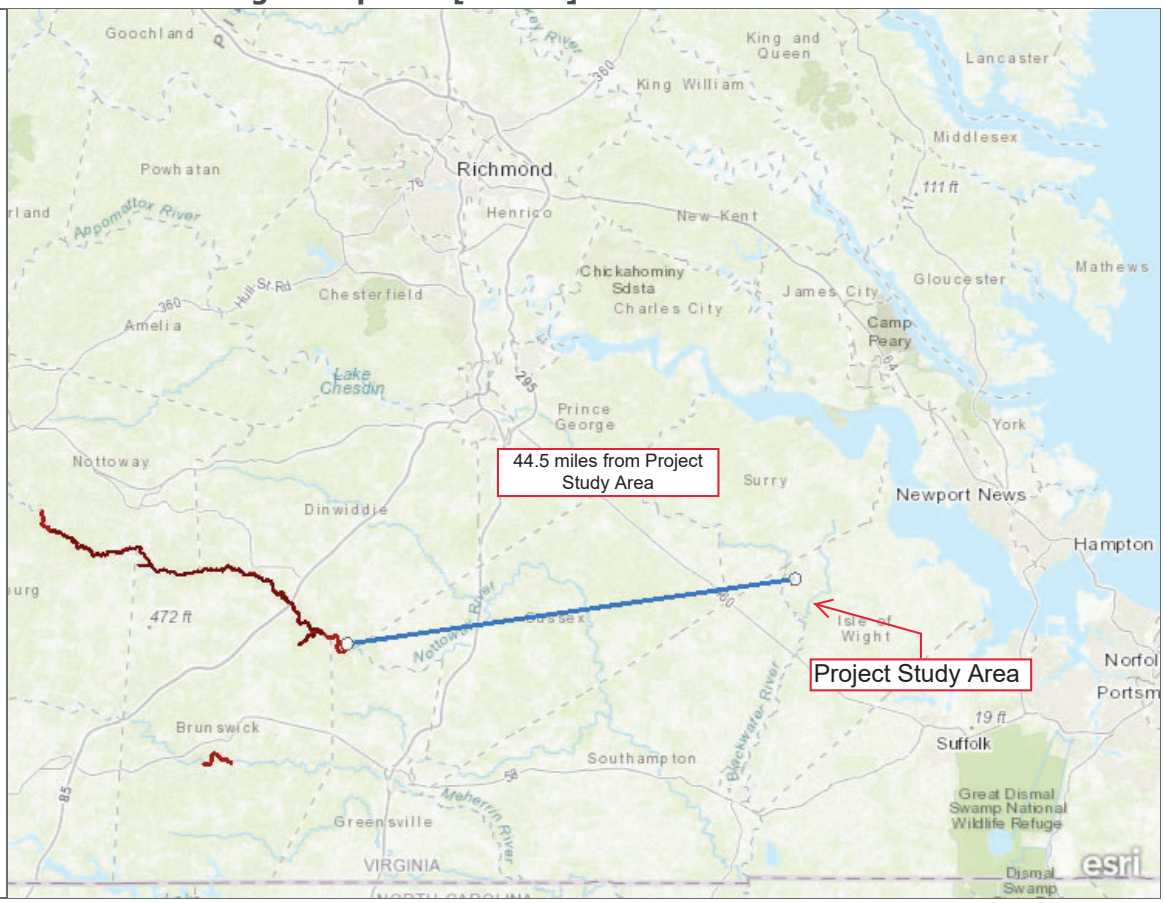
Critical Habitat for Threatened & Endangered Species [USFWS]

Final Polygon Features

Final Linear Features

Proposed Polygon Features

Proposed Linear Features



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

CCB Mapping Portal



Layers: VA Eagle Nest Buffers, VA Eagle Nest Locator

Map Center [longitude, latitude]: [-76.83631896972655, 36.933702217046296]

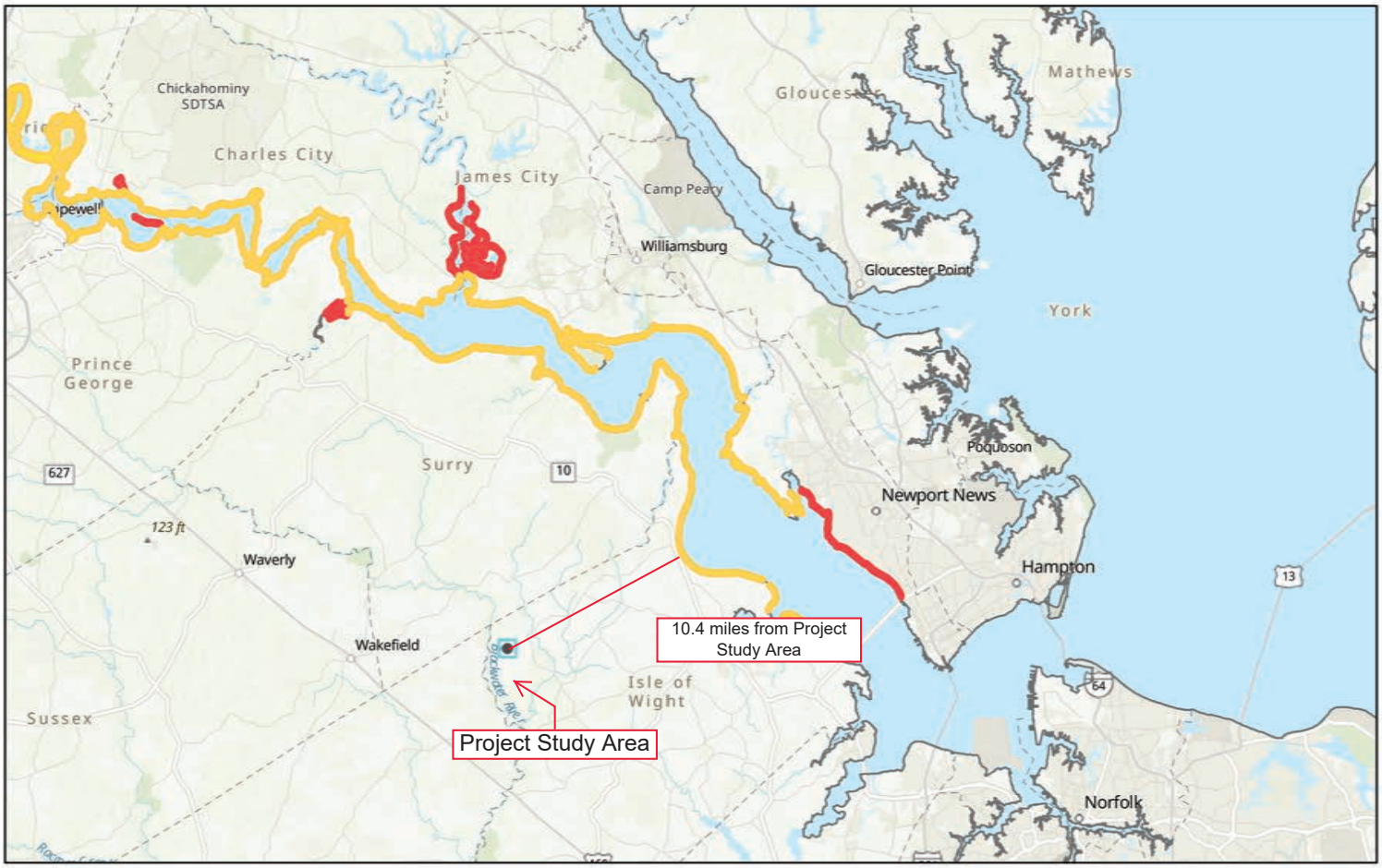
Map Link:
https://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Buffers&layer=VA+Eagle+Nest+Locator&zoom=11&lat=36.933702217046296&lng=-76.83631896972655&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 03/27/2023

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the Data Use Agreement to ensure compliance with our data use policies. For additional data access questions, view our Data Distribution Policy, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Area A

BECA



March 27, 2023

1:577,791

0 4 8 16 mi

0 5 10 20 km

Esri, CGIAR, USGS, VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

APPENDIX C: STATE-LISTED SPECIES INFORMAL REVIEW

Site Location

37,00,52.7 -76,49,49.6
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles buffer

Display at center | **Search Point** is not at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, BECAR, BAEANests, TEWaters, TierII, Habitat, Trout, Anadromous

Map Overlay Legend

T & E Waters
Federal
State

Predicted Habitat WAP Tier I & II
Aquatic
Terrestrial

Trout Waters
Class I - IV
Class V - VI

Anadromous Fish Reach
Confirmed
Potential

123 Impediment

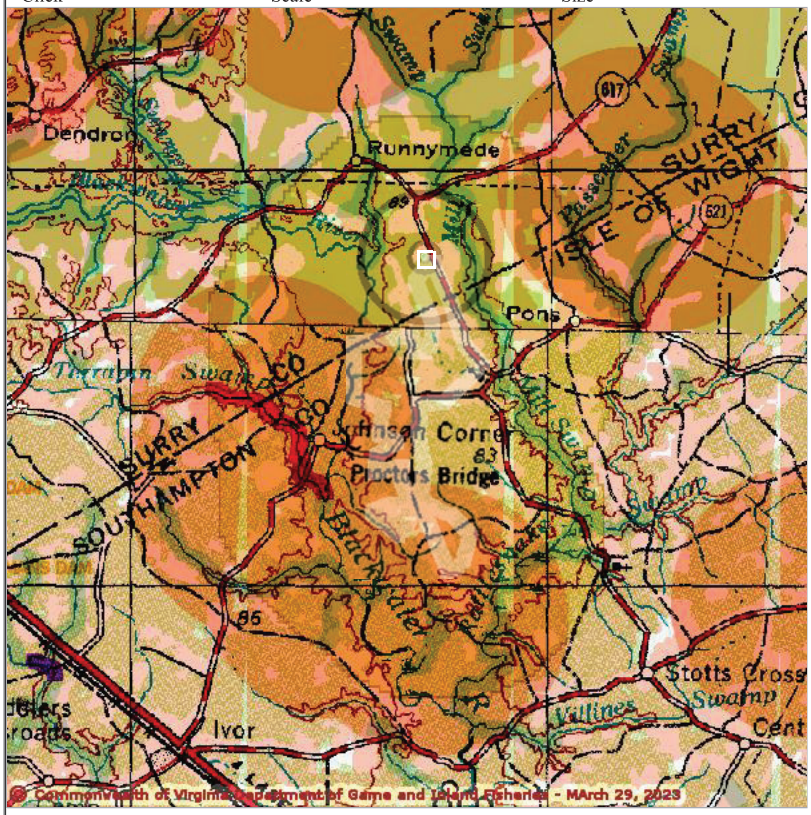
Position Rings 1 mile and 1/4 mile at the Search Point

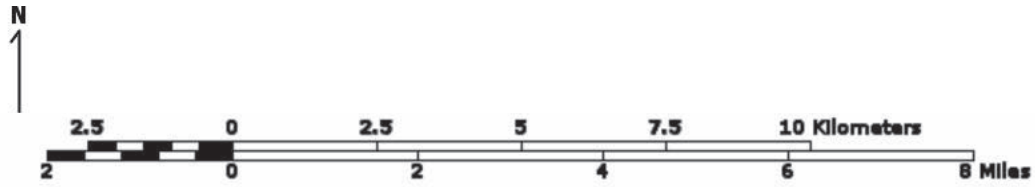
2 mile radius Search Area

Bald Eagle Concentration Areas and Roosts

Refresh Browser Page

Map Click: Pan | Id | M
Map Scale: In Zoom Out
Screen Size: Small Size Big
Help





Point of Search 37,00,52.7 -76,49,49.6
Map Location 36,58,55.9 -76,50,04.8

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:250,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 327114 and top 4104072. Pixel size is 23. . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 19200 meters east to west by 19200 meters north to south for a total of 368.6 square kilometers. The map display represents 63002 feet east to west by 63002 feet north to south for a total of 142.3 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
http://www.national.geographic.com/topo
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-29 10:45:27 (qa/qc March 21, 2016 12:20 - tn=1469798.0 dist=3218 I)
$poi=37.0146500 -76.8304699

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Commonwealth of Virginia Governor

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Search Va DGIF Go

Virginia Department of Game and Inland Fisheries

VaFWIS Search Report Compiled on 3/29/2023, 10:45:04 AM

Known or likely to occur within a **2 mile buffer around polygon; center 37.0146500 -76.8304699** in **093 Isle of Wight County, 175 Southampton County, 181 Surry County, VA**

View Map of Site Location

593 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 39) (39 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
040228	FESE	Ia	Woodpecker, red-cockaded	Picoides borealis		BOVA
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
010214	FESE	IIa	Logperch, Roanoke	Percina rex		BOVA
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta		BOVA
040144	FTST	Ia	Knot, red	Calidris canutus rufa		BOVA,HU6
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
060029	FTST	IIa	Lance, yellow	Elliptio lanceolata	Yes	BOVA,TEWaters,SppObs,HU6
010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Potential	BOVA,Habitat,HU6
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis	Yes	BOVA,SppObs,HU6
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA,SppObs,HU6
020052	SE	IIa	Salamander, eastern tiger	Ambystoma tigrinum		BOVA
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Potential	Habitat,HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040385	ST	Ia	Sparrow, Bachman's	Peucaea aestivalis		BOVA,HU6
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Potential	BOVA,Habitat,HU6
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
100079	FC	IIIa	Butterfly, monarch	Danaus plexippus		BOVA
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Potential	BOVA,Habitat
030063	CC	IIIa	Turtle, spotted	Clemmys guttata	Yes	BOVA,SppObs,HU6
030031	CC	IIIc	Kingsnake, scarlet	Lampropeltis elapsoides		BOVA
010174		Ia	Bass, Roanoke	Ambloplites cavifrons		BOVA
010077		Ia	Shiner, bridle	Notropis bifrenatus		BOVA
070131		Ic	Isopod, Phreatic	Caecidotea phreatica		BOVA
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes	BOVA,Habitat,SppObs,HU6
020002		IIa	Treefrog, barking	Hyla gratiosa		BOVA,HU6
040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040033		IIa	Egret, snowy	Egretta thula		BOVA

040029		IIa	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA,HU6
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		IIa	Woodcock, American	Scolopax minor		BOVA,HU6
060071		IIa	Lampmussel, yellow	Lampsilis cariosa		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA,HU6

To view **All 593 species** View 593

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the grou

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (3 records)

View Map of All Query Results Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Sycamore Crossroads	1	Jun 2 2003	1			Yes
Blackwater River at Surry	1	Jun 1 1993	1			Yes
Rattlesnake Swamp	1	Jun 1 1993	1			Yes

Displayed 3 Colonial Water Bird Survey

Threatened and Endangered Waters (13 Reaches)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species							View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name						
Terrapin Swamp (0283664)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0285385)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0287738)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0289129)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0289623)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0290117)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0291410)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0291935)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0293016)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0294529)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0298333)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0302220)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0302289)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (56 records - displaying first 20 , 6 Observations with Threatened or Endangered species) View Map of All Query Results Species Observations

obsID	class	Date Observed	Observer	N Species	
				Different Species	Highest TE
55516	SppObs	May 7 1998	BEATY, AND ZEYTOONIAN, VIRGINIA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT.	3	FTST
55237	SppObs	May 7 1998	BRAVEN B. BEATY AND RICHARD J. NEVES, DEPARTMENT OF FISHERIES AND WILDLIFE AT VA TECH	3	FTST
635308	SppObs	Aug 18 2021	Shane Brodnick	1	SE
58094	SppObs	Aug 7 1997	Steven M. Roble, Ph. D. , Staff Zoologist	1	SE
53381	SppObs	Aug 8 1996	Steven M. Roble, Ph. D. , DCR	2	FPSE
9410	SppObs	Apr 5 1988	Mitchell D. Norman, VDGIF	3	CC
614290	SppObs	Jun 26 2007	John; Kleopfer| Robert ; Clontz	1	
375284	Aquatics	Oct 12 2007	B. T. Watson, M. E. Bradley	7	
426929	SppObs	May 17 2005	VCU - INSTAR	14	
62424	SppObs	Aug 11 1999	Ryan Smith, DGIF	12	
11331	SppObs	Sep 6 1985	NORMAN	19	
426934	SppObs	Sep 6 1985	VCU - INSTAR	19	
426951	SppObs	Sep 6 1984	VCU - INSTAR	10	
10425	SppObs	Sep 6 1984	Norman	10	
10433	SppObs	Aug 29 1984	Norman	23	
338036	SppObs	Jan 1 1984	MDN-B-NORMAN	23	
338051	SppObs	Jan 1 1984	MDN-B-NORMAN	10	
15411	SppObs	May 5 1962	R D ROSS	4	
332815	SppObs	Jan 1 1962	VPI-B-VA. POLY. INST.	4	
426942	SppObs	May 12 2005	VCU - INSTAR	5	

Displayed 20 Species Observations

Selected 56 Observations View all 56 Species Observations

Habitat Predicted for Aquatic WAP Tier I & II Species (5 Reaches) View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Tier Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Hickaneck Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Mill Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Rattlesnake Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Terrapin Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
tributary (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
tributary (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species (4 Species) View Map of Combined Terrestrial Habitat Predicted for 4 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Yes
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes

Virginia Breeding Bird Atlas Blocks (2 records)

View Map of All Query Results
Virginia Breeding Bird Atlas Blocks

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
55056	Dendron, SE	43		III	Yes
56056	Runnymede, SE	65		III	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
093	Isle of Wight	421	FESE	I
175	Southampton	402	FESE	I
181	Surry	445	FESE	I

USGS 7.5' Quadrangles:
Ivor
Dendron
Raynor
Runnymede

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CU59	Blackwater River-Terrapin Swamp	99	FTSE	I
CU60	Mill Swamp-Moores Swamp	89	FTSE	I
CU61	Rattlesnake Swamp	88	FTSE	I
CU62	Blackwater River-Antioch Swamp	92	FTSE	I

Compiled on 3/29/2023, 10:45:05 AM I1469798.0 report=all searchType= P dist= 3218 poi= 37.0146500 -76.8304699 siteDD= 37.0146550 -76.8304718;37.0066990 -76.8254288;37.0001450 -76.8230508;36.9967600 -76.8213098;36.9930180 -76.8166158;36.9852540 -76.8256298;36.9847270 -76.8336928;36.9804500 -76.8326788;36.9788090 -76.8335 -76.8324618;36.9563430 -76.8367528;36.9612070 -76.8454438;36.9632160 -76.8392578;36.9610180 -76.8391648;36.9615850 -76.8345228;36.9685120 -76.8383148;36.9712350 -76.8373848;36.9696540 -76.8447548;36.9730630 -76.8446968;36.9763590 -76.8378158;36.9781580 -76.8437688;36.9839170 -76.8427458;36.9859910 -76.8507688;36.9910220 -76.8303698;37.0146550 -76.8304718;.

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| 3/29/2023, 10:45:05 AM | DGIF | Credits | Disclaimer | Please view our privacy policy |
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I 1469798

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Natural Heritage Resources

Your Criteria

Taxonomic Group: Select All

Global Conservation Status Rank: Select All

State Conservation Status Rank: Select All

Federal Legal Status: Select All

State Legal Status: Select All

County: Isle of Wight,Surry

Physiographic Province: Select All

Watershed (8 digit HUC): 03010202 - Blackwater River

Subwatershed (12 digit HUC): CU59 - Blackwater River-Terrapin Swamp,CU60 - Mill Swamp-Moores Swamp,CU61 - Rattlesnake Swamp

Planning District: Select All

Virginia Coastal Zone: Select All

Search Run: 3/27/2023 15:27:24 PM

Result Summary

Total Species returned: 3

Total Communities returned: 0

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Isle of Wight								
Southern Coastal Plain Blackwater Blackwater River-Terrapin Swamp								

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Hampton Roads								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y
Rattlesnake Swamp								
Hampton Roads								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y

Surry

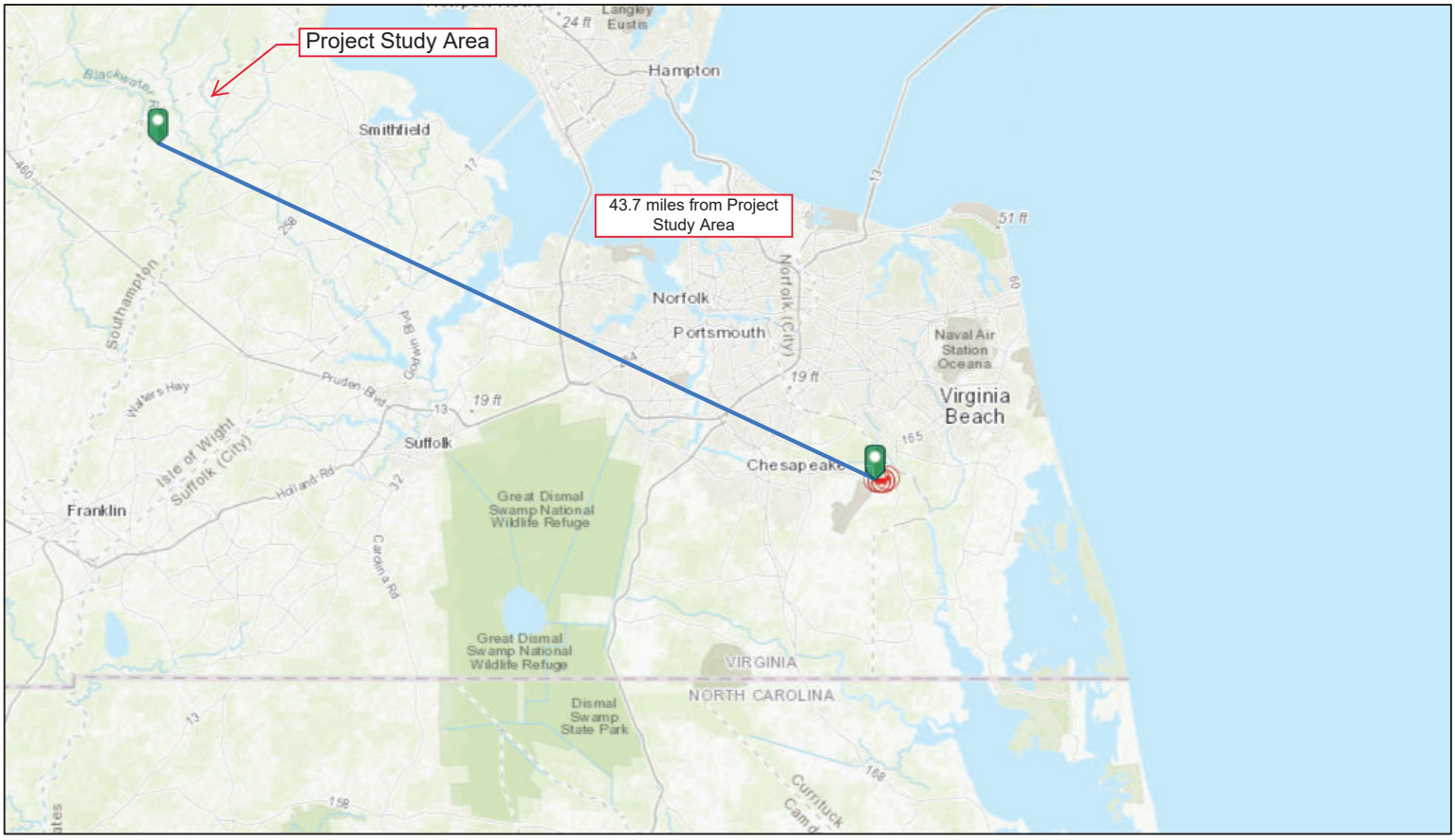
Southern Coastal Plain								
Blackwater								
Rattlesnake Swamp								
Crater								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an information request.

To Contribute information on locations of natural heritage resources, please fill out and submit a rare species sighting form.

NLEB Locations and Roost Trees



3/27/2023, 2:38:01 PM

NLEB Known Occupied Maternity Roost (Summer Habitat)

1:577,791

0 4 8 16 mi

0 5 10 20 km

Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

VA Dept. Game & Inland Fisheries

Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |

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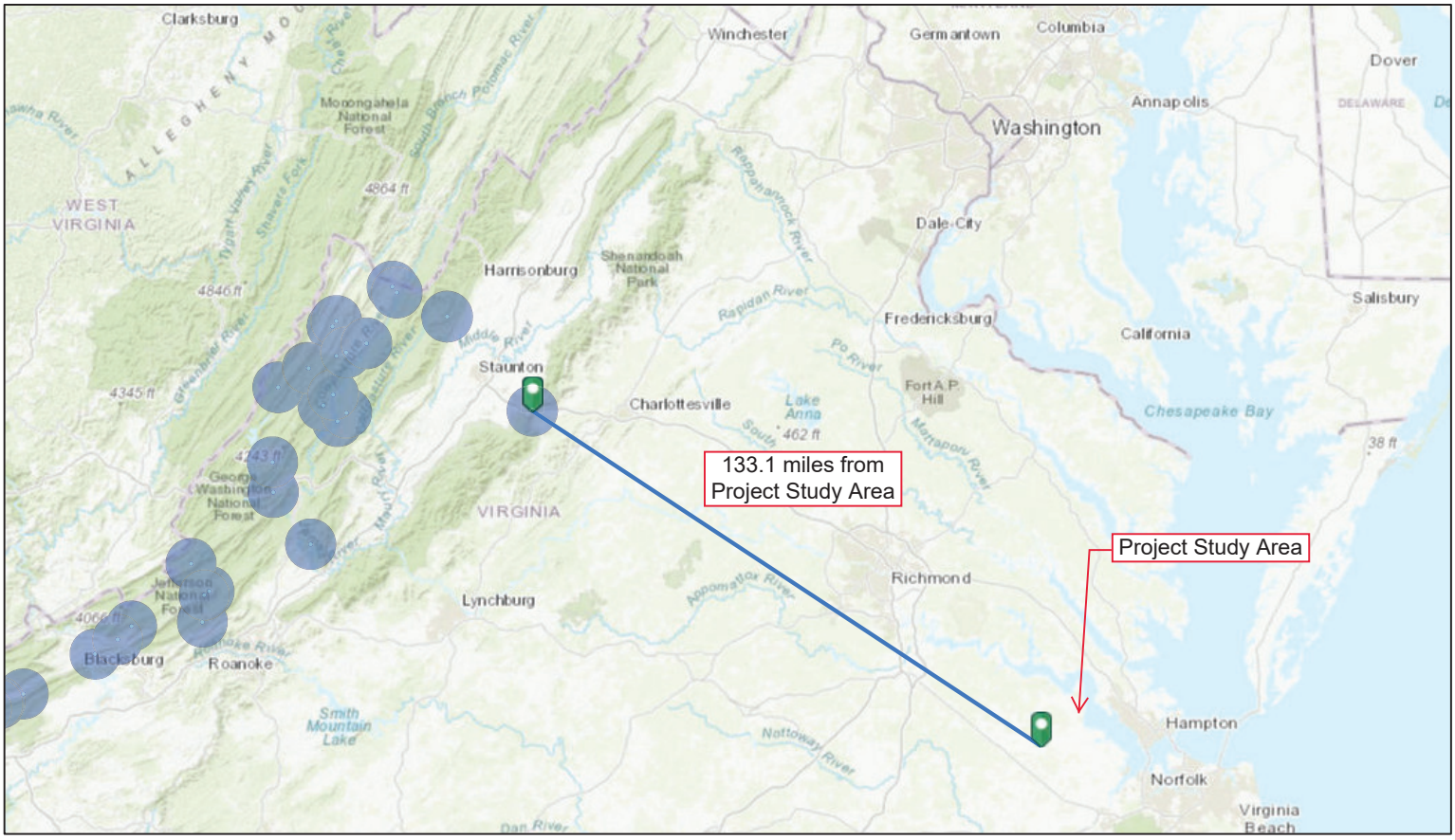

3/27/2023, 2:55:31 PM

1:2,311,162

0 15 30 60 mi

0 20 40 80 km

Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Tri-colored and Little Brown Hibernaculum Half Mile Buffer

Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

Dept. Game and Inland Fisheries

Esri, HERE, Garmin, FAO, USGS, EPA, NPS |

Attachment N
Historical and Cultural Resources Report

REPORT >

Phase IA Cultural Resource Assessment of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

DATE > August 2023

LOCATION > Isle of Wight and Surry Counties, Virginia

PREPARED FOR >
AES Clean Energy



PREPARED BY >
Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE IA CULTURAL RESOURCES ASSESSMENT OF THE ±817.46 Hectare (2,020 Acre) SYCAMORE CROSS SOLAR STUDY AREA

ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
AES CLEAN ENERGY
4200 INNSLAKE DRIVE
SUITE 302
GLEN ALLEN, VIRGINIA 23060

***PREPARED BY*:**
DUTTON + ASSOCIATES, LLC
1115 CROWDER DRIVE
MIDLOTHIAN, VIRGINIA 23113
804.897.1960

PRINCIPAL INVESTIGATOR:
ROBERT J. TAYLOR, JR., M.A.

PROJECT ARCHAEOLOGIST:
HOPE SMITH, PH.D.

AUGUST 2023

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ABSTRACT

In August 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The assessment was conducted for planning purposes in order to confirm existing conditions of the study area, note surface evidence of cultural activity, and identify recommended survey methods based upon the results of the background research and field reconnaissance. The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the project. Rather, the study area represents the maximum extent of the parcels being considered for development.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the study area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the study area is now sparsely developed. Just seven (7) building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the study area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The study area is bordered by Blackwater River and Mill Swamp and 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, however, no such sites have been previously recorded within the study area limits.

Although the study area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the study area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about ***34 hectares (85 acres)*** *total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for*

historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not be previously disturbed by logging. Together, the moderate potential area covers an area of about ***365 hectares (901 acres)*** *total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder of the study area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and field depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about* ***170 hectares (421 acres)****. A large tract of land at the northern end of the study area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort The table below details these areas.*

Potential	***Reason***	***STP Sample***	***Total Area***	***STP Area***
High	*Yard space around extant and map-projected architectural resources*	*100%*	*34 hectares 85 acres*	*34 hectares 85 acres*
Moderate	*Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.*	*25%, chosen based on field conditions, pedestrian survey of remainder*	*365 hectares 901 acres*	*91 hectares 225 acres*
Low	*Areas with no site predictors*	*10%, chosen based on field conditions, pedestrian survey of remainder*	*170 hectares 421 acres*	*17 hectares 42 acres*
No Subsurface Testing	*Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas*	*Pedestrian survey where possible*	*248 hectares 613 acres*	*Pedestrian survey where possible*
Total			***817.46 hectares 2,020 acres***	***142 hectares 352 acres***

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1. INTRODUCTION

In July 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted January 4th and 5th, and June 28th and 29th, 2023. The D+A effort is intended to provide a comprehensive archival study that will include a complete listing and discussion of previously recorded historic properties located within and in the vicinity of the study area, a historical map review of the study area in order to better understand the development and use of the properties and their role in the larger community, provide a basis for interpreting previously recorded historic properties, define potential locations where historic resources (above and below ground) are present or likely to be present, as well as delineate areas where consideration of archaeological resources is not necessary to assist in the development of a strategy for addressing historic resource issues going forward in the Certificate of Public Convenience and Need (CPCN) process.

Robert J. Taylor, Jr., M.A. served as the Principal Investigator, oversaw all project tasks, and co-authored the report. Hope Smith, Ph.D., served as the Project Archaeologist, coauthored the report, and was assisted in the field by Rebecca Mattson and Courtney Roark. Dara Friedberg, M.S., conducted background research for the project and coauthored the report. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's main office in Midlothian, Virginia.

STUDY AREA

The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail (Figure 1-1). The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the 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 part of the effort, field reconnaissance to document existing conditions was limited to those parcels where access was expressly granted while the rest of the study area was limited to desktop review only (Figure 1-2).



Figure 1-1: General location of the study area. Source: USGS

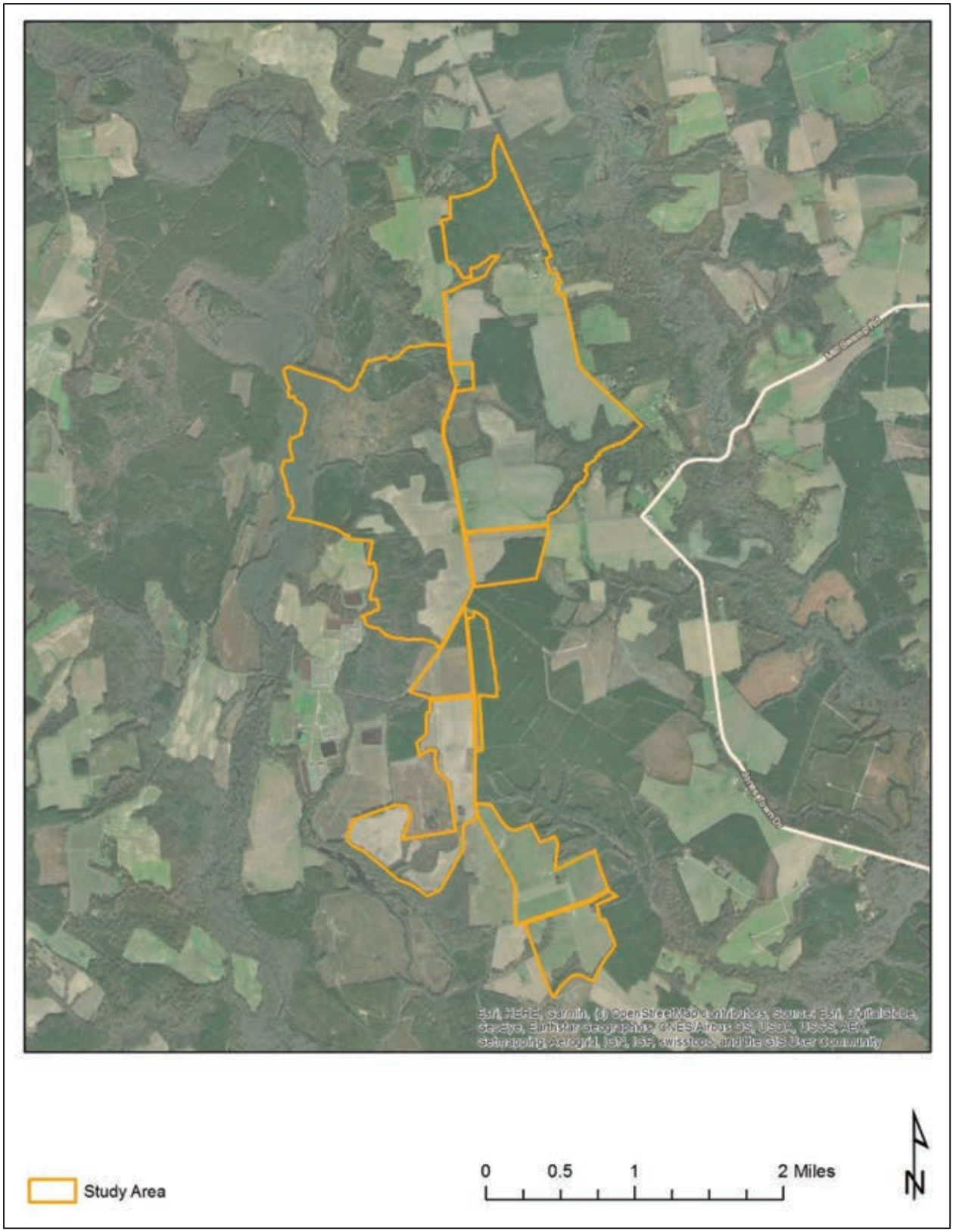

Figure 1-2: Aerial view of study area depicting parcels subject to full assessment as well as desktop-only.

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2. RESEARCH DESIGN

The Phase IA cultural resource assessment of the Sycamore Cross Solar study area was undertaken to provide a comprehensive archival study of previous cultural resource investigations in the study area, a historical map review to understand the land-use and development of properties within the study area, and define potential locations within the study area where historic resources (above and below ground) are present or likely to be present. Limited field reconnaissance was also conducted to verify existing conditions and note visible evidence of cultural resources, previous disturbance, or other pertinent landscape features. The background research, field reconnaissance, and field survey methodologies are summarized below.

ARCHIVAL RESEARCH

In January 2023, D+A conducted background research with the goal of identifying all previously recorded historic properties located within and in the vicinity of the study area in accordance with VDHR's guidance document titled *Guidelines for Conducting Cultural Resources Survey in Virginia* (Revised October 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.

In further preparation for the Phase IA survey, D+A conducted additional review of the following documents and sources for information relative to unrecorded historic property locations in the study 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.

ARCHAEOLOGICAL FIELD SURVEY

For those parcels within the study area where field access was granted, a limited pedestrian survey was conducted to document existing conditions and to note surface evidence of cultural activity or material. In addition, a limited number of judgmentally placed shovel tests were excavated in order to assess and document soil conditions throughout the project area. 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.

REPORT AND RECORD PREPARATION

The results of the background research and field reconnaissance were synthesized and summarized in this report accompanied by maps and photographs as appropriate. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia.

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).

3. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Sycamore Cross Solar study area consists of ±817.46-Hectare (2,020 Acres) of land divided into multiple contiguous and discontiguous parcels. The study area is located along the border of Isle of Wight and Surry counties within a primarily rural area of the Coastal Plain of Southside Virginia. The landscape within and bordering the study area is a mix of cultivated agricultural field, planted timber stands, and native woodland, particularly bordering the numerous drainages and swamps that dissect the area (Figure 3-1).

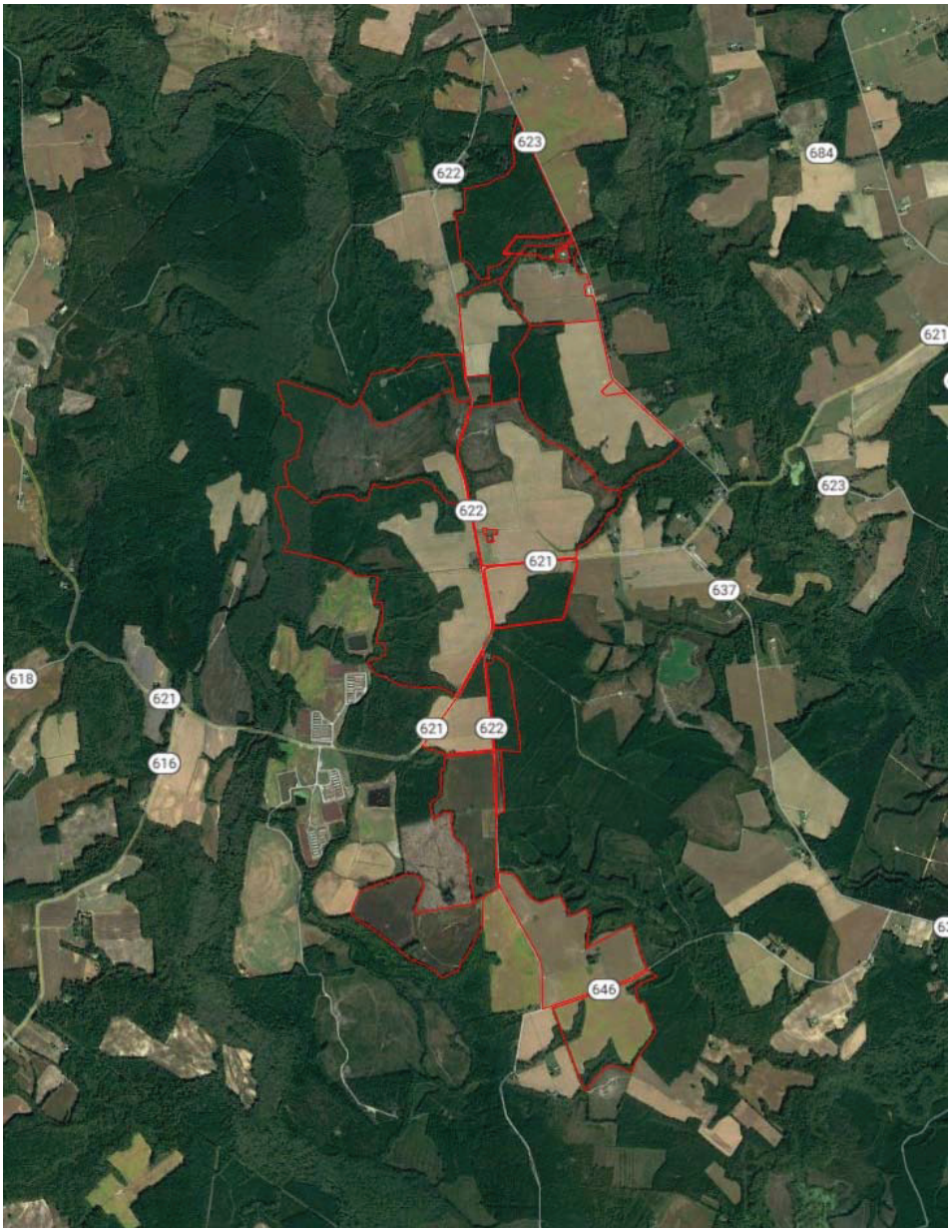

Figure 3-1. Aerial view of study area illustrating existing conditions.

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 study area ranges from approximately ±7.9 meters (26 feet) to ±27.4 meters (90 feet) above mean sea level with the highest elevations located along the crest of a broad ridge along the eastern edge of the study area and the lowest elevations bordering the Blackwater River along the western edge.

HYDROLOGY

Most of the study area drains west into Blackwater River, although portions of the eastern edge drain eastward into Mill Swamp which flows into Rattlesnake Swamp and ultimately into Blackwater River. This flows south into North Carolina where it empties into the Chowan River, which flows into Albemarle Sound, which empties into the Currituck Sound 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 Slagel fine sandy loam which is moderately well drained and covers about 25% of the study area. The second most prominent soil type is Kinston loam, which represents about 17.8% of the study area and is considered poorly drained. Well-drained Emporia fine sandy loam are the only other soils types that account for a significant portion of the study area at 15.2%. The rest of the study area is comprised of assorted sandy loams and complexes. Approximately 39.7% of the soils within the study area are classified as poorly to somewhat poorly drained (Figure 3-2 and Table 3-1).

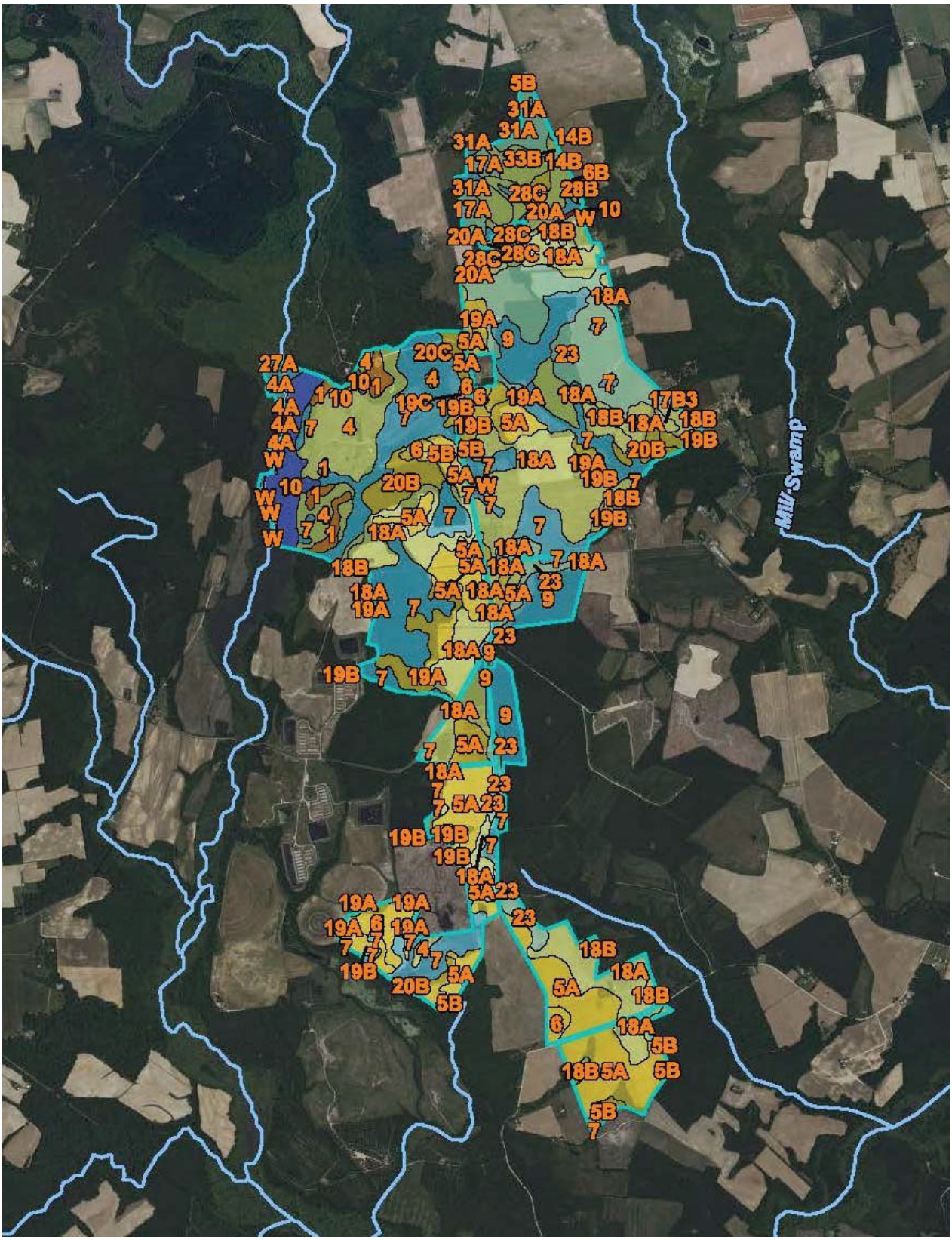

Figure 3-2: Soil survey of the Sycamore Cross study area showing drainage class (USDA 2023).

Table 3-1: Soil survey data for study area parcel cluster, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	Somewhat excessively drained	29.3	1.5%
4	Chipley sand	Moderately well drained	116.0	5.7%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	286.6	14.2%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	21.0	1.0%
6	Kenansville loamy sand	Well drained	41.6	2.1%
7	Kinston loam	Poorly drained	347.0	17.2%
9	Myatt fine sandy loam	Poorly drained	119.0	5.9%
10	Nawney loam	Very poorly drained	55.9	2.8%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	401.5	19.9%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	56.9	2.8%
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	66.8	3.3%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	40.1	2.0%
19C	Uchee loamy sand, 6 to 10 percent slopes	Well drained	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	57.3	2.8%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	9.2	0.5%
23	Yemassee fine sandy loam	Somewhat poorly drained	205.4	10.2%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,863.4**	**92.2%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	3.9	0.2%

Table 3-1 (cont.): Soil survey data for primary study area parcel cluster, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	Moderately well drained	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	Well drained	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	Somewhat poorly drained	40.1	2.0%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	13.0	0.6%
21B	Lakeland sand, 2 to 6 percent slopes	Excessively drained	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	Poorly drained	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	Moderately well drained	0.5	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	Moderately well drained	28.4	1.4%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	Moderately well drained	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	Poorly drained	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	39.7	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	4.2	0.2%
Subtotals for Soil Survey Area			**149.6**	**7.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

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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 2023. 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.

PREVIOUS SURVEYS RELEVANT TO THE STUDY AREA

VCRIS reveals that three Phase I cultural resource surveys have been conducted within one mile of the study area, one of which included portions of the study area (Table 4-1 and Figure 4-1). These surveys are archaeological in nature, although some include architectural resource investigations as well. The three surveys were conducted as part of assorted utility and infrastructure projects.

Table 4-1: Previously conducted Phase I surveys within one mile of the study area. Orange highlight denotes survey including portions of the study area.

Report Number	Survey Title	Author/ Affiliation	Year	VDHR Review File
IW-105	Phase I Cultural Resources Survey for the Align RNG Virginia – Waverly Renewable Natural Gas Project, Isle of Wight County, Virginia	TRC	2022	2021-0097
SY-079	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	DUTTON	2020	2020-0521
VA-176	Phase I Archaeological Survey, Virginia Reliability Project, Cities of Chesapeake and Suffolk, and Greensville, Isle of Wight, Prince George, Southampton, Surry, and Sussex Counties, Virginia	ERM	2022	2021-0026

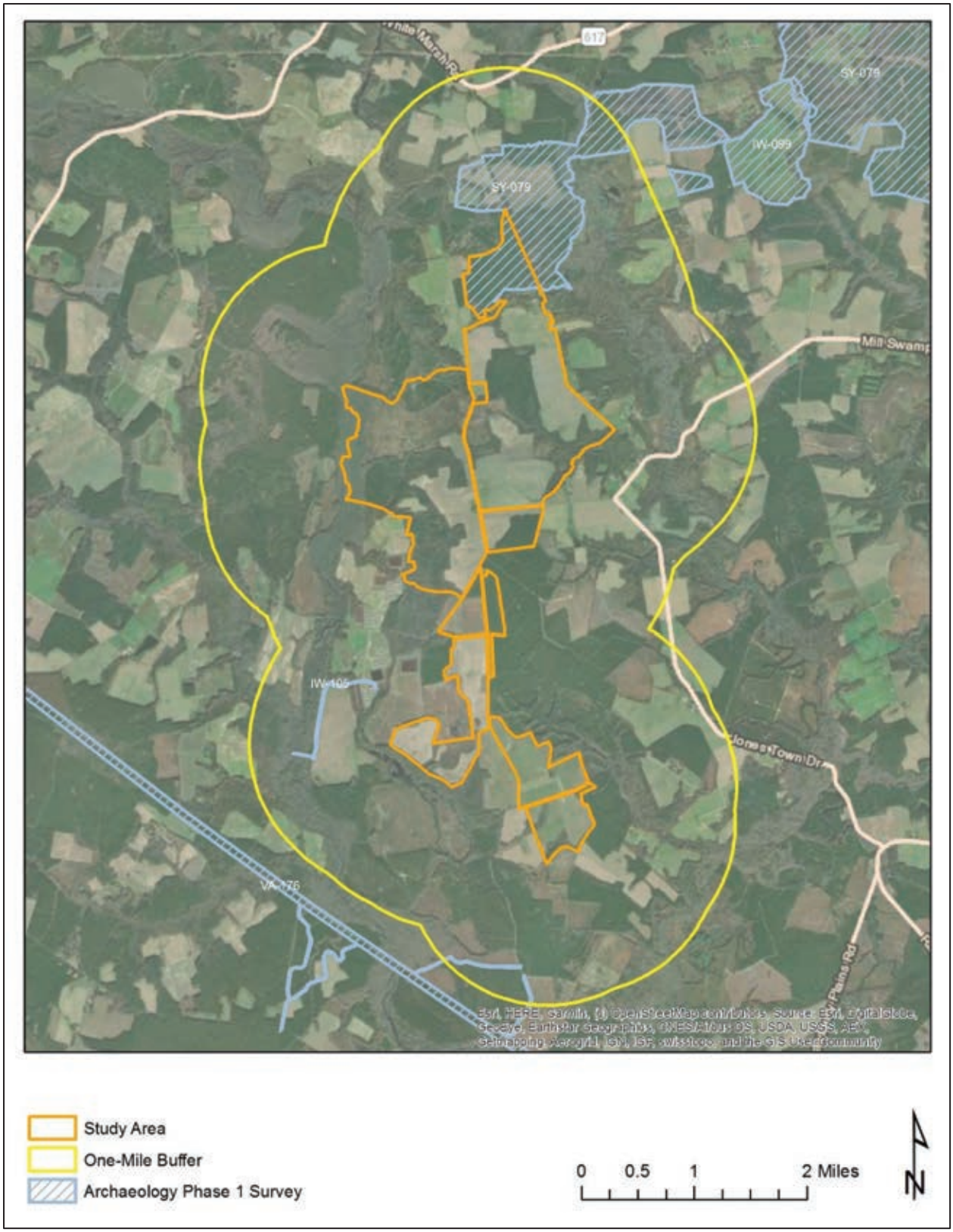

Figure 4-1: Previous Phase I surveys conducted within one mile of the study area Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are ten (10) previously recorded archaeological sites located within one mile of study area, two of which are located within the study area (Table 4-2 and Figure 4-2). The sites within one mile include prehistoric lithic scatters and camps; as well as historic period domestic sites and refuse scatters. Of the sites within one mile, eight (8) have been determined not eligible and two (2) have not been formally evaluated by the VDHR. Of the two sites within the study area, both are historic period artifact scatters that have been determined not eligible for listing in the NRHP.

Table 4-2: Table detailing all archaeological resources within one mile of study area. Orange highlight denotes site is within the limits of the study area.

VDHR #	Site Type	Cultural Designation	Temporal Association	NRHP Status
44IW0327	Camp	Native American	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E)	Not Evaluated
44IW0336	Lithic scatter	Native American	Pre-Contact	DHR Staff: Not Eligible
44SY0128	Dwelling, single	Indeterminate	Historic/Unknown	Not Evaluated
44SY0316	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0317	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0318	Dwelling, single	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0319	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0320	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0321	Outbuilding	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0322	Artifact scatter, Lithic scatter	Indeterminate	Pre-Contact, Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible

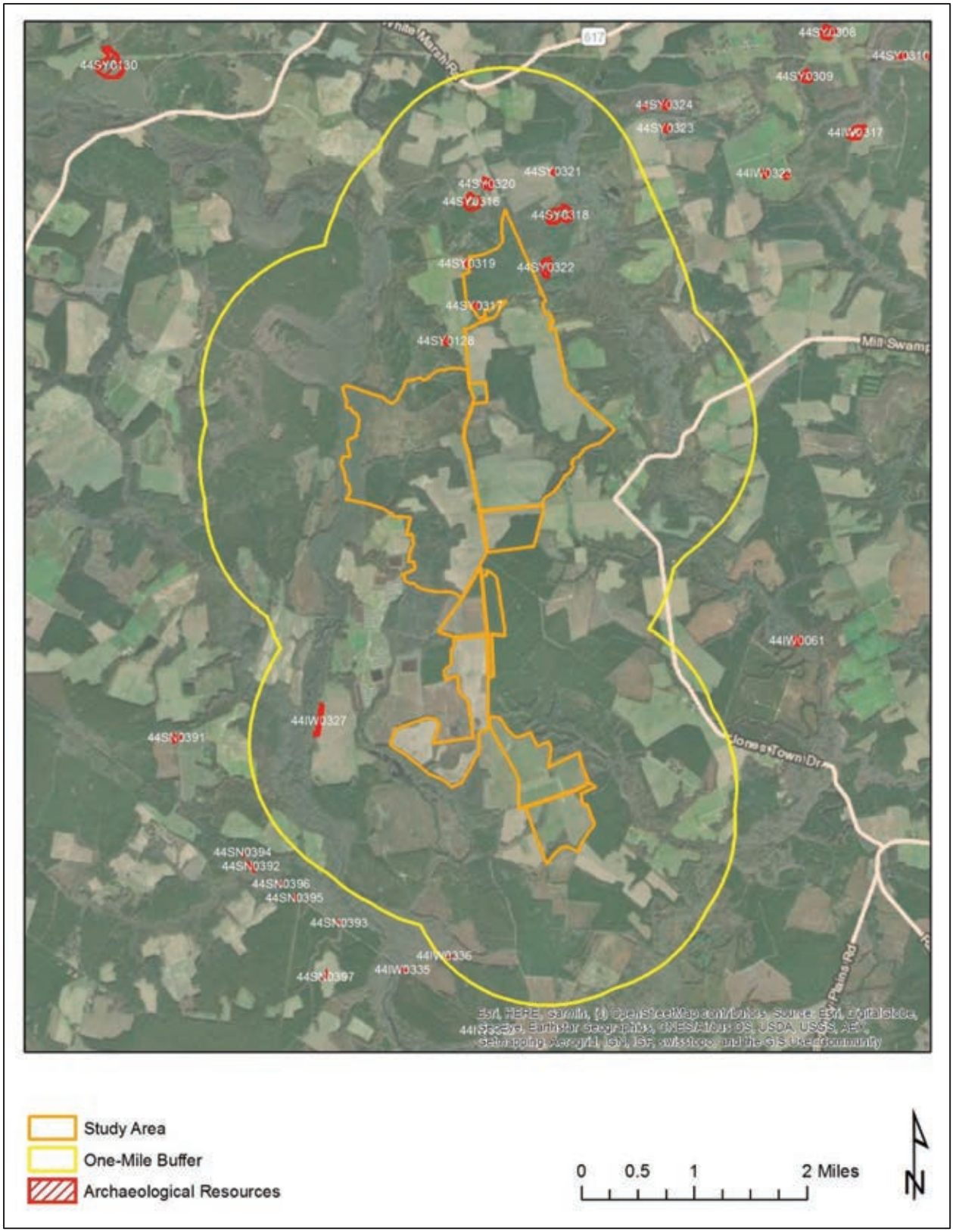

Figure 4-2: Previously recorded archaeological sites located within one mile of the study area. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

There are thirty-two (32) previously recorded architectural resources located one mile of the study area, nine (9) of which are located within the study area (Table 4-3 and Figure 4-3). The resources within one mile include single-family homes from the mid-eighteenth to mid-twentieth century, a commercial building from the turn-of-the-twentieth century, a church from the early-twentieth century, and a family cemetery from the early-twentieth century. Thirteen of the resources have been determined not eligible for listing in the NRHP by the VDHR and the rest have not been formally evaluated. Of the nine resources within the study area, nine are dwellings with four from the early-nineteenth century, four from the late-nineteenth century, and one from the early-twentieth century; and one is a late-nineteenth century commercial building. One late-nineteenth and one early-twentieth century dwelling have been determined not eligible for listing in the NRHP and the rest have not been formally evaluated.

Table 4-3: Previously identified architectural resources located within one mile of the study area. Orange highlight denotes resource is located within the study area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-0029	House, Route 622 (Function/Location)	Single Dwelling	c.1800	Not Evaluated
046-0030	Betts House (Historic)	Single Dwelling	c.1802	Not Evaluated
046-0032	Dudley House and Outbuildings (Historic)	Single Dwelling	c.1820	Not Evaluated
046-0055	Tenant House, Sycamore Crossroads (Historic/Current)	Secondary Dwelling	c.1800	Not Evaluated
046-0056	Grays' Brick House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-0057	Brick House (Descriptive)	Single Dwelling	c.1825	Not Evaluated
046-0068	Wilson Hollemon House, Mill Swamp Rd (Rt 621) (Historic/Location)	Single Dwelling	c.1830	Not Evaluated
046-5147	Farmhouse, 14537 Rattlesnake Trail (Function/Location)	Single Dwelling	1850	Not Evaluated
046-5148	Farmhouse, 13407 Ramsey Road (Function/Location)	Single Dwelling	1880	Not Evaluated
046-5149	Store, Intersection of Mill Swamp Road and Sycamore Cross Drive (Function/Location)	Commercial Building	1899	Not Evaluated
046-5150	Farmhouse, 11356 Proctors Bridge Road (Function/Location)	Single Dwelling	1899	Not Evaluated
046-5151	Mill Swamp Baptist Church & Cemetery (Historic/Current)	Church/Chapel	1928	Not Evaluated
046-5152	Store, 6159 Jones Town Road (Function/Location)	Service Station	c.1930	Not Evaluated
046-5234	William Gray House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-5260	House, 6330 Mill Swamp Road (Function/Location), Mill Swamp Baptist Church Parsonnage (Historic)	Single Dwelling	c.1900	Not Evaluated
046-5550	Dwelling, 10126 White Hill Trail (Function/Location)	Single Dwelling	1890	DHR Staff: Not Eligible
046-5551	Dwelling, 10106 White Hill Trail (Function/Location)	Single Dwelling	1944	DHR Staff: Not Eligible
046-5552	Dwelling, 10088 White Hill Trail (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
087-0003	Binford House (Historic)	Single Dwelling	c.1750	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
087-5328	Brantley Home (Historic), Pretlow Farm (Historic)	Single Dwelling	c.1900	Not Evaluated
087-5509	1760 Henley Pretlow House (Historic), Captain Pretlow House (Historic), House 4071 Proctor's Bridge Road (Function/Location)	Single Dwelling	1760	Not Evaluated
090-0051	Stratman House (Historic/Current)	Single Dwelling	c.1750	Not Evaluated
090-5160	Dwelling, 9091 White Marsh Road (Function/Location)	Single Dwelling	1905	DHR Staff: Not Eligible
090-5161	Dwelling, 9100 White Marsh Road (Function/Location)	Single Dwelling	1949	DHR Staff: Not Eligible
090-5162	Dwelling, 274 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1890	DHR Staff: Not Eligible
090-5163	Dwelling, 337 Berrymans Corner Road (Function/Location)	Single Dwelling	1942	DHR Staff: Not Eligible
090-5164	Dwelling, 285 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1900	DHR Staff: Not Eligible
090-5165	Simmons and Brown Cemetery (Current Name)	Cemetery	c.1900	DHR Staff: Not Eligible
090-5166	Dwelling, 1122 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
090-5167	Dwelling, 1097 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1965	DHR Staff: Not Eligible
090-5168	Dwelling, 1676 Berrymans Corner Road (Function/Location)	Single Dwelling	1870	DHR Staff: Not Eligible
090-5174	House, Berrymans Corner Road (Function/Location)	Single Dwelling	c.1920	DHR Staff: Not Eligible

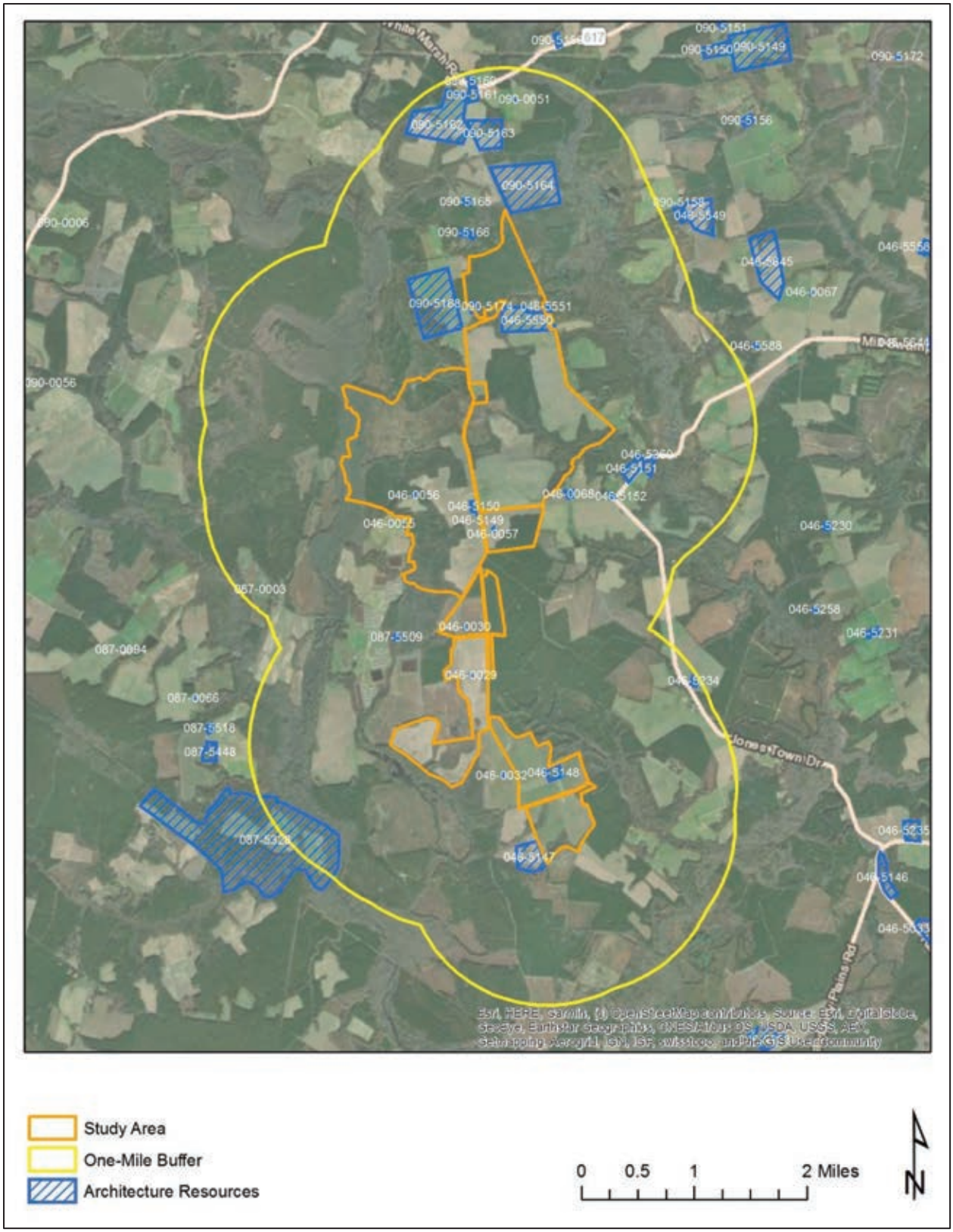

Figure 4-3: Previously recorded architectural resources within one mile of the study area. Source: V-CRIS

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5. HISTORIC MAP REVIEW

The Sycamore Cross Solar study area is located at the northwestern corner of Isle of Wight County, spanning the county line into Surry County. Prior to English arrival to Virginia, the region was home to the Warraskoyak 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). As early as 1608, the English crossed the James River to what is now Isle of Wight County though it would not be until 1619 when the first permanent English settlement was initiated in the future county (Morrison and Gwaltney 2006). 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 region a bit less desirable (Rouse 1968:17).

The study area would have remained the frontier as settlement was focused along the James River. 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 (Rouse 1969:67).

Despite unrest between European settlers and American Indians, land continued to be granted. Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland into the more swampy land. In the vicinity of the study area are Blackwater River and Mill Swamp.

By the mid-eighteenth century, the population increasingly moved inland from the James River and the farms in Isle of Wight County were typically between 500 to 1,700 acres (David 2007:9). According to V-CRIS records, several mid- to late eighteenth century homes were constructed less than two miles of the study area. During the American Revolution, though the British passed through Isle of Wight and Surry counties, closer to the James River, the war did not impact this region as it did nearby port towns, like Norfolk and Portsmouth (Figure 5-1).

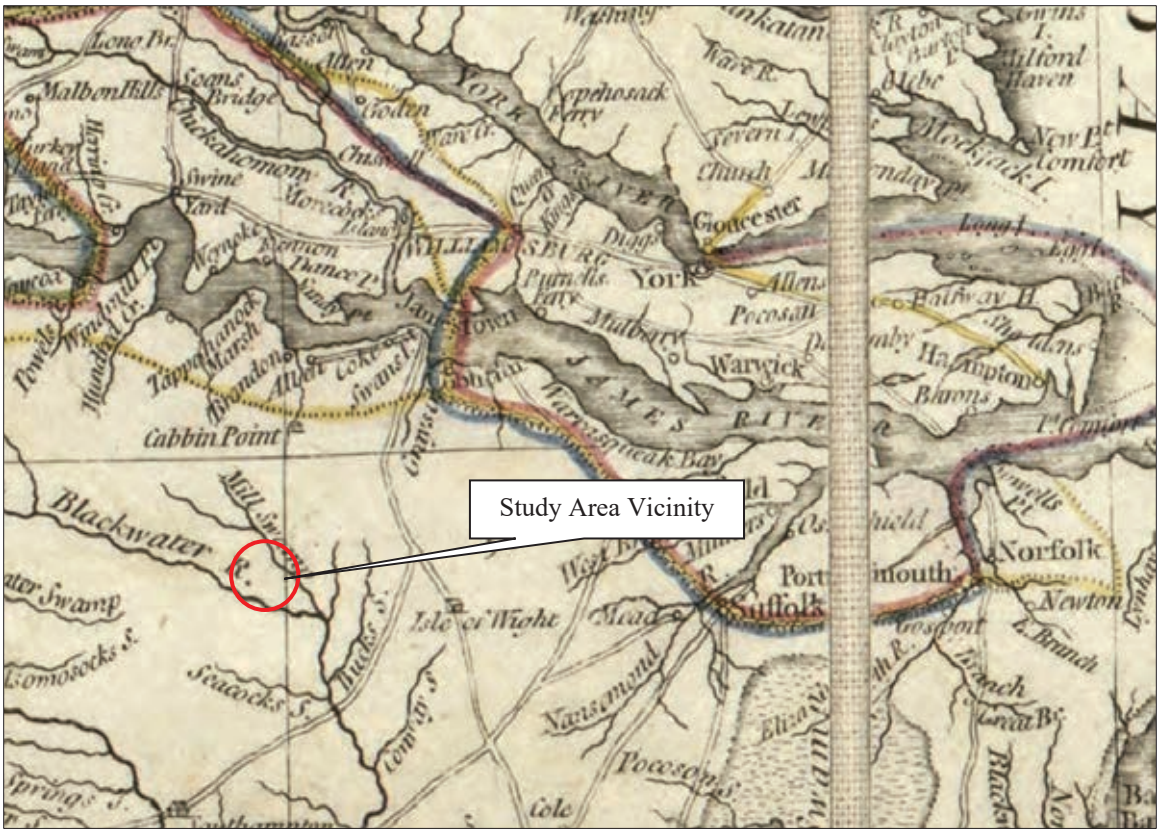

Figure 5-1: Detail of *The marches of Lord Cornwallis in the Southern Provinces*, 1787, depicting general vicinity of the study area. Source: Library of Congress

As time passed, the almost exclusively agrarian society was beginning to accommodate urban centers and small hamlets, although farming continued to be the primary means of livelihood. 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. Roads began to increasingly cross the county and homesteads continued to be erected, including within the study area and the general vicinity (Figure 5-2).

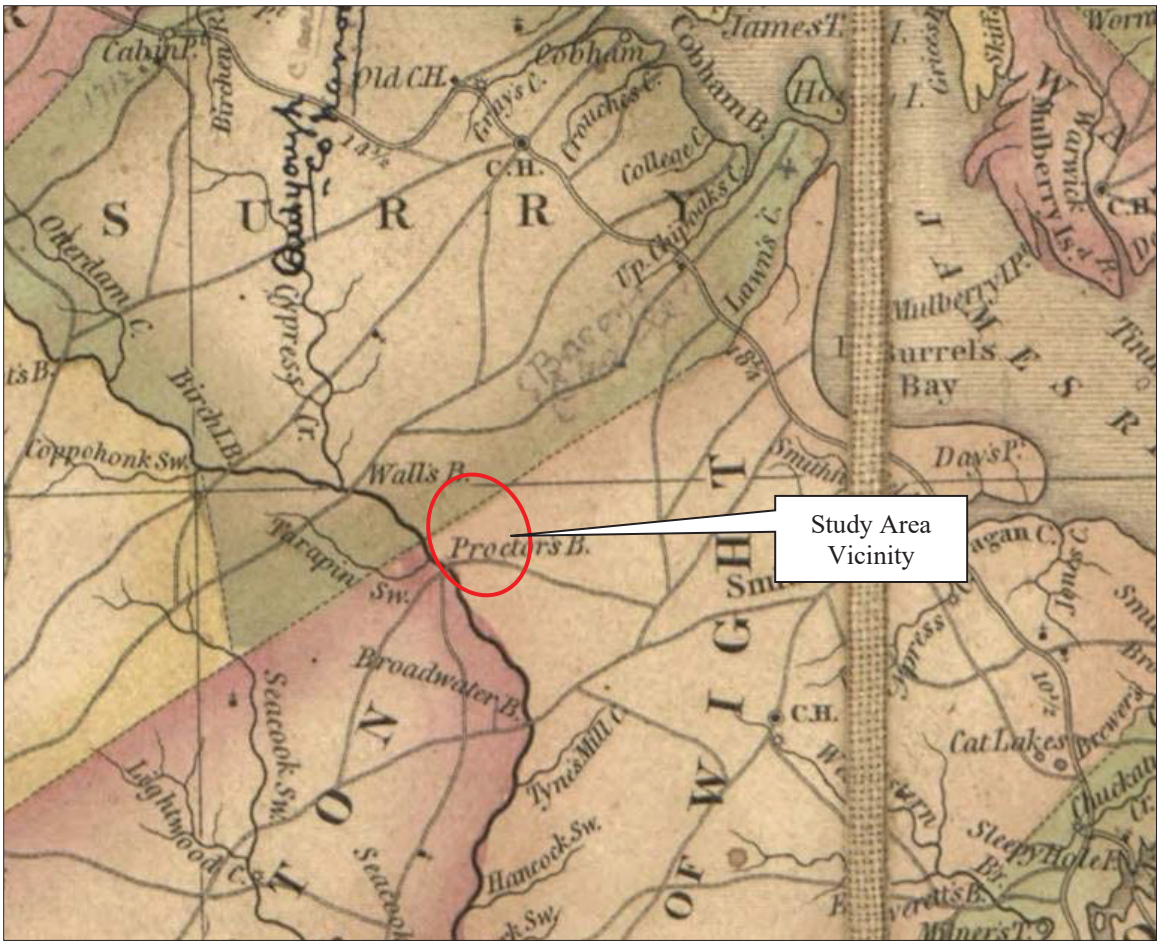

Figure 5-2: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the study area. Source: Library of Congress

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. Approximately 90 percent of the total population was involved in agriculture and identified as farmers (David 2007:10).

Despite the number of marshes crossing the study area, structures within it and in the vicinity were common by the mid-nineteenth century as evidenced by mid-nineteenth century maps. In Surry County, the study area appears to have been completed wooded (Figure 5-3). Mapping illustrates several buildings within or adjacent to the study area in Isle of Wight County, however (Figure 5-4). This includes homes related to the Bell, Betts, and Barlow families. According to a Works Progress Administration survey of Virginia's historical inventory, there was a small family cemetery associated with the Betts House that may be within the study area (Jordan 1937). The cemetery is not identified in Find-a-Grave or on topographic maps. Major roads crossed through the study area in Isle of Wight County, including that connecting to Proctor's Bridge over the Blackwater River. Also located in Isle of Wight County, on Rattlesnake Road (now Sycamore Cross Drive, Route 622) were a store and a schoolhouse.



Figure 5-3: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the portion of the study area in Surry County. Source: Library of Congress



Figure 5-4: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the primary study area parcel cluster in Isle of Wight County. Source: Library of Congress

During the Civil War, no major battles took place in the county, although a skirmishes did occur. The products of the countryside were depleted in service of the Confederate cause. Following the War Between the States, the longstanding agricultural economy of Tidewater Virginia began to recover and the production of peanuts increased. In addition to peanuts, the county produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Timbering also prospered, as did the bacon and ham industry. 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, within the study area was Sycamore Crossroads.

As the twentieth century continued, the number of farms steadily increased. Additionally, during this time many farms were subdivided and new single family homes were constructed or new dwellings replaced older homes on farms (David 2007:18). Topographic maps from this period illustrate the increase of buildings within and around the study area as well as a lumber railroad in the study area in Surry County (Figure 5-5).



Figure 5-5: Detail of the 1919 and 1920 topographic maps, *Surry* and *Ivor,* depicting the primary study area parcel cluster. Source: USGS

The end of World War II brought with it a building boom that would begin to change the character of the earlier farmsteads within counties, particularly Isle of Wight. With its proximity to Newport News, Portsmouth, and Norfolk, the county began to become a bedroom community. As the twentieth century continued and transitioned in the twenty-first, the study area remained much as it had historically, as a mixture of forested land and agricultural fields with some farmsteads (Figure 5-6 through Figure 5-10). Buildings previously depicted in the study area in Surry County, were no longer illustrated by the mid-twentieth century. Sycamore Crossroads remained, though it was referred as McClelland on the 1944 topographic map. On the same map, south of McClelland, McClelland School was depicted within the study area. This was a small school that served black students (Locations n.d.). The study area continues to show evidence of agriculture and timbering on its land.

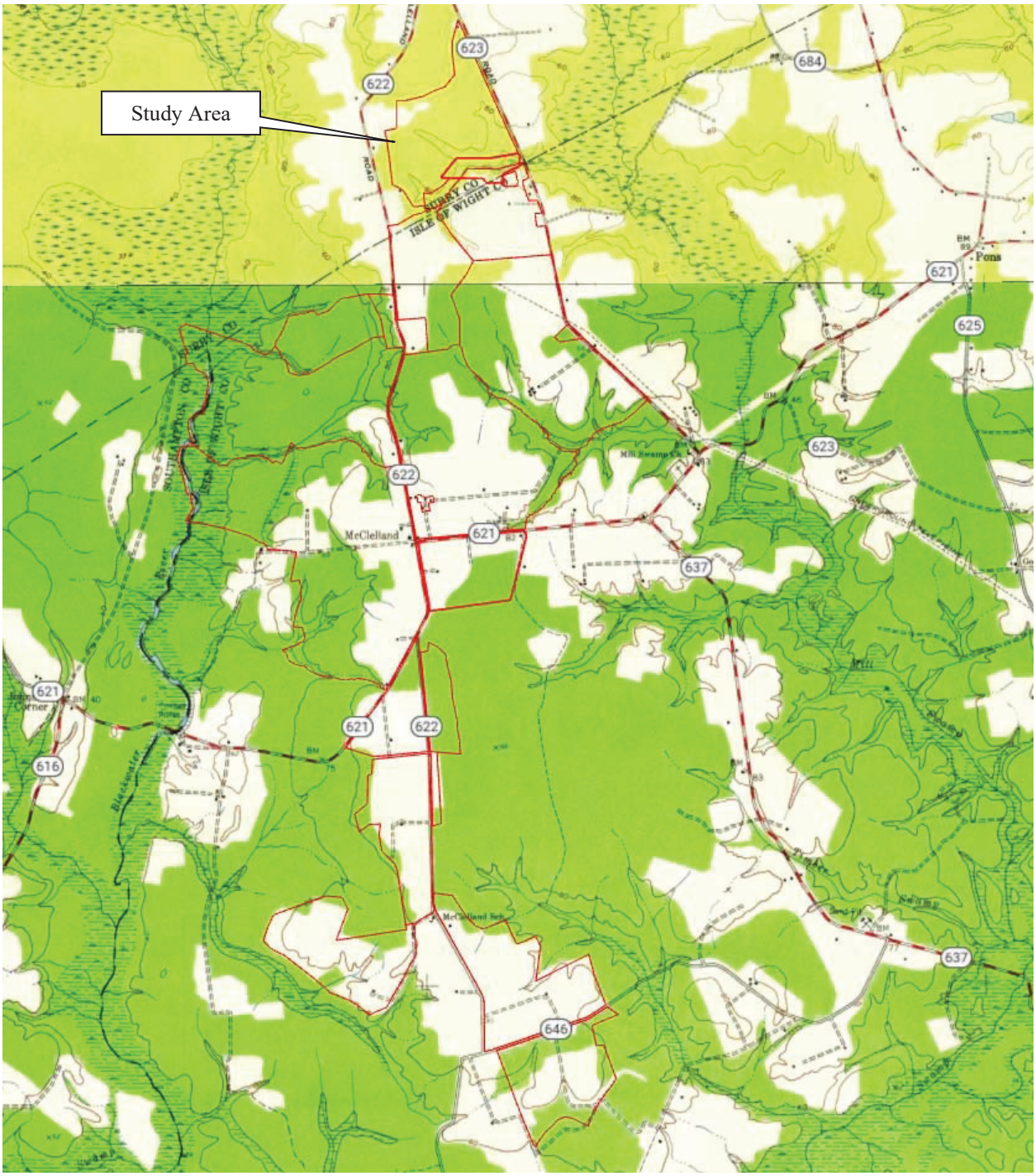

Figure 5-6: Detail of the 1944 and 1954 topographic maps, *Raynor* and *Runnymeade*, depicting the primary study area parcel cluster. Source: USGS

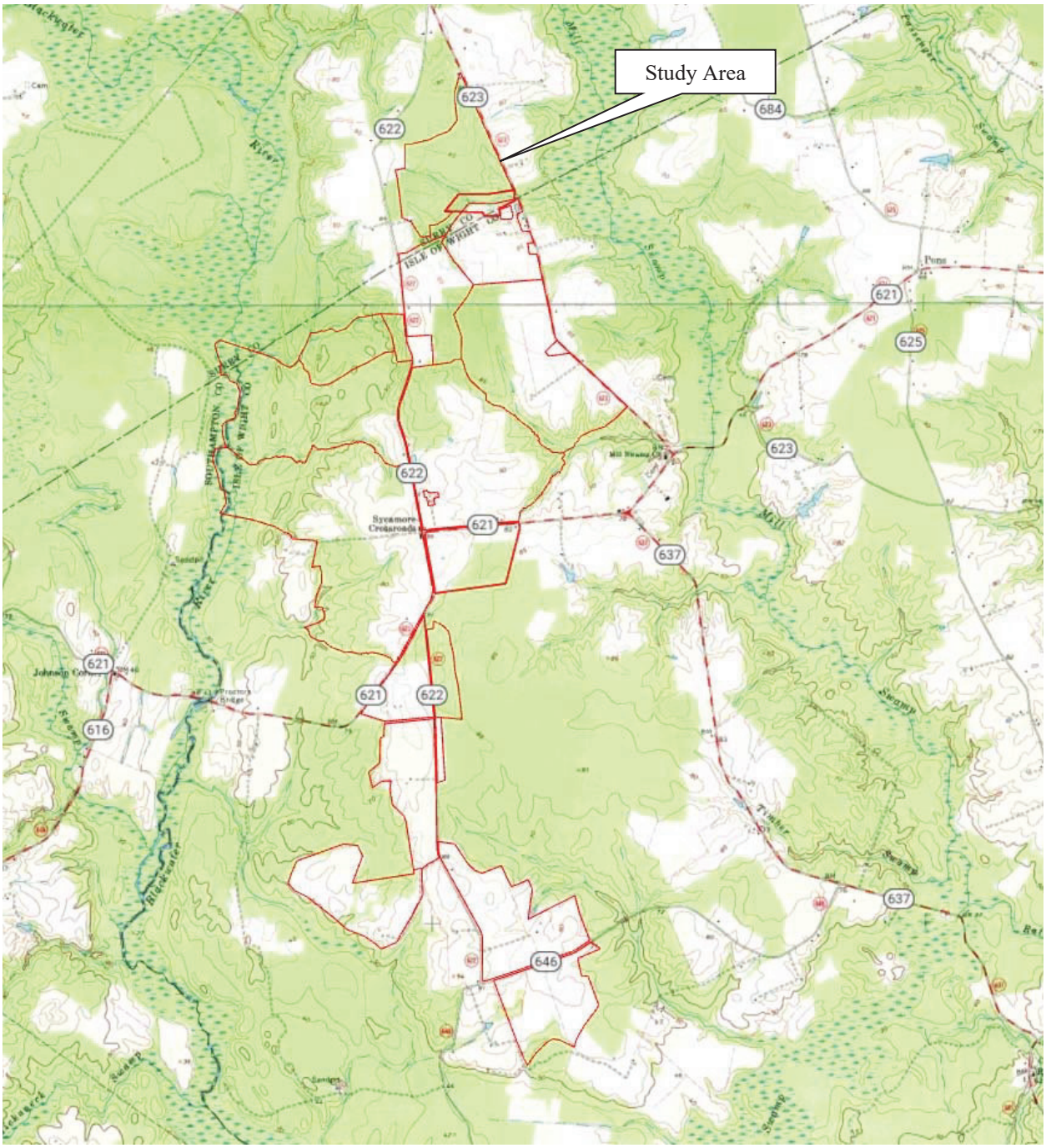

Figure 5-7: Detail of the 1968 and 1971 topographic maps, *Raynor* and *Runnymeade*, depicting the primary study area parcel cluster. Source: USGS

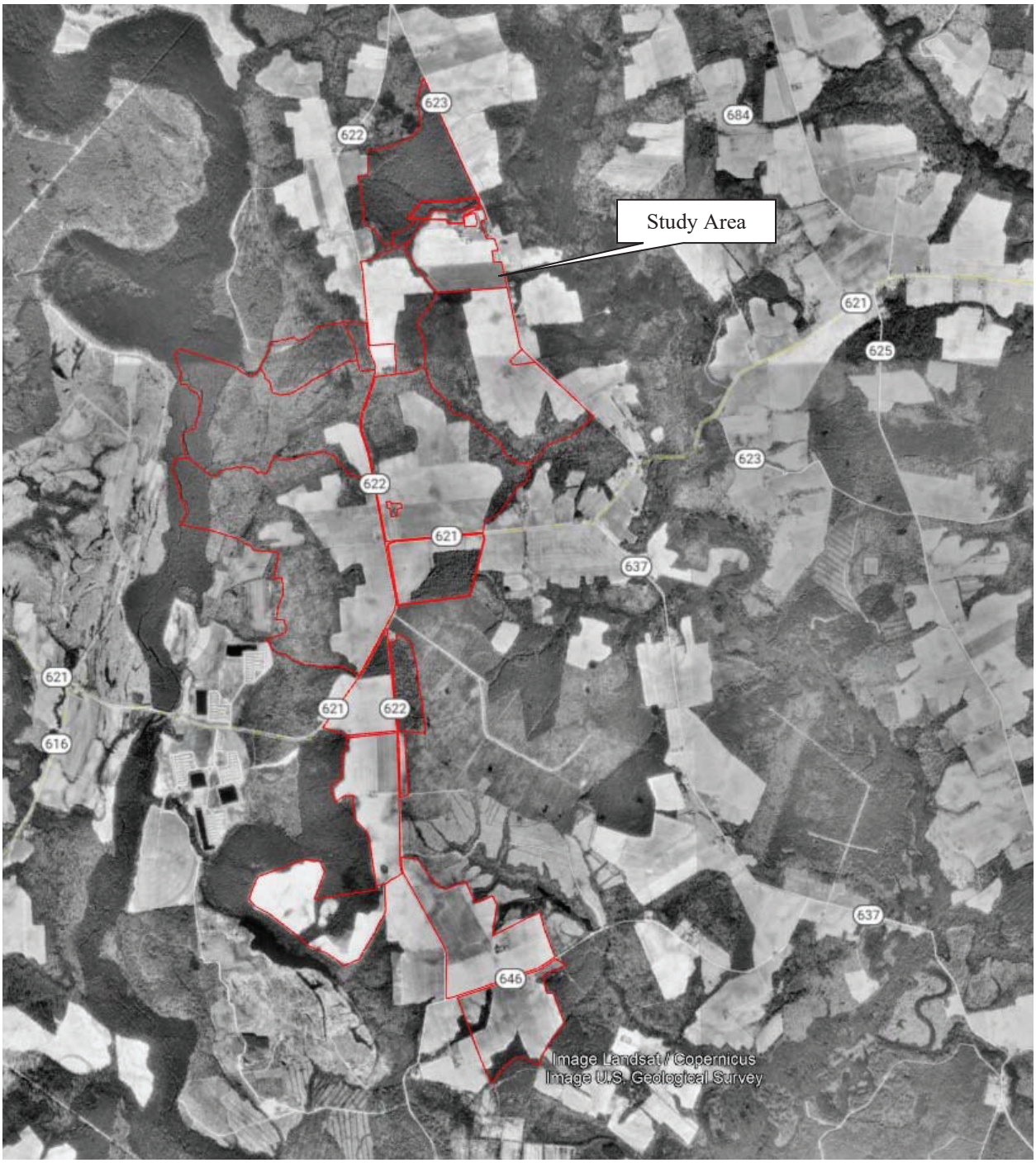

Figure 5-8: Detail of a 1990 aerial depicting the primary study area parcel cluster. Source: Google Earth

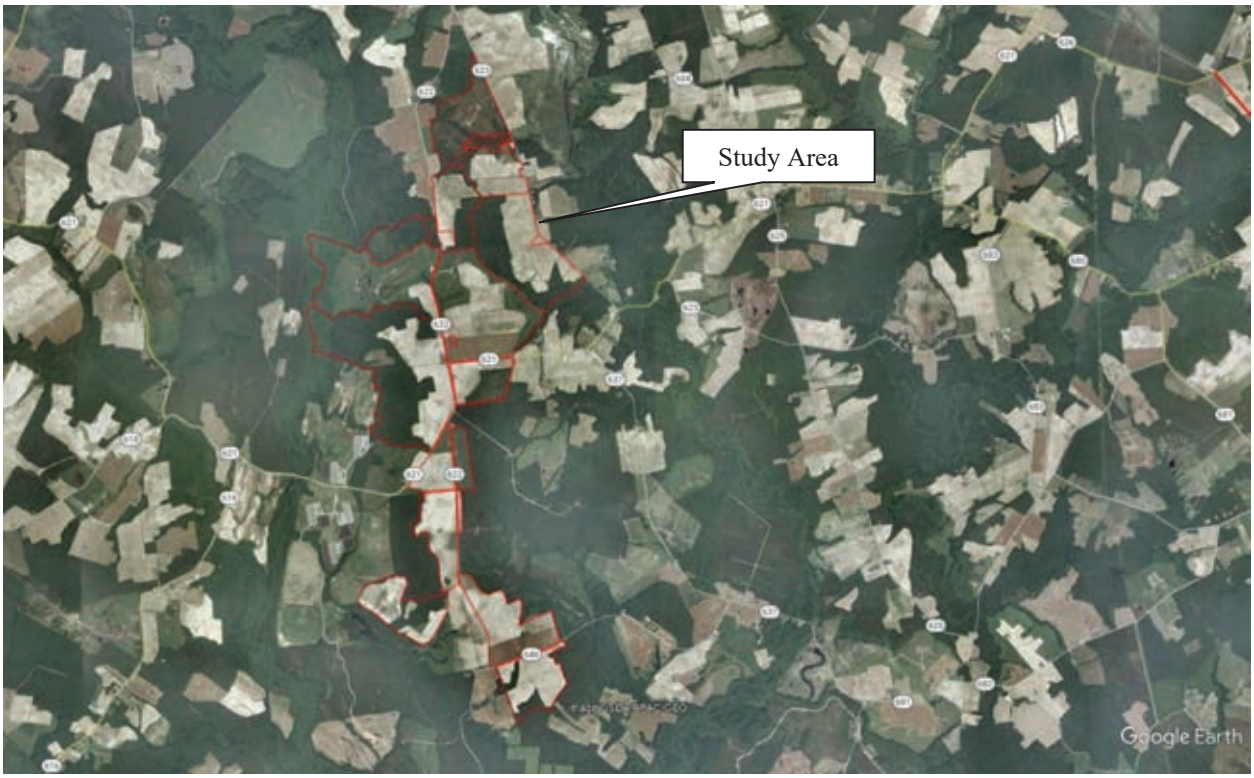

Figure 5-9: Detail of a 2003 aerial depicting the study area. Source: Google Earth

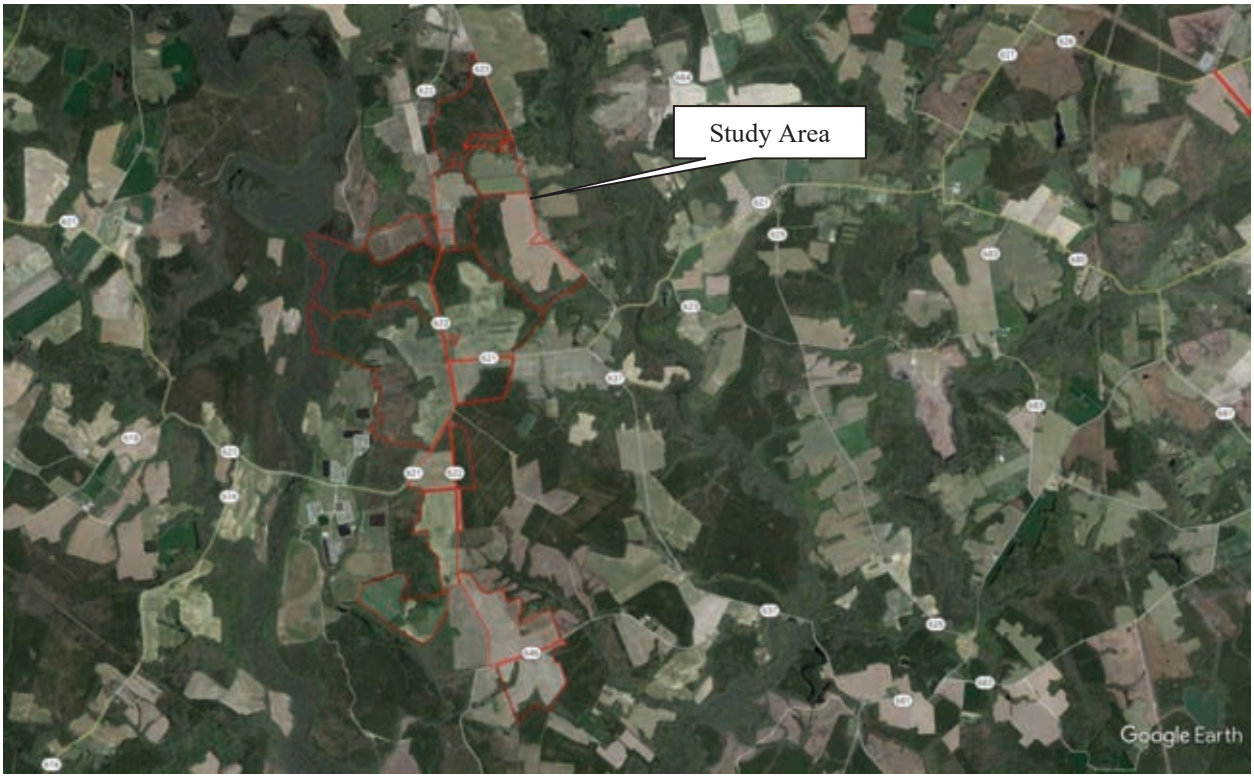

Figure 5-10: Detail of a 2017 aerial depicting the study area. Source: Google Earth

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6. ASSESSMENT RESULTS

On January 4th and 5th and June 28th and 29th, 2023, D+A performed field reconnaissance for the Phase IA cultural resources assessment of the Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The field investigations involved a walkover reconnaissance of the study area tracts, as well as the excavation of nine (9) judgmental shovel test pits in order to determine soil stratigraphy within them. To organize the field investigations, the study area was divided into three sections, including the northern, central, and southern parcels (Figure 6-1). The results of the assessment are summarized below.



Figure 6-1: Sycamore Cross Study Area depicting Field Reconnaissance Areas.

NORTHERN PARCELS

The Northern Parcels area consists of six tracts of land at the northern edge of the overall study area. The parcels are generally located between Berrymans Corner Road to the west and Mill Swamp Road to the east, and north of an unnamed tributary to Mill Swamp (Figure 6-2).

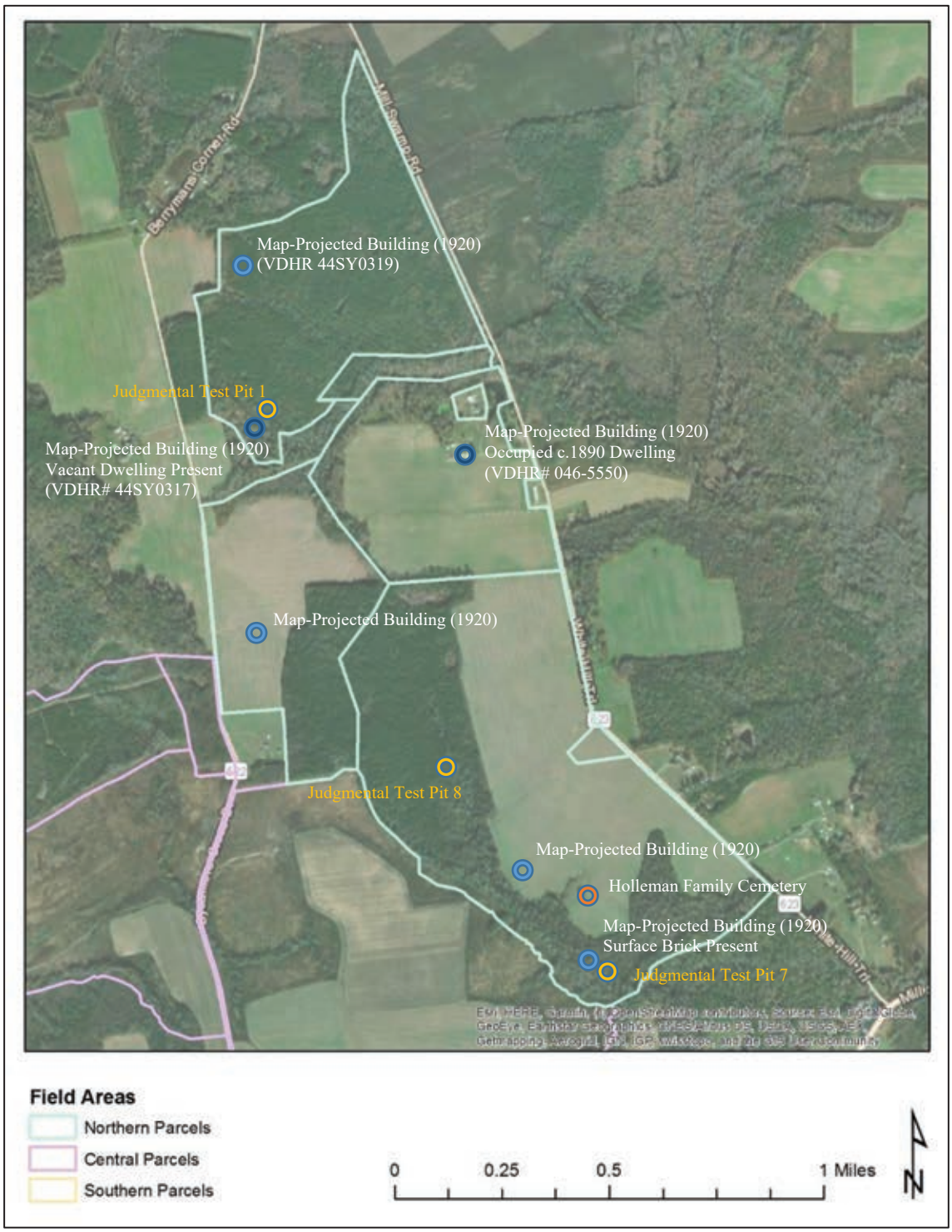


Figure 6-2: Northern parcels map.

At present time, the northernmost two parcels are completely wooded, while the lower parcels are a mix of open agricultural field, primarily occupying the portions of the area along the road while the central areas along the Mill Swamp tributary are wooded. Vegetation in the northern parcels consisted of mature planted pine with scrub understory (Figure 6-3) while the vegetation within the lower areas is a mix of native woodland along the drainage and mature planted pine (Figure 6-4 and Figure 6-5). The agricultural fields were fallow at the time of inspection in January and planted with corn as of June (Figure 6-6). The terrain of the area is generally flat, except along the drainages that cross through the lower edge of the northernmost parcel and centrally through the lower parcels, enroute towards Mill Swamp to the east.

One occupied dwelling and farm complex is located near the northern edge of this area just south of a drainage leading into Mill Swamp. This building appears to coincide with one labeled as "Turner" on Civil War-era maps and has been previously recorded as a circa 1890 dwelling (VDHR# 046-5550) (Figure 6-7). Two additional previously recorded dwellings from the early- to mid-twentieth century are located along the road to the front of this house (VDHR# 046-5551 and 046-5552), but both are excluded from the project study area.

One abandoned dwelling with an associated outbuilding was observed in the western edge of the northernmost parcel (Figure 6-8). This building is located within the limits of previously recorded site VDHR# 44SY0317, recorded as a Reconstruction and Growth (1866-1916) era site that has been determined not eligible. Civil War-era maps reveal what is now Sycamore Cross Road was present along the western edge of the area, but suggests the area remained wooded and undeveloped at that time. However, a 1920 topographic map reveals a building present by that time in generally the same location as the abandoned home. A driveway off Berrymans Corner Road (SR 622) leads to the home.

The 1920s topographic map also reveals several additional buildings scattered throughout the northern parcel area, none of which remain extant, although evidence of several remain. One in the northwestern corner of the area coincides with site 44SY0319 but no surface evidence was observed. This site has been recorded as a Reconstruction and Growth (1866-1916) era site that was determined not eligible for listing in the NRHP by the VDHR. A relic farm lane from Sycamore Cross Drive in the western most parcel leads to the location of one of the map-projected buildings although field inspection did not reveal surface evidence of the building. The 1920 map projects two additional buildings along the drainage in the southernmost parcel of this area of which a brick was observed on the surface in the vicinity of one (Figure 6-9) but no evidence was observed of the second. A family cemetery associated with the Holleman family was observed within a copse of trees set between the map-projected locations of these buildings (Figure 6-10).



Figure 6-3: Planted pine forest of northernmost Parcel, looking South from Judgmental 1



Figure 6-4: Field edge within southernmost Parcel, looking northeast from near Judgmental 7



Figure 6-5: Wooded area along drainage in southernmost parcel, looking northwest from Judgmental 8



Figure 6-6: Corn planted within southernmost parcel, looking southeast



Figure 6-7: Occupied dwelling along Mill Swamp Road generally coinciding with "Turner" on Civil War-era maps and previously recorded as circa 1890 VDHR# 046-5550.



Figure 6-8: Vacant dwelling in the northernmost parcel coinciding with Site 44SY0317.



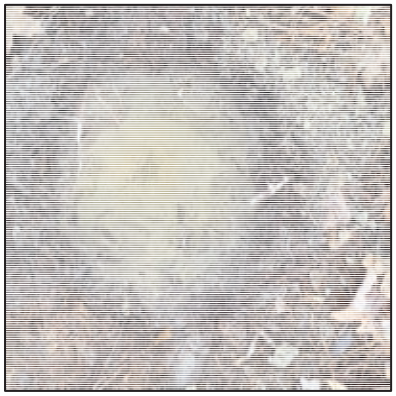
Figure 6-9: Brick on surface in the vicinity of a 1920 map projected building

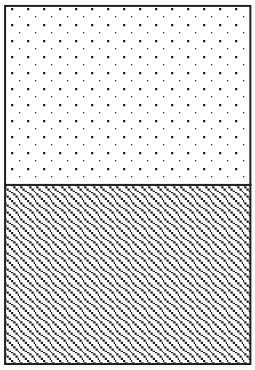


Figure 6-10: Headstone within family cemetery, looking east.

Three judgmental shovel tests were excavated throughout the northern parcel assessment area, including one in the northwestern portion of the area near a standing home in the vicinity of Site 44SY0317 (STP 1), one within a wooded area bordering the drainage that extends through the central portion of the area (STP 2), and one in the southern portion of the area in the vicinity of a 1920 map projected home where a brick was encountered on the surface (STP 3).

Judgmental STP 1 confirmed disturbed topsoil in what appears to be a previously logged area and was negative for cultural material. Soils consisted of a topsoil layer of 2.5Y 5/4 silty clay loam topsoil (A horizon) over top of 2.5Y 5/6 silty clay subsoil (B horizon) (Figure 6-11). The shovel test pit was highly disturbed, with little historic integrity remaining.





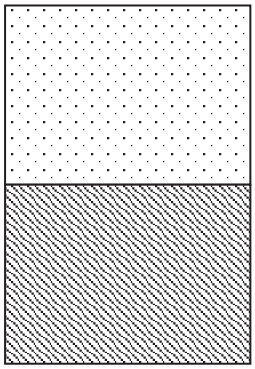
2.5Y 5/4 silty clay loam
0-33 cm

2.5Y 5/6 silty clay
33-40 cm

Figure 6-11: Soil profile of Judgmental 1.

Judgmental STP 8 confirmed disturbed topsoil in what appears to be a previously logged area and was negative for cultural material. Soils consisted of a topsoil layer of 2.5Y 5/6 sandy clay loam topsoil (A horizon) over top of 2.5Y 6/6 sandy clay subsoil (B horizon) (Figure 6-12).





2.5Y 5/6 sandy clay loam
0-41 cm

2.5Y 6/6 sandy clay
41-51 cm

Figure 6-12: Soil profile of Judgmental 8.

Judgmental STP 7 revealed natural soil stratigraphy within an area of native vegetation bordering a drainage and was negative for cultural material. Soils consisted of a topsoil layer of 10YR 7/4

sandy loam topsoil (A horizon) overlying 2.5Y 7/3 sandy clay loam, over top of 5Y 6/4 sandy clay subsoil (B horizon) (Figure 6-13).

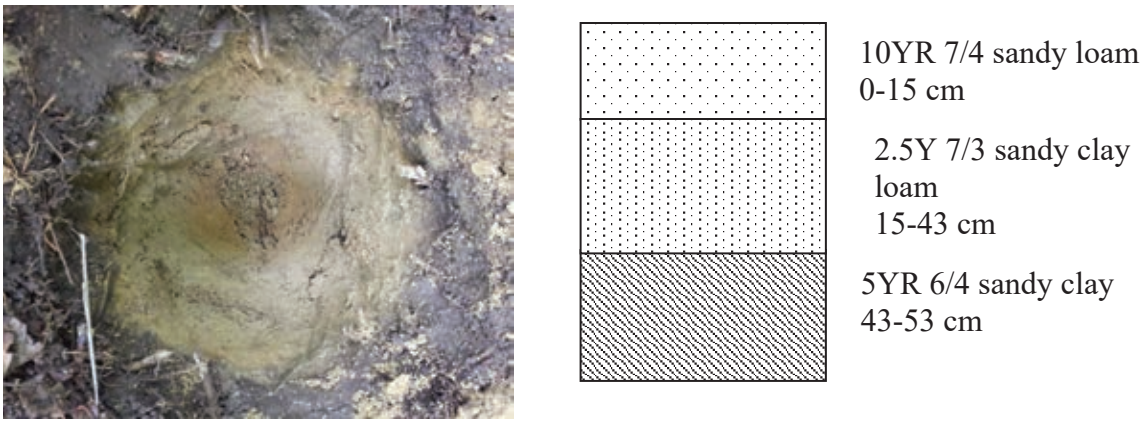


Figure 6-13: Soil profile of Judgmental 7.

CENTRAL PARCELS

The Central Parcels area consists of six tracts of land sited centrally within the overall study area. The area spans Sycamore Cross Drive/Proctors Bridge Road (State Rte 622) and borders Blackwater River to the west and an offshoot of Mill Swamp to the east (Figure 6-14).



Figure 6-14: Central parcels map.

At present time, the area is a mix of open agricultural field and woodland, including both native forest and planted pine. The terrain in the crop fields of the central area parcels is generally flat while the forested and timbered areas to the rear of the parcels are slightly more rolling down to the bordering rivers and swampy areas. Most of the two parcels east of Sycamore Cross Drive are cleared as agricultural fields that are currently in crop. The northern field is bordered by a planted pine stand that has been logged within the last three years (Figure 6-15), although a narrow drainage extends through the front of the parcel along and crossing Sycamore Cross Road (Figure 6-16). The entrances to the timbered areas do not appear well maintained or easily accessible but there are farm roads in the crop fields that provide access to the properties. The southern field is bordered by a large patch of deciduous forest (Figure 6-17). Of the tracts on the west side of Sycamore Cross Road, the front portions (nearest the road) are cleared field while the rear portions nearer Blackwater River are wooded. The majority of the woodland in the southern tract is a mix of young-growth pine interspersed with native hardwood and swampy wetland vegetation along a network of drainages leading into the river (Figure 6-18). The large middle parcel was planted timber that was harvested within the last three years leaving just narrow lines of native vegetation along a drainage at the front of the tract and along Blackwater River to the rear. The northernmost two tracts on the west side of Sycamore Cross Road is a mix of native hardwood, young pine, and scrub brush (Figure 6-19 and Figure 6-20).

There were four standing buildings observed within the Central parcels area, one of which is located within a small parcel excluded from the study area footprint, while the other three are within the study area limits. Two of the extant buildings appear to coincide with structures depicted on Civil War-era maps and a third is also believed to be Antebellum but is not illustrated on maps from that period. At that time, two buildings were shown in proximity to the intersection of Sycamore Cross Road and Mill Swamp Drive including one on the northeast corner that was labeled as a "store" and an unlabeled building was mapped across the road to the south. The mapped location of the store coincides with the location of the standing building that is located within an exclusion parcel (Figure 6-21). This building functions as a dwelling, but may historically have operated as a tavern or "store". The building mapped on the south side of the intersection appears to coincide with a ruinous structure that remains within an agricultural field that is recorded as VDHR# 046-0057 (Figure 6-22 through Figure 6-24). A third building believed to be Antebellum was observed near the western edge of the assessment area, but does not appear to be depicted on Civil War-era maps. The structure has been previously recorded as the circa 1825 "Gray's House" (VDHR# 046-0056). The dwelling remains in ruinous condition, however, a variety of materials and evidence of other features, including brick fall, and subsurface pits were observed in the vicinity of the house (Figure 6-25 through Figure 6-30). Civil War-era maps do depict a building on the west side of Sycamore Cross Drive north of Gray's House and therefore may represent the same building with a mapping discrepancy. Field investigation did not reveal any surface evidence of a structure in the map-projected location of this building, however, there were artifacts such as whiteware, terracotta drainpipe, solarized glass, and brick fragments observed in the plowed field where the building was map-projected. In the trees to the west of the field, there was a push pile with a large stone and some modern detritus but no indications of extant structures or foundations (Figure 6-31).

The 1920 topographic map also reveals eight additional buildings present by that time, one of which coincides with the fourth standing buildings observed in the area. This building has been previously recorded as an 1899 dwelling (VDHR# 046-5150) (Figure 6-32). Field inspection did

not reveal surface evidence of any of the other map-projected buildings. None of the previously recorded buildings have been formally evaluated for NRHP-eligibility.



Figure 6-15: Recently timbered terrain and vegetation around Judgmental 3, looking East.



Figure 6-16: Drainage between Berrymans Corner Rd and timbered field, looking East.



Figure 6-17: Debris pile within wooded area along southeastern edge of area, looking southwest.



Figure 6-18: Planted pine and wetland vegetation, looking west from Judgmental 4.



Figure 6-19: Deciduous vegetation and scrub in northern tract on west side of Sycamore Cross Road, looking south.



Figure 6-20: Planted pine in northern tract on west side of Sycamore Cross Road, looking southeast.



Figure 6-21: Intersection of Sycamore Cross Drive and Mill Swamp Road showing Civil War-era "store" to the right (within exclusion parcel) and c.1899 farmhouse (VDHR# 046-5150) to the left, looking north.



Figure 6-22: Ruinous c.1825 structure (VDHR# 046-0057) located southeast of Sycamore Cross Road and Mill Swamp Drive, looking east.



Figure 6-23: View of ruinous c.1825 structure (VDHR# 046-0057), looking north.



Figure 6-24: Interior view of ruinous c.1825 structure (VDHR# 046-0057), looking southeast



Figure 6-25: Circa 1825 "Gray's Brick House" (VDHR# 046-0056) in western portion of assessment area, looking northeast.



Figure 6-26: Depression near Gray's Brick House, looking west.



Figure 6-27: Second depression near Gray's Brick House, looking north.



Figure 6-28: Brick pile near Gray's Brick House, looking southeast.



Figure 6-29: Gray's Brick House setting, looking north.



Figure 6-30: Swampy area at rear of western parcel, looking northeast.



Figure 6-31: Push-pile and stone in treeline near Civil War-era map-projected building site in western parcel, looking southwest.



Figure 6-32: View of c.1899 farmhouse (VDHR# 046-5150), looking west.

Four judgmental shovel test pits were excavated throughout this testing area including one near the standing c.1825 Grays Brick House (Judgmental STP 5), one within an area of native woodland (Judgmental STP 4), one within an area of young, mixed vegetation (Judgmental STP 9), and one

within a recently timbered area (Judgmental STP 3). Soils in these parcels vary drastically based on location. Soils near the Gray's House were undisturbed, primarily consisting of 10YR 4/3 sandy loam topsoil over top of 2.5Y 5/4 sandy clay subsoil (Figure 6-33). The shovel test pit in the native woodland area had similar stratigraphy; dry, although with wetland qualities, consisting of 10YR 3/2 Silty loam over 10YR 6/1 Sandy clay (Figure 6-34). The judgmental tests in the recently timbered areas were considerably deeper and disturbed. The soils in STP 3 consisted of a 2.5Y 5/6 Sandy clay loam (A horizon) over 10YR 5/6 Sandy clay (B horizon) (Figure 6-35).



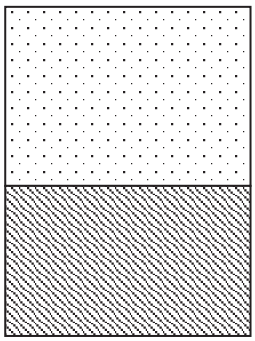


Figure 6-33: Soil Profile of Judgmental 5.



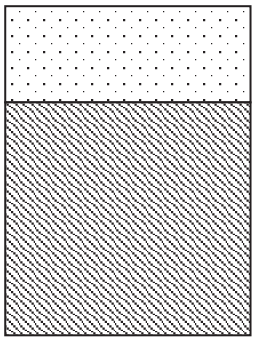
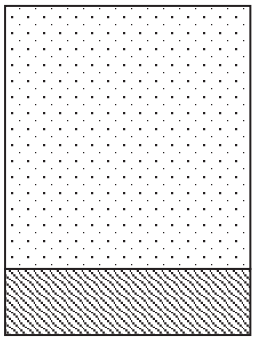


Figure 6-34: Soil Profile of Judgmental 4.





2.5Y 5/6 Sandy clay loam
0-68 cm

10YR 5/6 Sandy clay
68-80 cm

Figure 6-35: Soil Profile of Judgmental 3.

SOUTHERN PARCELS

The Southern Parcels area consists of seven tracts of land sited at the southern end of the overall study area. The area spans Ramsey Road (State Rte 622) with three parcels on the west side of the road and three on the east side, as well as one on the south side of Rattlesnake Trail. The parcels generally back up to small drainages that dissect the area (Figure 6-36).

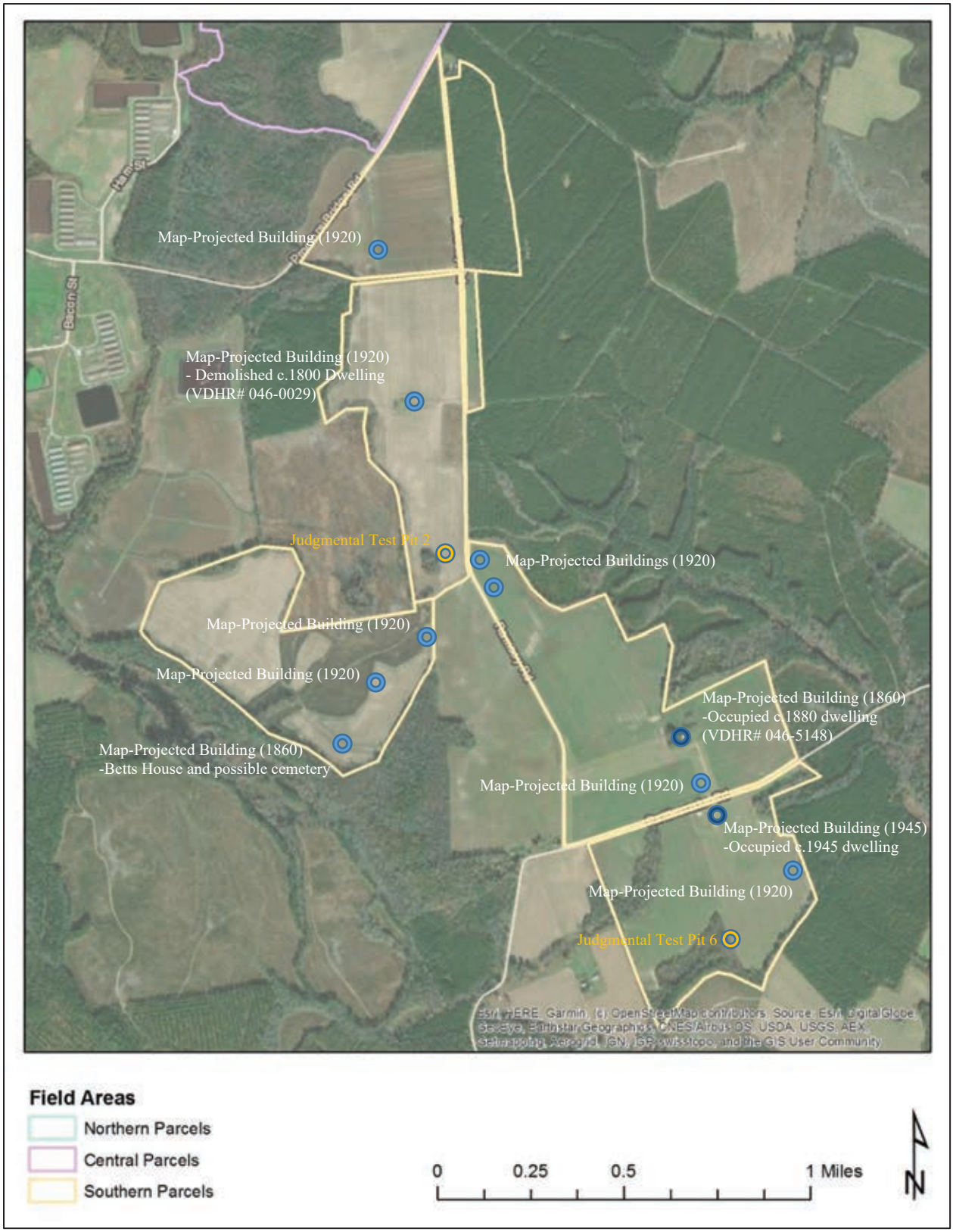


Figure 6-36: Southern parcels map.

At present time, this area is primarily open agricultural field with just small patches of planted and recently harvested timber, as well as smaller patches of vegetated native woodland. The timber harvested area is limited to the southwestern-most parcel abutting a drainage leading to Blackwater River that was harvested within the last three years. A network of logging roads leads through this parcel and beyond the timbered area to an agricultural field at the rear. Another large patch of planted pine is situated on the east side of Ramsay Road at the northeastern edge of this area. The native woodlands are limited to treelines bordering two low drainages that cross through the southeastern-most parcel and a larger patch of woodland in the northernmost parcel (Figure 6-37 and Figure 6-38). Vegetation in these areas consists of a mix of deciduous trees and some evergreens. The remaining portions of the southern parcel area are primarily agricultural fields that are currently in crop (Figure 6-39 through Figure 6-41). Terrain of this area is nearly flat, particularly within the crop field areas, while the edges and rear of the parcels slopes gently towards the short, low drainages that cross through the southernmost two parcels (Figure 6-42).

There were two standing building complexes observed within the Southern Parcels area, including a single-family home and associated outbuilding set near the road in the front of the southernmost parcel along Rattlesnake Road and a farm complex across the road to the north. The building on the north side of Rattlesnake Road appears to coincide with a Civil War-era map projected building, however, the home is previously recorded as a c.1880 dwelling (VDHR# 046-5148) (Figure 6-43 through Figure 6-45). The extant building on the south side of Rattlesnake Road coincides with a building depicted on a 1945 topographic map. The small frame building appears to date from the second-quarter of the twentieth century (Figure 6-46). Civil War-era maps reveal what is now Ramsey Road was present, as was Rattlesnake Trail, although this road was depicted at that time as secondary route. Another road crossing the area was also depicted and coincides with what is now a private farm lane along the lower edge of the southwestern-most parcel. In addition to the extant home on the north side of Rattlesnake Road that coincides with a Civil War map-projected building but is recorded as a c.1880 dwelling, another home labeled as "Betts" was depicted west of Ramsay Road. That building continues to be depicted on a 1920 topographic map of the area and was inventoried in the 1930s as part of a WPA project. That documentation noted the home as a frame structure and mentioned a family burial in the vicinity, however, no evidence of the structure or cemetery was observed at this time. The 1920 map depicts a number of additional buildings throughout the area as well, including two along the west side of Ramsay Road in the northwestern two parcels, two more set further back from Ramsay Road in the southwestern parcel, two set immediately along the east side of Ramsay Road, and two spanning Rattlesnake Road. Field investigation revealed evidence of one building projected on the west side of Ramsay Road on the 1920 topographic map, but none of the other map-projected buildings from the Civil War-era or 1920 topo map. The building site on the west side of Ramsay Road verified through field inspection was also previously recorded in 1973 as a c.1800 dwelling frame dwelling. At that time, it was noted as remaining in ruinous condition and was updated to demolished by 2005 (VDHR# 046-0029). Field inspection at this time confirmed the building is no longer extant, but the site is still evident as a grassy patch with relic hardwood vegetation at the end of a dirt lane within the center of an otherwise plowed and cultivated agricultural field. Located south of this homesite within the same parcel is a small patch of trees that is not depicted on maps until a 1960s aerial that reveals it as a ring of trees. Inspection at this time revealed a ring of hardwood trees with scrub brush and greenbriers throughout the interior (Figure 6-47). Several fence posts remain around the ring, and the soils were soft and uneven. A surface scatter of cultural materials included iron scrap and a twentieth century bottle dump (Figure 6-48 and Figure 6-49).



Figure 6-37: Wooded area in northern parcel, looking east.



Figure 6-38: View of treeline in vicinity of Judgmental 6, looking north.



Figure 6-39: Landscape within southeastern parcel, looking north.



Figure 6-40: View towards map-project building site (VDHR# 046-0029) within northwestern parcel, looking north.



Figure 6-41: Crops within fields bordering Ramsay Road, looking north.



Figure 6-42: Terrain at edge of field in southernmost parcel, looking south.



Figure 6-43: Extant building on the north side of Rattlesnake Road coinciding with a Civil War map project and previously recorded as a c.1880 dwelling (VDHR# 046-5148), looking northeast.



Figure 6-44: Barn in the vicinity of the previously recorded c.1880 dwelling (VDHR# 046-5148), looking north.



Figure 6-45: Shed in the vicinity of the previously recorded c.1880 dwelling (VDHR# 046-5148), looking northeast.



Figure 6-46: Extant twentieth century dwelling along south side of Rattlesnake Road, looking southwest.



Figure 6-47: Tree ring in northwestern parcel, looking north.



Figure 6-48: Vegetation within tree ring, looking north.



Figure 6-49: Iron scrap within tree ring, looking west.

Two judgmental shovel test pits were excavated in the southern parcels area, including one within an agricultural field in the northwestern parcel in the vicinity of the tree ring, and the other within the southwestern parcel near the edge of a field just inside the deciduous treeline. The shovel test within the field revealed a 28-cm deep 2.5Y 4/4 plow zone over a 2.5Y 5/6 A Horizon that extended to 44 cm deep resting on a 10YR 5/6 sandy clay subsoil (Figure 6-50). The shovel test within the treeline revealed a more natural soil profile consisting of a 2.5Y 4/2 sandy loam layer over 2.5YR 5/6 sandy clay loam (Figure 6-51).

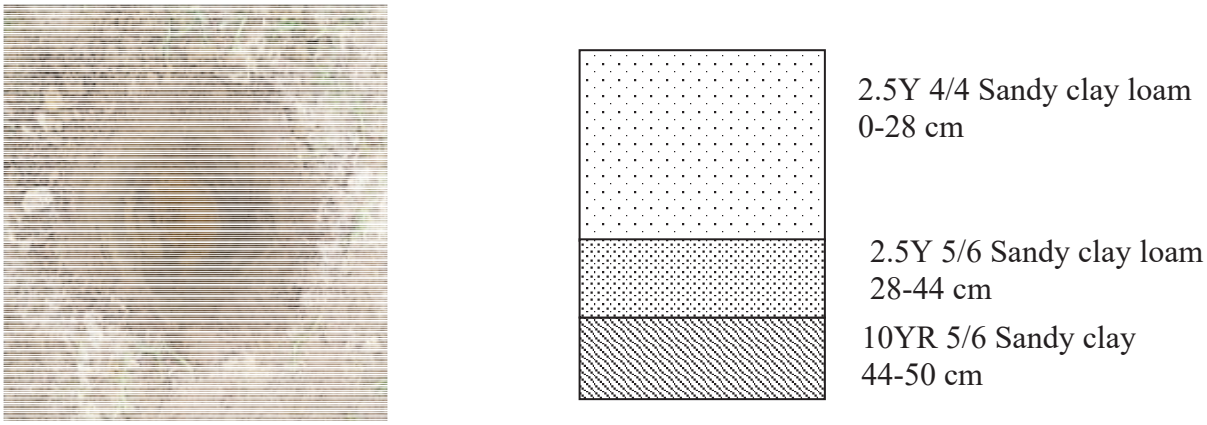
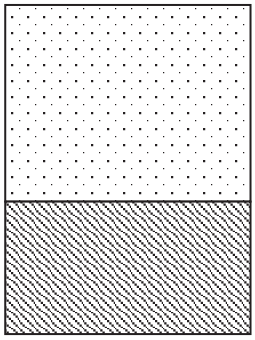


Figure 6-50: Soil Profile of Judgmental 2.





2.5Y 4/2 Sandy loam
0-24 cm

2.5Y 5/6 Sandy clay loam
24-37 cm

Figure 6-51: Soil Profile of Judgmental 6.

7. CONCLUSIONS AND RECOMMENDATIONS

In August 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The assessment was conducted for planning purposes in order to confirm existing conditions of the study area, note surface evidence of cultural activity, and identify recommended survey methods based upon the results of the background research and field reconnaissance. The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the project. Rather, the study area represents the maximum extent of the parcels being considered for development.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the study area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the study area is now sparsely developed. Just seven (7) building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the study area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The study area is bordered by Blackwater River and Mill Swamp and 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, however, no such sites have been previously recorded within the study area limits.

Although the study area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the study area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about **34 hectares (85 acres)** total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for

historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not be previously disturbed by logging. Together, the moderate potential area covers an area of about **365 hectares (901 acres)** total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder of the study area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and field depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about **170 hectares (421 acres).** A large tract of land at the northern end of the study area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort (Table 7-1 and Figure 7-1 and Figure 7-2).

Table 7-1: Summary of archaeological potential within the study area.

Potential	Reason	STP Sample	Total Area	STP Area
High	Yard space around extant and map-projected architectural resources	100%	34 hectares 85 acres	34 hectares 85 acres
Moderate	Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.	25%, chosen based on field conditions, pedestrian survey of remainder	365 hectares 901 acres	91 hectares 225 acres
Low	Areas with no site predictors	10%, chosen based on field conditions, pedestrian survey of remainder	170 hectares 421 acres	17 hectares 42 acres
No Subsurface Testing	Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas	Pedestrian survey where possible	248 hectares 613 acres	Pedestrian survey where possible
Total			**817.46 hectares 2,020 acres**	**142 hectares 352 acres**

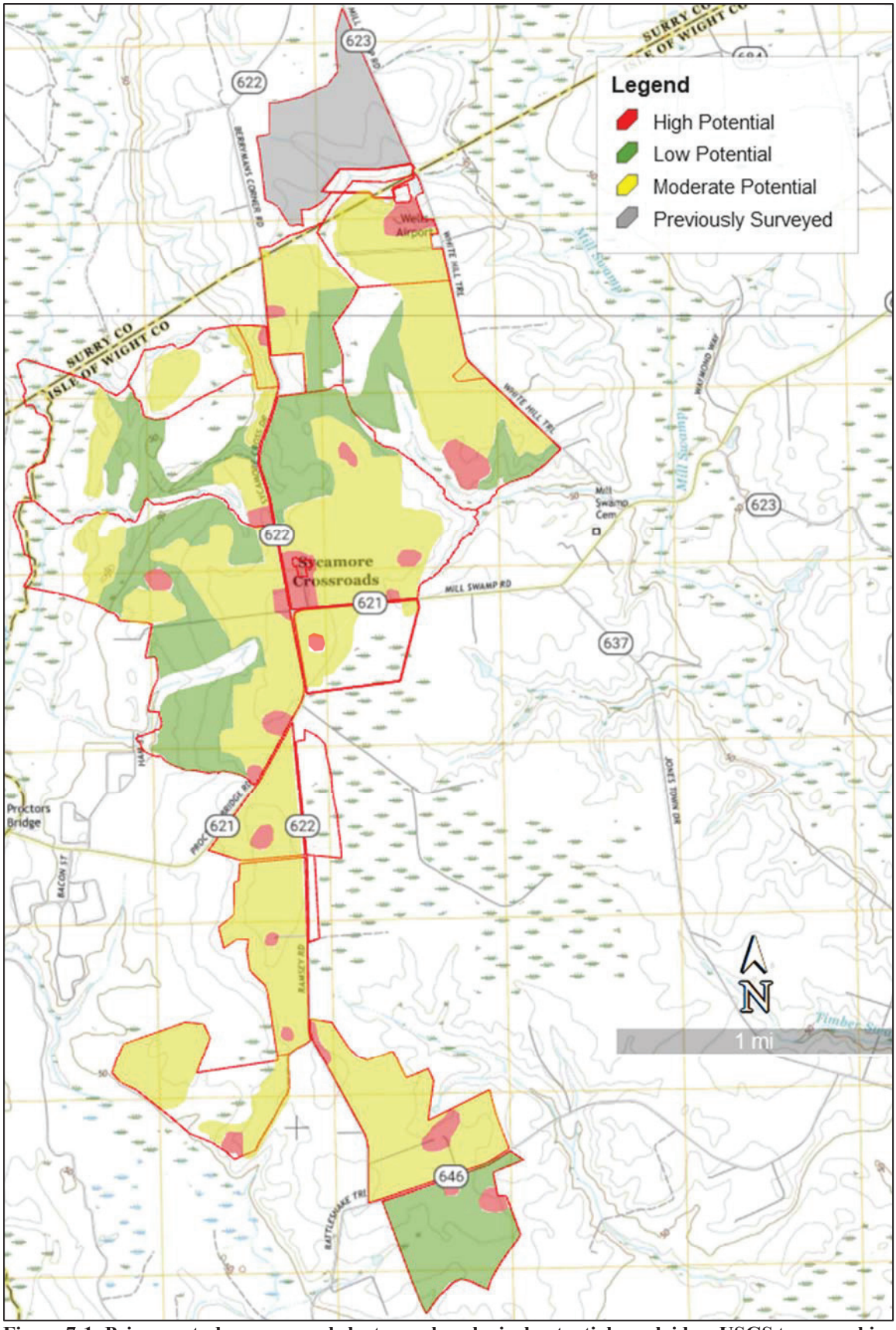


Figure 7-1: Primary study area parcel cluster archaeological potential overlaid on USGS topographic map.

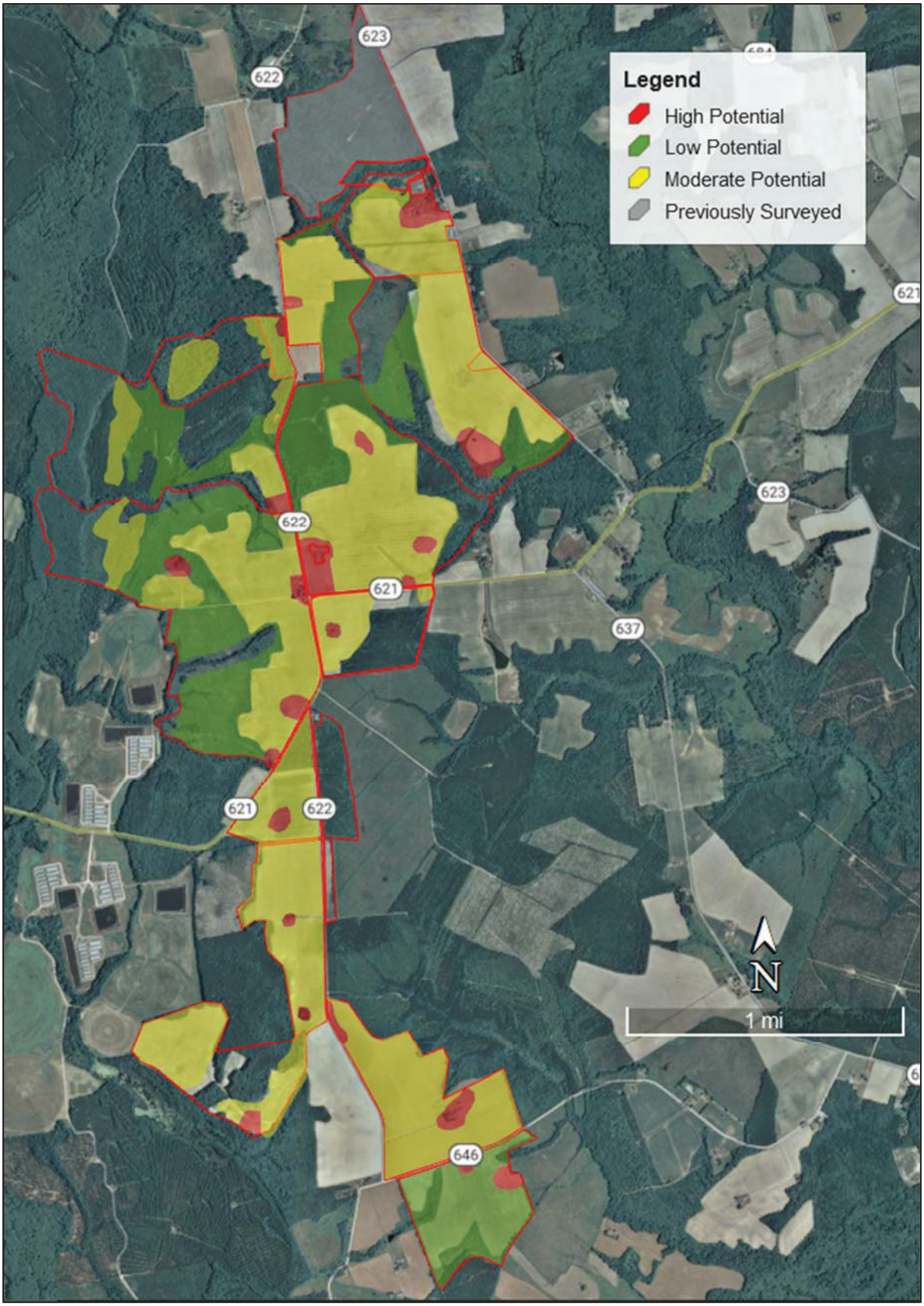


Figure 7-2: Primary study area parcel cluster archaeological potential overlaid on aerial photography.

COMMONWEALTH of VIRGINIA

Travis A. Voyles
Secretary of Natural and Historic Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director
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August 28, 2023

Julia Wellman
Dept. of Environmental Quality
Office of Environmental Impact Review
P.O. Box 1105
Richmond, VA 23218

RE- Application of Sycamore Cross Solar, LLC, PUR-2023-00126
Isle of Wight and Surry Counties, VA
DEQ #23-108S
DHR File No. 2023-4691

Dear Ms. Wellman

We have received your request for comments on the project referenced above. Our comments are provided as assistance to the Department of Environmental Quality (DEQ) and the State Corporation Commission (SCC) in the review of this application. In general, the SCC application does not reflect the full record of consultation on this project, nor does it sufficiently identify potential impacts to historic properties that may be eligible for listing in the Virginia Landmarks Register (VLR)/National Register of Historic Places (NRHP).

On August 2, 2023, DHR received the OEIR review request. The application includes a Phase IA desktop analysis and proposed survey strategy for the Sycamore Cross Solar project area. Typically, DHR does not consider desktop analyses to be sufficient for identifying historic properties that may be eligible for the listing in the VLR/NRHP. Furthermore, the proposed survey strategy included in the application for the Sycamore Cross Solar project is, in our opinion, inadequate for identifying archaeological resources within the project area.

In a letter dated August 14, 2023, DHR provided comments to the applicant's consultants, Dutton and Associates (D+A) regarding the proposed survey strategy in the Phase IA desktop analysis report. DHR recommended revising the probability map to more accurately reflect previous disturbance and site probability. On August 24, 2023, DHR received a revised Phase IA report from D+A. The newly revised survey strategy is generally sufficient for identifying archaeological resources within the project area; however, this revised Phase IA is not included in the SCC application. The application should be amended to include the revised Phase IA report.

As stated earlier, desktop analyses are typically not considered sufficient for identifying historic resources that are eligible for listing in the VLR/NRHP and assessing the full impacts of a project on historic resources. Without a sufficient identification of historic properties, it is difficult for DHR to provide meaningful comments about potential adverse impacts. The desktop analysis does state that there are areas with moderate to high potential

for archaeological resources. These areas should be adequately surveyed, and any identified sites should be evaluated for eligibility for listing in the VLR/NRHP and assessed for impacts. The desktop analysis also listed previously identified architectural resources within the study area that have not been evaluated for the VLR/NRHP. Moderate to severe impacts to VLR/NRHP-eligible/listed resources should be avoided, minimized or mitigated in consultation with DHR and other stakeholders.

While DHR often supports the phased review of electric transmission line projects regulated by the SCC, solar projects often have much larger footprints and more extensive impacts on historic resources. We are concerned that any approval by the SCC at this time would be made with insufficient information to make an informed decision regarding the potential impact of this project on significant historic resources. That said, in order to fully identify and address impacts to historic resources, we recommend the following:

1. The SCC application must be updated to include the revised Phase IA report and amended survey plan.
2. Any project approval should allow for sufficient flexibility in design to accommodate avoidance of significant archaeological sites and minimization of visual impacts to adjacent properties and construction should not commence until the studies and analyses listed below and completed.
3. Archaeological and architectural surveys should be completed by qualified professionals in accordance with DHR's *Survey Guidelines* and the revised Phase IA report prior to any significant project-related ground disturbance. All identified resources should be evaluated for listing in the VLR/NRHP.
4. The results of the archaeological and architectural surveys should be submitted to DHR for review and comment.
5. Potential direct and indirect impacts to all VLR/NRHP-eligible/listed resources, including previously inaccessible properties, should be assessed in consultation with DHR.
6. All moderate to severe impacts to VLR/NRHP-eligible/listed resources should be avoided, minimized, and/or mitigated by the applicant in consultation with DHR and other stakeholders.

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

Cc: Robert Taylor, Dutton and Associates

ISLE of WIGHT COUNTY MUSEUM

MEMORANDUM

TO: Amy Ring, Director of Community Development, Isle of Wight County

FROM: Jennifer England
Director, Isle of Wight County Museum
Historic Resources Manager, Isle of Wight County

RE: Sycamore Cross Solar Energy Generation Facility
Conditional Use Permit (CUP-8-23) – Third Submittal Tax Map Numbers 09-01-001, 10-01-017, 11-01-015, 16-01-002, 16-01- 002A, 16-01-003, 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01- 001, 17-01-002, 27-01-003, and 27-01-004

DATE: March 26, 2024

After reviewing the **Updated Historical and Cultural Resources Report Dated August 2023** as prepared by Dutton + Associates for AES Clean Energy and sPower with reference to Conditional Use Permit (CUP-8-23), the Isle of Wight County Museum/Isle of Wight County Department of Historic Resources acknowledges that much of the acreage to be developed as a solar energy facility has been plowed, logged and utilized as farmland for many years. However, there are still a few notable concerns, and some of them are noted here as they were in a previous memorandum.

The report's study area includes multiple parcels and tracts of land--some of these span Isle of Wight County's border to cross into Surry County. Within the project area, there are multiple recorded archaeological and architectural resources. These sites as well as their boundaries are considered high potential for archaeological discovery. Expanding the project area by one mile adds other resources to this list. Vegetative cover may be required for the varied project locations within the viewshed of some of these historic resources.

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ISLE of WIGHT COUNTY MUSEUM

Of particular note are these sites. Avoidance with a 100-foot buffer is recommended. In the event that is not possible, a Phase II evaluation should be required.

- Site 44SYO309, farmstead
- Site 44SY0310, archaeological materials with a single grave
- Cemeteries in areas D2 and D3

There are nine previously recorded architectural resources located within the study area. Only two have been formally evaluated by Virginia Department of Historic Resources staff for eligibility on the National Register of Historic Places. Before proceeding with the project, the remaining resources should be formally evaluated. Additionally, these dwellings may or may not have associated cemeteries which will require avoidance.

Overall, the proposed project will certainly impact – both directly and indirectly - archaeological, cultural or architectural historic resources in Isle of Wight County. Determining the full extent of the project's archaeological history may not be possible because of size; however, if the project proceeds, an on-site archaeologist during site preparation and construction should be considered.

The potential on the project site for archaeological artifacts is highly likely. As the project proceeds, the Isle of Wight County Museum should be the repository for discovered artifacts and future finds on this site as they will further the interpretation or discovery of Isle of Wight County history.

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SYCAMORE CROSS SOLAR
ECONOMIC & FISCAL CONTRIBUTION TO THE COUNTIES OF SURRY AND ISLE OF WIGHT, VIRGINIA



Prepared for

aes

MANGUM economics

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MANGUMECONOMICS.COM

SEPTEMBER 2023

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About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. One recent example was an analysis of the proposed $2.3 billion Green City "net-zero eco district." The Mangum Team has also authored multiple economic development plans, including identifying industry recruitment opportunities created by the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 23 GW of proposed solar, wind, battery, and hydro projects spanning twenty states. Among those projects was Dominion Energy's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Information Technology:** Working with some of the largest names in the industry, to date the Mangum Team has produced analyses of the economic and fiscal impact of the data center industry in multiple states. Among those, were studies conducted in IL, MD, and VA that were instrumental in the passage of industry-specific legislation.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

Rebecca Kyle, *Senior Research Analyst*

Martina Arel, M.B.A., *Director – Economic Development & Energy Research*

A. Fletcher Mangum, Ph.D., *Founder and CEO*

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight, Virginia. The primary findings from that assessment are as follows:

1) **Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land.**
    - The actively used, fenced-in portion of the project site would encompass approximately 125 acres located in Surry County and approximately 1,030 acres located in Isle of Wight County.
    - The project would involve an investment of $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be located in Surry County and approximately $402.5 million would be located in Isle of Wight County.[1]

2) **The proposed Sycamore Cross Solar project would make a significant economic contribution to the counties of Surry and Isle of Wight:**
    - The proposed Sycamore Cross Solar project would provide an estimated one-time pulse of economic activity to the counties of Surry and Isle of Wight during its construction phase supporting approximately:
        - 197 direct, indirect, and induced job years.
        - $9.9 million in associated wages and benefits.
        - $91.6 million in economic output.
    - The proposed Sycamore Cross Solar project would provide an estimated annual economic impact to the counties of Surry and Isle of Wight during its ongoing operational phase supporting approximately:
        - 7 direct, indirect, and induced jobs.
        - $0.6 million in associated wages and benefits.
        - $1.6 million in economic output.

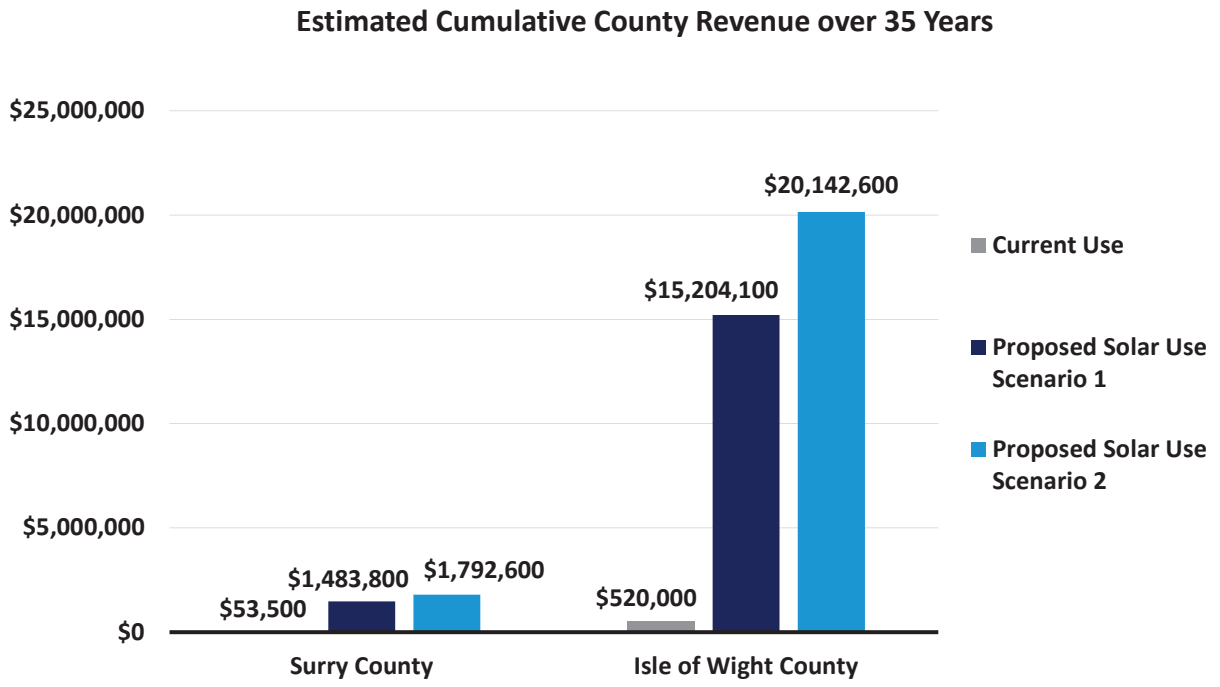
3) **The proposed Sycamore Cross Solar project would also make a significant fiscal contribution to the counties of Surry and Isle of Wight. The proposed project would generate approximately:**
    - $1.4 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.

[1] Data Source: AES Corporation. Allocation of generation capacity and investment subject to change based on final design.

- Surry County:
  - $1.5 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $1.8 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).
- Isle of Wight County:
  - $15.2 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $20.1 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).

4) **The proposed Sycamore Cross Solar project would have a significantly greater fiscal impact on The counties of Surry and Isle of Wight than the property generates in its current use:**

- Surry County: The proposed Sycamore Cross Solar project would generate approximately $1.5 million (from taxation on capital investments) or $1.8 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $53,500 in cumulative county revenue in the property's current use – that's a 28- to 34-fold increase over the current use revenues.
- Isle of Wight County: The proposed Sycamore Cross Solar project would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use – that's a 29- to 39-fold increase over current use revenues.



The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good 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 Sycamore Cross Solar project would make to the Counties of Surry and Isle of Wight, Virginia. This report was commissioned by AES Clean Energy (AES) and produced by Mangum Economics.

The Project

Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land. The estimated actively used, fenced-in solar site encompasses approximately 125 acres in Surry County and 1,030 acres in Isle of Wight County.

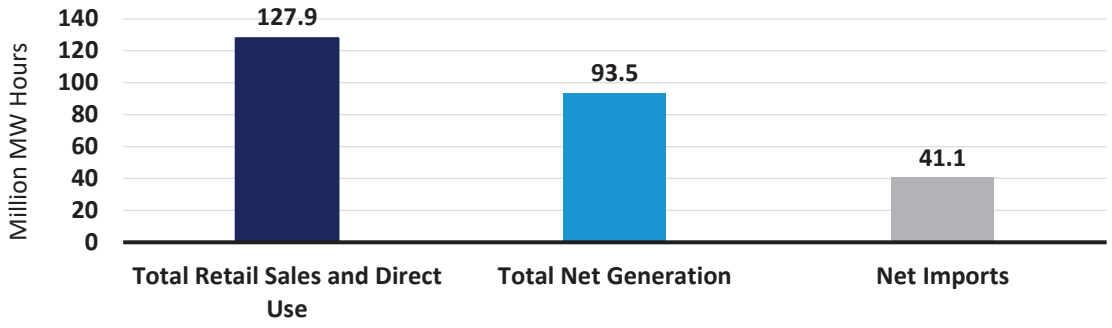
Electricity Production in Virginia

This section provides a backdrop for the proposed Sycamore Cross 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 2021 electricity sales and direct use in Virginia totaled 127.9 million megawatt hours, ranking the state 10th among the fifty states in terms of electricity consumption. However, only 73 percent of that demand was met by in-state utilities, independent producers, and other sources. As a result, Virginia had to import the remaining 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 2021 (in millions of megawatt-hours)[2]



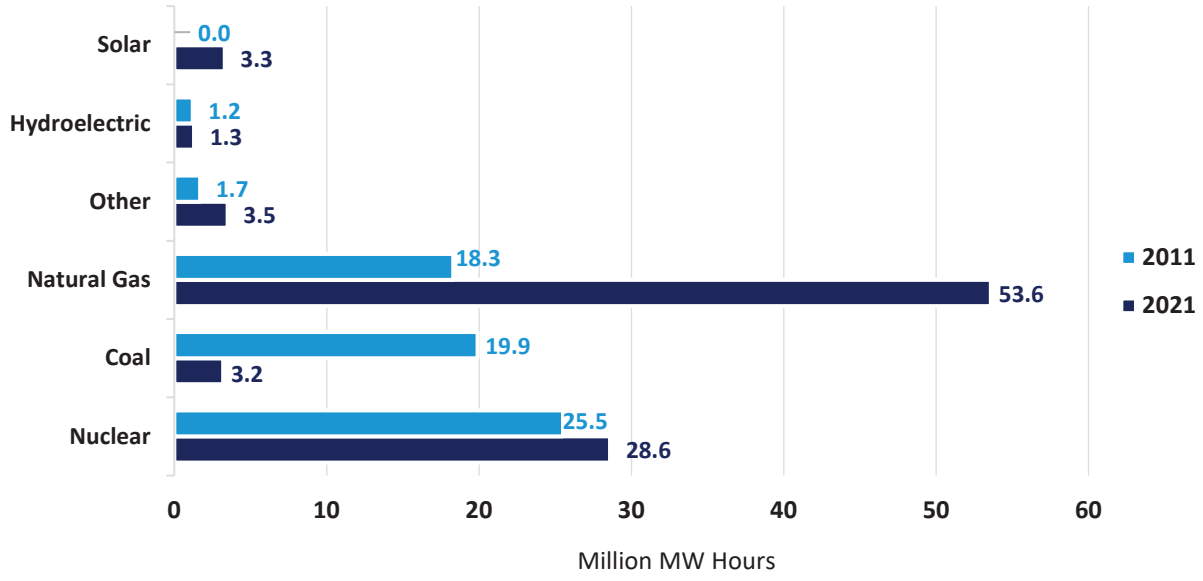
[2] Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Sources of Production

Between 2011 and 2021, the total amount of electricity produced in Virginia increased from 66.7 to 93.5 million megawatt hours, while retail and direct consumption of electricity increased from 112.1 to 127.9 million megawatt hours. Consequently, imports of electricity decreased by 11.8 million megawatt hours (or 22 percent) during this time.[3] Figure 2 provides a comparison of the energy sources that were used to produce electricity in Virginia in each of those years. As these data show, the most significant change between 2011 and 2021 was a decrease in the use of coal and an increase in the use of natural gas. Where coal was the state's second largest source of electricity in 2011, accounting for 19.9 million megawatt hours (or 29.9 percent) of production, by 2021 production had fallen by 16.7 million megawatt hours, making coal a distant fifth place source of electricity with only 3.4 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 18.3 million megawatt hours (or 27.5 percent) of Virginia's electricity production in 2011, by 2021 that proportion had almost tripled to 53.6 million megawatt hours (or 57.3 percent of production), making natural gas the state's largest source of electricity. In addition, solar, which entered the Virginia electricity production market in 2016, increased its share to 3.3 million megawatt hours in 2021.

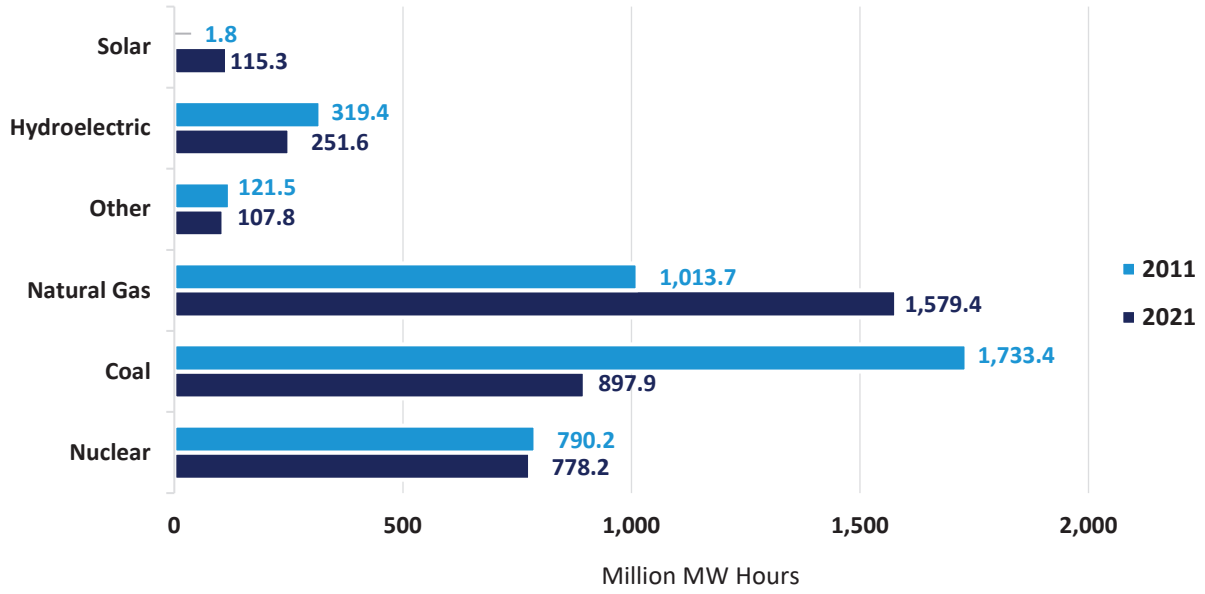
Figure 2: Electricity Generation in Virginia by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[4]



[3] Imports also takes into account losses during transmission. As a result, totals do not equal sum of components.
[4] Data Source: U.S. Energy Information Administration. The "Other" category includes battery, wood, wind, petroleum, other biomass, "other", and pumped storage.

Figure 3 provides similar data for the U.S. as a whole. A quick comparison of Figures 2 and 3 shows that although the degree of reliance on specific energy sources for electricity production is quite different between the U.S. and Virginia, the trend toward lower-emissions energy sources is the same. Nationally, between 2011 and 2021 the amount of electricity produced using coal declined by 835.5 million megawatt hours from 42 to 22 percent of production, while in contrast the amount of electricity produced using natural gas increased by 565.7 million megawatt hours from 25 to 38 percent of production. Nationwide, as in Virginia, the reliance on renewable energy sources such as solar increased during this time but at a slower pace than in Virginia. Between 2011 and 2021, the amount of electricity produced using solar increased by 113.5 million megawatt hours to 2.8 percent of total electricity production in the nation compared to 3.5 percent of total electricity production in Virginia.

Figure 3: Electricity Generation in the United States by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[5]

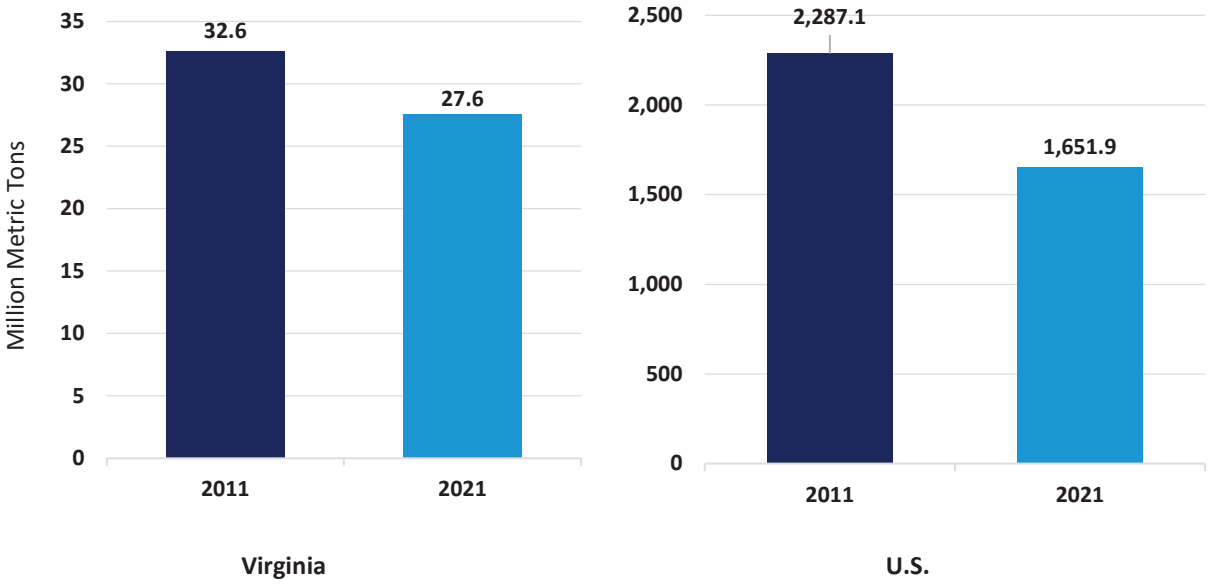


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is one of the U.S.'s largest sources of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2011 and 2021 for both Virginia and the U.S. As these data indicate, between 2011 and 2021, as the share of electricity produced in Virginia by coal fell from 29.9 to 3.4 percent, carbon dioxide emissions from electricity production fell from 32.6 to 27.6 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 42 to 22 percent, carbon dioxide emissions from electricity production fell from 2,287.1 to 1,651.9 million metric tons.

[5] Data Source: U.S. Energy Information Administration. "Other" includes battery, geothermal, hydroelectric, other, other biomass, other gas, petroleum, pumped storage, wind, and wood.

Figure 4: Carbon Dioxide Emissions from Electricity Production (millions of metric tons)[6]



[6] Data Source: U.S. Energy Information Administration.

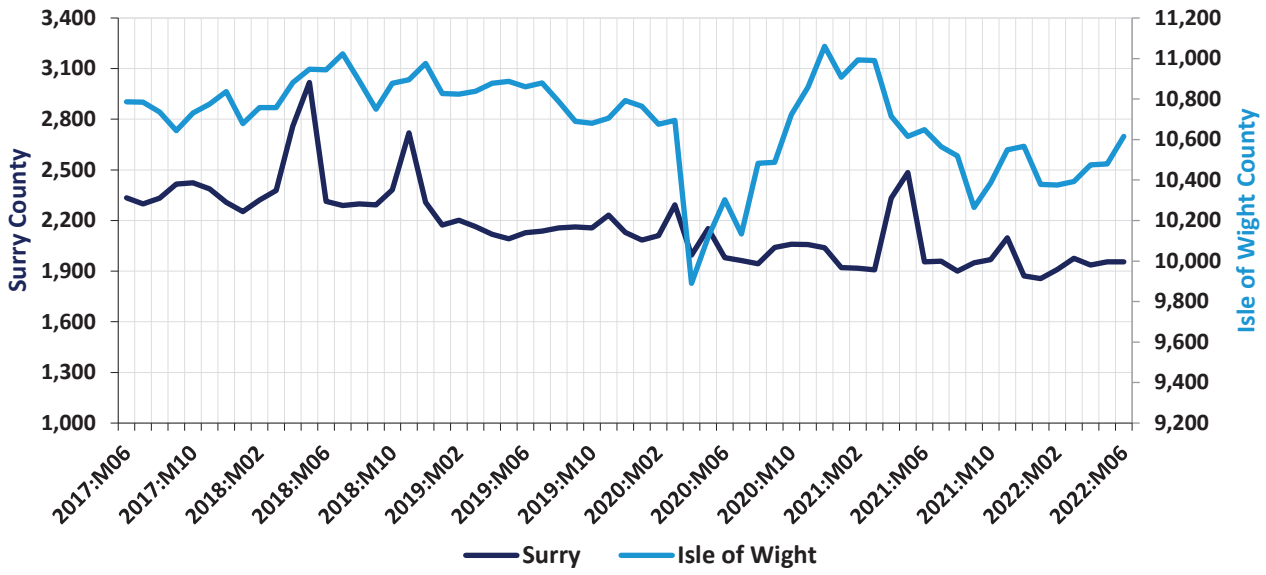
Local Economic Profile

This section provides context for the economic and fiscal impact assessments to follow by profiling the local economies of the counties of Surry and Isle of Wight.

Total Employment

Figure 5 depicts the trend in total employment in the counties of Surry and Isle of Wight from June 2017 through June 2022. As these data show, employment in Surry County generally declined through the five-year period. Employment in Isle of Wight County remained generally stable until the decrease in economic activity associated with the COVID-19 pandemic led to a steep employment decline in Isle of Wight County in April 2020. Since then, employment has rebounded back to pre-pandemic levels. As of June 2022, county employment stood at 1,956 jobs in Surry County and 10,616 jobs in Isle of Wight County. This represents an overall decrease in employment of 16.2 percent (or 379 jobs) in Surry County and 1.6 percent (or 170 jobs) in Isle of Wight County over the five-year period. To put this number in perspective, over this same period, total statewide employment in Virginia increased by 1.5 percent.[7]

Figure 5: Total Employment in the Counties of Surry and Isle of Wight– June 2017 to June 2022[8]

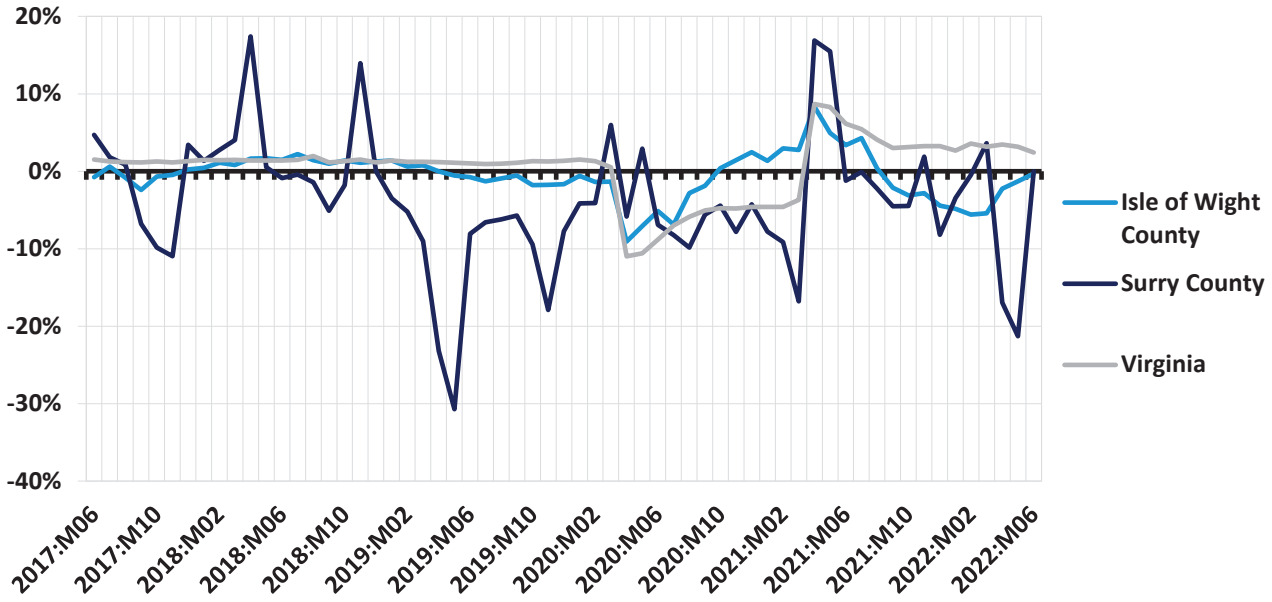


To control for seasonality and provide a point of reference, Figure 6 compares the year-over-year change in total employment in the counties of Surry and Isle of Wight to that of the state of Virginia over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, Surry County experienced periods of high employment growth and high employment loss throughout the period. Isle of Wight County tracked closely with the statewide trend throughout the

[7] Data Source: U.S. Bureau of Labor Statistics.
[8] Data Source: U.S. Bureau of Labor Statistics.

five-year period. As of June 2022, the year-over-year change in total employment was 0 percent in Surry County and minus 0.3 percent in Isle of Wight County as compared to 2.4 percent statewide in Virginia.

Figure 6: Year-Over-Year Change in Total Employment – June 2017 to June 2022[9]



Employment and Wages by Industry Supersector

To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figures 5 and 6, Figures 7 through 9 provide data on private employment and wages in the counties of Surry and Isle of Wight by industry supersector.[10]

Figure 7 provides an indication of the distribution of private sector employment across industry supersectors in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data indicate, the largest industry sector that quarter in Surry County was Trade, Transportation, and Utilities (873 jobs). In Isle of Wight County, the largest industry sector that quarter was Manufacturing (2,646 jobs).

Figure 8 provides a similar ranking for average private sector weekly wages by industry supersector in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data show, the highest paying industry sector that quarter in Surry County was Trade, Transportation and Utilities ($2,088 per week). In Isle of Wight County, the highest paying sector was Information ($2,089 per week).

[9] Data Source: U.S. Bureau of Labor Statistics.
[10] A "supersector" is the highest level of aggregation in the coding system that the Bureau of Labor Statistics uses to classify industries.

Figure 7: Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight– 2nd Qu. 2022[11]

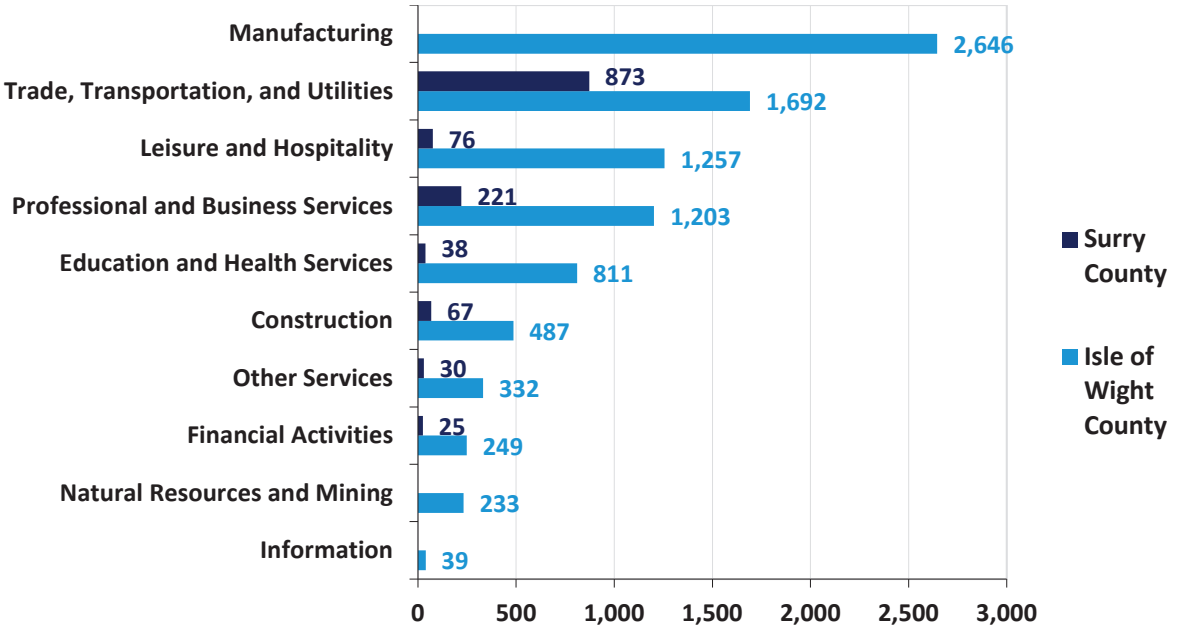
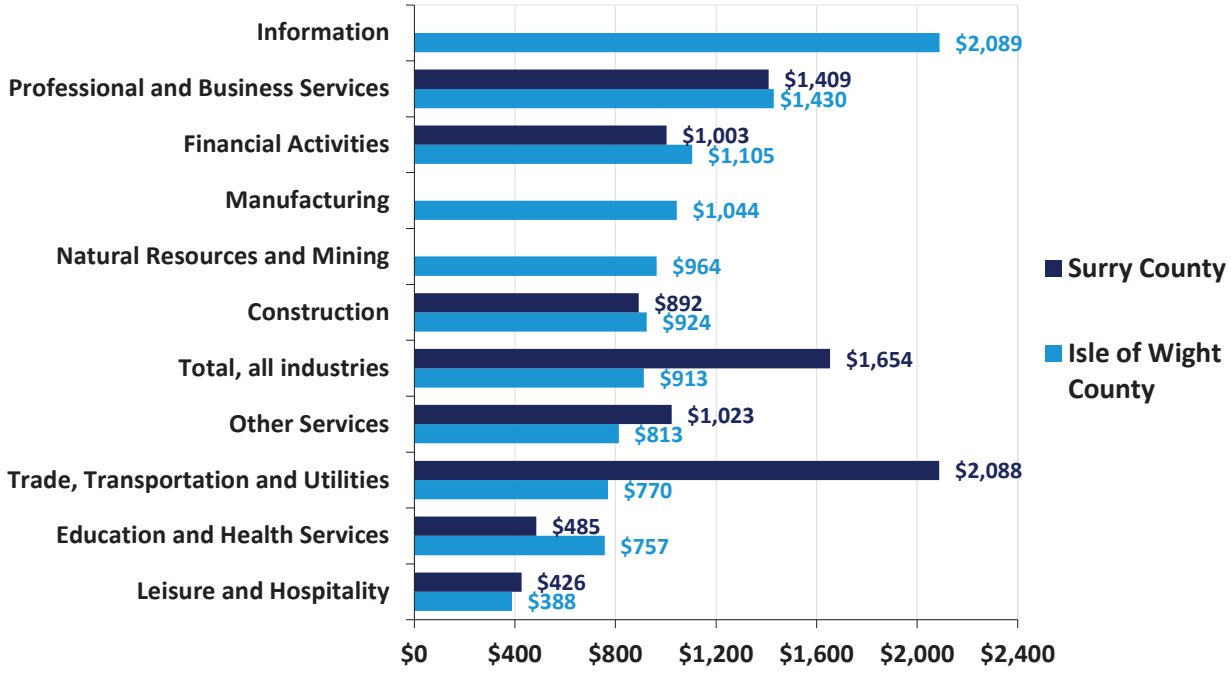


Figure 8: Average Private Weekly Wages by Industry Supersector in the Counties of Surry and Isle of Wight – 2nd Qu. 2022[12]

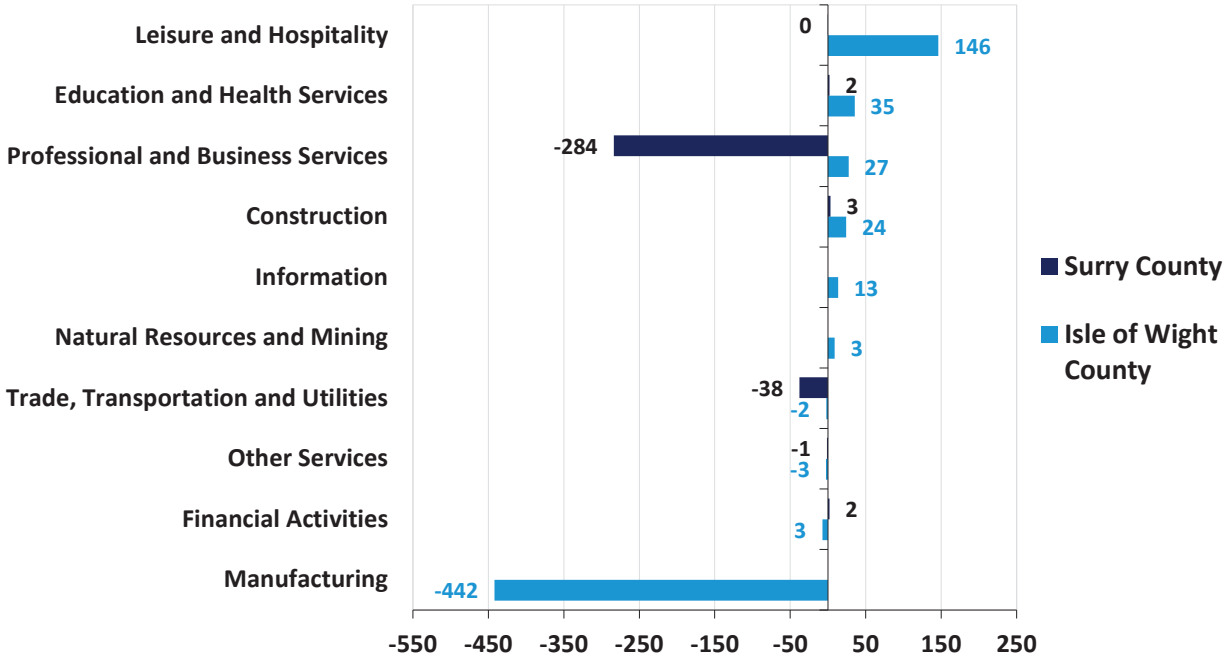


[11] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

[12] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 9 details the year-over-year change in private sector employment from the second quarter of 2021 to the second quarter of 2022 in the counties of Surry and Isle of Wight by industry supersector. Over this period, the largest employment gains in Surry County occurred in the Construction (up 3 jobs) sector, and the largest employment loss occurred in the Professional and Business Services (down 284 jobs) sector. The largest employment gain in Isle of Wight County occurred in the Leisure and Hospitality (up 146 jobs) sector, and the largest employment loss occurred in the Manufacturing (down 442 jobs) sector.

Figure 9: Change in Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight from 2nd Qu. 2021 to 2nd Qu. 2022[13]

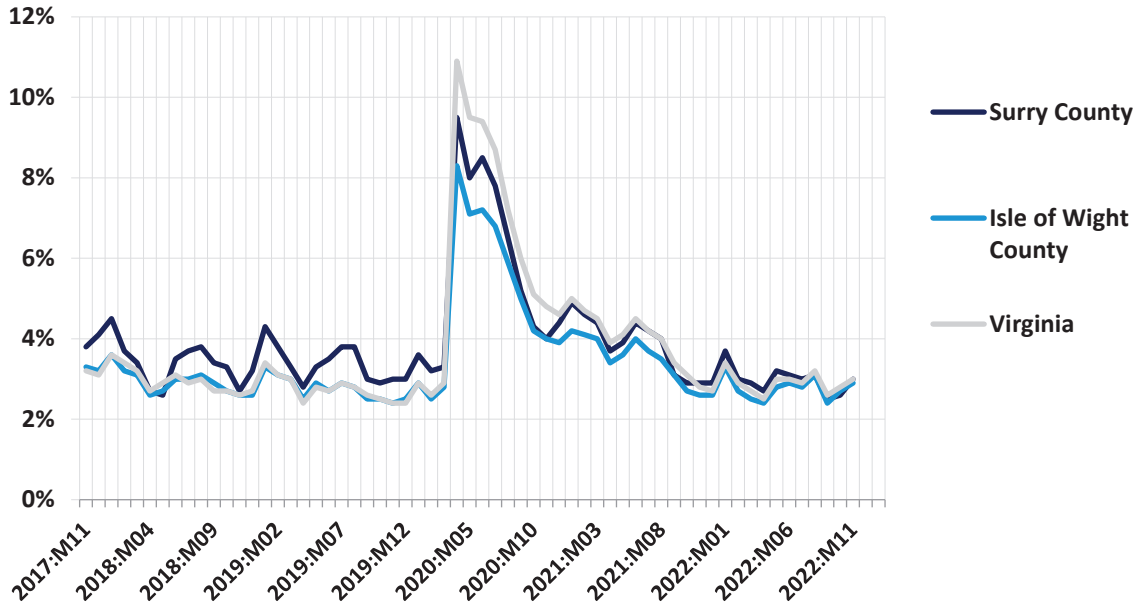


Unemployment

Figure 10 illustrates the unemployment trend in the counties of Surry and Isle of Wight over the five-year period from November 2017 through November 2022 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in the counties of Surry and Isle of Wight generally tracked closely to the statewide norm. In April 2020 unemployment in both the counties and the state significantly rose as a result of the labor dislocations caused by the COVID-19 pandemic. The counties' unemployment rates did not peak as high as the statewide rate. As of November 2022, unemployment stood at 3.0 percent in Surry County, 2.9 percent in Isle of Wight County, and 3.0 percent in Virginia as a whole.

[13] Data Source: Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 10: Unemployment Rate – November 2017 to November 2022[14]



[14] Data Source: Bureau of Labor Statistics.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight. The 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 Sycamore Cross Solar project, the analysis employs 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 Sycamore Cross Solar project purchases goods and services – or when 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 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 Sycamore Cross 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).

[15] IMPLAN is produced by IMPLAN Group, LLC.

Construction Phase

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight.

Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- Total investment in the Sycamore Cross Solar project is estimated to be approximately $437.1 million.[16]
- Of that total:
    - Architecture, engineering, site preparation, and other construction and development costs are estimated to be approximately $253.1 million.[17]
    - Capital equipment costs are estimated to be approximately $184.0 million.[18] It is anticipated that no capital equipment would be purchased from vendors in the counties of Surry and Isle of Wight.[19]
- For ease of analysis, all construction expenditures are assumed to take place in a single year.

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Sycamore Cross Solar project would directly provide a one-time pulse supporting approximately: 1) 102 job years, 2) $5.3 million in wages and benefits, and 3) $75.9 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct investment would generate, the total estimated one-time impact on the counties of Surry and Isle of Wight would support approximately: 1) 197 job years, 2) $9.9 million in wages and benefits, 3) $91.6 million in economic output, and 4) $1.4 million in state and local tax revenue.

[16] Data Source: AES.
[17] Data Source: AES.
[18] Data Source: AES.
[19] Data Source: IMPLAN Group LLC.

Table 1: Estimated One-Time Economic and Fiscal Impact on the Counties of Surry and Isle of Wight from Construction of the Sycamore Cross Solar Project[20,21]

Economic Impact	Employment (Job Years)[22]	Wages and Benefits	Output
1st Round Direct Economic Activity	102	$5,253,400	$75,938,700
2nd Round Indirect and Induced Economic Activity	95	$4,671,900	$15,708,700
Total Economic Activity	**197**	**$9,925,300**	**$91,647,400**
Fiscal Impact			
State and Local Tax Revenue			**$1,431,500**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

This portion of the section assesses the annual economic and fiscal impact that the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight during its anticipated 35-year operational phase.

Economic Impact Inputs

The analysis is based on the following inputs:

- The Sycamore Cross Solar project would employ approximately five individuals and spend approximately $1.3 million each year for maintenance and repair, vegetative control, and other operational expenditures.[23]

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Sycamore Cross Solar project would on average directly support approximately: 1) 5 jobs, 2) $0.5 million in wages and benefits, and 3) $1.3 million in economic output to the counties of Surry and Isle of Wight.

[20] It is important to note that construction sector jobs are not necessarily new jobs, but the investments made can also support an existing job during the construction of the project. Due to preliminary nature of the project, the analysis is based on industry averages. Actual spending patterns may vary based on vendor contracts and final design.
[21] A construction sector job, also referred to as a job year, is equal to one job over one year. It is used to denote employment on construction projects where the construction schedule extends beyond one year and to account for the fact that actual on-site employment may vary over the period.
[22] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[23] Data Source: AES.

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on the counties of Surry and Isle of Wight would be approximately: 1) 7 jobs, 2) $0.6 million in wages and benefits, and 3) $1.6 million in economic output.

Table 2: Estimated Annual Economic Impact on the Counties of Surry and Isle of Wight from the Ongoing Operation of the Sycamore Cross Solar Project[24]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	5	$501,200	$1,250,000
2nd Round Indirect and Induced Economic Activity	2	$82,900	$302,700
Total Economic Activity	**7**	**$584,100**	**$1,552,700**

**Totals may not sum due to rounding.*

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The Sycamore Cross Solar project would involve an investment of approximately $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be invested in Surry County and approximately $402.5 million in Isle of Wight County.[25]
- The Sycamore Cross Solar project would be situated on approximately 125 acres in Surry County and on approximately 1,030 acres in Isle of Wight County.[26]
- The actively used, fenced-in acreage in Surry County would be reassessed at $13,000 per acre.[27]
- The actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.[28]
- Tax rates and locality ratios remain constant throughout the analysis.
- The initial interconnection request for Sycamore Cross Solar was filed in March 2017.[29]
- The Sycamore Cross Solar project's total generation capacity would be 240 MW AC, of which approximately 19 MW would be located in Surry County and approximately 221 MW would be located in Isle of Wight County.[30]
- The Sycamore Cross Solar project would become operational in the fourth quarter of 2026.[31]

[24] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[25] Data Source: AES.
[26] Data Source: AES.
[27] Data Source: Surry County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[28] Data Source: Isle of Wight County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[29] Data Source: AES.
[30] Data Source: AES.
[31] Data Source: AES.

Fiscal Impact – Surry County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Surry County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Surry County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Surry County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 3 details the increased property assessments associated with reassessing the 125-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $11,600 per year, for a cumulative total of approximately $404,600 over the project's anticipated 35-year operational life expectancy.[32] In contrast, the property currently generates approximately $1,530 per year in real estate tax revenue for the county, for a cumulative total of approximately $53,500 over 35 years.[33]

Table 3: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[34]	$1,628,100
Surry County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$11,600
Cumulative Revenue over 35 Years	**$404,600**

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment

Table 4 separately details the additional annual revenue that the proposed Sycamore Cross 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 pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[35], times 2) the State Corporation Commission's utility assessment ratio for taxation of public utilities in Surry County, times 4) the State Corporation

[32] Assumes property will be reassessed at $13,000 per acre once it is under solar use.
[33] Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[34] Calculated as 125 acres times $13,000.
[35] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.

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.

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $43,600 in the project's first year of operation, with that figure projected to decline to approximately $4,800 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $1.1 million.

Table 4: Estimated Surry County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
1	$34,602,325	$6,141,221	$43,600
2	$34,602,325	$6,141,221	$43,600
3	$34,602,325	$6,141,221	$43,600
4	$34,602,325	$6,141,221	$43,600
5	$34,602,325	$6,141,221	$43,600
6	$34,602,325	$6,141,221	$43,600
7	$34,602,325	$6,141,221	$43,600
8	$34,602,325	$6,141,221	$43,600
9	$34,602,325	$6,120,068	$43,500
10	$34,602,325	$6,016,349	$42,700
11	$34,602,325	$5,906,490	$41,900
12	$34,602,325	$5,790,489	$41,100
13	$34,602,325	$5,667,664	$40,200
14	$34,602,325	$5,536,652	$39,300
15	$34,602,325	$5,398,133	$38,300
16	$34,602,325	$5,251,426	$37,300
17	$34,602,325	$5,095,848	$36,200
18	$34,602,325	$4,931,400	$35,000
19	$34,602,325	$4,756,034	$33,800
20	$34,602,325	$4,571,115	$32,500
21	$34,602,325	$4,374,596	$31,100
22	$34,602,325	$4,166,477	$29,600
23	$34,602,325	$3,946,075	$28,000

[36] Data Source: AES.
[37] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Surry County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[38] 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 $0.72 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
24	$34,602,325	$3,712,027	$26,400
25	$34,602,325	$3,464,331	$24,600
26	$34,602,325	$3,200,941	$22,700
27	$34,602,325	$2,922,539	$20,800
28	$34,602,325	$2,627,078	$18,700
29	$34,602,325	$2,314,558	$16,400
30	$34,602,325	$1,982,250	$14,100
31	$34,602,325	$1,630,835	$11,600
32	$34,602,325	$1,258,268	$8,900
33	$34,602,325	$863,183	$6,100
34	$34,602,325	$682,358	$4,800
35	$34,602,325	$682,358	$4,800
Estimated Cumulative Total			**$1,079,200**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

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 Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $1.5 million.

Table 5: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$404,600
County Revenue from Taxation of Capital Investments	$1,079,200
Total Cumulative Revenue over 35 Years	**$1,483,800**

**Totals may not sum due to rounding.*

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Surry County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 6 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 19 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $1.4 million over the anticipated 35-year operational life of the project.

Table 6: Estimated Surry County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	19	$1,540	$29,300
2	19	$1,540	$29,300
3	19	$1,540	$29,300
4	19	$1,540	$29,300
5	19	$1,540	$29,300
6	19	$1,694	$32,200
7	19	$1,694	$32,200
8	19	$1,694	$32,200
9	19	$1,694	$32,200
10	19	$1,694	$32,200
11	19	$1,863	$35,400
12	19	$1,863	$35,400
13	19	$1,863	$35,400
14	19	$1,863	$35,400
15	19	$1,863	$35,400
16	19	$2,050	$38,900
17	19	$2,050	$38,900
18	19	$2,050	$38,900
19	19	$2,050	$38,900
20	19	$2,050	$38,900
21	19	$2,255	$42,800
22	19	$2,255	$42,800
23	19	$2,255	$42,800
24	19	$2,255	$42,800
25	19	$2,255	$42,800
26	19	$2,480	$47,100
27	19	$2,480	$47,100
28	19	$2,480	$47,100
29	19	$2,480	$47,100
30	19	$2,480	$47,100
31	19	$2,728	$51,800
32	19	$2,728	$51,800
33	19	$2,728	$51,800
34	19	$2,728	$51,800
35	19	$2,728	$51,800
Cumulative Total			**$1,388,000**

Scenario 2: Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $1.8 million.

Table 7: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$404,600
County Revenue from Revenue Share Ordinance	$1,388,000
Total Cumulative Revenue over 35 Years	**$1,792,600**

Fiscal Impact – Isle of Wight County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Isle of Wight County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Isle of Wight County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 8 details the increased property assessments associated with removing the affected acreage from the land use program and reassessing the 1,030-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $109,700 per year, for a cumulative total of approximately $3.8 million over the project's anticipated 35-year operational life expectancy.[39] Adding one-time rollback taxes of approximately $157,700 increases that cumulative total to approximately $4.0 million. In contrast, the property currently generates approximately $14,900 per year in real estate tax revenue for the county, for a cumulative total of approximately $520,000 over 35 years.[40]

Table 8: Estimated Isle of Wight County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[41]	$15,455,300
Isle of Wight County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$109,700
Cumulative Revenue over 35 Years	**$3,840,600**
One-time Rollback Taxes[42]	**$157,700**
Cumulative Revenue over 35 Years	**$3,998,300**

**Totals may not sum due to rounding.*

[39] Assumes property will be reassessed at $15,000 per acre once it is under solar use.
[40] Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.
[41] Calculated as 1,030 acres times $15,000.
[42] Rollback taxes are computed as the difference between the land use value assessment tax and the tax on the fair market value for the affected acreage for five complete tax years plus the current year, including simple interest. Does not account for changes in assessment values.

Scenario 1: Taxation of Capital Investment

Table 9 separately details the additional annual revenue that the proposed Sycamore Cross 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 pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[43], times 2) the State Corporation Commission's 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 $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 9 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $452,700 in the project's first year of operation, with that figure projected to decline to approximately $50,300 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $11.2 million.

Table 9: Estimated Isle of Wight County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
1	$402,479,675	$63,767,270	$452,700
2	$402,479,675	$63,767,270	$452,700
3	$402,479,675	$63,767,270	$452,700
4	$402,479,675	$63,767,270	$452,700
5	$402,479,675	$63,767,270	$452,700
6	$402,479,675	$63,767,270	$452,700
7	$402,479,675	$63,767,270	$452,700
8	$402,479,675	$63,767,270	$452,700
9	$402,479,675	$63,547,627	$451,200
10	$402,479,675	$62,470,669	$443,500
11	$402,479,675	$61,329,943	$435,400
12	$402,479,675	$60,125,450	$426,900
13	$402,479,675	$58,850,105	$417,800

[43] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.
[44] Data Source: AES.
[45] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Isle of Wight County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[46] 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 $0.71 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
14	$402,479,675	$57,489,736	$408,200
15	$402,479,675	$56,051,430	$398,000
16	$402,479,675	$54,528,101	$387,100
17	$402,479,675	$52,912,663	$375,700
18	$402,479,675	$51,205,118	$363,600
19	$402,479,675	$49,384,208	$350,600
20	$402,479,675	$47,464,104	$337,000
21	$402,479,675	$45,423,552	$322,500
22	$402,479,675	$43,262,550	$307,200
23	$402,479,675	$40,974,013	$290,900
24	$402,479,675	$38,543,772	$273,700
25	$402,479,675	$35,971,825	$255,400
26	$402,479,675	$33,236,918	$236,000
27	$402,479,675	$30,346,135	$215,500
28	$402,479,675	$27,278,221	$193,700
29	$402,479,675	$24,033,175	$170,600
30	$402,479,675	$20,582,658	$146,100
31	$402,479,675	$16,933,753	$120,200
32	$402,479,675	$13,065,205	$92,800
33	$402,479,675	$8,962,844	$63,600
34	$402,479,675	$7,085,252	$50,300
35	$402,479,675	$7,085,252	$50,300
Estimated Cumulative Total			**$11,205,800**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

Table 10 combines the results from the calculations depicted in Tables 8 and 9 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $15.2 million.

Table 10: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$3,998,300
County Revenue from Taxation of Capital Investments	$11,205,800
Total Cumulative Revenue over 35 Years	**$15,204,100**

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Isle of Wight County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 11 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 221 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $16.1 million over the anticipated 35-year operational life of the project.

Table 11: Estimated Isle of Wight County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	221	$1,540	$340,300
2	221	$1,540	$340,300
3	221	$1,540	$340,300
4	221	$1,540	$340,300
5	221	$1,540	$340,300
6	221	$1,694	$374,400
7	221	$1,694	$374,400
8	221	$1,694	$374,400
9	221	$1,694	$374,400
10	221	$1,694	$374,400
11	221	$1,863	$411,800
12	221	$1,863	$411,800
13	221	$1,863	$411,800
14	221	$1,863	$411,800
15	221	$1,863	$411,800
16	221	$2,050	$453,000
17	221	$2,050	$453,000
18	221	$2,050	$453,000
19	221	$2,050	$453,000
20	221	$2,050	$453,000
21	221	$2,255	$498,300
22	221	$2,255	$498,300
23	221	$2,255	$498,300
24	221	$2,255	$498,300
25	221	$2,255	$498,300
26	221	$2,480	$548,100

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
27	221	$2,480	$548,100
28	221	$2,480	$548,100
29	221	$2,480	$548,100
30	221	$2,480	$548,100
31	221	$2,728	$602,900
32	221	$2,728	$602,900
33	221	$2,728	$602,900
34	221	$2,728	$602,900
35	221	$2,728	$602,900
Cumulative Total			**$16,144,300**

Scenario 2: Total Fiscal Impact

Table 12 combines the results from the calculations depicted in Tables 8 and 11 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $20.1 million.

Table 12: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$3,998,300
County Revenue from Revenue Share Ordinance	$16,144,300
Total Cumulative Revenue over 35 Years	**$20,142,600**

Current Agricultural Use

This section provides a benchmark for the previous estimates of the economic contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight by estimating the economic and fiscal contribution that the site makes to the counties in its current use.

Economic Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres are located in Surry County and 1,030 acres are located in Isle of Wight County.[47]
- The land currently is timberland and agricultural land used to produce corn, soybeans, cotton, and peanuts.[48]

Economic Impact

Applying these inputs to the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 13, in its current use, the proposed Sycamore Cross Solar project site directly supports approximately: 1) 1 job, 2) $0.1 million in wages and benefits, and 3) $0.4 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct impact generates, on average, the total annually supported impact on the counties of Surry and Isle of Wight is approximately: 1) 2 jobs, 2) $0.2 million in wages and benefits, and 3) $0.5 million in economic output.

Table 13: Total Estimated Annual Economic Impact of the Sycamore Cross Solar Project Site on the Counties of Surry and Isle of Wight– Current Use[49]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	1	$111,400	$382,200
2nd Round Indirect and Induced Economic Activity	1	$56,700	$163,800
Total Economic Activity	**2**	**$168,100**	**$546,000**

**Totals may not sum due to rounding.*

[47] Data Source: AES.
[48] Data Source: AES.
[49] Calculations based data from the U.S. Department of Agriculture and IMPLAN Group, LLC for Isle of Wight County, Surry County, and Virginia.

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres would be located in Surry County and 1,030 acres would be located in Isle of Wight County.[50]
- The current assessment value of the affected acreage in Surry County is approximately $0.2 million.[51]
- The current assessment value of the affected acreage in Isle of Wight County is approximately $2.1 million.[52]

Fiscal Impact – Surry County

Table 14 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Surry County in its current use. As the data in Table 14 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $1,530 per year, for a cumulative total of approximately $53,500 over 35 years.

Table 14: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project Site over 35 Years from Real Estate Taxes – Current Use

Estimated Assessed Value of Property – Current Use	$215,300
Surry County Current Real Estate Tax Rate	0.0071
Estimated Annual County Real Estate Tax – Current Use	$1,530
Total Cumulative Revenue over 35 Years	**$53,500**

**Totals may not sum due to rounding.*

Fiscal Impact – Isle of Wight County

Table 15 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Isle of Wight County in its current use. As the data in Table 15 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $14,900 per year, for a cumulative total of approximately $520,000 over 35 years.

[50] Data Source: AES.
[51] Data Source: Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[52] Data Source: Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.

Table 15: Estimated Isle of Wight County Revenue Generated by the Proposed Sycamore Cross Solar Project Site over 35 Years from Real Estate Taxes – Current Use

Estimated Assessed Value of Property – Current Use	$2,092,500
Isle of Wight County Current Real Estate Tax Rate	0.0071
Estimated Annual County Real Estate Tax – Current Use	$14,900
Total Cumulative Revenue over 35 Years	**$520,000**

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

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: Amy M. Ring
Community Development Director

FROM: Gerald H. Gwaltney,
Commissioner of the Revenue

DATE: May 16, 2024

RE: **Sycamore Cross Solar Project**
Conditional Use Permit (CUP-8-23), Third Submittal

I have completed the review of the Sycamore Cross Solar Project Third Submittal. The solar project's initial interconnection request for Sycamore Cross Solar was filed in March 2017. This date is important because it occurs within the period (Jan. 1, 2015 – June 30, 2018) in which all solar equipment related to the application received an 80% exemption. No other category of taxable property in Isle of Wight receives such an exemption.

Below are several deficiencies in their submittal relating to the tax revenue analysis.

- **Real Estate**

  Rollback Taxes – the third submittal incorrectly calculates the rollback taxes. The amount of rollback taxes is overstated because "simple interest" is not applied in Isle of Wight County. This error indicates Sycamore Cross Solar, LLC did not review the County's land use ordinance.

  The study did not provide the worksheet detailing the rollback taxes by year for each parcel subject to the rollback tax, making it impossible to confirm the calculations.

- **Equipment**

  The State Corporation Commission will assess the solar equipment. Table 9 lists the "Depreciated Value of Taxable Capital Investment" as $63,767,270 for years 1 through 8. The study defines the formula used to arrive at the value. This formula includes the "SCC utility assessment ratio for taxation of public utilities in Isle of Wight County." If the 2023 sales ratio was used, then the capital investment taxes are overstated.

  The study did not provide the worksheet detailing the rates used to determine the taxes on the equipment, making it impossible to confirm the calculations.

Please let me know if you have any questions.

Sycamore Cross A and B Solar Projects with Approved Solar Energy Generation Facilities as of 5/21/24

PROJECT	DEVELOPED AREA (PER CUP)	PRIME FARMLAND /SOILS OF STATEWIDE IMPORTANCE*	% OF TOTAL PRIME SOILS (rounded)	LOCATION	% OF TOTAL FARMLAND**	TOTAL MW	APPROVAL DATE
Woodland	180	124	0.10%	Longview	0.22%	20	2015
Solidago	170	170	0.14%	Redhouse	0.21%	20	2018
Ho-Fel	330	315	0.26%	Lees Mill	0.41%	55	2019; Amended 2023
Windsor PV1	630	630	0.52%	Windsor	0.78%	85	2019; Amended in 2021
Cavalier	500	500	0.41%	Hardy	0.62%	240	2021
Nuby Run	20	20	0.02%	Orbit	0.02%	2	2022
Carver	637	297	0.24%	Windsor	0.79% 0.00%	71	Approved 7/23/2023
Prairie Solar	152	152	0.12%	Longview	0.19% 0.00%	20	Approved 8/17/23
Courthouse Solar	18	18	0.01%	Route 258	0.02%	3	Approved 11/16/23
Sycamore Cross A & B (Proposed)	1,030	1,030	0.84%	Ramsey/Mill Swamp/White Hill Trail/Sycamore Cross/Rattlesnake	1.28%	240	Under Review
TOTAL	**3,667**	**3,256**	**2.66%**		**4.57%**	**756**	

Prime soils include Prime Farmland, Prime, If Drained, and Soils of Statewide Importance – 122,296 total acres in County

Total active agricultural lands as of 2022 Census of Agriculture – 80,316 acres

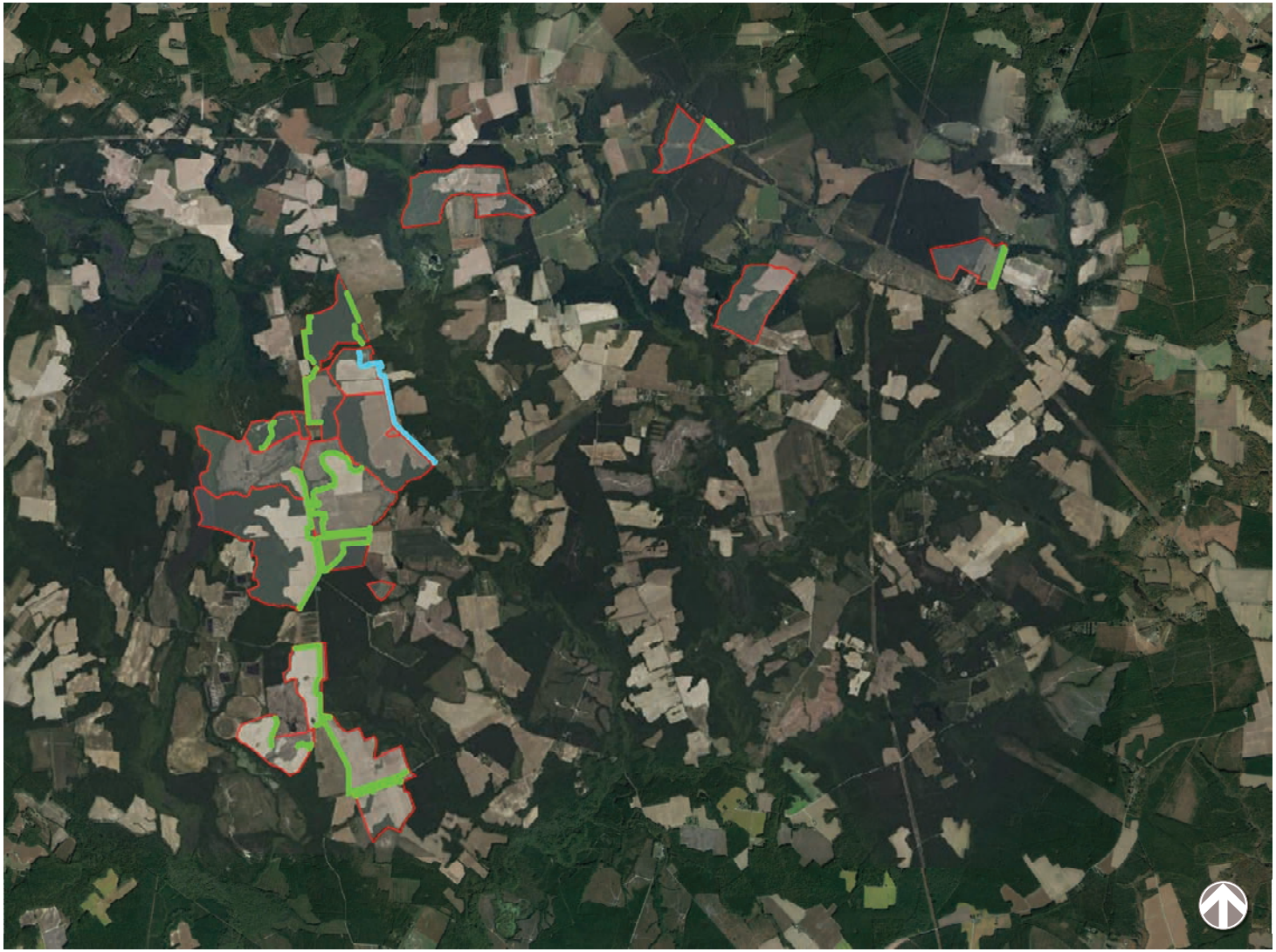
SYCAMORE CROSS SOLAR PROJECT

Isle of Wight and Surry Counties, Virginia

CONCEPTUAL LANDSCAPE

FEBRUARY 2024

LANDSCAPE SCREENING BY ZONE



LEGEND

FRONTAGE ZONE

BUFFER ZONE

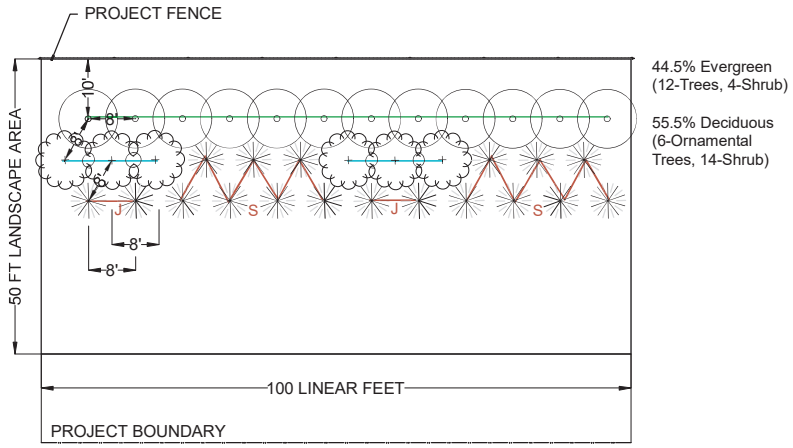
SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE SCREENING - PLANT SCHEMATICS AND CONCEPTUAL PLANT LISTS

FRONTAGE ZONE LANDSCAPE

Apply to landscape screening areaalong public roadways with ROW greater than 50 feet

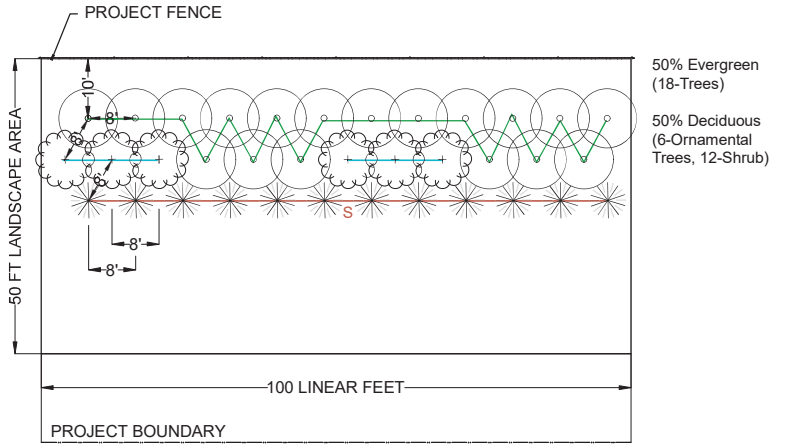


44.5% Evergreen (12-Trees, 4-Shrub)

55.5% Deciduous (6-Ornamental Trees, 14-Shrub)

BUFFER ZONE LANDSCAPE - ABUTTING RESIDENTIAL PARCELS

Apply to Abutting Residential Parcels where the existing vegetation not present



50% Evergreen (18-Trees)

50% Deciduous (6-Ornamental Trees, 12-Shrub)

CONCEPTUAL PLANT LIST

CONCEPT PLANT LIST				
Botanical Name	**Common Name**	**Height at Planting**	**Mature height**	**Mature Spread**
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

J

S

SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

SYCAMORE CROSS SOLAR FACILITY

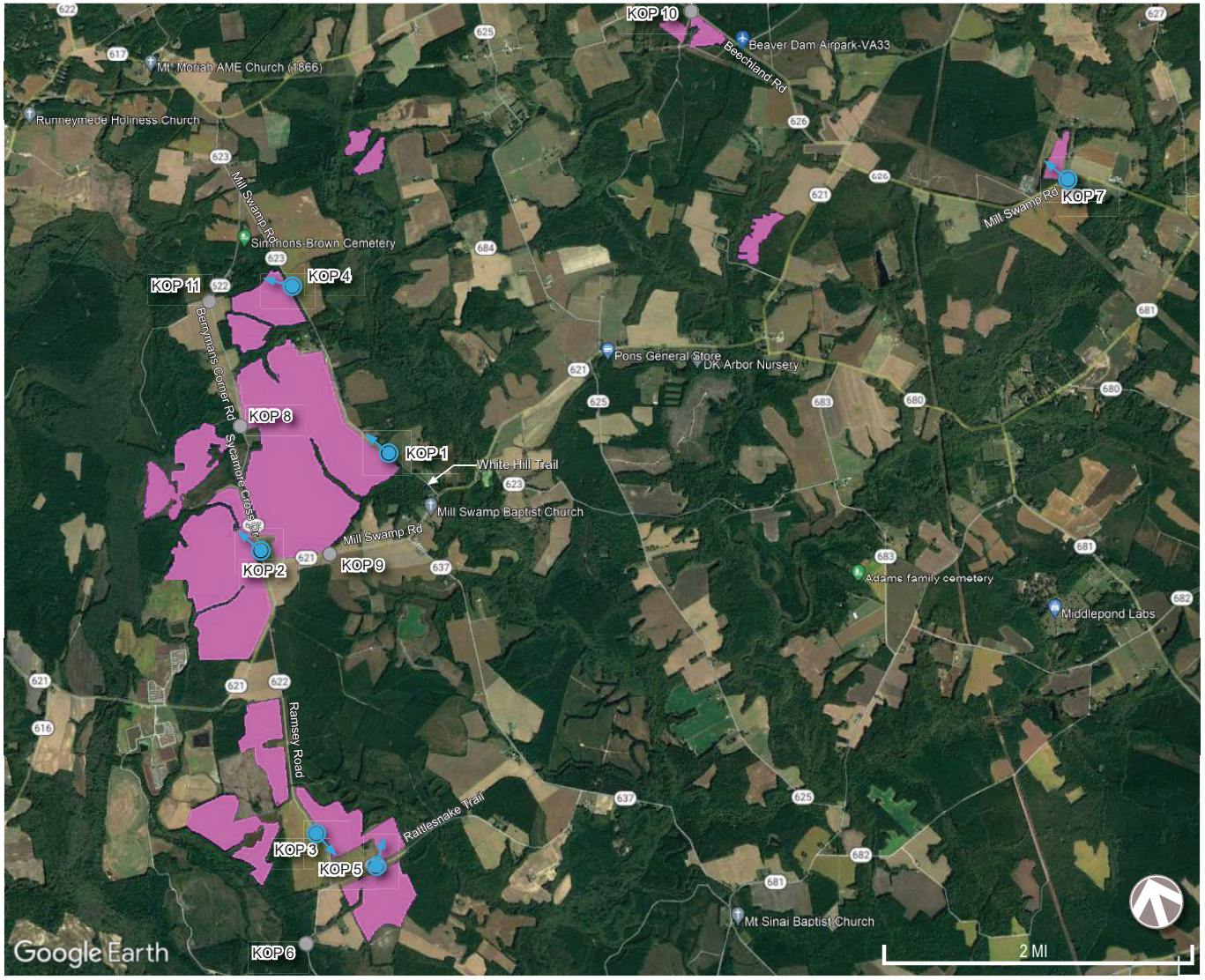
LANDSCAPE SCREENING - PLANT SCHEMATICS AND CONCEPTUAL PLANT LISTS

SYCAMORE CROSS SOLAR PROJECT

Isle of Wight and Surry Counties, Virginia

PHOTO SIMULATIONS

APRIL 2024

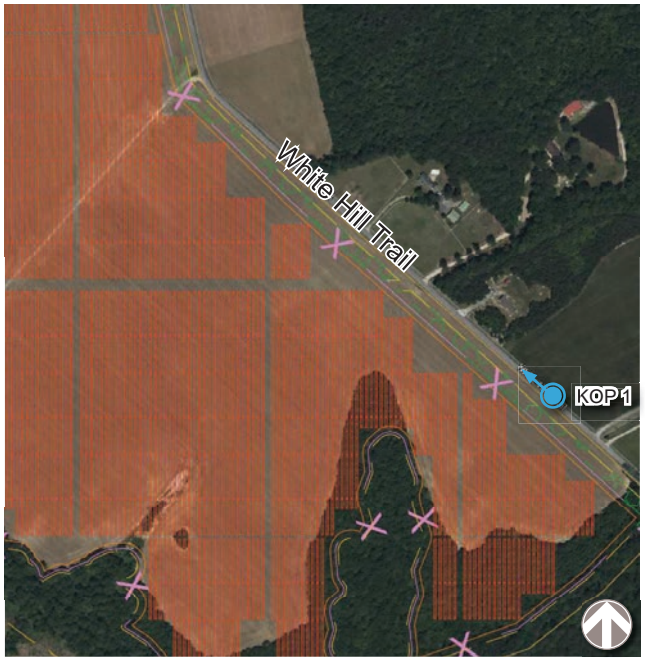


LEGEND

- Photo Simulation / Viewing Direction
- Project Area
- Candidate KOP Location

SYCAMORE CROSS SOLAR FACILITY

KEY OBSERVATION POINT LOCATION MAP



KOP 1:
WHITE HILL TRAIL



KOP 2:
SYCAMORE CROSS DRIVE



KOP 3:
RAMSEY RD

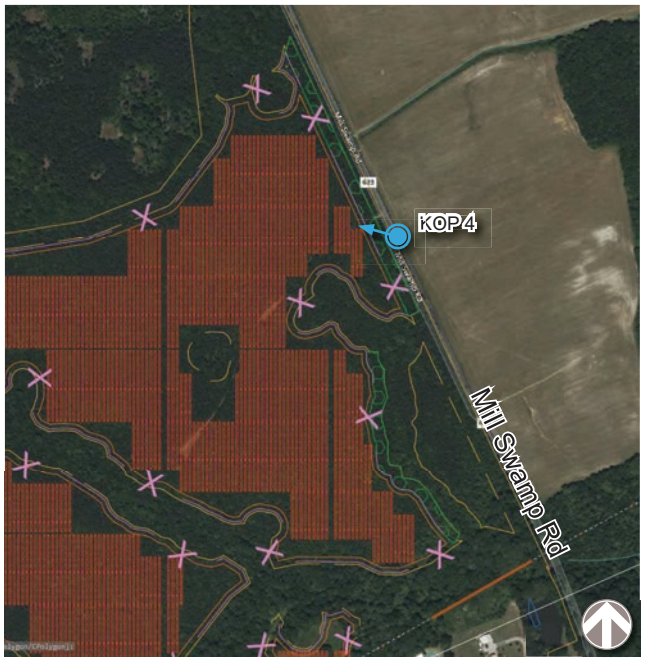
LEGEND

- PV Area
- Panels
- Fenceline
- Vegetative Buffer Area

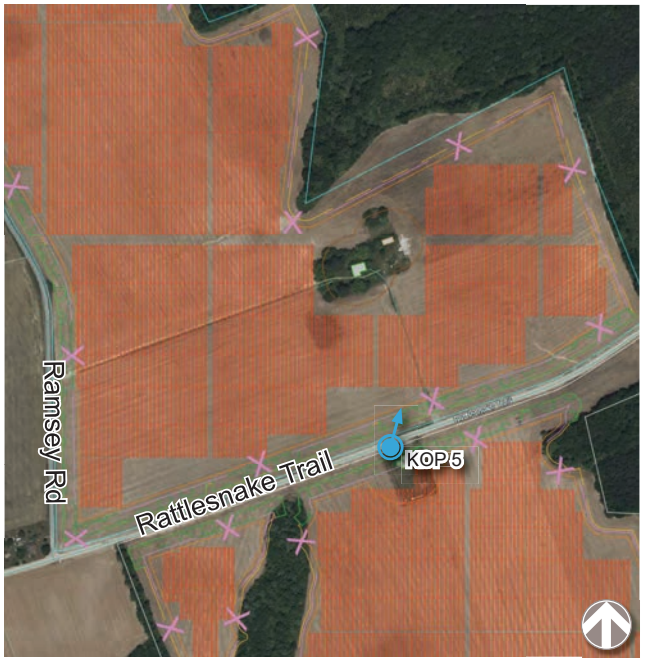
PHOTO LOCATION
& VIEWING DIRECTION

SYCAMORE CROSS SOLAR FACILITY

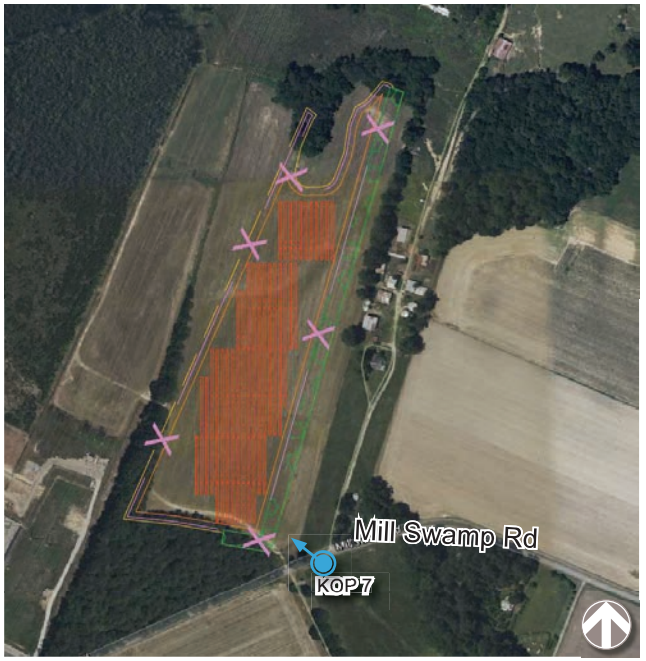
LANDSCAPE BUFFER VISUALIZATION - PHOTO LOCATIONS



KOP 4:
MILL SWAMP ROAD



KOP 5:
RATTLESNAKE TRAIL



KOP 7:
MILL SWAMP ROAD

LEGEND

- PV Area
- Panels
- Fenceline
- Vegetative Buffer Area

PHOTO LOCATION
& VIEWING DIRECTION

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - PHOTO LOCATIONS

KOP 1:
WHITE HILL TRAIL

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE TO PROJECT:	155 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 2:
SYCAMORE CROSS DRIVE

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE TO PROJECT:	175 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 3:
RAMSEY ROAD

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
LATITIUDE:	36.959386°
LONGITUDE:	-76.829939°
DISTANCE TO PROJECT:	145 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

DISCLAIMER: The photographs used as the base for these simulations were collected during winter months where existing deciduous trees are pictured in the leaf-off condition. The landscape screening simulated shows full leaf-on conditions for all vegetation used for screening. While this does not match existing conditions, it demonstrates the maximum extent of screening proposed.

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - BEFORE AND AFTER BUFFER INSTALLATION

KOP 4:
MILL SWAMP ROAD

PHOTOGRAPH INFORMATION

TIME:	11:35 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.011385°
LONGITUDE:	-76.827799°
DISTANCE TO PROJECT:	190 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING

KOP 5:
RATTLESNAKE TRAIL

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHEAST
LATITIUDE:	36.955797°
LONGITUDE:	-76.823667°
DISTANCE TO PROJECT:	400 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 7:
MILL SWAMP ROAD

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.014834°
LONGITUDE:	-76.733937°
DISTANCE TO PROJECT:	270 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

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SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - BEFORE AND AFTER BUFFER INSTALLATION

SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE FROM PROJECT:	155 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
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SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE FROM PROJECT:	175 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
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SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
LATITIUDE:	36.959386°
LONGITUDE:	-76.829939°
DISTANCE FROM PROJECT:	145 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
LATITIUDE:	36.959386°
LONGITUDE:	-76.829939°
DISTANCE FROM PROJECT:	145 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
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LONGITUDE:	-76.829939°
DISTANCE FROM PROJECT:	145 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 4: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:35 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	37.011385°
LONGITUDE:	-76.827799°
DISTANCE FROM PROJECT:	190 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 4: Mill Swamp Rd

PHOTO SIMULATION



PROJECT VIEWS ARE OBSTRUCTED BY EXISTING VEGETATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:35 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	37.011385°
LONGITUDE:	-76.827799°
DISTANCE FROM PROJECT:	190 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHEAST
LATITIUDE:	36.955797°
LONGITUDE:	-76.823667°
DISTANCE FROM PROJECT:	400 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHEAST
LATITIUDE:	36.955797°
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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
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WEATHER CONDITION:	PARTLY CLOUDY
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SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	37.014834°
LONGITUDE:	-76.733937°
DISTANCE FROM PROJECT:	270 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
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SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
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ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE CONDITIONAL USE PERMIT CUP-8-23 TO ESTABLISH A MAJOR UTILITY SERVICE, SPECIFICALLY A 214 MW UTILITY-SCALE SOLAR ENERGY GENERATION FACILITY, ON APPROXIMATELY 1,795 ACRES LOCATED ON MILL SWAMP ROAD (RTE. 621) WITH TAX PARCEL NUMBERS 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, AND 27-01-004 IN THE RURAL AGRICULTURAL CONSERVATION ZONING DISTRICT AND TO WITHDRAW APPROXIMATELY 860 ACRES THAT ARE PART OF TAX PARCEL NUMBERS 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 AND 17-01-011 FROM THE MOONLIGHT AGRICULTURAL AND FORESTAL DISTRICT

WHEREAS, Sycamore Cross Solar, LLC, applicant, has requested the issuance of a conditional use permit for a certain portion or all of the property with tax parcel numbers 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, and 27-01-004 for a 214 MW utility scale solar energy generation facility which land is depicted on Exhibit "A"; and,

WHEREAS, the applicant has also requested the withdrawal of 860 acres on part of tax map parcels 09-01-001, 16-01-003, 16-01-008, 16-01-009, 17-01-003C, 27-01-003 and 17-01-011 from the Moonlight Agricultural and Forestal District, which land is also depicted on Exhibit "A"; 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 of denial of the application at their May 28, 2024, regular meeting;

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," "Property Map", and Exhibit "B" 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 a conditional use permit (CUP-8-23) and the withdrawal of enrolled land in the Moonlight Agricultural and Forestal District, as submitted or modified with conditions herein, the expressed purpose of which is to permit a major utility service, specifically a 214 MW utility-scale solar energy generation 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property, subject to the attached conditions in Exhibit "B" and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a 214 MW major utility service solar energy generation 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

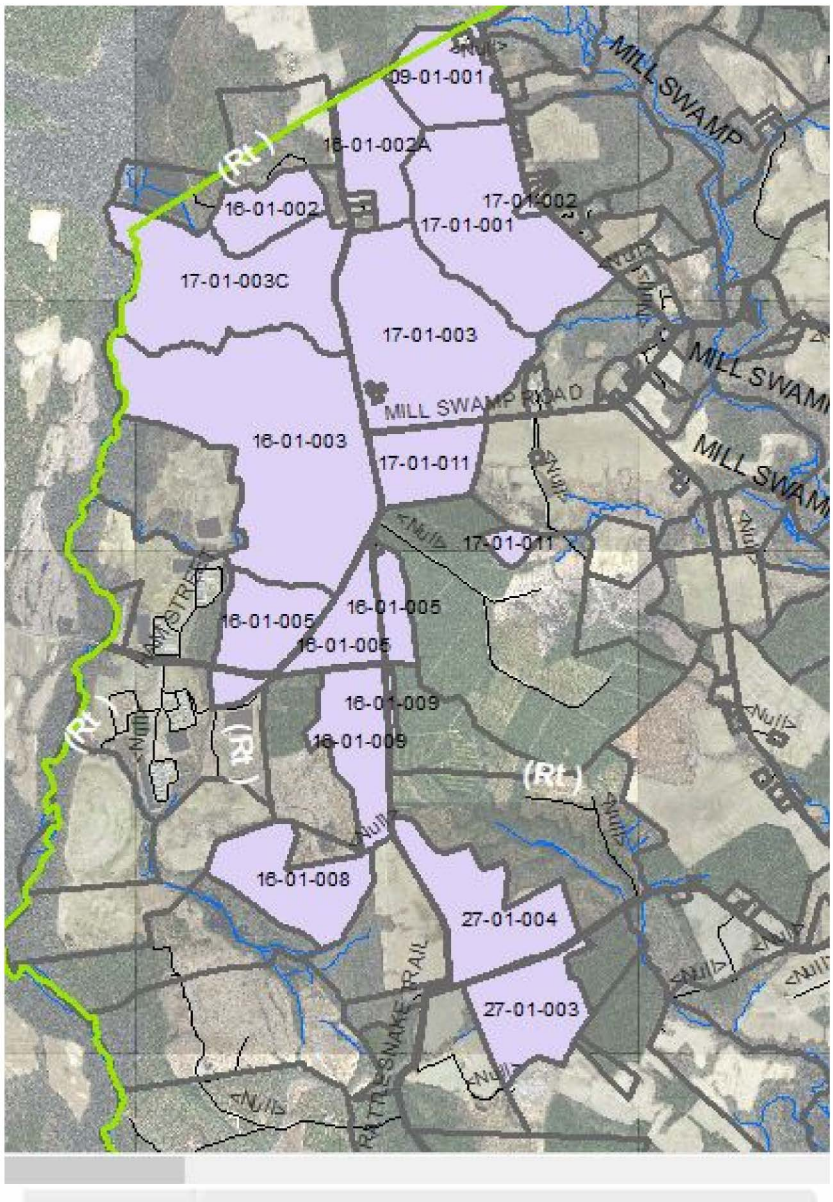
09-01-001
MILL SWAMP
16-01-002A
(Rt.)
16-01-002
17-01-002
17-01-001
17-01-003C
17-01-003
MILL SWAMP ROAD
16-01-003
17-01-011
17-01-011
16-01-005
16-01-005
16-01-005
16-01-009
16-01-009
(Rt.)
16-01-008
27-01-004
27-01-003
RATTLESNAKE TRAIL

EXHIBIT B

CUP-8-23
SYCAMORE CROSS A CONDITIONS OF APPROVAL

1. Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2. The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.
3. No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended.
4. The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.
5. The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6. A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7. The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility.
8. Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times.
9. Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10. Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project.
11. As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12. The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil

conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13. Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

REPORT >

Phase I Cultural Resource Survey of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

LOCATION > Isle of Wight and Surry Counties, Virginia

DATE > July 2024

PREPARED FOR >
AES Clean Energy



PREPARED BY >
Dutton + Associates, LLC

VDHR FILE NO. >
2023-4691

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I CULTURAL RESOURCE SURVEY OF THE ±817.46 HECTARE (2,020 ACRE) SYCAMORE CROSS SOLAR PROJECT AREA

ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
AES CLEAN ENERGY
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JULY 2024

ABSTRACT

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area (D+A July 2023).

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. As part of the project, a series of solar arrays will be built throughout the project area.

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). The surveyed resources consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.

Each of the four NRHP-eligible resources was subject to an assessment of impacts brought about by the project. Of the eligible resources, three are located directly within the study area, however, will be excluded by the project development plan and therefore will not be directly impacted by the project. With regards to indirect, visual impacts, field inspection revealed that the generally open nature of the landscape within and bordering the NRHP-eligible properties permits views of the project area that range from partially screened to nearly unobstructed. To minimize the potential for visibility of the project, a variety of measures have been employed including setbacks from roadways and property lines, and supplemental landscape buffers. ***With these measures, it is D+A's recommendation that visibility of the project from one resource, the Wilson Hollemon House (VDHR# 046-0068) will be screened and therefore the Sycamore Cross Solar Project will have no more than a minimal impact to it. With regards to the remaining three resources, the setbacks and landscape screening will reduce visibility of the project but some portions will remain visible. As such, it is D+A's recommendation that the Sycamore Cross Solar Project will result in a moderate impact to the Sycamore Cross Post Office (VDHR# 046-5149), the house at 11356 Sycamore Cross Drive (VDHR# 046-5150), and the Betts Farm (VDHR# 046-5811)****.*

Summary of NRHP-eligible architectural resources within the project survey area and recommendations of project impacts.

VDHR ID#	*Resource Name/Address*	*NRHP Eligibility*	*Proximity to Project*	*Project Impact*
046-0068	*Wilson Hollemon House, 5499 Mill Swamp Road*	*D+A: Potentially Eligible*	*Adjacent to Project*	*Minimal Impact*
046-5149	*Sycamore Cross Post Office, Mill Swamp Road*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*
046-5150	*House, 11356 Sycamore Cross Drive*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*
046-5811	*Betts Farm, 5191 Mill Swamp Road*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*

One (1) cemetery was identified within testing area B5 of the project area, and is an independent resource, not associated with any standing architectural resource. ***Although the cemetery represents a typical small family cemetery and is considered not eligible for listing in the NRHP, the visual limits of the cemetery should be avoided with a 100-foot avoidance zone, or be subject to further delineation, to ensure protection during and after project construction.***

Summary of Cemetery identified within the project area with proximity to project area and recommended avoidance measures.

Cemetery #	*Name, Location*	*NRHP Status*	*Proximity to Project Area*	*Avoidance/Impacts*
046-5816	*Holleman Cemetery, White Hill Trail*	*D+A: Not Eligible*	*Within Project Area*	*100-foot avoidance or further delineation*

Archaeological investigations followed an approved testing model that identified areas of high, moderate, and low archaeological potential. The testing strategy involved a combination of systematic pedestrian survey and shovel testing. A total of 1,175 shovel test pits were excavated throughout the project area. The archaeological survey resulted in the identification of 20 newly recorded sites and one previously recorded cemetery.

Of these sites, six are domestic sites associated with standing architectural resources, and fourteen are mid-nineteenth to early-twentieth century sites with no features and a light archaeological

signature. Most of these sites offer little new or significant archaeological data and are site types that are well represented in the region; ***D+A recommends these 18 sites not eligible for inclusion in the NRHP, and no additional work is required.*** *However, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and as such,* ***D+A recommends avoidance with a 50-foot buffer or further investigation of these sites.***

VDHR ID#	*Site Type*	*Tine Period*	*NRHP Eligibility*	*Treatment/ Project Impacts*
44IW0405	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0406	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0407	***Farmstead***	***Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II***	***Potentially Eligible***	***Avoidance with 50-foot buffer/ Phase II Evaluation***
44IW0408	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0409	*Farmstead*	*Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0410	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0411	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0412	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0413	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0414	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0415	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0416	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0417	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0418	*Farmstead*	*Reconstruction and Growth*	*Not Eligible*	*No Impact*
44IW0419	*Farmstead*	*Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0420	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0421	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0422	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0423	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0424	***Single Dwelling***	***Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II***	***Further Study***	***Avoidance with 50-foot buffer / Further Study***

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1. INTRODUCTION

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-hectare (2,020-acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated *Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area* (D+A July 2023).

All research, fieldwork, and recording conducted as part of these investigations conforms 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) and the Virginia Department of Environmental Quality's (DEQ) *Solar Permit by Rule Guidance* (2012) for complying with the provisions of §10.1-1197.6 B 7 of the *Code of Virginia*. Principal investigators meet the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. Robert J. Taylor, Jr. M.A. served as the Principal Investigator, oversaw architectural resource investigations, and coauthored the report. Hope Smith, Ph.D., oversaw archaeological investigations and coauthored the report. Research Historian Dara Friedberg M.S. conducted background research and prepared the historic context. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's office in Midlothian, Virginia.

PROJECT DESCRIPTION

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail (Figure 1-1). The project area tracts are currently a mix of open agricultural field and woodland, including planted timber and native deciduous forest (1-2).

As part of the project, a series of solar arrays will be built throughout the project area within a project fenceline (Figure 1-3).

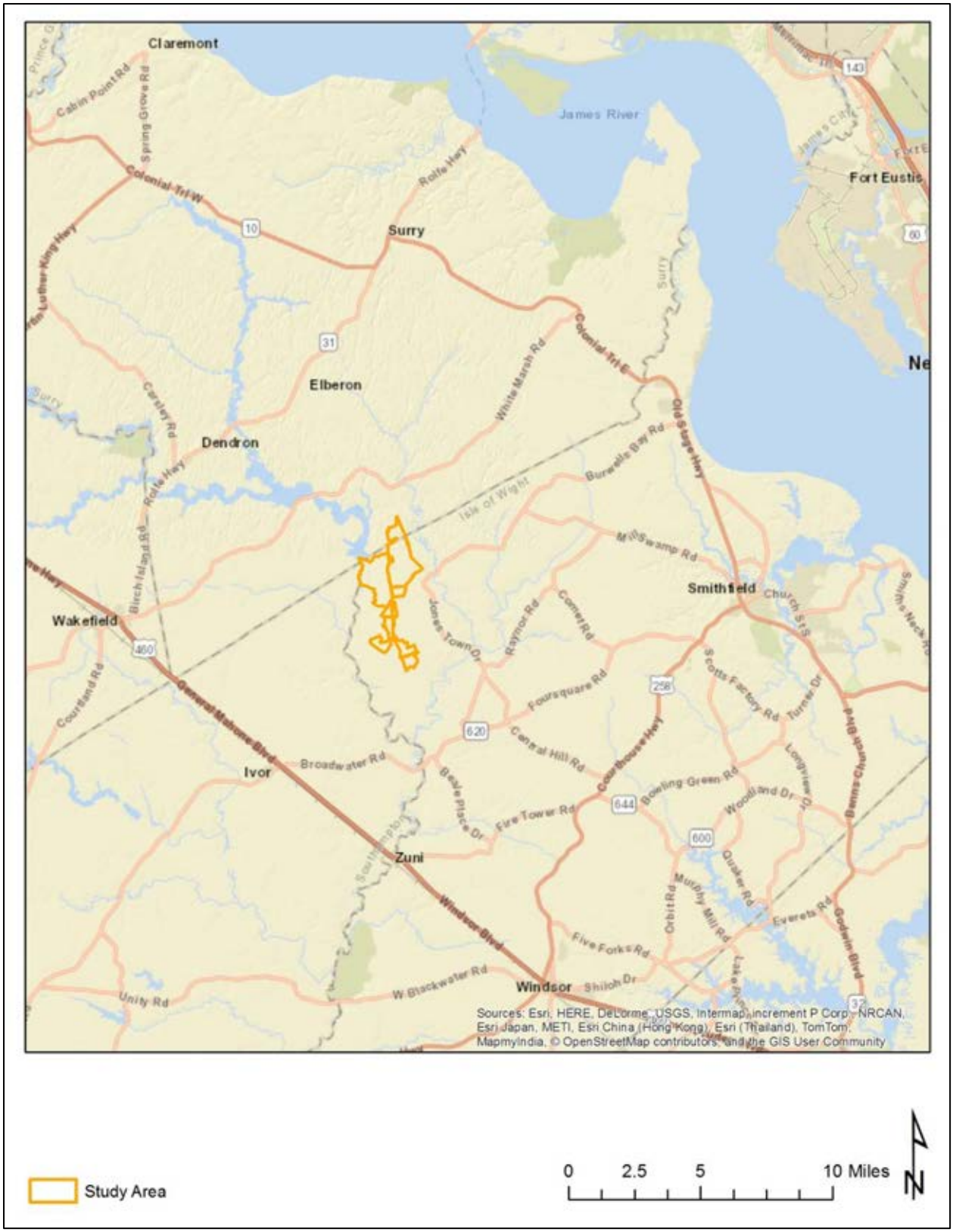

Figure 1-1: General location of the project area. Source: USGS

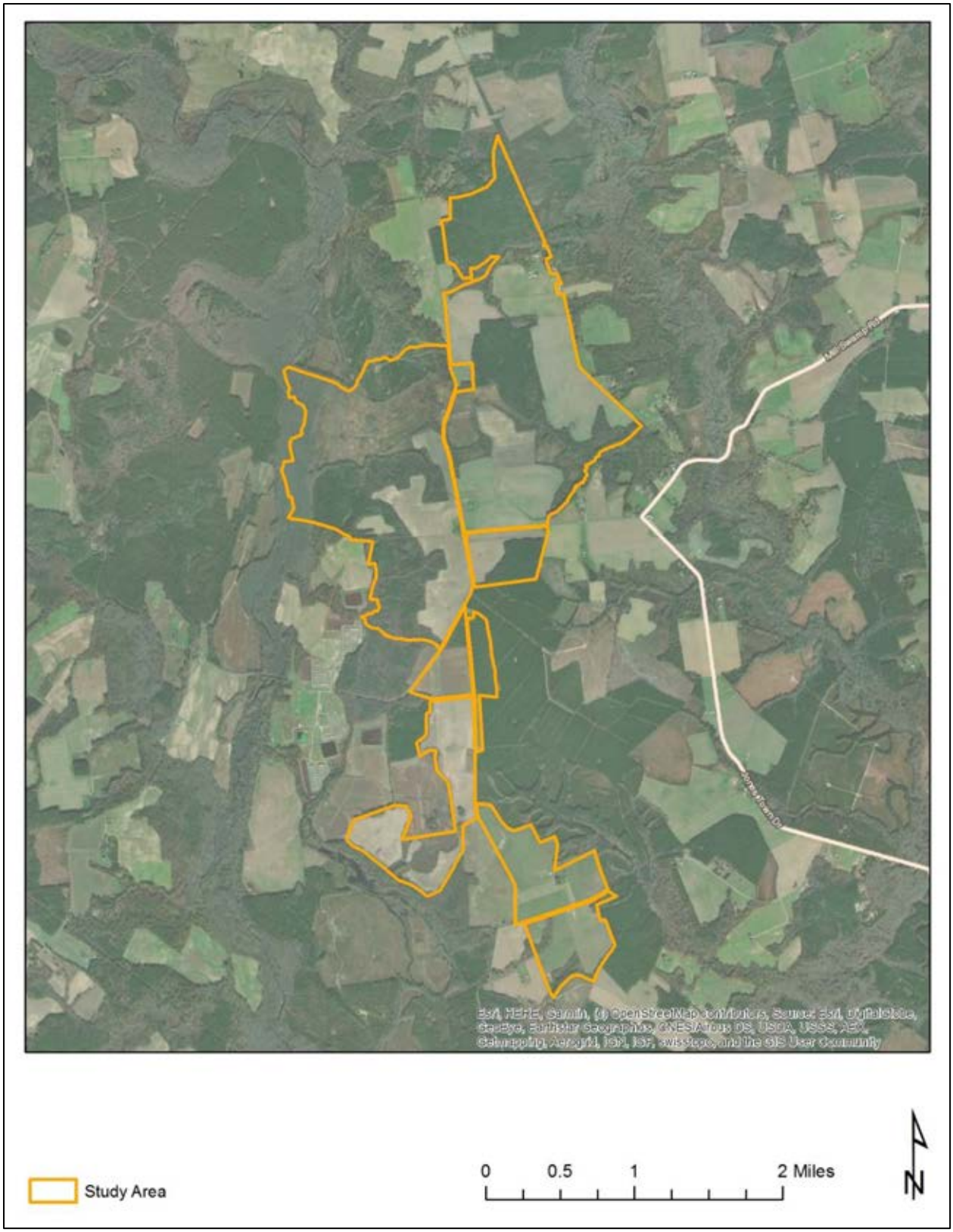

Figure 1-2: Aerial view of the project area.

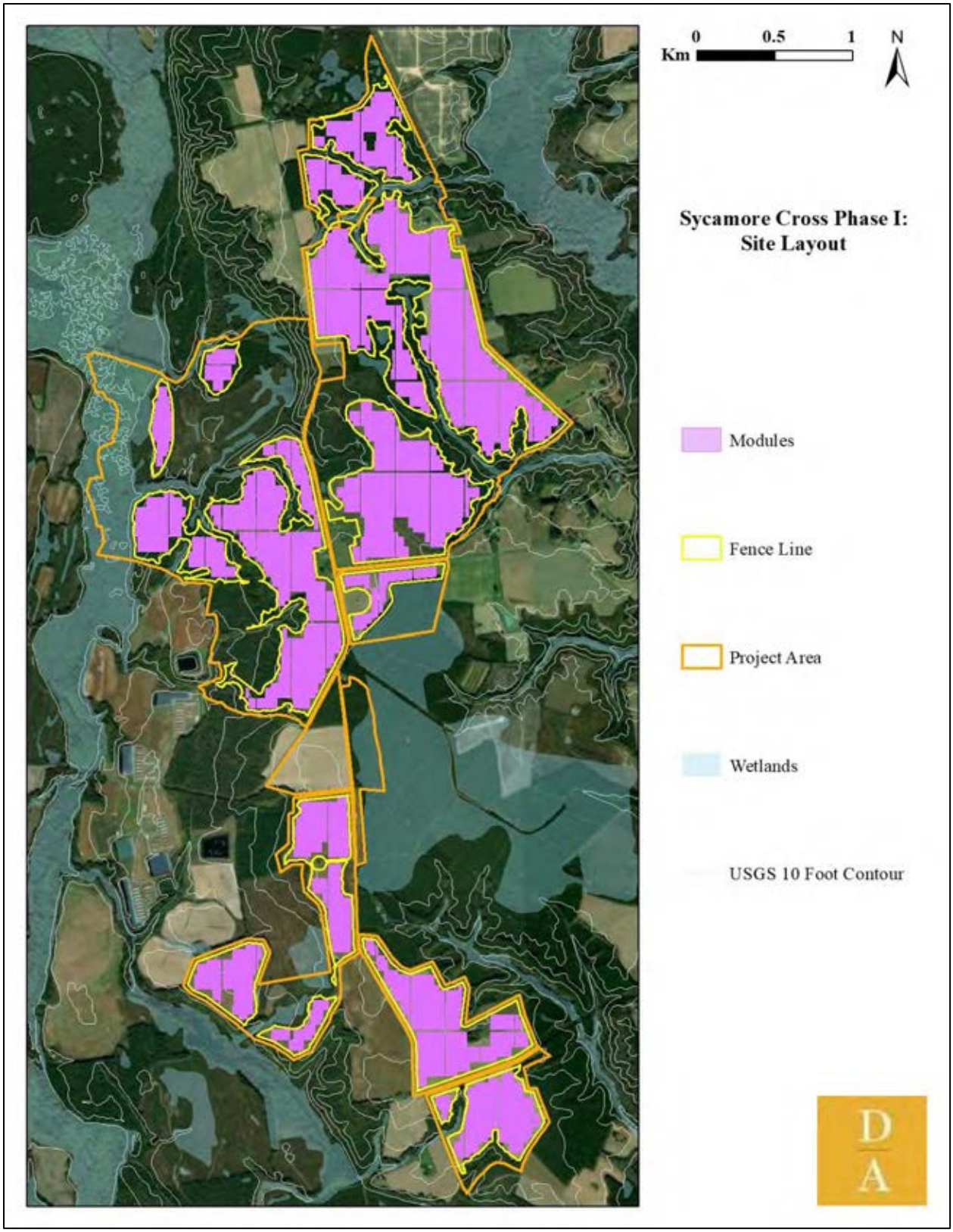

Figure 1-3: Aerial view of the project area showing proposed fencelines and array layout.

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 archaeological survey area included the entire limits of the study area, where arrays, substations, workspaces, access roads, and/or any other areas where ground-disturbing activities directly related to the project may take place. The survey strategy was further guided by, and conducted in accordance with, the testing strategy outlined in the *Phase IA Cultural Resource Assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia* (D+A 2023) and subsequent coordination with the VDHR (DHR File No. 2023-4691).

The architectural survey area includes the project area properties, 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 project according to the VDHR guidance for Solar Energy Projects is one-half mile, unless topography, vegetation, or other aspects of the landscape warrant a more refined distance. In the case of the Sycamore Cross Solar Project, the half-mile buffer was deemed appropriate and utilized. A map of the defined survey area for archaeological and architectural resources is illustrated in Figure 2-1.

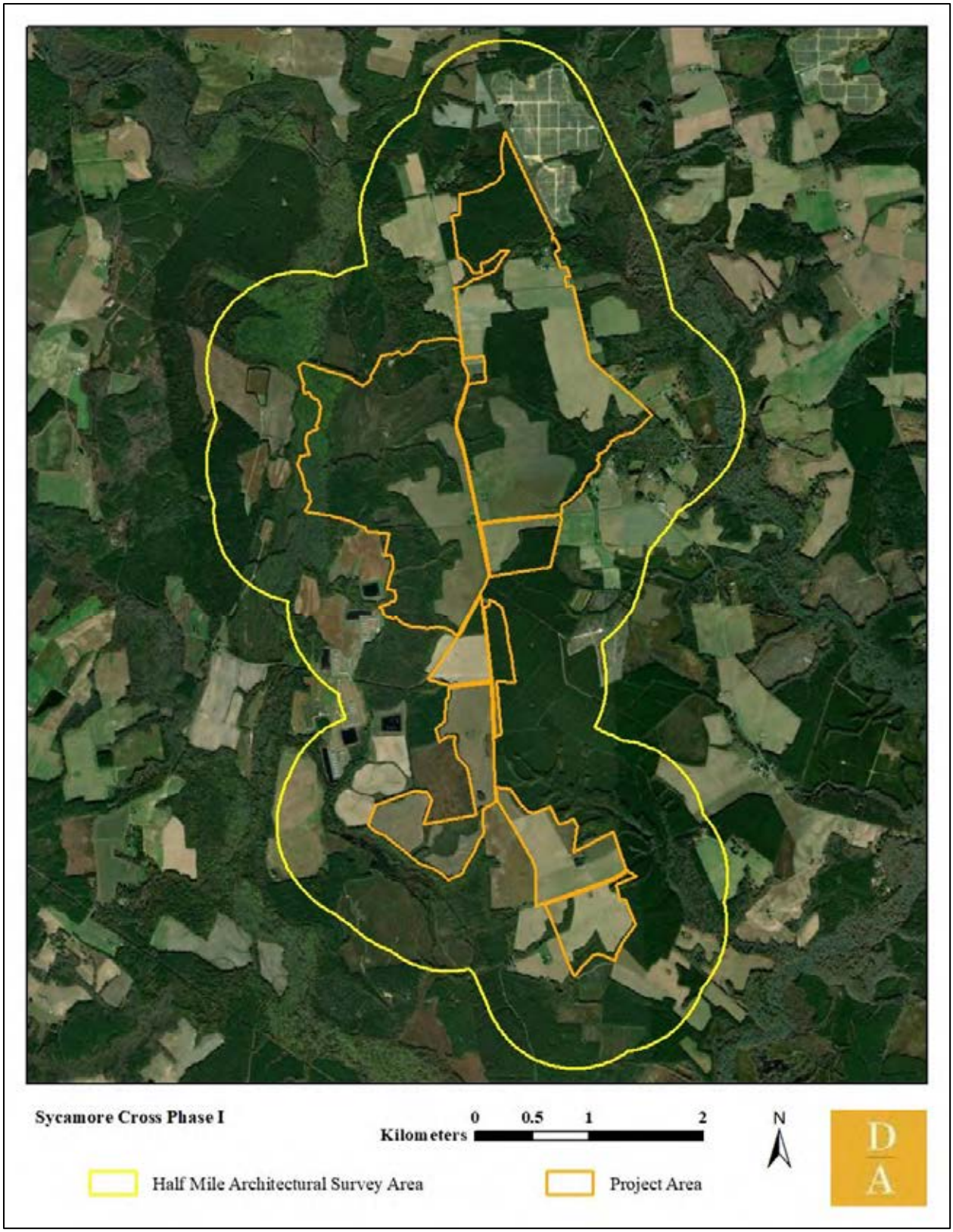

Figure 2-1: Sycamore Cross Project Area and Survey Areas.

3. RESEARCH DESIGN

The Phase I cultural resource survey of the Sycamore Cross Solar Project was undertaken in order to identify cultural resources within the project area, evaluate those resources for NRHP eligibility, and assess potential project impacts to NRHP-eligible resources. The Phase I survey methodology is summarized below and was further guided by the testing strategy outlined in the *Phase IA Cultural Resource Assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia* (D+A 2023).

ARCHIVAL RESEARCH

In December 2023, D+A conducted background research with the goal of identifying all previously recorded historic properties located within one mile 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.

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 survey 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 the Isle of Wight and Surry counties was prepared summarizing general historical trends, settlement patterns, and development

with a focus on the vicinity of the study area. Further analysis and context development were undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

Archaeological Resources

Archaeological testing was conducted in accordance with the model approved by the VDHR in the Phase IA probability map. At the outset of the Phase I field investigations, a limited pedestrian survey was conducted to document existing conditions and to note any observed changes since the Phase IA was completed.

Following the pedestrian survey, systematic shovel testing was conducted throughout portions of the project deemed to have the potential for intact archaeological deposits. Shovel tests were excavated at a maximum of 15-meter (50-foot) intervals along transects spaced 15 meters (50 feet) apart with shovel test pit placement avoiding 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 0.30 meters (1 foot) 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.

Architectural Resources

The background research conducted in support of the Phase I reconnaissance survey was designed to identify architectural 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 1974 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 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.

Assessment of Project Impacts

Following identification and field inspection of historic properties, D+A assessed each resource for potential impacts brought about by the proposed project. Assessment of impacts was conducted through a combination of field inspection, digital photography, and review of topography and aerial photography. When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing in the NRHP and whether the project had the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed project would introduce new visual elements into a property's setting or viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were assessed according to DHR's *Guidelines for Assessing Impacts of. Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* and characterized as **severe** (fully visible and incompatible with character-defining viewshed or setting), **moderate** (partially visible and incompatible with character-defining viewshed or setting), **minimal** (partially visible, but screened by intervening vegetation and/or not out of character with existing viewscape) or **no impact** (not visible).

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each identified architectural 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.

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).

4. ARCHIVES SEARCH

This section includes a summary of all the cultural resource management events that have taken place within the study area registered at VDHR through December 2023. It also lists all previously identified architectural resources and archaeological sites located within the project area, as well as within one mile of the study area.

PREVIOUS SURVEYS RELEVANT TO THE STUDY AREA

VCRIS reveals that three Phase I cultural resource surveys have been conducted within one mile of the project area, one of which included portions of the project area (Table 4-1 and Figure 4-1). These surveys are archaeological in nature, although some include architectural resource investigations as well. The three surveys were conducted as part of assorted utility and infrastructure projects.

Table 4-1: Previously conducted Phase I surveys within one mile of the project area. Orange highlight denotes survey including portions of the study area.

Report Number	Survey Title	Author/ Affiliation	Year	VDHR Review File
IW-105	Phase I Cultural Resources Survey for the Align RNG Virginia – Waverly Renewable Natural Gas Project, Isle of Wight County, Virginia	TRC	2022	2021-0097
SY-079	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	DUTTON	2020	2020-0521
VA-176	Phase I Archaeological Survey, Virginia Reliability Project, Cities of Chesapeake and Suffolk, and Greensville, Isle of Wight, Prince George, Southampton, Surry, and Sussex Counties, Virginia	ERM	2022	2021-0026

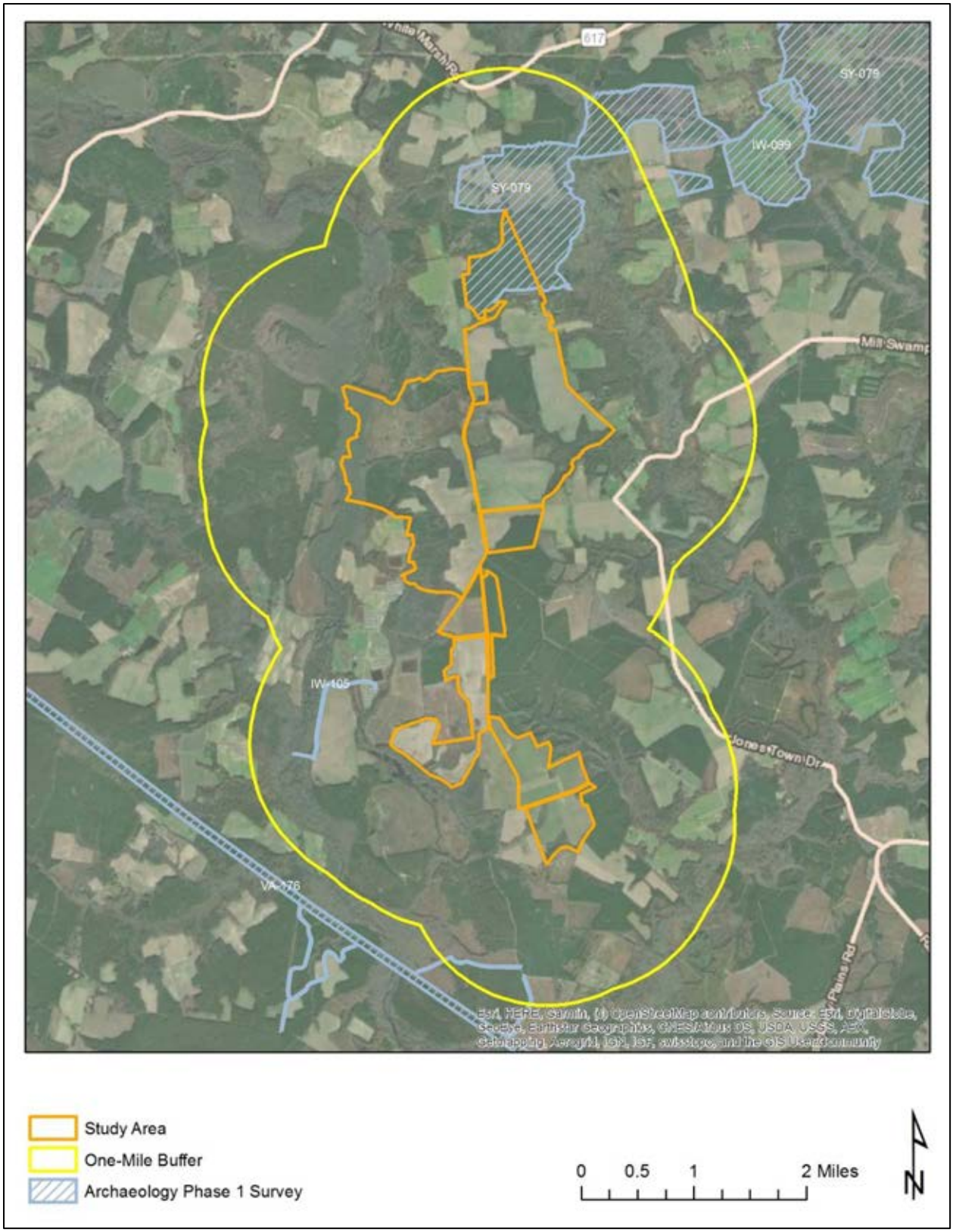

Figure 4-1: Previous Phase I surveys conducted within one mile of the project area Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are ten (10) previously recorded archaeological sites located within one mile of the project area, two of which are located within the project area (Table 4-2 and Figure 4-2). The sites within one mile include prehistoric lithic scatters and camps; as well as historic period domestic sites and refuse scatters. Of the sites within one mile, eight (8) have been determined not eligible and two (2) have not been formally evaluated by the VDHR. Of the two sites within the project area, both are historic period artifact scatters that have been determined not eligible for listing in the NRHP.

Table 4-2: Table detailing all archaeological resources within one mile of the project area. Orange highlight denotes site is within the limits of the project area.

VDHR #	Site Type	Cultural Designation	Temporal Association	NRHP Status
44IW0327	Camp	Native American	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E)	Not Evaluated
44IW0336	Lithic scatter	Native American	Pre-Contact	DHR Staff: Not Eligible
44SY0128	Dwelling, single	Indeterminate	Historic/Unknown	Not Evaluated
44SY0316	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0317	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0318	Dwelling, single	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0319	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0320	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0321	Outbuilding	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0322	Artifact scatter, Lithic scatter	Indeterminate	Pre-Contact, Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible

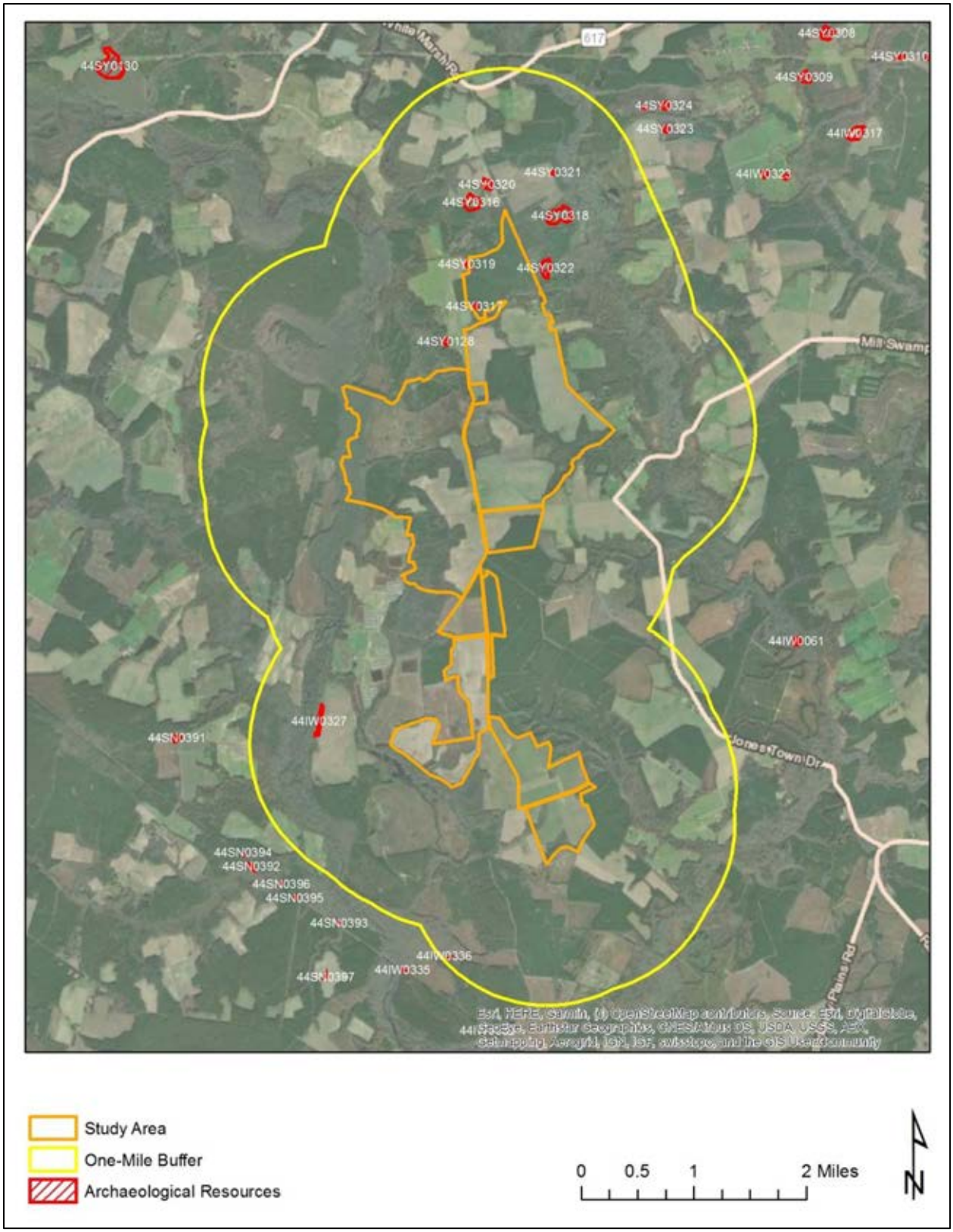

Figure 4-2: Previously recorded archaeological sites located within one mile of the project area. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

There are thirty-two (32) previously recorded architectural resources located within one mile of the project area, nine (9) of which are located within the project area (Table 4-3 and Figure 4-3). The resources within one mile include single-family homes from the mid-eighteenth to mid-twentieth century, a commercial building from the turn-of-the-twentieth century, a church from the early-twentieth century, and a family cemetery from the early-twentieth century. Thirteen of the resources have been determined not eligible for listing in the NRHP by the VDHR and the rest have not been formally evaluated. Of the nine resources within the project area, nine are dwellings with four from the early-nineteenth century, four from the late-nineteenth century, and one from the early-twentieth century; and one is a late-nineteenth century commercial building. One late-nineteenth and one early-twentieth century dwelling have been determined not eligible for listing in the NRHP and the rest have not been formally evaluated.

Table 4-3: Previously identified architectural resources located within one mile of the project area. Orange highlight denotes resource is located within the project area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-0029	House, Route 622 (Function/Location)	Single Dwelling	c.1800	Not Evaluated
046-0030	Betts House (Historic)	Single Dwelling	c.1802	Not Evaluated
046-0032	Dudley House and Outbuildings (Historic)	Single Dwelling	c.1820	Not Evaluated
046-0055	Tenant House, Sycamore Crossroads (Historic/Current)	Secondary Dwelling	c.1800	Not Evaluated
046-0056	Grays' Brick House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-0057	Brick House (Descriptive)	Single Dwelling	c.1825	Not Evaluated
046-0068	Wilson Hollemon House, Mill Swamp Rd (Rt 621) (Historic/Location)	Single Dwelling	c.1830	Not Evaluated
046-5147	Farmhouse, 14537 Rattlesnake Trail (Function/Location)	Single Dwelling	1850	Not Evaluated
046-5148	Farmhouse, 13407 Ramsey Road (Function/Location)	Single Dwelling	1880	Not Evaluated
046-5149	Store, Intersection of Mill Swamp Road and Sycamore Cross Drive (Function/Location)	Commercial Building	1899	Not Evaluated
046-5150	Farmhouse, 11356 Proctors Bridge Road (Function/Location)	Single Dwelling	1899	Not Evaluated
046-5151	Mill Swamp Baptist Church & Cemetery (Historic/Current)	Church/Chapel	1928	Not Evaluated
046-5152	Store, 6159 Jones Town Road (Function/Location)	Service Station	c.1930	Not Evaluated
046-5234	William Gray House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-5260	House, 6330 Mill Swamp Road (Function/Location), Mill Swamp Baptist Church Parsonnage (Historic)	Single Dwelling	c.1900	Not Evaluated
046-5550	Dwelling, 10126 White Hill Trail (Function/Location)	Single Dwelling	1890	DHR Staff: Not Eligible
046-5551	Dwelling, 10106 White Hill Trail (Function/Location)	Single Dwelling	1944	DHR Staff: Not Eligible
046-5552	Dwelling, 10088 White Hill Trail (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
087-0003	Binford House (Historic)	Single Dwelling	c.1750	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
087-5328	Brantley Home (Historic), Pretlow Farm (Historic)	Single Dwelling	c.1900	Not Evaluated
087-5509	1760 Henley Pretlow House (Historic), Captain Pretlow House (Historic), House 4071 Proctor's Bridge Road (Function/Location)	Single Dwelling	1760	Not Evaluated
090-0051	Stratman House (Historic/Current)	Single Dwelling	c.1750	Not Evaluated
090-5160	Dwelling, 9091 White Marsh Road (Function/Location)	Single Dwelling	1905	DHR Staff: Not Eligible
090-5161	Dwelling, 9100 White Marsh Road (Function/Location)	Single Dwelling	1949	DHR Staff: Not Eligible
090-5162	Dwelling, 274 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1890	DHR Staff: Not Eligible
090-5163	Dwelling, 337 Berrymans Corner Road (Function/Location)	Single Dwelling	1942	DHR Staff: Not Eligible
090-5164	Dwelling, 285 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1900	DHR Staff: Not Eligible
090-5165	Simmons and Brown Cemetery (Current Name)	Cemetery	c.1900	DHR Staff: Not Eligible
090-5166	Dwelling, 1122 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
090-5167	Dwelling, 1097 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1965	DHR Staff: Not Eligible
090-5168	Dwelling, 1676 Berrymans Corner Road (Function/Location)	Single Dwelling	1870	DHR Staff: Not Eligible
090-5174	House, Berrymans Corner Road (Function/Location)	Single Dwelling	c.1920	DHR Staff: Not Eligible

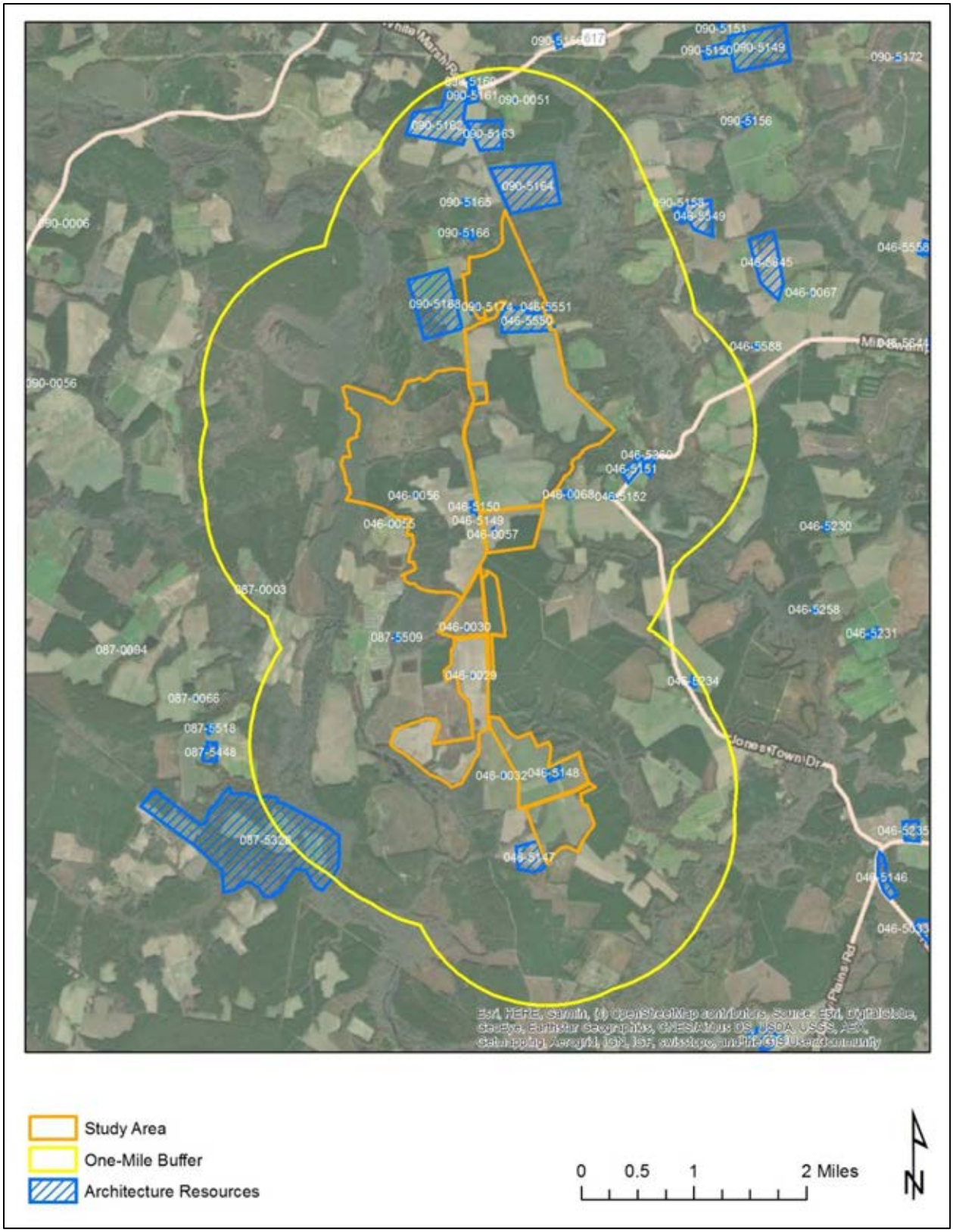

Figure 4-3: Previously recorded architectural resources within one mile of the project area. Source: V-CRIS

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5. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Sycamore Cross Solar project area consists of ±817.46 hectares (2,020 acres) of land divided into multiple contiguous and discontiguous parcels. The project area is located along the border of Isle of Wight and Surry counties within a primarily rural area of the Coastal Plain of Southside Virginia. The landscape within and bordering the project area is a mix of cultivated agricultural field, planted timber stands, and native woodland, particularly bordering the numerous drainages and swamps that dissect the area (Figure 5-1).

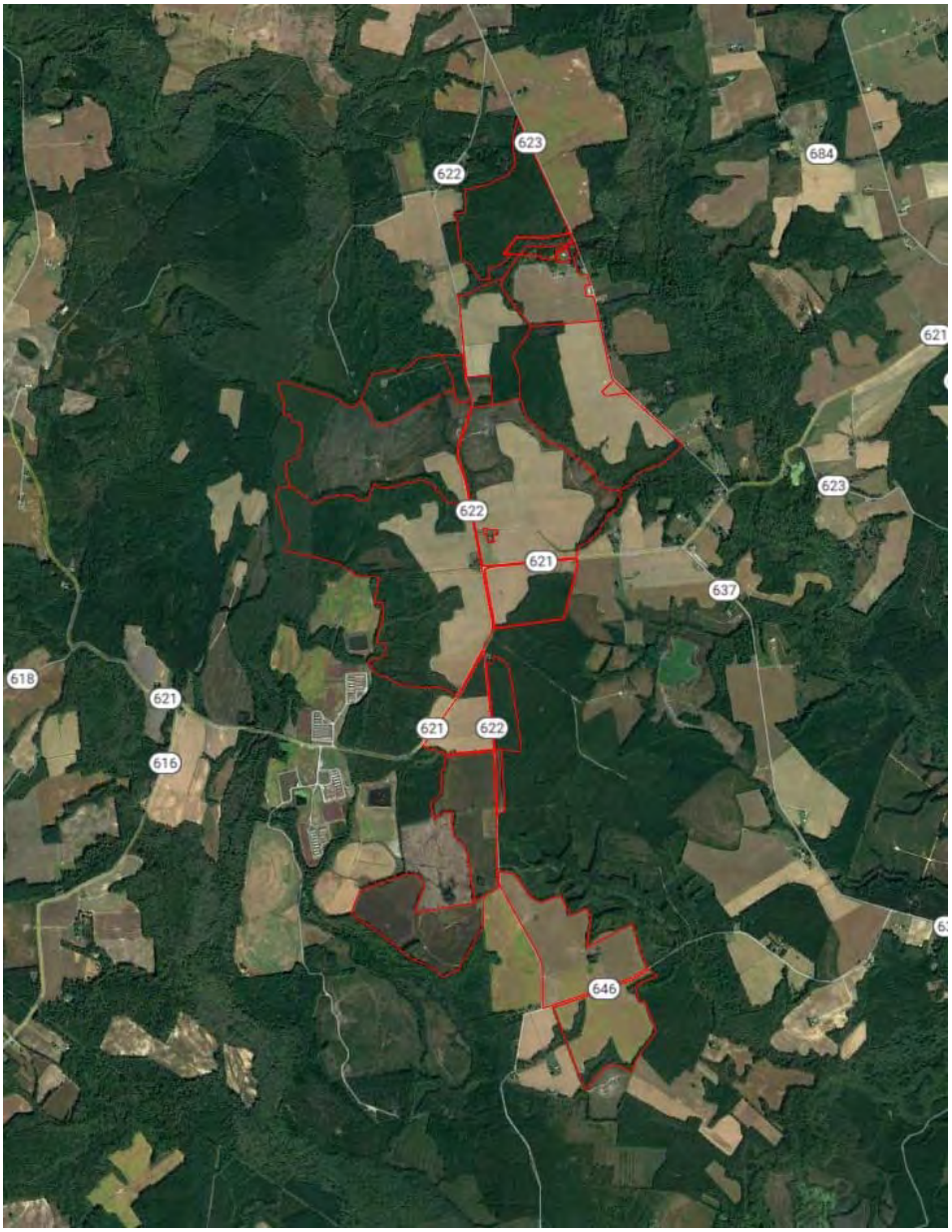

Figure 5-1. Aerial view of project area illustrating existing conditions.

GEOLOGY AND TOPOGRAPHY

The project area topography is characterized by 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 project area ranges from approximately ±7.9 meters (26 feet) to ±27.4 meters (90 feet) above mean sea level with the highest elevations located along the crest of a broad ridge along the eastern edge of the project area and the lowest elevations bordering the Blackwater River along the western edge.

HYDROLOGY

Most of the project area drains west into Blackwater River, although portions of the eastern edge drain eastward into Mill Swamp which flows into Rattlesnake Swamp and ultimately into Blackwater River. This flows south into North Carolina where it empties into the Chowan River, which flows into Albemarle Sound, which empties into the Currituck Sound before ultimately draining into the Atlantic Ocean.

PEDOLOGY

The project area is dominated by sandy loams and sandy clay loams formed from marine sediments. The most prominent soil type is Slagle fine sandy loam which is moderately well drained and covers about 25% of the study area. The second most prominent soil type is Kinston loam, which represents about 17.8% of the project area and is considered poorly drained. Well-drained Emporia fine sandy loam is the only other soil type that accounts for a significant portion of the project area at 15.2%. The rest of the study area is comprised of assorted sandy loams and complexes. Approximately 39.7% of the soils within the project area are classified as poorly to somewhat poorly drained (Figure 5-2 and Table 5-1).

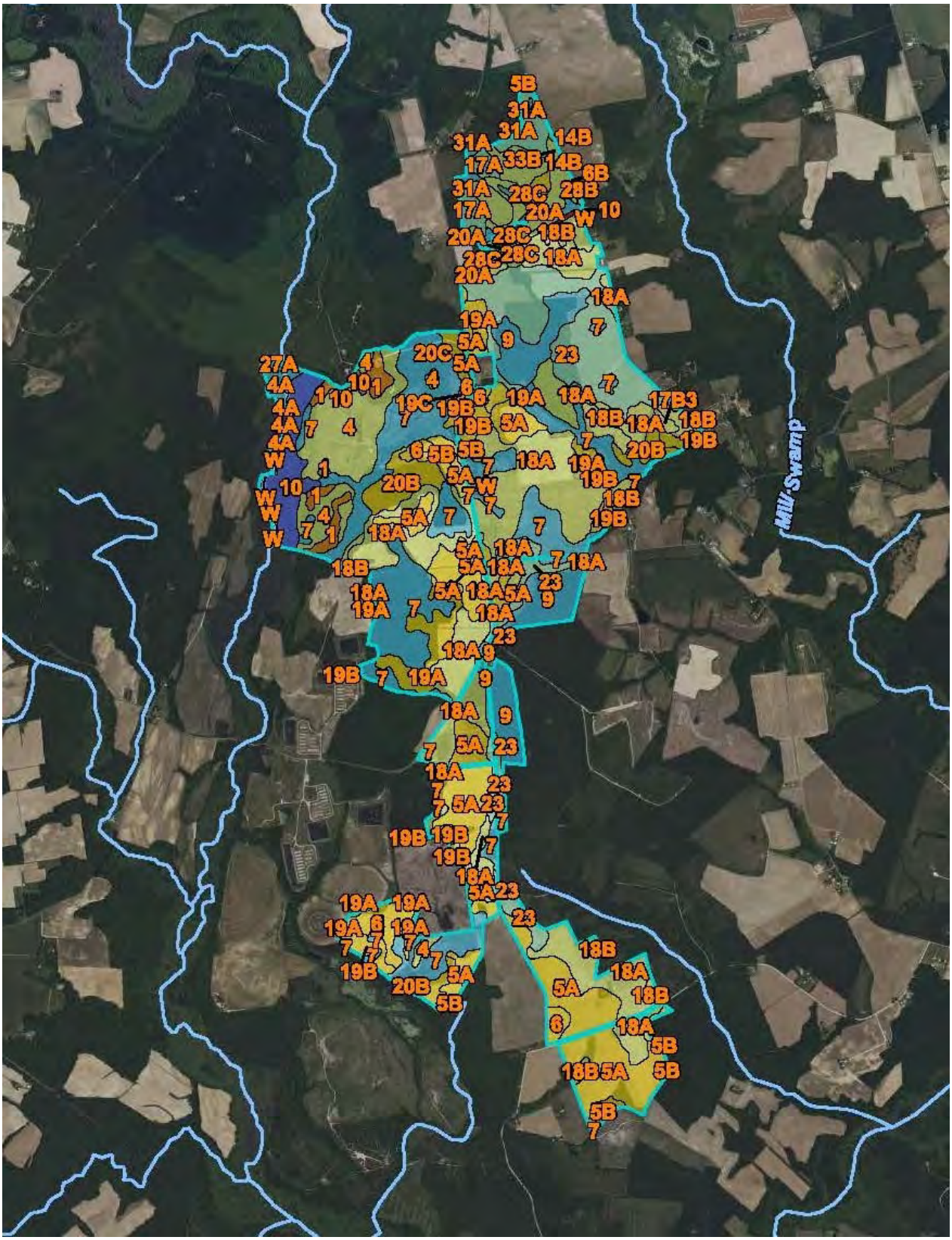

Figure 5-2: Soil survey of the Sycamore Cross project area showing drainage class (USDA 2023).

Table 5-1: Soil survey data for the project area, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	Somewhat excessively drained	29.3	1.5%
4	Chipley sand	Moderately well drained	116.0	5.7%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	286.6	14.2%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	21.0	1.0%
6	Kenansville loamy sand	Well drained	41.6	2.1%
7	Kinston loam	Poorly drained	347.0	17.2%
9	Myatt fine sandy loam	Poorly drained	119.0	5.9%
10	Nawney loam	Very poorly drained	55.9	2.8%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	401.5	19.9%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	56.9	2.8%
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	66.8	3.3%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	40.1	2.0%
19C	Uchee loamy sand, 6 to 10 percent slopes	Well drained	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	57.3	2.8%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	9.2	0.5%
23	Yemassee fine sandy loam	Somewhat poorly drained	205.4	10.2%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,863.4**	**92.2%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	3.9	0.2%

Table 3-1 (cont.): Soil survey data for project area, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	Moderately well drained	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	Well drained	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	Somewhat poorly drained	40.1	2.0%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	13.0	0.6%
21B	Lakeland sand, 2 to 6 percent slopes	Excessively drained	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	Poorly drained	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	Moderately well drained	0.5	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	Moderately well drained	28.4	1.4%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	Moderately well drained	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	Poorly drained	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	39.7	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	4.2	0.2%
Subtotals for Soil Survey Area			**149.6**	**7.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

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6. 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. 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 project 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 project 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). Descriptions of settlement patterns, cultural characteristics, and a general description of relevant material culture of the time periods are presented below.

PALEOINDIAN PERIOD (PRIOR TO 8000 B.C.)

Recent archaeological findings in Virginia have found the first Paleoindians are projected to have arrived in southeastern North America between 15,000 and 11,000 years ago, or approximately 13000 to 9000 B.C. (McAvoy and McAvoy 1997). Three of the earliest archaeological sites associated with Paleoindian occupation in Virginia are the Cactus Hill site (VDHR #44SX0202) located along the Nottoway River in Sussex County, the Thunderbird Site (VDHR #44WR0011) in Warren County, and the Saltville site (VDHR #44SM0037) in Smyth 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 (Anderson 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 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 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 adaptation 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 bears (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, bears, 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 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 B.C.-A.D. 300) is defined by the appearance of ceramics from prehistoric archaeological context. Ceremonialism associated with the burial of the dead also appears at about 500 B.C. with stone and earth burial cairns and cairn clusters in the Shenandoah Valley (McLearen 1992; Stewart 1992). Early Woodland settlements in the Piedmont region of Virginia are located along rivers as well as in interior areas and there is evidence to suggest the Piedmont areas developed a more sedentary lifestyle during this time (Klein and Klatka 1991; Mouer 1991). Many Early Woodland sites in the Piedmont are permanent or semi-permanent villages that are large and intensively occupied. This corresponds with the domestication of weedy plants such as the goosefoot and sunflower along intentionally cleared riverine areas.

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). 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 (A.D. 1000-1606), the use of domesticated plants had assumed a role of major importance in the prehistoric subsistence system. The arrival and cultivation of beans joined corn and squash as the three major crops (Egloff and Woodward 1992:26). 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.

Virginia Indians became more settled and developed strong identities to their local settings. They began to organize into villages and small hamlets with more substantial housing that may have been placed in rows around a plaza (Egloff and Woodward 1992:26). These villages were highly nucleated and occasionally fortified with palisades. The fortifications demonstrate inter-group conflict.

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 6-1). 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).

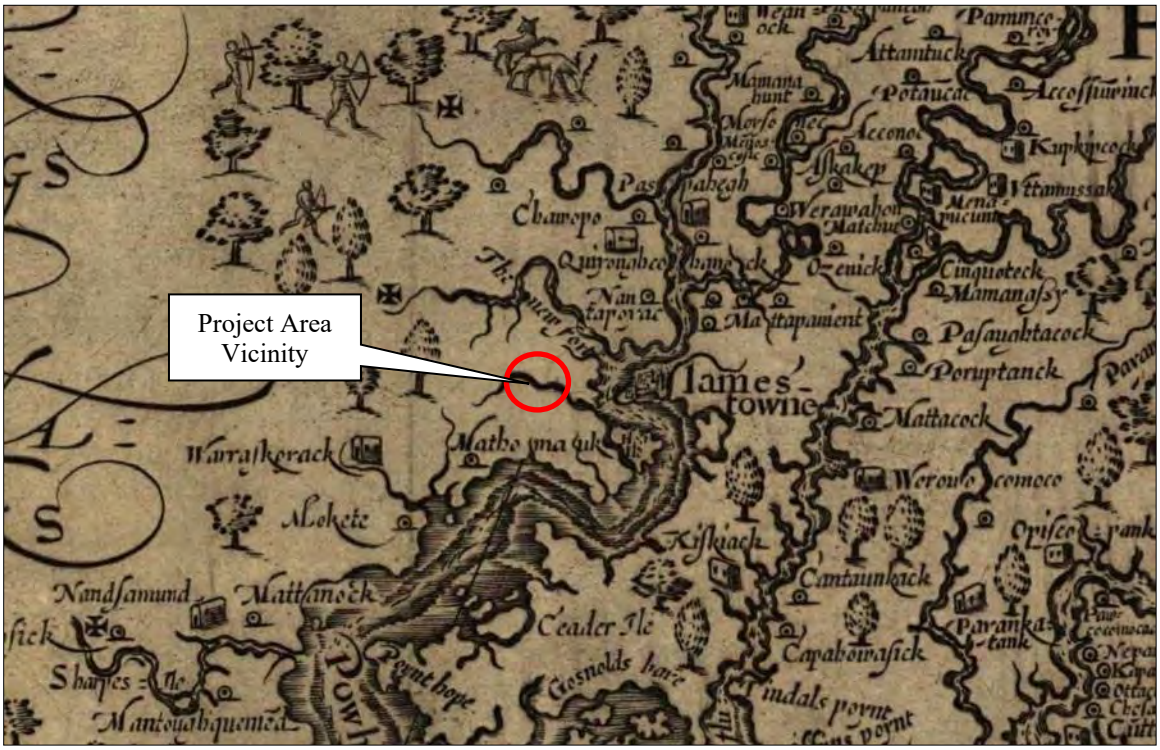

Figure 6-1: Detail of *Virginia,* by John Smith, depicting the general vicinity of the project area. Source: Library of Congress

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, approximately 14 miles northeast of the project 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 the 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). With the land patented on the south side of the river, 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 value was 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008). The Blackwater River forms a portion of the western boundary of the project area.

Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 6-2). 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). 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 along the project area (King 1993:441). The present-day Mill Swamp, or Rattlesnake Swamp, near the eastern border of the project area may be First Swamp. It appears that patenting of land around First Swamp began in the mid-seventeenth century.

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, less than nine miles northeast of the project 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).

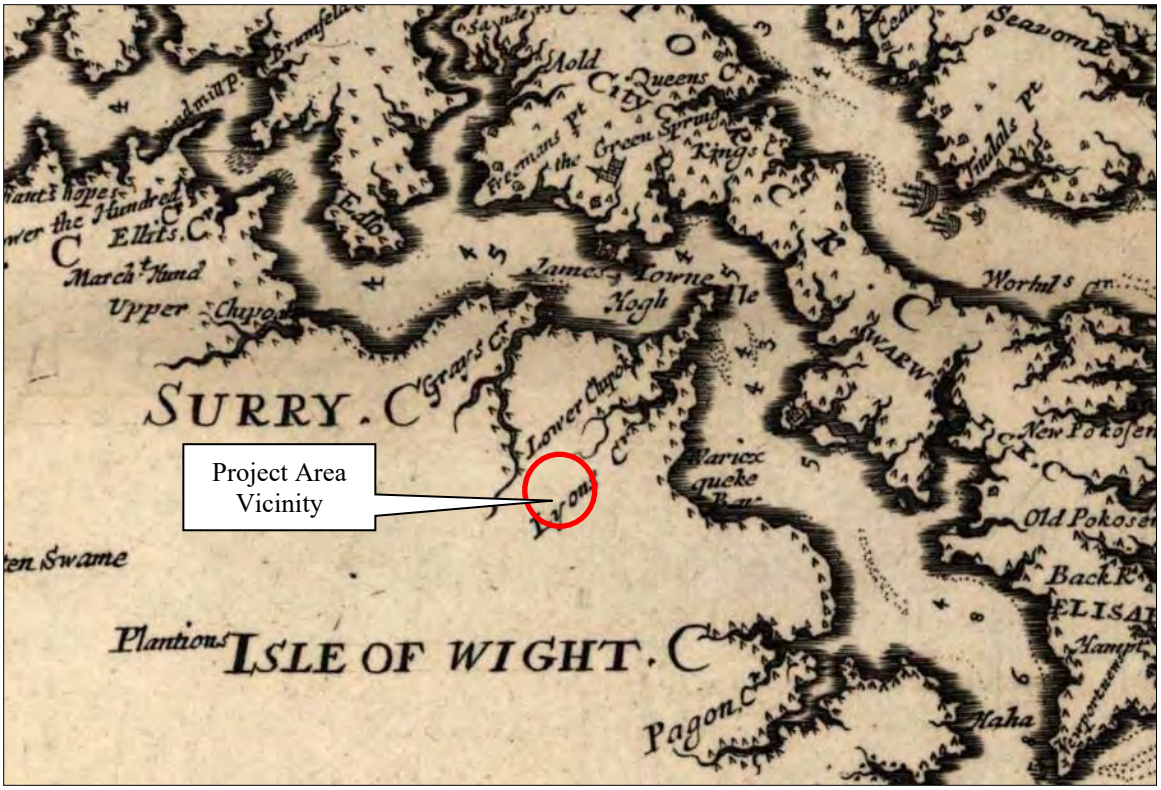

Figure 6-2: Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* depicting the vicinity of the project area. Source: Library of Congress

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). One of the earliest homesteads erected in the general vicinity of the project area was the Henley Pretlow House (VDHR# 087-5509). This home, one of multiple owned by the Pretlow family in Isle of Wight and Surry counties, was constructed in 1760 on present-day Route 621 in Isle of Wight. In 1988, the building was moved to its current location in Surry County, roughly 1.25 miles southwest of its original location, to save it from demolition. The Binford Home (VDHR #087-0003) was constructed in 1802 near the intersection of Routes 621 and 616 (Macon 1938).

To aid in getting their goods to market, two early major north-south roads extended through the two counties; the project area was situated between them. Additionally, the village of Surry, eight miles north of the project 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, approximately ten miles east of the project area, officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

As the population grew with the economy, early churches began appearing in Isle of Wight and Surry counties. One of the earliest Baptist churches in Isle of Wight was Mill Swamp Church. The church was established in 1774 by charter members of the disbanded Burleigh Church with David Barrow as its first pastor. Originally known as David Barrow's Church or the Church in Isle of Wight, the name was changed to Mill Swamp Church in 1791 for the old mill that stood a few miles away along the Surry County Line. Mill Swamp was the "mother church" to other Baptist churches in the county, including Smithfield, Moore's Swamp, Tucker Swamp, and Bethesda (King 1983:110). The current chapel on the site, located in the general vicinity east of the project area, was first built in 1832 and remodeled in 1895 (Morrison 2022:23).

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 for 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 enslaved laborers. 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 (Figure 6-3). 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. No battles were fought in Isle of Wight and Surry counties and the war was won on the Virginia Peninsula.

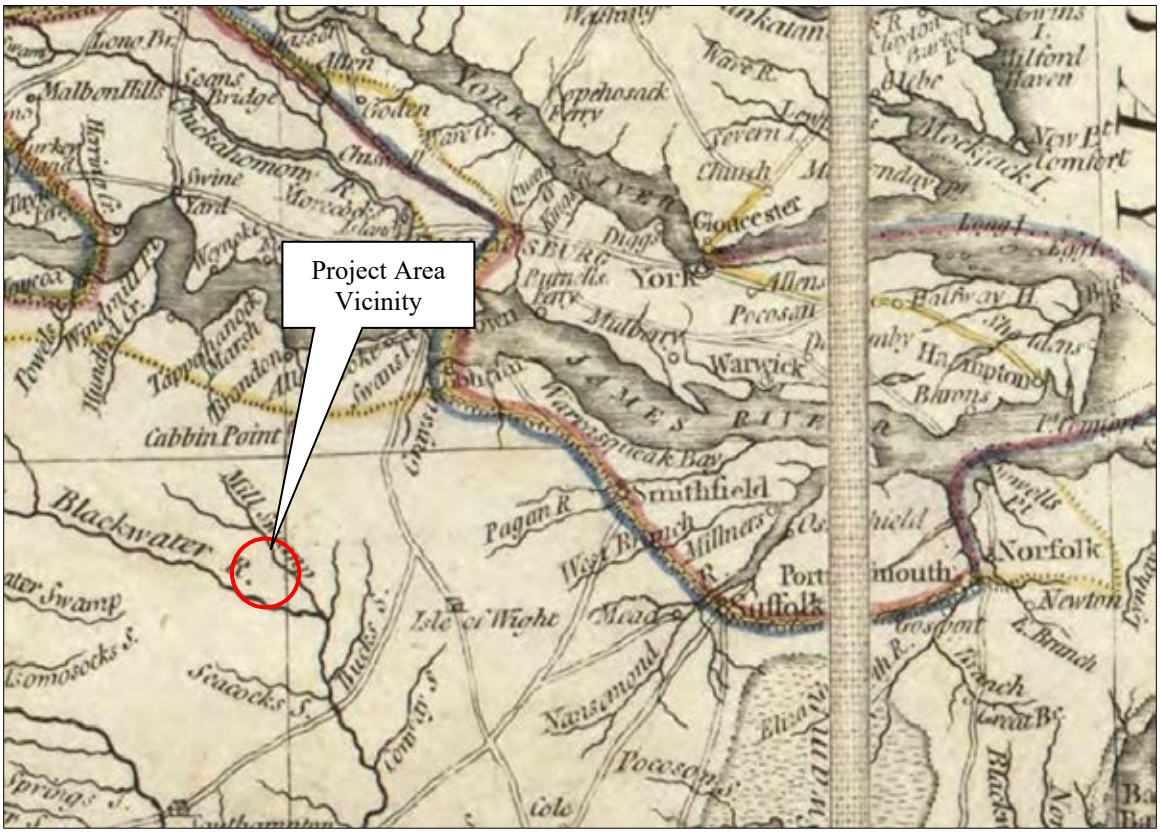

Figure 6-3: Detail of *The marches of Lord Cornwallis, with Virginia and Maryland, and the Delaware counties*, 1787, depicting the vicinity of the project area. Source: Library of Congress

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 enslaved laborers 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 general vicinity of the project area (Figure 6-4).

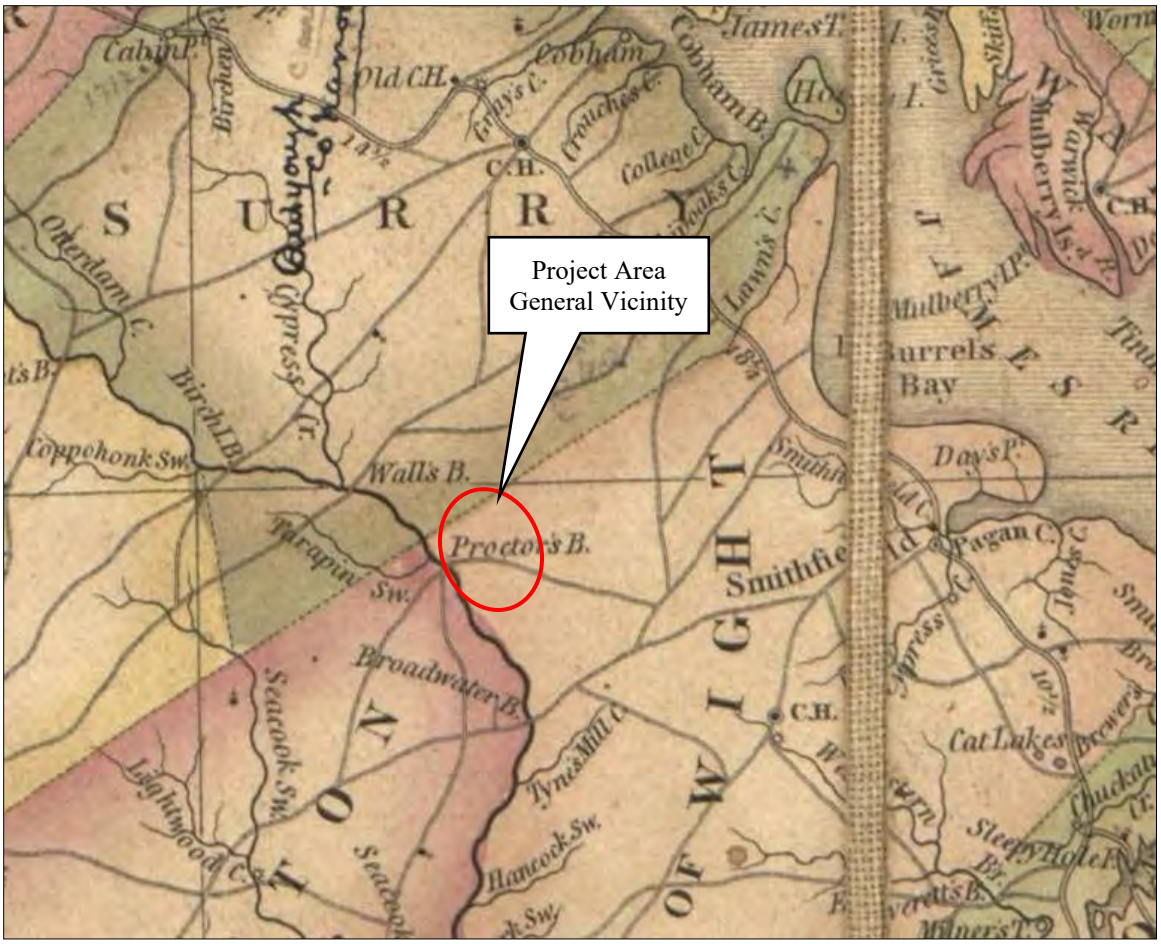

Figure 6-4: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the project area. Source: Library of Congress

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 enslaved 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 enslaved workers 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). As agricultural industry grew, more mills were built in Isle of Wight and Surry counties. One of these mills was Pretlow's Mill, mapped to the west of the project area near the site of the Binford Home. This mill was presumably owned and operated by the Pretlows, who owned multiple properties, including the Binford home for roughly a decade, in the general vicinity in the early to mid-nineteenth century (Macon 1938). Another mill that appears on maps from this time period is White's Mill located north of the project area, however no documentation of this structure could be identified. 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 five miles southwest of the project 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 in the region, several structures were located within the project area and its general vicinity by the mid-nineteenth century (Figure 6-5 and Figure 6-6). Names that appear within the project area on Civil War period maps include Betts and Barlow, both in Isle of Wight County. Affluent families in the local community, both the Betts and the Barlow families owned large plots of land featuring grand, high-style plantation homes. Members of the Betts family presided over two properties in the general vicinity of the project area (VDHR# 046-0030 and 046-5811), built circa 1802 and 1850, respectively. The Barlow family owned a house off of what is now Ramsey Road (VDHR# 046-5148), constructed in 1880. Located on the north side of Mill Swamp Road just outside of the project area was the Mayfield post office. Built in 1830, Mayfield was one of the earliest post offices in Isle of Wight County and was discontinued in 1886 when replaced by the Sycamore Crossroads post office. The post office operated out of the Hollemon home with Wilson Hollemon as both the first owner of the house and the first postmaster (King 1993:328-330).

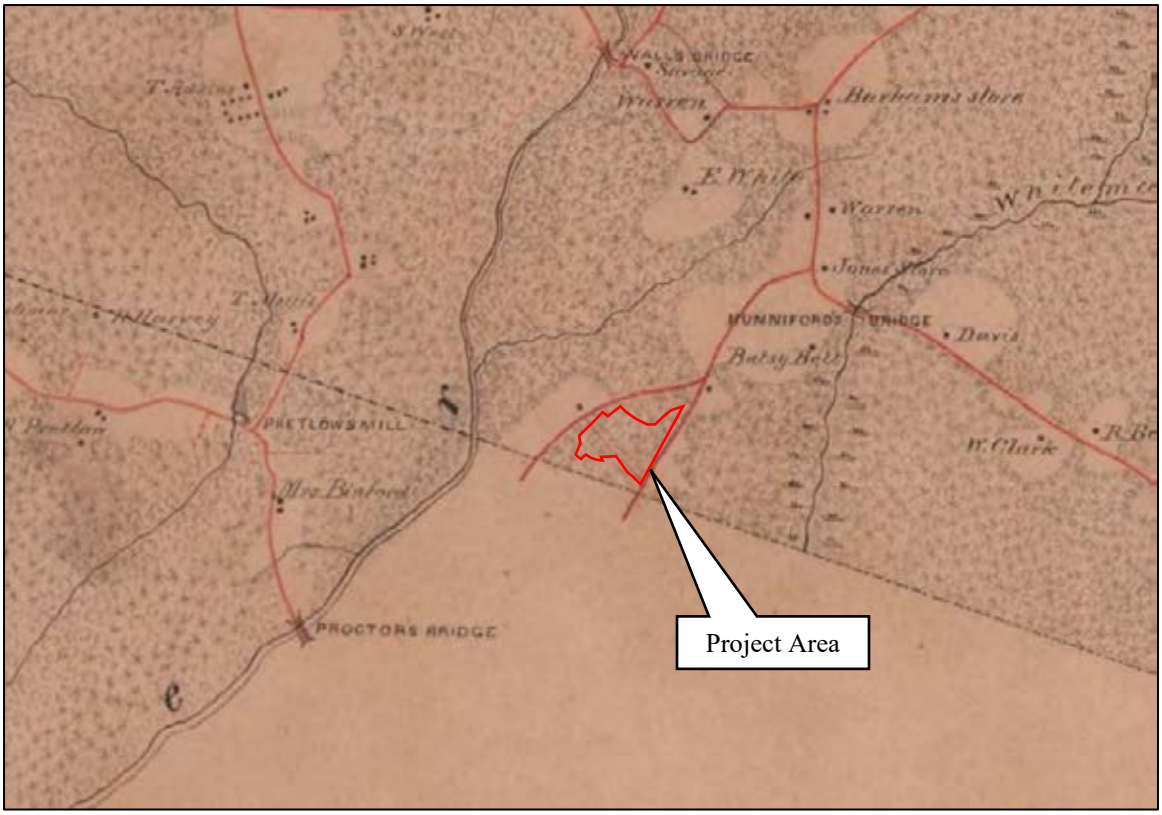

Figure 6-5: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the project area in Surry County. Source: Library of Congress

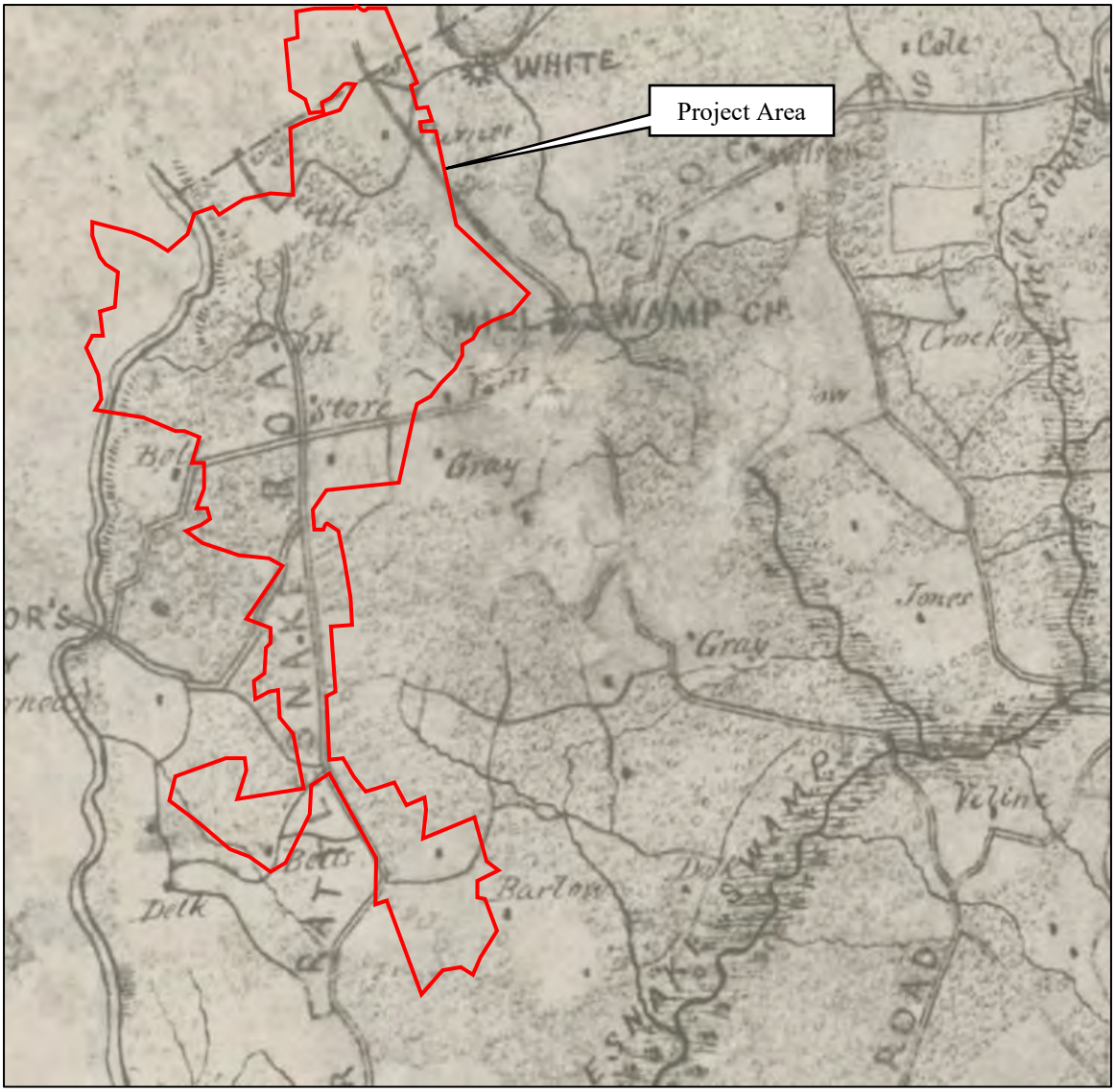

Figure 6-6: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the project area in Isle of Wight County. Source: Library of Congress

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 the 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. 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).

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 project 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 northwest of the project 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 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 circa-1892 map of Virginia illustrates a number of post offices in the general vicinity of the project area (Figure 6-7). Rural free delivery came to the county in 1907. This would eliminate the need for the multiple post offices found in crossroads stores. Located at the intersection of Routes 621 and 622 within the project area, the Sycamore Crossroads post office opened in 1886, replacing the earlier Mayfield post office, and operated until it was discontinued in 1917. William Henry (Harry) McClelland was Sycamore Crossroads' first postmaster, in addition to operating a store in the same building set in the front yard of the neighboring Guy Betts House (King 1993:331; Figure 6-8).

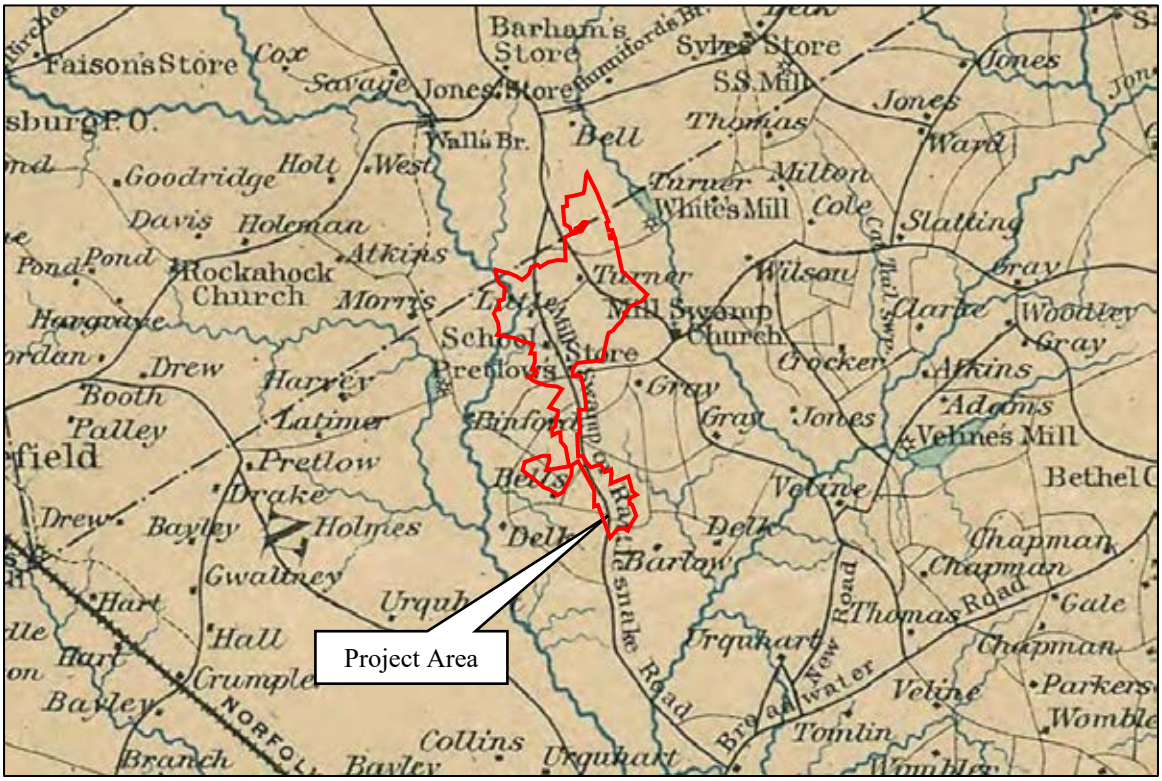

Figure 6-7: Detail of *Preliminary map of a part of the south side of James River, Va.: from surveys and reconnaissances*, c.1892, depicting the approximate location of the project area in Isle of Wight and Surry counties. Source: Library of Congress



Figure 6-8: Detail of *Battlefields of Virginia 1865*, 1900, depicting the approximate location of the project area in Isle of Wight County. 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 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).

Despite the fall in population in Isle of Wight and Surry counties, progress continued. By the 1930s, electric and telephone services were expanded into many of the rural areas in Isle of Wight. An Act by the Virginia General Assembly in 1918 provided for the improvement of roads and bridges within the county. Major roads were paved and others were widened to improve and facilitate transportation. Additionally, the prosperity of the 1920s brought the construction of new churches and schools (David 2007:18). One of these early schools was likely McClelland's School, which appears on mid-twentieth century maps, however no other documentation has been located at this time.

A 1919 topographic map depicting the project area shows several buildings within and in the general vicinity of the project area, including the Sycamore Crossroads Post Office (Figure 6-9). Proctor's Bridge, which appears on maps as early as the Civil War though it had been destroyed and rebuilt multiple times by the early twentieth century, is mapped to the west of the project area. The project area itself is comprised of a mix of wooded areas and open fields, with Blackwater River crossing the landscape to its west and Mill Swamp and Rattlesnake Swamp to the east. The crossroads community of Johnsons Corner appears on maps to the west of the project area dating to this time period. The community is located at the intersection of Routes 621 and 616 near the sites of Proctors Mill and the Binford Home, which was later owned by J.F. Johnson (Macon 1938).

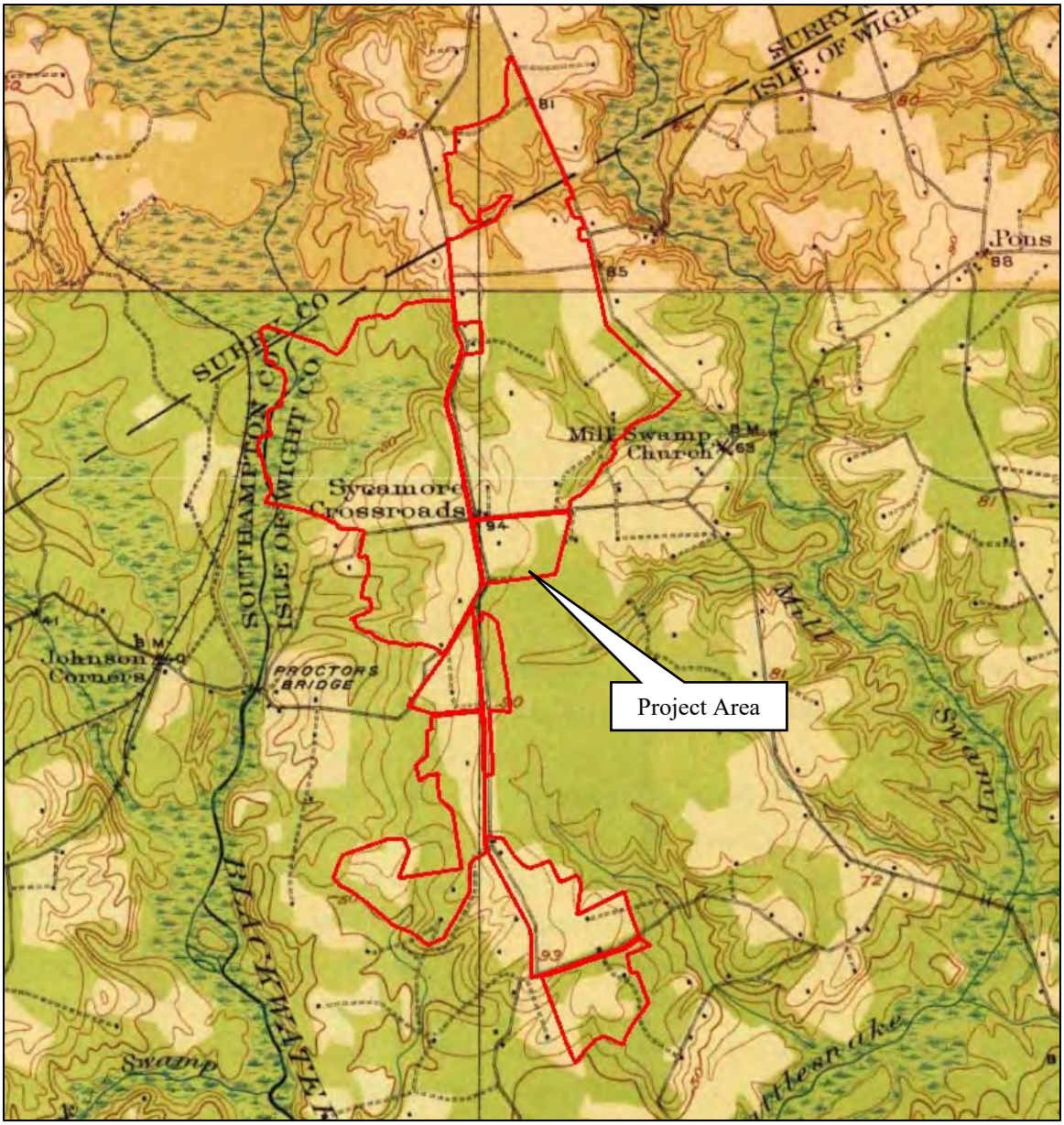

Figure 6-9: Detail of the 1919 topographic map, *Surry,* and the 1920 topographic map, *Ivor*, depicting the project area. Source: USGS

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 the project 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 to 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).

The landscape within and in the general vicinity of the project area continued to be developed. By the mid-twentieth century, major pipelines would cross the landscape to the northwest and southwest of the project area. Construction on Virginia's first nuclear energy plant on Hog Island began in 1971 (Apel and Watson 2006:27). In the early twenty-first century, Beaver Dam Airpark was opened approximately 3.5 miles northeast of the project area along the Isle of Wight-Surry county line. Despite changes in the landscape, 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). The project area remains a mixture of agricultural and forested land with few buildings which would decrease in number over time. Additionally, portions of the project area would be subject to heavy timbering as the industry gained importance in the county. The landscape in the general vicinity of the project area would continue to be developed, with structures mostly consisting of churches and small, roadside homes (Figure 6-10 through Figure 6-14).

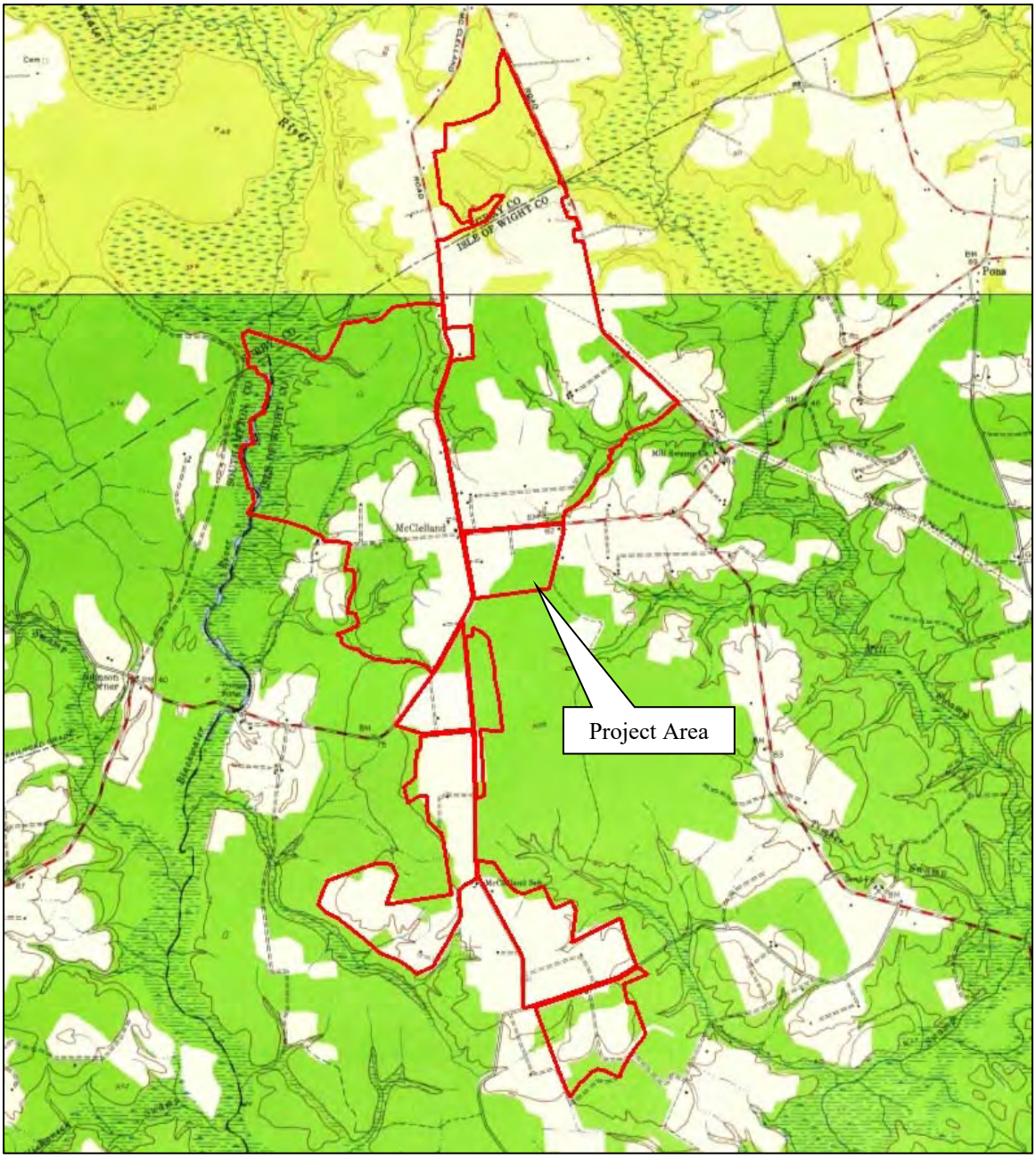

Figure 6-10: Detail of the 1944 topographic map, *Raynor*, and the 1954 topographic map, *Runnymede,* depicting the project area. Source: USGS

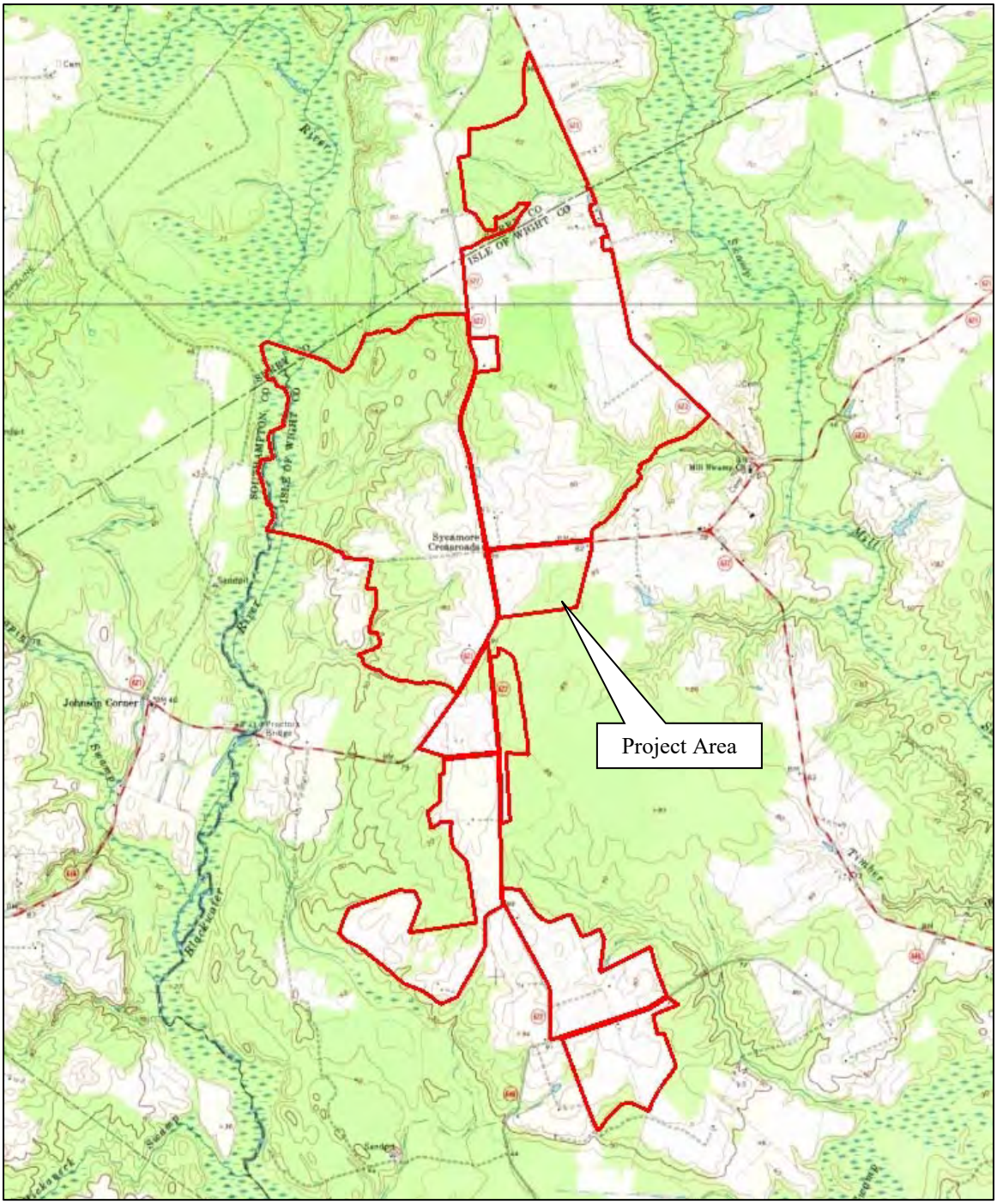

Figure 6-11: Detail of the 1968 topographic map, *Raynor,* and the 1971 topographic map, *Runnymede*, depicting the project area. Source: USGS

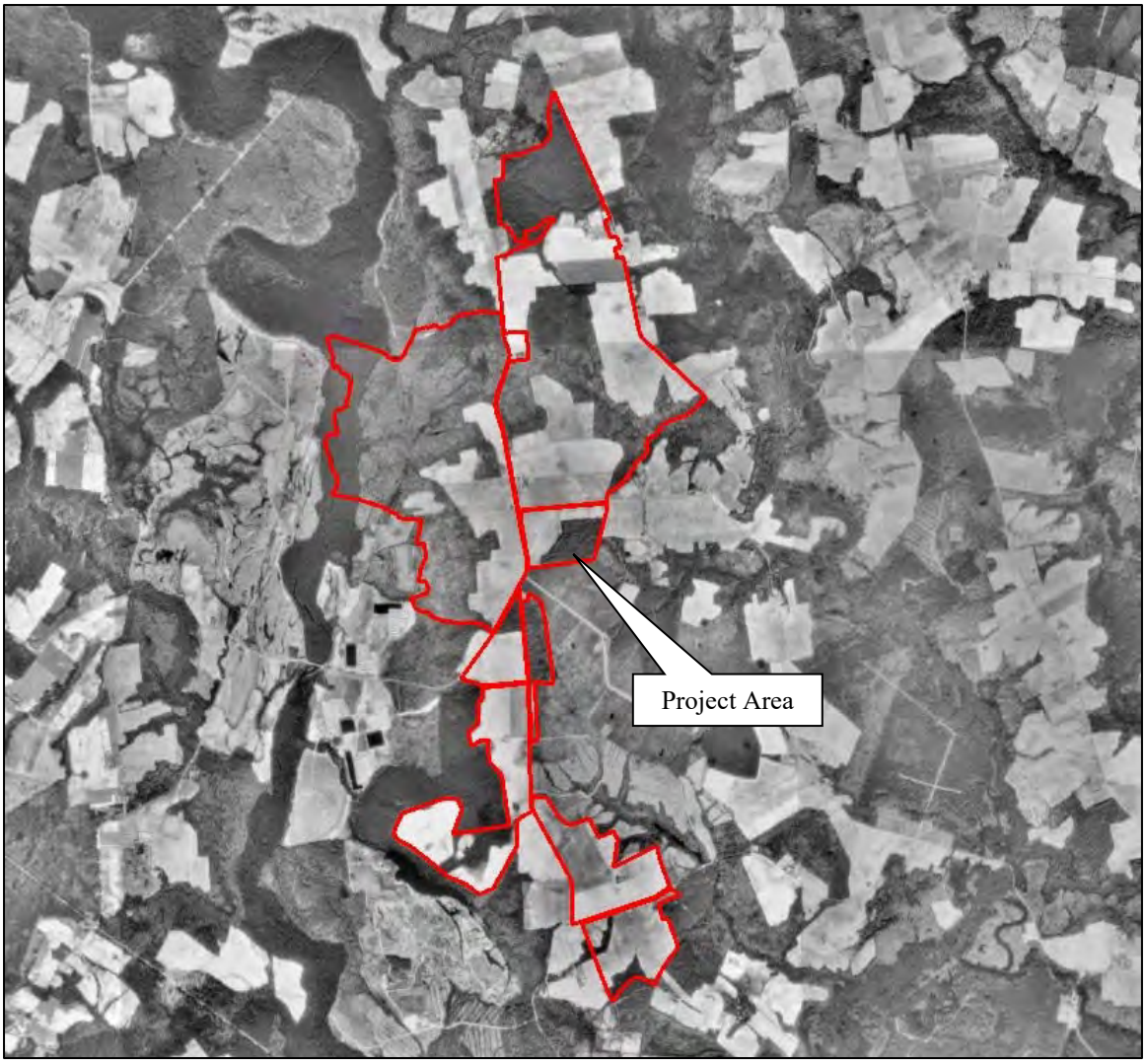

Figure 6-12: A 1990 aerial depicting the project area. Source: Google Earth

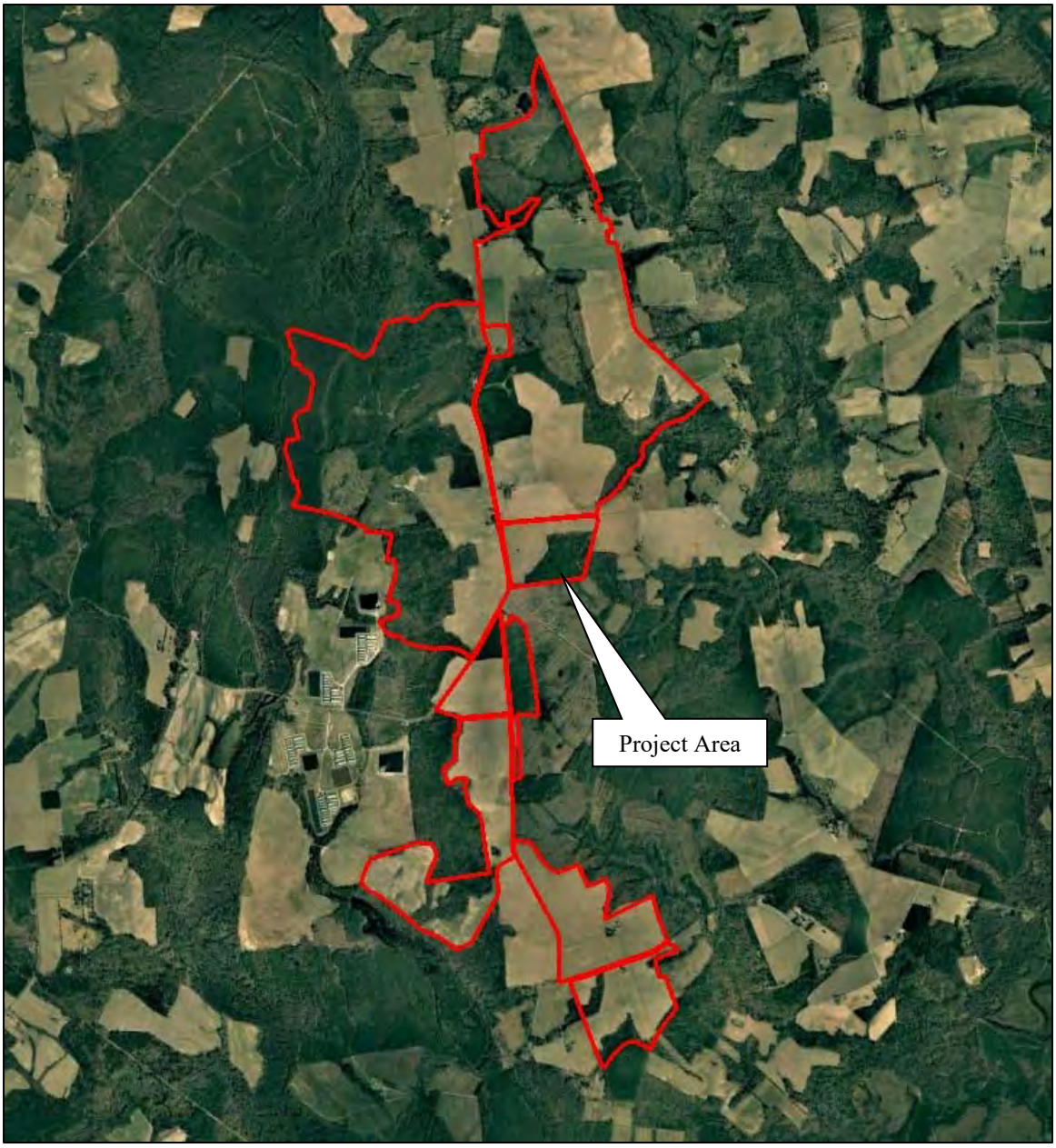

Figure 6-13: A 2007 aerial depicting the project area. Source: Google Earth

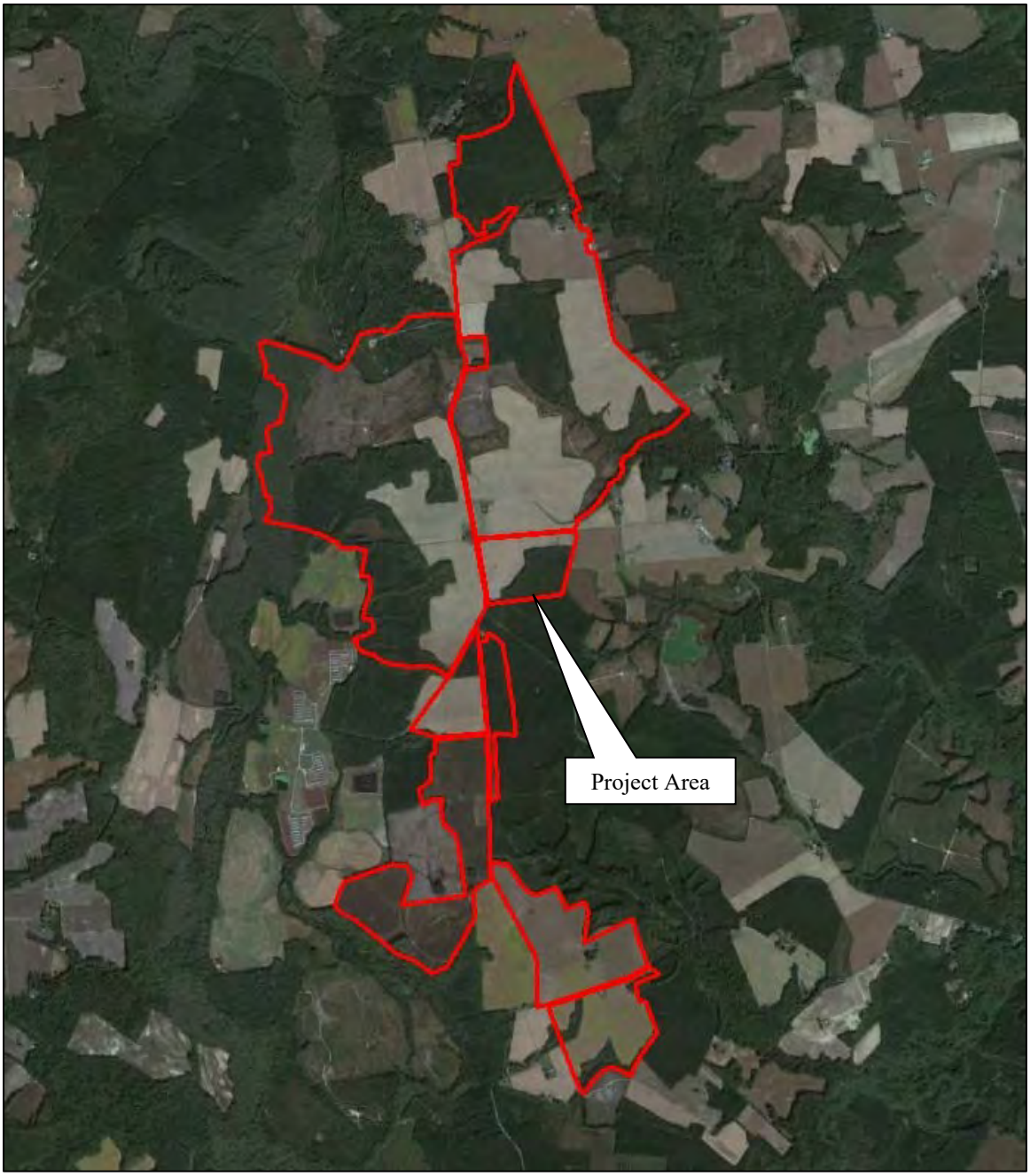

Figure 6-14: A 2021 aerial depicting the project area. Source: Google Earth

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7. EXPECTED RESULTS

Prior to initiation of fieldwork, D+A submitted a Phase IA cultural resources assessment and testing plan to VDHR for approval. The results of that assessment and testing strategy are presented below.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the project area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the project area is now sparsely developed. Just seven building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the project area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The project area is bordered by Blackwater River and Mill Swamp and crossed by numerous swamps, drainages, and pocosins. These natural resources would have been attractive to prehistoric hunters and gatherers, but the terrain within the project area 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, however, no such sites have been previously recorded within the project area limits.

Although the project area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the project area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about **34 hectares (85 acres)** total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not been previously disturbed by logging. Together, the moderate potential area covers an area of about **365 hectares (901 acres)** total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder

of the project area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and fields depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about **170 hectares (421 acres).** A large tract of land at the northern end of the project area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort (Table 7-1 and Figure 7-1 and Figure 7-2).

Table 7-1: Summary of archaeological potential within the project area.

Potential	Reason	STP Sample	Total Area	STP Area
High	Yard space around extant and map-projected architectural resources	100%	34 hectares 85 acres	34 hectares 85 acres
Moderate	Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.	25%, chosen based on field conditions, pedestrian survey of remainder	365 hectares 901 acres	91 hectares 225 acres
Low	Areas with no site predictors	10%, chosen based on field conditions, pedestrian survey of remainder	170 hectares 421 acres	17 hectares 42 acres
No Subsurface Testing	Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas	Pedestrian survey where possible	248 hectares 613 acres	Pedestrian survey where possible
Total			**817.46 hectares 2,020 acres**	**142 hectares 352 acres**

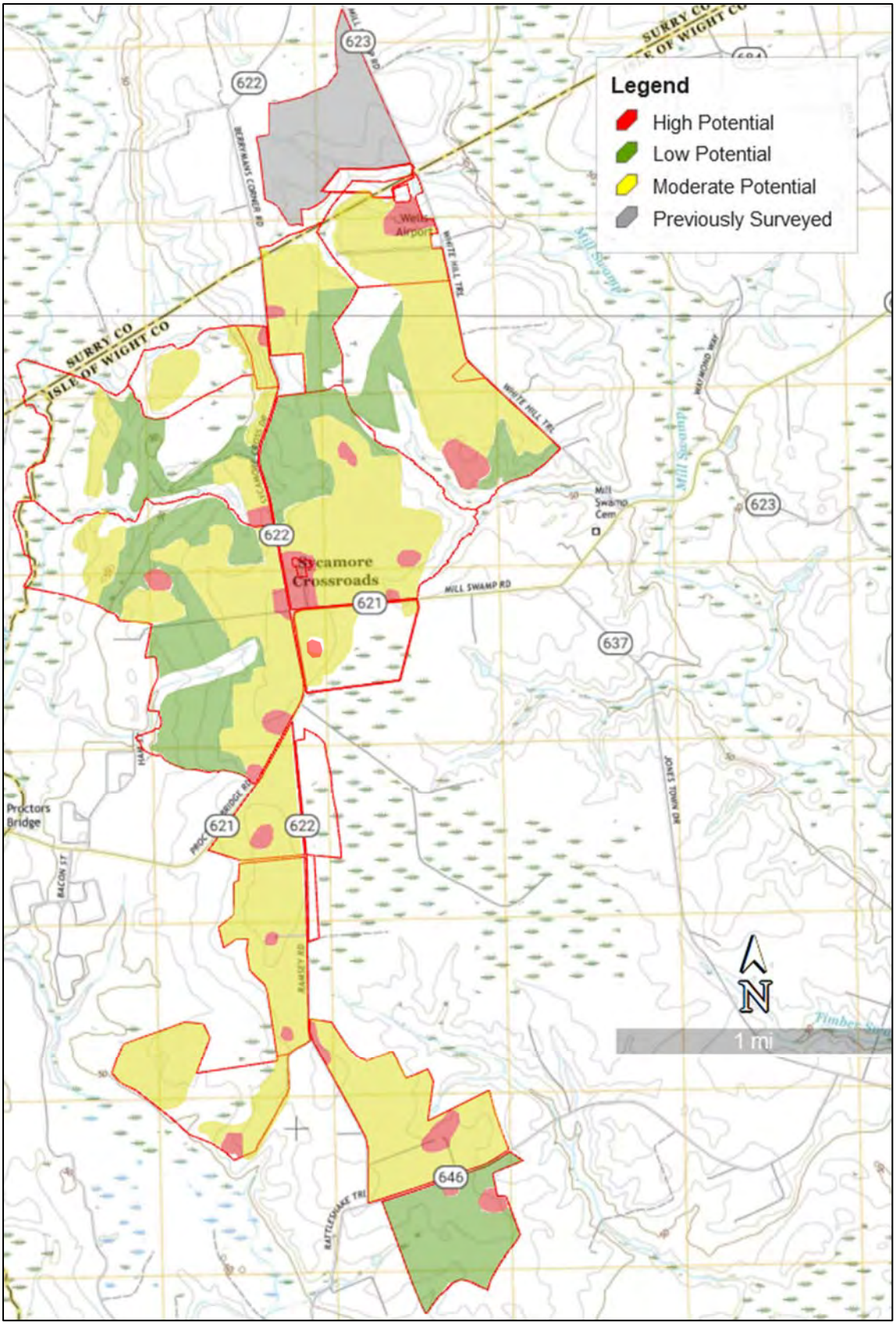


Figure 7-1: USGS topographic map with project area showing areas of archaeological potential.

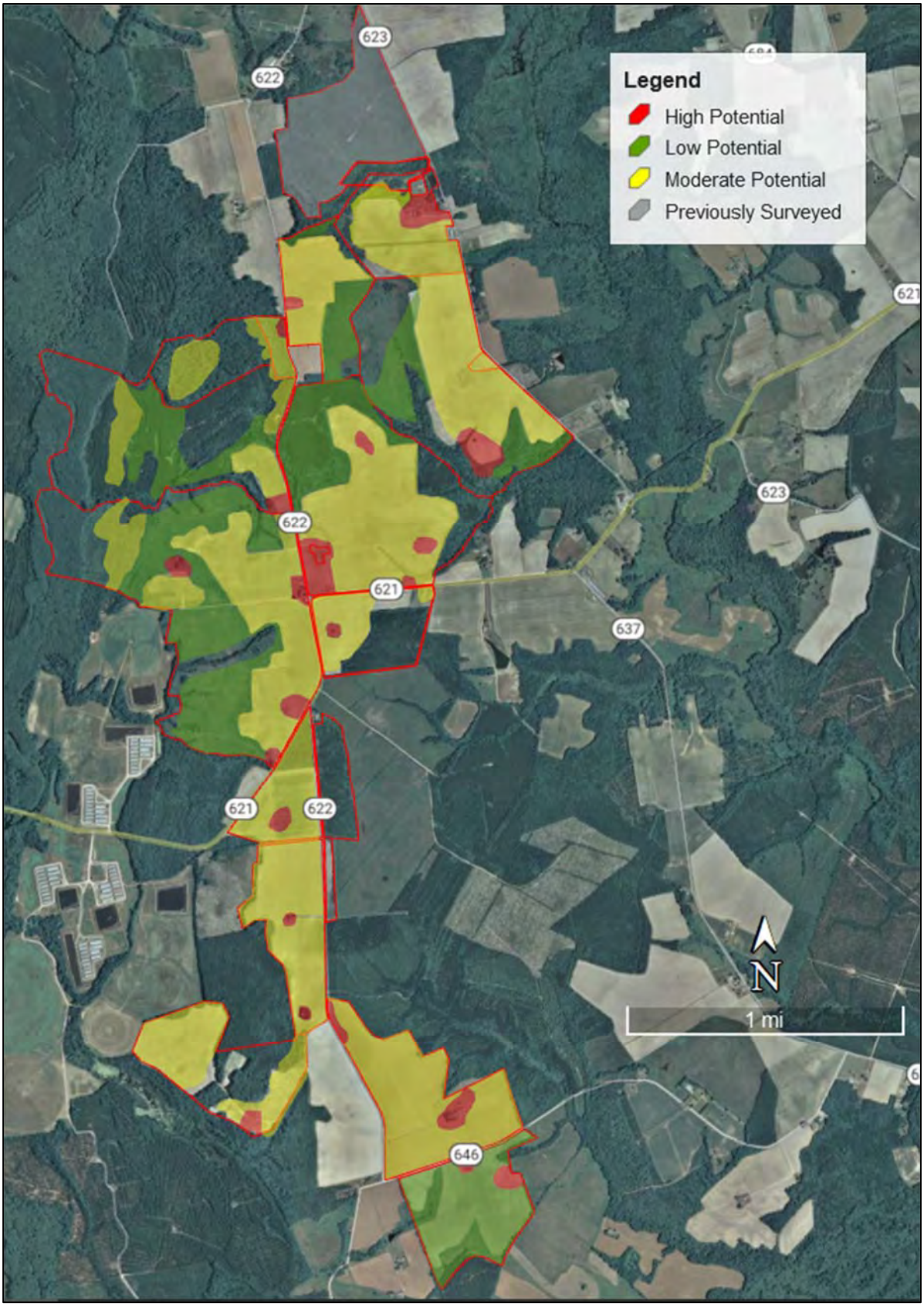


Figure 7-2: Aerial map with project area showing areas of archaeological potential.

8. FIELD SURVEY RESULTS

Phase I cultural resource survey of the Sycamore Cross Solar project area was conducted from December 2023 through April 2024. The effort included both architectural and archaeological investigations according to the survey methodology outlined in the research design and Phase IA. The results of the survey are summarized below.

ARCHITECTURAL FIELD RESULTS

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). VCRIS site file forms were prepared or updated for each resource subject to survey as part of this effort.

The 28 extant resources within the survey area and surveyed as part of this effort consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

The survey area occupies a large rural area of southern Surry and western Isle of Wight counties, situated roughly eight miles east of Wakefield. There are no incorporated or unincorporated communities within or in the immediate vicinity of the survey area, however, it is centered on the former crossroads community of Sycamore Cross. It is crossed or bordered by several local transportation corridors including Sycamore Cross Road and White Hill Trail that extend generally north-south through the survey area, and Mill Swamp Road and Proctors Bridge Road that extend generally east-west. 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.

Development patterns in the area are diverse, with older homes and farmsteads generally set back from the road on large properties while more recent, twentieth century homes tend to be set in clusters on small lots bordering the roads.

The earliest resources in the survey area are believed to date from the first and second quarters of the nineteenth century, although many of these were found to have been demolished since they were last documented. Four early-nineteenth century homes have been completed demolished and cleared from their sites, while two resources believed to both date circa 1825 remain in ruinous condition with only the brick exterior walls standing. Another four Antebellum homes, dating from c.1830, two c.1850, and 1852 all remain extant and occupied. These homes tend to be Vernacular in nature although one exhibits fairly high-style Federal to Greek Revival transitional architectural influences. There are also several resources that date from the late-nineteenth century, including two homes and a former post office. The homes reflect Folk Victorian influences popular at that time, while the post office reflects a stripped Vernacular example of a rural crossroads building. The vast majority of resources from the twentieth century, including the homes and commercial buildings reflect national trends in building styles of their period including Colonial Revival/Cape Cod, Minimal Traditional, and Ranch.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.

Provided in the following pages are a table of all surveyed resources (Table 8-1), a map with the location of each resource surveyed (Figure 8-1), 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 8-1: Architectural resources surveyed. Bold Font denotes resource is NRHP-Eligible. Orange Highlighted resources are located directly within the project area. Green highlight indicates resource was determined not NRHP-eligible within the last five years and not resurveyed at this time.

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-0029	House, 12462 Ramsey Road	c.1800	D+A: Demolished
046-0030	Betts House, Proctors Bridge Road	c.1802	D+A: Demolished
046-0032	Dudley House and Outbuildings, Ramsey Road	c.1820	D+A: Demolished
046-0055	Tenant House, Proctors Bridge Road	c.1800	D+A: Demolished
046-0056	Grays' Brick House, Proctors Bridge Road	c.1825	D+A: Not Eligible (Ruins)
046-0057	Brick House, Mill Swamp Road	c.1825	D+A: Not Eligible (Ruins)
046-0068	**Wilson Hollemon House, 5499 Mill Swamp Road**	**1830**	**D+A: Potentially Eligible**
046-5147	House, 14385 Rattlesnake Trail	1850	D+A: Not Eligible
046-5148	House, 13407 Ramsey Road	1880	D+A: Not Eligible
046-5149	**Sycamore Cross Post Office, Mill Swamp Road**	**1899**	**D+A: Potentially Eligible**
046-5150	**House, 11356 Sycamore Cross Drive**	**c.1899**	**D+A: Potentially Eligible**

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-5151	Mill Swamp Baptist Church & Cemetery; Church, 6329 Mill Swamp Road	1928	D+A: Not Eligible
046-5152	Store, 6159 Mill Swamp Road	1946	D+A: Not Eligible
046-5260	Mill Swamp Baptist Church Parsonage	c.1900	D+A: Demolished
046-5550	Dwelling, 10126 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5551	Dwelling, 10106 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5552	Dwelling, 10088 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5804	House, 10325 White Hill Trail	1953	D+A: Not Eligible
046-5805	House, 10261 White Hill Trail	1972	D+A: Not Eligible
046-5806	House, 6262 Mill Swamp Road	1955	D+A: Not Eligible
046-5807	Industrial Complex, 11321 Jones Town Drive	1959	D+A: Not Eligible
046-5808	House, 6177 Mill Swamp Road	1968	D+A: Not Eligible
046-5809	Commercial Building, 6143 Mill Swamp Road	c.1970	D+A: Not Eligible
046-5810	House, 5498 Mill Swamp Road	1899	D+A: Not Eligible
046-5811	**Betts Farm, 5191 Mill Swamp Road**	**1850**	**D+A: Potentially Eligible**
046-5812	House, 14195 Rattlesnake Trail	1950	D+A: Not Eligible
046-5813	Commercial Building, 14472 Rattlesnake Trail	c.1950	D+A: Not Eligible
046-5814	House, 11235 White Hill Trail	c.1950	D+A: Not Eligible
046-5815	House, 13484 Ramsey Road	1970	D+A: Not Eligible
046-5816	House, 12085 Ramsey Road	1971	D+A: Not Eligible
046-5817	Hollemon Cemetery	Pre-1900	D+A: Not Eligible
087-5509	Captain Pretlow House, 4071 Proctor's Bridge Road	1760	VDHR- Relocated (1988) / D+A: Now outside of survey area
090-5163	Dwelling, 337 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5164	Dwelling, 3285 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5165	Simmons and Brown Cemetery		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5166	House, 1122 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5167	House, 1097 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5168	House, 10676 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5174	House, Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5208	House, 1314 Berrymans Corner Road	c.1960	D+A: Not Eligible
090-5209	House, 1209 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5210	House, 1167 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5211	House, 1141 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5212	House, Berrymans Corner Road	c.1910	D+A: Not Eligible

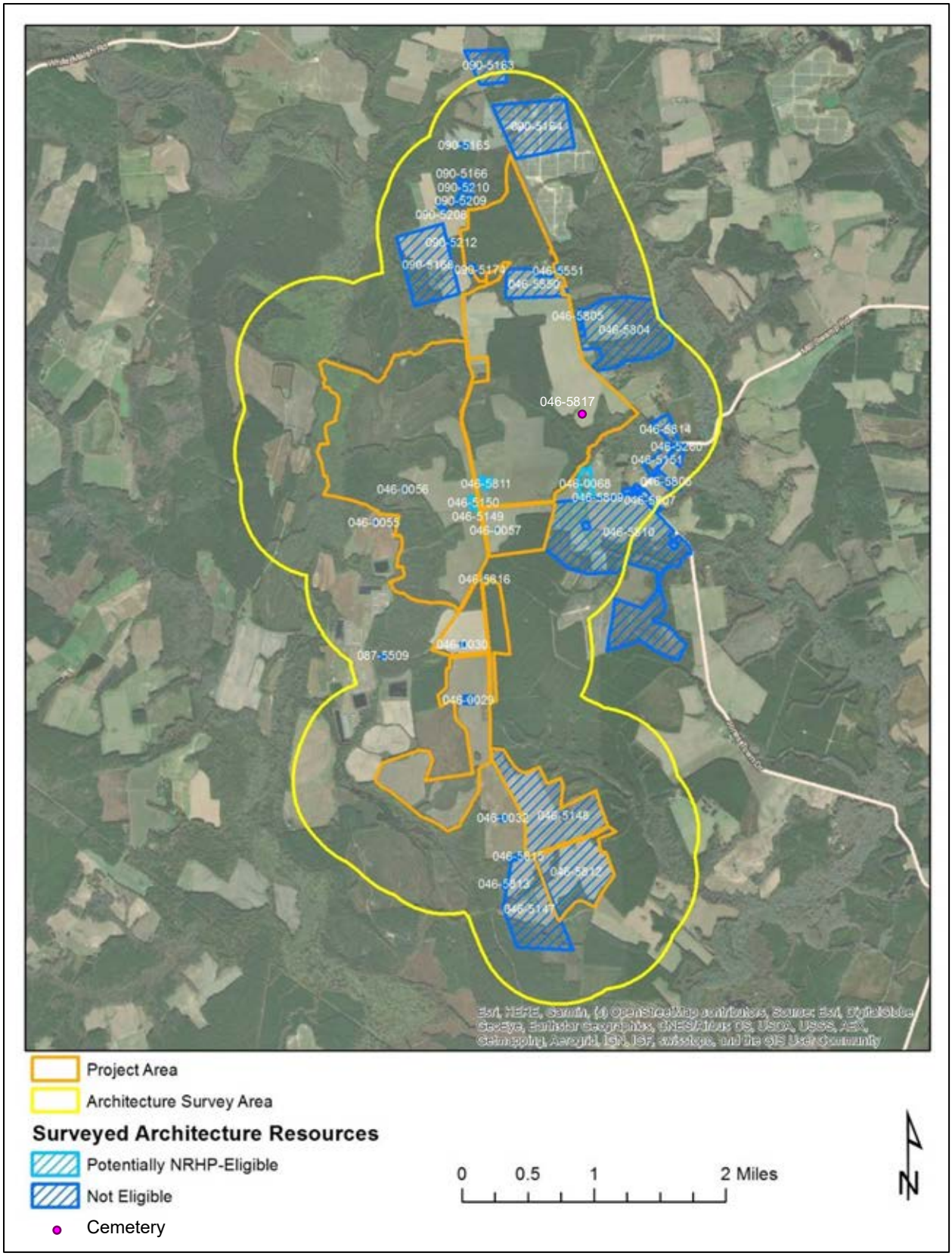


Figure 8-1: Location of surveyed architectural resources in relation to the project area.

RESOURCE NARRATIVES

VDHR# 046-0029
House, 12462 Ramsey Road



The house at 12462 Ramsey Road was constructed circa 1800 according to a previous survey. According to a previous survey, this structure was a one-and-a-half-story wood frame structure featuring a hall-parlor plan, beaded weatherboard siding, and brick exterior end chimneys laid in an American bond. This structure was not observed at the time of survey and a review of historic aerial imagery reveals that this structure has been demolished and removed from the site.

The site of the demolished resource is located on the west side of Ramsey Road between Proctors Bridge Road and Rattlesnake Trail. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field and is accessed by a long, gravel driveway. The only structure remaining on the property is a dilapidated shed.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0030
Betts House, Proctors Bridge Road



Betts House, located off of Proctors Bridge Road, was constructed circa 1802 according to a previous survey. According to a previous survey, this house was a one-story wood frame structure with a gable roof and two brick exterior end chimneys. This structure was not observed at the time of survey and inspection of historic aerial imagery indicates that it has been demolished and cleared from the site.

The site of the demolished resource is located on the southeast side of Proctors Bridge Road just south of its intersection with Ramsey Road. The landscape in the general vicinity of the site is gently rolling and characterized by a mix of wooded areas and agricultural fields with relatively light development. The house was previously mapped at the center of what is now a wide, open agricultural field. No outbuildings or other associated resources remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0032
Dudley House and Outbuildings, Ramsey Road



Dudley House, located off of Ramsey Road, was constructed circa 1820 according to a previous study. According to a previous survey, this building was a one-and-a-half-story wood frame structure featuring a hall-parlor plan, dormers on the front slope of its gable roof, and brick exterior end chimneys laid in an American bond. The house was not observed at the time of survey and inspection of historic aerial imagery reveals that the structure has been demolished and cleared from the site.

The site of the demolished resource is located on the west side of Ramsey Road between Proctors Bridge Road and Rattlesnake Trail. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field, however no structures remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0055
Tenant House, Proctors Bridge Road



The tenant dwelling off of Proctors Bridge Road was constructed circa 1800 according to a previous survey. According to a previous survey, this building was a one-story wood frame structure with a hall-parlor plan, a metal-sheathed gable roof, and brick exterior end chimneys. The site was not accessible at the time of survey, however a review of historic aerial imagery suggests that the structure has been demolished and removed from the site.

The site of the demolished resource is located on the north side of Proctors Bridge Road between Old Blackwater Road and the end of Mill Swamp Road. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field, however no structures appear to remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0056
Grays' Brick House, Proctors Bridge Road



The Grays' Brick House ruins, located off of Proctors Bridge Road, was constructed circa 1825 according to a previous survey. Although the home likely exhibited stylistic influences and features, any such detail is no longer extant in its current ruinous condition. All that remains of the structure are the walls of the primary block. The two-and-a-half-story masonry structure is constructed of brick laid in a 5:1 American bond and rests on a continuous foundation of the same construction. Scarring in the exterior brick indicates that it had been topped by a gable roof with a one-story gabled wing on one side, however neither of these features remain. A large, brick chimney laid in a 3:1 American bond is located on one side of the structure. Multiple door and window openings are present on the structure, however none contain their former occupants. On the interior of the structure, remnants of scratch coat plaster remain on the walls in some places.

This property is located on the west side of Proctors Bridge Road near its intersection with Mill Swamp Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The ruins is set far from the road within a densely forested area with no formal access points leading to the structure. No associated structures or other extant resources were observed on the property, however, a variety of evidence on the surrounding landscape is suggestive of archaeological features.

This property represents the remains of an early nineteenth century single dwelling in the region, that now remains in a ruinous condition. As all that remains of the building are the brick exterior walls and all other structural materials and features are gone, the ruins lack historical integrity and are therefore considered ***not eligible*** for listing in the NRHP as an architectural resource, however, warrants further archaeological investigation (recorded as Site 44IW0407).

VDHR# 046-0057
Brick House, Mill Swamp Road



The brick house ruins off of Mill Swamp Road was constructed circa 1825 according to a previous survey. Although the home likely exhibited stylistic influences and features, any such detail is no longer extant in its current ruinous condition. The two-story structure is constructed of brick laid in a 3:1 American bond and rests on a raised English Basement brick foundation of the same construction. It appears that it was once topped by a gable roof, however the roof is not intact. A large, brick chimney is located on the east side of the ruins, with hearths present on both the first and second floors in the interior of the building. The elevations appear symmetrical, with evenly spaced window openings, however none of the windows remain intact.

The ruins are located on a large, rural lot on the southeast corner of Mill Swamp Road and Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The ruins are set far back from the road within a large, open agricultural field and is immediately surrounded by overgrown vegetation in on an otherwise sparsely vegetated lot. There are no formal access points or associated structures on the property.

This property represents the remains of an early nineteenth century single dwelling in the region, that now remains in a ruinous condition. As all that remains of the building are the brick exterior walls and all other structural materials and features are gone, the ruins lack historical integrity and are therefore considered ***not eligible*** for listing in the NRHP as an architectural resource, however, warrants further archaeological investigation (recorded as Site 44IW0424).

VDHR# 046-0068
Wilson Hollemon House, 5499 Mill Swamp Road



The Wilson Hollemon House, located at 5499 Mill Swamp Road, was constructed in 1830 according to local land records. It remains in good condition and exhibits Georgian style influences. The two-story, five-bay, L-shaped masonry structure is constructed of brick laid in a 3:1 American bond and rests on a continuous foundation of the same construction. It is topped by a half-hipped gable roof sheathed in asphalt shingles and embellished with dentils lining its molded cornice. Three chimneys flank the roof – one on each gable end – and are laid in a 3:1 American bond with corbelled bases. Fenestration on the structure consists of two-over-two double-hung windows set in wood frames with wide, flared lintels. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door with a transom featuring elliptical filagree. Sheltering part of the façade is a one-story, three-bay porch supported by fluted Ionic columns and pilasters. A central, one-bay balcony rests on the flat roof of the first story porch, being a later addition constructed in 1917. This balcony is sheltered by a pedimented gable roof with the same supports as the first story porch and is enclosed by a wood balustrade with turned balusters.

This property is located on the north side of Mill Swamp Road between Proctors Bridge Road and the end of Jones Town Drive with the crossroads community of Sycamore Crossroads. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields. Set back approximately 250 feet from the road, the house rests on a gently sloping grass lawn and is accessed by a long, gravel driveway. Vegetation surrounding the house includes rows of mature shade trees and some planted shrubs along the edges of the house, along with a garden in the backyard. Several domestic and agricultural outbuildings are clustered behind the house as well as a cemetery.

The Wilson Hollemon House was constructed in 1830 according to previous documentation and functioned as both the Holleman family home and the Mayfield Post Office. Mayfield was one of the earliest post offices in Isle of Wight County and was later replaced by the nearby Sycamore Crossroads Post Office. Wilson Hollemon was both the original owner of the home and the first postmaster at Mayfield (Kind 1993:328-330). The post office was discontinued circa 1886, however the house has been passed down through the generations of the Holleman family and presently remains owned by the family. Additionally, the house represents a remarkably well-preserved example of an early Georgian-style home predating the Civil War in Isle of Wight County, as it has undergone little alteration since its original construction. For its association with Wilson Hollemon and the Mayfield Post Office, as well as its standing as a significant example of historic architecture in Isle of Wight County, this resource will be considered ***potentially eligible for listing in the NRHP*** under Criteria A and C for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located outside of the project area and not within the limits of any proposed sitework, this assessment was focused on indirect (visual) impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The Wilson Hollemon House is set on a rural lot on the north side Mill Swamp Road to the east of the project area. Although the rear edge of the property is adjacent to the project limits, the home is set closer to the front of the property and is roughly 515 feet from the project area limits at the nearest point with proposed improvements setback an additional 130 feet. The landscape between the property and the project area is characterized by open agricultural field with a treeline bordering a draw that runs along the edge of the project area.

Inspection from Mill Swamp Road along the front of the property revealed that the treeline extending between it and the project area generally screens views of the portion of the project area on the north side of the road. The treeline is a mix of deciduous trees and low evergreen shrubs, and at generally 250 feet wide, it is anticipated that it would provide screening year-round. The treeline stops short of the road, however, and therefore there is a narrow "window" in which the front edge of the project area along the road is visible, however, project improvements will be setback from the road by a minimum of 100 feet and as such would be mostly screened. While a large, wooded area screens views of the majority of the portion of the project area on the south side of the road, a narrow strip of the development area set between the road and the wooded area is visible.

As such, the project as currently designed has the potential to introduce a change to the viewshed and setting of the property. While the vast majority of the project and associated improvements are anticipated to be screened from view by existing vegetation patterns coupled with project setbacks, there are discrete areas where project components may be visible from the public road along the front of the property, as well as from within the property and in the vicinity of the house. To minimize the potential from views within these areas, supplemental landscape buffer will be planted within the 100-foot project setback. With the proposed setbacks and supplemental landscape buffer, it is D+A's recommendation that the project will be mostly screened from view

from the house and public vantage along the road to the front, and therefore result in no more than a ***minimal impact*** to the Wilson Hollemon House per VDHR's impact characterization.

Figure 8-2 illustrates the location of the Wilson Hollemon House in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-3 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-4 through Figure 8-7 provide representative photographs of and from the resource towards the project area.

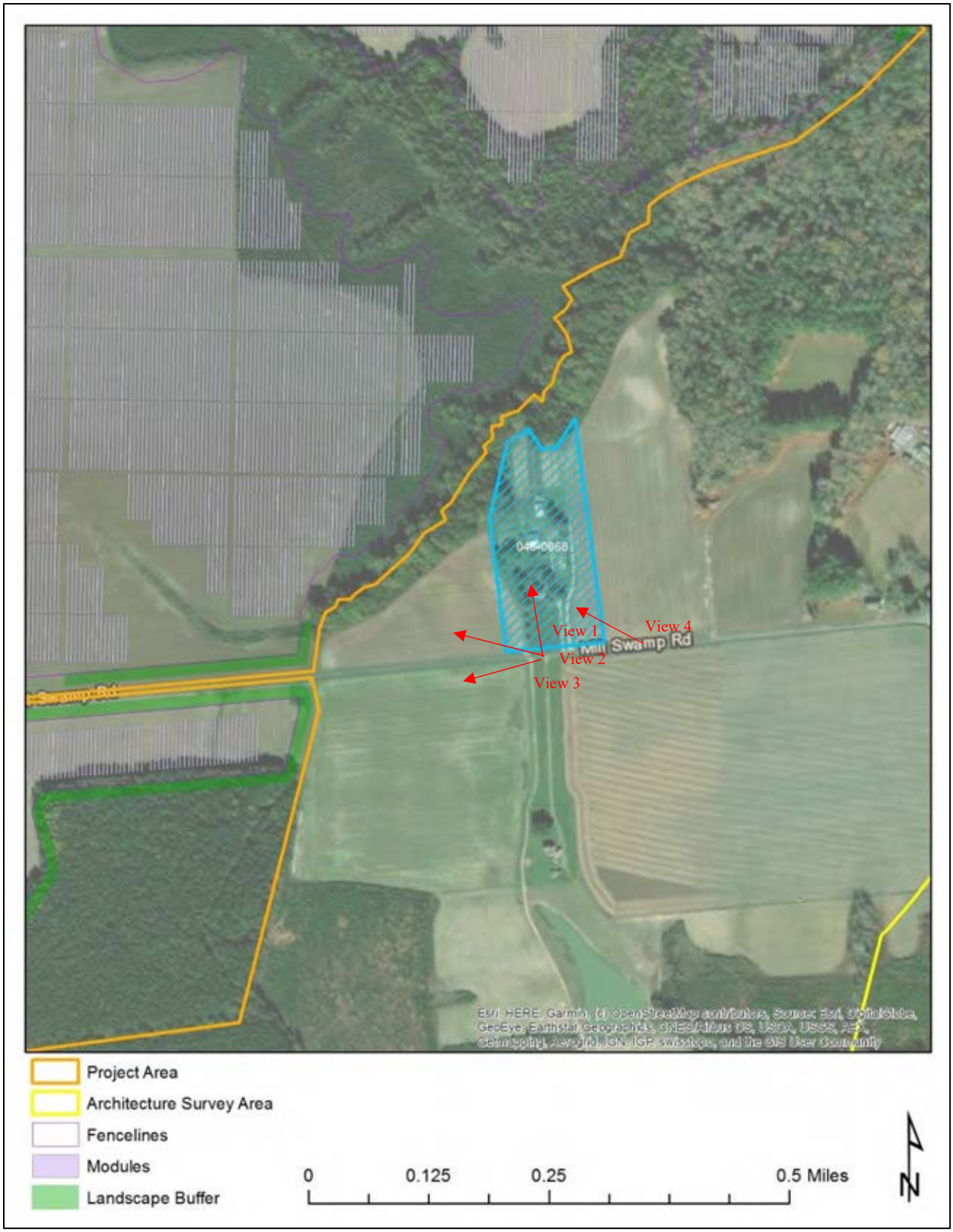
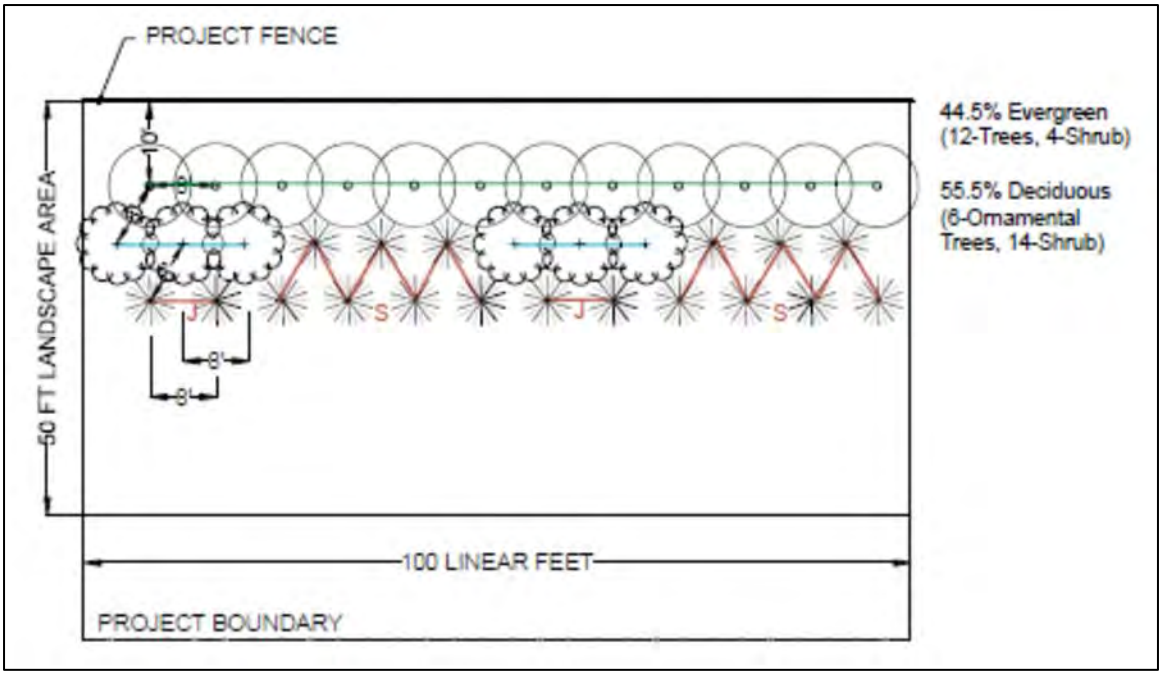


Figure 8-2: Wilson Hollemon House in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-3: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-4: View 1 – View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing north. (project area not visible – screened by treeline)



Figure 8-5: View 2 - View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing northwest. (project area mostly screened by treeline; small area visible)

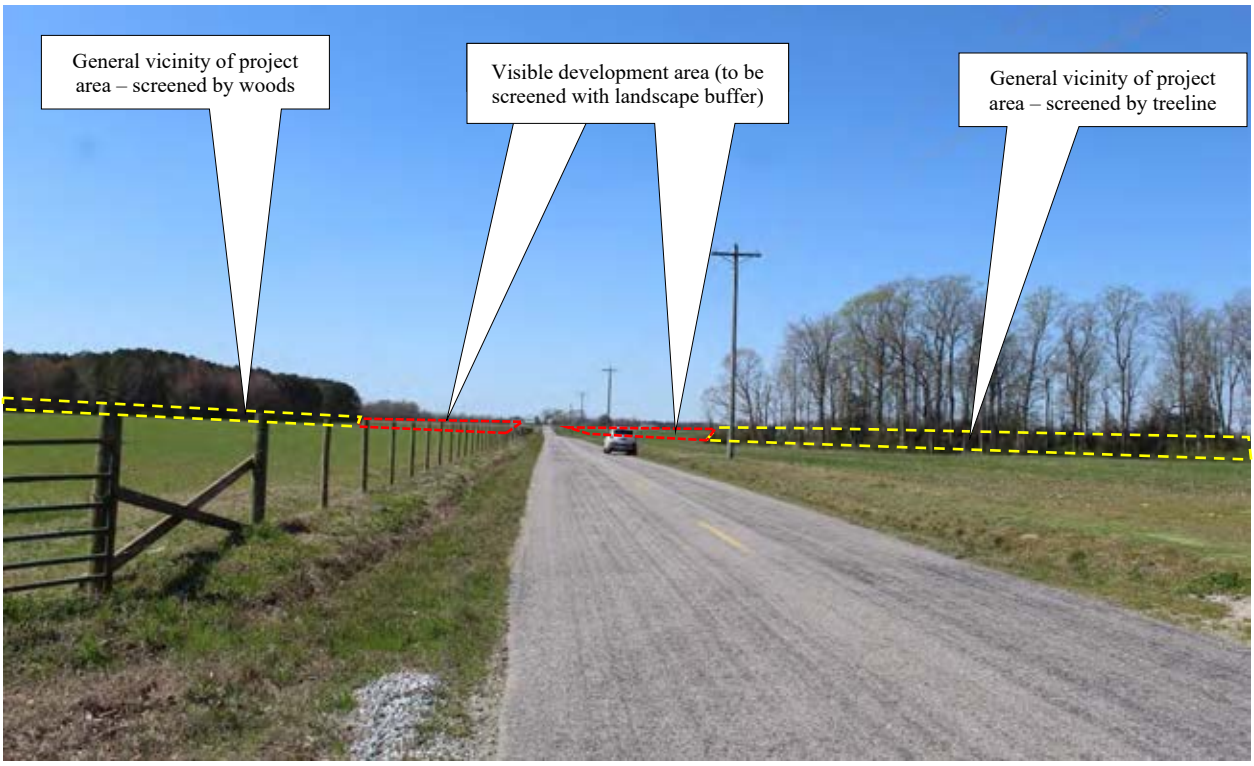


Figure 8-6: View 3 - View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing west. (project area mostly screened with exception of portions near the road that are visible)



Figure 8-7: View 4 - View from Mill Swamp Road east of the Wilson Hollemon House looking towards the project area, facing northwest. (project area not visible – screened by treeline)

VDHR# 046-5147
House, 14385 Rattlesnake Trail



The house at 14385 Rattlesnake Trail was constructed in 1850 according to local land records. It remains in fair condition and exhibits a Vernacular style. The wood frame structure is comprised of a two-and-a-half-story, three-bay main block with a two-story, two-bay wing on its east side. Both blocks are sheathed in asbestos siding and topped by a gable roof sheathed in standing seam metal. The roof of the primary block is pierced by a brick interior end chimney on its west side and embellished with gable returns. Fenestration on the structure includes four-over-four double-hung sash windows on the main block and six-over-six double-hung sash windows on the west wing. The primary entrance is located on the left side of the front (north) elevation on the main block and consists of a set of double-leaf doors flanked by sidelights. Sheltering the entrance is a one-story, one-bay entry porch with a shed roof supported by metal posts.

This property is located on the southeast side of Rattlesnake Trail adjacent to its intersection with Ramsey Road. The landscape within and around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back from the road at the center of a large agricultural field and is accessed by a long, gravel driveway that extends from the road to the south side of the lot. Vegetation surrounding the house includes several mature shade trees as well as rows of boxwoods along the edges of the structure. Parts of the lot are divided by wood and wire fencing, ponds, and thickets of trees. Several domestic and agricultural outbuildings are scattered in the fields to the north, south, and east of the house.

This property is an example of a typical mid-nineteenth century rural home in the region. This building reflects a Vernacular style with little architectural distinction. It does not embody distinctive characteristics or possess significant or unique architectural or design features and has been subject to a variety of additions and alterations. Reconnaissance-level research revealed no

known significant historical associations and therefore the property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5148
House, 13407 Ramsey Road



The house at 13407 Ramsey Road was constructed in 1880 according to local land records. It remains in poor condition and exhibits Colonial Revival style influences as applied to an I-house form. The two-story, three-bay wood frame structure rests on a continuous brick foundation laid in an American bond and is topped by side gable roof sheathed in asphalt shingles. The roof is pierced by two brick interior central chimneys at its ridge and is embellished with pedimented gable ends. A two-story rear ell topped by a gable roof is attached to the east side of the structure and features a third brick interior central chimney. Piercing the weatherboard siding are six-over-six double-hung sash windows. The primary entrance is centered on the symmetrical front (west) elevation, consisting of a single door with a transom and sidelights. Sheltering the entrance is a two-story, one-bay porch featuring a pedimented gable, square Doric columns, and wood balustrades. A door on the second story of the house leads to the second story balcony.

This property is located on the northeast corner of Ramsey Road and Rattlesnake Trail. The landscape within and around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields. The house is set far back from the road at the center of a wide, open agricultural field. The homesite is surrounded by a wood fence with brick entry posts and vegetated with several mature shade trees and a substantial amount of overgrown shrubbery. The property is accessed by two long, gravel driveways – one that extends from Ramsey Road to the front of the house and one that extends from Rattlesnake Trail to the outbuildings behind the house. Outbuildings on the property include a barn and a vehicle shed located behind the house.

This property is an example of a typical late nineteenth century single dwelling in the region. This building reflects a Colonial Revival style as applied to a Vernacular I-house form. 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. Additionally, the structure remains in poor condition and appears to have been vacant for an extended period. Therefore, the resource is considered ***not eligible*** for listing in the NRHP..

VDHR# 046-5149
Sycamore Cross Post Office, Mill Swamp Road



The Sycamore Cross Post Office, located off of Mill Swamp Road, was constructed in 1899 according to a previous survey. It remains in fair condition and exhibits a vernacular style typical of contemporary rural commercial buildings in southeastern Virginia. The two-story wood frame structure rests on a brick pier foundation and is clad in weatherboard siding. It is topped by a gable roof sheathed in standing seam metal and embellished with gable returns. Extending from the east and west sides of the structure are two one-story, shed-roofed wings. Fenestration on the structure includes six-over-six double-hung sash windows, however few remain on the structure. The primary entrance consists of a single door centered on the symmetrical front (north) elevation and approached by a small, wood stoop.

The Sycamore Cross Post Office is located on the west side of Mill Swamp Road adjacent to its intersection with Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The building is set close to the road on a flat, sparsely vegetated grass lawn with a short, chain fence extending along the road. The property is accessed by two short, gravel driveways off of Mill Swamp Road. The only outbuilding on the property is a shed located just south of the post office.

The Sycamore Cross Post Office opened in 1886 as McClelland's Post Office and operated until 1917 with William Henry (Harry) McClelland serving as its first postmaster. Harry McClelland operated the post office out of a store he ran in the yard of the neighboring home, known as the Guy Betts House. The post office was discontinued in 1917 and the mail rerouted to Ivor (King 1993:331). This resource represents a well-preserved example of an early post office in Isle of Wight County and warrants further investigation to determine the extent of its significance within the local community. As such, this property is considered ***potentially eligible for listing in the NRHP***.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The Sycamore Cross Post Office is situated on a small roadside lot on the west side of Sycamore Cross Road, just across from the intersection with Mill Swamp Road. The entire property is located within the project lease area, however, it is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, although the building and its associated property will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape bordering the property to the west, as well as across Sycamore Cross Road on both sides of Mill Swamp Road. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads with larger setbacks in some areas. With these setbacks, the project fenceline will be roughly 150 feet from the post office building at the nearest point.

Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Crossroads community, including the c.1852 dwelling associated with the post office immediately to the north, the c.1850 Betts Farm house, and the c.1825 Brick House ruins will all remain visible from the post office, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage in the vicinity of the property, as well as within the setback area between the project fenceline and the building complex.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays, however, the visible extent of the project would be reduced through supplemental landscape buffer. Therefore, it is D+A's opinion that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in some directions, the Sycamore Cross Solar Project has the potential to result in a ***moderate impact*** overall to the Sycamore Cross Post Office per VDHR's impact characterization.

Figure 8-8 illustrates the location of the Sycamore Cross Post Office in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-9 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-10 through Figure 8-13 provide representative photographs of and from the resource towards the project area.

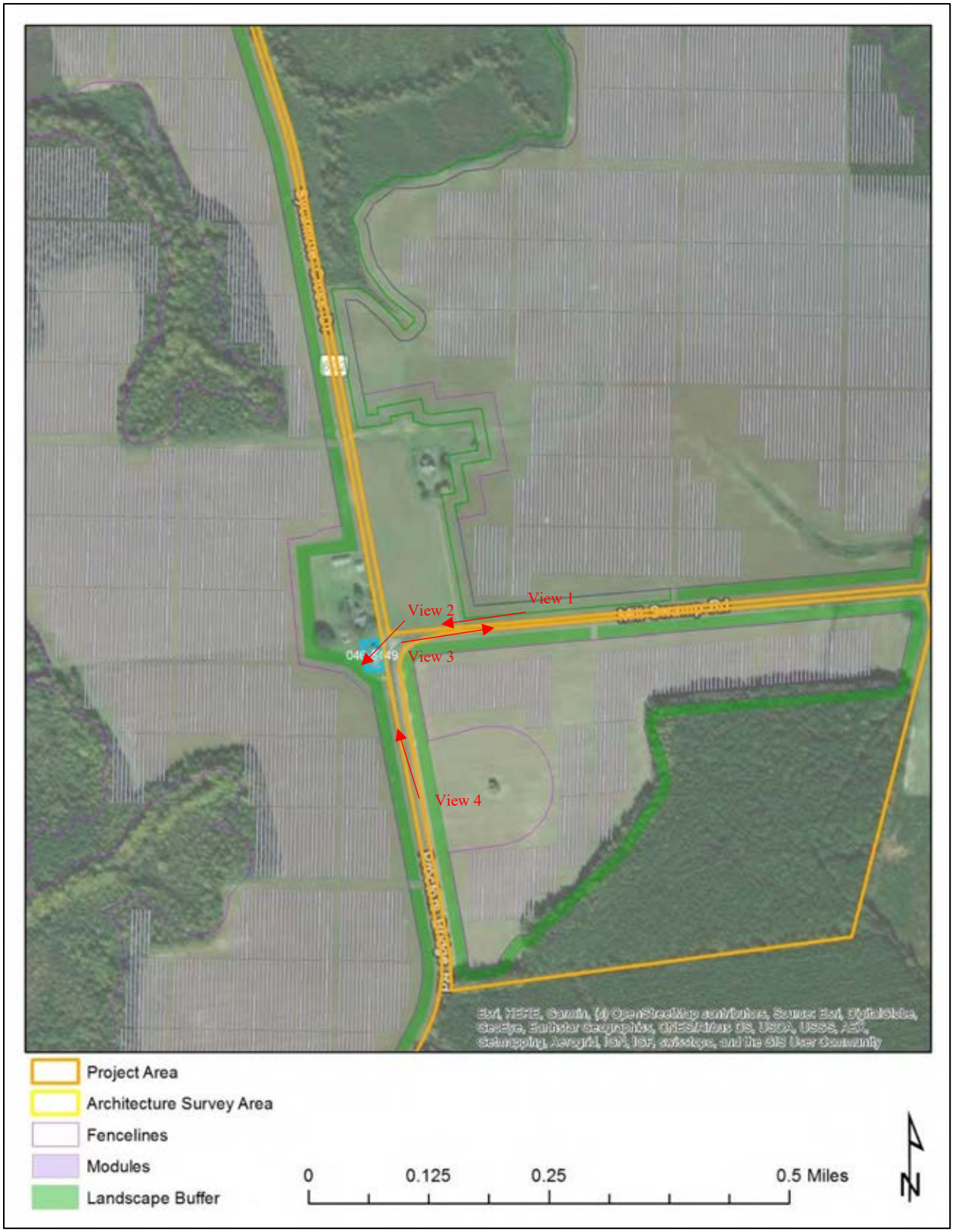
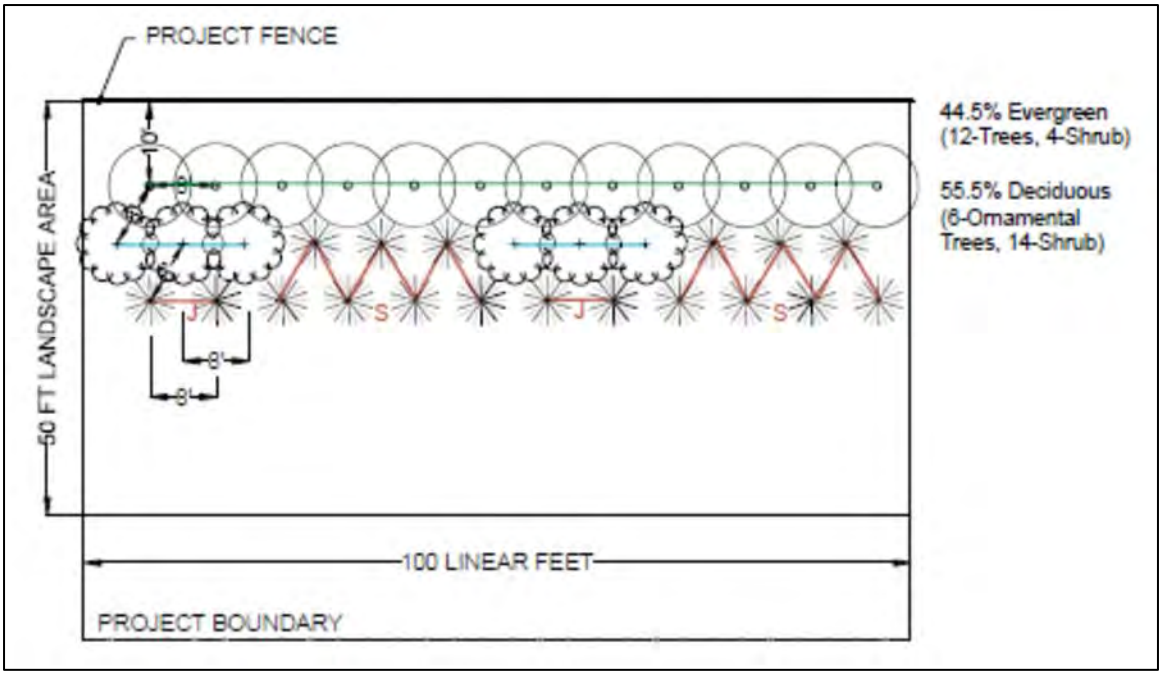


Figure 8-8: Sycamore Cross Post Office in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-9: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-10: View 1 – View of Sycamore Cross Post Office from Mill Swamp Road, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-11: View 2 - View of Sycamore Cross Post Office from intersection of Sycamore Cross and Mill Swamp Roads, facing southwest. (Development area visible in field beyond property)



Figure 8-12: View 3 - View from Sycamore Cross Post Office, facing east. (Development area visible along both sides of Mill Swamp Road)



Figure 8-13: View 4 - View of Sycamore Cross Post Office from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

VDHR# 046-5150
House, 11356 Sycamore Cross Drive



The house at 11356 Sycamore Cross Drive was likely constructed circa 1899, contemporary to the adjacent Sycamore Cross Post Office with which it was historically associated. It remains in good condition and exhibits Folk Victorian style influences. The two-story, L-shaped building is comprised of a three-bay I-house front block topped by a side gable roof with a rear ell topped by a cross gable. The wood frame structure rests on a continuous foundation and is clad in vinyl siding. The roof is sheathed in asphalt shingles and pierced by a brick interior central chimney and two brick interior end chimneys, as well as a small, central cross gable on its front slope. Fenestration on the structure includes single and paired two-over-two double-hung sash windows. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door topped by a transom. Sheltering the entrance is a one-story hipped porch that wraps around the east side of the house and is supported by Doric columns.

This house is located on a large, rural lot on the west side of Sycamore Cross Drive adjacent to its intersection with Mill Swamp Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. Set back roughly 60 feet from the road, the house rests on a flat grass lawn enclosed by a wood fence and vegetated with several mature shade trees and clusters of planted boxwoods. The property is accessed by a short, gravel driveway that extends from the road to a detached garage. Outbuildings on the property include the garage, a gazebo, a shed, and several agricultural outbuildings.

This property represents an example of a well-preserved rural home featuring a Folk Victorian style. Although the original owner of the property is unknown, historical writings refer to the home as the “Guy Betts House” and thus likely belonged to the Betts family, whose name appears on mid-nineteenth century maps within and in the general vicinity of the project area. Additionally, it appears that this property was historically associated with a neighboring property that functioned

as an early store and post office servicing the Sycamore Crossroads community. As such, this property warrants further study to determine the extent of its significance and is therefore considered ***potentially eligible for listing in the NRHP*** for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The house is situated on a small roadside lot on the west side of Sycamore Cross Road, just across from the intersection with Mill Swamp Road. The entire property is located within the project lease area, however, it is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, although the building and its associated property will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape bordering the property to the west, as well as across Sycamore Cross Road on both sides of Mill Swamp Road. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads with larger setbacks in some areas. With these setbacks, the project fenceline will be roughly 275 feet from the house at the nearest point.

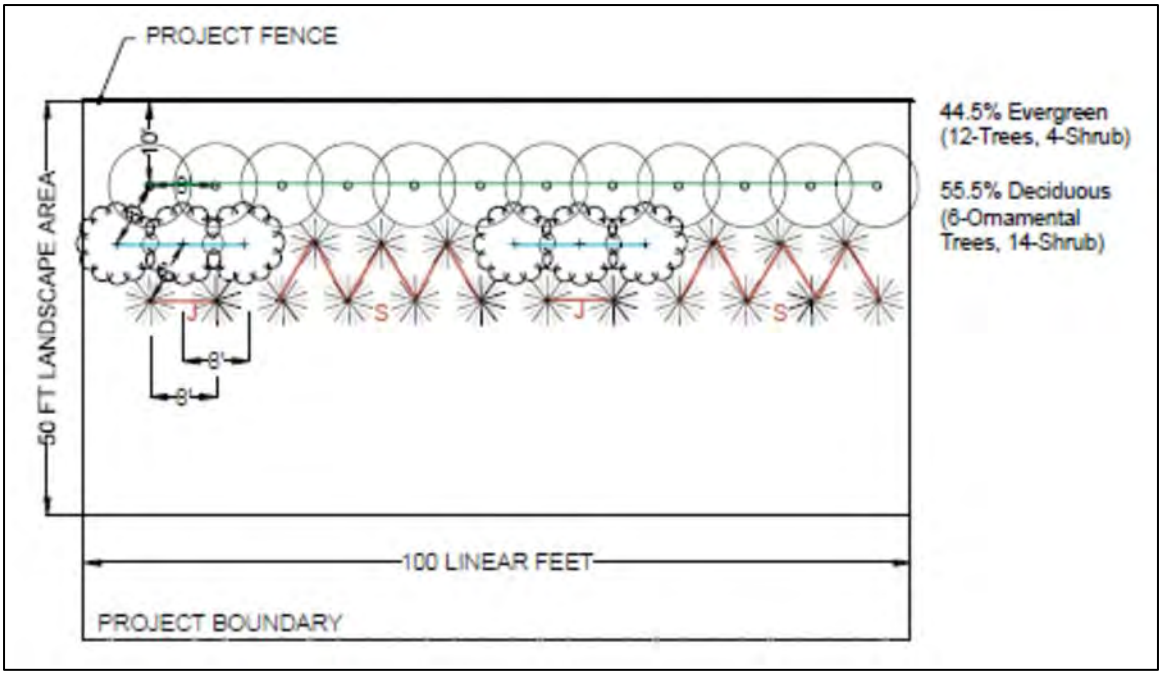
Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Crossroads community, including the c.1899 Sycamore Cross Post Office immediately to the south, the c.1850 Betts Farm house, and the c.1825 Brick House ruins will all remain visible from the Guy Betts House, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage in the vicinity of the property, as well as within the setback area between the project fenceline and the building complex.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays, however, the visible extent of the project would be reduced through supplemental landscape buffer. Therefore, it is D+A's opinion that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in some directions, the Sycamore Cross Solar Project has the potential to result in a ***moderate impact*** overall to the house at 11356 Sycamore Cross Drive per VDHR's impact characterization.

Figure 8-14 illustrates the location of the house in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-15 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-16 through Figure 8-21 provide representative photographs of and from the resource towards the project area.



Figure 8-14: House at 11356 Sycamore Cross Drive in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-15: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-16: View 1 – View of House at 11356 Sycamore Cross Drive from Mill Swamp Road, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-17: View 2 - View of House at 11356 Sycamore Cross Drive from intersection of Sycamore Cross and Mill Swamp Roads, facing northwest. (Development area visible in field beyond property)

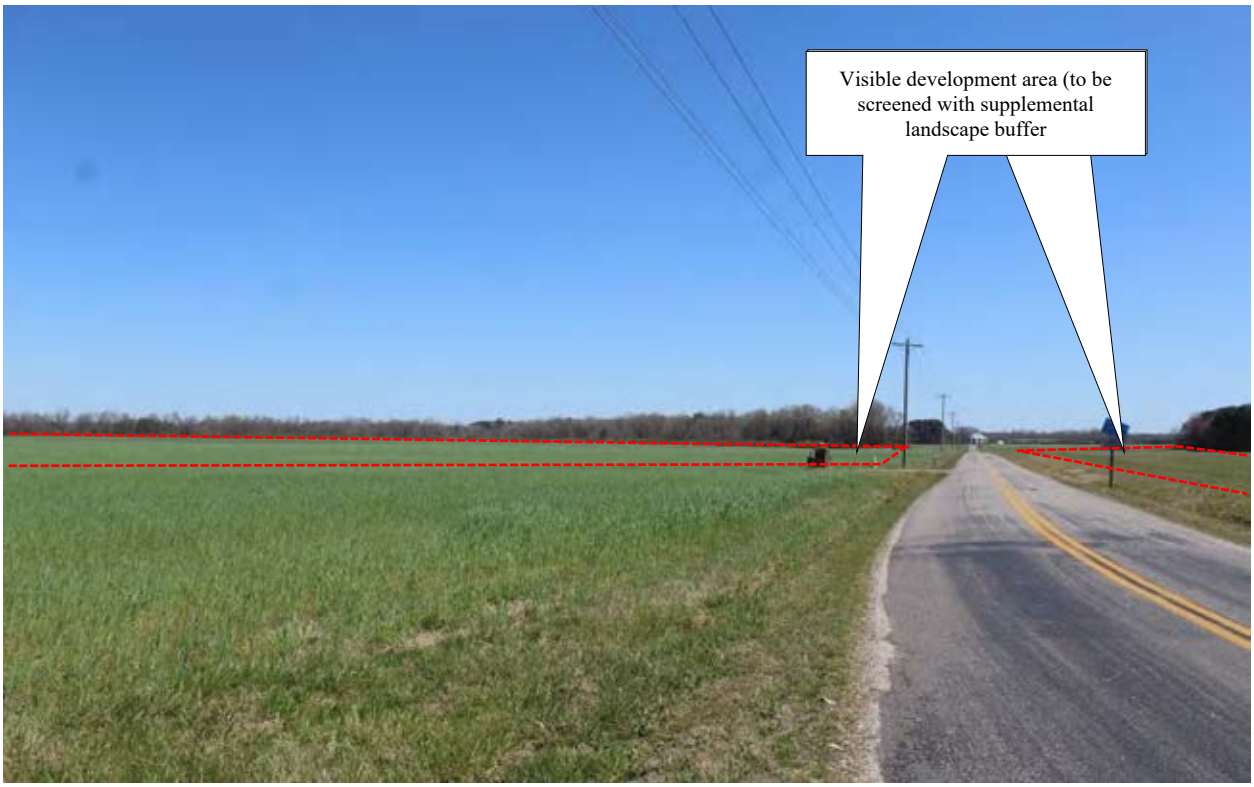


Figure 8-18: View 3 - View from House at 11356 Sycamore Cross Drive, facing east. (Development area visible along both sides of Mill Swamp Road)

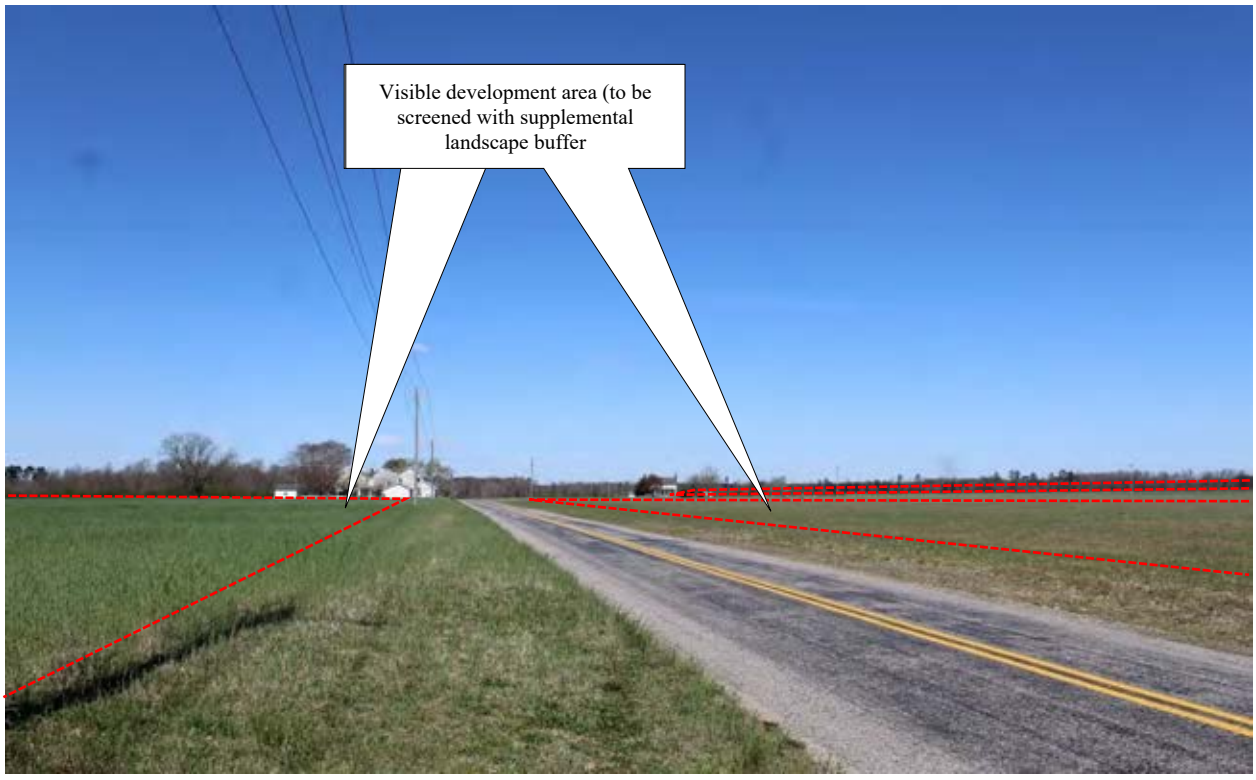


Figure 8-19: View 4 - View towards House at 11356 Sycamore Cross Drive from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

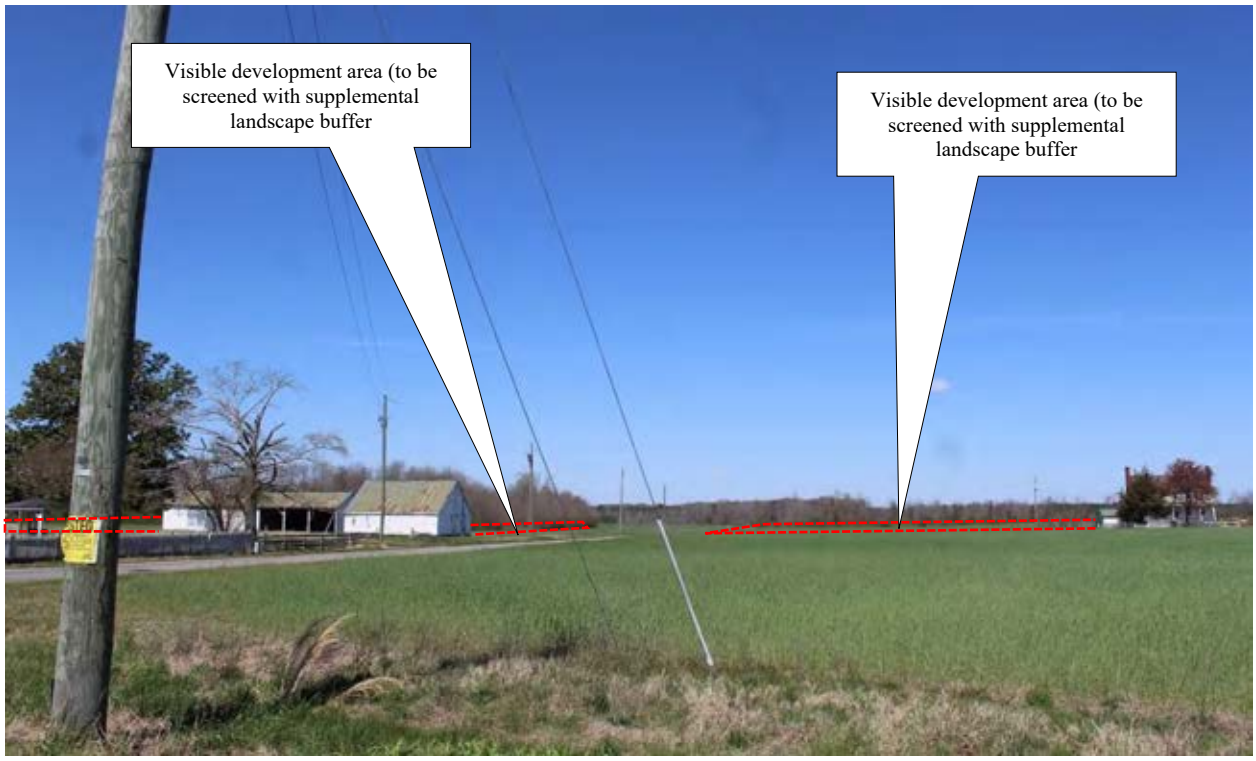


Figure 8-20: View 5 - View from Mill Swamp Road near the House at 11356 Sycamore Cross Drive, facing northwest. (Development area visible along both sides of Sycamore Cross Road)



Figure 8-21: View 6 - View of the House at 11356 Sycamore Cross Drive property from Sycamore Cross Road, facing south. (Development area visible in field bordering the property)

VDHR# 046-5151
Mill Swamp Baptist Church & Cemetery, 6329 Mill Swamp Road



Mill Swamp Baptist Church, located at 6329 Mill Swamp Road, was constructed in 1928 according to a previous survey. It remains in good condition and exhibits Colonial Revival style influences. The structure is comprised of a one-story main block topped by a front gable roof with a one-story, T-shaped rear addition topped by a metal-sheathed cross gable roof. The front block rests on a continuous concrete foundation and is clad in a brick veneer. Its roof is sheathed in asphalt shingles and embellished with modillions lining its pedimented gable. Piercing the roof of the primary block is a tall steeple near the front of the structure. Fenestration on the structure includes large stained glass windows on the main block and one-over-one double-hung sash windows on the rear addition. Three entrances are located on the front (south) elevation of the main block, each consisting of a pair of double-leaf, partially-glazed doors topped with a multi-light transom. Sheltering these entrances is a three-bay portico with a pedimented gable supported by fluted Doric columns and approached by a wide set of concrete steps.

This church is located on a rural property on the northwest corner of Mill Swamp Road and White Hill Trail. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The church is set close to the road at the top of a slight knoll and is surrounded by a large, paved parking lot accessed via driveways off of both Mill Swamp Road and White Hill Trail. Vegetation on the property is limited to sparse landscaping around the church and several mature trees shading the cemetery. To the north and west of the property is a densely forested area. There are no associated structures remaining on the property, however a large cemetery associated with the church is located to its southwest.

This property is an example of a typical early twentieth century church in the region. This building reflects a Colonial Revival style with little architectural distinction. 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# 046-5152
Store, 6159 Jones Town Road



The store at 6159 Jones Town Road was constructed in 1946 according to local land records. It remains in poor condition and exhibits a Vernacular style. The one-story, three-bay wood frame structure rests on a continuous concrete block foundation and is clad in vinyl siding. It is topped by a hipped roof sheathed in standing seam metal and pierced by a concrete block interior end chimney. The roof extends past the front elevation creating a porch on the front of the structure supported by wood posts resting on concrete piers. Fenestration on the structure includes one-over-two double-hung sash windows. The primary entrance consists of a single door centered on the symmetrical front (south) elevation.

This structure is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The structure is set close to the road and is surrounded by overgrown trees and scrub brush that partially obscures it from view. No outbuildings were observed on the property.

This property is an example of a typical mid-twentieth century rural commercial building in the region. This building reflects a Vernacular style with little architectural distinction. 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# 046-5260
Mill Swamp Baptist Church Parsonage, 6330 Mill Swamp Road



The house at 6330 Mill Swamp Road was constructed circa 1900 and historically functioned as the parsonage of the adjacent Mill Swamp Baptist Church according to a previous survey. This structure was previously recorded as a two-story wood frame structure with weatherboard siding and a side gable roof flanked by brick exterior end chimneys. A site visit, coupled with inspection of historic aerial imagery, reveals that this structure has been demolished and removed from the site.

The site of the demolished resource is located on the southeast side of Mill Swamp Road adjacent to its intersection with White Hill Trail. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The only remaining structures on the property are a concrete block wellhouse and a garage.

As the primary resource is no longer extant, this resource is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5804
House, 10325 White Hill Trail



The house at 10325 White Hill Trail was constructed in 1953 according to local land records. It remains in poor condition and exhibits a Craftsman style. The one-and-a-half-story wood frame structure rests on a continuous foundation clad in a brick veneer and topped by a side gable roof sheathed in asphalt shingles. Piercing the roof is a brick interior central chimney at its ridge as well as a large, gabled dormer on its front slope. The structure is clad in vinyl siding and features six-over-six double-hung sash windows. A one-story screened-in porch supported by square wood posts resting on brick piers spans the full width of the front (west) elevation.

This house is located on a large, rural lot on the east side of White Hill Trail northwest of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back roughly 110 feet from the road on a flat grass lawn vegetated with overgrown trees and scrub brush that partially obscures the structure from view. There are no remaining formal access points on the property. The only outbuilding on the property is a small, dilapidated shed set behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Craftsman style with little architectural distinction. 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# 046-5805
House, 10261 White Hill Trail



The house at 10261 White Hill Trail was constructed in 1972 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure rests on a continuous foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles and pierced by a brick interior slope chimney. Fenestration on the structure includes single and paired two-over-two double-hung sash windows as well as a picture window to the left of the entrance. The primary entrance consists of a single door on the front (west) elevation sheltered by the slightly overhanging eaves of the roof and approached by a small brick stoop. The eaves of the roof extend beyond the southwest corner of the structure creating an attached carport.

This house is located on the east side of White Hill Trail northwest of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the house rests on a grass lawn vegetated with several mature evergreen trees and scattered boxwoods. The property is accessed by a paved driveway that extends from the road to the attached carport. The only outbuilding on the property is a small, prefabricated shed located just off the southeast corner of the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 046-5806
House, 6262 Mill Swamp Road



The house at 6262 Mill Swamp Road was constructed in 1955 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure is clad in a brick veneer and topped by a hipped roof sheathed in asphalt shingles. Piercing the roof are two brick interior central chimneys and a single brick interior end chimney at the rear of the structure. Fenestration on the structure includes single and paired six-over-six double-hung sash windows as well as a large picture window to the left of the front entrance. The primary entrance consists of a single door slightly recessed beneath the eaves of the roof on the front (northwest) elevation.

This house is located on the southeast side of Mill Swamp Road just south of its intersection with White Hill Trail. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back from the road on a grass lawn surrounded by a wood fence. Vegetation on the property includes a variety of shade trees as well as rows of boxwoods along the edges of the house. The property is accessed by a long, unpaved driveway that extends past the side of the house to the detached garage. Outbuildings on the property include the garage as well as a shed located behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 046-5807
Industrial Complex, 11321 Jones Town Drive



The industrial complex at 11321 Jones Town Drive was constructed in 1959 according to local land records. It remains in fair condition and exhibits no discernable style. This complex is comprised of a tall granary surrounded by several large grain silos and a large, adjacent metal barn. Each component of the complex is a metal frame structure clad in metal siding with a metal-sheathed roof. The barn is topped by a gable roof and the silos are topped by conical roofs.

This complex is located on the southeast corner of Jones Town Drive and Mill Swamp Road. Around the property, the landscape is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The complex is set close to the road at the edge of an open agricultural field and accessed by a short, gravel driveway. Other structures on the property include an office building and a large vehicle shed.

This property is an example of a typical mid-twentieth century commercial granary within a rural setting in the region. The structures reflect no discernable style with little architectural distinction. 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 structure 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# 046-5808
House, 6177 Mill Swamp Road



The house at 6177 Mill Swamp Road was constructed in 1968 according to local land records. It remains in poor condition and exhibits no discernable style. The one-story wood frame structure rests on a continuous concrete block foundation and is clad in asbestos siding. It is topped by a side gable roof sheathed in asphalt shingles and pierced by a concrete block interior chimney on its front slope. Fenestration on the structure includes one-over-one double-hung sash windows as well as a large, fixed window to the left of the front entrance. The primary entrance consists of a single door on the front (southeast) elevation approached by a small concrete stoop.

This house is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set back roughly 50 feet from the road, the house rests at the top of a berm extending along the road and is surrounded by overgrown trees and shrubbery. Outbuildings on the property include three sheds, a wellhouse, and a vehicle shed.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 046-5809
Commercial Building, 6143 Mill Swamp Road



The commercial building at 6143 Mill Swamp Road remains in fair condition and exhibits no discernable style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this building was constructed circa 1970. The one-story. L-shaped concrete block structure rests on a continuous concrete block foundation and is topped by a cross gable roof with overhanging eaves and exposed rafters. The roof is sheathed in asphalt shingles and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one and six-over-six double-hung sash windows. Other bays on the structure include wide loading docks and a single pedestrian entrance on its south elevation.

This structure is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the building rests on a flat, sparsely vegetated grass lawn. No associated structures or other resources were observed on the property.

This property is an example of a typical late twentieth century commercial building in the region. This building reflects no discernable style with little architectural distinction, and based upon its form, likely functioned as an automotive shop. 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# 046-5810
House, 5498 Mill Swamp Road



The house at 5498 Mill Swamp Road was constructed in 1899 according to local land records. It remains in good condition and exhibits Folk Victorian style influences as applied to an expanded I-house form. The wood frame structure is comprised of a two-and-a-half-story, five-bay front block topped by a side gable roof with a two-story rear ell and a one-and-a-half-story wing on its east elevation. The entire structure is clad in vinyl siding and both roofs are sheathed in asphalt shingles. Piercing the roof are two brick interior central chimneys and one brick interior end chimney, as well as a small cross gable centered on the front slope of the front roof. Fenestration on the structure includes single and paired two-over-one double-hung sash windows. The primary entrance is centered on the symmetrical front (north) elevation and consists of a single door with sidelights and a transom. Sheltering the entrance is a one-story, full-width hipped porch supported by Doric columns.

This house is set on a large, rural lot on the south side of Mill Swamp Road between Proctors Bridge Road and Jones Town Drive. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. Set far back from the road, the homesite is located at the center of an expansive agricultural field on a grass lawn vegetated only with sparse scattered shrubbery and a single mature shade tree. The property is enclosed by a wire fence extending along Mill Swamp Road and Jones Town Drive and is accessed via a long, gravel driveway that extends from the road directly to the house. Outbuildings on the property include a garage and two sheds set directly behind the house and a barn set along the east edge of the lot.

This property is an example of a typical late nineteenth century commercial building in the region. This building reflects a Folk Victorian style with little architectural distinction. 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. Additionally, any historically significant architectural features have been obscured by modern alteration. 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# 046-5811
Betts Farm, 5191 Mill Swamp Road



The house at 5191 Mill Swamp Road, known locally as the Betts Farm, was constructed in 1850 according to local land records. It remains in fair condition and exhibits a Federal style as applied to an expanded I-house form. The T-shaped building is comprised of a two-and-a-half-story, five-bay front block topped by a side gable roof with a two-story rear ell and one-story wing attached to the ell, both topped by gable roofs. The wood frame structure rests on a continuous brick foundation and is clad in weatherboard siding. The roofs are sheathed in asphalt shingles and embellished with modillions, gable returns, and cornice skirts. A brick interior end chimney pierces the roof of the rear ell, while two brick exterior end chimneys featuring brick corbelling flank the side of the front block. Fenestration on the structure includes nine-over-nine double-hung sash windows on the first story and six-over-nine double-hung sash windows on the second story. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door with sidelights and a transom. Sheltering the entrance is a one-story, full-width hipped porch supported by Doric columns and accessed by a small set of concrete steps.

This house is located on a rural lot on the northeast corner of Mill Swamp Road and Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The homesite is set far back from the road within a wide, open agricultural field and is enclosed by a wood fence. Vegetation immediately surrounding the house includes scattered shrubs and bushes, as well as a few mature shade trees. The property is

accessed by a long gravel driveway that loops around the house. Outbuildings on the property include a well and shed, a garage, and a domestic outbuilding that appears to have historically functioned as a kitchen or quarters.

This house, referred to locally as the "Betts Farm," represents a rare, well-preserved example of a relatively high-style Federal to Greek Revival transitional style home dating to the mid-nineteenth century within a rural setting in the region. In addition to the primary dwelling, several contemporary outbuildings also remain extant on the property. While reconnaissance-level research did not reveal any notable historical associations, the property warrants further investigation as a rare surviving example of antebellum rural high-style architecture in Isle of Wight County and is therefore considered ***potentially eligible for listing in the NRHP*** for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The house is situated on a small rural lot that has been partitioned off a larger property occupying the northeast corner of the intersection of Mill Swamp and Sycamore Cross roads. While the home lot and large rural property bordering it is located within the project lease area, the home lot itself is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, but the building and its associated property tract will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape adjacent to the property to the north and east, as well as across Sycamore Cross Road to the west and Mill Swamp Road to the south. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads and 115 feet from the property. With these setbacks, the project fenceline will be roughly 215 feet from the house at the nearest point.

Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Cross community, including the c.1825 Brick House ruins across Mill Swamp Road and the c.1899 Sycamore Cross Post Office and house across Sycamore Cross Road will all remain visible from the Betts Farm, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage bordering the property.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays. The visible extent of the project would be reduced through supplemental landscape buffer bordering the property,

however, the portions of the project located on the adjacent fields would remain visible. Therefore, it is D+A's recommendation that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in the bordering fields, the Sycamore Cross Solar Project will result in a ***moderate impact*** overall to the Betts Farm per VDHR's impact characterization.

Figure 8-22 illustrates the location of the Betts Farm in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-23 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-24 through Figure 8-32 provide representative photographs of and from the resource towards the project area.

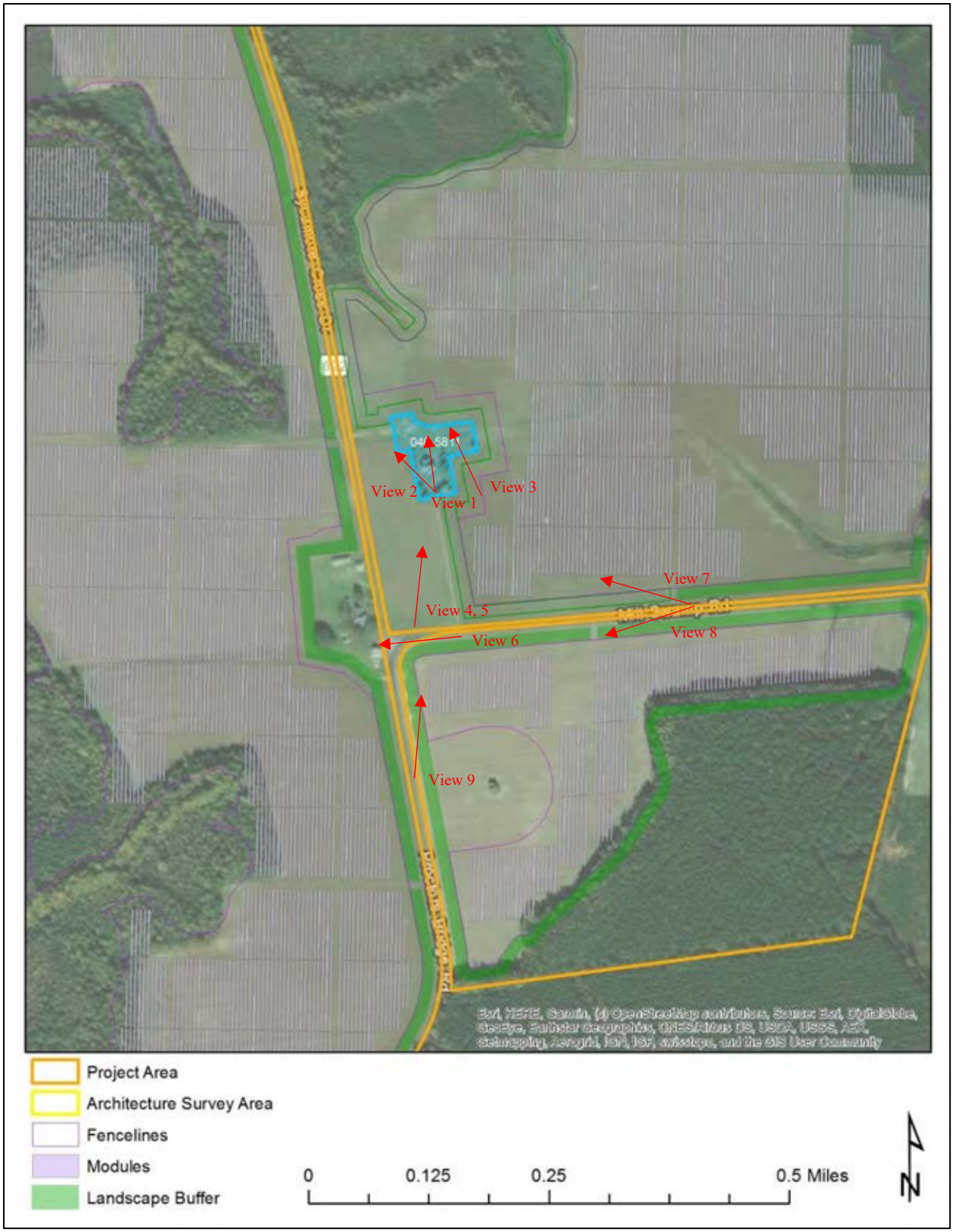
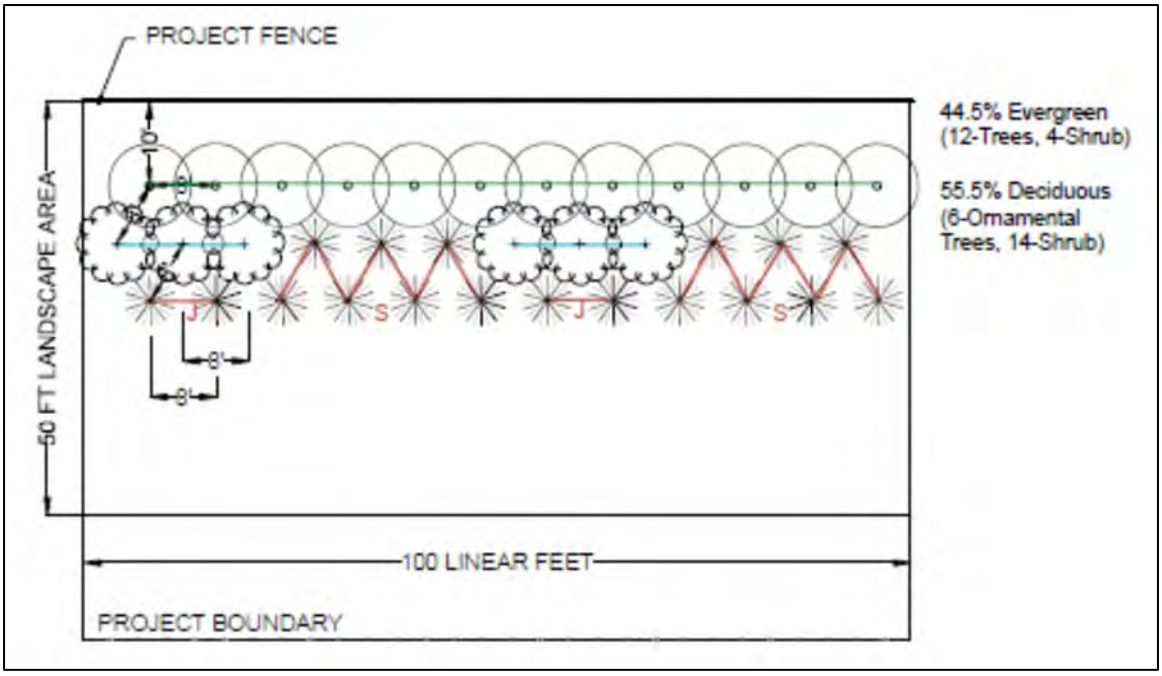


Figure 8-22: Betts Farm in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-23: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-24: View 1 - View of front of Betts Farm house, facing north. (Development area visible in field to rear)



Figure 8-25: View 2 - View from front of Betts Farm house, facing northwest. (Development area visible in field to rear)



Figure 8-26: View 3 - View from front of Betts Farm house, facing northwest. (Development area visible in field to rear)

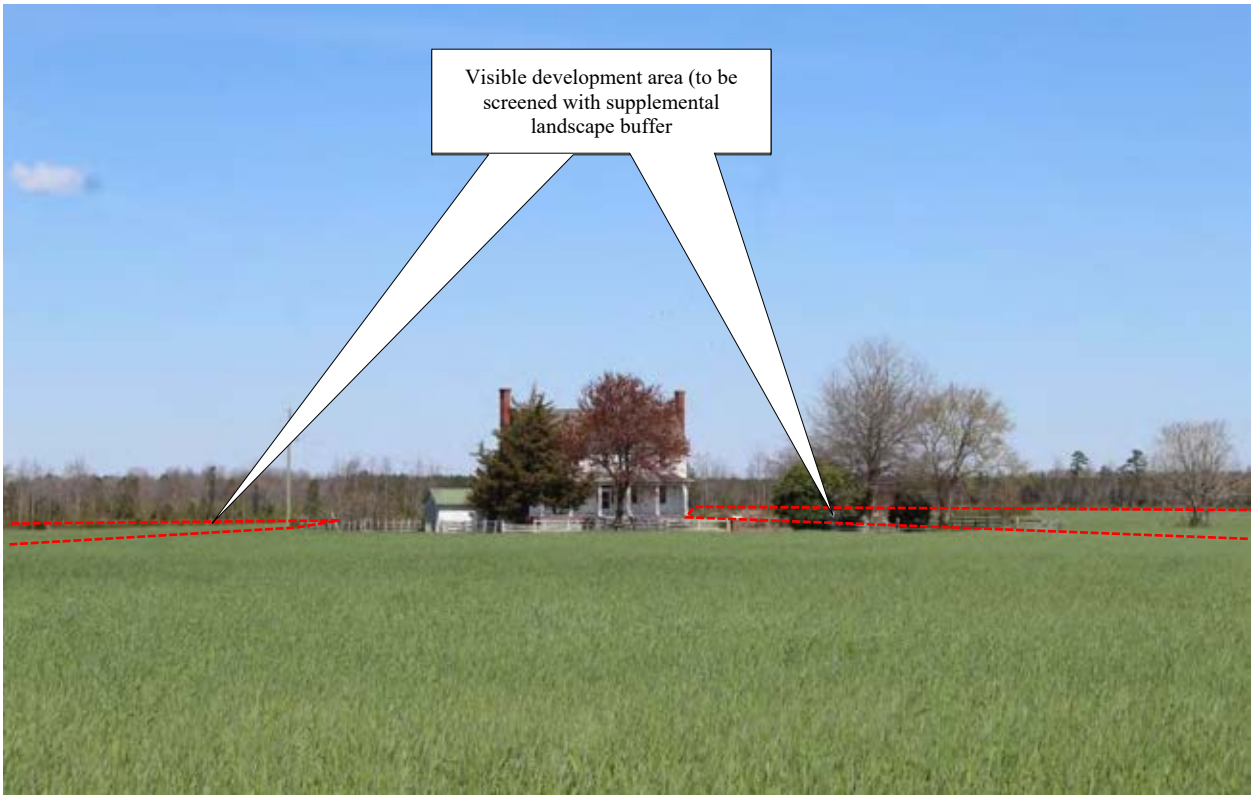


Figure 8-27: View 4 - View of Betts Farm from Mill Swamp Road, facing northeast. (Development area visible in field to rear and side)

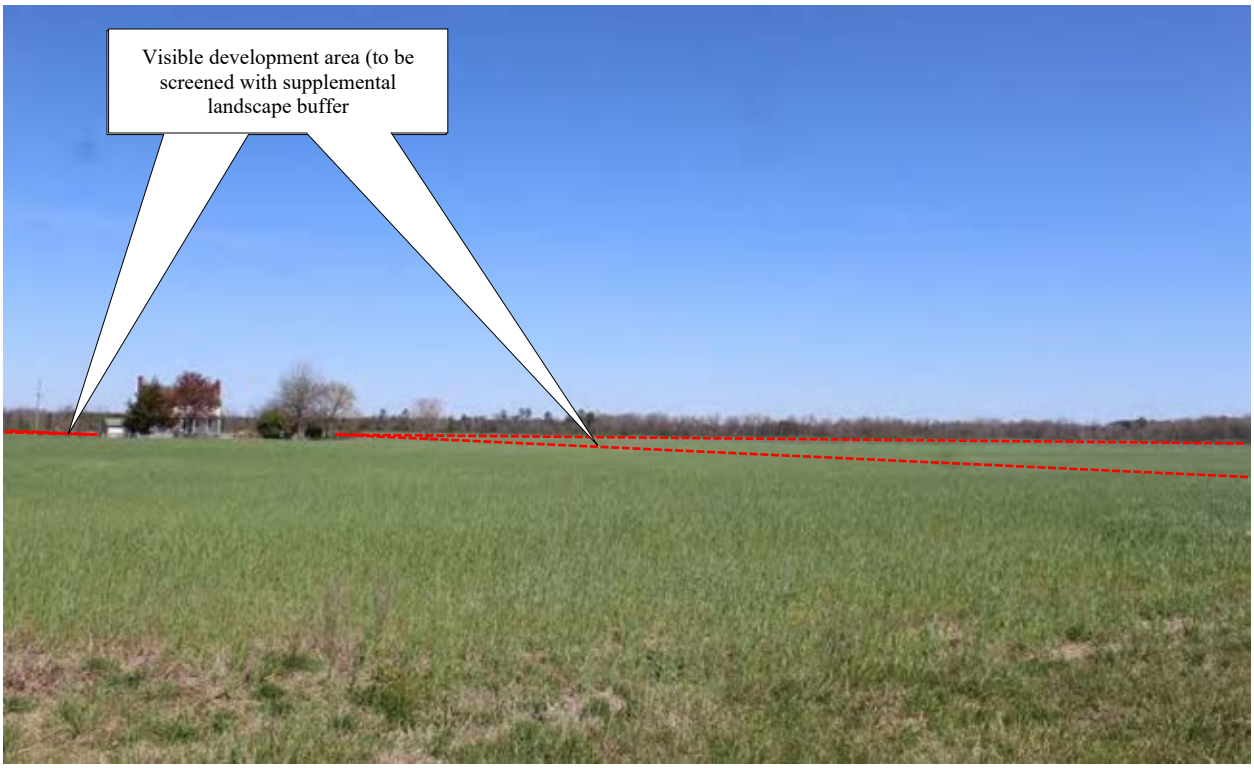


Figure 8-28: View 5 - View of Betts Farm from Mill Swamp Road, facing northeast. (Development area visible in field to rear and side)



Figure 8-29: View 6 – View from Mill Swamp Road in front of Betts Farm, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-30: View 7 – View from Mill Swamp Road east of Betts Farm, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-31: View 8 – View from Mill Swamp Road east of Betts Farm, facing southwest. (Development area visible along road across from property)



Figure 8-32: View 9 - View towards Betts Farm from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

VDHR# 046-5812
House, 14195 Rattlesnake Trail



The house at 14195 Rattlesnake Trail was constructed in 1950 according to local land records. It remains in good condition and exhibits a Vernacular hall-and-parlor form. The one-story, four-bay wood frame structure rests on a continuous concrete block foundation and is clad in vinyl siding.

It is topped by a side gable roof sheathed in standing seam metal and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one double-hung sash windows. The primary entrance consists of a single door on the front (north) elevation sheltered by a two-bay porch.

This house is located on the south side of Rattlesnake Trail just east of its intersection with Ramsey Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set close to the road at the edge of a wide, open agricultural field. Vegetation around the house is limited to sparse, scattered shrubbery. The only outbuilding on the property is a small wellhouse set behind the house.

This property is an example of a typical mid-twentieth century single Vernacular dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 046-5813
Commercial Building, 14472 Rattlesnake Trail



The building at 14472 Rattlesnake Trail remains in poor condition and exhibits no discernable style. Although the structure remains vacant, it appears to have historically functioned as a commercial building. As evidenced by its form and construction, this building was constructed circa 1950. The one-story, three-bay concrete block structure rests on a continuous concrete block foundation and is topped by a side gable roof sheathed in standing seam metal. Fenestration on the structure is sparse but consists of large hopper windows on either side of the primary entrance. The

primary entrance consists of a single door centered on the symmetrical front (east) elevation. Remaining wood supports above the door suggest that it was historically sheltered by an awning however the awning no longer remains intact.

This building is located on the west side of Rattlesnake Trail near its intersection with Ramsey Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the building rests on a flat grass lawn vegetated with overgrown scrub brush and surrounded by a densely forested area. No formal access points or associated structures were observed on the property.

This property is an example of a typical mid-twentieth century commercial building in the region. This building reflects no discernable style with little architectural distinction. 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. Additionally, the structure remains in poor condition and appears to have been vacant for an extended period. 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# 046-5814
House, 11235 White Hill Trail



The house at 11235 White Hill Trail remains in good condition and exhibits a Colonial Revival style as applied to a Cape Cod form. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this building was constructed circa 1950. The wood frame structure is comprised of a one-and-a-half-story, three-bay primary block with a one-story, three-bay wing on its east side. Both blocks are sheathed in vinyl siding and topped by gable roofs

sheathed in asphalt shingles. Brick exterior end chimneys are located on the east and west sides of the structure and three gabled dormers pierce the front slope of the primary roof. Fenestration on the structure includes single and paired one-over-one double-hung sash windows. The primary entrance is centered on the symmetrical front (south) elevation of the primary block and consists of a single door. Sheltering the façade of the main block is a one-story, full-width porch supported by battered wood posts resting on brick piers.

This property is located on the northeast side of White Hill Trail just north of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. Set back roughly 350 feet from the road, the house rests on a sloping grass lawn surrounded by a densely forested area and is accessed by a long, gravel driveway. Vegetation on the property includes several mature shade trees and some planted shrubbery immediately surrounding the house, as well as a line of trees extending along the road and the southwest edge of property. Several outbuildings are scattered around the house, however only some were visible with others obscured by vegetation and topography.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Colonial Revival style with little architectural distinction. 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# 046-5815
House, 13484 Ramsey Road



The house at 13484 Ramsey Road was constructed in 1950 according to site inspection. It remains in good condition and exhibits a Vernacular style. The one-story concrete block structure rests on a continuous concrete block foundation and is topped by a hipped roof sheathed in asphalt shingles. A brick interior chimney pierces the roof near the center of the structure. Fenestration on the structure includes one-over-one and six-over-six double-hung sash windows. The primary entrance consists of a single door centered on the symmetrical front (east) elevation sheltered by a one-bay shed roofed porch.

This house is located on a rural lot on the northwest corner of Ramsey Road and Rattlesnake Trail. The landscape in the general vicinity of the property is gently rolling and characterized by a mix of wooded areas and agricultural fields. Set back roughly 60 feet from the road, the house rests on a grass lawn vegetated with a variety of shade trees and scattered planted shrubbery. The property is accessed by short gravel driveways off of Ramsey Road and Rattlesnake Trail. The only outbuilding on the property is a shed located directly behind the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Vernacular style with little architectural distinction. 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# 046-5816
House, 12085 Ramsey Road



The house at 12085 Ramsey Road was constructed in 1971 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure rests on a

continuous foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles. Piercing the façade are one-over-one double-hung sash windows and a large, fixed window to the left of the entrance. The primary entrance consists of a single door on the front (west) elevation approached by a small, uncovered brick stoop. A one-story sunroom featuring large, fixed windows and a shed roof is attached to the north side of the structure.

This house is located on a rural lot on the southeast corner of Ramsey Road and Proctors Bridge Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mis of wooded areas and agricultural fields with light development. Set back roughly 80 feet from the road, the house rests on a flat grass lawn surrounded by a densely forested area. Vegetation on the property includes a row of boxwoods along the edges of the house and small trees and shrubs scattered on the lawn. The property is accessed by a gravel driveway that extends from the road to a parking area next to the house. Outbuildings on the property include three sheds and a mobile home.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Craftsman style with little architectural distinction. 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# 046-5817
Hollemon Cemetery, White Hill Trail



This small family cemetery contains just one memorial with a surname only and no associated dates. The marker is a granite tablet inscribed with “Holleman” which is a surname known to have historically been associated with a home to the south along Mill Swamp Road. Leaning against the

granite tablet is what appears to be an older, displaced footstone inscribed with J.J.H. The cemetery is not enclosed by a fence or any signage.

This cemetery is set on the west side of White Hill Trail roughly 0.6 miles north of the intersection with Mill Swamp Road. It is set back from the road within a copse of trees in the middle of an agricultural field. While there is evidence of relic cedar trees and groundcover, there is no enclosure or other markings.

This small family cemetery represents a typical private burial in a rural setting within the region. The one marked memorial reads the surname "Holleman" which was the family associated with a dwelling to the south along Mill Swamp Road in the mid-nineteenth century. What is believed to be a footstone that is now leaning against the granite marker reads J.J.H. which likely represents an unknown member of Holleman family. Another Holleman Cemetery is known to be located in closer proximity to the Wilson Hollemon House. As this small cemetery does not reflect any distinctive design or physical characteristics and is not known to be associated with people of transcendent significance, it does not meet Criteria Consideration D, and is considered not eligible for listing in the NRHP.

However, as the cemetery is located within the limits of the project area, it should be avoided as part of the project.

VDHR# 090-5208
House, 1314 Berrymans Corner Road



The house at 1314 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1960. The one-story masonry structure rests on a continuous

foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one double-hung sash windows as well as a large picture window to the right of the entrance. The primary entrance consists of a single door on the front (south) elevation flanked by sidelights and approached by a small, brick stoop. A large garage door is located on the right side of the façade.

This house is located on the northwest side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 160 feet from the road, the house rests on a grass lawn vegetated with a variety of trees and planted shrubbery. The property is accessed by a gravel driveway that extends from the road to the attached garage. The only outbuilding on the property is a small shed set behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 090-5209
House, 1209 Berrymans Corner Road



The house at 1209 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story masonry structure rests on a continuous

foundation and is clad in a brick veneer. It is topped by a side gable roof sheathed in asphalt shingles and flanked by a brick exterior end chimney on its southwest side. Fenestration on the structure includes single and paired one-over-one double-hung sash windows. The primary entrance consists of a single door on the front (northwest) elevation approached by a small, brick stoop. An open, wood deck is located on the south side of the house.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. The house is set close to the road on a sparsely vegetated grass lawn with a densely forested area located to its south and east. The property is accessed by a gravel driveway that extends from the road past the side of the house to the outbuildings behind the house. Outbuildings on the property include a carport and a shed located behind the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 090-5210
House, 1167 Berrymans Corner Road



The house at 1167 Berrymans Corner Road remains in good condition and exhibits no discernable style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story, four-bay wood frame structure rests

on a continuous concrete block foundation and is topped by a side gable roof sheathed in asphalt shingles. A brick interior end chimney and a gabled, one-bay wing are located on northeast side of the structure. Piercing the asbestos siding are one-over-one double-hung sash windows, some of which are sheltered by vinyl awnings. The primary entrance consists of a single door on the front (northwest) elevation accessed by a small, uncovered, wood stoop.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 90 feet from the road, the house rests on a flat grass lawn vegetated only with a couple mature shade trees in the backyard. The property is accessed by a gravel driveway that extends from the road to a parking area behind the house. Outbuildings on the property include a mobile home, a garage, a shed, and a wellhouse.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 090-5211
House, 1141 Berrymans Corner Road



The house at 1141 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story masonry structure rests on a continuous

foundation and is clad in brick veneer. It is topped by a side gable roof sheathed in asphalt shingles and pierced by a brick interior end chimney near the center of the front elevation. Fenestration on the structure consists of single and paired one-over-one double-hung sash windows. Two entrances are located on the front (northwest) elevation, each consisting of a single door approached by a small, uncovered brick stoop.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 80 feet from the road, the house rests on a flat grass lawn and is accessed by a gravel driveway that extends to a parking lot behind the structure. Vegetation on the property is limited to rows of shrubs and bushes along the edges of the house. Outbuildings on the property include a garage and two carports.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 090-5212
House, Berrymans Corner Road



The house off Berrymans Corner Road exhibits no discernable style and remains in ruinous condition, appearing to have been vacant for an extended period. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed

circa 1910. The one-story wood frame structure is clad in weatherboard siding and appears to have been topped by a side gable roof. The roof appears to have collapsed, however two central brick chimneys remain extant. Fenestration on the structure includes three-over-three double-hung sash windows.

This house is located on the east side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The landscape in the general vicinity of the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with generally light development. The house is set close to the road at the edge of a densely forested area and is partially obscured by overgrown vegetation. No formal access points or other structures were observed on the property.

This property is an example of a typical early twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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. Additionally, the structure remains in ruinous condition and appears to have been vacant for an extended period. 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.

ARCHAEOLOGICAL FIELD RESULTS

Archaeological fieldwork included both systematic pedestrian survey and subsurface testing to determine the presence of archaeological resources. The work was completed in accordance with VDHR guidelines for conducting historic resources survey in Virginia and proceeded according to the approved testing plan laid out in the document *Phase IA Cultural Resource Assessment of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area* (D+A August 2023). For the purposes of survey and reporting, the project area was divided into six areas labeled A through F. These areas were further subdivided into 24 discrete sub-areas for testing, with placement of shovel test grids determined by surface evidence of cultural activity, terrain, disturbance, and environmental considerations (Figure 8-33).

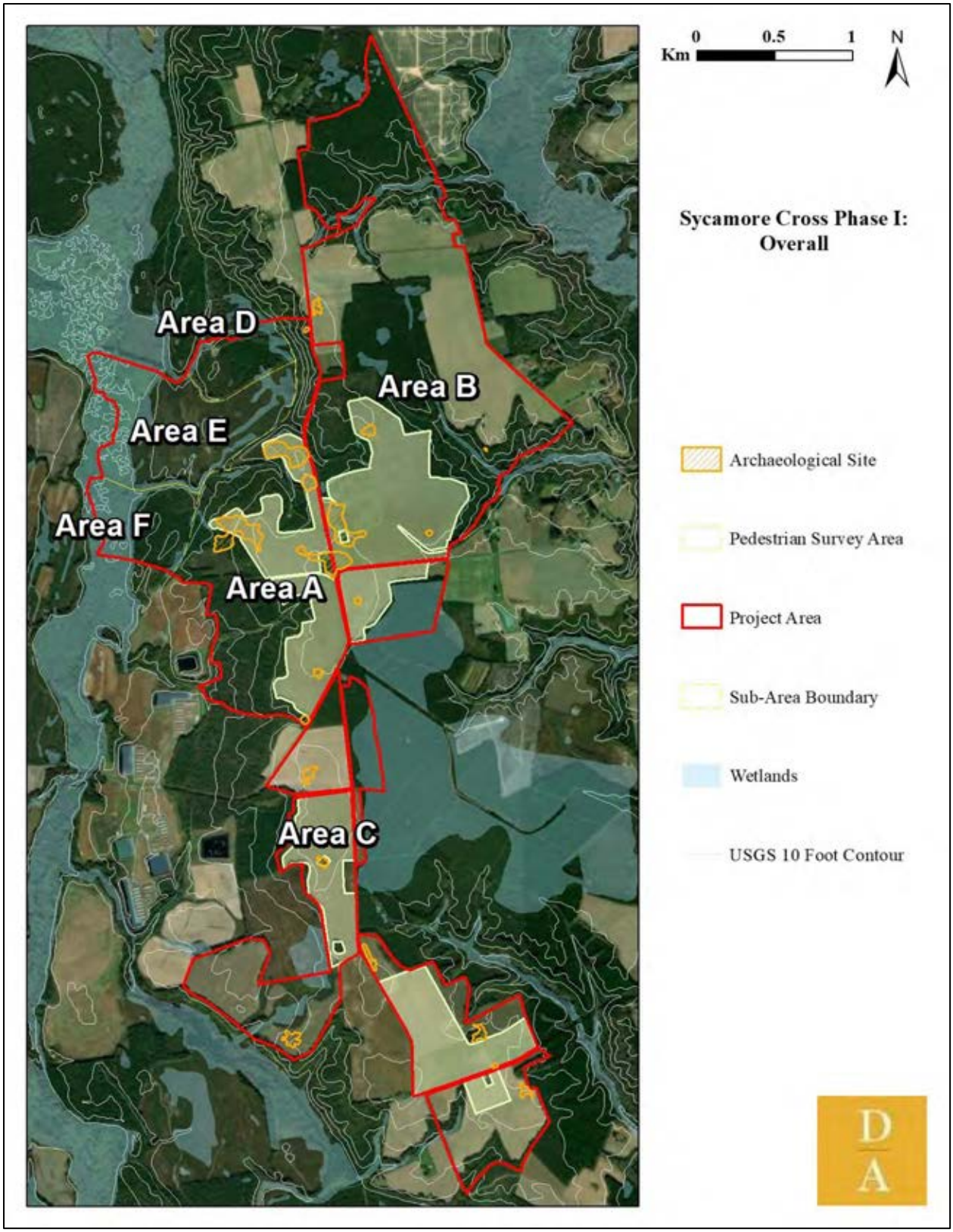


Figure 8-33: Overall map of testing areas.

A total of 1,175 shovel tests were systematically excavated throughout the project area, leading to the identification of twenty (20) new archaeological sites (Figure 8-34). The results of both the pedestrian and subsurface testing are provided below by area.

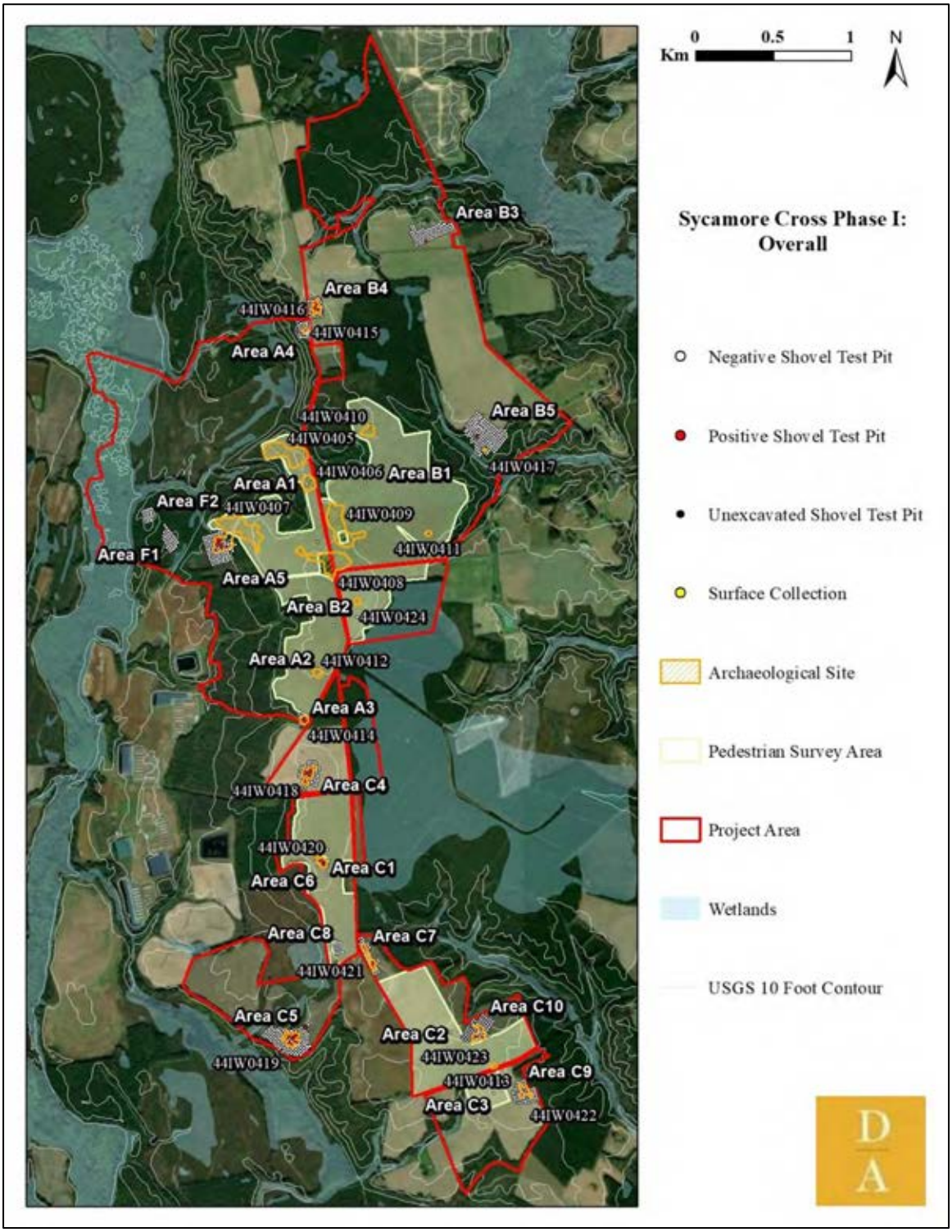


Figure 8-34: Overall view of project area with testing areas and archaeological sites.

AREA A

Area A consists of the parcels to the west of Proctors Bridge Road (Route 621) and Sycamore Cross Drive (Route 622) (Figure 8-35). Terrain in this area includes one primary large, irregular finger ridge with numerous drainages and unnamed tributaries down to Blackwater River. These drainages form smaller ridges, knolls, and terraces overlooking the river. Large, harvested agricultural fields cover the tops of the landforms. These fields exhibited excellent surface visibility at the time of survey, and pedestrian surveys were conducted in each, discussed in depth below. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the project are gentle to moderate.

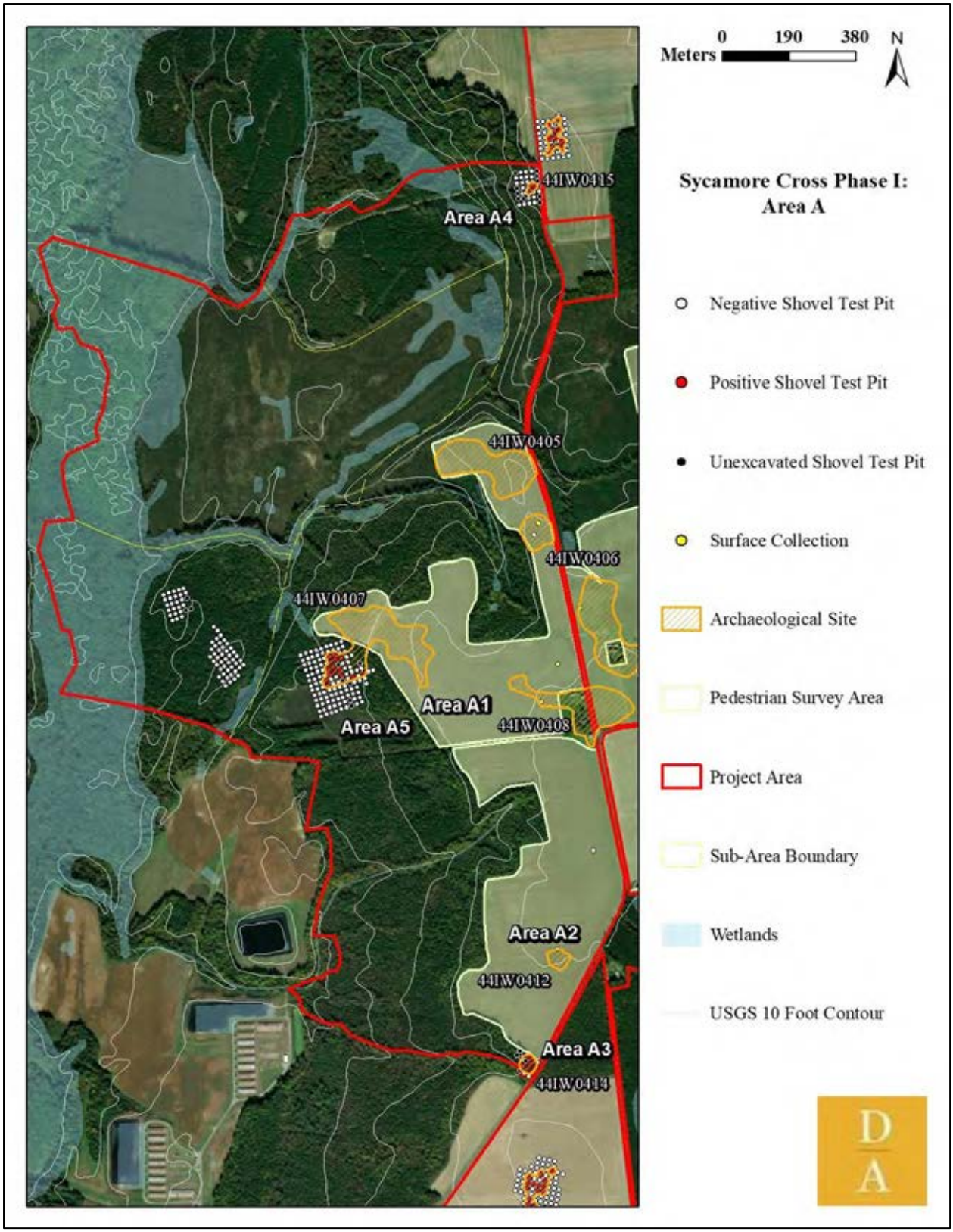


Figure 8-35: Overall map of Area A.

Area A1

This area consists of the large horseshoe-shaped agricultural field to the northeast of Sycamore Crossroads. This field sits on the north half of the top of the overall Area A landform, overlooking the Blackwater River to the west and bounded by Sycamore Cross Drive (Route 622) to the east. Access is provided by a series of farm roads running east to west off of Sycamore Cross Drive and Mill Swamp Road (Figure 8-36).



Figure 8-36: Farm road and overview of Area A1 facing east.

This part of the Area A landform is interrupted by two drainage cuts leading down to Blackwater River, forming one narrow finger ridge and a broad rectangular terrace. Vegetation bordering the agricultural field consists primarily of mature mixed woodland, with common privet and clusters of pine (Figure 8-37). Vegetation in Area A1 at the time of survey consisted of the remains of harvested soy and sparse, short grasses (Figure 8-38). A farm complex and store associated with Architectural Resources #046-5149 and 046-5150 sit at the southeast corner of the area (Figure 8-39).



Figure 8-37: Vegetation at the edge of the Area A1 agricultural field facing west.



Figure 8-38: Overview of Area A1, facing west.



Figure 8-39: Architectural Resources #046-5149 and 046-5150, facing southwest.

Surface exposure in this agricultural field was high, and systematic pedestrian survey was conducted in lieu of shovel test survey (Figure 8-40, Figure 8-41). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Many artifact fragments were observed, particularly in four dense artifact scatters. These surface concentrations were designated Sites 44IW0405 through 44IW0408, which are described in greater detail below.

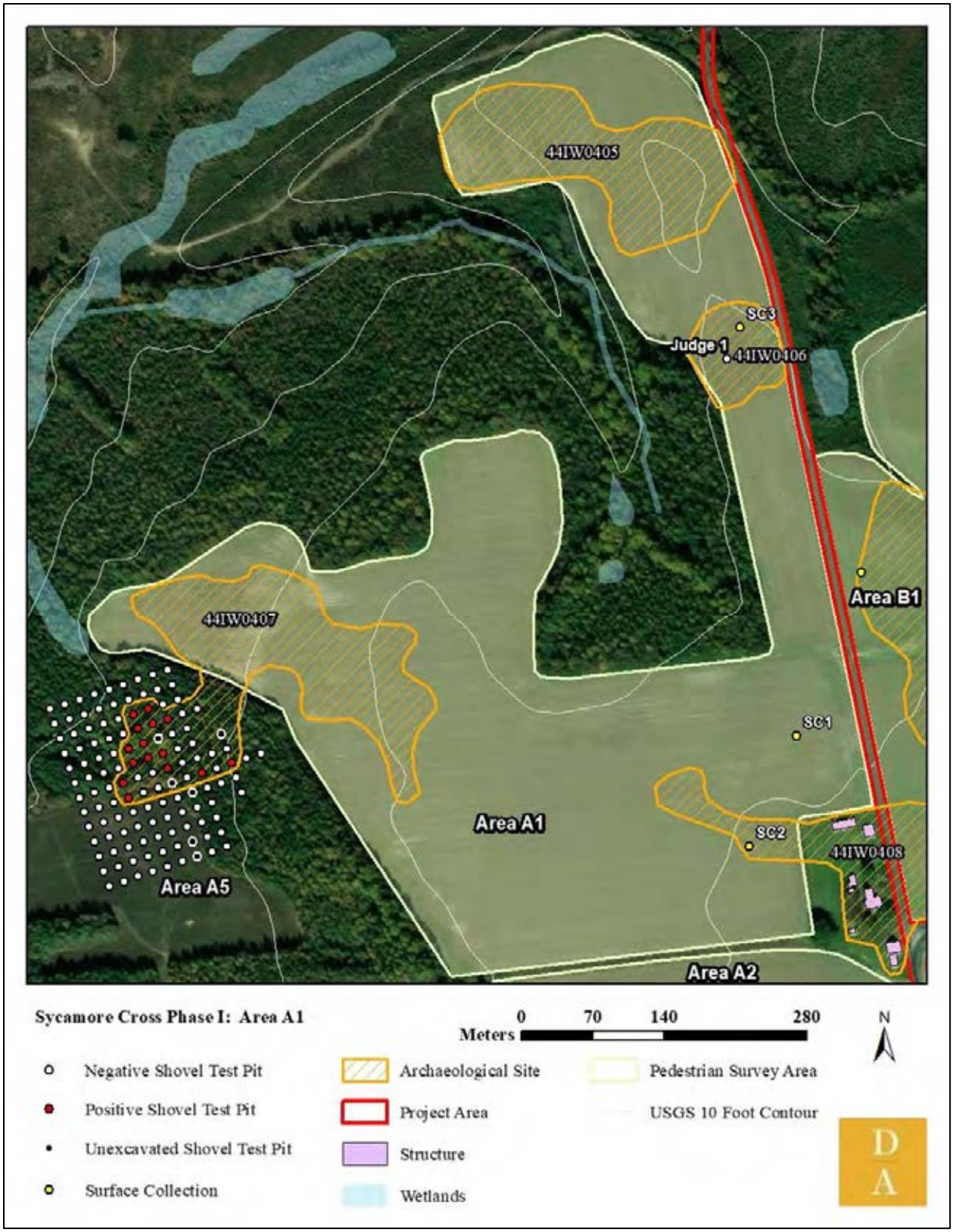


Figure 8-40: Aerial view of Area A1 survey.



Figure 8-41: Surface exposure in Area A1.

One shovel test was excavated in this artifact scatter to investigate the integrity of the soil strata. This shovel test, labeled Judgmental Shovel Test 1, exhibited a three-stratum profile of plowzone which cuts an intact transition layer over subsoil. Stratigraphy consisted of 2.5Y 3/2 very dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-42).

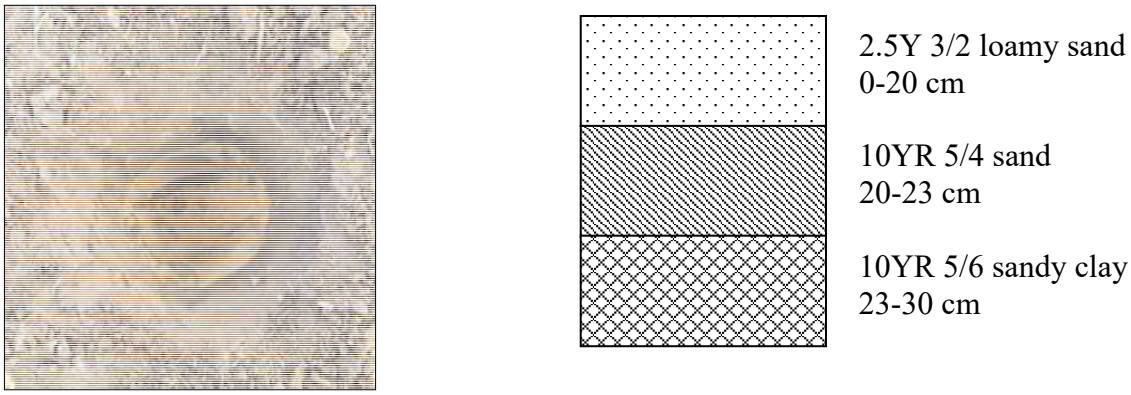


Figure 8-42: Soil profile of Judgmental Shovel Test 1 in Area A1.

44IW0405

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in the northernmost part of Area A1. No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a Prosser button, ironstone, and Bristol stoneware were observed.

44IW0406

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in Area A1, south of Site 44IW0405 (Figure 8-43). An aqua bottle finish was the only artifact collected (Figure 8-44). A dwelling is indicated here by historic topographic maps, though no surface features were observed. Artifacts observed here included fragments of ironstone, and colorless and vessel glass.



Figure 8-43: Artifacts on the surface in Site 44IW0406.



Figure 8-44: Aqua vessel finish collected in Site 44IW0406.

44IW0407

This site was first observed in the western half of Area A1, and later in Area A5 associated with Architectural Resource #046-0056. All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Site 44IW0407 as well (Figure 8-45). This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.



Figure 8-45: Artifact summary of Site 44IW0407.

The ruin is a brick structure with exterior end chimneys and an English basement that was previously recorded as being built circa 1825. In addition to the main dwelling, two rectangular depressions and some areas of brick scatter were observed in association with this site (Figure 8-46; Figure 8-47).



Figure 8-46: Interior view showing cellar entrance and fireplaces.



Figure 8-47: Square depression, facing west.

44IW0408

This field site was first observed in the southeastern corner of Area A1 and was further delineated in the southwest corner of Area B1. This site surrounds Architectural Resources #046-5149 and 046-5150. It consists of a late nineteenth to early twentieth century domestic artifact scatter. Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain (Figure 8-48).



Figure 8-48: Dipped ware collected in Site 44IW0408.

Area A2

This area consists of a long irregular agricultural field to the southeast of Sycamore Crossroads. This field is located south of Area A1 and bounded to the east by Proctors Bridge Road (Route 621). Access to this area is provided by Proctors Bridge Road and a farm road to the north. This field covers the southern half of the top of the overall Area A landform. This part of Area A is cut by two drainages, which flow west into an unnamed tributary of the Blackwater River. Vegetation in this area is the same as Area A1 (Figure 8-49).



Figure 8-49: Overview of Area A2, facing west.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-50, Figure 8-51). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Surface artifacts were observed in a scatter in the southern end of the field. These surface observations were designated Site 44IW0412, which is described in greater detail below.

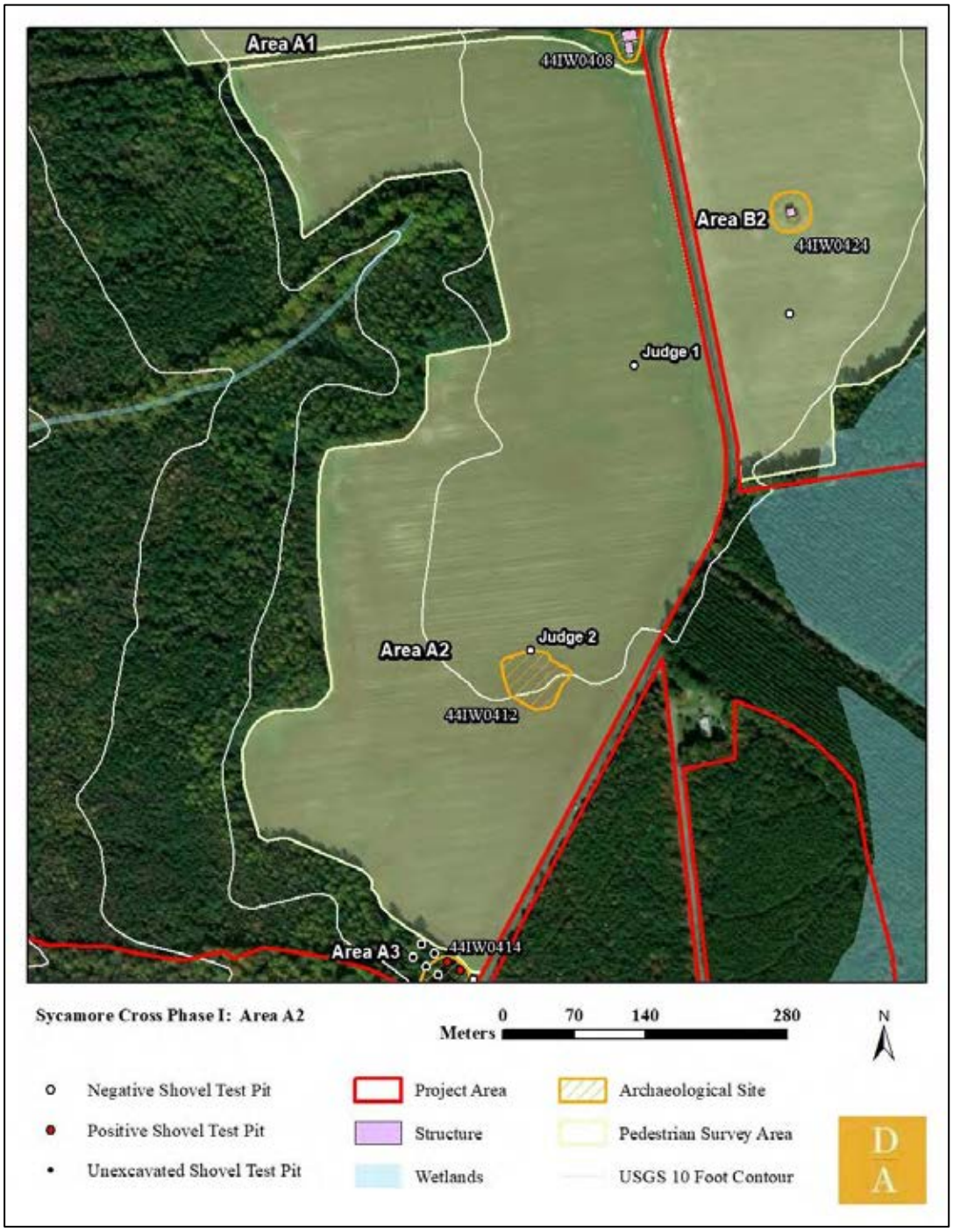


Figure 8-50: Aerial view of Area A2 survey.



Figure 8-51: Surface exposure in Area A2.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact transition layer over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-52).

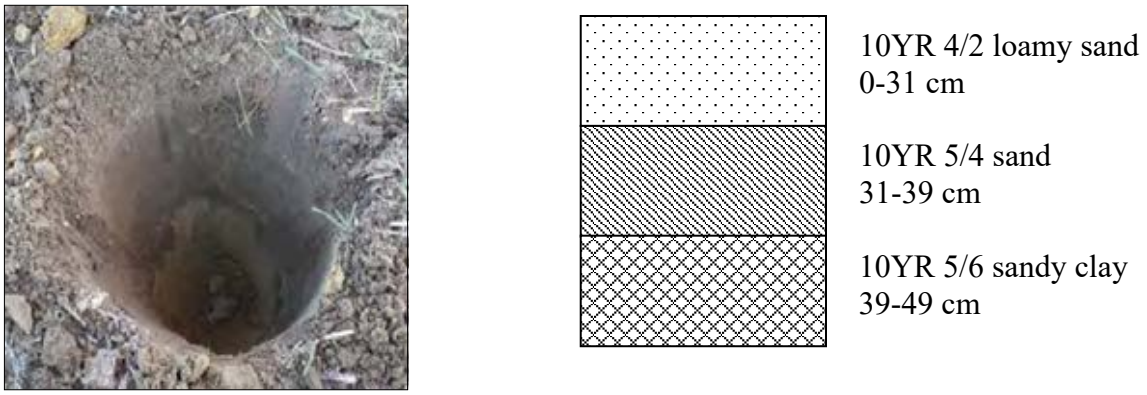


Figure 8-52: Soil profile of Judgmental Shovel Test 2 in Area A2.

44IW0412

This field site was observed in the southern part of Area A2, in the same location as a dwelling indicated on historic topographic maps. No surface features were observed; only a domestic artifact scatter was observed. Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century.

Area A3

This area sits at the southernmost point of the overall Area A, south of the Area A2 field and bounded to the east by Proctors Bridge Road (Route 621). Wetland bounds this area to the northwest (Figure 8-53). Area A3 is located at the head of a draw that drains down to the Blackwater River. This grid was placed to investigate a dwelling that is indicated in this area on historic topographic maps.



Figure 8-53: Wetland flagging in Area A3, facing southwest.

Vegetation in this area consists of mature mixed woodland with holly shrubs and vines composing the undergrowth (Figure 8-54). Terrain is flat, with minimal surface evidence of subsurface disturbance. The remains of several cars are scattered throughout the area (Figure 8-55). A scatter of twentieth century trash sits in the middle of the grid (Figure 8-56).



Figure 8-54: Vegetation in Area A3, facing south.



Figure 8-55: Fragments of old cars, facing northwest.



Figure 8-56: Twentieth century trash scatter in Area A3, facing southeast.

A total of sixteen shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D, six of which could not be excavated due to wetland (Figure 8-57). A total of seven shovel tests were positive for cultural material with fragments of window glass, vessel glass, lantern glass, and iron wire. These positive shovel tests were designated Site 44IW0414, which is described in greater detail, below.

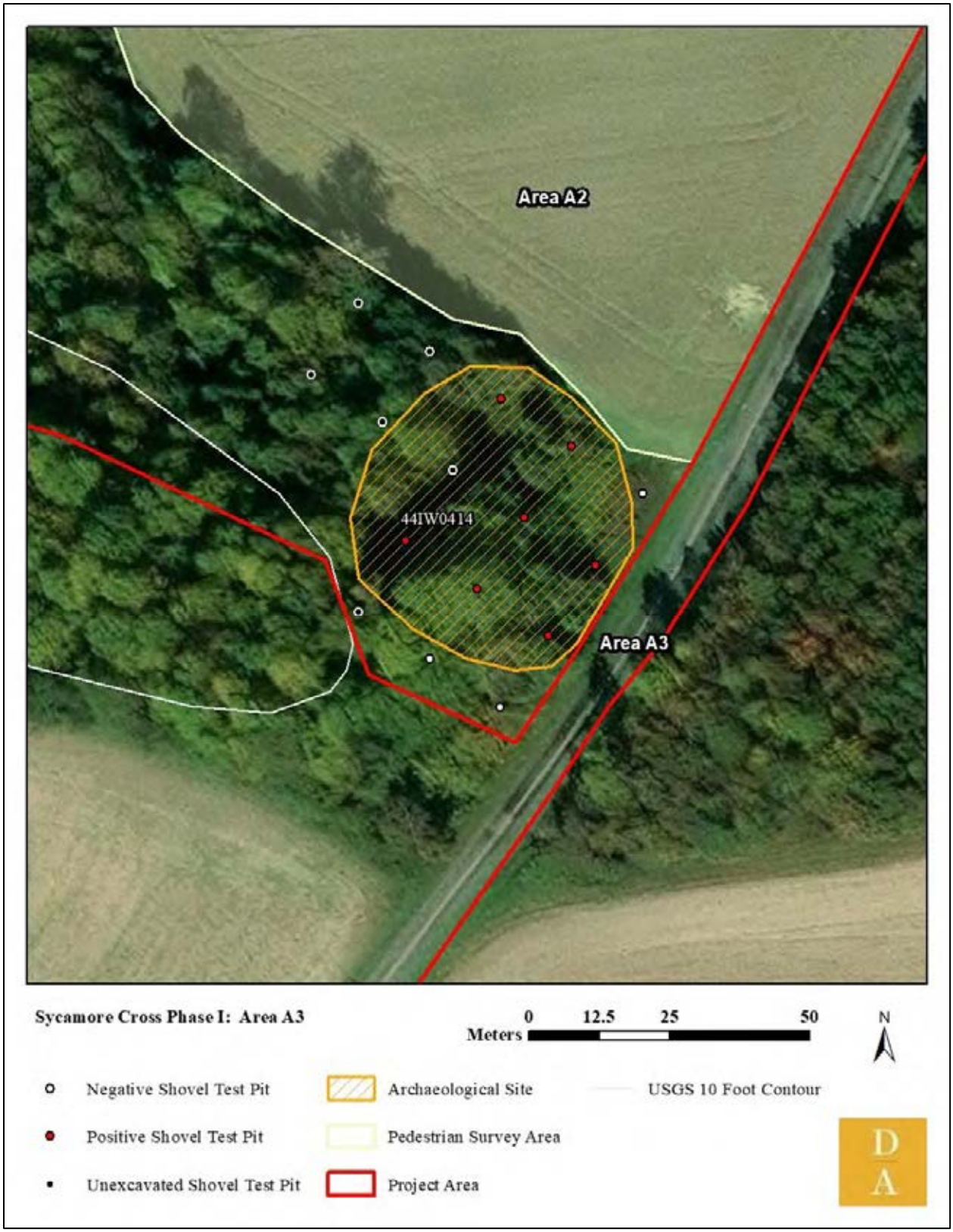


Figure 8-57: Aerial view of Area A3 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 4/4 yellowish brown sandy loam plowzone (Ap horizon) over 2/5Y 7/2 light gray sandy clay subsoil (B horizon) (Figure 8-58).



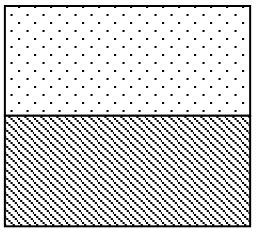


Figure 8-58: Soil profile of Judgmental Shovel Test 1 in Area A3.

44IW0414

This site consists of an early-to-mid twentieth century domestic artifact scatter associated with a dwelling indicated here by historic topographic maps. Forty-three artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire (Figure 8-59). Vessel glass makes up most of this assemblage, with 26 recovered fragments.



Figure 8-59: Artifact summary of Site 44IW0414.

Area A4

This area consists of the mixed woodland across Sycamore Cross Drive from Area B4. Access is provided by a deeply eroded logging road (Figure 8-60, Figure 8-61). Terrain is disturbed with pushpiles throughout the grid. It sits on the edge of slope down to wetlands associated with Blackwater River.



Figure 8-60: Logging road running through Area A4, facing southwest.



Figure 8-61: Erosion along logging road through Area A4, facing east.

Vegetation in Area A4 consists primarily of young deciduous forest with briary undergrowth and occasional pine (Figure 8-62). Pushpile disturbance from past timbering activity is common throughout the grid and prevented the excavation of several shovel tests (Figure 8-63). Soils in this area are also wet, with some shovel tests filling with water.



Figure 8-62: Vegetation in Area A4, facing west.



Figure 8-63: Pushpiles in Area A4, facing north.

A total of 43 shovel tests were laid out at 15-meter (50-foot) intervals in seven transects labeled A through G, fourteen of which could not be excavated due to pushpile disturbance (Figure 8-64). A total of five shovel tests were positive for cultural material, including fragments of window glass, screws, and other metal hardware fragments. These positive shovel tests were designated Site 44IW0415, which is described in greater detail, below.

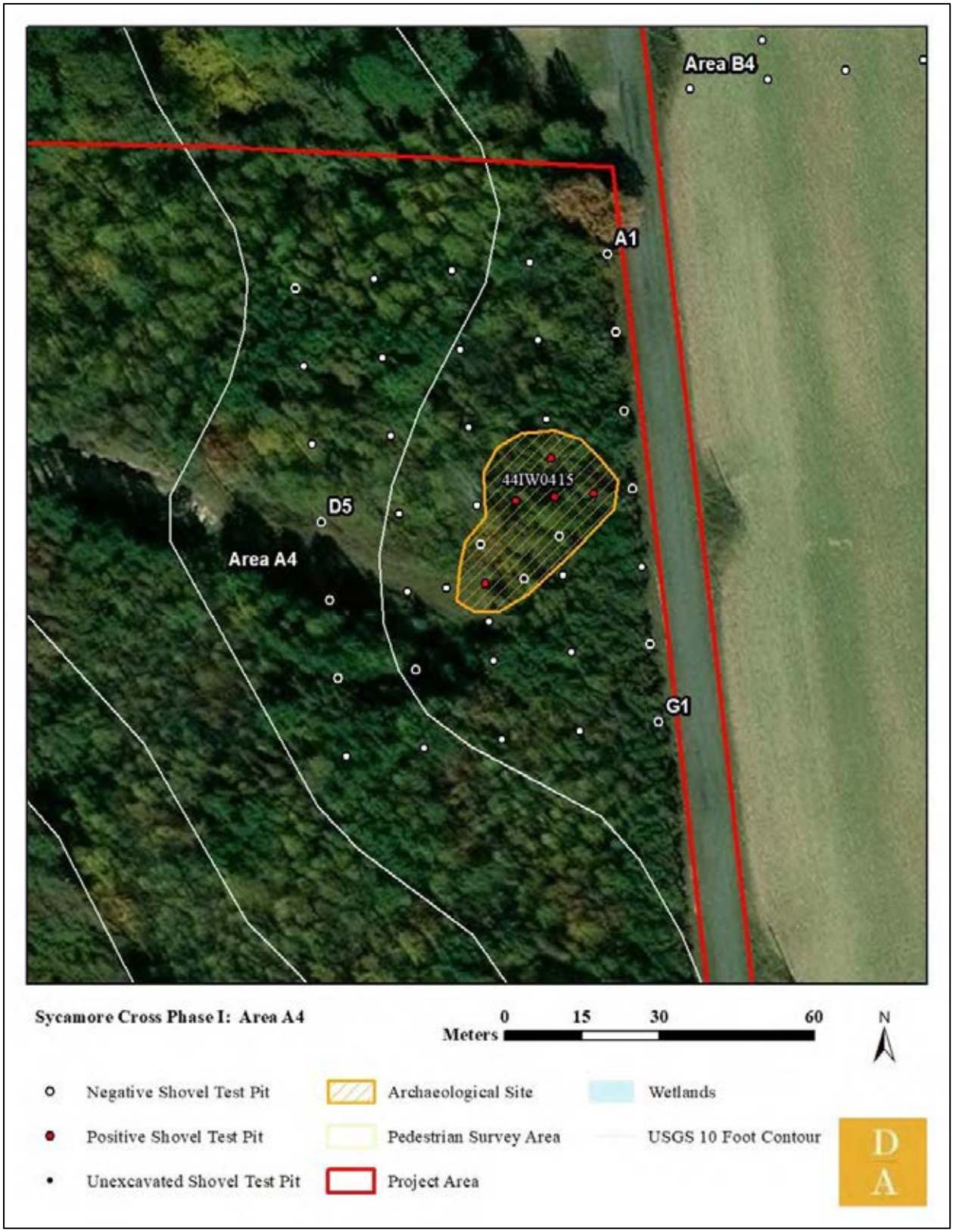


Figure 8-64: Aerial view of Area A4 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/2 grayish brown sandy loam plowzone (Ap horizon) over 10YR 6/4 light yellowish brown sand topsoil (A horizon) over 10YR 7/4 very pale brown sand subsoil (B horizon) (Figure 8-65).



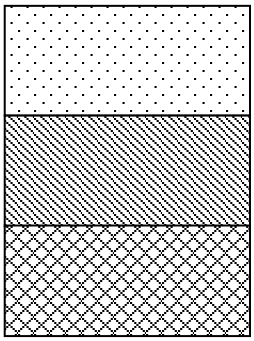


Figure 8-65: Soil profile of Shovel Test B3 in Area A4.

44IW0415

This site consists of a dense early-to-mid twentieth century artifact scatter in Area A4. 178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass (Figure 8-66). Window glass and unidentified melted glass make up the majority of this assemblage, with 128 fragments.



Figure 8-66: Artifact summary of Site 44IW0415.

Area A5

This area covers a round knoll west of the Area A1 pedestrian survey. Access is provided by a series of farm roads. This grid surrounds several large, potentially structural depressions and a three-story brick structure with a large cellar (Figure 8-67). This structure is associated with Architectural Resource #046-0056 (Figure 8-68).



Figure 8-67: Structural depression in Area A5, facing east.



Figure 8-68: Brick structure in Area A5, Architectural Resource #046-0056, facing south.

Vegetation in this area consists primarily of mature pine forest with common holly and briar undergrowth (Figure 8-69). Terrain in this part of the grid is somewhat disturbed by timbering activities, seen on the surface in the form of subtle windrows. Around the architectural remains, vegetation changes and is primarily deciduous trees with minimal undergrowth (Figure 8-70).



Figure 8-69: Vegetation in Area A5, facing south.



Figure 8-70: Vegetation in Area A5 around structural remains, facing south.

A total of 128 shovel tests were laid out at 15-meter (50-foot) intervals in nine transects labeled A through J, six of which could not be excavated due to standing water (Figure 8-71). A total of fifteen shovel tests were positive for cultural material with fragments of refined earthenware, wire nails, vessel and window glass, and oyster shell. These positive shovel tests are part of Site 44IW0407, discussed above with Area A1.

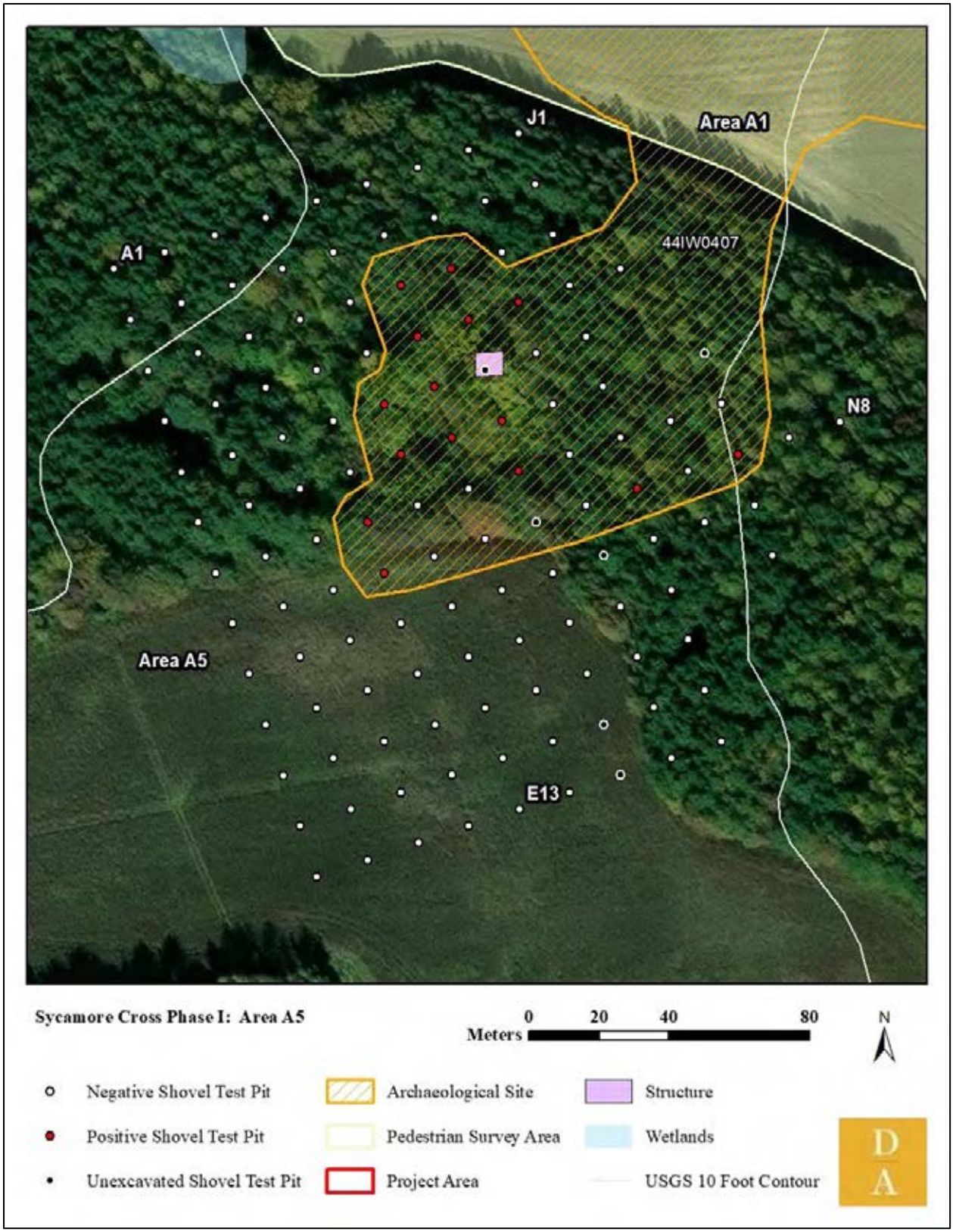


Figure 8-71: Aerial view of Area A5 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of topsoil over transitional layer over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-72).



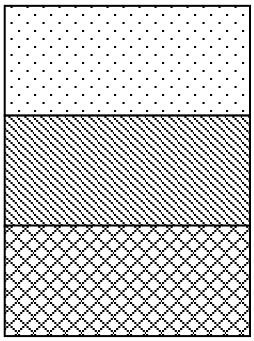


Figure 8-72: Soil profile of Shovel Test D5 in Area A5.

AREA B

The overall Area B consists of parcels to the east of Proctors Bridge Road (Route 621) and Sycamore Cross Drive (Route 622), and west of White Hill Trail (Route 623) (Figure 8-73). Terrain in this area includes two primary large, irregular finger ridges with numerous drainages and unnamed tributaries down to Mill Swamp to the east. These drainages form smaller ridges, knolls, and terraces overlooking the swamp. Large, harvested agricultural fields cover the tops of the landforms. These fields have very good surface visibility, and systematic pedestrian surveys were conducted in each, discussed in depth below. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the area are gentle to moderate. One previously known cemetery, the Hollemon Cemetery (VDHR# 046-5817) sits in the center of Area B5.



Figure 8-73: Overall map of Area B.

Area B1

This area consists of the large agricultural field northeast of Sycamore Crossroads. This field is located in the southern part of the overall Area B and bounded to the west by Sycamore Cross Drive (Route 622) and to the south by Mill Swamp Road (Route 621). Access to this area is provided by Sycamore Cross Drive and a farm road through the center of the field.

This part of Area B is cut by numerous small drainages as well as one major one, which flows east into an unnamed tributary of Mill Swamp. Vegetation in this area consists of harvested soy remnants and short, sparse grass, with mature mixed woodland and pine forest bordering the agricultural field. A small parcel is excluded from the project area on the interior of Area B1, which encompasses a complex of one dwelling and several outbuildings (Figure 8-74).



Figure 8-74: Dwelling and outbuildings in parcel cut out in Area B1, facing northwest.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-75). Transects were walked in 7.5-meter (25-foot) intervals north to south across the entirety of this field. Surface artifacts were observed in a scatter in the southeastern part of the field, and in the southwestern corner. These surface observations were designated Sites 44IW0409 through 44IW0411, which are described in greater detail below.



Figure 8-75: Aerial view of Area B1 survey.



Figure 8-76: Overview and ground cover in Area B1, facing north.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-77).

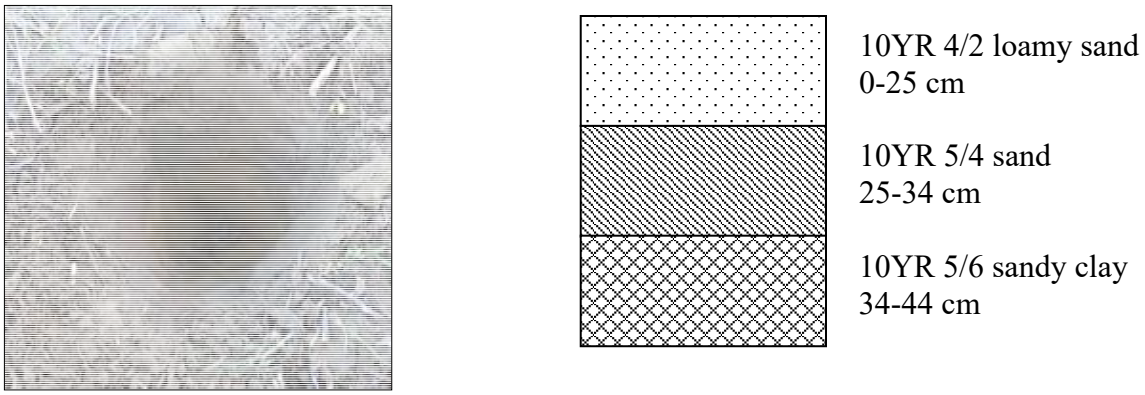


Figure 8-77: Soil profile of Judgmental Shovel Test 2 in Area B1.

44IW0409

This field site was observed by pedestrian survey in the western part of Area B1. It consists of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; stoneware, brick fragments; and one pipe stem that was the only artifact collected (Figure 8-78). This site is associated with Architectural Resource 046-5811, a circa 1850 standing dwelling.



Figure 8-78: Pipe stem collected in Site 44IW0409.

44IW0410

This site consists of a small late-nineteenth to early-twentieth century domestic artifact scatter observed in the northern part of Area B1. A sample of artifacts were collected, and observed artifacts included solarized and colorless vessel glass, aqua window glass, ironstone, and refined earthenware, Bristol and Albany-slip stoneware, and a reed pipe (Figure 8-79).



Figure 8-79: Artifact sample collected from Site 44IW0410.

44IW0411

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter observed in the southeast part of Area B1. Artifacts observed included ironstone, refined earthenware, and aqua and colorless vessel glass (Figure 8-80, Figure 8-81). Artifacts were densely clustered. No artifact samples were collected.



Figure 8-80: Artifacts flagged during pedestrian survey of Area B1 and delineating Site 44IW0411, facing west.



Figure 8-81: Artifacts on the surface in Site 44IW0411.

Area B2

This area consists of the triangular agricultural field southeast of the intersection of Sycamore Cross and Mill Swamp Roads. This field is located in the southern part of the overall Area B and bounded to the west by Proctors Bridge Road (Route 621) and to the north by Mill Swamp Road (also Route 621). In the eastern leg of Area B2, terrain slopes gently to wetland between two drainage cuts, one to the northeast and another to the southeast. Standing water prevented survey in this area. Vegetation in this area consists of harvested cotton remnants and short, sparse grass, with mature mixed woodland and pine forest bordering the agricultural field (Figure 8-82). A brick ruin stands in the western side of the field, previously recorded as Architectural Resource 046-0057. Although no artifacts were observed in association with the ruin, it has the potential for subsurface features and was recorded as an archaeological resource with the temporary designation of Site 44IW0424.



Figure 8-82: Overview of Area B2 showing Architectural Resource #046-0057, facing north.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-84). Transects were walked in 7.5-meter (25-foot) intervals east to west across the field. Surface artifacts were observed in a scatter in the southern end of the field. No artifact scatters were observed in this area.

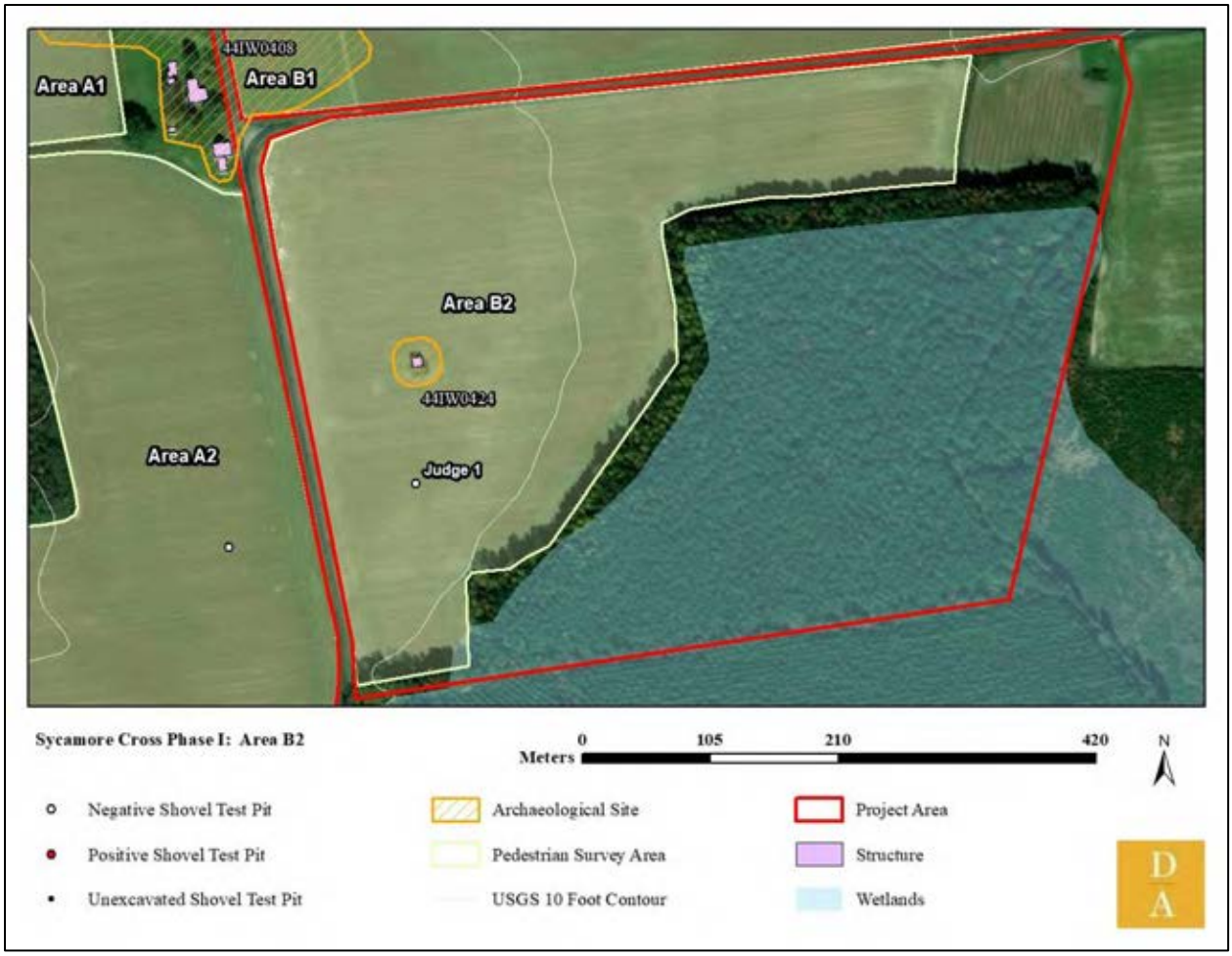


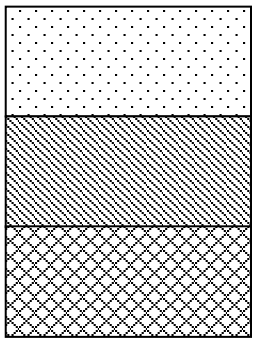
Figure 8-83: Aerial view of Area B2 survey.



Figure 8-84: Surface exposure in Area B2.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited a three-stratum profile of plowzone which cut an older topsoil or relict plowzone over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-85).





10YR 4/2 loamy sand
0-32 cm

10YR 5/4 sand
32-49 cm

10YR 5/6 sandy clay
49-62 cm

Figure 8-85: Soil profile of Judgmental Shovel Test 1 in Area B2.

Area B3

This area sits at the northern end of the long, irregular agricultural field in the northeastern part of the project area. A farm complex with several dwellings, outbuildings, and a parcel cut-out sit just to the north of this shovel test grid. This farm complex and a nearby dwelling are associated with Architectural Resources #046-5550 and 046-5551 respectively (Figure 8-86). White Hill Trail (Route 623) bounds this area to the east. Runoff from this area drains north into an unnamed tributary of Mill Swamp.



Figure 8-86: Farm complex (Architectural Resource #046-5550) and driveway in Area B3, facing west.

Vegetation in Area B3 at the time of survey consisted of the remains of harvested corn and short grasses (Figure 8-87). Surface visibility was too low for pedestrian survey. Mowed grasses and deciduous trees border the agricultural field.



Figure 8-87: Overview of Area B3, facing west.

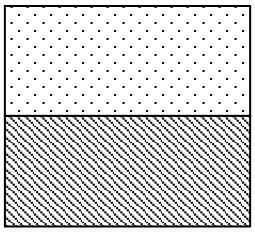
A total of 97 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F, two of which could not be excavated due to road disturbance (Figure 8-88). One shovel test was positive for cultural material with brick. This does not constitute a field site.



Figure 8-88: Aerial view of Area B3 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light olive brown sandy clay loam (Ap horizon) over 2.5Y 6/8 olive yellow clay subsoil (B horizon) (Figure 8-89).





2.5Y 5/4 sandy clay loam
0-34 cm

2.5Y 6/8 clay
34-44 cm

Figure 8-89: Soil profile of Shovel Test A4 in Area B3.

Area B4

This area consists of a small part of the agricultural field in the northwest part of the overall Area B. This field sits on the western edge of a large terrace overlooking forest and lowlands to the west. This grid was placed to investigate a dwelling indicated on historic topographic maps.

Vegetation in this area at the time of survey consisted of young winter wheat (Figure 8-90). Surface exposure was too low for pedestrian survey, though brick fragments were observed on the surface. Sycamore Cross Road bounds this grid to the west.



Figure 8-90: Sycamore Cross Road along the Area B4 baseline, facing north.

A total of 74 shovel tests were laid out at 15-meter (50-foot) intervals in eight transects labeled A through G (Figure 8-91). A total of 20 shovel tests were positive for cultural material including fragments of vessel glass, refined earthenware, window glass, terra cotta drain pipe, and unidentified nails. These positive shovel tests were designated Site 44IW0416, which is described in greater detail below.

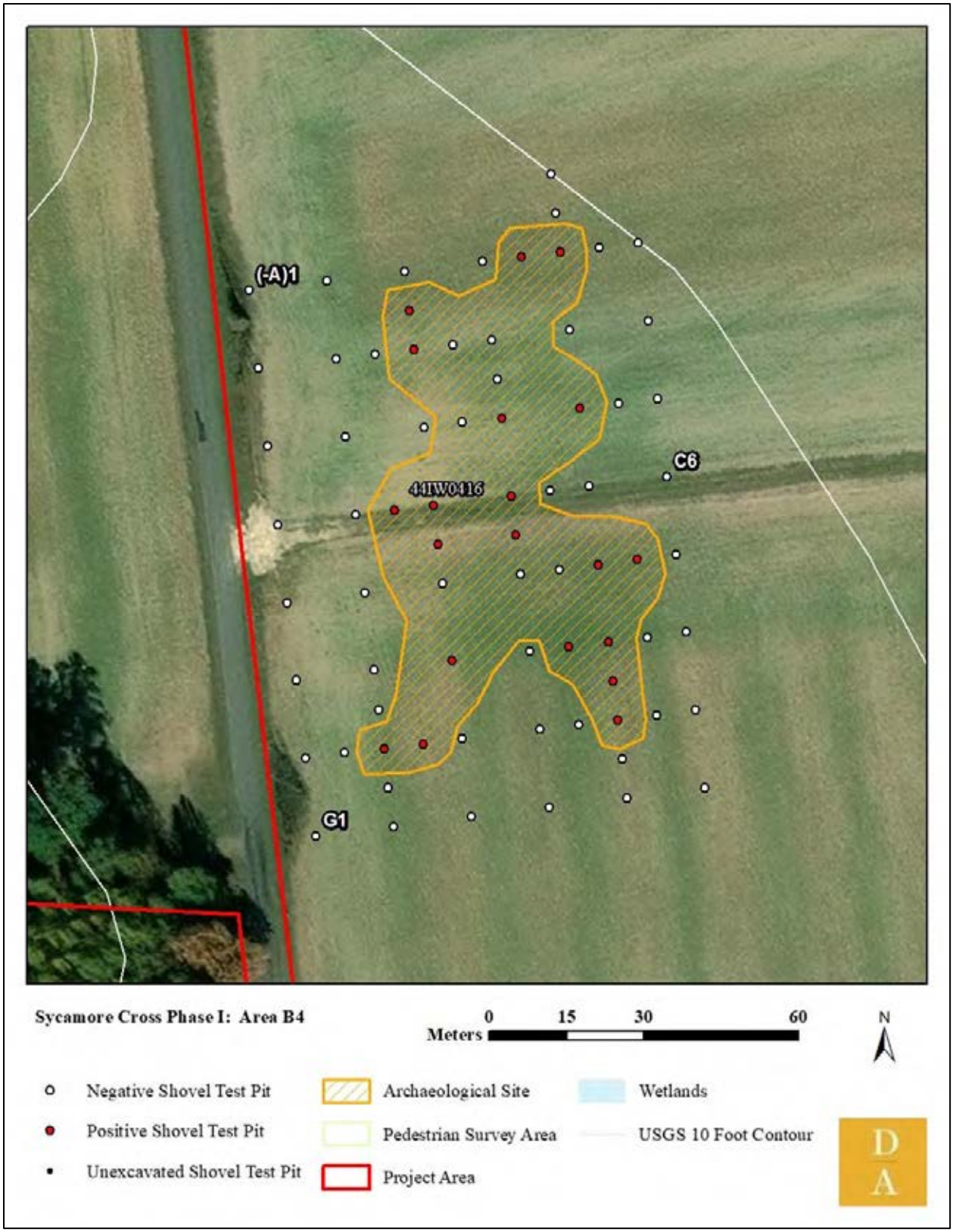


Figure 8-91: Aerial view of Area B4 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 6/4 light yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 brownish yellow compact sandy clay subsoil (B horizon) (Figure 8-92).

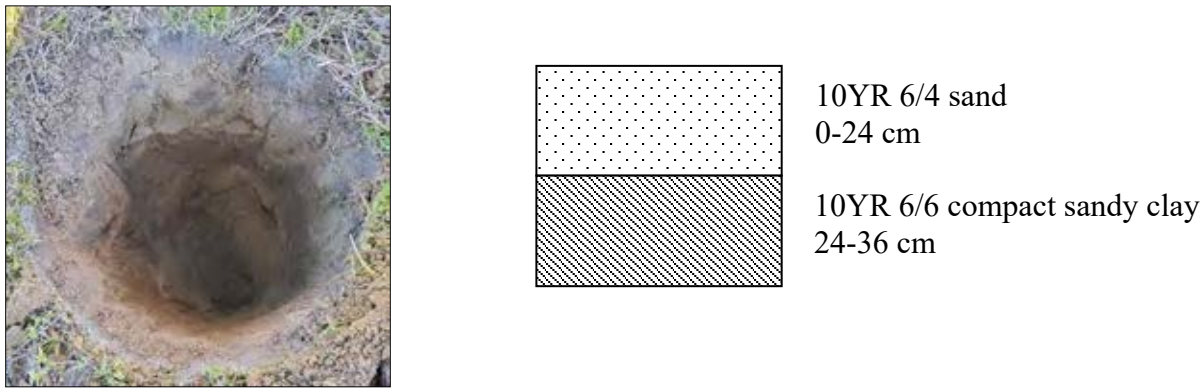


Figure 8-92: Soil profile of Shovel Test C3 in Area B4.

44IW0416

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area B4. It is located in the same place as a dwelling indicated on historic topographic maps. A total of 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, molded refined earthenware, a spark plug, and heavily corroded nails (Figure 8-93).



Figure 8-93: Artifact summary of Site 44IW0416.

Area B5

This area is located in the southeastern part of the overall Area B, bounded to the west and south by wetlands. It covers a portion of agricultural land as well as some woodland. Access is provided by White Hall Trail (Route 623) and by farm roads. A small, previously recorded cemetery sits in the middle of the grid surrounded by agricultural activity, and it contains only one headstone labeled "Holleman" and a displaced footstone labeled "J.J.H." (Figure 8-94). Mature oak, holly, and cedar surround the burial (Figure 8-95).



Figure 8-94: Head and footstone in Area B5 cemetery.



Figure 8-95: Holleman cemetery in Area B5, facing southwest.

Vegetation in this area varied between the agricultural field and the wooded part of the area. In the agricultural part of the grid vegetation consisted of harvested corn and young winter wheat (Figure 8-96). Vegetation in the woodland consisted of mature deciduous trees with a dense undergrowth of holly (Figure 8-97).



Figure 8-96: Vegetation in the agricultural field of Area B5, facing north and the Holleman cemetery.



Figure 8-97: Vegetation and wetland flagging in the wooded part of Area B5, facing south.

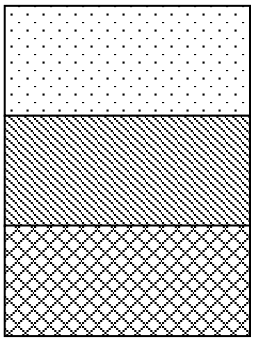
A total of 205 shovel tests were laid out at 15-meter (50-foot) intervals in seventeen transects labeled A through R, fourteen of which could not be excavated due to wetland (Figure 8-98). A total of three shovel tests were positive for cultural material with fragments of colorless and aqua vessel glass, terra cotta drain pipe, and colorless window glass. These positive shovel tests were designated Site 44IW0417, which is described in greater detail, below.



Figure 8-98: Aerial view of Area B5 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/4 yellowish brown sandy loam plowzone (Ap horizon) over 10YR 4/6 dark yellowish brown sandy clay topsoil (Ab horizon) over 10YR 6/8 brownish yellow clay subsoil (B horizon) (Figure 8-99).





10YR 5/4 sandy loam
0-7 cm

10YR 4/6 sandy clay
7-30 cm

10YR 6/8 clay
30-38 cm

Figure 8-99: Soil profile of Shovel Test E5 in Area B5.

44IW0417

This site consists of a small domestic artifact scatter in Area B5. Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe (Figure 8-100).

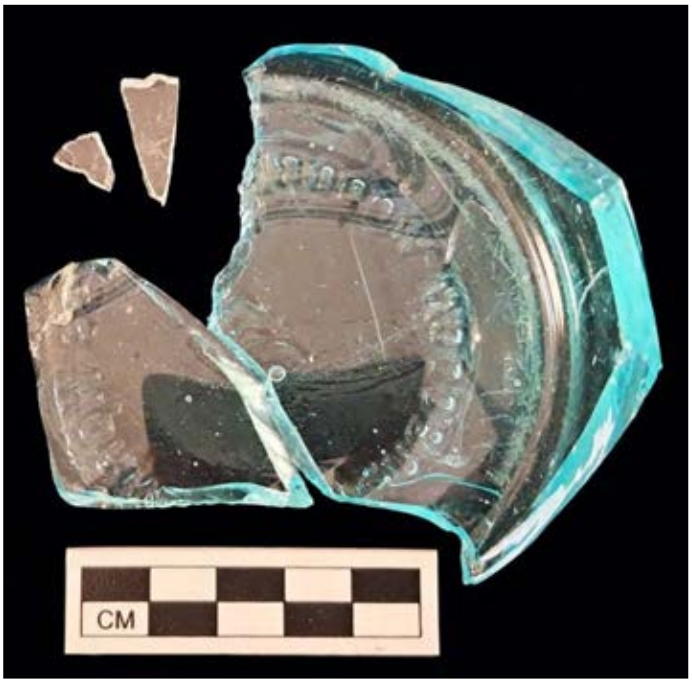


Figure 8-100: Artifact summary of Site 44IW0417.

AREA C

The overall Area C consists of the parcels south of Proctors Bridge Road (Route 621) and along Ramsey Road (Route 622) (Figure 8-101). Terrain in this area includes three primary large, irregular finger ridges with numerous drainages and unnamed tributaries down to Blackwater River to the west and Mill Swamp to the east. These drainages form smaller ridges, knolls, and terraces overlooking the wetlands. Large, harvested agricultural fields cover the tops of the landforms. These fields have very high surface visibility, allowing for systematic pedestrian

survey. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the project are gentle to moderate.

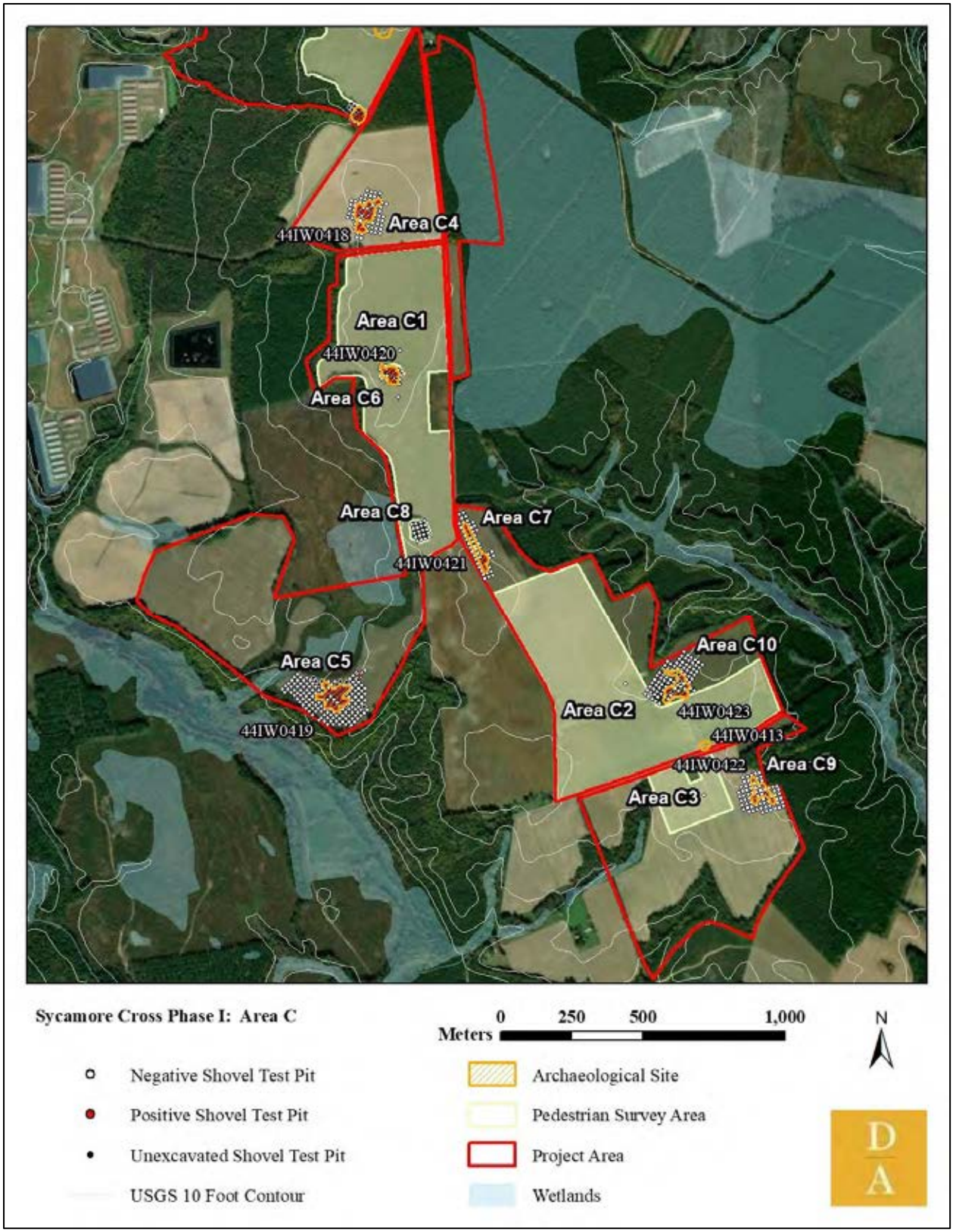


Figure 8-101: Overall map of Area C.

Area C1

This area consists of a long irregular agricultural field in the northern part of the overall Area C. It is bounded to the east by Ramsey Road (Route 622). Access to this area is provided by a short farm road running east to west in the center of the area. Terrain in this area consists of one long irregular finger ridge. Vegetation consists of harvested soy remnants with mixed woodland at the edges of the field (Figure 8-102). A dwelling is indicated on historic topographic maps, though only a grassy space, several mature trees, an outbuilding, and several utility poles remain on the surface: these surface features are associated with Architectural Resource #046-0029. An evenly rectangular space in the central and eastern part of the field was uncultivated and overgrown, for unknown reasons (Figure 8-103).



Figure 8-102: Overview of Area C1, showing Architectural Resource #046-0029, facing north.



Figure 8-103: Overgrown area in middle of Area C1, facing southeast.

Surface exposure in this area was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-104, Figure 8-105). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Only a few surface artifacts were observed across this area, including aqua vessel glass, transferware, blue shell edged refined earthenware.

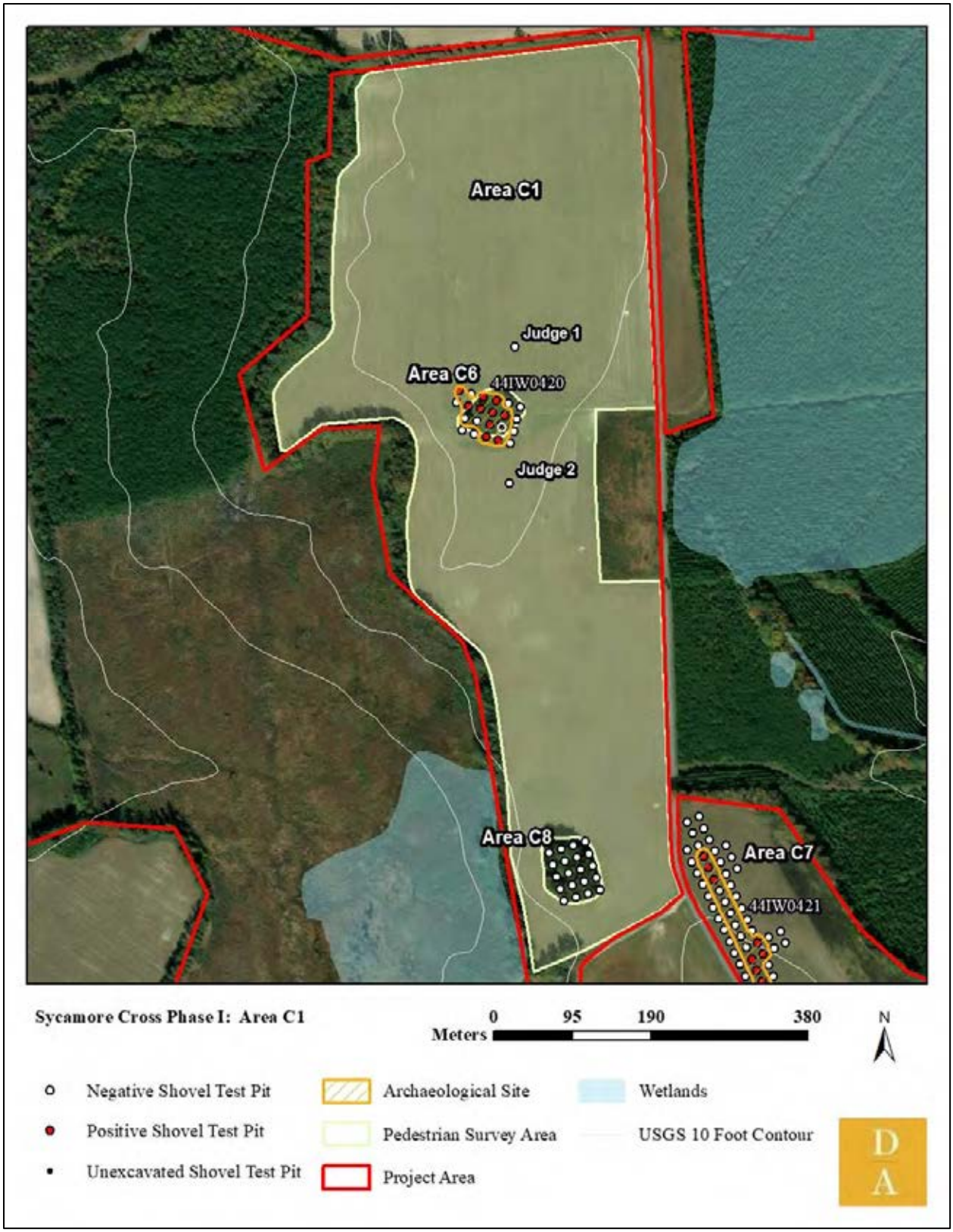


Figure 8-104: Aerial view of Area C1 survey.



Figure 8-105: Surface exposure in Area C1.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-106).

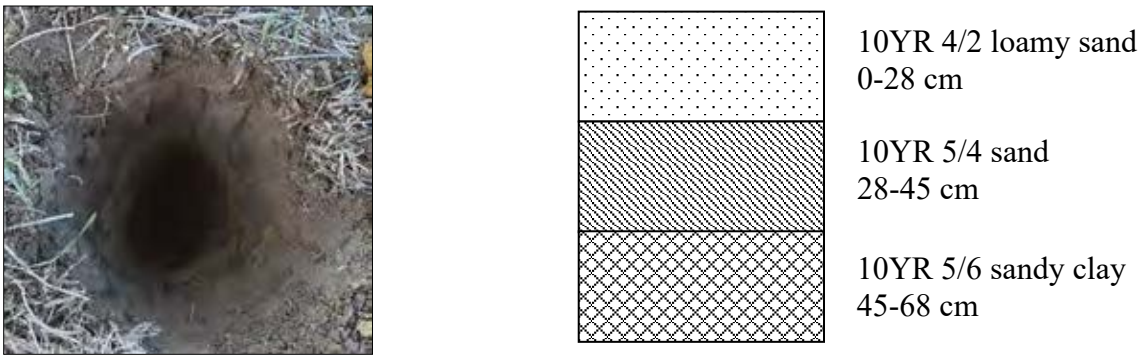


Figure 8-106: Soil profile of Judgmental Shovel Test 1 in Area C1.

Area C2

This area consists of the "L"-shaped agricultural field in the southern part of the Sycamore Cross project area and is bounded to the west by Ramsey Road (Route 622) and to the south by Rattlesnake Trail (Route 646). Access to this area is provided by farm roads to the east and south (Figure 8-107).



Figure 8-107: Farm road in Area C2, facing south.

Terrain in this area consists of two broad, flat finger ridges that overlook an unnamed tributary of Rattlesnake Swamp to the south. Vegetation consists of soy remnants and short, sparse grasses (Figure 8-108). A complex of structures associated with Architectural Resource #046-5148 is located in the southern part of this area (Figure 8-109). This complex includes a dwelling and several outbuildings.



Figure 8-108: Overview of Area C2, facing northwest.



Figure 8-109: Architectural Resource #046-5148 in Area C2, facing north.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-110, Figure 8-111). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Surface artifacts were observed in a scatter in the southern end of the field. These surface observations were designated Site 44IW0413, which is described in greater detail below.

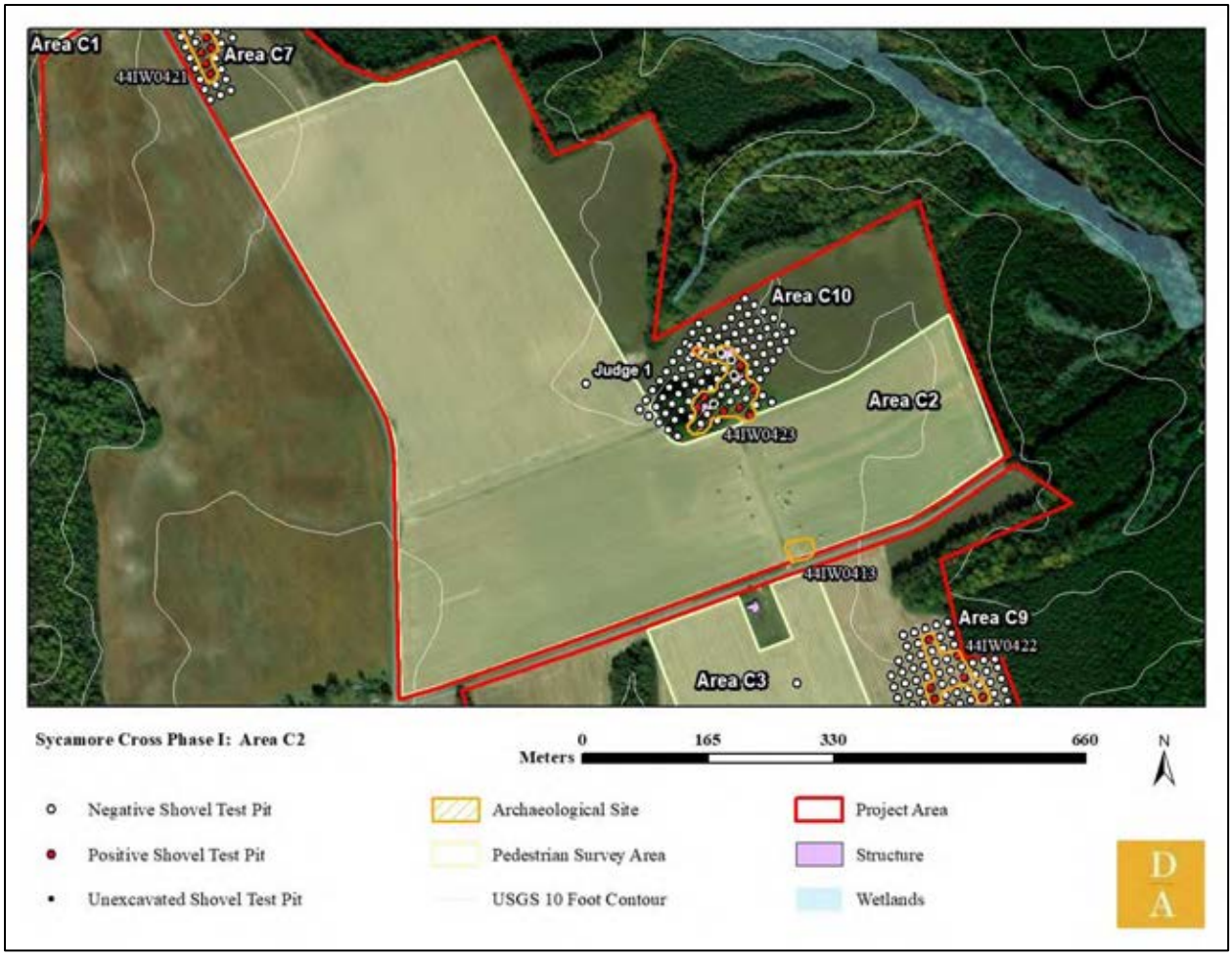


Figure 8-110: Aerial view of Area C2 survey.



Figure 8-111: Surface exposure in Area C2.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited at least a two-stratum profile of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition (AB horizon), and excavation reached the water table before subsoil could be observed (Figure 8-112).

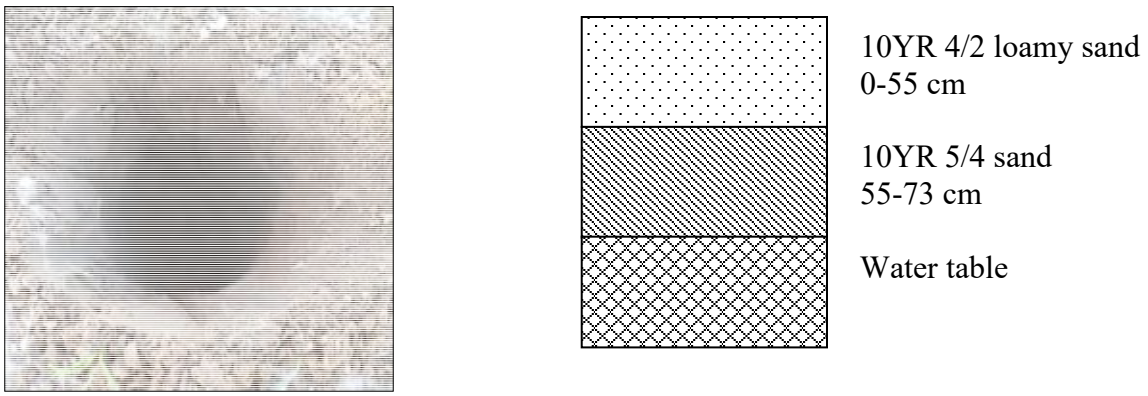


Figure 8-112: Soil profile of Judgmental Shovel Test 1 in Area C2.

44IW0413

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C2. No artifacts were collected, but artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware (Figure 8-113). No surface features were observed.



Figure 8-113: Artifacts on the surface in Site 44IW0413.

Area C3

This area consists of a smaller rectangular section of a larger agricultural field in the southernmost part of the Sycamore Cross project area (Figure 8-114). This area is south of Area C2 and bounded to the north by Rattlesnake Trail (Route 646). Access to this area is provided by a short drive off of Rattlesnake Trail, in the middle of the area.



Figure 8-114: Overview of Area C3, facing south.

Terrain in this area consists of a broad finger ridge overlooking three large drainages to the east and west, which lead to both Blackwater River and Rattlesnake Swamp. Vegetation in this area is the same as that of Area C2. One dwelling stands at the northern edge of the field (Figure 8-115).



Figure 8-115: Dwelling in Area C3, facing southwest.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-116, Figure 8-117). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. No artifact scatters were observed.



Figure 8-116: Aerial view of Area C3 survey.



Figure 8-117: Surface exposure in Area C3.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand topsoil (Ab horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-118).

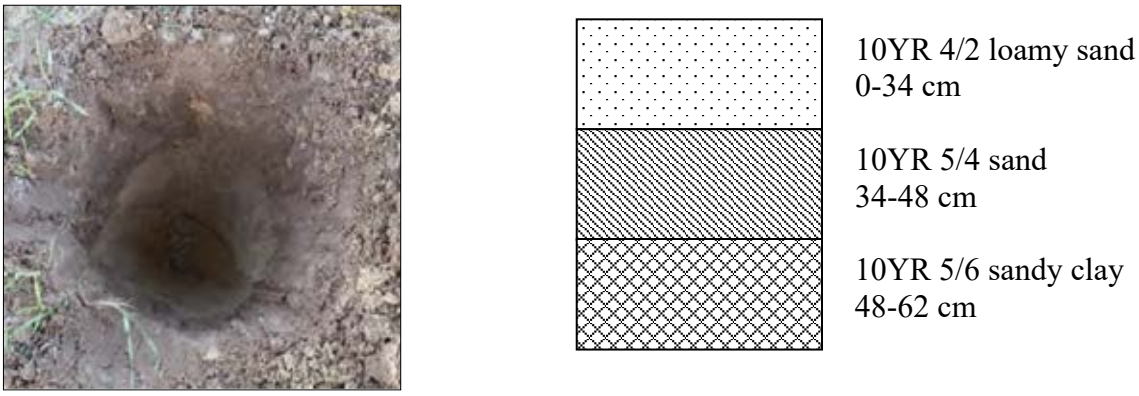


Figure 8-118: Soil profile of Judgmental Shovel Test 1 in Area C3.

Area C4

This area consists of a large rectangular agricultural field in the northern part of the overall Area C. This field sits on the top of a long, broad finger ridge that makes up much of Area C. It is bounded to the northwest by Proctors Bridge Road (Route 621), to the east by Ramsey Road (Route 622), and to the south by an unnamed farm road (Figure 8-119). This grid was placed where two outbuildings are indicated on historic maps, though no surface features remain. These outbuildings may be associated with Architectural Resource #046-0030, which is no longer standing.



Figure 8-119: Towards farm road south of Area C4, facing southwest.

Vegetation in Area C4 at the time of survey consisted of the remains of harvested corn and sparse, short grasses (Figure 8-120). Standing water earlier in the year prevented systematic pedestrian survey. Buried utilities run through the field, indicating at least some surface disturbance by farming activity.



Figure 8-120: Vegetation and utilities in Area C4, facing north.

A total of 76 shovel tests were laid out at 15-meter (50-foot) intervals in nine transects labeled -B through G (Figure 8-121). A total of fourteen shovel tests were positive for cultural material with fragments of vessel glass, refined earthenware, oyster shell, nails, brick, and window glass. These positive shovel tests were designated Site 44IW0418, which is described in greater detail below.

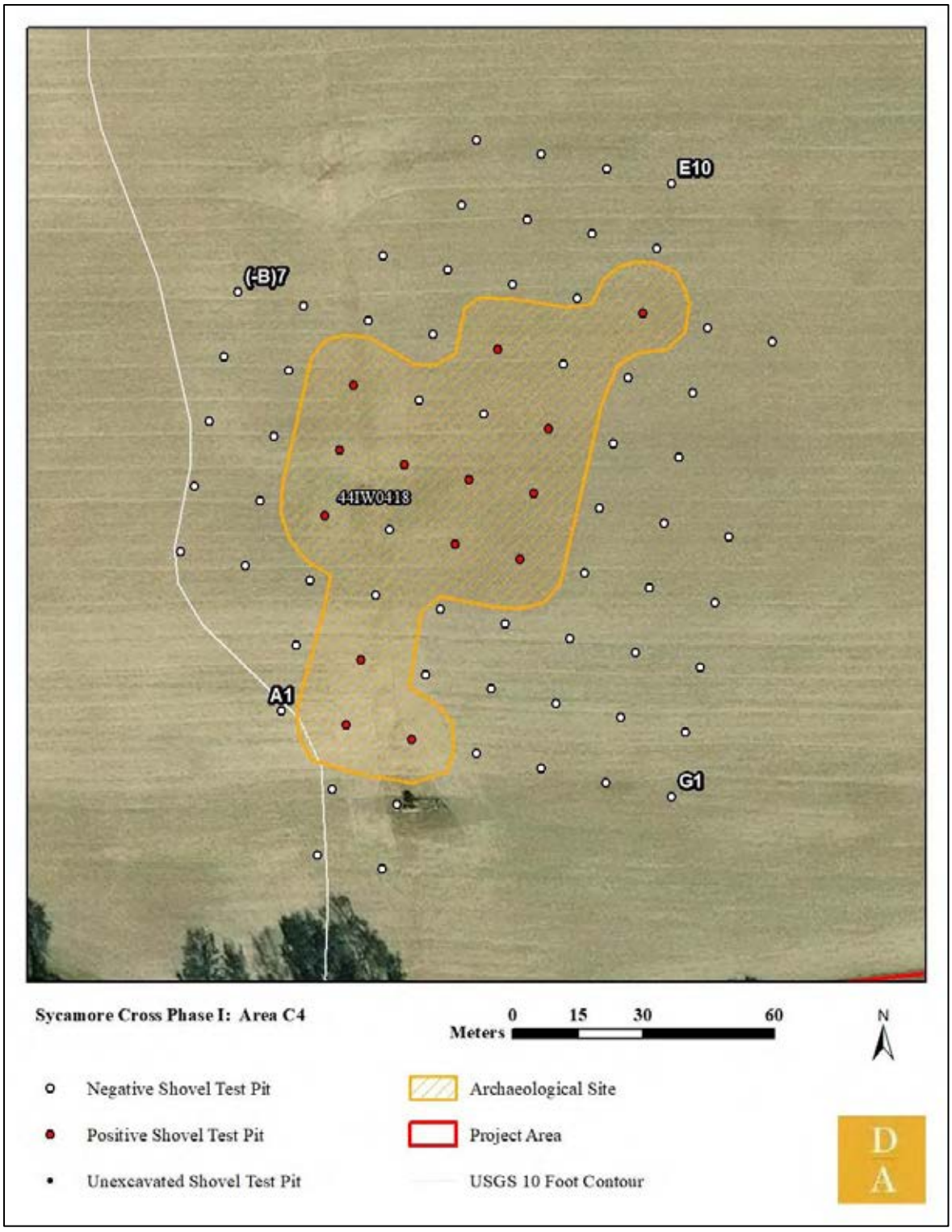


Figure 8-121: Aerial view of Area C4 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 7.5Y 4/3 brown sandy loam plowzone (Ap horizon) over 10YR 6/3 pale brown sandy loam transition layer (AB horizon) over 7.5YR 6/4 light brown sandy clay loam subsoil (B horizon) (Figure 8-122).

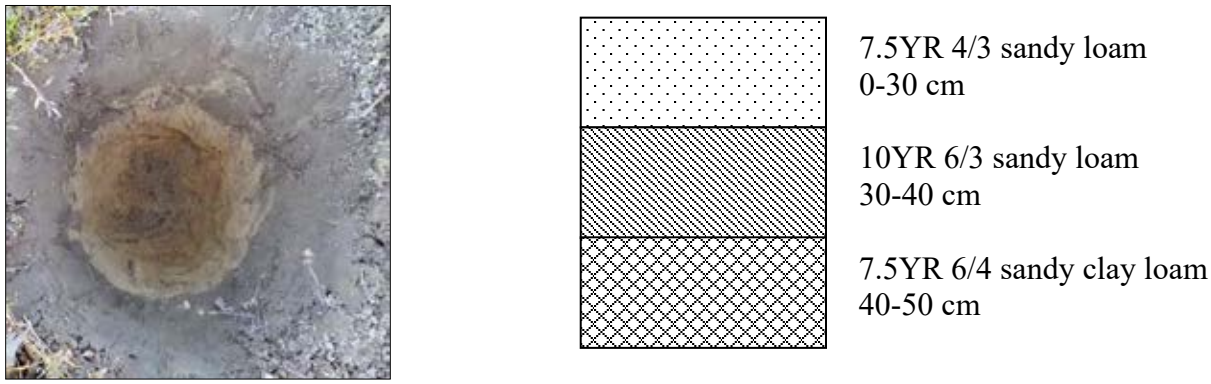


Figure 8-122: Soil profile of Shovel Test C8 in Area C4.

44IW0418

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter associated with Architectural Resource #046-0030. This resource is no longer standing. A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass (Figure 8-123).



Figure 8-123: Artifact summary of Site 44IW0418.

Area C5

This area consists of the small horseshoe-shaped agricultural field to the southwest of the Sycamore Cross project area. This field sits at the end of a narrow, rectangular finger ridge

overlooking the headwaters of an unnamed tributary of Blackwater River. Slope is gentle and rolling. Access is provided by a farm road that runs along the finger ridge (Figure 8-124).



Figure 8-124: Farm road in Area C5, facing south.

Vegetation in Area C5 at the time of survey consisted of young winter wheat (Figure 8-125). Scrubby grasses and mixed woodland border this area. Historic topographic maps show a dwelling and associated outbuilding at the end of this landform. This grid was placed to find evidence of these structures.



Figure 8-125: Overview of Area C5, facing north.

A total of 178 shovel tests were laid out at 15-meter (50-foot) intervals in 0 transects labeled A through S, nine of which could not be excavated due to road disturbance and standing water (Figure 8-126, Figure 8-127). A total of 20 shovel tests were positive for cultural material with fragments of vessel glass, lantern glass, refined earthenware, machine cut and wire nails, and copper pipe. These positive shovel tests were designated Site 44IW0419, which is described in greater detail below.

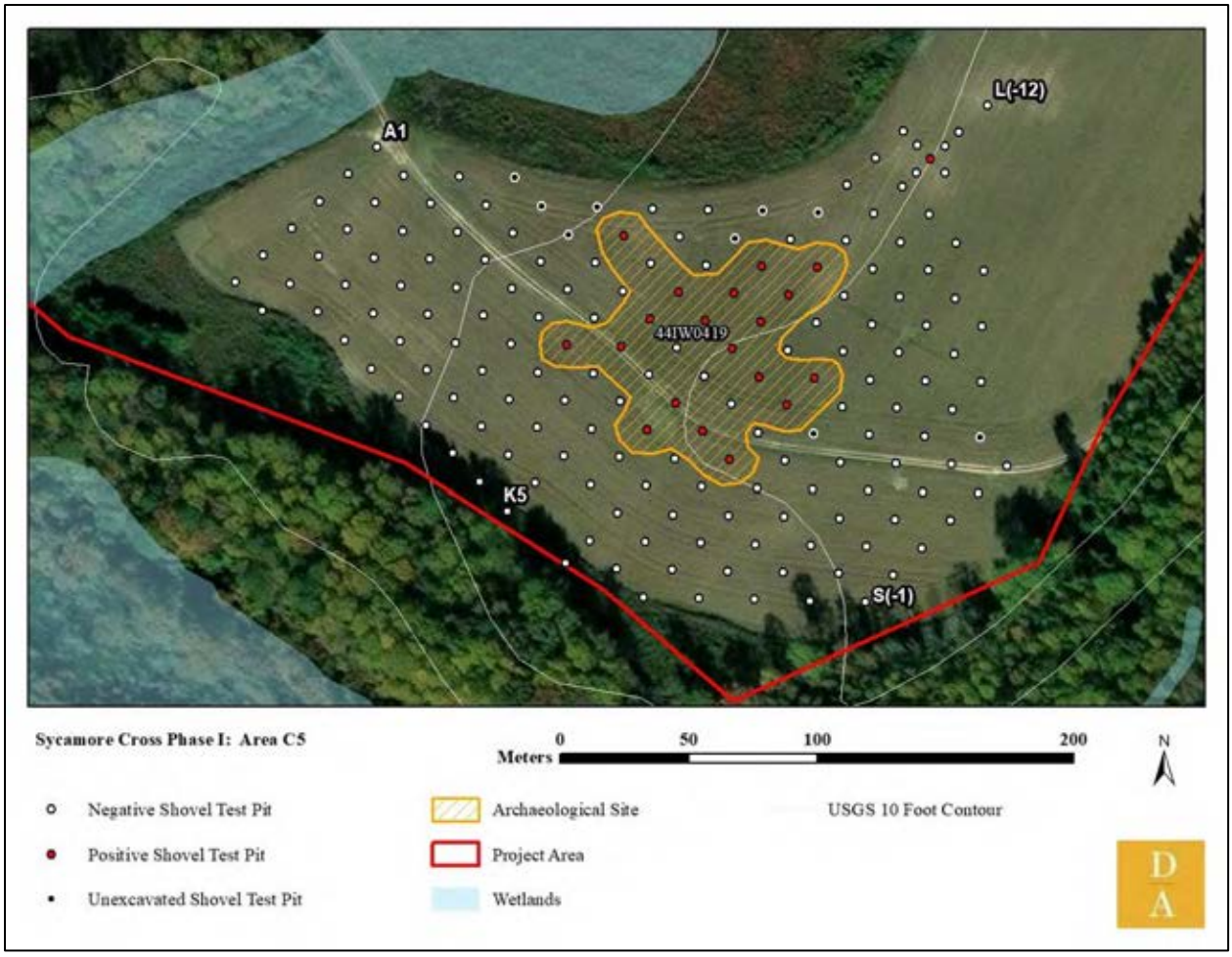


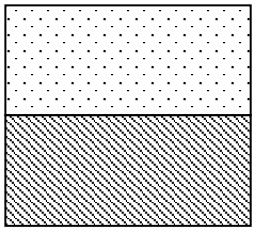
Figure 8-126: Aerial view of Area C5 shovel test grid.



Figure 8-127: Standing water in Area C5.

Shovel tests exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light yellowish brown sandy clay loam plowzone (Ap horizon) over 10YR 4/6 dark yellowish brown clay subsoil (B horizon) (Figure 8-128). Shovel Test J(-1) encountered an impasse of concrete or mortar at 20 cm below the surface (Figure 8-129).



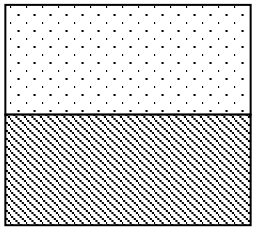


2.5Y 5/4 sandy clay loam
0-45 cm

10YR 4/6 clay
45-55 cm

Figure 8-128: Soil profile of Shovel Test N(-4) in Area C5.





10YR 4/2 sandy loam
0-20 cm

Concrete and mortar impasse
20- cm

Figure 8-129: Shovel Test J(-1), showing concrete impasse.

44IW0419

This site consists of a mid-nineteenth to early-twentieth century domestic artifact scatter in Area C5. A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe (Figure 8-130).



Figure 8-130: Artifact summary of Site 44IW0419.

Area C6

This area sits in the center of the long rectangular agricultural field of the Area C1 pedestrian survey. It focuses on a grassy space that could not be systematically pedestrian surveyed and where historic topographic maps indicate one dwelling and one outbuilding. Structural remains, one

standing structure, and farm equipment were observed on the surface (Figure 8-131, Figure 8-132). Vegetation in this area consisted of tall grasses and a few mature shrubs.



Figure 8-131: Vegetation and outbuilding in Area C6, facing west.



Figure 8-132: Structural rubble in Area C6.

A total of 22 shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D, one of which could not be excavated due to structural remains (Figure 8-133). A total of ten shovel tests were positive for cultural material with fragments of unidentified farm equipment, window and vessel glass, and refined earthenware. These positive shovel tests were designated Site 44IW0420, which is described in greater detail, below. In order to get negative space around positive shovel tests, a portion of the Area C6 shovel test grid overlaps with the Area C1 pedestrian survey.

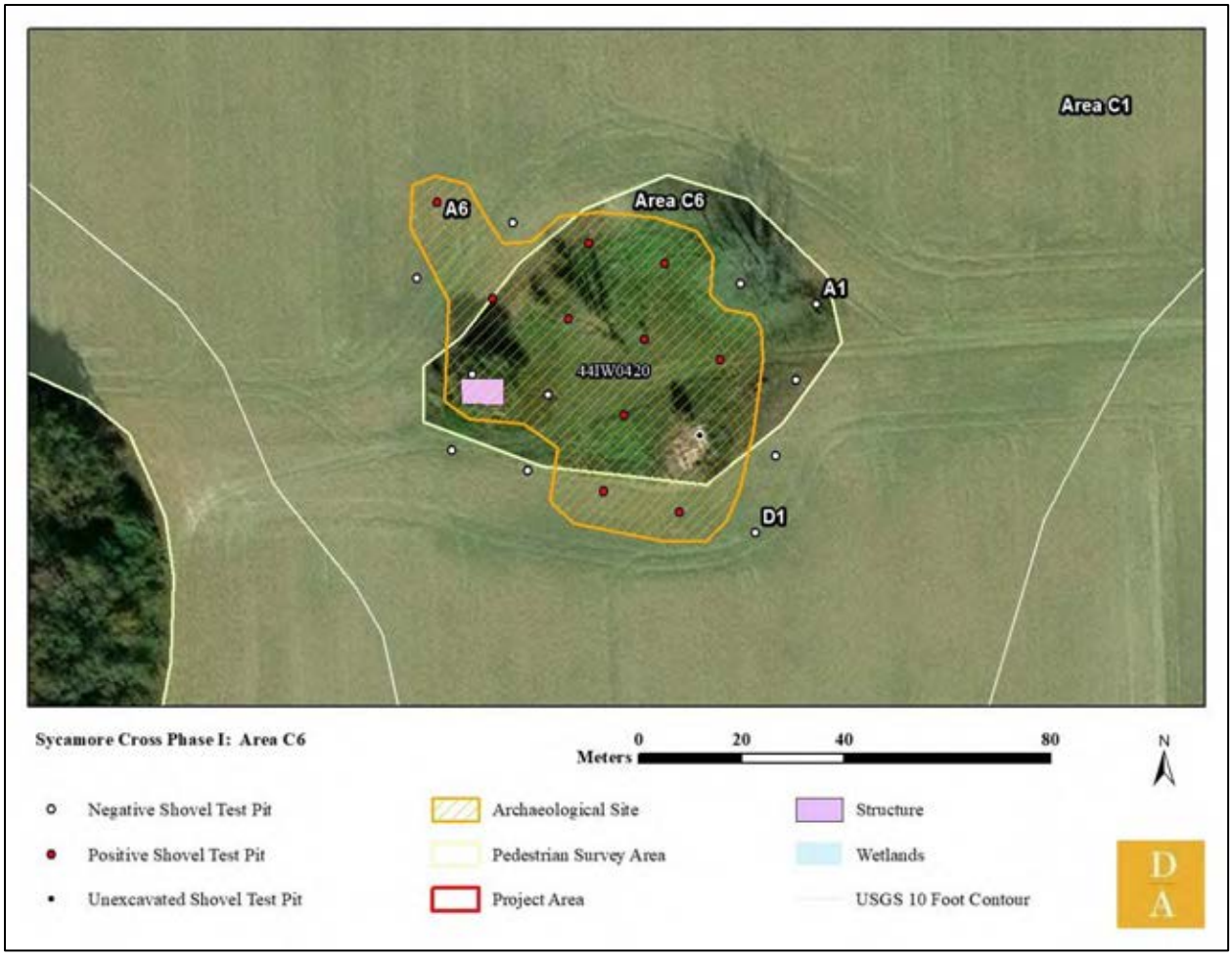
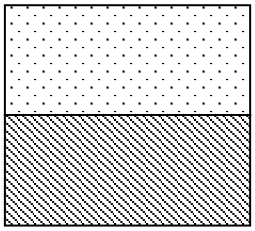


Figure 8-133: Aerial map of Area C6 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/2 grayish brown sandy loam topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-134).





10YR 5/2 sandy loam
0-35 cm

10YR 5/6 sandy clay
35-51 cm

Figure 8-134: Soil profile of Shovel Test B3 in Area C6.

44IW0420

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C6. This grid also overlaps slightly with the Area C1 pedestrian survey. This site is also associated with Architectural Resource #046-0029. A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail (Figure 8-135). Colorless vessel glass was most common in this area, with five fragments recovered.



Figure 8-135: Artifact summary of Site 44IW0420.

Area C7

This area sits in the center of the overall Area C, north of the Area C2 pedestrian survey and bounded on the west by Ramsey Road (Route 622) (Figure 8-136). It sits at the top of a large finger ridge, pinched between drainages to tributaries of the Blackwater River and Mill Swamp. This grid was excavated to find evidence of a dwelling marked on historic topographic maps. Vegetation in this area is primarily short grasses consistent with fallow agricultural fields (Figure 8-137).



Figure 8-136: Ramsey Road bounding the west of Area C7, facing south.



Figure 8-137: Vegetation and overview of Area C7, facing south.

A total of 56 shovel tests were laid out at 15-meter (50-foot) intervals in five transects labeled A through E (Figure 8-138). A total of eight shovel tests were positive for cultural material with fragments of vessel glass, unidentified nails, refined earthenware, window glass, and a glass marble. These positive shovel tests were designated Site 44IW0421, which is described in greater detail, below.

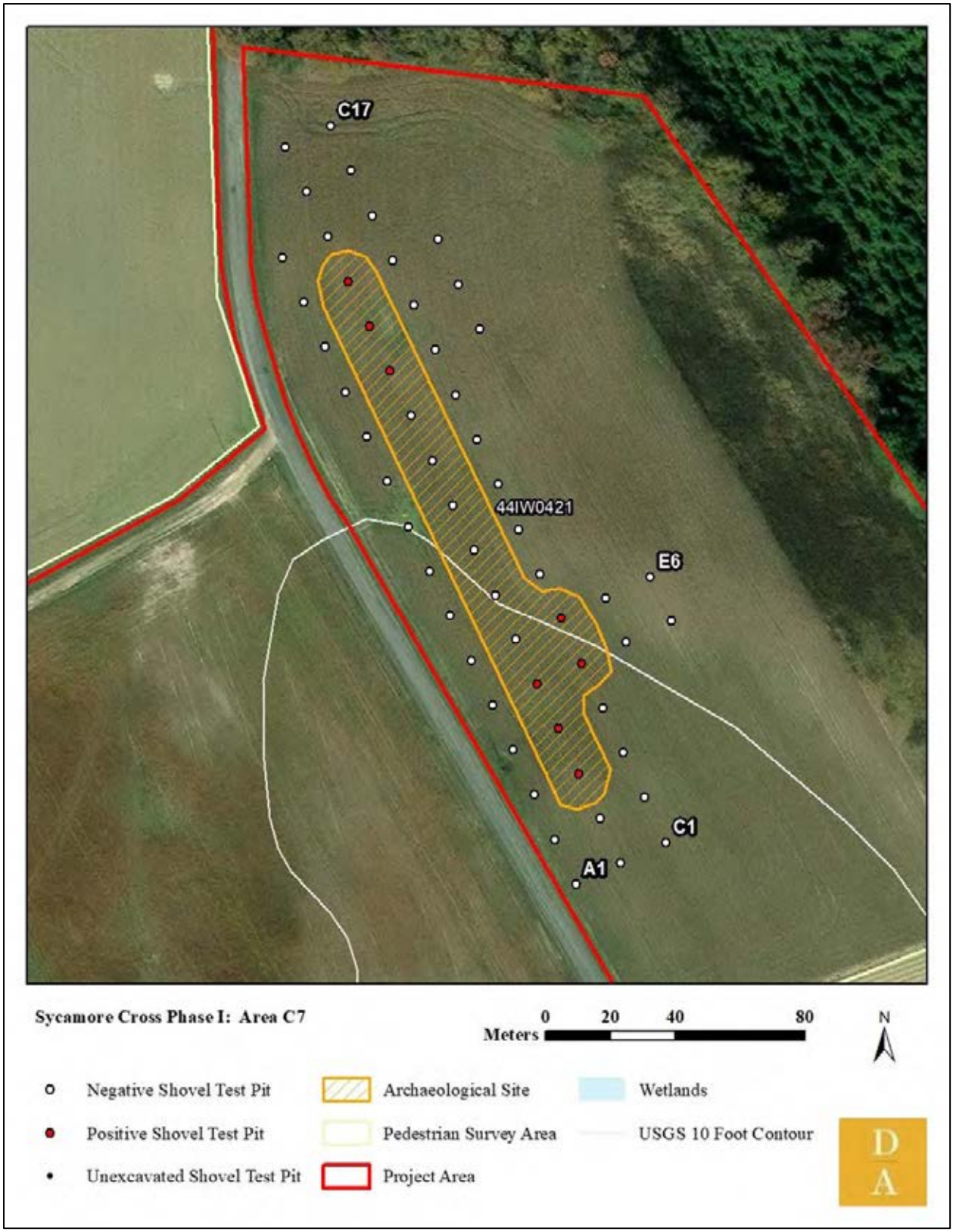
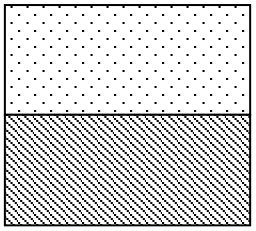


Figure 8-138: Aerial view of Area C7 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand subsoil (B horizon) (Figure 8-139).





10YR 3/2 sandy loam
0-31 cm

10YR 5/4 sand
31-50 cm

Figure 8-139: Soil profile of Shovel Test B12 in Area C7.

44IW0421

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C7. Fifty artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble (Figure 8-140).



Figure 8-140: Artifact summary of Site 44IW0421.

Area C8

This area covers the copse of trees in the southern end of the agricultural field that constitutes the Area C1 pedestrian survey. This small grid overlooks a large, flat, terraced finger ridge to the west.

Fence posts, sheet metal, farm equipment, and fragments of brick and plaster can be found scattered across the ground surface of this area (Figure 8-141, Figure 8-142).



Figure 8-141: Fence post in Area C8, facing east.



Figure 8-142: Equipment remnants in Area C8, facing south.

Vegetation in Area C8 at the time of survey consisted of mature deciduous trees ringing a dense briar thicket (Figure 8-143). A thick, loamy humus layer can be found across this area (Figure 8-144). Terrain in this grid is unnatural and bowl-shaped, with trees growing around the "rim" of the "bowl."



Figure 8-143: Vegetation in Area C8, facing east.



Figure 8-144: Shovel Test C4, showing 35 cm humus layer.

A total of 20 shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D (Figure 8-145). No cultural material was recovered, and no historic surface features were observed.



Figure 8-145: Aerial view of Area C8 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of topsoil over transitional layer over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-146).

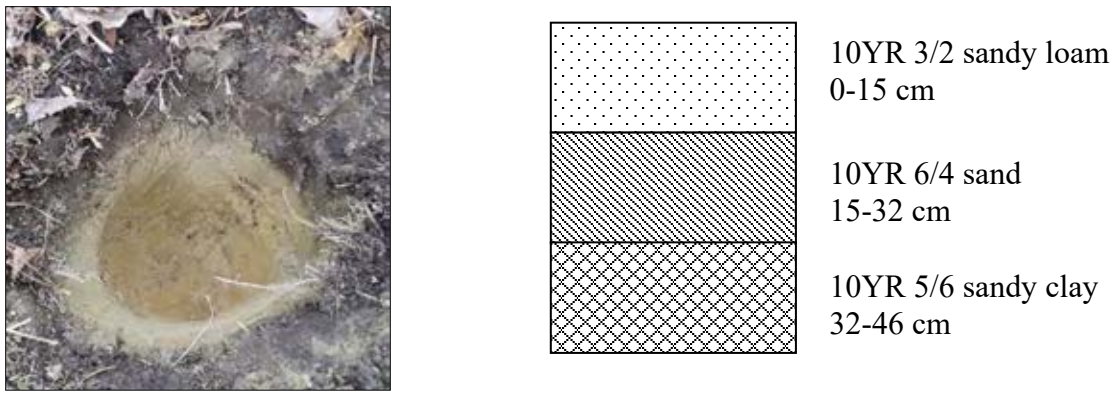


Figure 8-146: Soil profile of Shovel Test B5 in Area C8.

Area C9

This area consists of a portion of the southernmost agricultural field in Area C9, at the eastern project area boundary. It shares this agricultural field with the Area C3 pedestrian survey, though these areas do not overlap. This area overlooks several broad terraces that themselves overlook drainages down to Mill Swamp. Vegetation in Area C9 at the time of survey consisted of waist-high winter wheat, with mature mixed forest at the edge of the agricultural field (Figure 8-147). Terrain is broad and flat.



Figure 8-147: Overview of Area C9, facing north.

A total of 78 shovel tests were laid out at 15-meter (50-foot) intervals in ten transects labeled A through K (Figure 8-148). A total of six shovel tests were positive for cultural material including fragments of vessel and window glass, ironstone, and refined earthenware. These positive shovel tests were designated Site 44IW0422, which is described in greater detail, below.

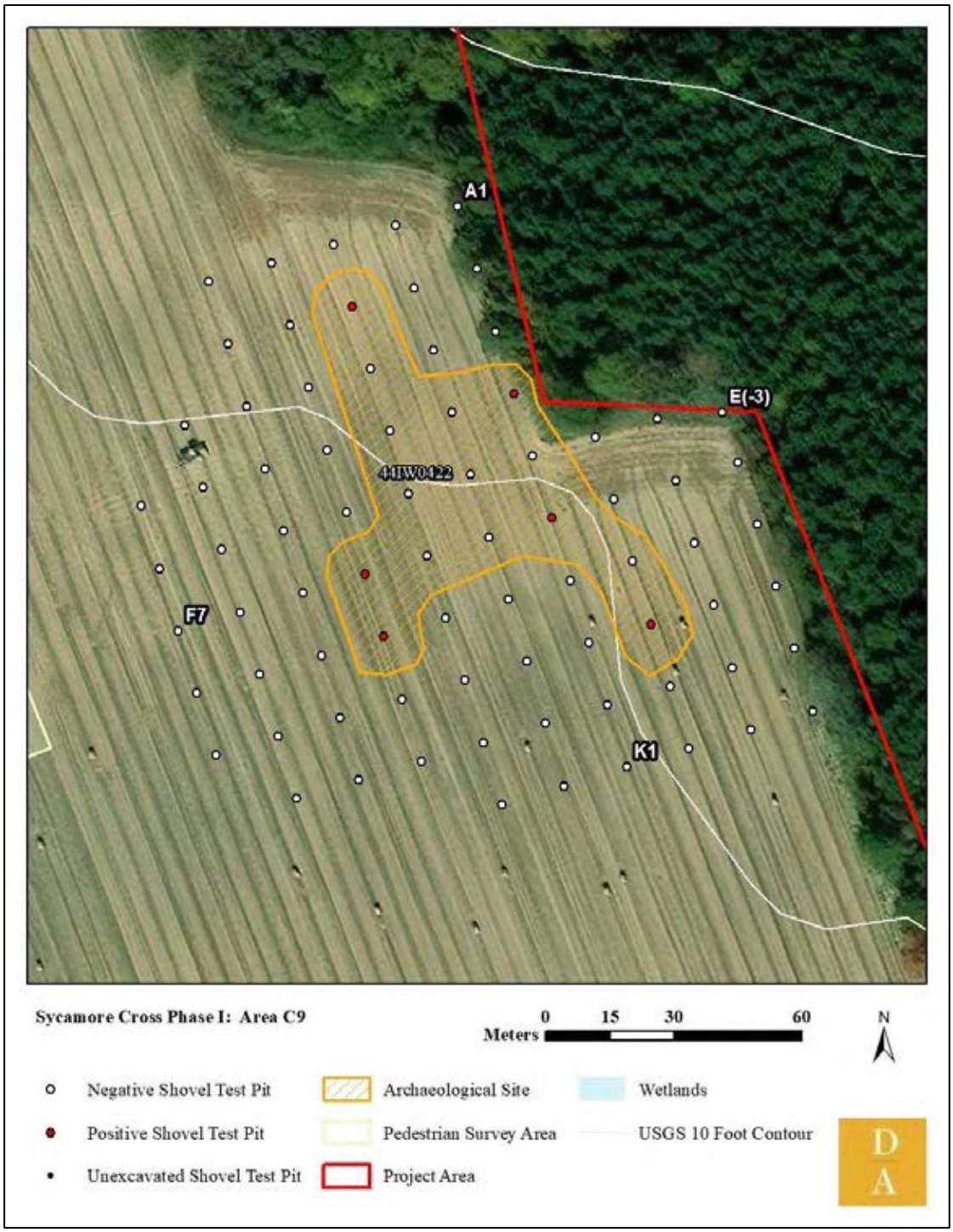


Figure 8-148: Aerial view of Area C9 shovel test grid.

Shovel tests exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR6/4 light yellowish brown sand topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-149).

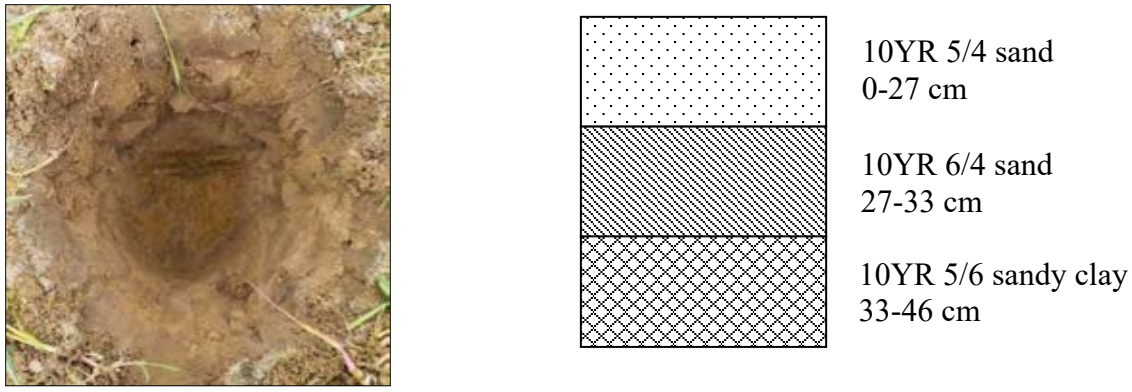


Figure 8-149: Soil profile of Shovel Test B4 in Area C9.

44IW0422

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C9. 13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron (Figure 8-150). The most common artifact was colorless vessel glass, with four fragments.



Figure 8-150: Artifact summary of Site 44IW0422.

Area C10

This area rests in the southern part of the overall Area C, bounded by Area C2 to the west and south and by the Sycamore Cross project area boundaries to the north. This area was excavated to investigate a part of the project that could not be systematically pedestrian surveyed due to low surface visibility, as well as its proximity to Architectural Resource #046-5148 (Figure 8-151). It

sits on a narrow finger ridge at the headwaters of an unnamed tributary of Mill Swamp, where human activity has formed a dam and artificial wetland outside of the project area.



Figure 8-151: View towards an outbuilding associated with Architectural Resource #046-5148, facing east.

Vegetation in Area C10 at the time of survey varied. In the open field, vegetation consisted of short grasses (Figure 8-152). Around the farm complex, vegetation consisted of tall grasses, woody shrubs, privet, and mature trees (Figure 8-153).



Figure 8-152: Vegetation in the agricultural field in Area C10, facing west.



Figure 8-153: Vegetation around Architectural Resource #046-5148, facing south.

A total of 101 shovel tests were laid out at 15-meter (50-foot) intervals in fourteen transects labeled A through O, four of which could not be excavated due to proximity to structures (Figure 8-154). A total of eight shovel tests were positive for cultural material with fragments of mortar, unidentified nails, vessel glass, and iron bolts. These positive shovel tests were designated Site 44IW0423, which is described in greater detail, below.

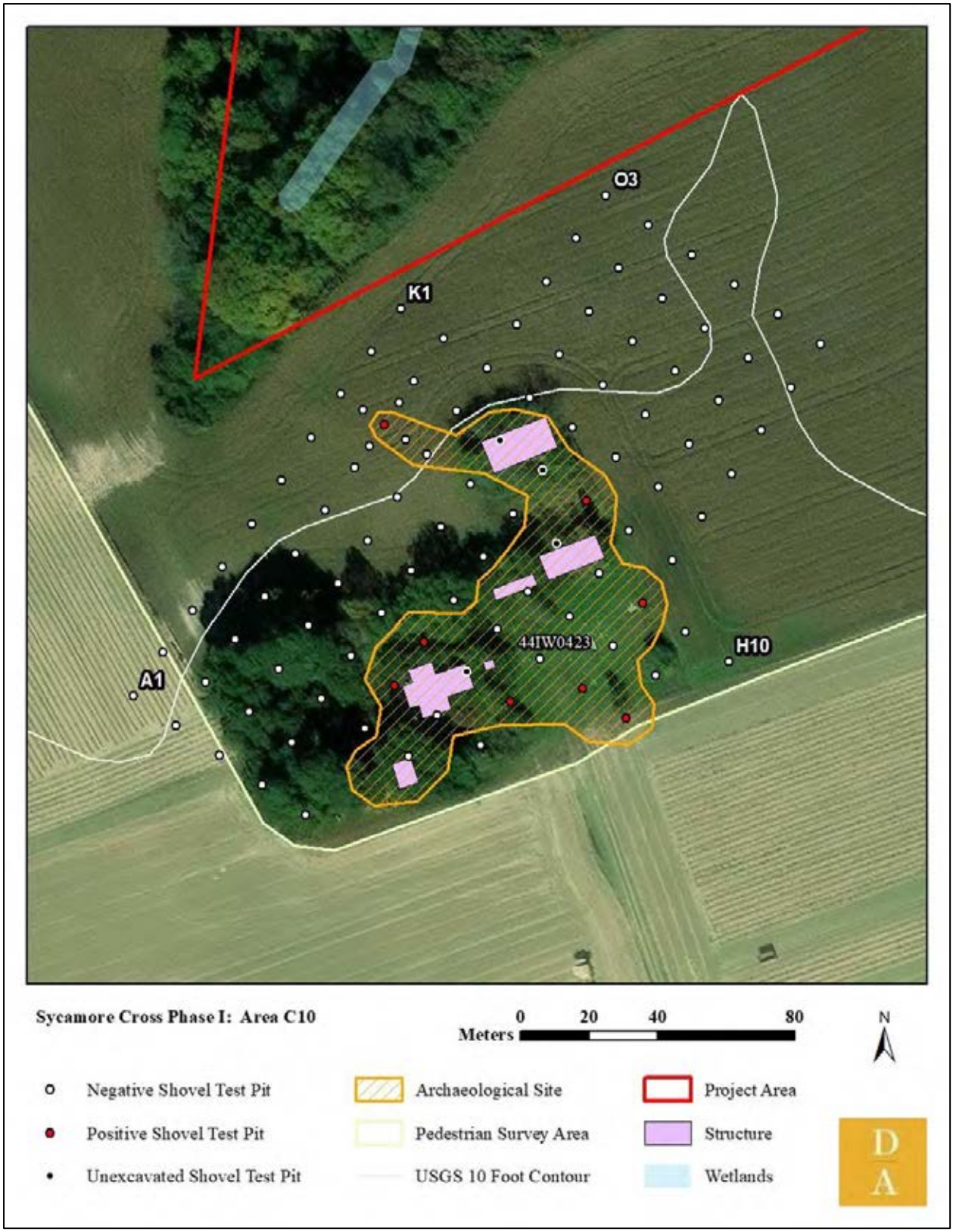


Figure 8-154: Aerial view of Area C10 shovel test grid.

Shovel tests in the agricultural field exhibited a three-stratum profile of plowzone which cuts an intact transition layer over subsoil. Stratigraphy consisted of 10YR 4/3 brown sandy loam plowzone (Ap horizon) over 2.5Y 7/4 pale brown sandy clay transition (AB horizon) over 10YR 7/6 yellow clay subsoil (B horizon) (Figure 8-155). Shovel tests in the thicker vegetation around the architectural resource exhibited a three-stratum profile of a disturbed layer over intact topsoil over subsoil. Stratigraphy here consisted of 10YR 6/6 brownish yellow clay disturbance over 10YR 3/3 dark brown sand topsoil (A horizon) over 2.5Y 6/4 light yellowish brown sandy clay subsoil (B horizon) (Figure 8-156).



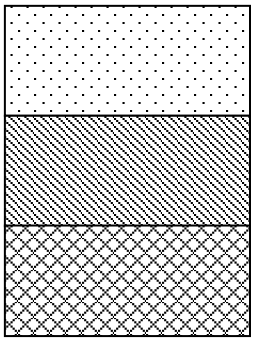


Figure 8-155: Soil profile of Shovel Test J3 in the agricultural field in Area C10.



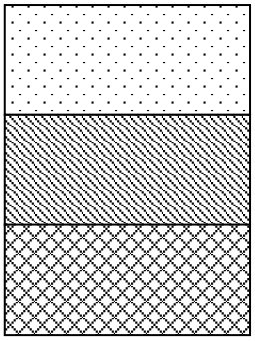


Figure 8-156: Soil profile of Shovel Test E5 in the domestic part of Area C10.

44IW0423

This site consists of an early-to-mid twentieth century artifact scatter in Area C10. Eighteen artifacts were recovered from eight shovel tests, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe (Figure 8-157).



Figure 8-157: Artifact summary of Site 44IW0423.

AREA D

Area D encompasses the parcel in the northwestern part of the Sycamore Cross project area and west of Area A4 (Figure 8-158). This area was timbered in 2017, which caused extensive disturbance. Field technicians visually inspected the area, but systematic shovel testing was not conducted.

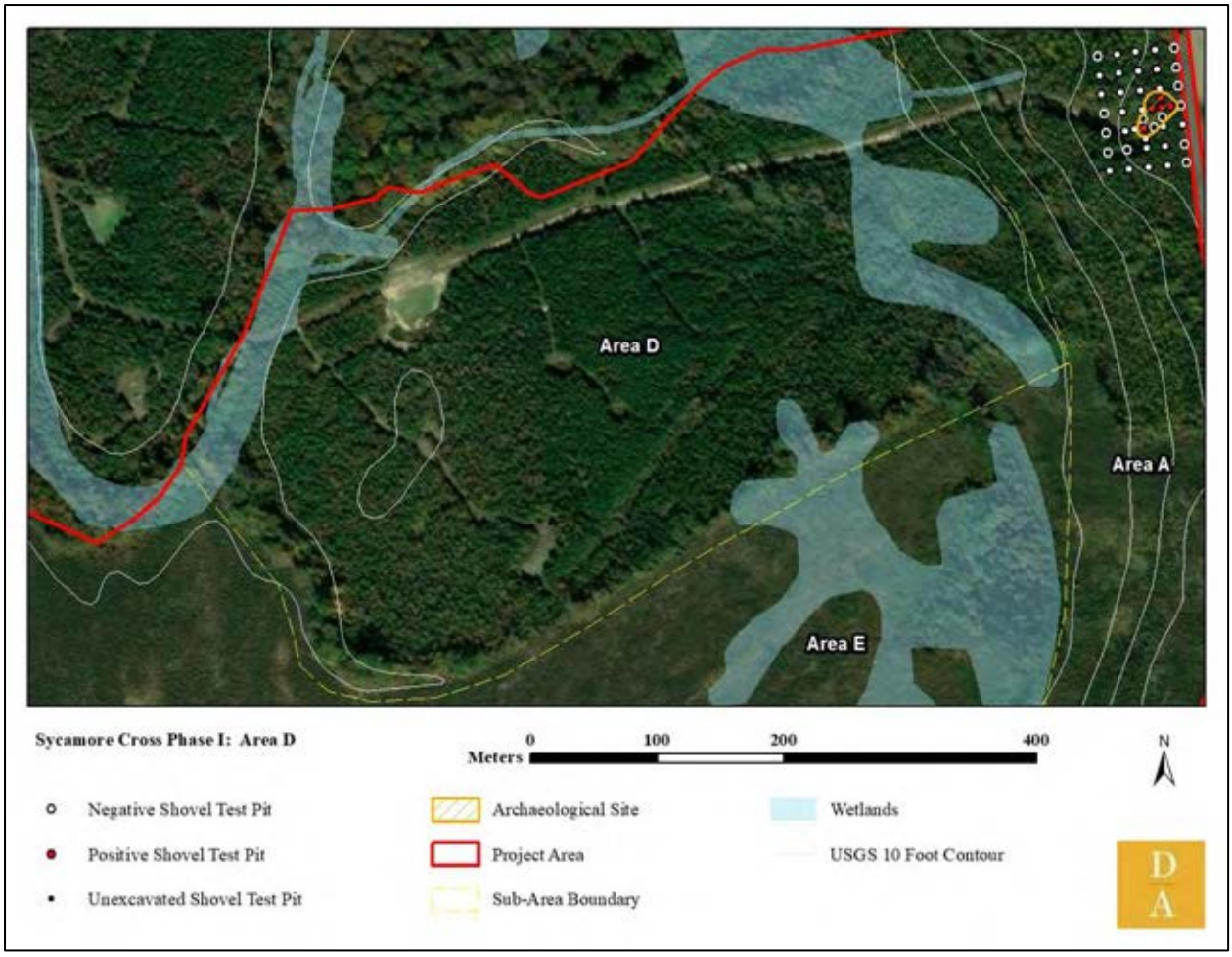


Figure 8-158: Aerial view of Area D.

Terrain in this area consists of a broad, low terrace, formed by two drainage cuts and overlooking the Blackwater River. Standing water was common, and the ground surface was disturbed by erosion and logging equipment (Figure 8-159). Vegetation is primarily densely growing young pine, with a thick undergrowth of tall grasses and briars (Figure 8-160).



Figure 8-159: Standing water in Area D, facing east.



Figure 8-160: Vegetation in Area D, facing north.

AREA E

Area E encompasses the parcel in the western part of the Sycamore Cross project area and northwest of Area A1 (Figure 8-161). This area was timbered in 2021, which caused extensive disturbance. Field technicians visually inspected the area, but systematic shovel testing was not conducted.

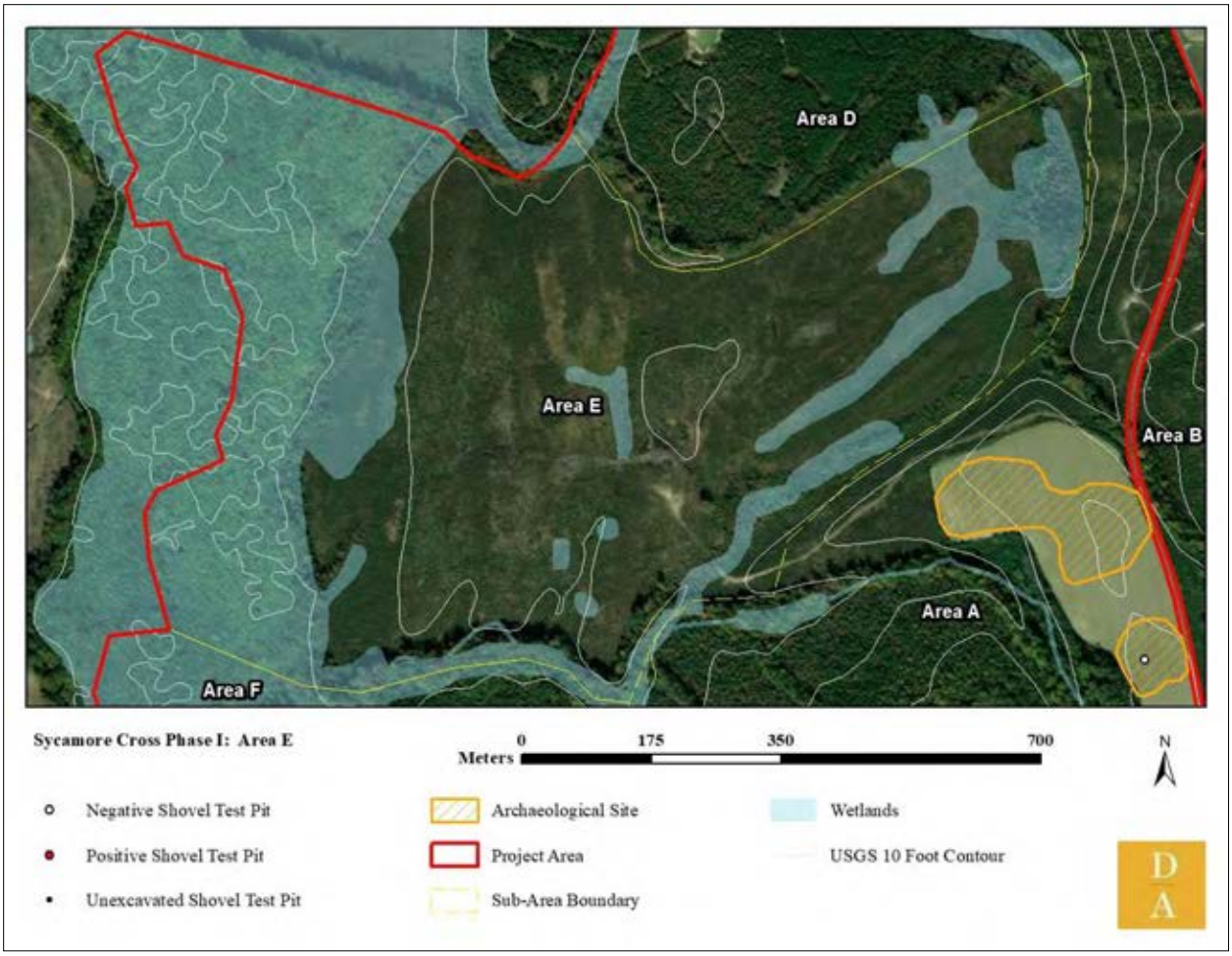


Figure 8-161: Aerial view of Area E.

Terrain in this area consists of a broad, low terrace and a series of knolls. Numerous drainages interrupt the landform, which drain west to the Blackwater River. Standing water was common, and the ground surface was disturbed by erosion and logging equipment (Figure 8-162). Vegetation is primarily sparse pine saplings, with briars and shrubs throughout (Figure 8-163). Thick layers of slash are common (Figure 8-164).



Figure 8-162: Standing water in Area E, facing south.



Figure 8-163: Vegetation in Area E, facing east.



Figure 8-164: Slash in Area E, facing north.

AREA F

Area F encompasses the low terrace west of Area A1 that overlooks Blackwater River (Figure 8-165). It is bounded on all sides by wetlands. Parts of this landform were visually inspected but not systematically shovel tested due to dense vegetation and wetlands.

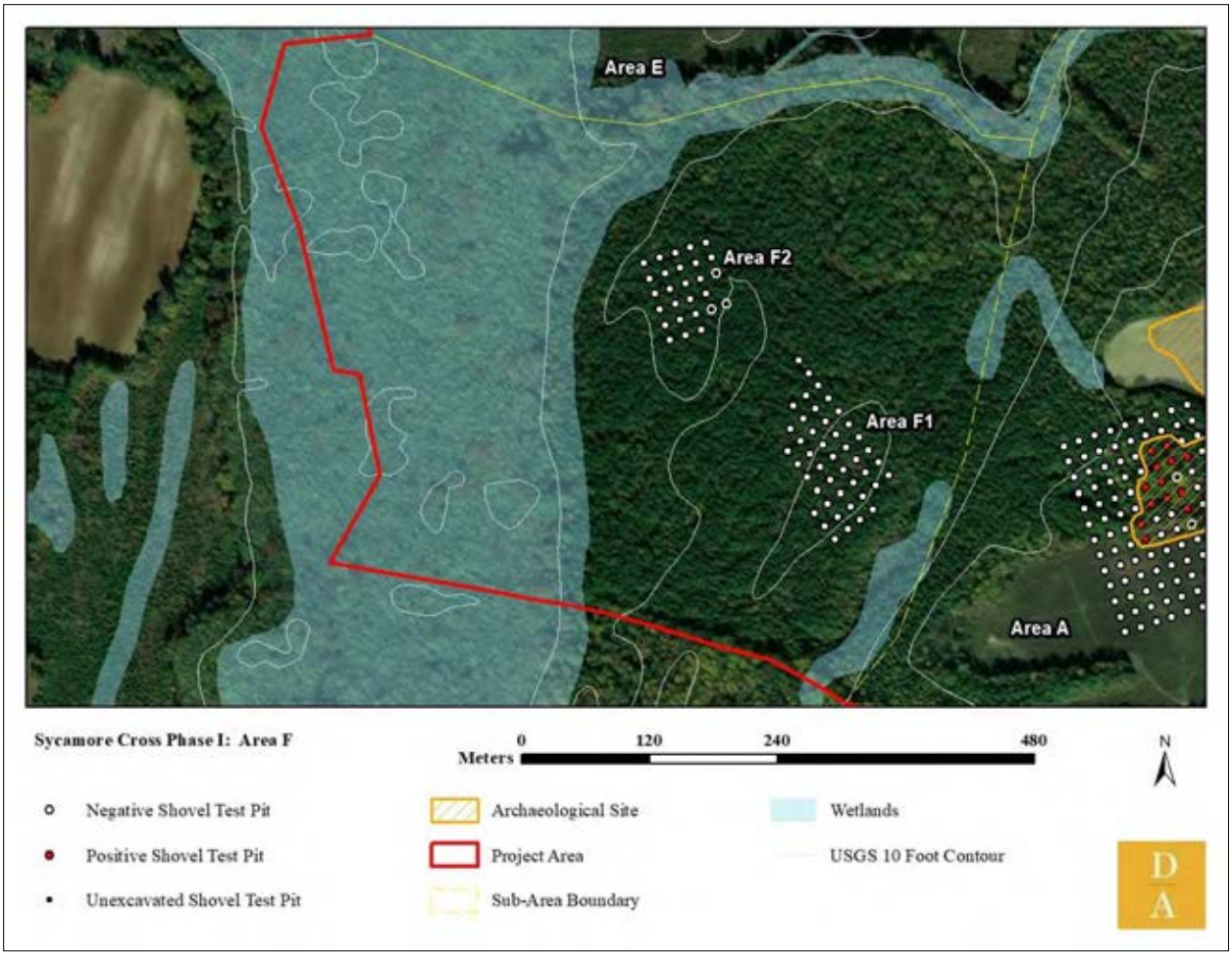


Figure 8-165: Overall map of Area F.

Vegetation in these areas ranged from mixed woodland with dense vines and briars, and pine saplings and holly with layers of slash (Figure 8-166, Figure 8-167). Access to shovel test grids was provided by a series of logging roads. Two shovel test grids were placed on the high ground of Area F, labeled F1 and F2.



Figure 8-166: Thick vegetation preventing shovel test survey in Area F.



Figure 8-167: Thick briars in Area F preventing shovel test survey.

Area F1

This area consists of the narrow ridge in the southeastern part of the overall Area F, across a narrow swamp from Area A5, and bounded to the west by wetlands associated with Blackwater River. Terrain ranged from flat to gently sloped and was minimally disturbed by timbering activity.

Vegetation in this area consisted of mature planted pine forest with an open understory of sparse holly shrubs and vines (Figure 8-168). Vegetation in the wetlands around the grid was primarily mature deciduous trees and holly (Figure 8-169).



Figure 8-168: Vegetation in Area F1 facing north.



Figure 8-169: Wetlands south and east of Area F1, facing west.

A total of 45 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F (Figure 8-170). No cultural material was recovered, and no historical features were observed.

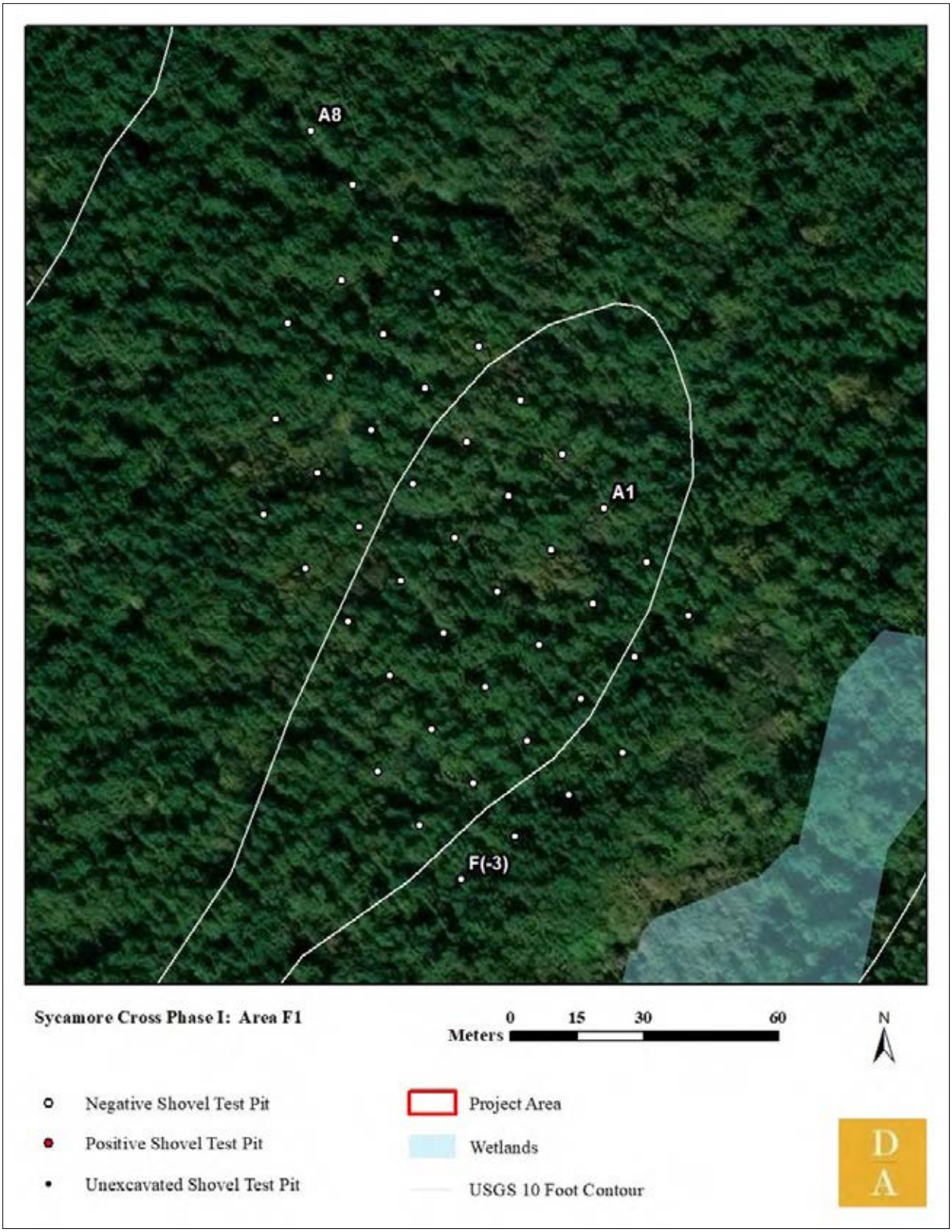


Figure 8-170: Aerial view of Area F1 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 4/3 brown sand topsoil (A horizon) over 10YR 6/6 brownish yellow clay subsoil (B horizon) (Figure 8-171).

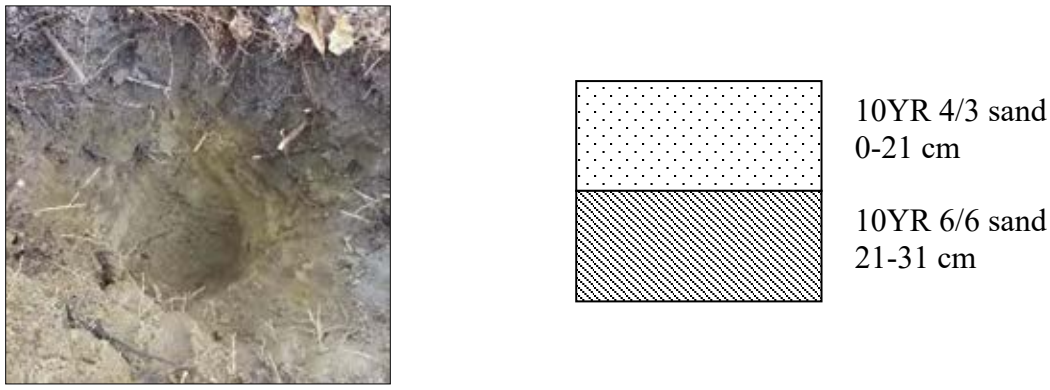


Figure 8-171: Soil profile of Shovel Test C4 in Area F1.

Area F2

This area consists of a low finger ridge in the northwestern part of the overall Area F, north of Area F1, and south of Area E. Wetlands bound the north and west of the area (Figure 8-172). Terrain was flat with steep slopes at the edge of the grid, and surface disturbance was minimal.



Figure 8-172: Wetlands and mixed deciduous woodland north of Area F2, facing north.

Vegetation in this area consisted of mature planted pine forest with an open understory of sparse holly shrubs, vines, and deciduous saplings (Figure 8-173). Vegetation in the wetlands around the grid was primarily mature deciduous trees and holly.



Figure 8-173: Vegetation in Area F2 facing south.

A total of 27 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F, three of which could not be excavated due to slope (Figure 8-174). No cultural material was recovered, and no historical features were observed.

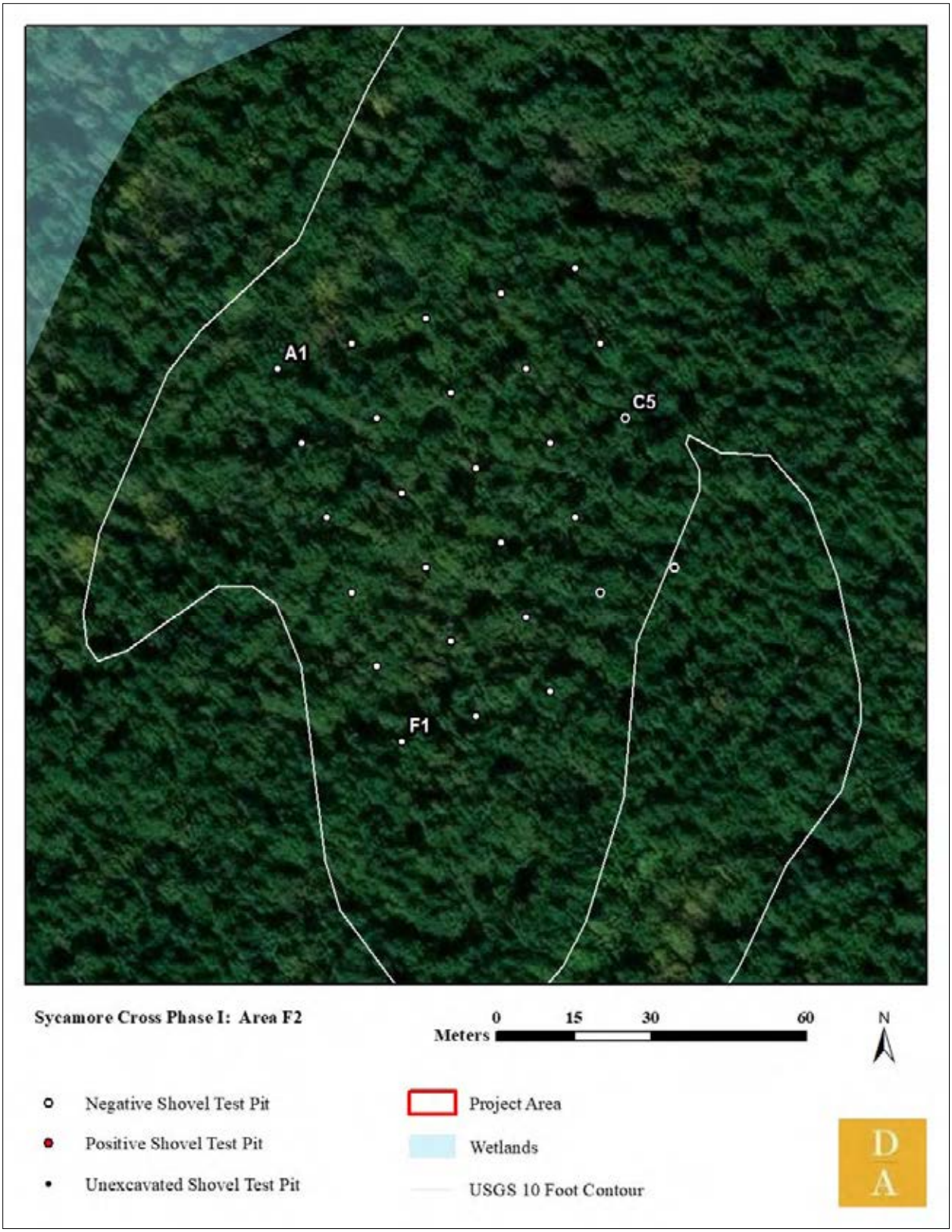


Figure 8-174: Aerial view of Area F2 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light olive brown sandy clay loam (A horizon) over 2.5Y 6/8 olive yellow clay subsoil (B horizon) (Figure 8-175).

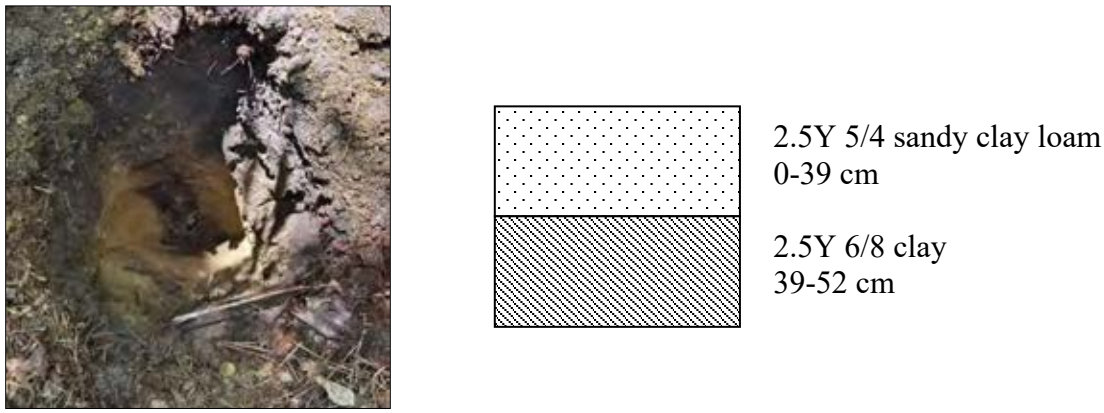


Figure 8-175: Soil profile of Shovel Test B2 in Area F2.

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9. CONCLUSIONS AND RECOMMENDATIONS

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated *Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area* (D+A July 2023).

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. As part of the project, a series of solar arrays will be built throughout the project area.

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). The surveyed resources consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.
Each of the four NRHP-eligible resources was subject to an assessment of impacts brought about by the project. Of the eligible resources, three are located directly within the study area, however,

will be excluded by the project development plan and therefore will not be directly impacted by the project. With regards to indirect, visual impacts, field inspection revealed that the generally open nature of the landscape within and bordering the NRHP-eligible properties permits views of the project area that range from partially screened to nearly unobstructed. To minimize the potential for visibility of the project, a variety of measures have been employed including setbacks from roadways and property lines, and supplemental landscape buffers. ***With these measures, it is D+A's recommendation that visibility of the project from one resource, the Wilson Hollemon House (VDHR# 046-0068) will be screened and therefore the Sycamore Cross Solar Project will have no more than a minimal impact to it. With regards to the remaining three resources, the setbacks and landscape screening will reduce visibility of the project but some portions will remain visible. As such, it is D+A's recommendation that the Sycamore Cross Solar Project will result in a moderate impact to the Sycamore Cross Post Office (VDHR# 046-5149), the house at 11356 Sycamore Cross Drive (VDHR# 046-5150), and the Betts Farm (VDHR# 046-5811)*** (Table 9-1).

Table 9-1: Summary of NRHP-eligible architectural resources within the project survey area and recommendations of project impacts.

VDHR ID#	Resource Name/Address	NRHP Eligibility	Proximity to Project	Project Impact
046-0068	Wilson Hollemon House, 5499 Mill Swamp Road	D+A: Potentially Eligible	Adjacent to Project	Minimal Impact
046-5149	Sycamore Cross Post Office, Mill Swamp Road	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact
046-5150	House, 11356 Sycamore Cross Drive	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact
046-5811	Betts Farm, 5191 Mill Swamp Road	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact

One (1) cemetery was identified within testing area B5 of the project area, and is an independent resource, not associated with any standing architectural resource (Table 9-2). ***Although the cemetery represents a typical small family cemetery and is considered not eligible for listing in the NRHP, the visual limits of the cemetery should be avoided with a 100-foot avoidance zone, or be subject to further delineation, to ensure protection during and after project construction.***

Table 9-2: Summary of Cemetery identified within the project area with proximity to project area and recommended avoidance measures.

Cemetery #	Name, Location	NRHP Status	Proximity to Project Area	Avoidance/Impacts
046-5817	Holleman Cemetery, White Hill Trail	D+A: Not Eligible	Within Project Area	100-foot avoidance zone or further delineation

Archaeological investigations followed an approved testing model that identified areas of high, moderate, and low archaeological potential. The testing strategy involved a combination of systematic pedestrian survey and shovel testing. A total of 1,175 shovel test pits were excavated throughout the project area. The archaeological survey resulted in the identification of 20 newly recorded sites (Table 9-3).

Of these sites, six are domestic sites associated with standing architectural resources, and fourteen are mid-nineteenth to early-twentieth century sites with no features and a light archaeological signature. Most of these sites offer little new or significant archaeological data and are site types

that are well represented in the region; ***D+A recommends these 18 sites not eligible for inclusion in the NRHP, and no additional work is required.*** However, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and ***D+A recommends avoidance with a 50-foot buffer or further investigation of these sites.***

Table 9-3: Table showing archaeological sites and eligibility recommendations.

VDHR ID#	Site Type	Tine Period	NRHP Eligibility	Treatment/ Project Impacts
44IW0405	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0406	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0407	**Farmstead**	**Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II**	**Potentially Eligible**	**Avoidance with 50-foot buffer/ Phase II Evaluation**
44IW0408	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0409	Farmstead	Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0410	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0411	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0412	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0413	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0414	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0415	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0416	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0417	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0418	Farmstead	Reconstruction and Growth	Not Eligible	No Impact
44IW0419	Farmstead	Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0420	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0421	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0422	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0423	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0424	**Single Dwelling**	**Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II**	**Further Study**	**Avoidance with 50-foot buffer/ Further Study**

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APPENDIX A: RESUMES

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ROBERT J. TAYLOR, JR
Principal Investigator
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 15 years of Cultural Resource Management Experience and has taken part in projects in Virginia and throughout the East Coast.

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, writing survey reports, preparing *NRHP* evaluations and applications for individual resources and historic districts, compiling HABS/HAER documentation packages, and assisting with cultural resource consultation and compliance. 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.

As Principal Investigator and 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

ROBERT J. TAYLOR, JR
Principal Investigator
Senior Architectural Historian

Professional Experience

Dutton + Associates, LLC, Principal Investigator, Richmond, Virginia, March 2009- present.
Manages cultural resource projects, oversees architectural history team, conducts field survey and investigations, assembles architectural resource documentation, authors cultural resource survey reports, prepares NRHP nominations, prepares HABS/HAER documentation, provides regulatory and compliance consultation.

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

Cultural Resource Management Plans
Regional Integrated Cultural Resource Management Plan for Naval Installations in Hampton Roads, Virginia
Programmatic Agreement amongst NASA, the VASHPO, and ACHP for the Management of Facilities, Infrastructure, and Sites at the NASA Langley Research Center, Hampton, Virginia

Cultural Resource Survey and Compliance Reports
Phase I Cultural Resource Survey of the Southern Virginia Solar Center, Pittsylvania County, Virginia
Phase I Cultural Resource of the Gordonsville-Remington 500 kV Transmission Line Rebuild Project, Orange, Fauquier, and Culpeper County, Virginia
NRHP Evaluations of Two One Room School Houses and a Farmstead in Perrysburg Township, Ohio
Intensive-Level Architectural Survey of the Vice Admiral James H. Doyle Jr, Combat System Engineering Development Site (CSEDS), Moorestown, New Jersey
Review and Evaluation of the Adaptive Rehabilitation of Quarters D&E and G&H at the Norfolk Naval Shipyard, Portsmouth, Virginia
Cultural Resource Assessment Survey (CRAS) of the I-395 Advance Acquisition #2 in Miami-Dade County, Florida
CRAS of the I-4/Crosstown Connector Interchange Design in Hillsborough County, Florida

NRHP Nominations
Hermitage Road Historic District, Richmond, Virginia
Old Wythe Historic District, Hampton, Virginia
NASA LaRC Historic District, Hampton, Virginia
Sebrell Rural Historic District, Southampton County, Virginia
Palmetto Beach Historic District, Tampa, Florida
Rosemere Historic District, Orlando, Florida

Historic American Buildings Survey (HABS) Packages
NASA Low Turbulence Pressure Tunnel, LaRC, Hampton VA, HABS # VA-118-H
NASA Aircraft Landing Dynamics Facility, LaRC, Hampton, VA, HABS # unassigned
1st Street Bridge update package, Los Angeles, CA HAER # CA-175
Faith Temple Missionary Baptist Church, Tampa, FL, HABS # FL-542
Building 64, Melville Net and Fuel Depot, Naval Station Newport, RI, RIHRA # PORT-0004

Technical and Research Papers
"New Use for an Old Gas Station: Rehabilitation Plan and Feasibility Assessment for the Fry's Spring Service Station in Charlottesville, Virginia"
"Historic Structure Report for the Edward Valentine House (Redland Club Building) in Charlottesville, Virginia"
"Historic Linear Resources: Challenges and the Practical Applicability of NRHP Criteria"
"'A Country Doctor for Forty Years' A Historic Structure Report for the Dr. J.E. Wilson House in Haywood County, North Carolina"

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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

Dr. Smith holds a Ph.D. 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 dissertation research involved creating and interpreting data sets for the Digital Archaeological Archive of Comparative Slavery, and it was focused on the construction of race and identity through material culture on plantations in eighteenth-century Virginia. Her research interests include material culture studies, artifacts of personal adornment, and the intersection of race and gender.

Her experience in Cultural Resource Management includes managing a wide range of projects, including Phase I surveys, Phase II evaluations, and Phase III data recovery, for a variety of clients, including renewable energy, electric transmission, and transportation.

Dr. Smith has over 15 years of experience in archaeology. Prior to 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. Before pursuing graduate studies, she worked as an archaeologist at James Madison's Montpelier, helping to identify sites associated with that enslaved community and interpret them to the public.

As a Principal Investigator for Dutton + Associates, Dr. Smith manages all aspects of archaeological research, supervising both lab and field work.

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

J. HOPE SMITH
Principal Investigator

Professional Experience

Dutton+Associates, LLC, Project Archaeologist
Richmond, Virginia, 2017
Directs operation of archaeological field and lab work. Manages and conducts archaeological investigations. Prepares research designs and excavation 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; coauthored site reports and presented research to the public.

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

Dissertation:
Adorned Identities: an Archaeological Perspective on Race and Self-Presentation in 18th-Century Virginia

Phase I Surveys
Mecklenburg Timber and Prison sites, Mecklenburg Co
Remington to Gordonsville Transmission Line
Montebello Farm, Loudoun Co.
Arbordale, York Co.
Spotsylvania Town Center, City of Fredericksburg
Palmer's Creek, Spotsylvania Co.
Bristers to Chancellor 500kV Transmission Line
Skipjack Solar, Charles City Co

Phase II Evaluations
44LD1819, Loudoun Co
44GE0373, Greensville Co
44MC0970, Mecklenburg Co

Phase III Data Recoveries
44LD1244, Loudoun Co
44CC0448, Charles City Co
44LD1359, Loudoun Co

Museum Technical Reports
Object Report and Museum Purchasing Recommendations, The Montpelier Foundation,

Report of Archaeological Testing at Mount Pleasant, The Montpelier Foundation,

Archaeological Dataset and Context, Digital Archaeological Archive of Comparative Slavery (DAACS)

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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 INVENTORY

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Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
Area A1 Pedestrian Survey					
Surface Collection 1	Surface	Coarse earthenware, Drain tile	4	Body	three fragments glazed on interior and exterior, one only exterior
Surface Collection 2	Surface	Refined earthenware, Dipped ware	1	Body	
Surface Collection 3	Surface	Glass, Apothecary	1	Neck and finish	bubble inclusions
Area A3 / 44IW0414		,			
B1	I	Glass, Window, aqua	4	Pane	
B2	I	Glass, Vessel, brown	1	Base	Embossed stippling
B2	I	Glass, Vessel, colorless	4	Body	
B2	I	Glass, Window, colorless	2	Pane	
B2	I	Iron, Wire	1	Fragment	
B2	I	Synthetic, Hardware, unidentified	1	Whole	Plastic cylander with two wires in one end
B3	I	Glass, Vessel, colorless	1	Finish	Threaded finish
B3	I	Glass, Vessel, colorless	2	Body	
B3	I	Glass, Vessel, opaque	1	Body	
B3	I	Glass, Lantern	2	Body	
B3	I	Glass, Window, Aqua	3	Pane	
C1	I	Glass, Vessel, colorless	1	Body	
C1	I	Iron, Wire	1	Fragment	
C2	I	Glass, Vessel, colorless	1	Base	Embossed, stippled
D2	I	Glass, Vessel, colorless	1	Body	
D2	I	Iron, Unidentified	1	Fragment	
D3	I	Glass, Vessel, brown	2	Body	
D3	I	Glass, Vessel, colorless	9	Body	
D3	I	Iron, Bar, unidentified	1	Fragment	
D3	I	Glass, Window, aqua	1	Pane	
D3	I	Glass, Vessel, colorless	1	Body	Embossed, stippled
D3	I	Glass, Vessel, colorless	1	Base	Embossed, stippled
D3	I	Glass, Vessel, colorless	1	Base	Embossed star
Area A4 / 44IW0415		,			
CD2	I	Glass, Window, colorless	5	Pane	
D1.5	I	Glass, Vessel, colorless	1	Body	Bubble inclusions
D1.5	I	Glass, Window, aqua	8	Pane	
D1.5	I	Glass, Window, colorless	29	Pane	
D1.5	I	Glass, Vessel, aqua	8	Body	
D1.5	I	Glass, Vessel, colorless	1	Body	plastic film, unidentifiable

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
D1.5	I	Glass, Unidentified, heat altered	63	Fragment	Too melted to tell if vessel or window
D1.5	I	Iron, Washer	1	Whole	
D1.5	I	Iron, Screw	2	Whole	
D1.5	I	Iron, Nail, wire	1	Whole	
D1.5	I	Iron, Nail, unidentified	2	Head shank	
D1.5	I	Iron, Hardware, unidentified	1	Fragment	Hinge, not for a door. Two bars with one pin
D1.5	I	Iron, Plate and nail, wrought	1	Fragment	small rectangular sheet with a short nail
D1.5	I	Iron, Screw, washer, and nut	1	Whole	Rusted together
D1.5	I	Iron, Screw and washer	1	Fragment	Rusted together and to some unidentified alloy
D1.5	I	Iron, Screw, nut, and hardware	1	Fragment	Unidentified hardware fragment
D1.5	I	Lead alloy, Unidentified	1	Fragment	
D1.5	I	Lead, Unidentified	1	Fragment	
D1.5	I	Alloy, Grommet	1	Whole	"UNITED CARR"
D1.5	I	Alloy, Hardware, unidentified	1	Fragment	unidentified bracket with two corroded bolts
D1.5	I	Synthetic, Unidentified	1	Fragment	
D2	I	Iron, Wire	1	Fragment	
D2	I	Iron, Washer	1	Whole	
D2	I	Lead alloy, Unidentified	4	Fragment	
D2	I	Glass, Window, colorless	5	Pane	
D2	I	Glass, Window, aqua	2	Pane	
D2.5	I	Glass, Vessel, colorless	2	Base	Embossed stippling
D2.5	I	Glass, Vessel, colorless	13	Body	Embossed stippling
D2.5	I	Glass, Window, colorless	16	Pane	
D2.5	I	Iron, Wire	1	Fragment	
D2.5	I	Iron, Bolt	1	Whole	nut rusted on to bolt
E3	I	Terra cotta, Drain pipe	1	Fragment	Not collected
Area A5 / 44IW0407		,			
D7	I	Refined earthenware, Undecorated	1	Body	
D7	I	Iron, Sheet	8	Fragment	small fragments of very thin metal sheets
D8	I	Glass, Vessel, green	1	Body	
E5	I	Glass, Vessel, green	1	Body	
E5	I	Glass, Window, colorless	1	Pane	
E6	I	Refined earthenware, Undecorated	1	Body	
F3	I	Shell, Oyster	1	Fragment	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
F3	I	Iron, Nail, wire	1	Shank	
F3	I	Iron, Nail, unidentified	3	Fragment	
F4	I	Iron, Nail, unidentified	1	Shank	
F4	I	Glass, Lid liner	1	Rim	
F4	I	Refined earthenware, Undecorated	2	Body	
F4	I	Glass, Vessel, solarized	3	Body	
F4	I	Glass, Vessel, aqua	2	Body	
F4	I	Glass, Window, aqua	1	Pane	
F5	I	Refined earthenware, Transfer print	1	Body	Diaper pattern
F6	I	Refined earthenware, Undecorated	1	Body	
F6	I	Glass, Window, colorless	1	Pane	
G3	I	Refined earthenware, Undecorated	1	Rim	
G3	I	Glass, Vessel, colorless	1	Body	
G3	I	Glass, Window, aqua	1	Pane	
G4	I	Refined earthenware, Spall	2	Body	
G4	I	Glass, Vessel, solarized	1	Body	
G4	I	Glass, Window, aqua	4	Pane	
G4	I	Iron, Unidentified	1	Fragment	
G6	I	Refined earthenware, Undecorated	1	Body	
G6	I	Glass, Vessel, colorless	2	Body	
G6	I	Glass, Vessel, opaque	1	Body	
G7	I	Stoneware, American, bristol, albany slip	1	Body	Bristol glaze exterior, albany slip interior
H4	I	Refined earthenware, Spall	1	Body	
H4	I	Refined earthenware, Undecorated	1	Body	Buff glaze
H4	I	Glass, Vessel, colorless	1	Body	
H4	I	Glass, Window, aqua	2	Pane	
J8	I	Glass, Vessel, solarized	1	Body	Bubble inclusions
L8	I	Brick,	1	Fragment	Not collected
Area B1 Pedestrian Survey / 44IW0409					
Surface Collection 1	Surface	Clay, Pipe	1	Stem	molded hobnail pattern at edge of stem
Area B1 Pedestrian Survey / 44IW0410					
Surface Collection 2	Surface	Glass, Window, aqua	2	Pane	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
Surface Collection 2	Surface	Glass, Vessel, dark green	1	Base	
Surface Collection 2	Surface	Refined earthenware, Spall	1	Body	
Surface Collection 2	Surface	Stoneware, Bristol	1	Body	Bristol exterior, albany slip interior
Surface Collection 2	Surface	Stoneware, Reed Pipe	1	Stem	ribbed pattern
Area B1 Pedestrian Survey					
Surface Collection 3	Surface	Stoneware, Westerwald	1	Body	
Area B3		,			
A11	I	Brick,	1	Fragment	Not collected
Area B4 / 44IW0416		,			
(-A)5	I	Glass, Vessel, solarized	1	Body	
(-A)4.5	I	Iron, Unidentified	1	Fragment	heavily corroded
(-A)A3	I	Brick,	1	Fragment	Not collected
A3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, green	1	Body	
B5	I	Brick,	1	Fragment	Not collected
C2.5	I	Glass, Vessel, colorless	1	Body	
C2.5	I	Glass, Vessel, opaque	2	Body	
C3	I	Refined earthenware, Undecorated	1	Handle	
C3	I	Refined earthenware, Spall	1	Body	
C3	I	Glass, Window, colorless	1	Pane	
C3	I	Iron, Nail, unidentified	5	Shank	
C4	I	Brick,	1	Fragment	
C4	I	Terra cotta, Drain pipe	1	Fragment	
C4	I	Iron, Nail, unidentified	1	Shank	
C4	I	Iron, Unidentified	2	Fragment	heavily corroded
CD3	I	Brick,	1	Fragment	Not collected
CD4	I	Iron, Hardware, unidentified	1	Fragment	
D5	I	Glass, Vessel, colorless	1	Finish	Threaded finish
D5	I	Glass, Vessel, colorless	2	Body	
D5	I	Glass, Window, aqua	1	Pane	
D5	I	Composite, Spark plug	1	Whole	"CHAMPION N-14Y" heavily corroded
D5.5	I	Iron, Nail, unidentified	1	Fragment	
E3	I	Terra cotta, Drain pipe	6	Body	DISCARDED
E3	I	Iron, Buckle	1	Whole	An iron rectangle with a partial hook on one end, 6x4 cm

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
E4.5	I	Refined earthenware, Spall	2	Body	
E4.5	I	Glass, Window, colorless	1	Pane	
E4.5	I	Brick,	1	Fragment	
E4.5	I	Glass, Vessel, aqua	2	Body	
E4.5	I	Glass, Vessel, colorless	4	Body	
E4.5	I	Glass, Vessel, colorless	1	Body	Embossed, diamond pattern
E4.5	I	Glass, Vessel, colorless	1	Fragment	Melted
E5	I	Glass, Vessel, colorless	3	Body	
E5	I	Glass, Vessel, brown	1	Body	
E5	I	Brick,	1	Fragment	
EF5	I	Glass, Vessel, aqua	1	Body	
EF5	I				
EF5	I	Refined earthenware, Molded	2	Rim	Mend
EF5	I	Refined earthenware, Molded, royal pattern	2	Rim	Mend
EF5	I	Coal, Anthracite	1	Fragment	
EF5	I	Brick,	1	Fragment	
EF5	I	Iron, Nail, unidentified	1	Shank	
EF5	I	Synthetic, Plastic, vessel	1	Rim	too small to tell what kind of vessel
F2	I	Iron, Nail, unidentified	1	Shank	
F2.5	I	Glass, Vessel, colorless	1	Finish	
F5	I	Glass, Vessel, colorless	1	Body	
F5	I	Iron, Nail, unidentified	1	Shank	
Area B5					
G9	I	Glass, Vessel, colorless	1	Body	
Area B5 / 44IW0417		,			
N11	I	Glass, Vessel, aqua	2	Base	Mend. Embossed "WOODBU- - ASSWORK-" "2" and one illegible word embossed over the rest
NO11	I	Terra cotta, Drain pipe	83	Fragment	DISCARDED
NO11	I	Glass, Window, colorless	2	Pane	
Area C4 / 44IW0418		,			
A4	I	Brick,	1	Fragment	DISCARDED
A4	I	Glass, Vessel, colorless	1	Base	
A4	I	Glass, Vessel, aqua	2	Body	
A4	I	Glass, Window, aqua	2	Fragment	
A5	I	Refined earthenware, Undecorated	2	Rim	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
A5	I	Refined earthenware, Undecorated	2	Body	
A5	I	Glass, Vessel, green	1	Body	
A5	I	Glass, Vessel, solarized	1	Body	
A5	I	Glass, Vessel, brown	3	Body	
A5	I	Glass, Vessel, colorless	15	Body	
A5	I	Glass, Window, aqua	1	Pane	
A5	I	Glass, Vessel, colorless	1	Finish	Threaded finish
A5	I	Brick,	6	Fragment	
A5	I	Shell, Oyster	1	Fragment	
A5	I	Iron, Nail, unidentified	2	Shank	Heavily corroded
A5	I	Iron, Unidentified	3	Fragment	Heavily corroded
A6	I	Glass, Vessel, brown	1	Body	
A6	I	Glass, Vessel, colorless	3	Body	
A6	I	Refined earthenware, Undecorated	1	Rim	
A6	I	Iron, Nail, unidentified	1	Shank	
A6	I	Brick,	4	Fragment	
B1	I	Glass, Vessel, opaque	1	Body	
B2	I	Refined earthenware, Spall	1	Body	
B5	I	Refined earthenware, Undecorated	1	Body	
B5	I	Glass, Window, aqua	1	Pane	
C1	I	Iron, Nail, unidentified	1	Shank	
C1	I	Glass, Window, aqua	1	Pane	
C4	I	Glass, Vessel, solarized	1	Base	
C4	I	Refined earthenware, Molded, royal pattern	1	Rim	
C4	I	Refined earthenware, Spall	1	Body	
C4	I	Shell, Oyster	3	Fragment	
C5	I	Brick,	1	Fragment	Not collected
C7	I	Refined earthenware, Yellowware	1	Body	buff bodied, buff glazed
C7	I	Glass, Vessel, blue	1	Body	Cobalt
C7	I	Glass, Vessel, brown	1	Body	
C7	I	Glass, Vessel, aqua	1	Body	
C7	I	Glass, Vessel, colorless	3	Body	
D4	I	Brick,	2	Fragment	
D4	I	Iron, Nail, unidentified	1	Shank	
D5	I	Brick,	1	Fragment	Not collected
D6	I	Glass, Window, aqua	1	Pane	
E8	I	Glass, Vessel, aqua	1	Body	
Area C5 / 44IW0419		,			

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
G(-3)	I	Brick,	1	Fragment	Not collected
H1	I	Brick,	1	Fragment	Not collected
J(-1)	I	Brick,	1	Fragment	Not collected
J(-3)	I	Iron, Nail, unidentified	1	Shank	
J(-2)	I	Iron, Nail, machine cut	1	Shank	
J(-2)	I	Iron, Unidentified	4	Fragment	small iron fragments
K(-5)	I	Glass, Vessel, aqua	2	Body	
K(-5)	I	Glass, Vessel, colorless	2	Body	
K(-5)	I	Glass, Lantern	1	Body	
K(-4)	I	Refined earthenware, Undecorated	1	Base	
K(-4)	I	Refined earthenware, Undecorated	1	Body	
K(-4)	I	Glass, Vessel, solarized	1	Body	Molded, star and diamond pattern
K(-4)	I	Glass, Vessel, colorless	1	Base	
K(-3)	I	Refined earthenware, Undecorated	1	Body	
K(-3)	I	Glass, Vessel	1	Body	
K(-3)	I	Iron, Nail, machine cut	1	Whole	
L(-6)	I	Iron, Nail, unidentified	1	Head shank	
L(-5)	I	Glass, Vessel, aqua	2	Body	
L(-4)	I	Refined earthenware, Twentieth century, undecorated	2	Body	
L(-4)	I	Iron, Nail, unidentified	2	Shank	
L(-3)	I	Glass, Vessel, colorless	2	Body	
L(-3)	I	Refined earthenware, Edge ware, shell edged	1	Rim	Curved impressed lines
L(-3)	I	Iron, Nail, unidentified	2	Shank	
L(-3)	I	Brick,	2	Fragment	
L(-1)	I	Iron, Nail, wire	1	Whole	
L1	I	Glass, Vessel, colorless	1	Body	
L1	I	Brick,	1	Fragment	
M(-3)	I	Brick,	1	Fragment	
M(-3)	I	Iron, Nail, unidentified	2	Shank	
M(-1)	I	Glass, Vessel, opaque	1	Base	molded verticle ribbing
M(-1)	I	Glass, Vessel, brown	1	Body	
M(-1)	I	Brick,	1	Fragment	
N(-4)	I	Copper, Pipe	1	Fragment	
N(-3)	I	Glass, Vessel, colorless	1	Body	
N(-3)	I	Iron, Nail, machine cut	1	Shank	
N(-3)	I	Brick,	1	Fragment	
N(-3)	I	Mortar,	1	Fragment	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
N(-1)	I	Glass, Vessel, green	1	Finish	Dark olive green
Area C5					
L(-10)	I	Porcelain, Industrial	1	Rim	molded
Area C6 / 44IW0420		,			
A3	I	Iron, Farm equipment, unidentified	1	Fragment	Potentially a tooth from unidentified equipment
A3	I	Iron, Farm equipment, unidentified	1	Fragment	Potentially mends with above
A4	I	Glass, Vessel, brown	1	Base	Embossed stippling, "57" and A.R. Samuel/Mason Fruit Jar Co. makers mark
A6	I	Iron, Nail, machine cut	1	Shank	
B2	I	Glass, Vessel, colorless	2	Body	
B2	I	Glass, Window, colorless	1	Pane	
B2	I	Brick,	1	Fragment	
B3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, colorless	1	Body	Embossed "-T-"
B4	I	Iron, Chain	1	Fragment	5 links
B5	I	Glass, Vessel, aqua	2	Body	
B5	I	Glass, Window, colorless	1	Pane	
C3	I	Glass, Vessel, colorless	1	Body	
C3	I	Glass, Window, colorless	1	Pane	
D2	I	Glass, Vessel, colorless	1	Body	Embossed, too small to identify
D2	I	Glass, Vessel, brown	1	Body	
D3	I	Refined earthenware, Unidentified	1	Body	
D3	I	Refined earthenware, Undecorated	1	Body	
Area C7 / 44IW0421		,			
B3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, aqua	1	Base	
B4	I	Glass, Vessel, blue	1	Body	
B4	I	Glass, Vessel, colorless	1	Body	
B4	I	Iron, Nail, unidentified	3	Shank	
B4	I	Brick,	4	Fragment	
B5	I	Iron, Nail, unidentified	1	Shank	
B5	I	Glass, Marble	1	Whole	
B12	I	Glass, Vessel, brown	2	Body	Embossed, illegible
B12	I	Glass, Vessel, aqua	1	Body	
B12	I	Glass, Window, aqua	1	Pane	
B12	I	Iron, Nail, unidentified	2	Shank	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
B12	I	Brick,	2	Fragment	
B13	I	Brick,	1	Fragment	Not collected
B14	I	Glass, Vessel, colorless	1	Body	
B14	I	Glass, Vessel, colorless	1	Body	Molded, ribbed
B14	I	Glass, Window, colorless	1	Pane	
B14	I	Brick,	1	Fragment	
B14	I	Coal, Anthracite	1	Fragment	
C5	I	Glass, Vessel, colorless	9	Body	
C5	I	Glass, Vessel, colorless	1	Rim	
C5	I	Glass, Vessel, aqua	2	Body	
C5	I	Glass, Vessel, brown	1	Body	
C5	I	Refined earthenware, Undecorated	1	Body	
C5	I	Glass, Window, colorless	1	Pane	
C5	I	Iron, Nail, unidentified	3	Shank	
C5	I	Brick,	1	Fragment	
C6	I	Glass, Vessel, aqua	2	Body	
C6	I	Glass, Vessel, colorless	1	Body	
C6	I	Iron, Nail, unidentified	1	Head shank	
Area C9 / 44IW0422		,			
B3	I	Iron, Unidentified	1	Fragment	nail or fragment of barbed wire
D1	I	Glass, Vessel, blue	2	Body	Cobalt
D1	I	Glass, Window, colorless	1	Pane	
F1	I	Stoneware, Ironstone	1	Base	Fragment of makers mark, "-TONE CHIN-"
F4	I	Glass, Vessel, aqua	1	Body	
F4	I	Glass, Vessel, solarized	1	Body	
F4	I	Glass, Vessel, colorless	1	Body	
G4	I	Refined earthenware, Undecorated	1	Rim	
G4	I	Refined earthenware, Spall	1	Body	
G4	I	Glass, Vessel, colorless	1	Body	
G4	I	Glass, Window, aqua	1	Pane	
H(-1)	I	Glass, Vessel, colorless	1	Body	
Area C10 / 44IW0423		,			
D5	I	Refined earthenware, Undecorated	1	Body	
E5	I	Iron, Bolt	1	Fragment	nut rusted to it
E5	I	Iron, Washer	1	Whole	was on the above bolt, not rusted to it
E5	I	Iron, Nail, unidentified	1	Shank	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
E7	I	Brick,	1	Fragment	Not collected
F8	I	Glass, Vessel, colorless	2	Body	
F8	I	Glass, Vessel, blue	1	Body	Cobalt
F8	I	Iron, Bolt	1	Head shank	
F8	I	Iron, Unidentified	1	Fragment	unclear if part of wire or nail
F9	I	Iron, Nail, unidentified	3	Shank	
H2	I	Glass, Vessel, colorless	1	Body	
H8	I	Iron, Nail, unidentified	1	Shank	
H8	I	Terra cotta, Drain pipe	1	Fragment	
J6	I	Iron, Nail, wire	1	Whole	
J6	I	Mortar,	1	Fragment	

APPENDIX C: V-CRIS FORMS

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Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 6.580
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in the northernmost part of Area A1. No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a prosser button, ironstone, and Bristol stoneware were observed.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a Prosser button, ironstone, and Bristol stoneware were observed.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in Area A1, south of Field Site 1. An aqua bottle finish was the only artifact collected. A dwelling is indicated here by historic topographic maps, though no surface features were observed. Artifacts observed here included fragments of ironstone, and colorless and vessel glass.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

An aqua apothecary bottle finish was the only artifact collected.

Summary of Specimens Observed, Not Collected:

Artifacts observed here included fragments of ironstone, and colorless and 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-0056
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 9.530
Landform: Ridge Toe
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site was first observed in the western half of Area A1, and later in Area A5 associated with Architectural Resource #046-0056. All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Field Site 3 as well. This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*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:

All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Field Site 3 as well. This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.

Summary of Specimens Observed, Not Collected:

Artifacts observed in the agricultural field included brick fragments, vessel glass, refined earthenware, and American stoneware.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Field Site 3 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and, D+A recommends avoidance or further investigation of this site.

Surveyor's Eligibility Recommendations: Recommended Potentially Eligible

Surveyor's NR Criteria Recommendations: D

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-5149, 046-5150
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 6.180
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This field site was first observed in the southeastern corner of Area A1 and was further delineated in the southwest corner of Area B1. This site surrounds Architectural Resources #046-5149 and 046-5150. It consists of a late nineteenth to early twentieth century domestic artifact scatter. Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

The only diagnostic artifact collected was one sherd of blue, white, and brown dipped ware.

Summary of Specimens Observed, Not Collected:

Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1830 - 1860, 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 7.270
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Antebellum Period (1830 - 1860), 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: This field site was observed by pedestrian survey in the western part of Area B1. It consists of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; brick fragments; and one pipe stem that was the only artifact collected.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

The only diagnostic artifact collected was a white clay pipe stem with a single raised ring of hobnails around the very end.

Summary of Specimens Observed, Not Collected:

Observed artifacts consist of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; stoneware, 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.040
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a small late-nineteenth to early-twentieth century domestic artifact scatter observed in the northern part of Area B1. A sample of artifacts were collected, and observed artifacts included solarized and colorless vessel glass, aqua window glass, ironstone, and refined earthenware, Bristol and Albany-slip stoneware, and a reed pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Collected artifacts include refined earthenware, Bristol glaze and Albany-slip stoneware, a stoneware reed pipe, aqua and colorless window glass, and dark green wine bottle glass.

Summary of Specimens Observed, Not Collected:

Artifacts observed but not collected are similar to those collected in the sample: refined earthenware, American stoneware, aqua and colorless window glass, and dark green wine bottle 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.250
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a domestic artifact sample observed in the southeast part of Area B1. Artifacts observed included ironstone, refined earthenware, and aqua and colorless vessel glass. Artifacts were densely clustered. No artifact samples were collected

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Artifacts observed included densely clustered ironstone, refined earthenware, and aqua and colorless 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.670
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This field site was observed in the southern part of Area A2, in the same location as a dwelling indicated on historic topographic maps. No surface features were observed; only a domestic artifact scatter was observed. Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.210
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C2. No artifacts were collected, but artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware. No surface features were observed.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.500
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter associated with a dwelling indicated here by historic topographic maps. 43 artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire. Vessel glass makes up most of this assemblage, with 26 recovered fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

43 artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.170
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a dense early-to-mid twentieth century artifact scatter in Area A4. 178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass. Window glass and unidentified melted glass make up the majority of this assemblage, with 128 fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR, 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: 0.910
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area B4. It is located in the same place as a dwelling indicated on historic topographic maps. A total of 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, royal-pattern molded refined earthenware, a spark plug, and heavily corroded nails.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*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 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, molded refined earthenware, a spark plug, and heavily corroded nails.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.040
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Indeterminate
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a small domestic artifact scatter in Area B5. Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name:	No Data
Site Classification:	Terrestrial, open air
Year(s):	1830 - 1860, 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s):	Artifact scatter
Other DHR ID:	046-0030
Temporary Designation:	No Data

Site Evaluation Status

Locational Information

USGS Quad:	RAYNOR
County/Independent City:	Isle Of Wight (County)
Physiographic Province:	Coastal Plain
Elevation:	No Data
Aspect:	No Data
Drainage:	Albemarle-Chowan
Slope:	No Data
Acreage:	1.380
Landform:	Ridge Finger
Ownership Status:	Private
Government Entity Name:	No Data

Site Components

Component 1

Category:	Domestic
Site Type:	Artifact scatter
Cultural Affiliation:	Indeterminate
Cultural Affiliation Detail:	No Data
DHR Time Period:	Antebellum Period (1830 - 1860), 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:	This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter associated with Architectural Resource #046-0030. This resource is no longer standing. A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass

Summary of Specimens Observed, Not Collected:

Some artifacts were observed on the surface but not collected, including vessel glass, yellowware, brick, refined earthenware, and brick.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1830 - 1860, 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.700
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Antebellum Period (1830 - 1860), 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: This site consists of a mid-nineteenth to early-twentieth century domestic artifact scatter in Area C5. A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe.

Summary of Specimens Observed, Not Collected:

Artifacts observed but not collected on the surface include primarily brick fragments, but include the same types as those collected in shovel tests.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-0029
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C6. This grid also overlaps slightly with the Area C1 pedestrian survey. This site is also associated with Architectural Resource #046-0029. A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail. Colorless vessel glass was most common in this area, with five fragments recovered.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.990
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C7. 50 artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

50 artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.930
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C9. 13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron. The most common artifact was colorless vessel glass, with four fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-5148
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.370
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century artifact scatter in Area C10. Eighteen artifacts were recovered from eight artifacts, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Eighteen artifacts were recovered from eight artifacts, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1790 - 1829, 1830 - 1860
Site Type(s): Dwelling, single
Other DHR ID: 046-0057
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.310
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
Start Year: 1825
End Year: No Data
Comments: This site consists of a single brick structure recorded as Architectural Resource 046-0057. No artifacts or surface features were observed in association with it.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/9/2024	*No Data*

Threats to Resource: Public Utility Expansion, Structural Failure

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Some brick fragments were observed scattered around the structure, but not collected.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site has the potential for associated artifacts and subsurface features, and is recommended for further survey.

Surveyor's Eligibility Recommendations: Recommended for Further Survey

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Proposed Revisions to Isle of Wight County Staff Suggested Conditions from Planning Commission Hearing on May 28, 2024, as of August 7, 2024 – Red-Line Version

1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.

2) The Applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.

3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area~~,~~. The applicant shall comply with Virginia Department of Conservation and Recreation ("DCR") recommendations regarding the C1-C3 ecological core areas, and shall coordinate with Virginia Department of Forestry on efforts to mitigate impact to~~, or~~ the priority forestland areas. ~~The applicant shall submit a formal ecological core impact assessment of ecological cores C1 and C2 with DCR as recommended.~~

4) The Applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.

5) The Applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.

6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.

7) The facility perimeter fencing will be equipped with ~~push bar pedestrian~~ gates to permit emergency exits from the facility subject to compliance with applicable requirements, including those of the National Electric Code and the North American Electric Reliability Corporation.

8) Adherence to the ~~proposed~~ approved transportation plan shall be required for all facility traffic during construction of the facility. Oversized vehicle ~~Truck~~ traffic shall be limited to only to the ~~preferred~~ approved route as described in in the transportation plan. ~~No other local routes in Isle of Wight County may be used.~~ The applicant shall coordinate with the Isle of Wight County school administration ~~deliveries outside of~~ on school bus pickup and drop-off times and locations for incorporation into the transportation plan.

9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.

10) Hours of operation for construction (including construction associated with repairs during operation of the facility) ~~and post-construction operation~~ shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. and Saturdays from 7:00 a.m. to 5:00 p.m., except in cases of emergency. Except in cases of emergency, ~~N~~no construction is to occur on Sundays by any party involved with the project. In the event of any emergency event necessitating divergence from the foregoing hours and days of operation, the applicant shall notify the zoning administrator as soon as reasonably possible.

11) As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).

12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/ Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to ~~at least~~ substantially similar or better condition as in the baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

Applicant's suggested conditions as of April 30, 2024 Submittal:

14) The Property shall be developed in general conformance with the submitted conceptual plan prepared by AES and dated December 12, 2023.

15) During the Project life, the Applicant shall preserve and maintain existing and newly installed buffer landscaping and shall not clear cut live trees within required setbacks or buffer zones except as necessary for access roads, utility crossings, and to avoid shading of solar panels per the approval of the Zoning Administrator.

16) The Applicant shall submit a combined Stormwater Management Plan and a combined Erosion and Sediment Control Plan for Sycamore Cross A and Sycamore Cross B with the submission of the site plan for review by the Virginia Stormwater Management Program authority having jurisdiction at the time of submission.

17) The Applicant shall submit a combined Unanticipated Discovery Plan for Sycamore Cross A and Sycamore Cross B prior to final site plan approval. The plan shall include emergency protection protocols, curation processing of cultural materials, disposition of cultural materials, and a contact list including an on-call archaeologist, Project contacts, and state/regional contacts.

Applicant's additional suggested conditions as of July 9, 2024:

18) The Applicant will coordinate with landowners and the Zoning Administrator to install enhanced landscape buffers in proximity to occupied residential properties as needed to mitigate potential viewshed impacts.

19) The Applicant shall submit an initial combined Transportation Plan, as referenced in Condition 8 of Staff Recommended Conditions, for Sycamore Cross A and Sycamore Cross B with the first submission of the site plan. The final Transportation Plan shall address traffic control measures, an evaluation of the condition of the public roads along delivery routes prior to construction, and a plan to address repairs to public roads that may be needed due to damages attributable to Project construction. The Applicant shall obtain Isle of Wight County approval of the final Transportation Plan prior to approval of the site plan. Additionally, the Transportation Plan shall include each of the following:

i) Third party enforcement of the approved transportation plan.
ii) Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through coordination with the applicable Virgina Department of Transportation (VDOT) office.
iii) Limit construction traffic on White Hill Trail (State Route 623).
iv) Upon commencement of construction, Applicant will engage a Project Liaison to facilitate communication between citizens, construction crews, maintenance teams, and the Applicant. The contact information for the Project

Liaison will be posted at each permanent site gate, published on the Project's website, and provided to Isle of Wight County Staff. A Project Liaison will remain in place until completion of construction.

20) The Applicant will commit to agricultural uses on site, including, but not limited to, sheep grazing and forage crops. The Applicant will develop and submit as part of the site plan review process a Farming Plan for such agricultural uses on site, which will require a performance bond to secure Applicant's obligations under the Farming Plan.

21) The Applicant will commit at least eight (8) acres of land to agricultural community support. The Applicant will develop a program to manage the land identified for agricultural community support.

22) Pursuant to Va. Code 15.2-2209.1:2, the Applicant must commence construction of the Project within three years from the date of approval of this Conditional Use Permit, unless otherwise extended by the Board of Supervisors or applicable law.

23) This Conditional Use Permit, including these conditions, shall run with the land and shall not be affected by a change in ownership of the Applicant or the Project.

Sycamore Cross Solar A and B
Recommended Conditions as amended August 7, 2024

1. Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2. The Applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.
3. No impacts shall be permitted to the Pouches Swamp stream conservation unit area. The Applicant shall comply with Virginia Department of Conservation and Recreation ("DCR") recommendations regarding the C1-C3 ecological core areas and shall coordinate with Virginia Department of Forestry on efforts to mitigate impact to the priority forestland areas.
4. The Applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.
5. The Applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6. A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7. The facility perimeter fencing will be equipped with gates to permit emergency exits from the facility subject to compliance with applicable requirements, including those of the National Electric Code and the North American Electric Reliability Corporation.
8. Adherence to the approved transportation plan shall be required for all facility traffic during construction of the facility. Oversized vehicle traffic shall be limited only to the approved route as described in in the transportation plan. The Applicant shall coordinate with the Isle of Wight County school administration on school bus pickup and drop-off times and locations for incorporation into the transportation plan.
9. Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10. Hours of operation for construction (including construction associated with repairs during operation of the facility) shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. and Saturdays from 7:00 a.m. to 5:00 p.m., except in cases of emergency. Except in cases of emergency, no construction is to occur on Sundays by any party involved with the Project. In the event of any emergency event

necessitating divergence from the foregoing hours and days of operation, the Applicant shall notify the zoning administrator as soon as reasonably possible.

11. As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12. The Applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the Project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/ Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to substantially similar or better condition as in the baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.
13. Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.
14. The Property shall be developed in general conformance with the submitted conceptual plan prepared by AES and dated December 12, 2023.
15. During the Project life, the Applicant shall preserve and maintain existing and newly installed buffer landscaping and shall not clear cut live trees within required setbacks or buffer zones except as necessary for access roads, utility crossings, and to avoid shading of solar panels per the approval of the Zoning Administrator.
16. The Applicant shall submit a combined Stormwater Management Plan and a combined Erosion and Sediment Control Plan for Sycamore Cross A and Sycamore Cross B with the submission of the site plan for review by the Virginia Stormwater Management Program authority having jurisdiction at the time of submission.
17. The Applicant shall submit a combined Unanticipated Discovery Plan for Sycamore Cross A and Sycamore Cross B prior to final site plan approval. The

plan shall include emergency protection protocols, curation processing of cultural materials, disposition of cultural materials, and a contact list including an on-call archaeologist, Project contacts, and state/regional contacts.

18. Applicant will coordinate with landowners and the Zoning Administrator to install enhanced landscape buffers in proximity to occupied residential properties as needed to mitigate potential viewshed impacts.
19. The Applicant shall submit an initial combined Transportation Plan, as referenced in Condition 8 of Staff Recommended Conditions, for Sycamore Cross A and Sycamore Cross B with the first submission of the site plan. The final Transportation Plan shall address traffic control measures, an evaluation of the condition of the public roads along delivery routes prior to construction, and a plan to address repairs to public roads that may be needed due to damages attributable to Project construction. The Applicant shall obtain Isle of Wight County approval of the final Transportation Plan prior to approval of the site plan. Additionally, the Transportation Plan shall include each of the following:
    i. Third party enforcement of the approved transportation plan.
    ii. Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through coordination with the applicable Virgina Department of Transportation (VDOT) office.
    iii. Limit construction traffic on White Hill Trail (State Route 623).
    iv. Upon commencement of construction, Applicant will engage a Project Liaison to facilitate communication between citizens, construction crews, maintenance teams, and the Applicant. The contact information for the Project Liaison will be posted at each permanent site gate, published on the Project's website, and provided to Isle of Wight County Staff. A Project Liaison will remain in place until completion of construction.

20. The Applicant will commit to agricultural uses on site, including, but not limited to, sheep grazing and forage crops. The Applicant will develop and submit as part of the site plan review process a Farming Plan for such agricultural uses on site, which will require a performance bond to secure Applicant's obligations under the Farming Plan.
21. The Applicant will commit at least eight (8) acres of land to agricultural community support. The Applicant will develop a program to manage the land identified for agricultural community support.
22. Pursuant to Va. Code 15.2-2209.1:2, the Applicant must commence construction of the Project within three years from the date of approval of this Conditional Use Permit, unless otherwise extended by the Board of Supervisors or applicable law.
23. This Conditional Use Permit, including these conditions, shall run with the land and shall not be affected by a change in ownership of the Applicant or the Project.

ISSUE:

Application (CUP-5-24) of Sycamore Cross Solar , LLC, Applicant, for a for a Conditional Use Permit to Allow the Expansion of an Existing Major Utility Service, Specifically a Six MW Utility-Scale Solar Energy Generation Facility and Associated Six Medium Voltage Lines Known as Sycamore Cross B, on approximately 240 Acres Located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way

BACKGROUND:

Application (CUP-5-24) of Sycamore Cross Solar , LLC, applicant, for a for a conditional use permit to allow the expansion of an existing major utility service, specifically a six MW utility-scale solar energy generation facility and associated six medium voltage lines known as Sycamore Cross B, on approximately 240 acres located on tax parcel numbers 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005 located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way.

The project site includes properties that are part of the existing Cavalier Solar facility as well as one new property with tax map numbers 10-01-028A that will be crossed by an easement only for a proposed medium voltage transmission line. The conditional use permit would allow the expansion of the existing facility on the existing Cavalier parcels with tax map numbers 10-01-017 and 11-01-015 by up to 240 acres. The other existing Cavalier parcels associated with this application will be crossed by medium voltage transmission lines.

The project site is generally bounded by Surry County on the north, James Wilson Way on the west, and Stallings Creek to the east and south. The project has road frontage on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way. The site lies adjacent to agricultural, forestal, and dispersed single-family residential uses.

Property location and proximity maps are attached to this staff report.

All of the properties that are part of the application with the exception of 10-10-028A are part of the existing Cavalier solar facility. At its meeting on May 20, 2021, the Isle of Wight County Board of Supervisors approved Cavalier (CUP-3-19) to allow a Utility Scale Solar Energy Facility for up to 500 acres. This

application would allow the expansion of the utility scale solar energy generation facility use on two of the properties to up to 240 acres. Most of the Cavalier facility has been constructed and is awaiting final landscaping inspection and permit approval.

According to County records, the new property with tax map number 10-01-028A located at 9621 Burwells Bay Road is 75.24 acres and has historically been used for agriculture. County real estate records show an existing dwelling built in 1933 along with several outbuildings and a cemetery. The applicant plans to install a medium voltage transmission line to serve the new solar facility on the property.

The Sycamore Cross B solar facility application was submitted in conjunction with the accompanying Sycamore Cross A solar project application which lies approximately 2.5 miles away. Sycamore Cross A consists of 13 project parcels parcel totaling 1,795 acres, includes one medium voltage easement only parcel and will account for approximately 214 MWac. The Sycamore Cross B project will consist of two parcels with panels totaling 240 acres accounting for approximately 6 MW and six medium voltage easement only parcels.

The project will consist of solar photovoltaic modules on a single axis tracker system and associated electrical equipment. The project will utilize an existing substation location shared with the Cavalier Solar facility.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising Sycamore Cross A to the project's collector substation. The Sycamore Cross project is using the same utility corridor as Cavalier Solar. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar facility and that will interconnect the project's substation with the VEPCO Septa 500 kV Substation. The applicant states that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. These improvements are being completed as part of the Cavalier facility. As part of the site construction activities, one house is proposed for demolition at 14195 Rattlesnake Trail which was built in 1950. The applicant states that other structures may be considered for demolition to accommodate the final design of the solar facility, although none have been specifically identified in this application.

The Project will serve the PJM (Pennsylvania-Jersey-Maryland) wholesale market. The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. The maximum facility output is 240 MW for projects, which is also referred to as the "installed capacity", and the total project has rights to inject the full 240 MW into the grid. A redacted version of the

interconnection service agreement is attached to the staff report.

The application anticipates construction of the Project to begin in Spring 2025 and completed by the end of 2026. Construction activity is proposed between the hours of 7 a.m. and 7 p.m., Monday through Saturday.

The applicant submitted the required the supporting studies in support of both the Sycamore Cross A and B projects. Staff assessed the application for its consistency with the County's plans and ordinances as well as potential impacts to natural and cultural resources, public facilities and services. Unless otherwise noted, the following analysis is for both projects. The following is a summary of the projected benefits, potential impacts and any mitigation measures proposed by the applicant.

Public Facility Impacts:

The impacts of the proposed facility on public roads will occur primarily during construction and will be minimal once the use is established. In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by construction traffic and noise generation.

The applicant has provided a proposed construction transportation route which has been reviewed by the Virginia Department of Transportation (VDOT), and they stated they had no concerns. The construction traffic route alternative plan is attached to the staff report.

The applicant has submitted three options for proposed construction traffic routes, each of which includes escorted heavy haul routes, a delivery route, and anticipated employee commuter routes. Sycamore Cross has suggested a preferred delivery route using Proctor's Bridge (Rte. 616) from Route 460 in Southampton County to Proctor's Bridge (Rte. 621) in Isle of Wight to a main staging area within the project site. From the staging area, deliveries will be escorted to various project areas on the local road network and back to the staging area. Factors used to determine Sycamore Cross Solar’s preferred routing includes traffic counts, road characterizations as defined by VDOT, bridge capacities, road widths, current road conditions, challenges based on superelevation, and proximity to residences. The applicant states that construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

Staff expressed concerns to the applicant in regard to the narrowness of all three

proposed routes as well as bridge capacity, lack of shoulders or passing areas, and proximity to residences. The roads surrounding the project site are not well suited to construction traffic. In addition, staff recommends that no construction should occur on Sundays by any party involved with the project, to include the solar developer, its contractors, and Dominion Energy contractors and that deliveries and hauling activities should occur outside of school bus traffic times.

Environmental Assessment:

The project lies within the Blackwater River watershed area and contains several types of sensitive environmental features, including wetlands, streams, and floodplains. According to the information the Department of Conservation and Recreation (DCR), 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 83, which represents a site of high significance.

A wetland delineation performed by the applicant shows 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features located within the fenced area of the project. The applicant states they will continue to avoid and minimize impacts to these features through the site plan design phase of the project.

Review comments from DCR reveal there is a potential for rare and threatened species such as the Barking treefrog and the Eastern Big Eared Bat to occur in the project area. The proposed project will impact one or more ecological cores with very high (C2) to outstanding (Cl) ecological integrity.

Ecological core areas are classified into five categories of ecological integrity: C1 – Outstanding; C2 – Very High; C3 – High; C4 – Moderate; and C5 – General. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also increase for those cores and habitat fragments that contribute to water quality enhancement. In general, larger, more biologically diverse areas are given higher scores. DCR recommends avoidance of impacts to cores. However, when avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

According to the applicant, approximately 77 acres of very high value ecological cores, 32 acres of high value ecological cores, 3.3 acres of moderate value ecological cores, and 423.7 acres of general value ecological cores may be impacted by the Project. The Project does not intersect any outstanding value ecological cores. The applicant states that they have made a concerted effort to minimize impacts wherever possible.
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Based on the current design of the project, approximately 614 acres of prime farmland (26% of the Project study area), 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be

impacted.

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The report states that the project would involve an investment of $402.5 million in

capital equipment and improvements to the existing property within Isle of Wight County. Both Sycamore Cross Solar projects would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million with the siting agreement in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use, representing a 29- to 39-fold increase over current use revenues. This is assuming the actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.

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According to the 2022 Census of Agriculture (USDA-NASS), Isle of Wight County has 212 farms totaling 80,316 aces of land. The average farm size is 379 acres. The average annual market value of agricultural products sold per farm is $346,011. Using the same data to derive market values for crops cultivated on 891 acres within the fenced area of this project, the farmland generates an estimated $813,483 in market value.

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A full analysis of the consistency of the application with County Plans and Ordinances is included in the attached Planning Commission staff report. After performing the analysis, staff identified the following strengths and weaknesses of

the application:

Strengths:

1. The proposed use will generate additional nonresidential tax revenue for needed public services and facilities.

Weaknesses:

1. The proposed use would remove agricultural land from production.
2. Temporary impact to residential development in the area from construction traffic and noise is expected during the construction phase.
3. The project may create impacts to archeological and architectural resources pending final study.
4. The project will impact identified ecological core areas, priority forest land, and prime farm soils.
5. Approval of the project would result in a multiplicity and saturation of similar uses other solar energy generation facilities nearby.
6. With no to minimal shoulders and deep ditches at several points along the proposed transportation route there may be safety issues that arise as construction vehicles meet along the route.
7. Due to poor transportation route alternatives and impacts to environmentally sensitive areas, the project's proposed location is not well suited and therefore is not consistent with the recommendations of the Comprehensive Plan.

Project Update as of August 5, 2024:

Following the July 11, 2024, regular meeting, the Board of Supervisors continued their discussion of the application until the next available regular meeting in order to obtain additional information on the ongoing noise study results, feedback from the Smithfield Volunteer Fire Department, proposed restrictions on construction traffic during school pick up and drop off times, and the component materials of the solar panels to be used onsite. The applicant will provide this information at the August 15, 2024, Board meeting.

The Board also requested that both staff's recommended conditions as well as the suggested changes from the applicant be combined in one document. The revised conditions dated August 7, 2024, are attached to this staff report.

The applicant submitted a Phase I archeological and architectural study on July 26, 2024. The new study is attached to this staff report.

Of the surveyed architectural resources, four are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century.

Of the surveyed archeological resources, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area

The study recommends screening and buffering to minimize visual impacts and disturbance for these resources. The report has been submitted to VDHR for review and concurrence. Any components of the proposed solar facility will require a 250 foot setback from any architectural and archeological resources that are potentially eligible for listing or require additional investigation. VDHR will make the final determination of which resources are eligible for listing or are recommended for additional investigation.

BUDGETARY IMPACT:

TBD

RECOMMENDATION:

The Planning Commission voted to recommend denial of the application by a a vote of eight in favor of the recommendation and two against the recommendation (8-2) at their May 28, 2024, regular meeting.

Based on the identified weaknesses, staff recommends denial of the Conditional Use Permit request. However, should the CUP and withdrawal be approved staff recommends the following conditions:

1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2) The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.

3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended.
4) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.
5) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility.
8) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times.
9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project.
11) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are "Tier 1" modules, as established by the most recent "PV Module Tier 1 List" issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field

and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Planning Commission Staff Report	Backup Material	7/1/2024
Sycamore Cross B application	Backup Material	5/21/2024
Project Narrative	Backup Material	5/21/2024
Sycamore Cross B Location Map	Backup Material	5/21/2024
Sycamore Cross A and B Proximity Map	Backup Material	5/21/2024
Concept Plan A and B	Backup Material	5/21/2024
Environmental Assessment	Backup Material	5/21/2024
DCR comments	Backup Material	5/21/2024
Phase IA Historical Resources Survey	Cover Memo	5/21/2024
VDHR comments	Backup Material	5/21/2024
Isle of Wight Museum Comments	Backup Material	5/21/2024
Economic Analysis	Backup Material	5/21/2024
Commissioner of Revenue Comments	Backup Material	5/21/2024
Viewshed Impact Perspectives	Backup Material	5/21/2024
Solar Table	Cover Memo	5/21/2024
Ordinance	Ordinance	7/1/2024
Phase I historic resource study	Backup Material	8/5/2024
Revised Conditions Redline Version 8/7/24	Backup Material	8/7/2024
Revised Conditions as of 8/7/24	Backup Material	8/7/2024

PLANNING REPORT

APPLICATION:

Application (CUP-5-24) of Sycamore Cross Solar , LLC, applicant, for a for a conditional use permit to allow the expansion of an existing major utility service, specifically a six MW utility-scale solar energy generation facility and associated six medium voltage lines known as Sycamore Cross B, on approximately 240 acres located on tax parcel numbers 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005 located on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way

ELECTION DISTRICT:

D5

LOCATION:

The project site includes properties that are part of the existing Cavalier Solar facility as well as one new property with tax map numbers 10-01-028A that will be crossed by an easement only for a proposed medium voltage transmission line. The conditional use permit would allow the expansion of the existing facility on the existing Cavalier parcels with tax map numbers 10-01-017 and 11-01-015 by up to 240 acres. The other existing Cavalier parcels associated with this application will be crossed by medium voltage transmission lines.

The project site is generally bounded by Surry County on the north, James Wilson Way on the west, and Stallings Creek to the east and south. The project has road frontage on Jones Drive (Rte. 626), Burwells Bay Road (Rte. 621), Mill Swamp Road (Rte. 621) and James Wilson Way. The site lies adjacent to agricultural, forestal, and dispersed single-family residential uses.

Property location and proximity maps are attached to this staff report.

BACKGROUND:

All of the properties that are part of the application with the exception of 10-10-028A are part of the existing Cavalier solar facility. At its meeting on May 20, 2021, the Isle of Wight County Board of Supervisors approved Cavalier (CUP-3-19) to allow a Utility Scale Solar Energy Facility for up to 500 acres. This application would allow the expansion of the utility scale solar energy generation facility use on two of the properties to up to 240 acres. Most of facility has been constructed and is awaiting final landscaping inspection and permit approval.

According to County records, the new property with tax map number 10-01-028A located at 9621 Burwells Bay Road is 75.24 acres and has historically been used for agriculture. County real estate records show an existing dwelling built in 1933 along with several outbuildings and a cemetery. The applicant plans to install a medium

voltage transmission line to serve the new solar facility on the property.

DESCRIPTION:

The Sycamore Cross B solar facility application was submitted in conjunction with the accompanying Sycamore Cross A solar project application which lies approximately 2.5 miles away. Sycamore Cross A consists of 13 project parcels parcel totaling 1,795 acres, includes one medium voltage easement only parcel and will account for approximately 214 MWac. The Sycamore Cross B project will consist of two parcels with panels totaling 240 acres accounting for approximately 6 MW and six medium voltage easement only parcels.

The project will consist of solar photovoltaic modules on a single axis tracker system and associated electrical equipment. The project will utilize an existing substation location shared with the Cavalier Solar facility.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising Sycamore Cross A to the project's collector substation. The Sycamore Cross project is using the same utility corridor as Cavalier

Solar. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar facility and that will interconnect the project's substation with the VEPCO Septa 500 kV Substation. The applicant states that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. These improvements are being completed as part of the Cavalier facility. As part of the site construction activities, one house is proposed for demolition at 14195 Rattlesnake Trail which was built in 1950. The applicant states that other structures may be considered for demolition to accommodate the final design of the solar facility, although none have been specifically identified in this application.

The Project will serve the PJM (Pennsylvania-Jersey-Maryland) wholesale market. The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. The maximum facility output is 240 MW for projects, which is also referred to as the "installed capacity", and the total project has rights to inject the full 240 MW into the grid. A redacted version of the interconnection service agreement is attached to the staff report.

The application anticipates construction of the Project to begin in Spring 2025 and completed by the end of 2026. Construction activity is proposed between the hours of 7 a.m. and 7 p.m., Monday through Saturday.

The applicant submitted the required the supporting studies in support of both the Sycamore Cross A and B projects. Staff assessed the application for its consistency with the County's plans and ordinances as well as potential impacts to natural and cultural resources, public facilities and services. Unless otherwise noted, the following analysis is for both projects. The following is a summary of the projected benefits, potential impacts and any mitigation measures proposed by the applicant.

Public Facility Impacts:

The impacts of the proposed facility on public roads will occur primarily during construction and will be minimal once the use is established. In establishing the use, the enjoyment of neighboring properties may also be temporarily impacted by construction traffic and noise generation.

The applicant has provided a proposed construction transportation route which has been reviewed by the Virginia Department of Transportation (VDOT), and they stated they had no concerns. The construction traffic route alternative plan is attached to the staff report.

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COMPREHENSIVE LAND USE PLAN:

The future recommended land use designation for these properties is Rural Agricultural Conservation (RAC) and Environmental Conservation (EC) under the adopted Comprehensive Plan. Appropriate uses for the RAC land use designation include agriculture, horticulture, forest lands, and scattered low-density residential uses. Other uses such as resource extraction and utility-scale solar facilities are also permitted when appropriately sited. Appropriate uses for the EC land use designation include wetlands, farms, forest uses, open space, and limited park facilities.

Solar Energy facilities are considered compatible with the RAC land use when properly sited and with the application of appropriate development criteria. The area designated as EC should be preserved due to environmental constraints unless site-specific analysis demonstrates there are no environmental concerns in a specific area.

Staff has concerns about the appropriate siting of this facility due to the lack of suitable roads for construction traffic as well as impacts to agricultural land and sensitive environmental features.

ORDINANCE REVIEW:

The zoning district classification for the subject properties is Rural Agricultural Conservation (RAC). The RAC

zoning district is intended to preserve an protect areas of the County that are predominantly in agricultural and forestall use and to maintain the existing land base to support those activities.

The applicant proposes to establish a 240 MW solar energy facility with both projects, which is classified as a major utility serve use type in the Zoning Ordinance. These facilities are permitted as conditional uses in the RAC, RR, and GC zoning districts and may be considered compatible with appropriate conditions to mitigate any potential negative impacts on the surrounding community.

Section 1-1017 of the Zoning Ordinance provides standards for review of a conditional use application that the Planning Commission and Board of Supervisors shall consider before granting a conditional use permit. They are as follows:

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 described in the Zoning Ordinance, the Board may impose 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 of landmarks.

Should the CUP be approved, the applicant will be required to submit a site plan for review and approval in accordance with Zoning Ordinance requirements and conditions of approval.

AGENCY REVIEW:

- Fire Rescue: All concerns have been addressed in the application.
- Commissioner of the Revenue: Comments are attached separately.
- Sheriff's Department: Similar to the Moonlight project, there will be an increase in patrol during the construction phase and the traffic impacts on proposed transportation routes. These are primarily secondary roads with no to minimal shoulders and are also shared with farm vehicles. During the construction phase they will be bringing in heavy equipment and large vehicles which will require escorts or even road closures. Also, there being multiple sites there is a concern of the operation of heavy equipment on the roads from one parcel to another.
- County Attorney: Only include conditions that go above what is now required under the zoning ordinance.
- VDOT: All concerns have been addressed in the application.
- Isle of Wight County Museum: Comments are attached separately.

Please note that, should this CUP be approved, it will be subject to review and approval from all associated agencies during site plan review. The project will be required to comply with all Zoning Ordinance requirements in effect at the time of site plan submittal.

STAFF CONCLUSIONS:

Strengths:
1. The proposed use will generate additional nonresidential tax revenue for needed public services and facilities.

Weaknesses:
1. The proposed use would remove agricultural land from production.
2. Temporary impact to residential development in the area from construction traffic and noise is expected during the construction phase.
3. The project may create impacts to archeological and architectural resources pending final study.
4. The project will impact identified ecological core areas, priority forest land, and prime farm soils.
5. Approval of the project would result in a multiplicity and saturation of similar uses other solar energy generation facilities nearby.
6. With no to minimal shoulders and deep ditches at several points along the proposed transportation route there may be safety issues that arise as construction vehicles meet along the route.

7. Due to poor transportation route alternatives and impacts to environmentally sensitive areas, the project's proposed location is not well suited and therefore is not consistent with the recommendations of the Comprehensive Plan.

STAFF RECOMMENDATION:

Based on the identified weaknesses, staff recommends denial of the Conditional Use Permit request. However, should the CUP and withdrawal be approved staff recommends the following conditions: 1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads. 2) The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan. 3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended. 4) The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR. 5) The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process. 6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response. 7) The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility. 8) Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times. 9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing. 10) Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project. 11) As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results. 13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

ATTACHMENTS:

Description	Type	Upload Date
Sycamore Cross B application	Backup Material	5/21/2024
Project Narrative	Backup Material	5/21/2024
Sycamore Cross B Location Map	Backup Material	5/21/2024
Sycamore Cross A and B Proximity Map	Backup Material	5/21/2024
Concept Plan A and B	Backup Material	5/21/2024
Environmental Assessment	Backup Material	5/21/2024

DCR comments	Backup Material	5/21/2024
Phase IA Historical Resources Survey	Cover Memo	5/21/2024
VDHR comments	Backup Material	5/21/2024
Isle of Wight Museum Comments	Backup Material	5/21/2024
Economic Analysis	Backup Material	5/21/2024
Commissioner of Revenue Comments	Backup Material	5/21/2024
Viewshed Impact Perspectives	Backup Material	5/21/2024
Solar Table	Cover Memo	5/21/2024

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[X] Conditional Use Permit (Are applicant proposed conditions attached?): X Yes _____ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): _____ Yes _____ No

Proposed Use or Activity: Civic Use (Utility/Major) Solar Farm

B. PROJECT DESCRIPTION:

Project Name: Sycamore Cross B

Property Address (if any): See Exhibit F

Election District: D5 (formerly Carrsville)

Comprehensive Plan Designation: Environmental Conservation and RAC

The use permit will apply to 240 acres out of 2036 total acres

Tax Parcel Identification # See Attached Number of acres to be effected: _____

Tax Parcel Identification # _____ Number of acres to be effected: _____

Tax Parcel Identification # _____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water _____ Private Well _____

Public Sewer _____ Private Septic _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Sycamore Cross Solar, LLC

Address: 2180 South 1300 East, Suite 600

City, State, Zip Code: Salt Lake City, Utah 84106

Phone No.: 804-334-9882 Email: gregory.creswell@aes.com Fax No.:

Property Owner(s) Name(s): See Exhibit E

Address:

City, State, Zip Code:

Phone No.: Email: Fax No.:

4/29/24

Applicant Signature **Date**

See Exhibit G of Sycamore Cross A application

Owner Signature *if different* **Date**

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: 5/2/2024 Fees Paid: $1,200.00

Tax Query: [X] Current [ ] Delinquent Distribution Date: 5/2/2024 (PREVIOUS SUBMITTALS REVIEWED - APP FOR B ONLY)

Posted/Date to Post: 5/15/2024

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: Amy M. Brin Date: 5/2/2024

Sycamore Cross Part B, Parcels Within Project Boundaries

Tax Parcel Identification Number	Parcel Acres	Property Owner Name	Property Owner Address
10-01-017	145	MILL SWAMP ROAD HOLDINGS LLC	804 GENERAL PICKETT DRSUFFOLK VA 23434
11-01-015	95	BATTEN MITCHELL DELK	11231 MILL SWAMP RDSMITHFIELD VA 23430

Anticipated Medium Voltage Easement Only Parcels, Isle of Wight Only

Tax Parcel Identification Number	Parcel Acres	Property Owner Name	Property Owner Address
10-01-023	120	SEWARD MICHAEL A & EMILY B	9310 JONES DRIVE SMITHFIELD VA 23430
10-01-025	120	BARCROFT JEAN E SOLE TRUSTEE JEAN E BARCROFT LIVING TRUST	11470 MODEST NECK RD IVOR VA 23866
10-01-027	130	SEWARD MICHAEL A	9310 JONES DRIVE SMITHFIELD VA 23430
10-01-028A	75	THACKER SHELTON L & ANN	11073 MILL SWAMP RD SMITHFIELD VA 23430
10-01-030	129	MILL SWAMP ROAD HOLDINGS LLC	804 GENERAL PICKETT DR SUFFOLK VA 23434
11-01-005	448	476, LLC	632 HAMPTON HIGHWAY 632 HAMPTON HIGHWAY

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided. **The required number of copies may be reduced with permission of the Zoning Administrator.**

- ☑ Application: Ten (10) copies of the original, executed application, one (1) digital copy of all application documents, and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page 3 of the application.
- ☑ The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☑ Ten (10) copies of a statement of the reasons for seeking such permit and if applicable, a statement of conditions.
- ☑ Ten (10) copies of a narrative description of the property which shall include the Tax Parcel Identification
- ☑ Ten (10) copies of a concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:
  - A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
  - Title of drawing
  - Date of drawing
  - Existing wood line
  - North arrow
  - Scale bar
  - Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
  - Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
  - Street names including route number and width(s) of the right-of-way(s)
  - Ten (10) full size copies, with one (1) reduced 11-inch X 17-inch copy and a digital copy shall be submitted

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

✓ Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

N/A A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

✓ All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

Ben Saunders

Printed or Typed Name

Signature

4/29/24

Date

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant Sycamore Cross Solar, LLC

Address 2180 South 1300 East, Suite 600
Street

Salt Lake City — Utah — 84106
City — State — Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
See Attached	

OTHER OWNERS OF AFFECTED REAL ESTATE
(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
See Attached	

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes[ ] No[X]
If yes, names of members:

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct, and true.

Applicant: Ben Saunders (Printed or Typed Name) Applicant: _____ (Signature) Date: 4/29/24

Commonwealth of Virginia
County of Isle of Wight

Subscribed and sworn to before me Mary L. Hall,
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia, this 29th day of April, 2024.

_____
Notary Public

My Commission Expires 12.31.24

MARY LEON HALL
NOTARY PUBLIC
REGISTRATION # 7858674
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
DECEMBER 31, 2024

April 30, 2024

Central Permitting Office
c/o Amy Ring, AICP
Director, Planning and Zoning
Department of Community Development, Isle of Wight County
17140 Monument Circle, Suite 101
Isle of Wight, VA 23397

Re: Conditional Use Permit Application for the Sycamore Cross Solar Project, Fourth Submittal for Sycamore Cross A, Creation of and First Submittal for Sycamore Cross B

Dear Ms. Ring,

At your request, the Sycamore Cross Solar Project has been split into separate project areas, each requiring its own Conditional Use Permit (CUP). These two areas are referenced as Sycamore Cross A and Sycamore Cross B, and together are the entirety of Sycamore Cross Solar, the "Project."

Please find enclosed Sycamore Cross Solar, LLC's fourth submittal for a CUP application which has been amended to represent Sycamore Cross A and the first submittal for a CUP application for Sycamore Cross B, which together comprise a photovoltaic solar generation facility of up to 240 megawatts located in Isle of Wight and Surry Counties. All documentation for Sycamore Cross A and Sycamore Cross B can be found in previous Sycamore Cross A application submittals with the exception of the documentation in this submittal.

The following list of documents have been updated and supplied with this submittal to support previously submitted CUP application components and to create the required CUP application for Sycamore Cross B:

- Project Narrative (updated to reflect 2 project areas and 2 CUPs)
- Attachment A: Conditional Use Permit Application Packages
  - Amended CUP Application Package For Sycamore Cross A: Fourth Submittal
  - CUP Application Package For Sycamore Cross B: First Submittal
- Attachment C: Revised Proposed Conditions (to reflect two project areas and to add a condition to address Unanticipated Discoveries)
- Attachment D: Updated Conceptual Plan of Development (to delineate Sycamore Cross A from Sycamore Cross B)
- Attachment J: Visual Impact Assessment: Visual Simulations

Thank you for your guidance and assistance in bringing the project to this point. We look forward to working with you and your staff further to answer questions and offer any needed clarity as you complete your review. The AES team is available to meet or talk at your convenience. I can be reached using the contact information provided in the signature below.

Sincerely,

Gregory S. Creswell

Greg Creswell
Senior Project Development Manager
804-334-9882
Gregory.Creswell@aes.com

Project Narrative

PROJECT OVERVIEW

Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy (AES), is proposing to build a photovoltaic solar generation facility of up to 240 megawatts to be located in Isle of Wight and Surry Counties, Virginia (the "Project").

The total Project study area is approximately 2,488 acres across all or portions of 18 parcels in Isle of Wight and Surry Counties. The Project study area is shown on the orthoimagery and U.S. Geological Survey Project Location Maps (Figures 1 and 2). Within Isle of Wight County, the Project study area comprises portions of 15 project parcels totaling approximately 2,036 acres of predominantly undeveloped and agricultural land zoned RAC: Rural Agricultural Conservation. The RAC zoning district allows utility-scale solar facilities with approval of a Conditional Use Permit. The adjacent and adjoining properties represent similar land use to the Project study area, including agriculture, forested, historically managed area for silviculture use and residential use. The proposed Project satisfies the goals and objectives of the Isle of Wight County Comprehensive Plan. This is further discussed in Section 3 of this application.

At the request of Isle of Wight County, the project portions located in Isle of Wight have been split into two separate applications: Sycamore Cross A and Sycamore Cross B. Sycamore Cross A consists of 13 project parcels parcel totaling 1,795 acres, includes one medium voltage easement only parcel and will account for approximately 214 MWac. Sycamore Cross B consists of two project parcels totaling 240 acres, includes six medium voltage easement only parcels and will account for approximately 6 MWac. Tables showing which parcels are included with Sycamore Cross A and Sycamore Cross B are included with each application package (Attachment A). These two applications comprise the Isle of Wight portions of the Project.

The Conditional Use Permit application packages (Attachment A) and associated fees (Attachment B) are being submitted to Isle of Wight County in accordance with Section 1-1017, Conditional Uses and Section 5-5003, Supplementary use regulations for civic use types. Additionally, a list of proposed Conditional Use Permit conditions for the Project are included in Attachment C and further detailed throughout this document.

PROJECT APPLICANT

Sycamore Cross Solar, LLC is wholly owned by AES Clean Energy (AES). Since 1981, AES has been headquartered in the Commonwealth of Virginia. Our commitment is to provide clean and reliable energy in a way that benefits every Virginian. Currently, we operate 660 megawatts (MW) of renewable energy in Virginia, with an additional 240 MW of renewable energy permitted and in a phase of construction. These projects bring extensive economic benefits to their respective communities through the creation of hundreds of construction jobs at each site, stimulus of the local economy when we provide employment and buy from area businesses, and substantial tax

revenue generation that helps fund county services such as emergency response, public education, and the deployment of broadband.

Within Virginia, renewable energy development is critical to fulfill the promise of the Virginia Clean Economy Act of 2020 to transition the Commonwealth's electric grid to 100% clean energy by 2050. AES remains committed to working with our stakeholders to co-create and deliver the smarter, greener energy solutions that meet their needs, benefiting the local community and economy.

DESIGN

The Project will consist of solar photovoltaic modules on a single axis tracker system and associated electrical equipment and materials necessary to collect the energy produced. The system will be comprised of UL-listed components and installed according to the National Electric Code. The maximum panel height will be less than 15 feet above grade at maximum tilt in accordance with Article V Sec. 5-5003 of the Isle of Wight zoning ordinance. The facility will be secured by a 6-foot-tall chain link fence with 1-foot of barbed wire. Sound from the solar panels will not exceed 60 dBA in normal circumstances in accordance with Sec. 5-5003. Setback lines will comply with Sec. 5-5003. Due to setbacks, sound at property lines will likely be much lower than 60 dBA. Areas under the panels will be planted with local grasses and forbs, non-panel areas will be planted with wildlife- and pollinator-friendly vegetation to the extent practicable, and wildlife corridors will be maintained as shown in the Conceptual Plan of Development (Attachment D).

The Project will utilize an existing substation location shared with the Cavalier Solar project, which location is identified on Attachment D. The existing substation location pad has been built as part of the Cavalier Solar project. Additional civil work is not expected to complete the project substation for the Sycamore Cross project. Further, the interconnect with the Dominion Septa substation has been approved and will also be built as part of the Cavalier Solar project.

As of this submittal of the CUP applications, no operations or maintenance buildings are contemplated in the design. If included prior to a final design, all operations and maintenance buildings and related structures will incorporate materials, colors, textures, screening, and landscaping that will blend the facilities to the natural setting and surrounding structures. No signage of any type will be placed on the facility other than notices, warnings, and identification information required by law or as approved by the Zoning Administrator. Construction parking and staging signs will be clearly placed at ingress and egress points to direct traffic to the proper location. Appropriate warning signage will be placed on all towers, electrical equipment, and Project site ingress and egress points. Signs will be clearly marked at the Project site for emergency vehicle ingress and egress.

Consideration is being made for the potential demolition of structures to accommodate the design of Sycamore Cross Solar and to use the land most efficiently within the project area. As of this submittal of the CUP applications, the only improvement anticipated to be demolished is at the address 14195 Rattlesnake Trail on parcel 27-01-003. A photo of the structure can be found in Figure 6-46 of the Cultural Resource Assessment dated August 2023. In the event additional

structures are considered for demolition, a thorough review will be completed, and the required information submitted to Isle of Wight updating this list of properties for consideration. Additionally, prior to any demolition, Sycamore Cross Solar, LLC will elicit concurrence from VDHR on our architectural survey findings. Should any buildings be found to be of significance, avoidance and mitigation measures will be taken.

INTERCONNECTION

The Project will serve the PJM wholesale market. The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. Our maximum facility output is 240 MW, which is also referred to as the "installed capacity", and the Project has rights to inject the full 240 MW into the grid. A redacted version of the interconnection service agreement is included in Attachment E.

New 34.5kV feeder lines will interconnect the various solar generation equipment comprising the Project to the Project's collector substation. Siting of the Sycamore Cross project is using the same utility corridor as Cavalier Solar to limit any additional impact to view sheds. The project will use an existing 500 kV gen-tie line that was constructed for the Cavalier Solar Project and that will interconnect the Project's substation with the VEPCO Septa 500 kV Substation. It should be noted that no improvements will be required to the VEPCO substation or the 500 kV gen-tie. Said improvements are being completed and certificated as part of the Cavalier project.

LAND USE AND ZONING

The Project is located off Mill Swamp Road (State Rte. 621) on approximately 2,488 acres of 18 parcels in Isle of Wight and Surry Counties. Within Isle of Wight County, the Project study area comprises portions of 15 parcels totaling approximately 2,036 acres of predominantly undeveloped and agricultural land zoned RAC: Rural Agricultural Conservation. The fenced Project area will consist of 1,030 acres of the total Project study area acreage. The adjacent and adjoining properties are also zoned as RAC: Rural Agricultural Conservation and represent similar land use to the Project study area, including agriculture, forested, and land historically managed for silvicultural use (Attachment D).

The RAC zoning district allows utility-scale solar facilities with approval of a Conditional Use Permit. Furthermore, the proposed use fulfills the intent of the RAC district by preserving land which may be used in the future for additional agricultural and silvicultural activities. While in use by the proposed solar facility, the land cannot be sold for development of residential or commercial use, and the quality of the soil will likely be improved over the projected 35-year life of the Project as the land lays fallow.

Landowners for each participating parcel, as described in Attachment F, within the Project Site have provided Owner's Authority Letters (Attachment G). 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 (Attachment H) and a copy of the county tax records for the participating parcels (Attachment I).

VISUAL IMPACT

A Visual Impact Analysis was performed by Tetra Tech and is provided in Attachment J. This analysis determined that based on the proposed mitigating measures including landscaping and screening, the Project will have little to no impact on the existing viewshed. To ensure minimal viewshed impacts, the Project has implemented setbacks from adjoining parcels and residences in accordance with the County Ordinance; furthermore, the Conceptual Plan of Development (Attachment D) includes proposed landscaping and screening to be established and maintained within these buffers, as shown in the visual simulations included in Attachment I. This screening will be maintained and supplemented as necessary throughout the life of the Project.

TRAFFIC IMPACT

The Project anticipates construction of the Project to begin in Q2 2025 and is forecasted to be completed by Q4 2026. Construction will take place between the hours of 7 a.m. and 7 p.m., Monday through Saturday. Construction and decommissioning of the Project may cause temporary impacts to traffic flow in the direct vicinity of the Project site but will not adversely impact traffic during the normal operation phase of the Project.

Sycamore Cross Solar has been working in conjunction with Isle of Wight Planning and Zoning, Isle of Wight Transportation, and the VDOT Franklin Residency to develop a Construction Traffic Management Plan. Sycamore Cross has submitted three options for proposed construction traffic routes, each of which includes escorted heavy haul routes, a delivery route, and anticipated employee commuter routes. Mapping is included in Attachment K. Sycamore Cross has suggested a preferred delivery route using Route 616 to Route 621 from Ivor to a main staging area within the project site. From the staging area, deliveries will be escorted to various project areas and back to the staging area. Factors used to determine Sycamore Cross Solar's preferred routing includes traffic counts, road characterizations as defined by VDOT, bridge capacities, road widths, current road conditions, challenges based on superelevation, and proximity to residences.

Sycamore Cross Solar will refine and finalize the details of the Construction Traffic Management Plan in coordination with both the Virginia Department of Transportation (VDOT) Franklin residency and the County Transportation Department prior to Site Plan Approval. Construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

ECONOMIC IMPACT

The current zoning of the Project is RAC and the use is generally agricultural or timber. According to information obtained from participating landowners, 891 acres or 35.8% of the project site is currently used for crop production. This includes 221 acres (8.9%) that are being used for corn production, 40 acres (1.6%) used for cotton production, 433 acres (17.4%) used for soy

production, and 197 acres (7.9%) used for peanut production. No parcels are currently being used for livestock.

The Project will generate tax revenue for the County without increasing demand for public utilities or services, allowing increased investment in services and infrastructure. An Economic Impact Assessment was completed in September 2023 by Mangum Economics using the IMPLAN model. This assessment provides fiscal impacts based on taxation of capital investment and on the potential use of a Revenue Share Ordinance. Depending on the tax revenue stream the County chooses to pursue, the Project may provide between approximately $15.2 million and $20.1 million in tax revenue for Isle of Wight County. This is a 29 to 39 fold increase to County revenue versus current use revenue. Additionally, construction of the Project will create approximately 197 direct, indirect, and induced jobs during construction and 7 direct, indirect, and induced jobs during the operational phase. The Economic Impact Analysis assumes a commercial operation date of Q4 2026. A full Economic Impact Analysis is included in Attachment L.

ENVIRONMENTAL RESOURCES

The Project will avoid and mitigate any potential impacts to natural and cultural resources to the greatest extent possible. A summary of potential Project interactions with environmental resources is provided below. A full Environmental Resource Impact Analysis with further details is included in Attachment M.

Water Resources

Tetra Tech performed a wetland delineation of the Project site through several field surveys in October 2022 through June 2023. The project will minimize impacts to wetlands and floodplain to the extent reasonably possible. A 50-foot buffer area around water resources will be implemented, to the extent practicable, as shown for the majority of resources in the current Conceptual Plan of Development, Attachment B. In the event development is to occur within any wetland or floodplain, these areas will be designed and permitted to be compliant with all local, state, and federal requirements. AES acknowledges several project areas shown in the conceptual plan of development are within the FEMA 100-year floodplain. This design is conceptual and will be refined as additional studies are completed and regulatory coordination is finalized. All resources will be delineated and clearly flagged for avoidance during construction in areas where avoidance is possible.

Construction of the Project may cause temporary water quality impacts in the form of increased sediment runoff during land disturbing activities; however, best management practices will be implemented to avoid and minimize impacts to surface water features. Ultimately, the Project will likely lead to improved water quality in the area because runoff of pesticides and other inputs to or byproducts of farming will be reduced or eliminated. Soil testing will be performed prior to construction, after completion of construction, and every five years thereafter; results will be provided to the County Planning Department per Article V, Sec. 5-5003.M.4.f.

Threatened and Endangered Species

An initial desktop assessment performed by Tetra Tech identified several protected species as having the potential to occur within the Project study area. Field surveys of the Project study area were conducted in October 2022 through April 2023. These surveys identified potential presence of six protected species – the bald eagle *(Haliaeetus leucocephalus),* red-cockaded woodpecker *(Picoides borealis),* northern long-eared bat *(Myotis septentrionalis),* Rafinesque's eastern big-eared bat *(Corynorhinus rafinesquii macrotis)*, tri-color bat *(Perimyotis subflavus)*, and the yellow lance *(Elliptio lanceolata)*. Both the bald eagle and red-cockaded woodpecker were determined to be unlikely to be adversely affected by the Project. Suitable habitat was found on site for the other four species, and agency consultation was recommended. Additional presence/absence surveys have been conducted and coordination with federal and state agencies is ongoing to determine best avoidance, minimization, and mitigation measures.

Ecological Cores

Based on the current design, approximately 77 acres of very high value ecological cores, 32 acres of high value ecological cores, 3.3 acres of moderate value ecological cores, and 423.7 acres of general value ecological cores may be impacted by the Project. The Project does not intersect any outstanding value ecological cores. Ecological core data with the classification of high, very high, and outstanding have the greatest value of ecological biodiversity. Per the recommendations of the Department of Conservation and Recreation, potential impacts to ecological cores have been avoided and minimized to the extent practicable. Where unavoidable, potential impacts were limited to the edges of identified ecological cores.

HISTORICAL AND CULTURAL RESOURCES

A Phase 1A Cultural Resource Assessment and early coordination was completed by Dutton + Associates, LLC in August 2023. This analysis indicated that no National Register of Historic Places (NRHP) listed resources are present within the fenced Project area. There are three desktop mapped potential resources that are located within the fenced Project area. The Historical and Cultural Resources Report is included in Attachment N.

This report was submitted to Virginia Department of Historic Resources (VDHR) for concurrence on the predictive modeling and the proposed Phase 1b survey methodology on August 2, 2023. The VDHR provided comments regarding the proposed survey methodology August 14, 2023; to which the report was revised, finalized, and resubmitted on August 24, 2023, and the VDHR concurrence letter dated August 28, 2023 is included in Attachment Q.

The Phase 1B fieldwork, in accordance with the guidance provided by VDHR and outlined methodology in the Phase 1A assessment, was initiated in December 2023 and is ongoing at the time of this submittal of the CUP applications. The final Phase 1B will be provided to VDHR for concurrence on findings and recommendations.

AES will create an Unanticipated Discovery Plan which will be used during construction of the project to address any unexpected cultural discoveries on site. This plan will include emergency protections protocols, curation processing of cultural materials, disposition of cultural materials,

and a contact list including an on-call archaeologist, project contacts, and state/regional contacts.

LANDSCAPE STANDARDS

According to Isle of Wight County Code of Ordinances Appendix B Zoning Article VIII. Landscape and Screening Standards Section 8-1005-Landscaping Zones, there is a certain minimum number of required landscape points that vary based on the landscape zone assigned to an area, which include the: frontage zone, buffer zone, parking zone, foundation zone, and screening zone. The zone use type for the areas surveyed for this Project are likely categorized as a buffer zone, which requires the installation of a minimum of 45 points of landscaping per 500 square feet of buffer zone for civic use types. A tree canopy assessment was conducted to identify mature tree stands that would meet the requirements for tree preservation point credits. The project will provide approximately 2.8 million landscape points. The full Tree Canopy Survey Assessment is included in Attachment O.

DECOMMISSIONING

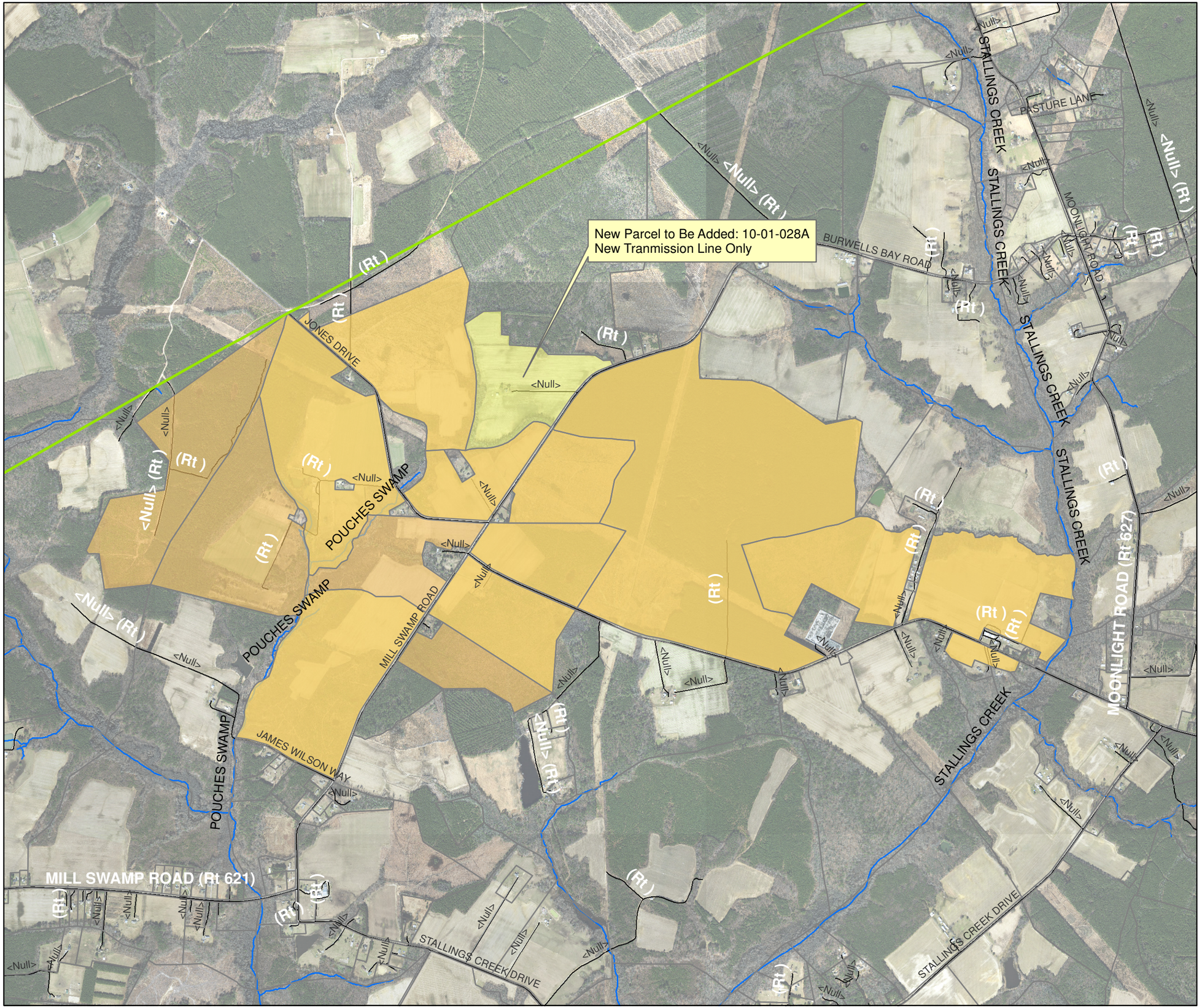
The operating period of the Project is anticipated to be approximately 35 years. At the end of the useful life of the Project, Sycamore Cross Solar, LLC, will be responsible for decommissioning the Project. Prior to final site plan approval, Sycamore Cross Solar, LLC will finalize and submit to the County a decommissioning plan and associated written agreement to decommission the Project equipment, facilities, and devices. The decommissioning security amount will be determined and posted based on an estimate provided in operational year 1 by a qualified third-party engineering firm. The decommissioning plan and associated security will not include a deduction for salvage value.

CUP-5-24
Sycamore Cross B
Solar Energy Generation Facility
Location Map

Legend

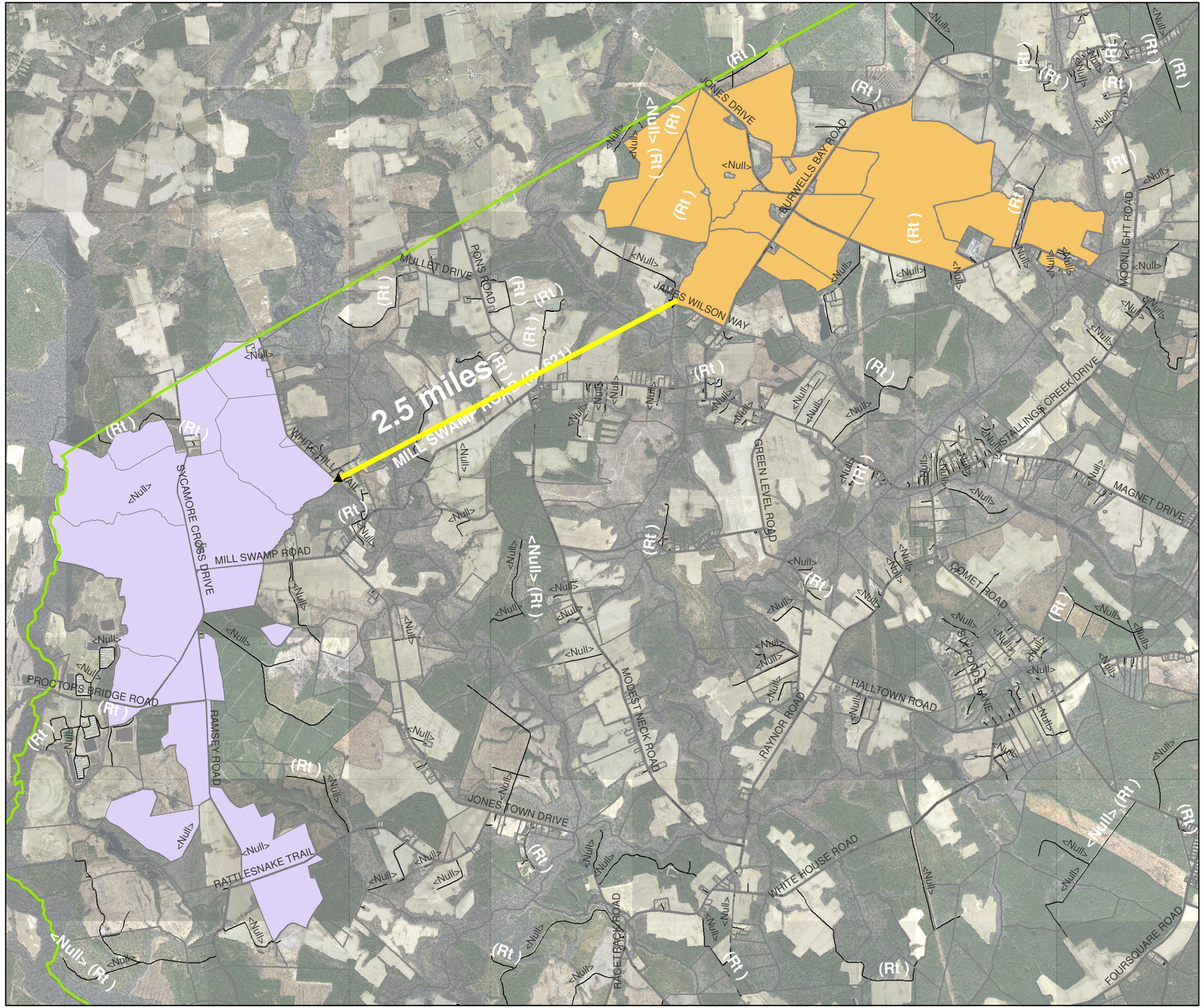
- Parcels
- Existing Cavalier Solar Parcels

N



Legend

- Sycamore Cross A
- Parcels
- Cavalier



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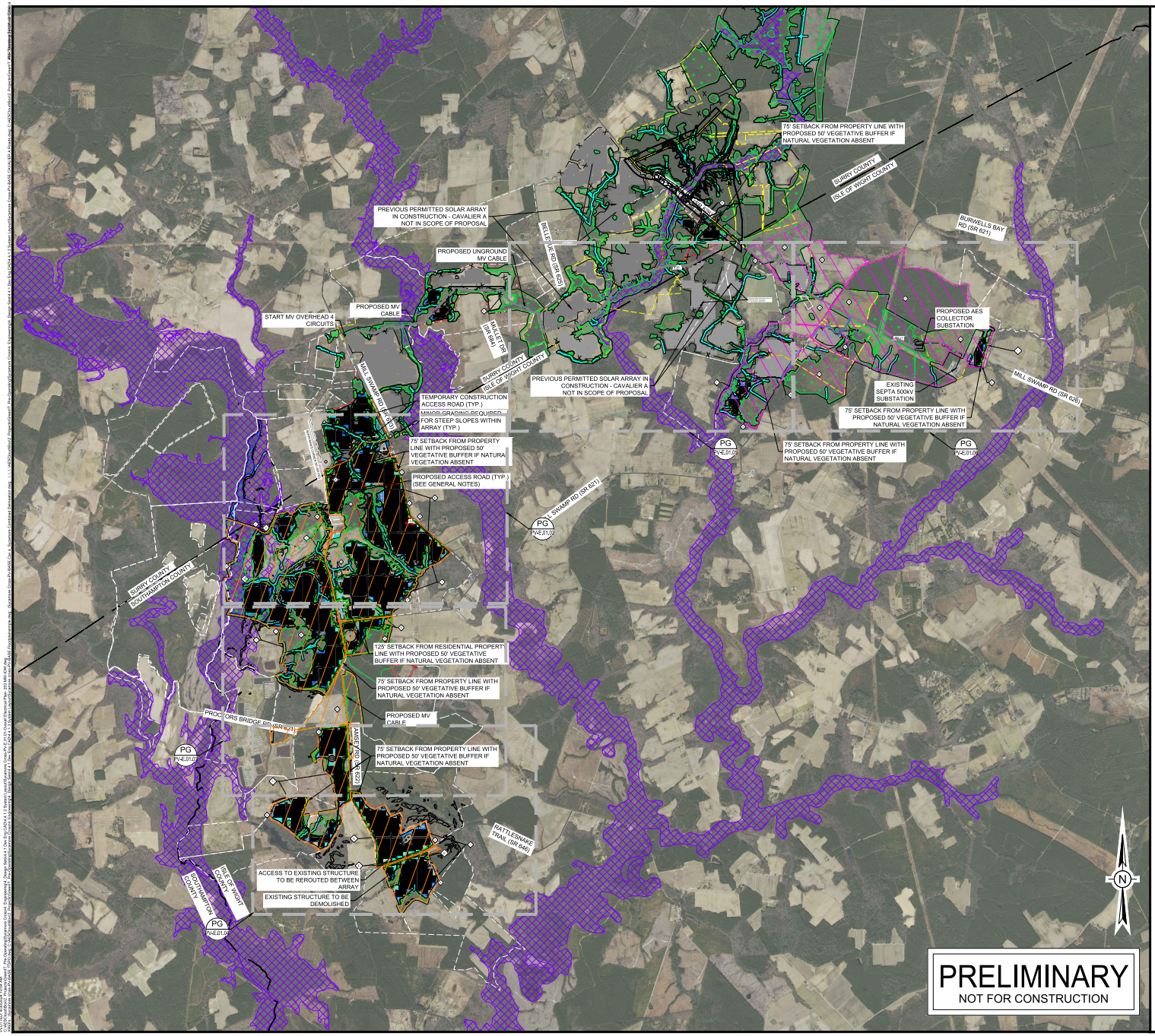

GENERAL NOTES

1. THIS DRAWING IS PRELIMINARY AND FOR ESTIMATING PURPOSES ONLY. IT IS NOT FOR CONSTRUCTION.
2. LOCATION OF ALL EXISTING ITEMS IS APPROXIMATE AND MUST BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
3. ALL SPECIFIED EQUIPMENT IS PRELIMINARY. FINAL EQUIPMENT SELECTION SHALL BE APPROVED BY OWNER.
4. 75' EQUIPMENT SETBACK FROM ALL PROPERTY LINES
5. 125' EQUIPMENT SETBACK FROM ALL RESIDENTIAL PARCELS
6. EXISTING WOOD LINE, EASEMENTS, ROW'S TO BE PROVIDED ONCE ALTA SURVEY COMPLETED.
7. ALL SITE ENTRANCES SHALL BE 20' WIDE AND TAPER TO 16' INTERNAL ACCESS ROADS

SHEET NOTES

- E — SITE ENTRANCE
- I — ISLE OF WIGHT COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT PROPERTY LINE
- MAJOR PUBLIC ROAD
- ROAD RIGHT-OF-WAY
- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 / OH-500 — EXISTING 500kV GEN-TIE
- OH-MV / OH-MV — 34.5kV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- SYCAMORE CROSS SOLAR A
- SYCAMORE CROSS SOLAR B
- MV / MV / MV — MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PARCELS WITHIN PROJECT BOUNDARIES

SHEET NOTE NUMBER	PARCEL TYPE	APPLICATION AREA	PARCEL ID	OWNER NAME
SYCAMORE CROSS SOLAR - A				
1	PROJECT	A	16-01-003	BLUE SKY ENDEAVORS LLC
2	PROJECT	A	27-01-003	BLUE SKY ENDEAVORS LLC
3	PROJECT	A	27-01-004	GORDON KATHLEEN H
4	PROJECT	A	16-01-009	BLUE SKY ENDEAVORS LLC
5	PROJECT	A	16-01-008	BLUE SKY ENDEAVORS LLC
6	PROJECT	A	16-01-002	EVERETS PROPERTIES INC
7	PROJECT	A	17-01-001	GORDON KATHLEEN H
8	PROJECT	A	17-01-011	HOLLEMAN WILLIAM JOSEPH
9	PROJECT	A	16-01-002A	SEWARD JEFFREY A & MELANIE D
10	PROJECT	A	09-01-001	WELLS CHRISTINE LORENZO
11	PROJECT	A	17-01-003	BLUE SKY ENDEAVORS LLC
12	PROJECT	A	17-01-003C	BLUE SKY ENDEAVORS LLC
13	EASEMENT ONLY	A	16-01-005	CARROLLS FOOD OF VIRGINIA LLC
14	PROJECT	A	17-01-002	GORDON KATHLEEN H
SYCAMORE CROSS SOLAR - B				
15	PROJECT	B	10-01-017	MILL SWAMP ROAD HOLDINGS LLC
16	PROJECT	B	11-01-015	BATTEN MITCHELL DELK
17	EASEMENT ONLY	B	11-01-005	476 LLC
18	EASEMENT ONLY	B	10-01-025	BARCROFT JEAN E SOLE TRUSTEE JEAN E BARCROFT LIVING TRUST
19	EASEMENT ONLY	B	10-01-030	MILL SWAMP ROAD HOLDINGS LLC
20	EASEMENT ONLY	B	10-01-028A	THACKER SHELTON L & ANN
21	EASEMENT ONLY	B	10-01-027	SEWARD MICHAEL A
22	EASEMENT ONLY	B	10-01-023	SEWARD MICHAEL A & EMILY B

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	12/28/2022	INITIAL 5% LAYOUT
8	07/24/2023	REVISED 5% LAYOUT
9	12/12/2023	REVISED 5% LAYOUT
10	4/6/2023	REVISED 5% LAYOUT
4	4/17/2023	REVISED 5% LAYOUT
5	4/28/2023	REVISED 5% LAYOUT
6	5/25/2023	REVISED DC:AC RATIO
7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MWAC

PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 1.000' 2.000' 3.000' 4.000'
1" = 2,000'

SHEET NO: PV-E.01.01
REV: 10

Environmental Resource Impact Analysis

Sycamore Cross Solar Project
Isle of Wight and Surry Counties, Virginia

April 2023



Prepared for

AES Clean Energy Development, LLC
4200 Innslake Drive, Suite 302
Glen Allen, Virginia 23060

Prepared by

TETRA TECH
4101 Cox Road, Suite 120
Glen Allen, Virginia 23060

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Acronyms and Abbreviations

AMSL	Above Mean Sea Level
AES	AES Clean Energy Development, LLC
AJD	Approved Jurisdictional Determination
AMSL	Above Mean Sea Level
BECA	Bald Eagle Concentration Area
BGEPA	Bald and Golden Eagle Protection Act
CBPA	Chesapeake Bay Protection Area
CCB	Center for Conservation Biology
FEMA	Federal Emergency Management Act
FCV	Forest Conservation Value
FIRM	Flood Insurance Rate Map
IPaC	Information for Planning and Consultation
NHD	National Hydrography Dataset
NHDE	Natural Heritage Data Explorer
NLEB	northern long-eared bat
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
PJD	Preliminary Jurisdictional Determination
Project	Sycamore Cross Solar Project
RPA	Resource Protection Area
T&E	threatened and endangered
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
SSURGO	Soil Survey Geographic Database
Tetra Tech	Tetra Tech, Inc
VaFWIS	Virginia Fish and Wildlife Information Services
VDCR	Virginia Department of Conservation and Recreation

VDEQ	Virginia Department of Environmental Quality
VDWR	Virginia Department of Wildlife Resources
VMRC	Virginia Marine Resource Commission

1.0 PROJECT DESCRIPTION

Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy (AES), is conducting due diligence for a proposed commercial solar energy project, the Sycamore Cross Solar Project (Project), on approximately 2,226 acres of agricultural and undeveloped forested land (Project study area). Sycamore Cross Solar, LLC is proposing to utilize approximately 1,195 acres of the Project study area in connection with the Project (Fenceline Area) to generate up to 240 megawatts (MWac) of solar energy. The Project is located in Isle of Wight and Surry Counties, Virginia, as shown on the orthoimagery and topographic Project location maps (Figures 1 and 2, respectively). The Project is in the Blackwater Watershed (Hydrologic Unit Code 03010202; USGS 2022).

Sycamore Cross Solar, LLC, is pursuing a Conditional Use Permit (CUP) from Isle of Wight and Surry Counties in accordance with Section 5-5003.M.4 of the Isle of Wight County, Virginia, and Section 10-122 of the Surry County, VA, Code of Ordinances. A desktop Environmental Resource Impact Analysis was conducted to identify potential impacts to environmental and wildlife resources within the Project Area and applicable buffers from the Project study area to comply with Section 5-5003.M.4.vi of the Isle of Wight County Zoning Ordinance and to help support the Surry County CUP application.

Resources considered include watershed preservation areas, forest conservation, ecological cores, floodplains, wetlands, surface water, and federal and state listed threatened and endangered species. This impact assessment was based on preliminary site plans and avoidance and minimization measures that are anticipated to be implemented.

2.0 ENVIRONMENTAL RESOURCES

2.1 Terrestrial and Aquatic Resources

2.1.1 Federal and State Protected Lands

Based on a desktop review of data provided by Virginia Department of Conservation and Recreation (VDCR), no federal or state protected lands, including national or state forests or parks, wildlife management areas or recreational areas, are located within the Fenceline Area of the Project study area. Two conservation easements are mapped within a one-mile radius of the Project study area, including one Virginia Department of Forestry/VDCR managed easement located approximately 350 feet southwest of the southwestern portion of the Project study area and one National Resources Conservation Service (NRCS) managed easement located approximately 0.20 miles north of the eastern portion of the Project study area (VDCR 2023a). Additionally two designated conservation areas were identified approximately 0.65 miles southwest of the southwestern portion of the Project study area, including one conservation area managed by The Nature Conservancy, named Blackwater River and one conservation area managed by VDCR, named Blackwater Sandhills (VDCR 2023a). No additional conservation easements or areas were identified within a one-mile radius of the Project study area.

2.1.2 Chesapeake Bay Preservation Area

Existing Conditions

The Project is located within Isle of Wight and Surry Counties, which are both considered one of Virginia's 29 coastal counties and independent cities deemed "Tidewater Virginia" as outlined in 9VAC25-830-80; however, based on Appendix B-1, Article 3 of the Isle of Wight County Code of Ordinances, the Isle of Wight County Chesapeake Bay Preservation Area (CPBA) Mapper, Section 3-1400 of the Surry County Code of Ordinances, preliminary correspondence with the Surry County Planning and Community Development Department and preliminary correspondence with the Isle of Wight Planning and Zoning department, the Project study area is located within the Albemarle-Chowan watershed. Therefore, the Project is not subject to CBPA Resource Protection Areas.

Potential Impacts

The Project is not located within the Chesapeake Bay watershed and therefore, not subject to CBPA regulations.

2.1.3 Forest Conservation Value

Existing Conditions

The Forest Conservation Value (FCV) model was designed by the Virginia Department of Forestry to identify forestland with the highest priority for conservation within Virginia with the intent to maximize the conservation efforts to the highest quality, most productive, and most vulnerable forestland within Virginia (VDCR 2021). The classifications of the values range from average to outstanding, indicating the value of forestlands for conservation (VDCR 2021). The VDCR FCV model indicated that approximately 1,254 acres of the Project study area were mapped as forest with approximately 213 acres categorized as outstanding priority for conservation, 293 acres as very high, and 384 acres categorized as high priority forestland for conservation. VDCR FCV located within the Project study area are depicted as Figure 4

Potential Impacts

Based on the current design of the Project and the Fenceline Area, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted. A map depicting the FCV model within the Project study area is represented as Figure 4. Consultation with VDCR will be undertaken in connection with the potential impact of outstanding, very high, and high value forestland.

2.1.4 Ecological Cores

Existing Conditions

The VDCR developed ecological cores that classify lands based on environmental and species diversity, patch characteristics and context, and water quality benefits (VDCR 2018). The classifications of ecological cores range from general to outstanding based on a determination of ecological importance and characteristics (VCDR 2018). Ecological core data with the classification of high, very high, and outstanding have the greatest value of ecological biodiversity (VDCR 2018). VCDR ecological cores data indicates that approximately 357 acres of the Project study area are classified as very high, and approximately 162 acres are classified as high. No portion of the Project study area is classified as outstanding. The remaining portions of the Project study area are classified as either

general or is unclassified. Ecological cores located within the Project study area are depicted as Figure 5

Potential Impacts

Based on the current design of the Project and the Fenceline Area, approximately 94 acres of ecological cores classified as very high value will be impacted, and approximately 32 acres of high value ecological cores may be impacted. Wildlife corridors will be implemented in Project site design in order to reduce adverse impacts to these ecological cores. A map depicting the ecological core classifications within the Project study area is represented as Figure 5. Consultation with VDCR will be undertaken in connection with the potential impact of very high and high value ecological cores.

2.1.5 Floodplains

Existing Conditions

The floodplain data for the Project were obtained from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Number 51093C00653, effective December 2, 2015; 51093C0125E, effective December 2, 2015; 51093C0050E, effective December 2, 2015 and 51181C0225E, effective April 6, 2022 (FEMA 2015a, b, c, 2022). According to the FEMA FIRMs, Blackwater River, located on the western portion of the Project study area, is mapped as Zone A, with a one-percent annual chance flood hazard. The Project is in the Blackwater River – Terrapin Swamp (12-digit Hydrologic Unit Code [HUC] 030102020301), and Rattlesnake Swamp (HUC 030102020303) watershed. FEMA floodplain data is depicted on Figure 6.

Potential Impacts

There are no anticipated impacts to floodplains based on the current design of the Project. These areas will be included in Project design considerations as design evolves and will continue to be avoided to the greatest extent practicable. Additionally, any potential impacts will be permitted through the appropriate authorities having jurisdiction.

2.1.6 Topography and Soils

Existing Conditions

The topography within the Project study area is relatively flat, ranging from 50 feet above mean sea level (amsl) to 95 feet amsl (Figure 2). Very minimal steep slopes were identified, with slopes exceeding 25 percent mapped in small areas throughout the Project study area (Figure 7).

A review of the U.S. Department of Agriculture (USDA) NRCS Web Soil Survey was conducted to determine the erosivity of soils within the Project study area. The K factor is an index which quantifies the relative susceptibility of the soil to sheet and rill erosion. Values range from 0.02 for the least erodible soils to 0.64 for the most erodible, with any K factor value equal to or greater than 0.32 being considered moderately erodible. The USDA NRCS soil survey data indicates that approximately 23.7 percent of the Project study area is composed of moderate to highly erodible soils (Appendix A). A figure depicting the USDA NRCS soil series classification within the Project study area is attached as Figure 10.

The USDA NRCS Web Soils Survey was also queried to identify soils classified as prime farmland within the Project study area. Approximately 895 acres of prime farmland soils were identified, an additional 433 acres are classified as prime farmland if drained, and approximately 109 acres of farmland of statewide importance were identified within the Project study area. The remaining portions of the Project study area were not classified as prime farmland or farmland of statewide importance (Figure 9).

Potential Impacts

Construction of the Project may result in impacts on soil resources within the facility footprint. Ground-disturbing activities would include vegetation clearing and grubbing; excavating for foundations and footings; pile driving; stockpiling excavated material for backfilling; drilling rock to set foundations and footings; drilling and installing groundwater supply wells; grading for roads and staging and laydown areas; and installing stormwater best management practices (BMPs). The construction of other facilities, such as electrical substations and storage of equipment and parts, also would have the potential to result in adverse impacts on soil resources, because they involve some degree of ground disturbance. Soil contamination could also result from the release of contaminants related to the use of trucks and mechanical equipment, from improper storage and handling, and from the application of chemical stabilizers to control fugitive dust emissions. The extent of impact would depend on the size and design of the project and on site-specific factors, such as soil properties, slope (e.g., along gullies and on alluvial fan surfaces), vegetation, weather, and distance to surface water. The implementation of erosion and sediment control BMPs would minimize soil erosion and impacts to on-site and off-site resources.

Based on the current design of the Project and the Fenceline Area, approximately 614 acres of prime farmland (26% of the Project study area), 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be impacted.

Impacts to prime farmland soils are expected from the Project, as the areas of Prime Farmland soil on the site are centrally located where development activities will be concentrated. However, these impacts will be temporary in nature and beneficial to the quality of the soil. Over the life of the Project these soils will lay fallow, allowing reaccumulation of vital nutrients and organic matter; after the Project is decommissioned, the land may be converted into cropland that would benefit from this soil resting period. However, since the Project is not being completed by a Federal agency or with assistance from a Federal agency and will not irreversibly convert farmland to a nonagricultural use, the Project will not be subject to the Farmland Protection Policy Act (FPPA). Therefore, no form AD-1006 Farmland Conversion Impact Rating will be required.

2.1.7 Wetlands, Surface Waters, and Open Waters

Existing Conditions

A field wetland delineation was performed for the Project study area in January and April 2020, October 27, 2022, November 2-4, 2022, December 2, 9, 14-15, 20-21, 27-29, 2022, January 9-13, March 22-24 and 28-30, 2023 for wetland, stream, and open water features. 30,281 linear feet of streams features, 415 acres of wetlands, and 1.08 acres of open water features, including ponds, were identified within the Project study area. A portion of the delineated features in the northwestern

portion of the Project study area were confirmed for jurisdiction in the form of a USACE Preliminary Jurisdictional Determination (PJD) and an Approved Jurisdictional Determination (AJD) (NAO-2019-01204) in 2022 The remaining delineated water features identified within the Project study area were not confirmed for jurisdiction with the U. S. Army Corps of Engineers (USACE) and the Virginia department of the Environmental Quality (VDEQ), and/or Virginia Marine Resources Commission (VMRC) at the time of submittal of this analysis report. The Project plans to confirm all delineated features within the Project study area in the form of a USACE PJD and/or AJD. A figure depicting the delineated features within the Project study area is attached as Figure 8.

Potential Impacts

A utility-scale solar project can affect surface water and groundwater in several ways, including the use of water resources, modification of the natural surface water and groundwater flow systems, alteration of the interactions between groundwater and surface waters, contamination of aquifers, wastewater treatment either on- or off-site, and water quality degradation by runoff or excessive withdrawals, as well as from leaks and spills of chemicals used for the project. While some impacts on water resources (e.g., water use) are dependent upon the solar technologies themselves, impacts on water resources associated with land disturbance and construction activities would be expected to occur regardless of the type of solar technology used.

There are 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features located within the Fenceline Area. Through continued engineering and site design, the Project will avoid and minimize impacts to wetlands, surface waters, and open waters to the greatest extent practicable. Any impacts to wetlands, surface waters, and open waters will be permitted through the appropriate authorities having jurisdiction.

The Project has been designed to avoid and minimize impacts to wetlands and streams as they are currently mapped within the Fenceline Area and Project study area to the greatest extent practicable. A portion of the Project study area's delineated water resources delineation results have been confirmed by the USACE and VDEQ in the northeastern portion of the Project study area in the form of a Preliminary Jurisdictional Determination and an Approved Jurisdictional Determination (NAO-2019-01204) in 2022. The remaining water resources delineated within the Project study area have not yet been confirmed by the USACE, VDEQ, and/or the VMRC and are subject to change. Federal and state confirmation of the remaining unconfirmed water resources within the Project will be planned in the form of a USACE jurisdictional determination. Pending any changes to mapped features, impacts to jurisdictional features will be permitted through the USACE, VDEQ, and/or VMRC, and any requisite mitigation measures will be incorporated into the project.

Through the use of stormwater BMPs and erosion and sedimentation controls during construction, as well as routine stormwater inspections, no impacts to adjacent water resources are expected from the Project.

2.2 Wildlife Resources

Field visits at the Project study area were conducted on October 27, 2022; November 2–4, 2022; December 2, 9, 14–15, 20-21, 27–29, 2022; January 9–13, 2023; March 22–24, 28–30, 2023; and April 3, 2023. The results of this evaluation identified the potential presence of the following:

- One species protected by BGEPA and a listed bird species: bald eagle (*Haliaeetus leucocephalus*) and red-cockaded woodpecker (*Picoides borealis)*;
- Three species of bats: NLEB, Rafinesque's eastern big-eared bat *(Corynorhinus rafinesquii macrotis),* and tri-colored bat *(Perimyotis subflavus)*; and
- One mollusk species: yellow lance *(Elliptio lanceolata)*.

Potential impacts to these species as a result of implementation of the Project are discussed below.

2.2.1 Bald Eagle

Existing Conditions

The bald eagle is protected under the Bald and Golden Eagle Protection Act (BGEPA). Bald eagles prefer to nest in mature or old growth trees, snags, or cliffs near rivers, coastlines, lakes, and streams large enough to serve as a substantial food supply (USFWS 2007).

Several large bodies of water were identified on the USGS topographic map, specifically in the USFWS NWI and USGS NHD layers in the surrounding areas of the Project study area, and were noted during the site visit within the surrounding areas of the Project study area. Areas noted included Blackwater River, Mill Swamp, and an unnamed pond located in the western, eastern, and center portions of the Project study area, respectively (Figures 2 and 3).

Based on a review of the CCB Bald Eagle Nest Locator, the closest known bald eagle nest is approximately 7.1 miles south of the Project study area A, and 3.03 miles away from Project study area B. The USFWS BECA map did not indicate a bald eagle concentration area within the Project study area. During the January 2023 field survey, two adult bald eagles and one juvenile were observed feeding on carrion adjacent to the pond located in the northwestern portion of the Project study area.

Potential Impacts

Based on the observation of bald eagles, a "may effect-not likely to adversely affect" status was determined for the bald eagle in connection with the Project study area. Consultation with USFWS and VDEQ will be initiated; a subsequent bald eagle nest survey will be conducted if construction is anticipated to be conducted during the breeding season (October 1 through May 15). The appropriate buffers will be provided per the USFWS 2007 National Bald Eagle Management Guidelines (USFWS 2007).

2.2.2 Red-Cockaded Woodpecker

Existing Conditions

IPaC indicates that the red-cockaded woodpecker, which is a federally endangered and state endangered species, has the potential to occur within the Project study area (USFWS 2023a). The red-

cockaded woodpecker commonly inhabits mature pine trees that are generally 80 years old or older and are devoid of underbrush (USFWS 2023d).

Upon a review of aerial orthoimagery presented in Figure 1 and field verification of habitat, forested communities within the Project study area consist of mostly silviculture with pine plantations that are younger than 80 years old, as well as deciduous hardwood forests in riparian areas. During the January and March field surveys, pine trees were observed within the Project study area, however, the trees were observed to be less than 80 years of age.

Potential Impacts

Given the lack of suitable habitat, red-cockaded woodpecker constitutes a "no effect" status in connection with the Project study area.

2.2.3 Northern Long Eared Bat

Existing Conditions

The IPaC database (USFWS 2023a) indicated that the NLEB, a federally endangered and state-threatened species, has the potential to occur within the Project study area. The NLEB spend winters hibernating in caves and mines; during the summer, they roost singly or in colonies underneath bark, in cavities, or in crevices of trees both live and dead (USFWS 2023e). Foraging occurs on forested hillsides and ridges, occasionally over forest clearings, over water, and along tree-lined corridors. Mature forests may be an important habitat type for foraging. The VDWR NLEB mapping application shows that there are no known NLEB winter hibernacula or roost trees in the vicinity of the Project study area (VDWR 2023a). The nearest winter hibernacula and roosting habitat is located approximately 43.7 miles southeast of the Project study area and 40.1 miles southeast of Project study area B (VDWR 2023a). However, forested areas within the Project study area, especially along riparian corridors, provide potential suitable roosting and foraging habitat for the NLEB. Suitable trees were identified within forested areas in the Project study area during the field survey.

Potential Impacts

Given the suitable habitat on site, consultation with USFWS and VDWR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.4 Rafinesque's Eastern Big-eared Bat

Existing Conditions

The VDWR VaFWIS indicated that there are confirmed occurrences of the Rafinesque's eastern big-eared bat, which is a state endangered species, within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023c). The Rafinesque's eastern big-eared bat is known to roost in hollow trees and old buildings in the southeastern United States along the coast and in caves and mines within the Appalachian Mountains (VDWR 2022a) Additionally, the VDCR NHDE identified this species as possibly occurring within the following Project study area watersheds:

Blackwater River – Terrapin Swamp (12-digit Hydrologic Unit Code [HUC] 030102020301), and Rattlesnake Swamp (HUC 030102020303) (VDCR 2023b).

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.5 Tri-colored Bat

Existing Conditions

The VDWR VaFWIS indicated that there are confirmed occurrences of the state endangered tri-colored bat within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023b). It should be noted that the tri-colored bat was proposed on September 14, 2022 by the USFWS to be federally reclassified as endangered however, the rule has yet to be finalized at the completion of this report (87 FR 56381)(USFWS 2023f). The tri-colored bat is known to inhabit caves but is also known to inhabit hollow trees during the summer (VDWR 2022b). VDWR mapping shows that the nearest winter hibernacula and roosting habitat are located approximately 133.1 miles northwest of the western Project study area and 136.4 miles northwest of eastern Project study area. The wooded areas located within the Project study area, however, could provide suitable foraging and roosting habitat for the tri-colored bat between summer and fall.

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional bat presence/absence surveys will be conducted (i.e., acoustic or mist netting) prior to tree clearing for construction activities if deemed necessary by agencies.

2.2.6 Yellow Lance

Existing Conditions

The VDWR VaFWIS indicated confirmed occurrences of the yellow lance, which is a state threatened species, within the Project study area and a ±2-mile radius from the Project study area boundary (VDWR 2023c). The yellow lance is known to inhabit clean, coarse to medium-sized sandy substrate but can occasionally be located within gravel substrate; can be found in waters from main channels down to small streams (North Carolina Wildlife Resources Commission 2022). Based on a review of NHD and NWI data, depicted in Figure 3, Terrapin Swamp, Blackwater River, Mill Swamp, Stallings Creek, Pouches Swamp, and several unnamed tributaries were identified within the Project study area, which could be potential habitat for yellow lance.

Potential Impacts

Given the suitable habitat on site, consultation with VDWR and VDCR will be initiated, and additional species presence/absence surveys will be conducted prior to construction activities if deemed necessary by agencies.

2.2.7 Candidate Listed Species

Existing Conditions

The IPaC system identified the monarch butterfly (*Danaus plexippus*), a candidate species at the federal level, as having the potential to occur within the Project study area. Monarch butterflies migrate to temperate climates in eastern and western North America during the fall and breed at overwintering sites in February to March. Additionally, VaFWIS identified the Spotted Turtle (*Clemmys guttata*), a federal candidate species, as having the potential to occur within the Project study area. Spotted Turtles are found in shallow aquatic areas with vegetation (USFWS 2023d). Suitable habitat was observed on site, and a spotted turtle was observed in the Project study area- photos of which are included in the photolog (Attachment C).

Potential Impacts

At time of this analysis, both species above are listed as candidate species. As candidate species are not subject to review under the Endangered Species Act, presence of these species is not anticipated to be a constraint to the Project. Impacts to potential habitat, such as streams and riparian corridors, will be avoided to the greatest practicable extent. Should the two species be listed as state or federally threatened or endangered in the future, further measures to avoid or mitigate potential impacts to the two species will be enacted.

No federally listed critical habitat was documented on the USFWS Critical Habitat for Threatened and Endangered Species Mapper as occurring within the proposed Project study area or the vicinity. The western Project study area is approximately 44.5 miles southeast of the closest mapped critical habitat. The eastern Project study area is approximately 50.4 miles southeast of the closest mapped critical habitat.

2.3 Cultural and Aesthetic Resources

2.3.1 Cultural and Historic Resources

Existing Conditions

Dutton + Associates, LLC (Dutton) prepared a Phase IA Cultural Resource Assessment report dated March 2023 and a Phase I Cultural Resources Survey dated September 2019 for and area which includes the Project study area and Fenceline Area in which Dutton utilized desktop resources and limited field reconnaissance to identify potential resources and areas of historic and cultural potential within the Project study area and the adjacent properties. One previously identified archaeological site is present on a southwestern parcel within the Project study area, and seven dilapidated buildings and complexes remain extant in the Project study area but have not been assessed for eligibility for listing on the National Register of Historic Places (NRHP) or on the Virginia Landmark Register. Based on the information from the desktop assessment and field reconnaissance conducted by Dutton, areas of historic resource potential were identified within the Project study area. Approximately 123 acres were determined to be areas with high potential for historic resources; an additional 272 acres were identified as areas with moderate potential.

Additional information on cultural resources is included in the Desktop Cultural Resources Report.

Potential Impacts

Based on the preliminary review of cultural resources, coordination with VDHR will be conducted prior to Project construction activities (e.g. ground clearing or leveling) to determine the significance of dilapidated buildings and sensitive archaeological areas within the Project study area. Implementation of the Project would not have an adverse impact on any archaeological or architectural resources that are eligible or potentially eligible for listing on the NRHP; and no further work is expected to be necessary within the Project area. Many of the extant buildings and building complexes are excluded from the Project area with carve-out parcels, and the previously identified archaeological site will be avoided in Project design and construction. Consultation with the VDHR will be conducted to confirm that no additional archaeological or historic investigation are required for the Project.

2.3.2 Aesthetic Resources

Existing Conditions

The landscape surrounding the Project site is characterized by broad plains of terraces, sandy ridges, and broad but shallow valleys. The elevation within the Project site averages around 80 feet, and local relief is less than 30 feet. Mixed forest vegetation covers most undeveloped or non-agricultural areas, often limiting views to the immediate foreground (i.e., within half a mile of the viewer). Land use is primarily small agricultural fields and rural residences interspersed with large, forested areas. Views surrounding the Project area are dominated by cultivated open agricultural fields, dense woodlands, and scattered residences and agricultural buildings.

Additional detail is provided in the Conditional Use Permit application as Attachment J.

Potential Impacts

The Project would introduce low vertical, geometric elements that are gray in color (e.g., solar panels, fencing) into a rolling terrain landscape dominated by green vegetation and large patches of dense trees. Visual impacts would vary depending on several factors, such as the distance of the viewer from the Project and whether views toward the Project are unobstructed or screened by vegetation, terrain, or development. The views can be vastly different from one location to another, even in proximity, because of the rolling terrain and dense vegetation. Viewers in proximity to the Project may have unobstructed or partially screened views (primarily along Sycamore Cross Drive, Mill Swamp Road, and Beechland Road). The solar arrays and fencing would be installed in both existing cultivated and open fields, as well as within areas currently covered by pine timber lands which would be cleared for the Project. Therefore, tree removal would be a noticeable effect of the Project, in addition to direct views of Project components. Large-scale silviculture harvest is assumed to be a frequent occurrence in the area, and viewers are assumed to be familiar with the changes to views resulting from a timber stand being cleared.

No visual impacts would occur to identified designated scenic resources, and although the Sycamore Cross Solar facility would introduce new views of solar infrastructure from public roadways and a small number of private residents immediately adjacent to the Project site, visual effects are not expected to occur from viewpoints away from the immediate Project area. Additionally, the Project

will install landscape buffers consisting of trees and shrubs along rights of way and abutting residential parcels, per the Isle of Wight zoning code Section B. Article V. § 5-5003 Part 4e.

3.0 CONCLUSIONS

This Environmental Resource Impact Assessment identified the following environmental resources and associated potential impacts:

- 2,281 linear feet of streams, 36 acres of wetlands, and 0.39 acres of open water features may be impacted by the are located within the Fenceline Area, however, no impacts to wetlands, streams or waterbodies are anticipated with the current Project design. These features will be included in the Project site plan and will be avoided to the greatest extent practicable. Any unavoidable impacts will be permitted through the proper regulators prior to construction.
- The western portion of the Project study area, along Blackwater River, is located within a FEMA flood zone with a one percent chance annual flood hazard. No impacts to floodplains are anticipated based on current Project design.
- Based on the current design of the Project and the Fenceline Area, approximately 32 acres of outstanding priority forestland will be impacted, approximately 63 acres of very high priority, and approximately 139 acres of high priority forestland may be impacted.
- Based on the current design of the Project and the Fenceline Area, approximately 94 acres of ecological cores classified as very high value will be impacted, and approximately 32 acres of high value ecological cores will be impacted. Wildlife corridors will be implemented in Project design to mitigate potential habitat fragmentation.
- Based on the current design of the Project and the Fenceline Area, approximately 614 acres (26%) of prime farmland, 236 acres (10%) of prime farmland if drained, and 35 acres (1.5%) of farmland of statewide importance may be temporarily impacted. However, following decommissioning of the Project, the land may be returned to agricultural use with improved soil quality due to the resting of these soils over the life of the Project.
- Bald eagles were identified as potentially present within the Project study area and were observed during site visits; however, no recorded nests were identified within the Project study area or direct vicinity. Additional nest surveys will be conducted if construction is anticipated to occur within the breeding season, and appropriate buffers will be implemented as necessary.
- No suitable habitat is present within the Project study area for the red cockaded woodpecker, and no impacts to this species are anticipated.
- Suitable habitat is present within the Project study area for three listed bat species- NLEB, Rufinesque's bat, and tricolor bat. Agency coordination will be conducted; additional species presence surveys, such as acoustic surveys or mist-net surveys, will be conducted if deemed necessary prior to any tree-clearing activities.
- The yellow lance mussel is potentially present within the Project study area and direct vicinity in stream channels. Avoidance of streams will be implemented to the greatest extent

practicable; if any impacts to streams are unavoidable, agency coordination will be initiated and additional species presence surveys will be conducted prior to construction activities.

- Approximately 23.7 percent of the Project study area contains moderate to highly erodible soils. The implementation of erosion and sediment control BMPs would minimize soil erosion and impacts to on-site and off-site resources.

Additionally, the Environmental Resources Impact Analysis identified NLEB as federally-listed endangered and state-listed threatened, red-cockaded woodpecker as federally-listed endangered, eastern big-eared as state-listed endangered, tri-colored bat as state-listed endangered and federally proposed endangered, and yellow lance as federally-listed threatened and state-listed threatened species that have the potential to occur within and in the vicinity of the Project study area.

Potential impacts to threatened and endangered species and their habitats will be reduced by avoiding and minimizing Project impacts, including but not limited to excavation, tree removal, and fill activities, to potential habitat areas including wetlands, forested areas, streams, and riparian corridors. The Project plans to avoid these resources to the maximum extent possible and coordinate with USFWS, VDWR, and VDCR to determine the potential for further site-specific surveys.

The Project plans to avoid and minimize impacts to aquatic features to the greatest practicable extent. Coordination and permitting with the U.S. Army Corps of Engineers, Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission will be undertaken for planned potential impacts to aquatic features. Methods including utilizing temporary matting, staging of equipment in upland areas, and using best management practices during construction will be planned to avoid and minimize potential impacts to aquatic features.

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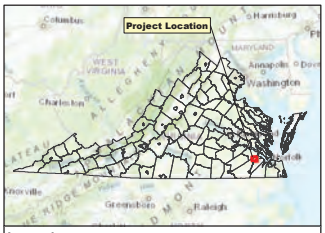
FIGURES





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

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0 0.25 0.5 1 Miles

Figure 1
Orthoimagery Project Location Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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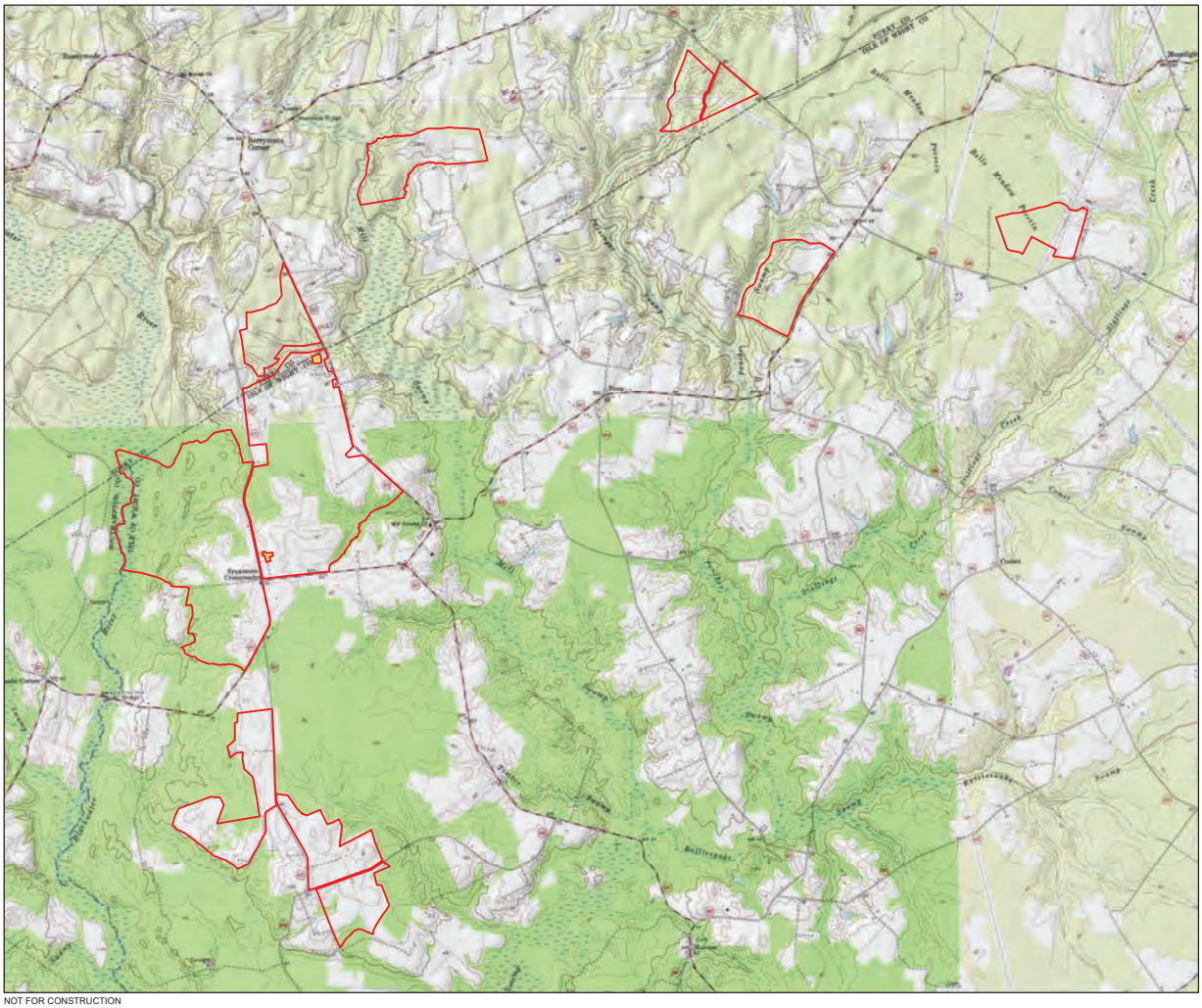

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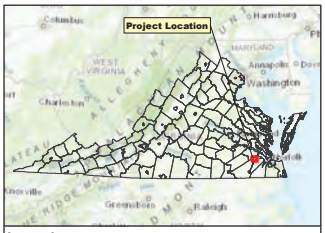

Legend

- Project Study Area
- Outside Project Study Area

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Figure 2
Topographic Project Location Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022; USGS Topo Quads - Dendron, Runnymede, Ivor, Raynor, 2023.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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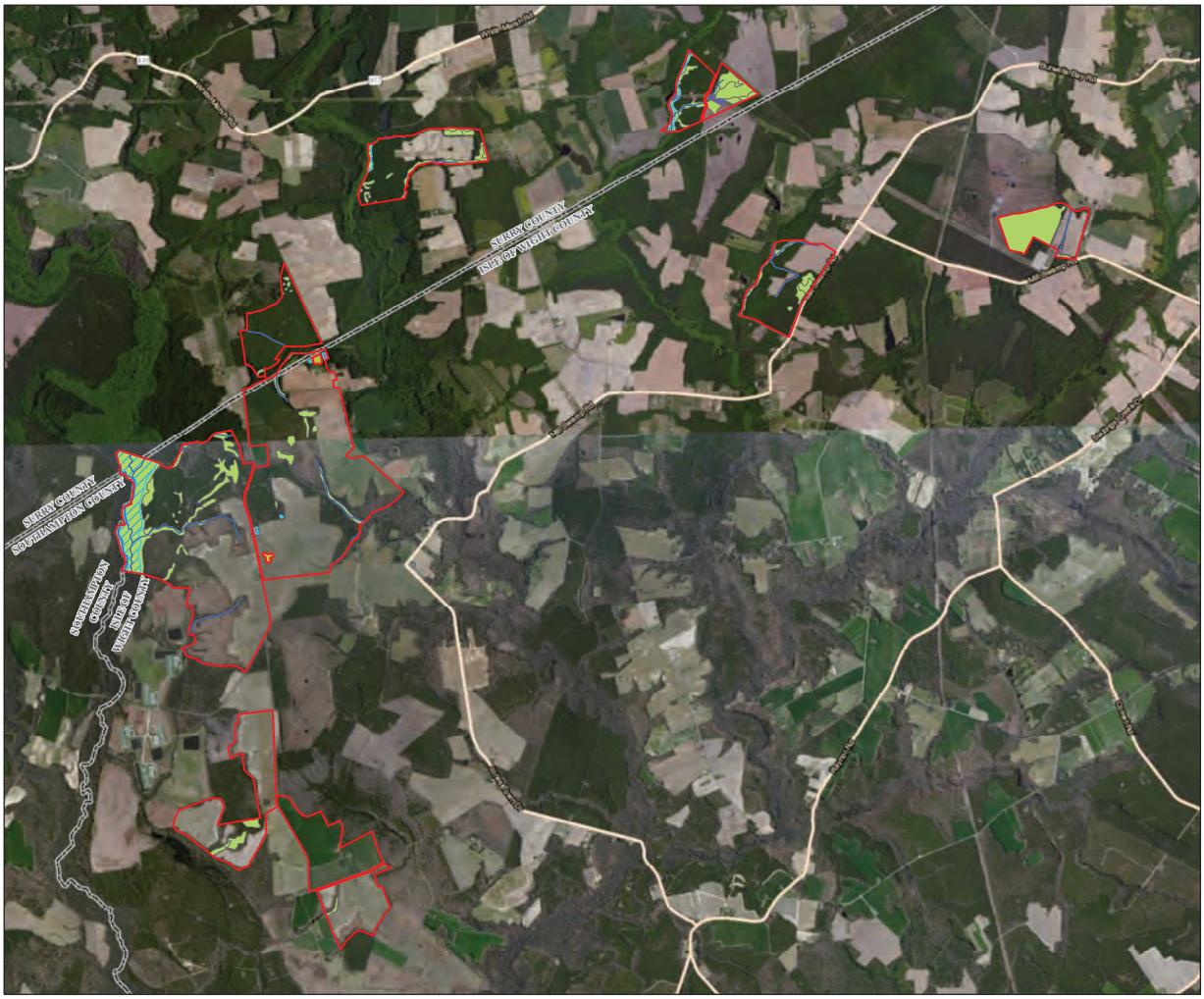

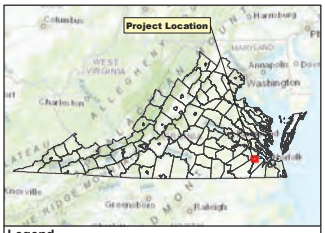

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- NHD Flowlines
- NHD Waterbodies

NWI Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

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Figure 3
NHD and NWI Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/12/2023

Source: Esri, et. al., 2022; AES, 2022; NHD, 2022; NWI; 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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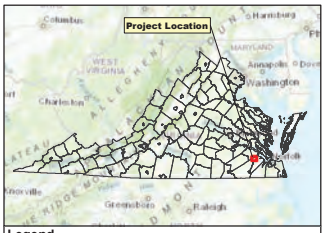

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

Forest Conservation Value

- 1: Average
- 2: Moderate
- 3: High
- 4: Very High
- 5: Outstanding

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Figure 4
VDCR Forest Conservation Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; VDCR, 2020.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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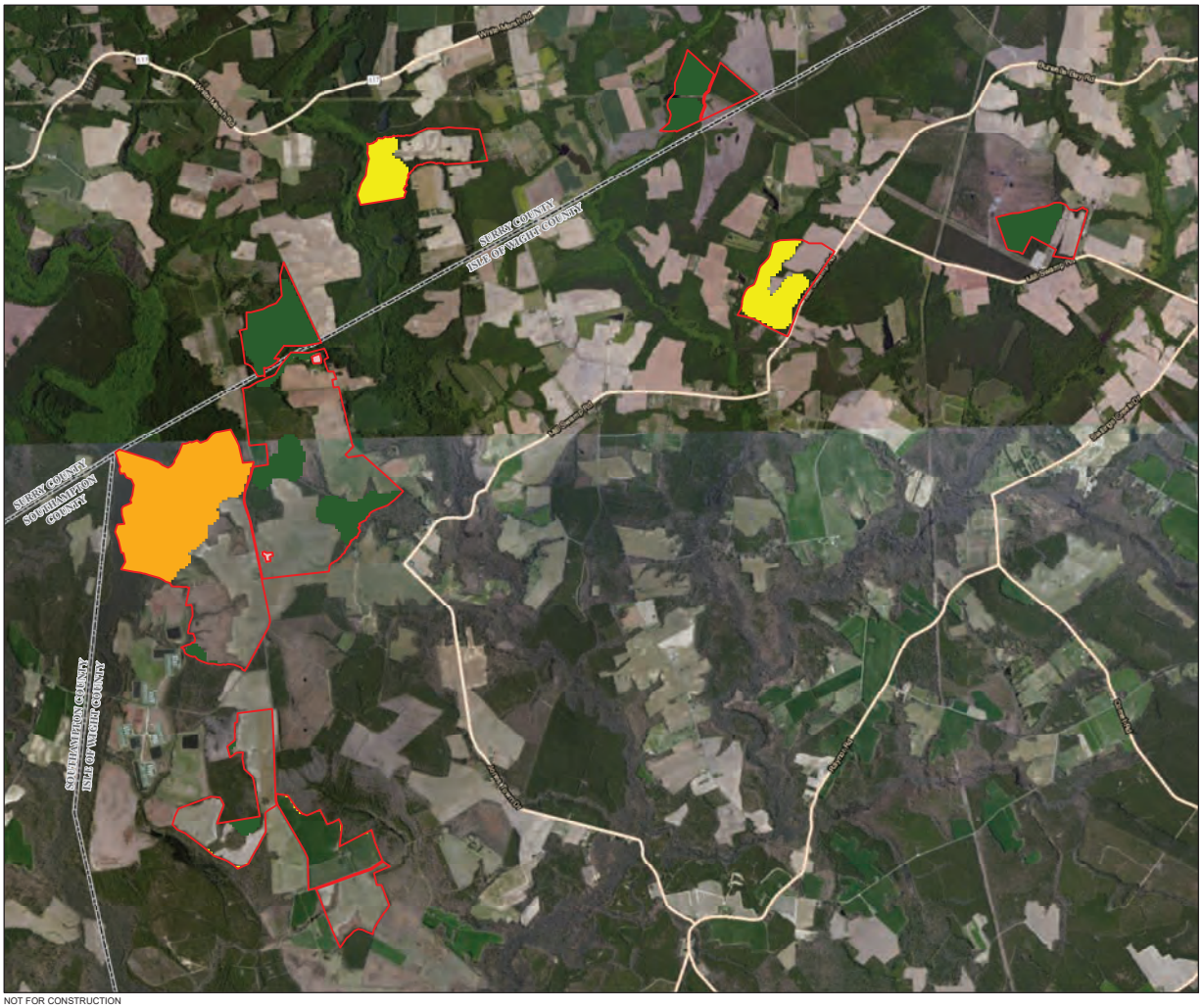

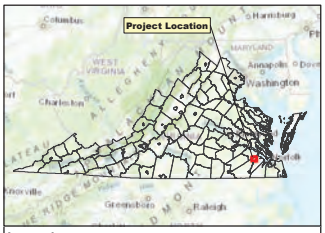

Legend

- Project Study
- Outside Project Study
- County Boundary

Core Rank

- C2: Very High
- C3: High
- C5: General

N
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0 0.25 0.5 1 Miles

Figure 5
VDCR Ecological Cores Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

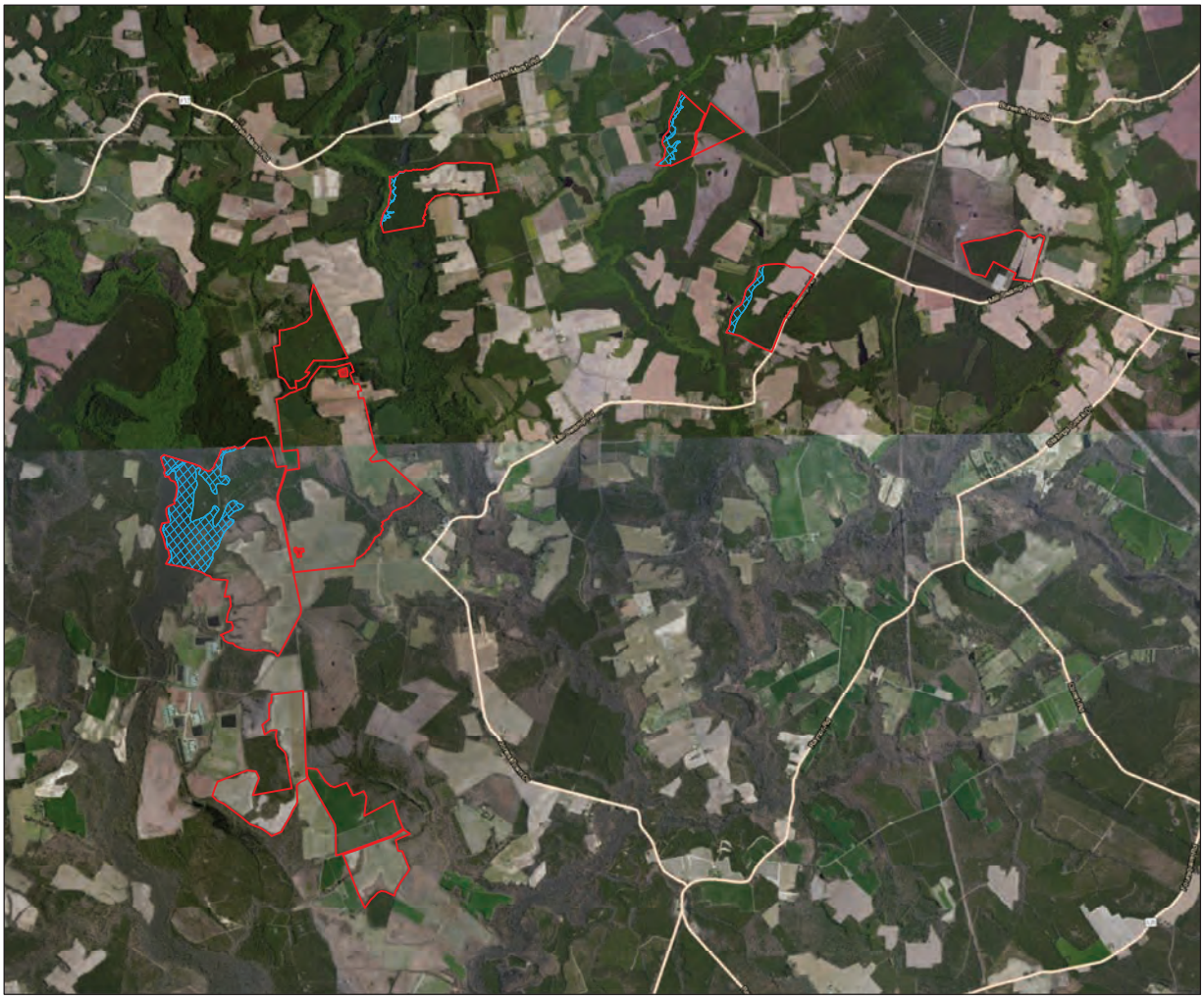
Date: 4/13/2023

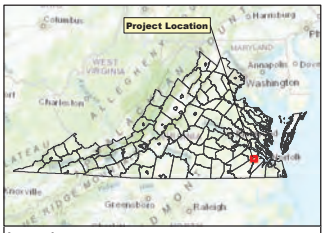
Source: Esri, et. al., 2022; AES, 2022; VDCR, 2017.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\2023\04\12_Env_Resource_Invest_Report\Figure_5_Sycamore_Cross_Solar_Ecological_Cores.mxd





Legend

- Project Study Area
- Outside Project Study Area

FEMA Flood Risk

- 100-year Floodplain, 1% annual chance of flooding

N
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S

0 0.25 0.5 1 Miles

Figure 6
FEMA Flood Hazard Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/14/2023

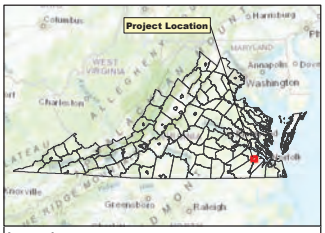
Source: Esri, et. al., 2022; AES, 2022; FEMA, 2022; FEMA FIRM number (FEMA FIRM Number 51093C0125E, effective December 2, 2015; 51093C0050E, effective December 1, 2015; and 51181C0225E, effective April 5, 2022); Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

I:\ES\Sycamore_Cross_Solar\GIS\Solar\MXD\20230412_Envir_Resource_Impact_Report\Figure_6_Sycamore_Cross_Solar_FEMA_Flood_Hazard_Map.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Steep Slope (>25%)

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0 0.25 0.5 1 Miles

Figure 7
Steep Slopes Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022, USGS, 2022.

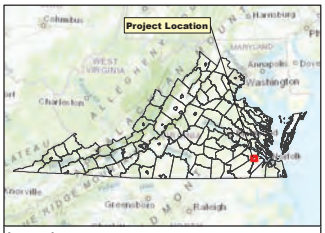
Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

P:\GIS\AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\20230412_Envir_Resource_Impact_Report\Figure_7_Sycamore_Cross_Solar_Steep_Slopes_Map.mxd

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION



Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Detail Map Page

N
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0 0.25 0.5 1 Miles

Figure 8

Delineated Aquatic Resources Features Map Overview Map

Sycamore Cross Solar Project

Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia Open Data Portal, 2022; Virginia GIS Clearinghouse, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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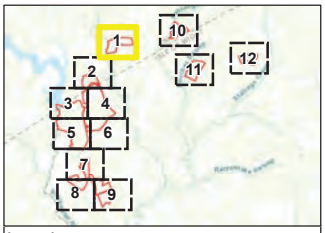

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 1 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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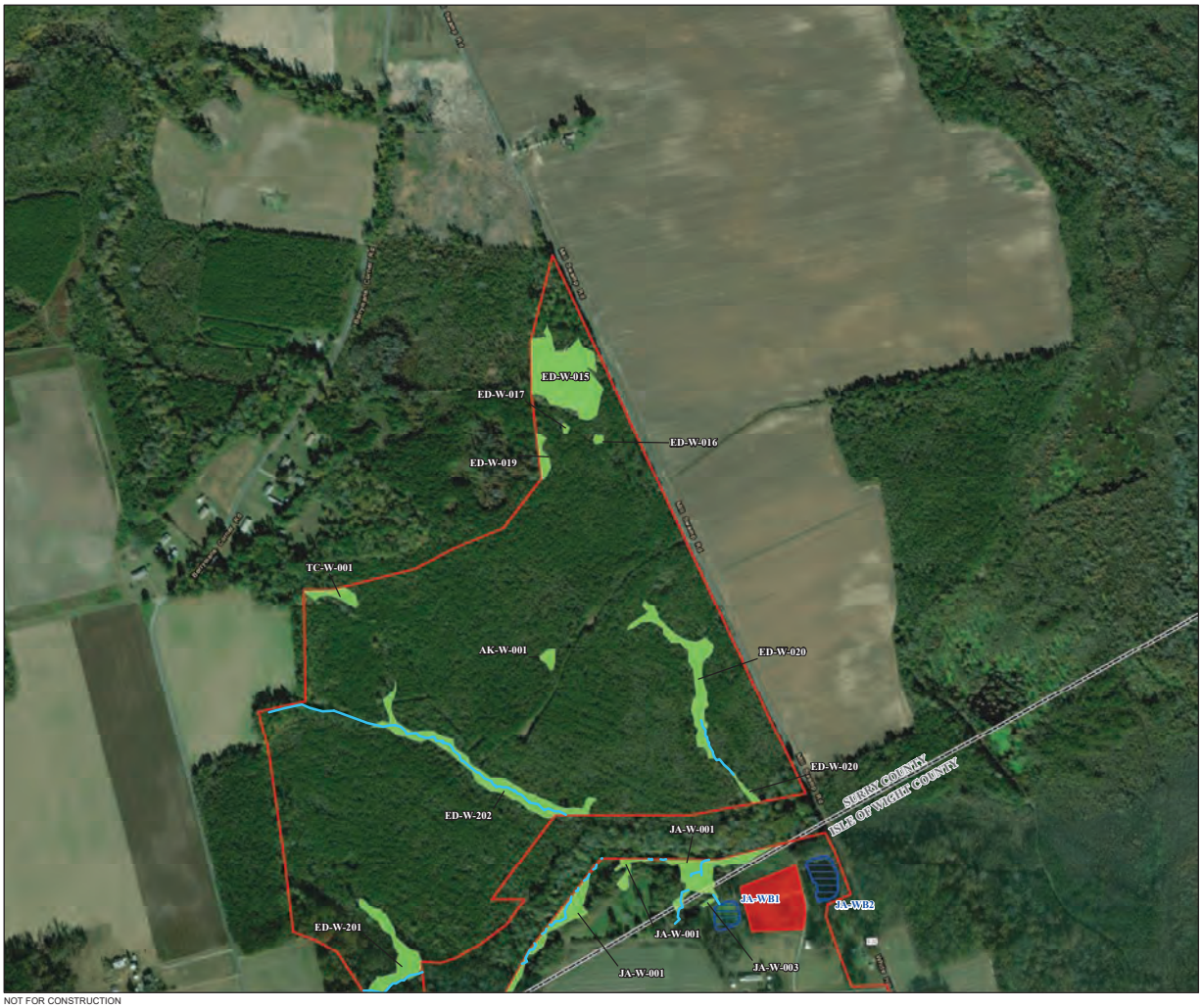

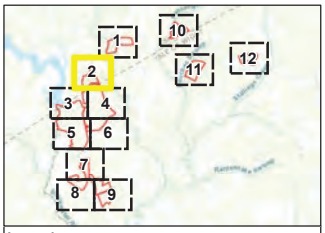

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 2 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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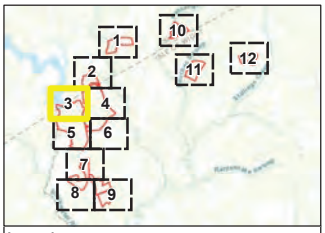

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N
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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 3 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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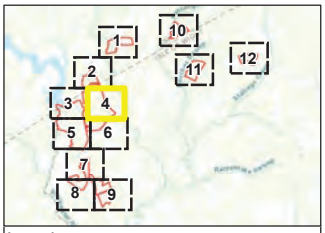

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 4 of 12

Prepared For: aes

Prepared By: TETRA TECH

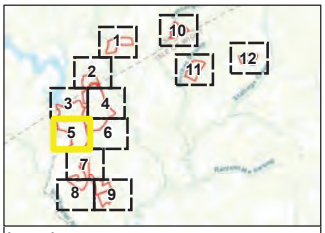
Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

\GIS\VA\Sycamore_Cross_Solar\GIS\Spatial\MXD\20241212_Env_Resource_Impact_Report\Figure_8_Sycamore_Cross_Solar_Delineated_Aquatic_Resources_Features_Detail.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N
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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 5 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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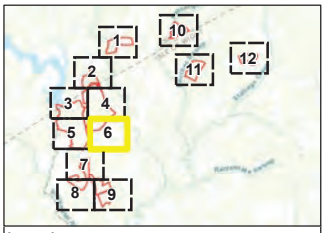

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 6 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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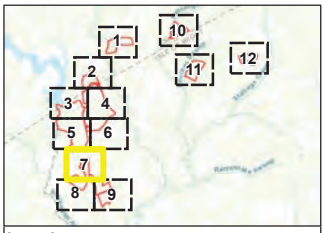

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 7 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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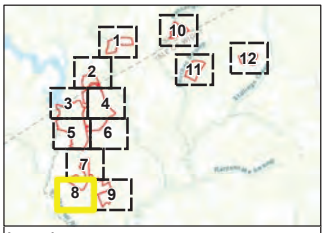

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 8 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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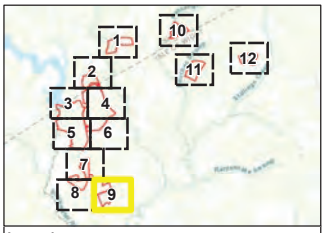

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

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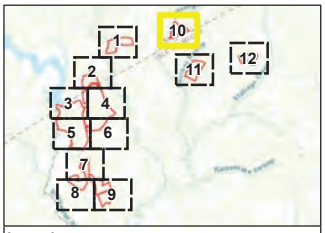

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 10 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

\GIS\AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\20200412_Envir_Resource_Impact_Report\Figure_8_Sycamore_Cross_Solar_Delineated_Aquatic_Resources_Features_Detail.mxd



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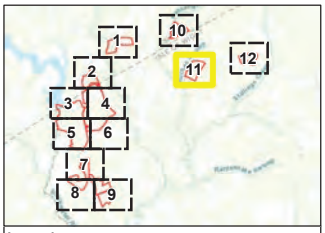

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N W E S

0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 11 of 12

Prepared For: aes

Prepared By: TETRA TECH

Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

\GIS\AES\Sycamore_Cross_Solar\GIS\Spatial\MXD\20200412_Envir_Resource_Impact_Report\Figure_8_Sycamore_Cross_Solar_Delineated_Aquatic_Resources_Features_Detail.mxd



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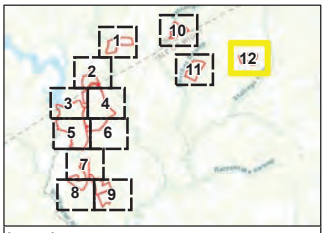

Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Field Delineated Stream
- Field Delineated Wetland
- Open Water

Disclaimer: Project study area/county boundary spatial data may have some accurary discrepencies.

N
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0 250 500 1,000 Feet

Figure 8

Delineated Aquatic Resources Features Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Page 12 of 12

Prepared For: aes

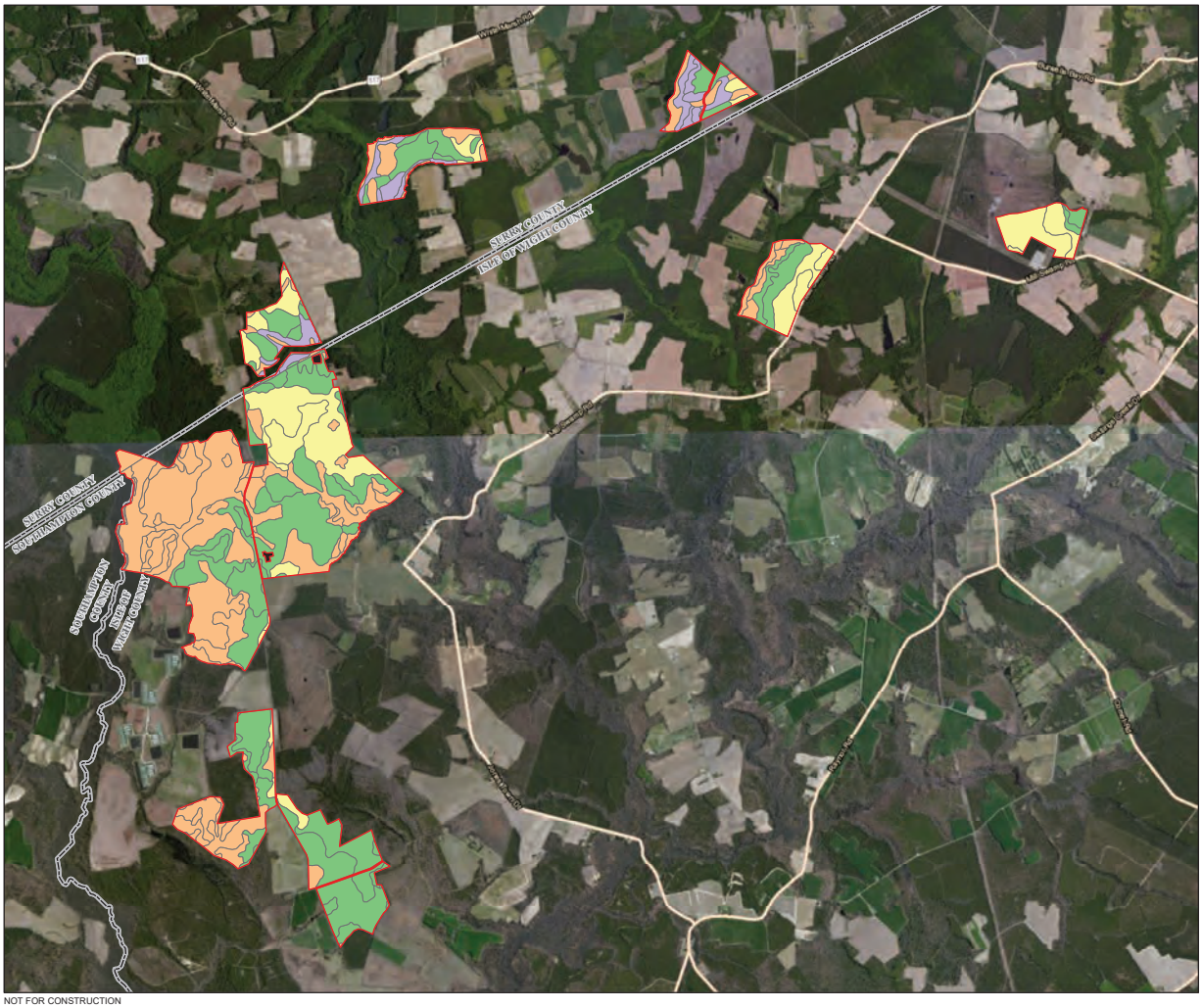
Prepared By: TETRA TECH

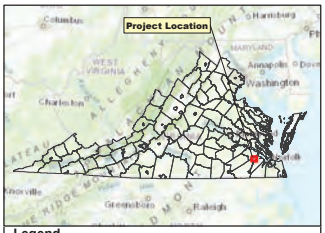
Date: 4/13/2023

Source: Esri, et. al., 2022; AES, 2022; Tetra Tech, 2023; Virginia GIS Clearinghouse, 2022; Virginia Open Data Portal, 2022;

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

\GIS\VA\Sycamore_Cross_Solar\GIS\Spatial\MXD\20230412_Env_Resource_Impact_Report\Figure_8_Sycamore_Cross_Solar_Delineated_Aquatic_Resources_Features_Detail.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

Farmland Class

- All areas are prime farmland
- Farmland of statewide importance
- Not prime farmland
- Prime farmland if drained

N
W E
S

0 0.25 0.5 1 Miles

Figure 9
Prime Farmland Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

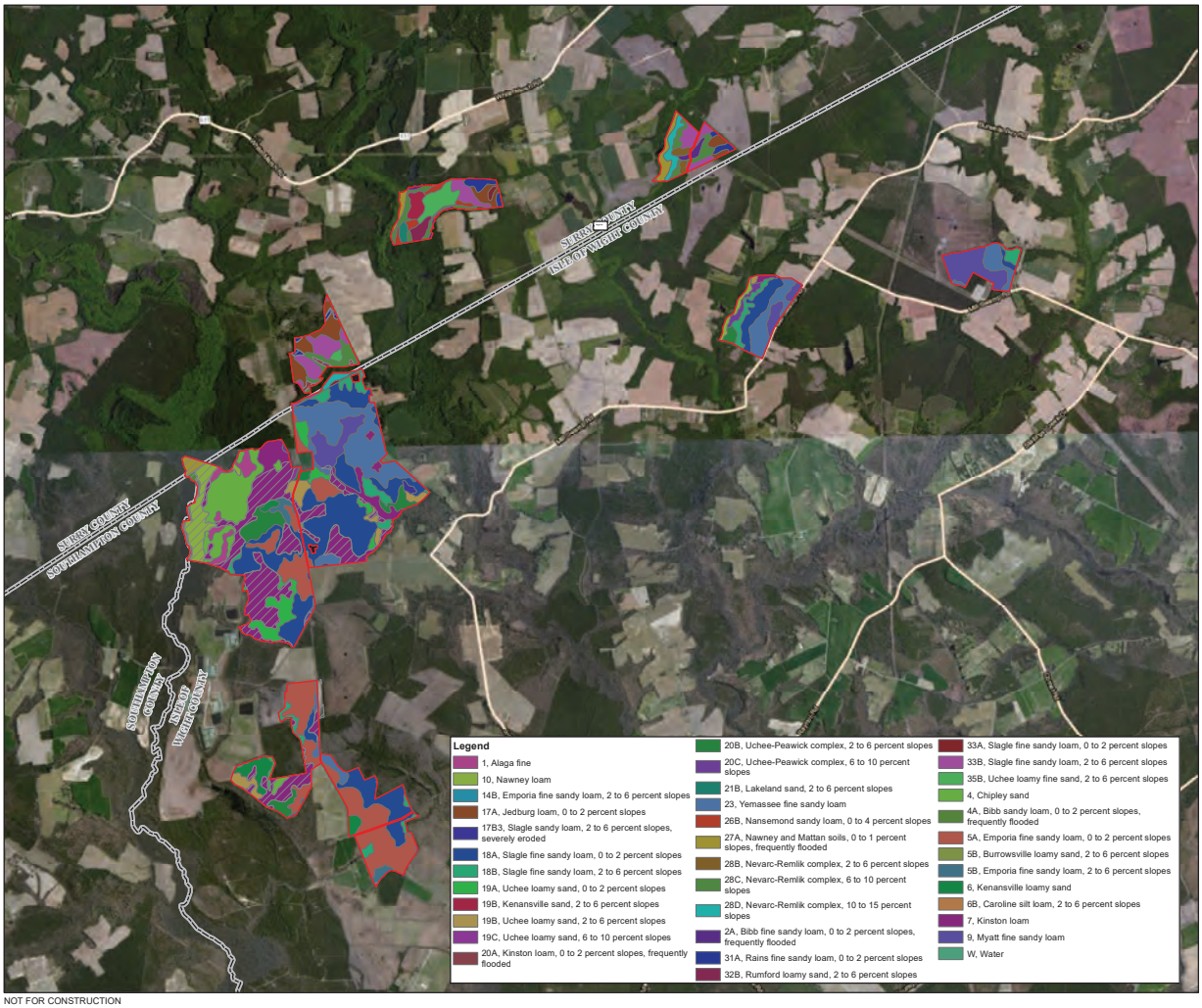
Date: 4/13/2023

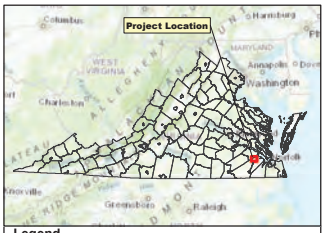
Source: Esri, et. al., 2022; AES, 2022; NHD, 2022; NWI; 2022; USDA, 2022; NRCS, 2022; SSURGO, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

\\sycamore_Cross_Solar\GIS\Spatial\MXD\20230412_Envir_Resource_Impact_Report\Figure_9_Sycamore_Cross_Solar_Prime_Farmland_Map.mxd





Legend

- Project Study Area
- Outside Project Study Area
- County Boundary
- Hydric Soil

N
W E
S

0 0.25 0.5 1 Miles

Figure 10
USDA-NRCS Soil Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

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Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

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APPENDIX A: USDA-NRCS SOIL REPORT

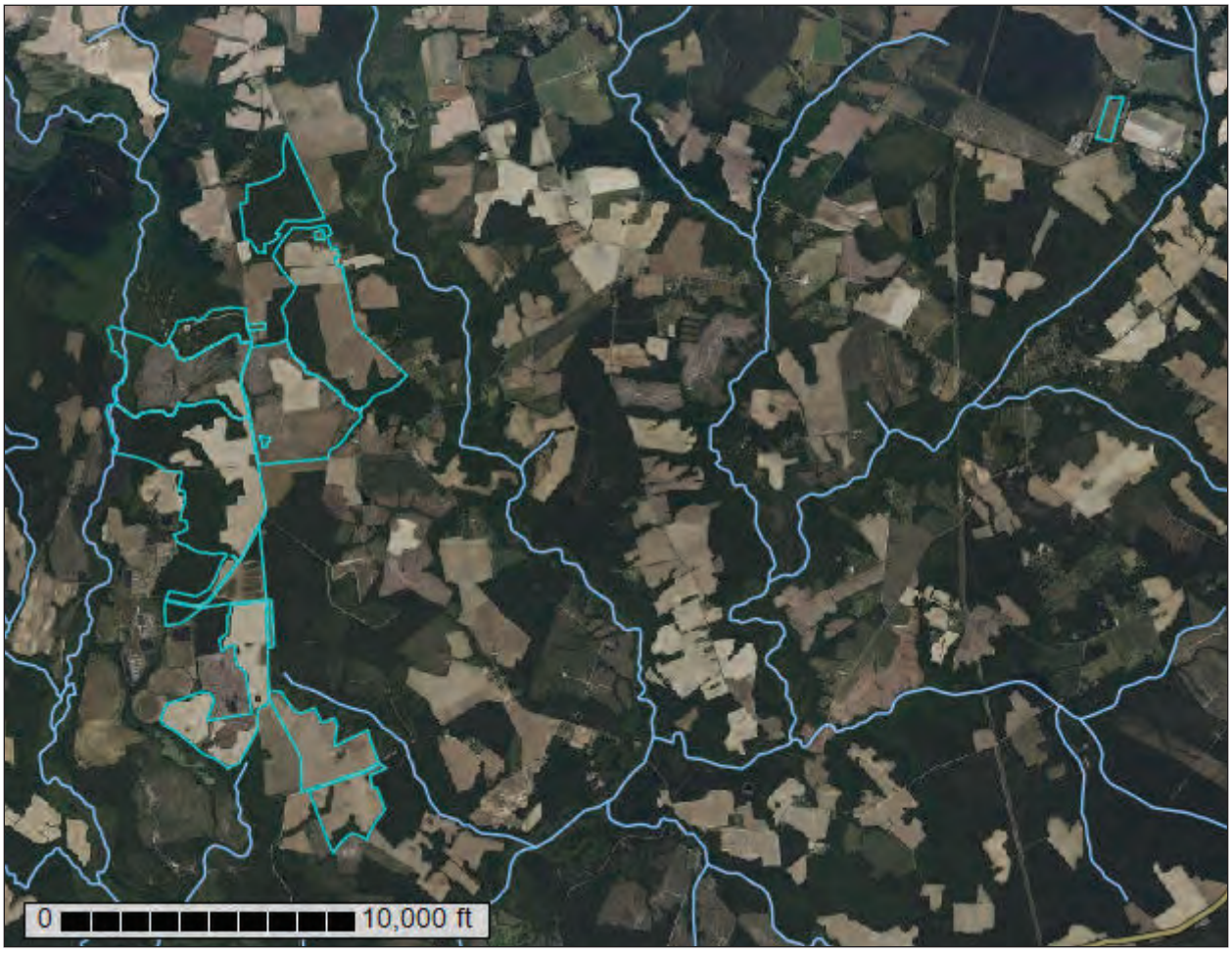
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Isle of Wight County, Virginia, Southampton County, Virginia, and Surry County, Virginia



March 31, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

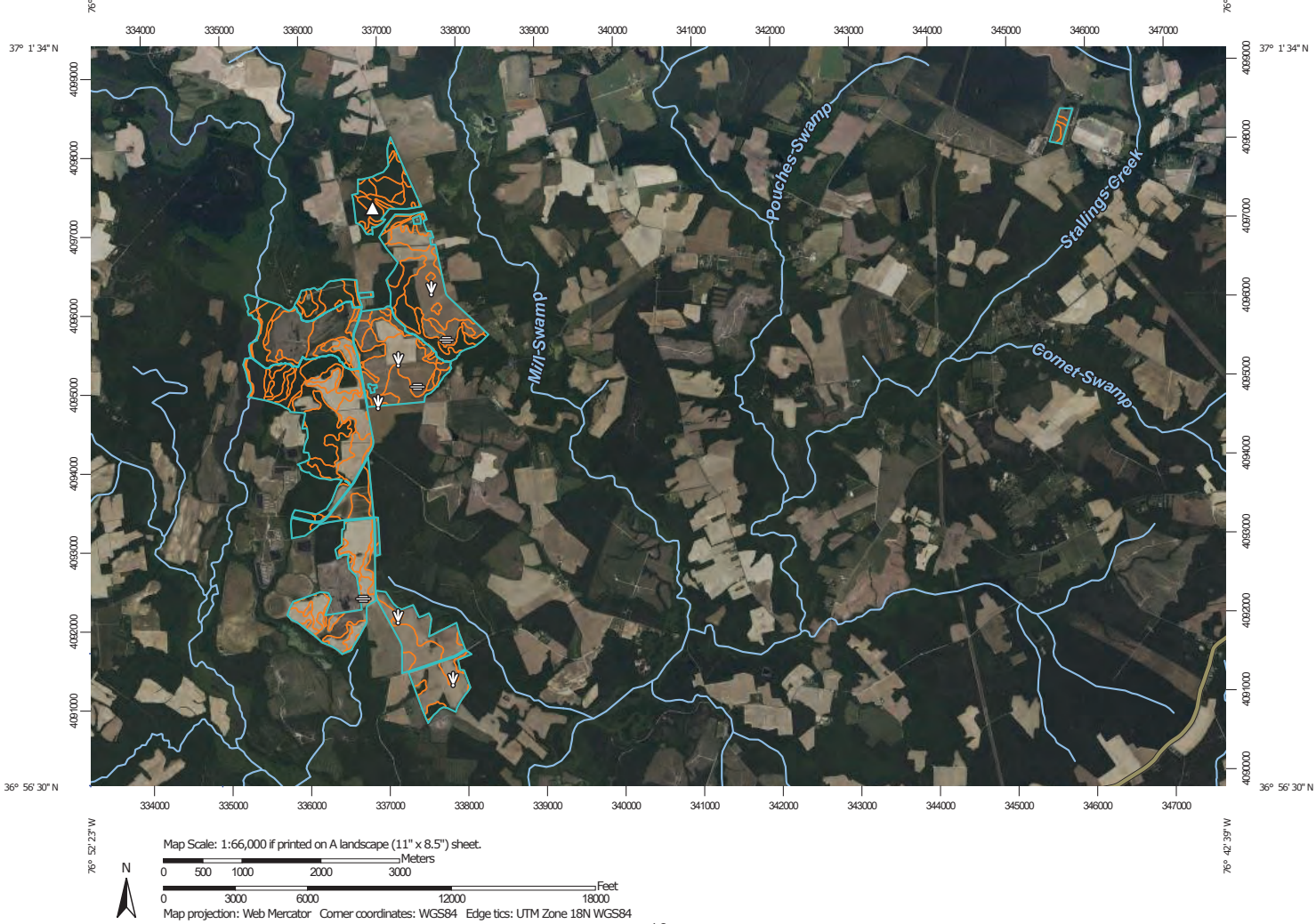
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Isle of Wight County, Virginia
Survey Area Data: Version 18, Aug 29, 2022

Soil Survey Area: Southampton County, Virginia
Survey Area Data: Version 21, Aug 22, 2022

Soil Survey Area: Surry County, Virginia
Survey Area Data: Version 19, Aug 22, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—Jul 13, 2022

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Alaga fine sand	29.3	1.6%
4	Chipley sand	116.0	6.2%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	274.8	14.6%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	21.0	1.1%
6	Kenansville loamy sand	41.6	2.2%
7	Kinston loam	367.5	19.5%
9	Myatt fine sandy loam	38.4	2.0%
10	Nawney loam	55.9	3.0%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	401.3	21.3%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	58.5	3.1%
19A	Uchee loamy sand, 0 to 2 percent slopes	61.1	3.2%
19B	Uchee loamy sand, 2 to 6 percent slopes	40.0	2.1%
19C	Uchee loamy sand, 6 to 10 percent slopes	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	57.2	3.0%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	9.3	0.5%
23	Yemassee fine sandy loam	155.4	8.3%
W	Water	4.1	0.2%
Subtotals for Soil Survey Area		**1,737.1**	**92.3%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	3.9	0.2%
W	Water	3.4	0.2%
Subtotals for Soil Survey Area		**7.3**	**0.4%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	40.2	2.1%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	6.9	0.4%
21B	Lakeland sand, 2 to 6 percent slopes	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	0.2	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	23.9	1.3%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	37.3	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	4.2	0.2%
Subtotals for Soil Survey Area		**136.5**	**7.3%**
Totals for Area of Interest		**1,881.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Isle of Wight County, Virginia

1—Alaga fine sand

Map Unit Setting

National map unit symbol: 404h
Elevation: 10 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Alaga and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alaga

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 3 inches: fine sand
H2 - 3 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Nawney

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

4—Chipley sand

Map Unit Setting

National map unit symbol: 4058
Elevation: 10 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Chipley and similar soils: 85 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chipley

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy marine deposits

Typical profile

H1 - 0 to 6 inches: sand
H2 - 6 to 60 inches: sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kinston
Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney
Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Leon
Percent of map unit: 4 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

5A—Emporia fine sandy loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 4059
Elevation: 20 to 150 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Emporia and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 33 inches: sandy clay loam
H3 - 33 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

5B—Emporia fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 405b
Elevation: 20 to 150 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 33 inches: sandy clay loam
H3 - 33 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

6—Kenansville loamy sand

Map Unit Setting

National map unit symbol: 405c
Elevation: 0 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days

Farmland classification: Not prime farmland

Map Unit Composition

Kenansville and similar soils: 80 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kenansville

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 41 inches: sandy loam
H3 - 41 to 60 inches: sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 8 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

7—Kinston loam

Map Unit Setting

National map unit symbol: 405d
Elevation: 50 to 300 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Kinston and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kinston

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

9—Myatt fine sandy loam

Map Unit Setting

National map unit symbol: 405g
Elevation: 0 to 100 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Myatt and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myatt

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 15 inches: fine sandy loam
H2 - 15 to 51 inches: sandy clay loam
H3 - 51 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

10—Nawney loam

Map Unit Setting

National map unit symbol: 404j
Elevation: 0 to 80 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Nawney and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nawney

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 44 inches: loam
H3 - 44 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

17B3—Slagle sandy loam, 2 to 6 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 404t
Elevation: 50 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Slagle and similar soils: 85 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: sandy loam
H2 - 4 to 25 inches: sandy clay loam
H3 - 25 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

18A—Slagle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 404v
Elevation: 50 to 350 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 85 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 25 inches: sandy clay loam
H3 - 25 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

18B—Slagle fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sgy1
Elevation: 70 to 330 feet
Mean annual precipitation: 32 to 51 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 158 to 206 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 83 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Riser, tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bt - 8 to 51 inches: sandy clay loam
C - 51 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

19A—Uchee loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 404y
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 7 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19B—Uchee loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 404z
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Nawney

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19C—Uchee loamy sand, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 4050
Elevation: 50 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20B—Uchee-Peawick complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 4052
Elevation: 20 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 45 percent
Peawick and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Peawick

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 70 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20C—Uchee-Peawick complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 4053
Elevation: 20 to 700 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Uchee and similar soils: 45 percent
Peawick and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 28 inches: loamy sand
H2 - 28 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Peawick

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 70 inches: clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Kinston

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

23—Yemassee fine sandy loam

Map Unit Setting

National map unit symbol: 4056
Elevation: 0 to 40 feet
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Yemassee and similar soils: 85 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yemassee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

H1 - 0 to 10 inches: fine sandy loam
H2 - 10 to 52 inches: sandy clay loam
H3 - 52 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 7 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 405h
Mean annual precipitation: 43 to 53 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 165 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Southampton County, Virginia

4A—Bibb sandy loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: rnwb
Elevation: 0 to 110 feet
Mean annual precipitation: 42 to 54 inches
Frost-free period: 180 to 208 days
Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 95 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains, drainageways
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy and/or loamy alluvium

Typical profile

H1 - 0 to 8 inches: sandy loam
H2 - 8 to 50 inches: sandy loam
H3 - 50 to 84 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Chastain, frequently flooded

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: Yes

Myatt

Percent of map unit: 1 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Riser, tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: rnxs
Mean annual precipitation: 42 to 54 inches
Frost-free period: 180 to 208 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Swamps, lakes, perenial streams

Surry County, Virginia

5B—Burrowsville loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43fs
Elevation: 60 to 100 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Burrowsville and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Burrowsville

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 11 inches: loamy sand
H2 - 11 to 32 inches: fine sandy loam
H3 - 32 to 59 inches: fine sandy loam
H4 - 59 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

6B—Caroline silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43ft
Elevation: 90 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Caroline and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Caroline

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey marine sediments

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 14 inches: silt loam
H3 - 14 to 70 inches: clay
H4 - 70 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

14B—Emporia fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43gz
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 14 inches: loamy fine sand
H3 - 14 to 18 inches: fine sandy loam
H4 - 18 to 41 inches: sandy clay loam
H5 - 41 to 54 inches: sandy clay
H6 - 54 to 72 inches: stratified sandy loam to sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

17A—Jedburg loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43h4
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Jedburg and similar soils: 85 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jedburg

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 57 inches: loam
H3 - 57 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 6 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

20A—Kinston loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43h9
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kinston and similar soils: 75 percent
Minor components: 21 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kinston

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 52 inches: sandy clay loam
H3 - 52 to 74 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 8 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Rains

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mattan

Percent of map unit: 1 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

21B—Lakeland sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hd
Elevation: 10 to 70 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy eolian sediments

Typical profile

H1 - 0 to 5 inches: sand
H2 - 5 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

27A—Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43hm
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Nawney and similar soils: 50 percent
Mattan and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nawney

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 44 inches: loam
H3 - 44 to 70 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Mattan

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic and loamy alluvial sediments

Typical profile

Oa1 - 0 to 14 inches: muck
Oa2 - 14 to 40 inches: muck
H3 - 40 to 48 inches: loamy sand
H4 - 48 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

28B—Nevarc-Remlik complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hx
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

28C—Nevarc-Remlik complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 43j0
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

28D—Nevarc-Remlik complex, 10 to 15 percent slopes

Map Unit Setting

National map unit symbol: 43j1
Elevation: 10 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 40 percent
Remlik and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

31A—Rains fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43j8
Elevation: 70 to 110 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Rains and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rains

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 12 inches: fine sandy loam
H2 - 12 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

33A—Slagle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43jg
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 80 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 41 inches: sandy clay loam
H3 - 41 to 70 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 2 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

33B—Slagle fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sgy1
Elevation: 70 to 330 feet
Mean annual precipitation: 32 to 51 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 158 to 206 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 83 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Riser, tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bt - 8 to 51 inches: sandy clay loam
C - 51 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Myatt

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

35B—Uchee loamy fine sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43jp
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Uchee and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 34 inches: loamy fine sand
H2 - 34 to 72 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

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United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

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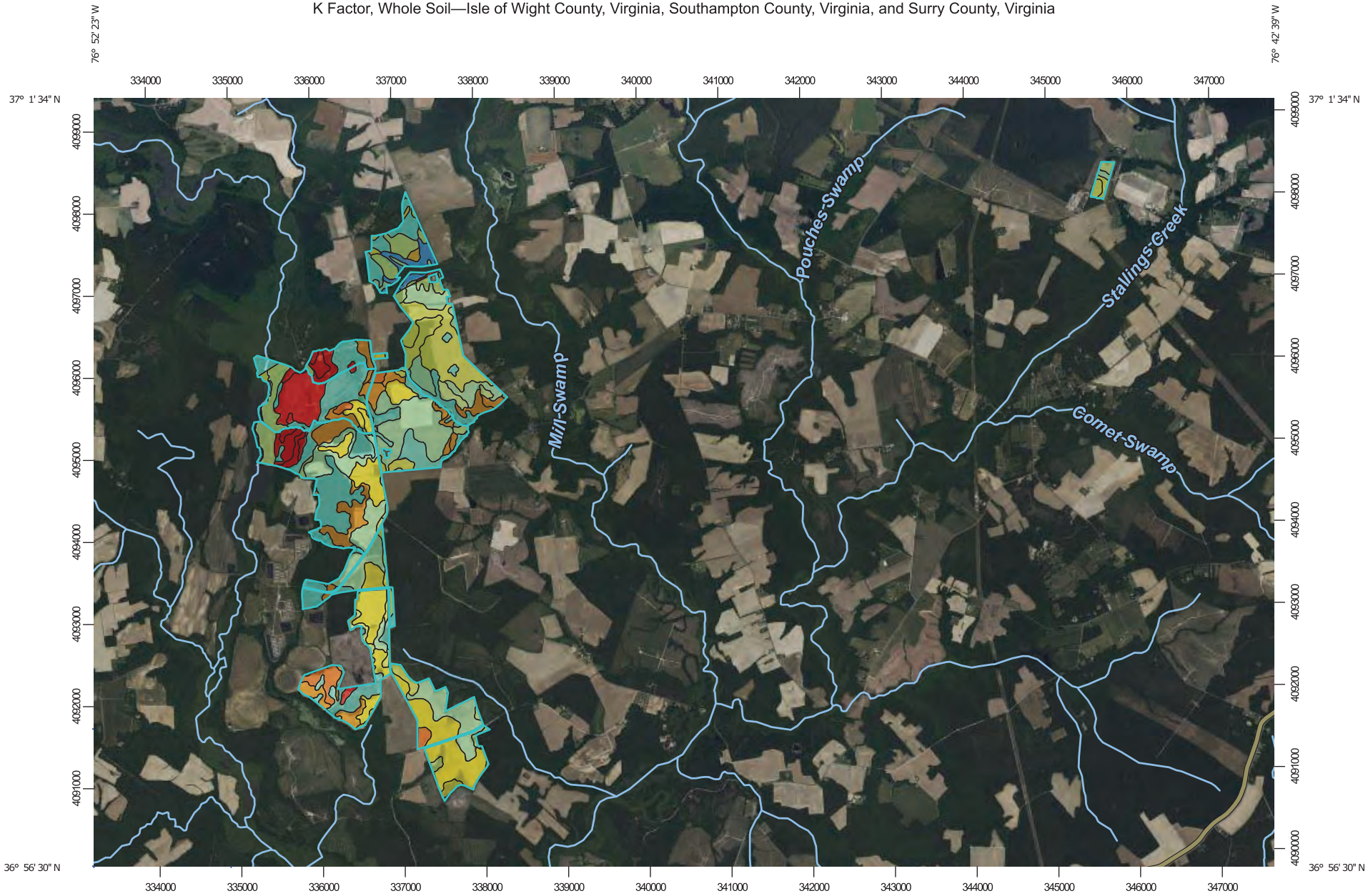

Map Scale: 1:66,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 500 1000 2000 3000

Feet
0 3000 6000 12000 18000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Isle of Wight County, Virginia
Survey Area Data: Version 18, Aug 29, 2022

Soil Survey Area: Southampton County, Virginia
Survey Area Data: Version 21, Aug 22, 2022

Soil Survey Area: Surry County, Virginia
Survey Area Data: Version 19, Aug 22, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—Jul 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	.02	29.3	1.6%
4	Chipley sand	.02	116.0	6.2%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	.17	274.8	14.6%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	.17	21.0	1.1%
6	Kenansville loamy sand	.05	41.6	2.2%
7	Kinston loam	.32	367.5	19.5%
9	Myatt fine sandy loam	.20	38.4	2.0%
10	Nawney loam	.24	55.9	3.0%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	.24	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	.28	401.3	21.3%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	.24	58.5	3.1%
19A	Uchee loamy sand, 0 to 2 percent slopes	.10	61.1	3.2%
19B	Uchee loamy sand, 2 to 6 percent slopes	.10	40.0	2.1%
19C	Uchee loamy sand, 6 to 10 percent slopes	.10	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	.10	57.2	3.0%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	.10	9.3	0.5%
23	Yemassee fine sandy loam	.20	155.4	8.3%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,737.1**	**92.3%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	.20	3.9	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	.10	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	.43	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	.24	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	.32	40.2	2.1%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	.28	6.9	0.4%
21B	Lakeland sand, 2 to 6 percent slopes	.02	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	.32	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	.43	0.2	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	.43	23.9	1.3%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	.43	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	.17	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	.24	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	.24	37.3	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	.15	4.2	0.2%
Subtotals for Soil Survey Area			**136.5**	**7.3%**
Totals for Area of Interest			**1,881.1**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

APPENDIX B: USFWS IPAC AND FEDERAL-LISTED SPECIES INFORMAL REVIEW

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project Code: 2023-0061833
Project Name: Sycamore Cross

March 29, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

PROJECT SUMMARY

Project Code: 2023-0061833
Project Name: Sycamore Cross
Project Type: Power Gen - Solar
Project Description: Sycamore Cross
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.985725,-76.84112557757788,14z



Counties: Isle of Wight , Southampton , and Surry counties, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

BIRDS

NAME	STATUS
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Brown-headed Nuthatch *Sitta pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12

(0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

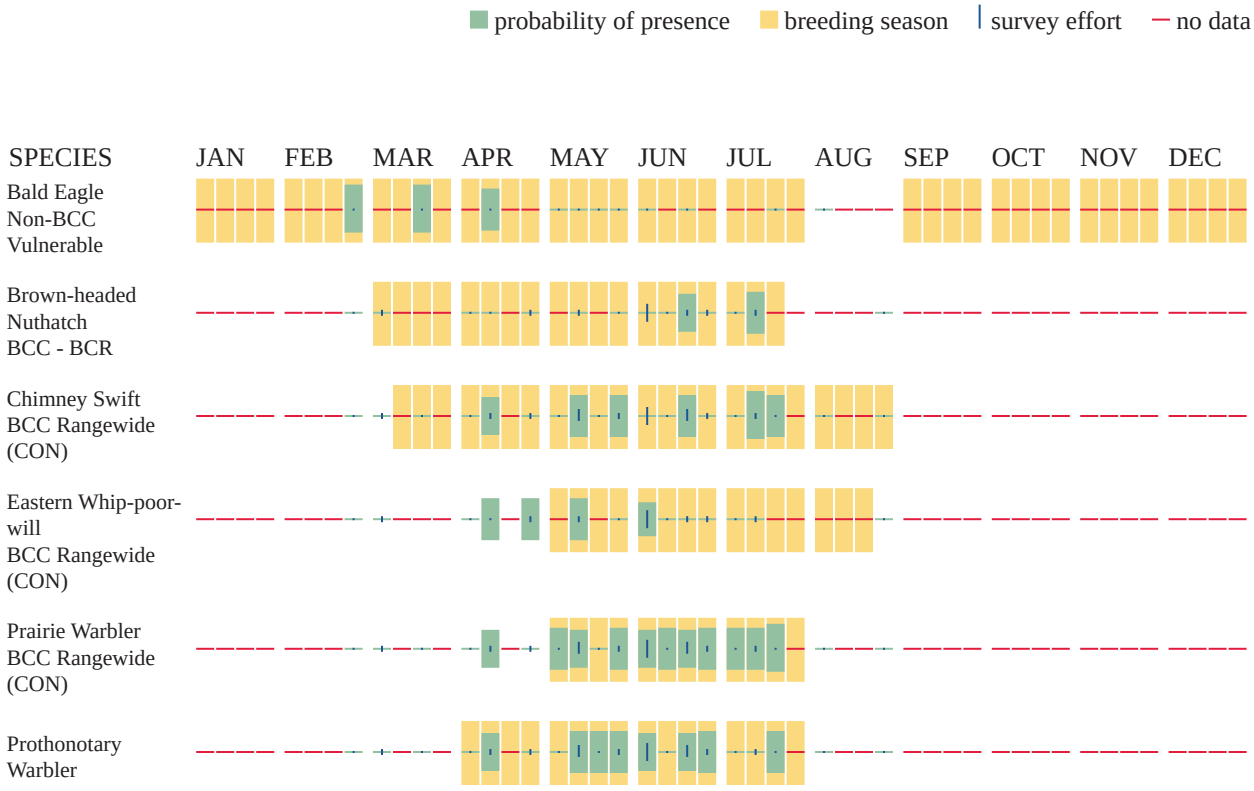
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

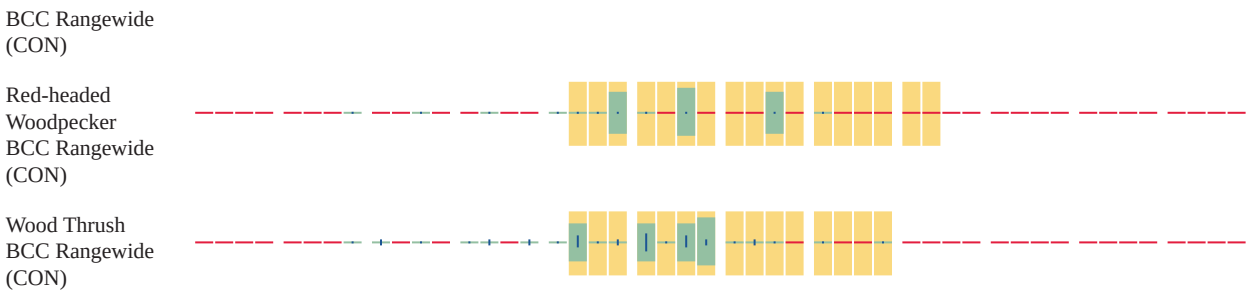
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list

of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical

Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPAC USER CONTACT INFORMATION

Agency:	Tetra Tech
Name:	Justin Ahn
Address:	4101 Cox Road
Address Line 2:	Suite 120
City:	Glen Allen
State:	VA
Zip:	23060
Email	justin.ahn@tetratech.com
Phone:	6105730764

Area A

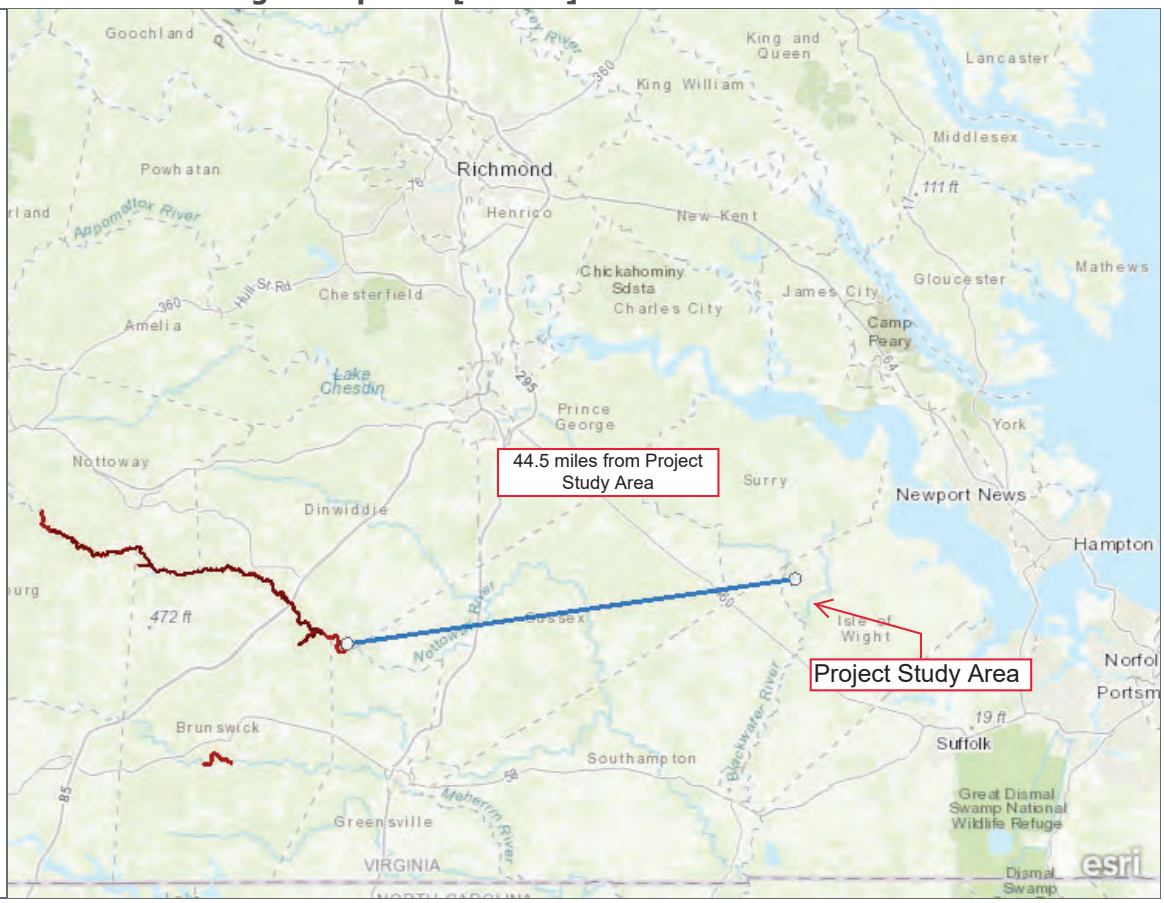
Critical Habitat for Threatened & Endangered Species [USFWS]

Final Polygon Features

Final Linear Features

Proposed Polygon Features

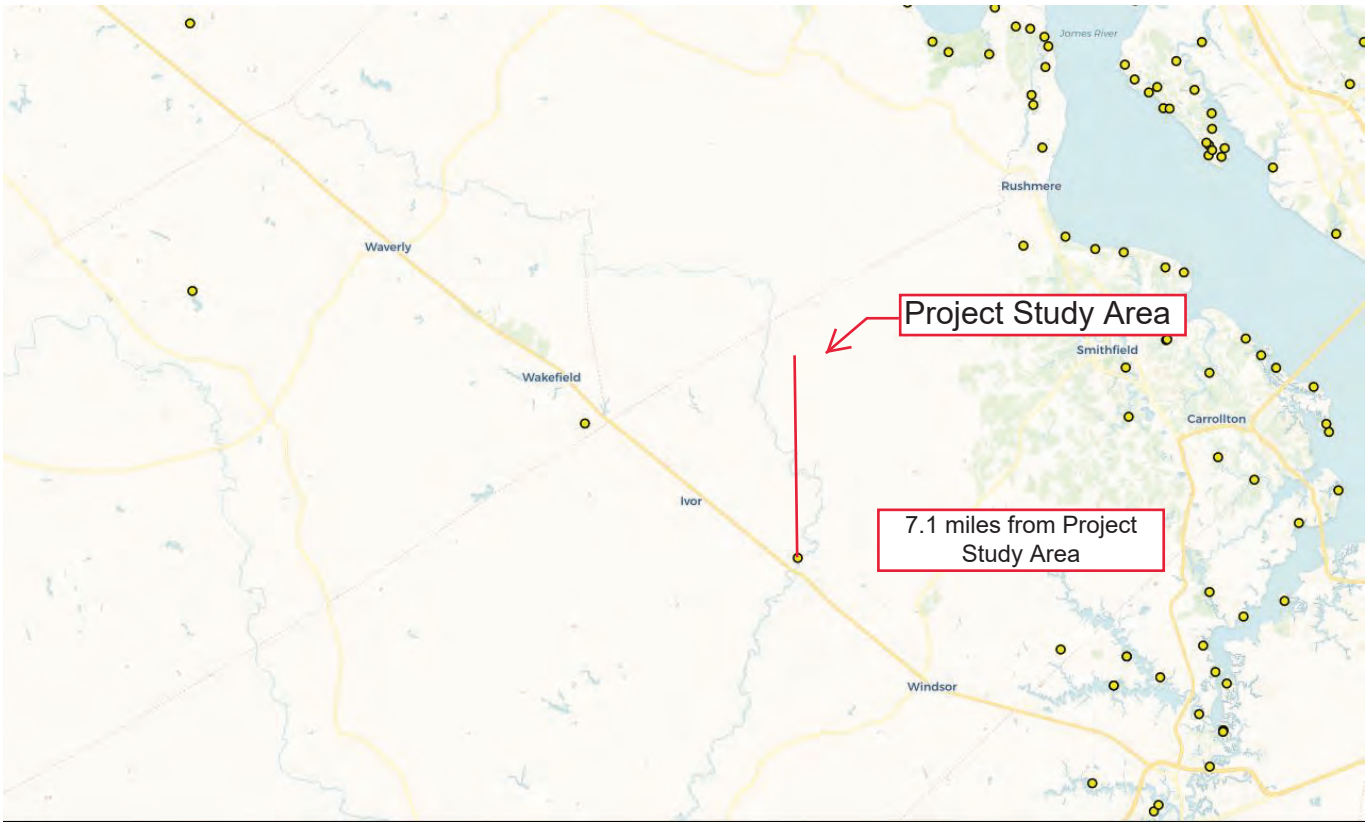
Proposed Linear Features



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

CCB Mapping Portal



Layers: VA Eagle Nest Buffers, VA Eagle Nest Locator

Map Center [longitude, latitude]: [-76.83631896972655, 36.933702217046296]

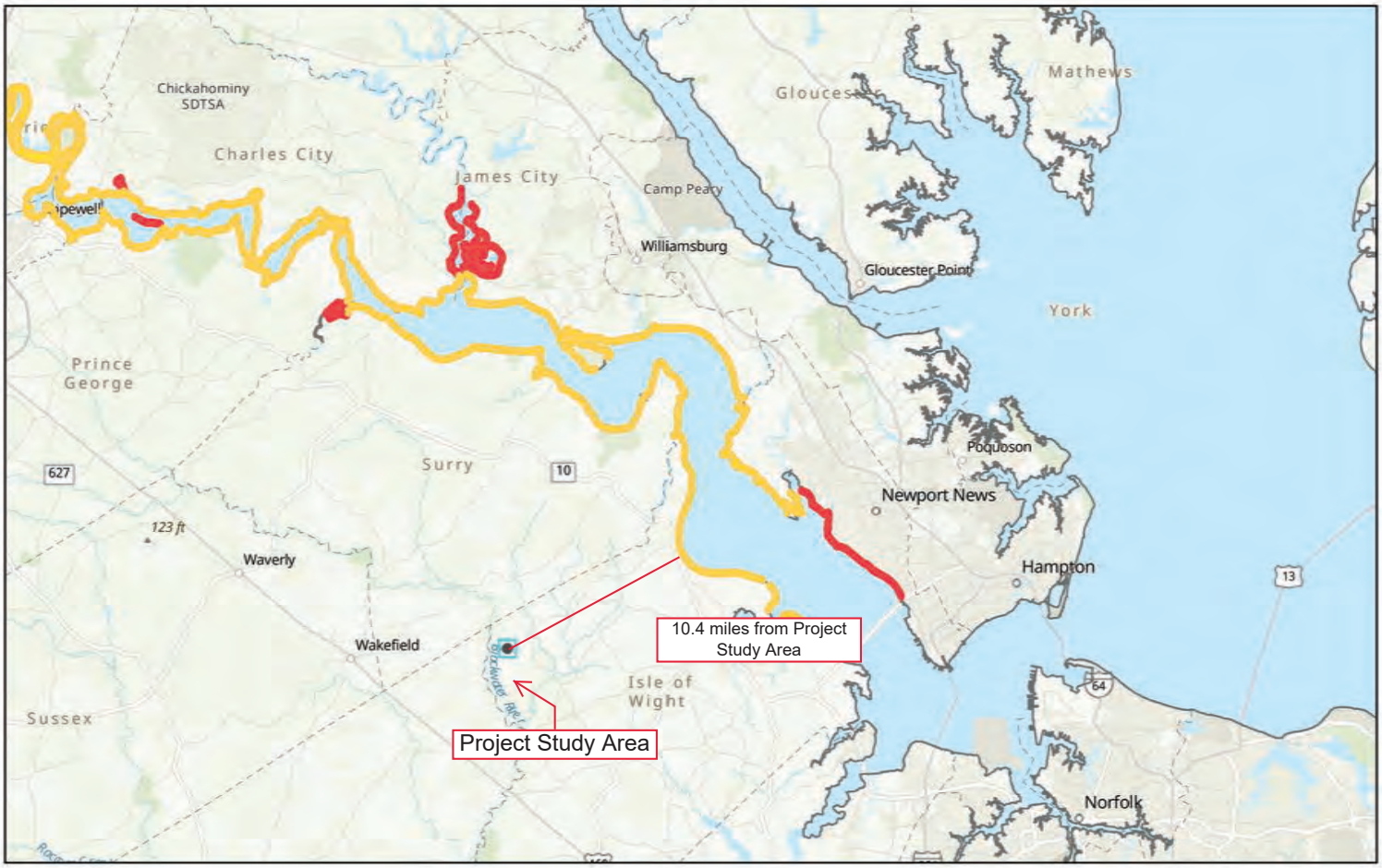
Map Link:
https://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Buffers&layer=VA+Eagle+Nest+Locator&zoom=11&lat=36.933702217046296&lng=-76.83631896972655&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 03/27/2023

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the Data Use Agreement to ensure compliance with our data use policies. For additional data access questions, view our Data Distribution Policy, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Area A

BECA



March 27, 2023

1:577,791

0 4 8 16 mi

0 5 10 20 km

Esri, CGIAR, USGS, VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

APPENDIX C: STATE-LISTED SPECIES INFORMAL REVIEW

Site Location

37,00,52.7 -76,49,49.6
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
(•) Yes ( ) No
2 Search distance miles buffer

Display at center | **Search Point** is not at map center

Base Map Choices
Topography

Map Overlay Choices
Current List: Position, Search, BECAR, BAEANests, TEWaters, TierII, Habitat, Trout, Anadromous

Map Overlay Legend

T & E Waters
Federal
State

Predicted Habitat WAP Tier I & II
Aquatic
Terrestrial

Trout Waters
Class I - IV
Class V - VI

Anadromous Fish Reach
Confirmed
Potential

Impediment

Position Rings
1 mile and 1/4 mile at the Search Point

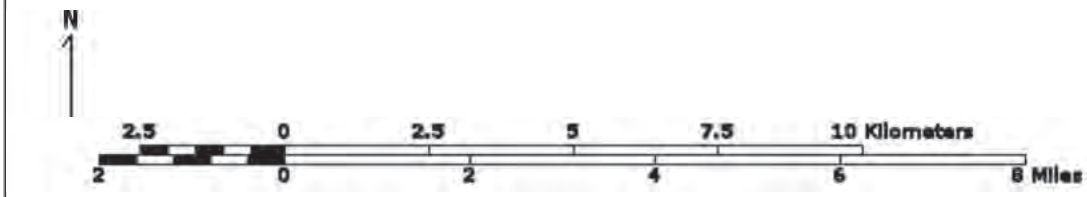
2 mile radius Search Area

Bald Eagle Concentration Areas and Roosts

Refresh Browser Page

Map Click Pan Id M Map Scale In Zoom Out Screen Size Small Size Big Help





Point of Search 37,00,52.7 -76,49,49.6
Map Location 36,58,55.9 -76,50,04.8

Select **Coordinate System:**
(•) Degrees,Minutes,Seconds Latitude - Longitude
( ) Decimal Degrees Latitude - Longitude
( ) Meters UTM NAD83 East North Zone
( ) Meters UTM NAD27 East North Zone

Base Map source: USGS 1:250,000 topographic maps (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 327114 and top 4104072. Pixel size is 23. . Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 19200 meters east to west by 19200 meters north to south for a total of 368.6 square kilometers. The map display represents 63002 feet east to west by 63002 feet north to south for a total of 142.3 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
http://www.national.geographic.com/topo
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2023-03-29 10:45:27 (qa/qc March 21, 2016 12:20 - tn=1469798.0 dist=3218 I)
$poi=37.0146500 -76.8304699

| DGIF | Credits | Disclaimer | Contact vafwis_support@dgif.virginia.gov |Please view our privacy policy |
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VaFWIS Search Report Compiled on 3/29/2023, 10:45:04 AM

Known or likely to occur within a **2 mile buffer around polygon; center 37.0146500 -76.8304699** in **093 Isle of Wight County, 175 Southampton County, 181 Surry County, VA**

View Map of Site Location

593 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 39) (39 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
040228	FESE	Ia	Woodpecker, red-cockaded	Picoides borealis		BOVA
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
010214	FESE	IIa	Logperch, Roanoke	Percina rex		BOVA
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta		BOVA
040144	FTST	Ia	Knot, red	Calidris canutus rufa		BOVA,HU6
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
060029	FTST	IIa	Lance, yellow	Elliptio lanceolata	Yes	BOVA,TEWaters,SppObs,HU6
010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Potential	BOVA,Habitat,HU6
030064	SE	Ia	Turtle, eastern chicken	Deirochelys reticularia reticularia		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050034	SE	Ia	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis	Yes	BOVA,SppObs,HU6
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA,SppObs,HU6
020052	SE	IIa	Salamander, eastern tiger	Ambystoma tigrinum		BOVA
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Potential	Habitat,HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040385	ST	Ia	Sparrow, Bachman's	Peucaea aestivalis		BOVA,HU6
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Potential	BOVA,Habitat,HU6
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
100079	FC	IIIa	Butterfly, monarch	Danaus plexippus		BOVA
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Potential	BOVA,Habitat
030063	CC	IIIa	Turtle, spotted	Clemmys guttata	Yes	BOVA,SppObs,HU6
030031	CC	IIIc	Kingsnake, scarlet	Lampropeltis elapsoides		BOVA
010174		Ia	Bass, Roanoke	Ambloplites cavifrons		BOVA
010077		Ia	Shiner, bridle	Notropis bifrenatus		BOVA
070131		Ic	Isopod, Phreatic	Caecidotea phreatica		BOVA
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes	BOVA,Habitat,SppObs,HU6
020002		IIa	Treefrog, barking	Hyla gratiosa		BOVA,HU6
040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040033		IIa	Egret, snowy	Egretta thula		BOVA

040029		IIa	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA,HU6
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		IIa	Woodcock, American	Scolopax minor		BOVA,HU6
060071		IIa	Lampmussel, yellow	Lampsilis cariosa		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA,HU6

To view **All 593 species** View 593

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the grou

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (3 records)

View Map of All Query Results Colonial Water Bird Survey

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE*	Highest Tier**	
Sycamore Crossroads	1	Jun 2 2003	1			Yes
Blackwater River at Surry	1	Jun 1 1993	1			Yes
Rattlesnake Swamp	1	Jun 1 1993	1			Yes

Displayed 3 Colonial Water Bird Survey

Threatened and Endangered Waters (13 Reaches)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species							View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name						
Terrapin Swamp (0283664)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0285385)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0287738)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0289129)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0289623)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0290117)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0291410)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0291935)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0293016)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0294529)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0298333)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0302220)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes
Terrapin Swamp (0302289)	FTST	060029	FTST	IIa	Lance, yellow	Elliptio lanceolata		Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (56 records - displaying first 20 , 6 Observations with Threatened or Endangered species) View Map of All Query Results Species Observations

obsID	class	Date Observed	Observer	N Species	
				Different Species	Highest TE
55516	SppObs	May 7 1998	BEATY, AND ZEYTOONIAN, VIRGINIA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT.	3	FTST
55237	SppObs	May 7 1998	BRAVEN B. BEATY AND RICHARD J. NEVES, DEPARTMENT OF FISHERIES AND WILDLIFE AT VA TECH	3	FTST
635308	SppObs	Aug 18 2021	Shane Brodnick	1	SE
58094	SppObs	Aug 7 1997	Steven M. Roble, Ph. D. , Staff Zoologist	1	SE
53381	SppObs	Aug 8 1996	Steven M. Roble, Ph. D. , DCR	2	FPSE
9410	SppObs	Apr 5 1988	Mitchell D. Norman, VDGIF	3	CC
614290	SppObs	Jun 26 2007	John; Kleopfer| Robert ; Clontz	1	
375284	Aquatics	Oct 12 2007	B. T. Watson, M. E. Bradley	7	
426929	SppObs	May 17 2005	VCU - INSTAR	14	
62424	SppObs	Aug 11 1999	Ryan Smith, DGIF	12	
11331	SppObs	Sep 6 1985	NORMAN	19	
426934	SppObs	Sep 6 1985	VCU - INSTAR	19	
426951	SppObs	Sep 6 1984	VCU - INSTAR	10	
10425	SppObs	Sep 6 1984	Norman	10	
10433	SppObs	Aug 29 1984	Norman	23	
338036	SppObs	Jan 1 1984	MDN-B-NORMAN	23	
338051	SppObs	Jan 1 1984	MDN-B-NORMAN	10	
15411	SppObs	May 5 1962	R D ROSS	4	
332815	SppObs	Jan 1 1962	VPI-B-VA. POLY. INST.	4	
426942	SppObs	May 12 2005	VCU - INSTAR	5	

Displayed 20 Species Observations

Selected 56 Observations View all 56 Species Observations

Habitat Predicted for Aquatic WAP Tier I & II Species (5 Reaches) View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Tier Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Hickaneck Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Mill Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Rattlesnake Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Terrapin Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
tributary (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
tributary (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species (4 Species) View Map of Combined Terrestrial Habitat Predicted for 4 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
030013	SE	IIa	Rattlesnake, canebrake	Crotalus horridus	Yes
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes
020063		IIa	Toad, oak	Anaxyrus quercicus	Yes

Virginia Breeding Bird Atlas Blocks (2 records)

View Map of All Query Results
Virginia Breeding Bird Atlas Blocks

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
55056	Dendron, SE	43		III	Yes
56056	Runnymede, SE	65		III	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
093	Isle of Wight	421	FESE	I
175	Southampton	402	FESE	I
181	Surry	445	FESE	I

USGS 7.5' Quadrangles:
Ivor
Dendron
Raynor
Runnymede

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CU59	Blackwater River-Terrapin Swamp	99	FTSE	I
CU60	Mill Swamp-Moores Swamp	89	FTSE	I
CU61	Rattlesnake Swamp	88	FTSE	I
CU62	Blackwater River-Antioch Swamp	92	FTSE	I

Compiled on 3/29/2023, 10:45:05 AM I1469798.0 report=all searchType= P dist= 3218 poi= 37.0146500 -76.8304699 siteDD= 37.0146550 -76.8304718;37.0066990 -76.8254288;37.0001450 -76.8230508;36.9967600 -76.8213098;36.9930180 -76.8166158;36.9852540 -76.8256298;36.9847270 -76.8336928;36.9804500 -76.8326788;36.9788090 -76.8335 -76.8324618;36.9563430 -76.8367528;36.9612070 -76.8454438;36.9632160 -76.8392578;36.9610180 -76.8391648;36.9615850 -76.8345228;36.9685120 -76.8383148;36.9712350 -76.8373848;36.9696540 -76.8447548;36.9730630 -76.8446968;36.9763590 -76.8378158;36.9781580 -76.8437688;36.9839170 -76.8427458;36.9859910 -76.8507688;36.9910220 -76.8303698;37.0146550 -76.8304718;.

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| 3/29/2023, 10:45:05 AM | DGIF | Credits | Disclaimer | Please view our privacy policy |
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I 1469798

If you have difficulty reading or accessing documents, please Contact Us for assistance.

Natural Heritage Resources

Your Criteria

Taxonomic Group: Select All

Global Conservation Status Rank: Select All

State Conservation Status Rank: Select All

Federal Legal Status: Select All

State Legal Status: Select All

County: Isle of Wight,Surry

Physiographic Province: Select All

Watershed (8 digit HUC): 03010202 - Blackwater River

Subwatershed (12 digit HUC): CU59 - Blackwater River-Terrapin Swamp,CU60 - Mill Swamp-Moores Swamp,CU61 - Rattlesnake Swamp

Planning District: Select All

Virginia Coastal Zone: Select All

Search Run: 3/27/2023 15:27:24 PM

Result Summary

Total Species returned: 3

Total Communities returned: 0

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Isle of Wight								
Southern Coastal Plain Blackwater Blackwater River-Terrapin Swamp								

Common Name/Natural Community	Scientific Name	Scientific Name Linked	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Hampton Roads								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y
Rattlesnake Swamp								
Hampton Roads								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y

Surry

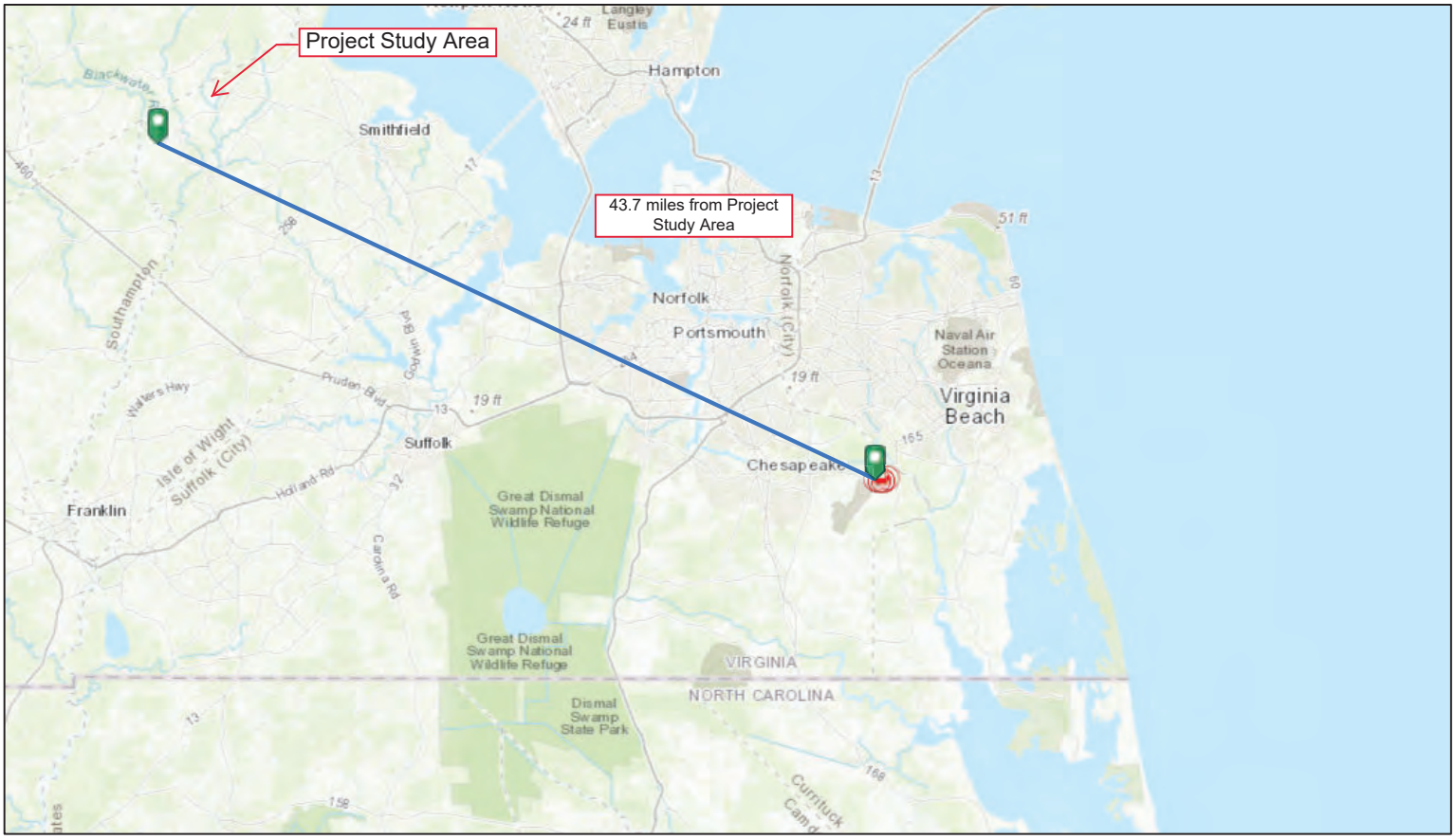
Southern Coastal Plain								
Blackwater								
Rattlesnake Swamp								
Crater								
MAMMALS								
Eastern Big-eared Bat	Corynorhinus rafinesquii macrotis	Corynorhinus rafinesquii macrotis	G3G4T3	S2	None	LE	44	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an information request.

To Contribute information on locations of natural heritage resources, please fill out and submit a rare species sighting form.

NLEB Locations and Roost Trees



3/27/2023, 2:38:01 PM

NLEB Known Occupied Maternity Roost (Summer Habitat)

1:577,791

0 4 8 16 mi

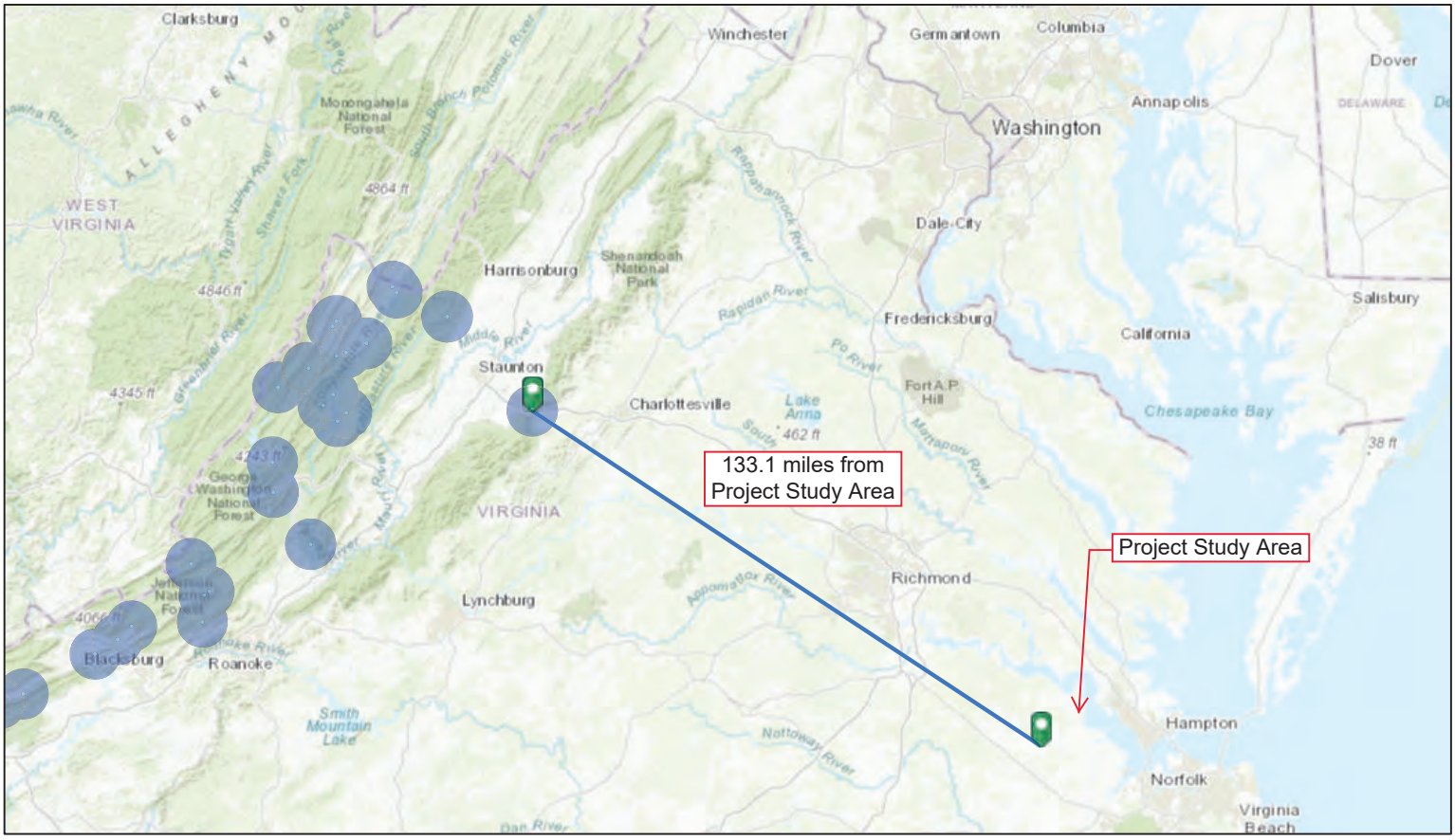
0 5 10 20 km

Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

VA Dept. Game & Inland Fisheries

Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |

MYLU PESU



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Tri-colored and Little Brown Hibernaculum Half Mile Buffer

Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

1:2,311,162

0 15 30 60 mi

0 20 40 80 km

Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Dept. Game and Inland Fisheries

Esri, HERE, Garmin, FAO, USGS, EPA, NPS |

Attachment N
Historical and Cultural Resources Report

REPORT >

Phase IA Cultural Resource Assessment of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

DATE > August 2023

LOCATION > Isle of Wight and Surry Counties, Virginia

PREPARED FOR >
AES Clean Energy



PREPARED BY >
Dutton + Associates, LLC

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE IA CULTURAL RESOURCES ASSESSMENT OF THE ±817.46 Hectare (2,020 Acre) SYCAMORE CROSS SOLAR STUDY AREA

ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
AES CLEAN ENERGY
4200 INNSLAKE DRIVE
SUITE 302
GLEN ALLEN, VIRGINIA 23060

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AUGUST 2023

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ABSTRACT

In August 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The assessment was conducted for planning purposes in order to confirm existing conditions of the study area, note surface evidence of cultural activity, and identify recommended survey methods based upon the results of the background research and field reconnaissance. The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the project. Rather, the study area represents the maximum extent of the parcels being considered for development.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the study area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the study area is now sparsely developed. Just seven (7) building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the study area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The study area is bordered by Blackwater River and Mill Swamp and 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, however, no such sites have been previously recorded within the study area limits.

Although the study area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the study area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about ***34 hectares (85 acres)*** *total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for*

historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not be previously disturbed by logging. Together, the moderate potential area covers an area of about ***365 hectares (901 acres)*** *total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder of the study area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and field depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about* ***170 hectares (421 acres)****. A large tract of land at the northern end of the study area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort The table below details these areas.*

Potential	***Reason***	***STP Sample***	***Total Area***	***STP Area***
High	*Yard space around extant and map-projected architectural resources*	*100%*	*34 hectares 85 acres*	*34 hectares 85 acres*
Moderate	*Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.*	*25%, chosen based on field conditions, pedestrian survey of remainder*	*365 hectares 901 acres*	*91 hectares 225 acres*
Low	*Areas with no site predictors*	*10%, chosen based on field conditions, pedestrian survey of remainder*	*170 hectares 421 acres*	*17 hectares 42 acres*
No Subsurface Testing	*Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas*	*Pedestrian survey where possible*	*248 hectares 613 acres*	*Pedestrian survey where possible*
Total			***817.46 hectares 2,020 acres***	***142 hectares 352 acres***

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1. INTRODUCTION

In July 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted January 4th and 5th, and June 28th and 29th, 2023. The D+A effort is intended to provide a comprehensive archival study that will include a complete listing and discussion of previously recorded historic properties located within and in the vicinity of the study area, a historical map review of the study area in order to better understand the development and use of the properties and their role in the larger community, provide a basis for interpreting previously recorded historic properties, define potential locations where historic resources (above and below ground) are present or likely to be present, as well as delineate areas where consideration of archaeological resources is not necessary to assist in the development of a strategy for addressing historic resource issues going forward in the Certificate of Public Convenience and Need (CPCN) process.

Robert J. Taylor, Jr., M.A. served as the Principal Investigator, oversaw all project tasks, and co-authored the report. Hope Smith, Ph.D., served as the Project Archaeologist, coauthored the report, and was assisted in the field by Rebecca Mattson and Courtney Roark. Dara Friedberg, M.S., conducted background research for the project and coauthored the report. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's main office in Midlothian, Virginia.

STUDY AREA

The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail (Figure 1-1). The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the 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 part of the effort, field reconnaissance to document existing conditions was limited to those parcels where access was expressly granted while the rest of the study area was limited to desktop review only (Figure 1-2).



Figure 1-1: General location of the study area. Source: USGS

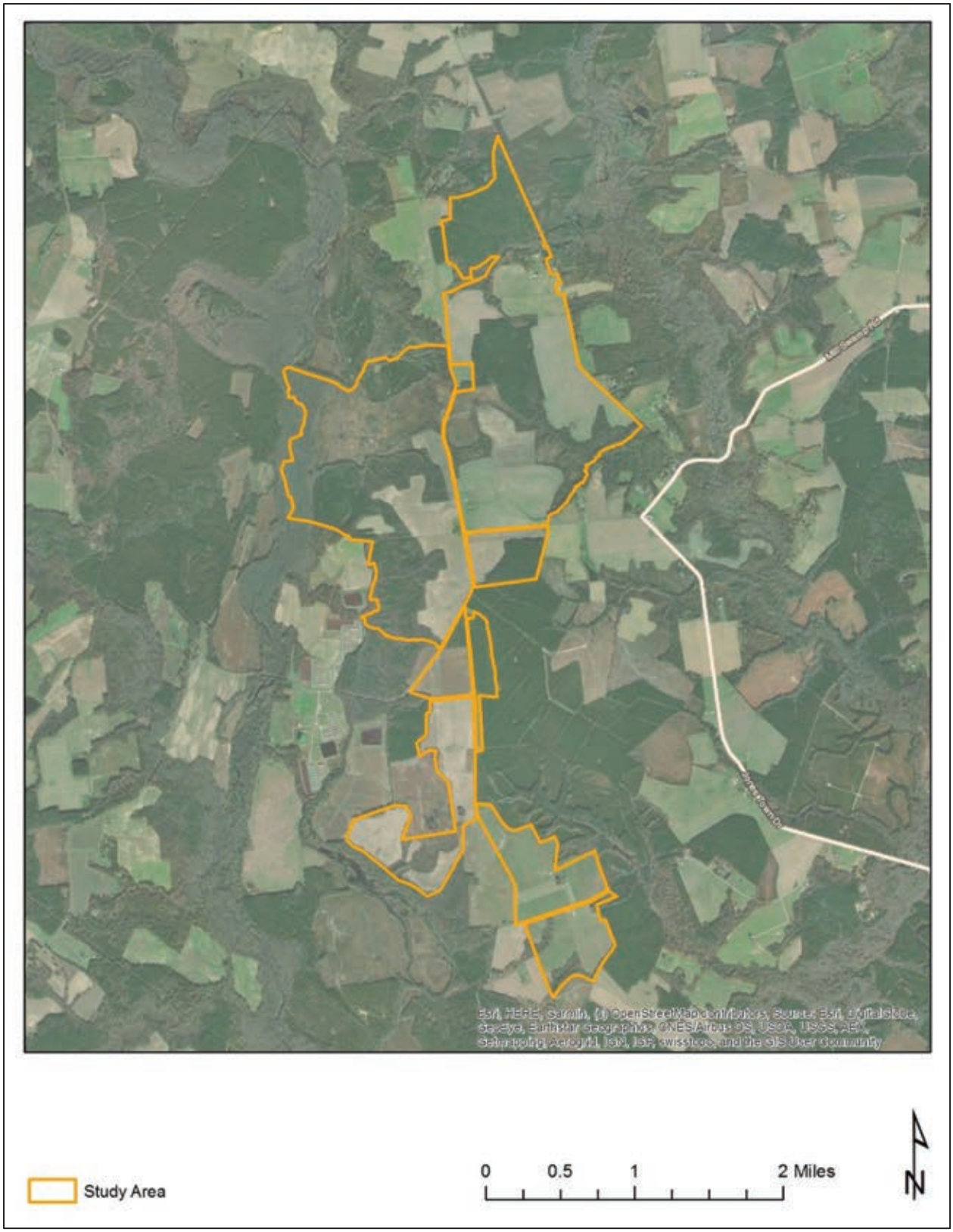

Figure 1-2: Aerial view of study area depicting parcels subject to full assessment as well as desktop-only.

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2. RESEARCH DESIGN

The Phase IA cultural resource assessment of the Sycamore Cross Solar study area was undertaken to provide a comprehensive archival study of previous cultural resource investigations in the study area, a historical map review to understand the land-use and development of properties within the study area, and define potential locations within the study area where historic resources (above and below ground) are present or likely to be present. Limited field reconnaissance was also conducted to verify existing conditions and note visible evidence of cultural resources, previous disturbance, or other pertinent landscape features. The background research, field reconnaissance, and field survey methodologies are summarized below.

ARCHIVAL RESEARCH

In January 2023, D+A conducted background research with the goal of identifying all previously recorded historic properties located within and in the vicinity of the study area in accordance with VDHR's guidance document titled *Guidelines for Conducting Cultural Resources Survey in Virginia* (Revised October 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.

In further preparation for the Phase IA survey, D+A conducted additional review of the following documents and sources for information relative to unrecorded historic property locations in the study 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.

ARCHAEOLOGICAL FIELD SURVEY

For those parcels within the study area where field access was granted, a limited pedestrian survey was conducted to document existing conditions and to note surface evidence of cultural activity or material. In addition, a limited number of judgmentally placed shovel tests were excavated in order to assess and document soil conditions throughout the project area. 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.

REPORT AND RECORD PREPARATION

The results of the background research and field reconnaissance were synthesized and summarized in this report accompanied by maps and photographs as appropriate. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia.

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).

3. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Sycamore Cross Solar study area consists of ±817.46-Hectare (2,020 Acres) of land divided into multiple contiguous and discontiguous parcels. The study area is located along the border of Isle of Wight and Surry counties within a primarily rural area of the Coastal Plain of Southside Virginia. The landscape within and bordering the study area is a mix of cultivated agricultural field, planted timber stands, and native woodland, particularly bordering the numerous drainages and swamps that dissect the area (Figure 3-1).

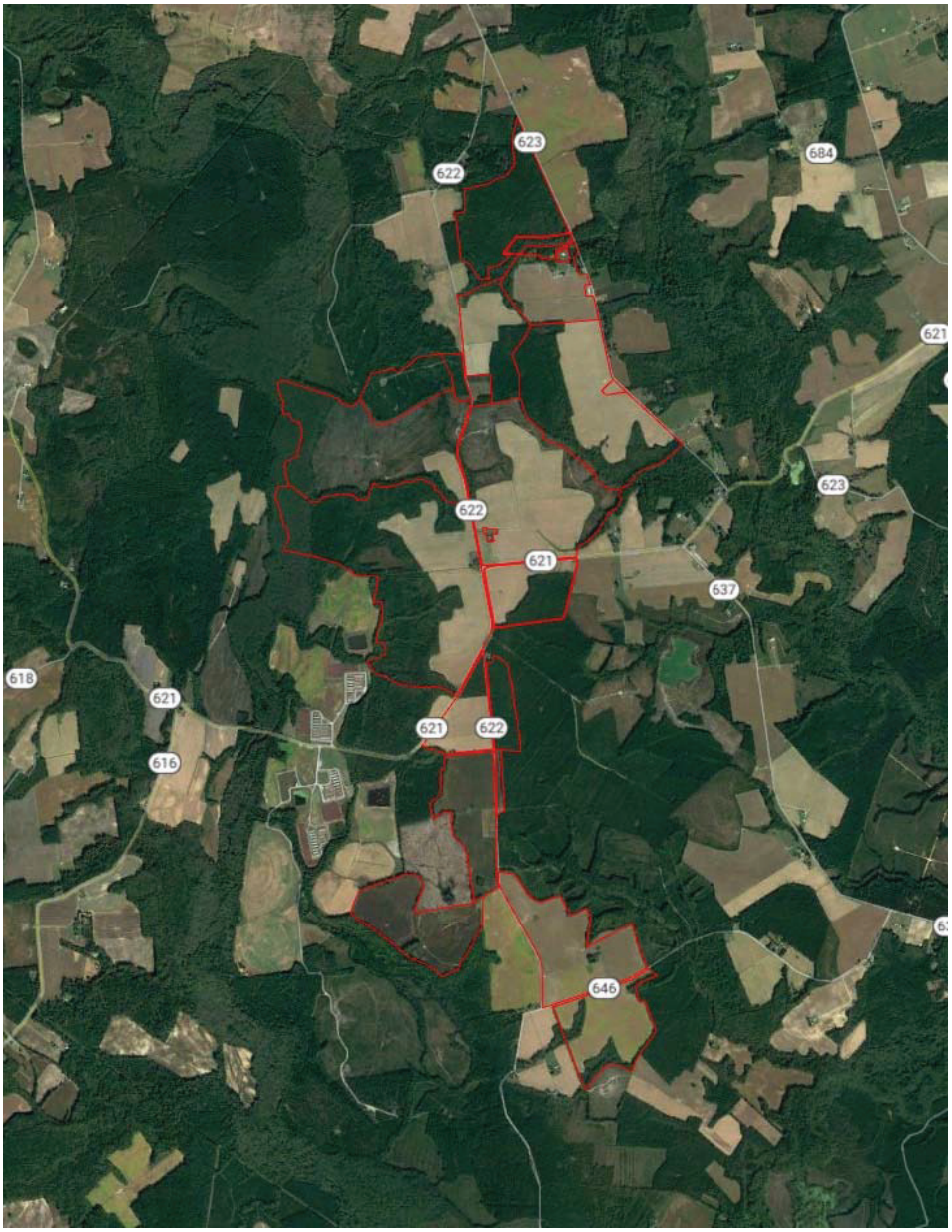

Figure 3-1. Aerial view of study area illustrating existing conditions.

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 study area ranges from approximately ±7.9 meters (26 feet) to ±27.4 meters (90 feet) above mean sea level with the highest elevations located along the crest of a broad ridge along the eastern edge of the study area and the lowest elevations bordering the Blackwater River along the western edge.

HYDROLOGY

Most of the study area drains west into Blackwater River, although portions of the eastern edge drain eastward into Mill Swamp which flows into Rattlesnake Swamp and ultimately into Blackwater River. This flows south into North Carolina where it empties into the Chowan River, which flows into Albemarle Sound, which empties into the Currituck Sound 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 Slagel fine sandy loam which is moderately well drained and covers about 25% of the study area. The second most prominent soil type is Kinston loam, which represents about 17.8% of the study area and is considered poorly drained. Well-drained Emporia fine sandy loam are the only other soils types that account for a significant portion of the study area at 15.2%. The rest of the study area is comprised of assorted sandy loams and complexes. Approximately 39.7% of the soils within the study area are classified as poorly to somewhat poorly drained (Figure 3-2 and Table 3-1).

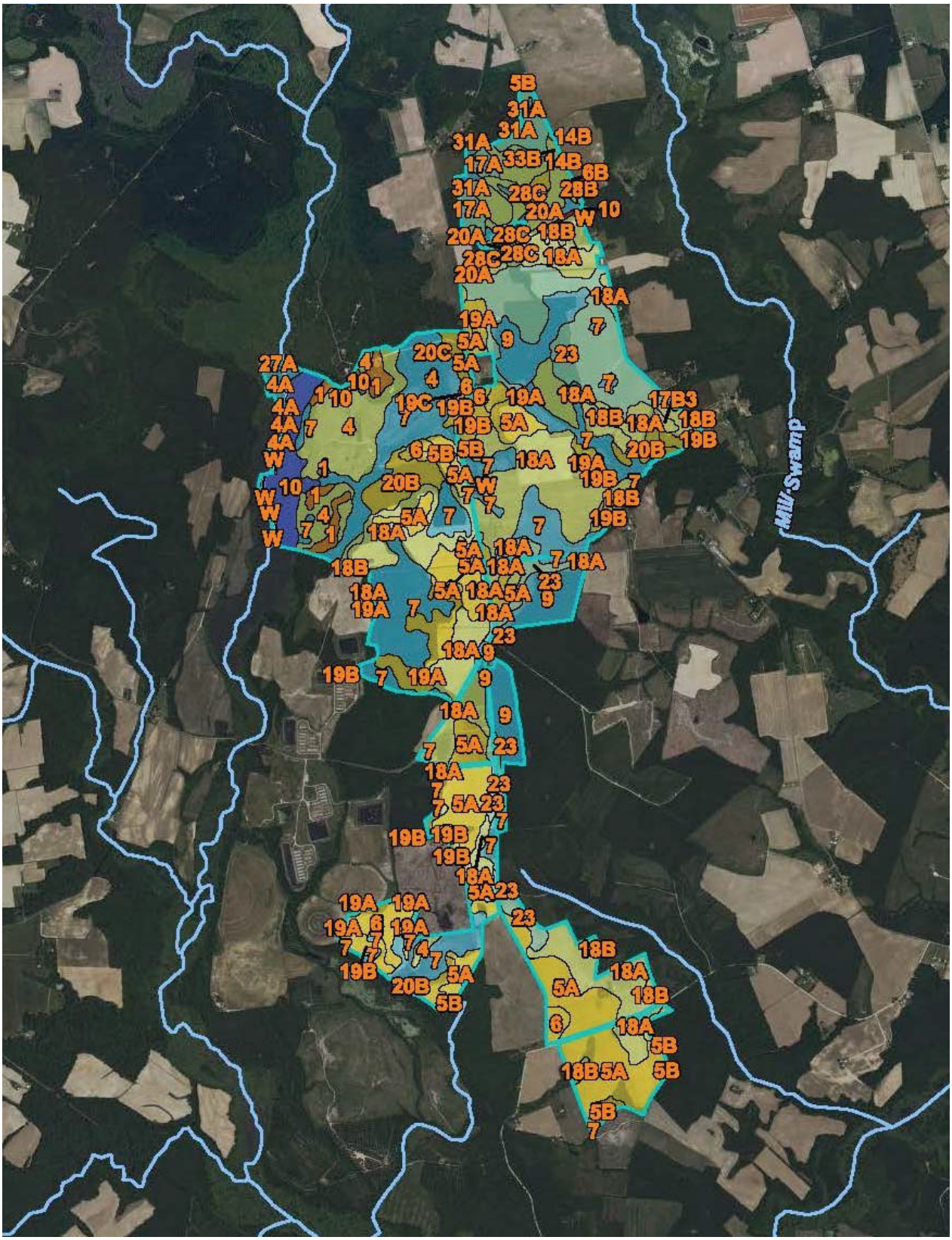

Figure 3-2: Soil survey of the Sycamore Cross study area showing drainage class (USDA 2023).

Table 3-1: Soil survey data for study area parcel cluster, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	Somewhat excessively drained	29.3	1.5%
4	Chipley sand	Moderately well drained	116.0	5.7%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	286.6	14.2%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	21.0	1.0%
6	Kenansville loamy sand	Well drained	41.6	2.1%
7	Kinston loam	Poorly drained	347.0	17.2%
9	Myatt fine sandy loam	Poorly drained	119.0	5.9%
10	Nawney loam	Very poorly drained	55.9	2.8%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	401.5	19.9%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	56.9	2.8%
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	66.8	3.3%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	40.1	2.0%
19C	Uchee loamy sand, 6 to 10 percent slopes	Well drained	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	57.3	2.8%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	9.2	0.5%
23	Yemassee fine sandy loam	Somewhat poorly drained	205.4	10.2%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,863.4**	**92.2%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	3.9	0.2%

Table 3-1 (cont.): Soil survey data for primary study area parcel cluster, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	Moderately well drained	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	Well drained	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	Somewhat poorly drained	40.1	2.0%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	13.0	0.6%
21B	Lakeland sand, 2 to 6 percent slopes	Excessively drained	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	Poorly drained	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	Moderately well drained	0.5	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	Moderately well drained	28.4	1.4%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	Moderately well drained	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	Poorly drained	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	39.7	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	4.2	0.2%
Subtotals for Soil Survey Area			**149.6**	**7.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

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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 2023. 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.

PREVIOUS SURVEYS RELEVANT TO THE STUDY AREA

VCRIS reveals that three Phase I cultural resource surveys have been conducted within one mile of the study area, one of which included portions of the study area (Table 4-1 and Figure 4-1). These surveys are archaeological in nature, although some include architectural resource investigations as well. The three surveys were conducted as part of assorted utility and infrastructure projects.

Table 4-1: Previously conducted Phase I surveys within one mile of the study area. Orange highlight denotes survey including portions of the study area.

Report Number	Survey Title	Author/ Affiliation	Year	VDHR Review File
IW-105	Phase I Cultural Resources Survey for the Align RNG Virginia – Waverly Renewable Natural Gas Project, Isle of Wight County, Virginia	TRC	2022	2021-0097
SY-079	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	DUTTON	2020	2020-0521
VA-176	Phase I Archaeological Survey, Virginia Reliability Project, Cities of Chesapeake and Suffolk, and Greensville, Isle of Wight, Prince George, Southampton, Surry, and Sussex Counties, Virginia	ERM	2022	2021-0026

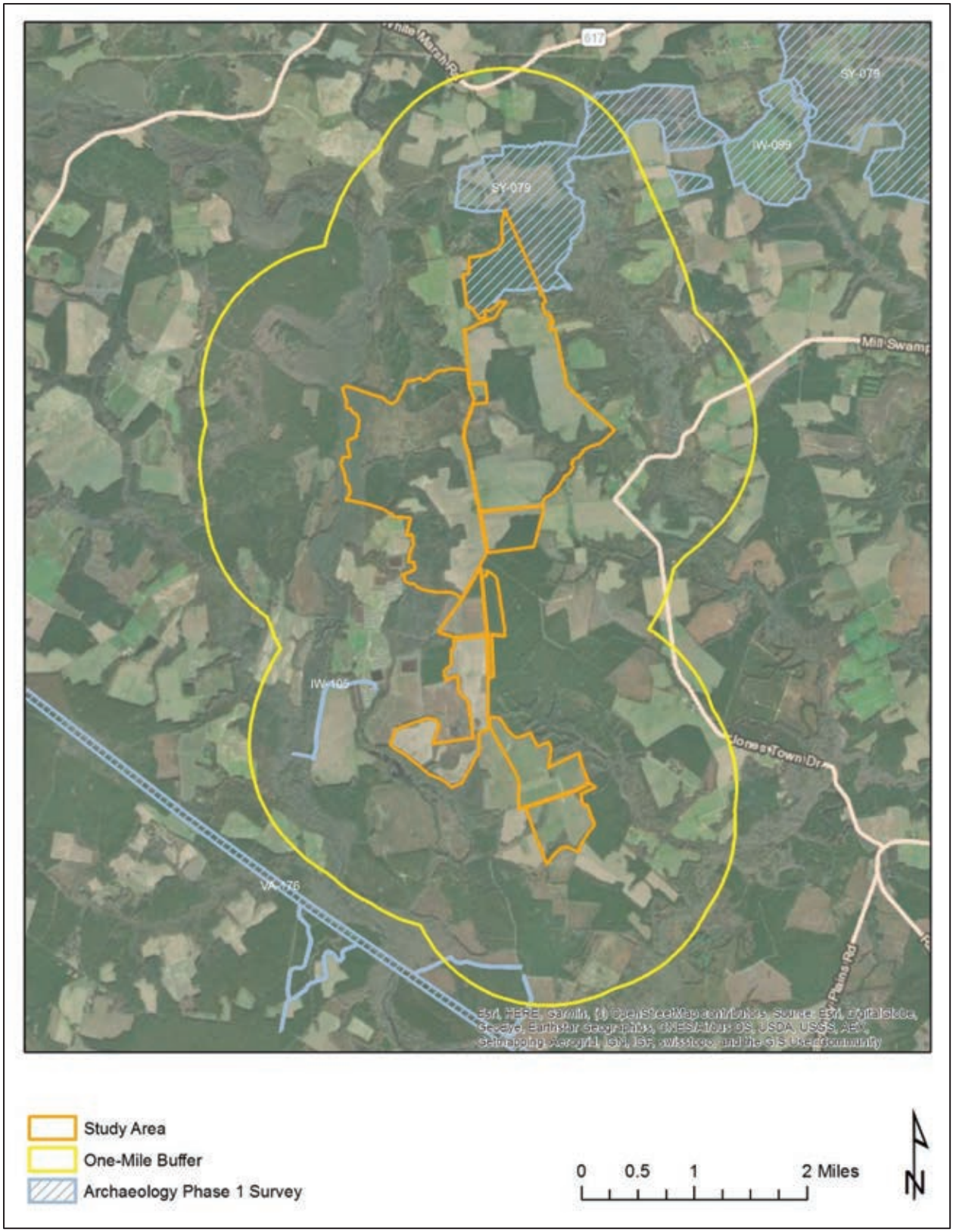

Figure 4-1: Previous Phase I surveys conducted within one mile of the study area Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are ten (10) previously recorded archaeological sites located within one mile of study area, two of which are located within the study area (Table 4-2 and Figure 4-2). The sites within one mile include prehistoric lithic scatters and camps; as well as historic period domestic sites and refuse scatters. Of the sites within one mile, eight (8) have been determined not eligible and two (2) have not been formally evaluated by the VDHR. Of the two sites within the study area, both are historic period artifact scatters that have been determined not eligible for listing in the NRHP.

Table 4-2: Table detailing all archaeological resources within one mile of study area. Orange highlight denotes site is within the limits of the study area.

VDHR #	Site Type	Cultural Designation	Temporal Association	NRHP Status
44IW0327	Camp	Native American	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E)	Not Evaluated
44IW0336	Lithic scatter	Native American	Pre-Contact	DHR Staff: Not Eligible
44SY0128	Dwelling, single	Indeterminate	Historic/Unknown	Not Evaluated
44SY0316	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0317	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0318	Dwelling, single	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0319	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0320	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0321	Outbuilding	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0322	Artifact scatter, Lithic scatter	Indeterminate	Pre-Contact, Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible

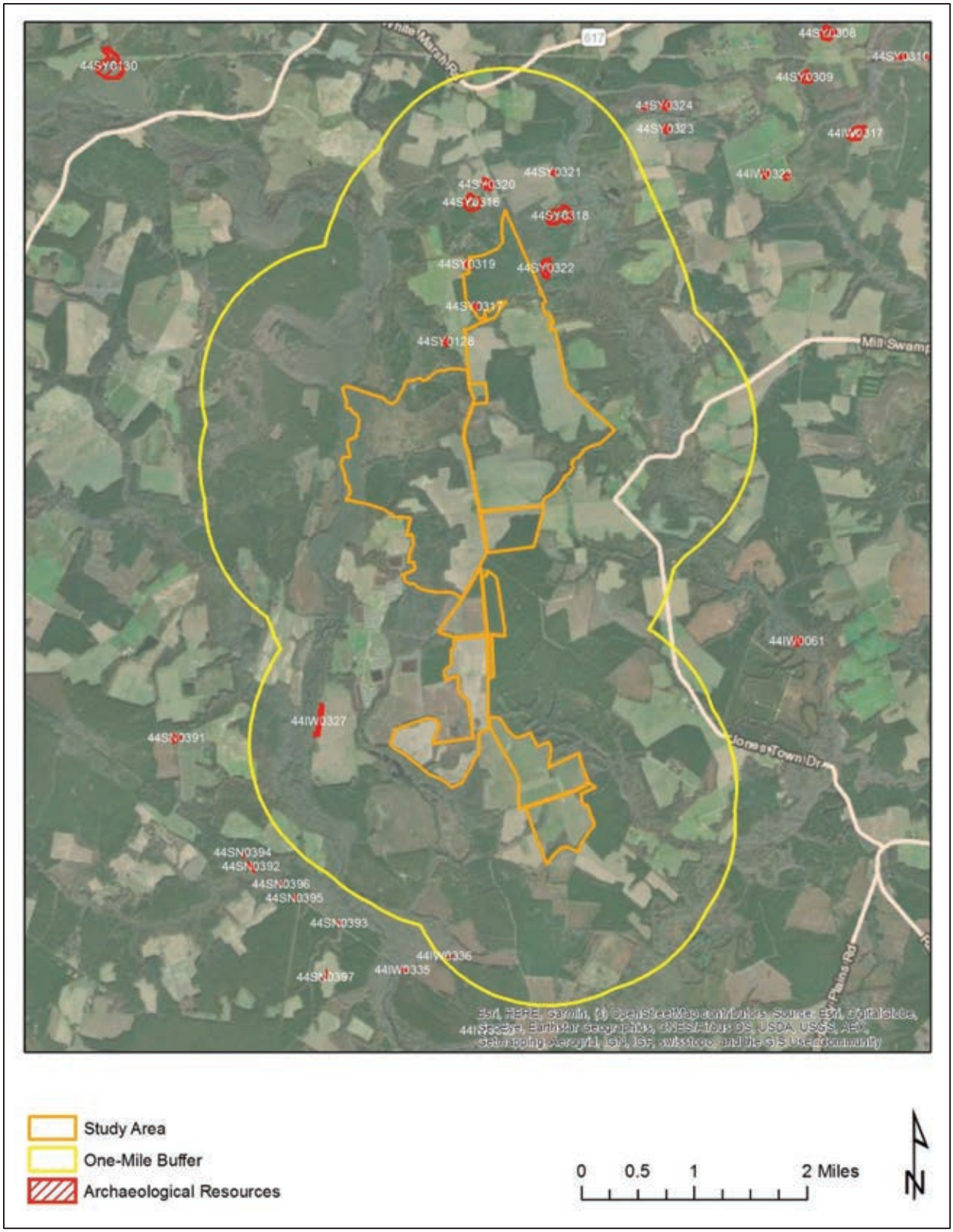

Figure 4-2: Previously recorded archaeological sites located within one mile of the study area. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

There are thirty-two (32) previously recorded architectural resources located one mile of the study area, nine (9) of which are located within the study area (Table 4-3 and Figure 4-3). The resources within one mile include single-family homes from the mid-eighteenth to mid-twentieth century, a commercial building from the turn-of-the-twentieth century, a church from the early-twentieth century, and a family cemetery from the early-twentieth century. Thirteen of the resources have been determined not eligible for listing in the NRHP by the VDHR and the rest have not been formally evaluated. Of the nine resources within the study area, nine are dwellings with four from the early-nineteenth century, four from the late-nineteenth century, and one from the early-twentieth century; and one is a late-nineteenth century commercial building. One late-nineteenth and one early-twentieth century dwelling have been determined not eligible for listing in the NRHP and the rest have not been formally evaluated.

Table 4-3: Previously identified architectural resources located within one mile of the study area. Orange highlight denotes resource is located within the study area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-0029	House, Route 622 (Function/Location)	Single Dwelling	c.1800	Not Evaluated
046-0030	Betts House (Historic)	Single Dwelling	c.1802	Not Evaluated
046-0032	Dudley House and Outbuildings (Historic)	Single Dwelling	c.1820	Not Evaluated
046-0055	Tenant House, Sycamore Crossroads (Historic/Current)	Secondary Dwelling	c.1800	Not Evaluated
046-0056	Grays' Brick House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-0057	Brick House (Descriptive)	Single Dwelling	c.1825	Not Evaluated
046-0068	Wilson Hollemon House, Mill Swamp Rd (Rt 621) (Historic/Location)	Single Dwelling	c.1830	Not Evaluated
046-5147	Farmhouse, 14537 Rattlesnake Trail (Function/Location)	Single Dwelling	1850	Not Evaluated
046-5148	Farmhouse, 13407 Ramsey Road (Function/Location)	Single Dwelling	1880	Not Evaluated
046-5149	Store, Intersection of Mill Swamp Road and Sycamore Cross Drive (Function/Location)	Commercial Building	1899	Not Evaluated
046-5150	Farmhouse, 11356 Proctors Bridge Road (Function/Location)	Single Dwelling	1899	Not Evaluated
046-5151	Mill Swamp Baptist Church & Cemetery (Historic/Current)	Church/Chapel	1928	Not Evaluated
046-5152	Store, 6159 Jones Town Road (Function/Location)	Service Station	c.1930	Not Evaluated
046-5234	William Gray House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-5260	House, 6330 Mill Swamp Road (Function/Location), Mill Swamp Baptist Church Parsonnage (Historic)	Single Dwelling	c.1900	Not Evaluated
046-5550	Dwelling, 10126 White Hill Trail (Function/Location)	Single Dwelling	1890	DHR Staff: Not Eligible
046-5551	Dwelling, 10106 White Hill Trail (Function/Location)	Single Dwelling	1944	DHR Staff: Not Eligible
046-5552	Dwelling, 10088 White Hill Trail (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
087-0003	Binford House (Historic)	Single Dwelling	c.1750	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
087-5328	Brantley Home (Historic), Pretlow Farm (Historic)	Single Dwelling	c.1900	Not Evaluated
087-5509	1760 Henley Pretlow House (Historic), Captain Pretlow House (Historic), House 4071 Proctor's Bridge Road (Function/Location)	Single Dwelling	1760	Not Evaluated
090-0051	Stratman House (Historic/Current)	Single Dwelling	c.1750	Not Evaluated
090-5160	Dwelling, 9091 White Marsh Road (Function/Location)	Single Dwelling	1905	DHR Staff: Not Eligible
090-5161	Dwelling, 9100 White Marsh Road (Function/Location)	Single Dwelling	1949	DHR Staff: Not Eligible
090-5162	Dwelling, 274 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1890	DHR Staff: Not Eligible
090-5163	Dwelling, 337 Berrymans Corner Road (Function/Location)	Single Dwelling	1942	DHR Staff: Not Eligible
090-5164	Dwelling, 285 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1900	DHR Staff: Not Eligible
090-5165	Simmons and Brown Cemetery (Current Name)	Cemetery	c.1900	DHR Staff: Not Eligible
090-5166	Dwelling, 1122 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
090-5167	Dwelling, 1097 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1965	DHR Staff: Not Eligible
090-5168	Dwelling, 1676 Berrymans Corner Road (Function/Location)	Single Dwelling	1870	DHR Staff: Not Eligible
090-5174	House, Berrymans Corner Road (Function/Location)	Single Dwelling	c.1920	DHR Staff: Not Eligible

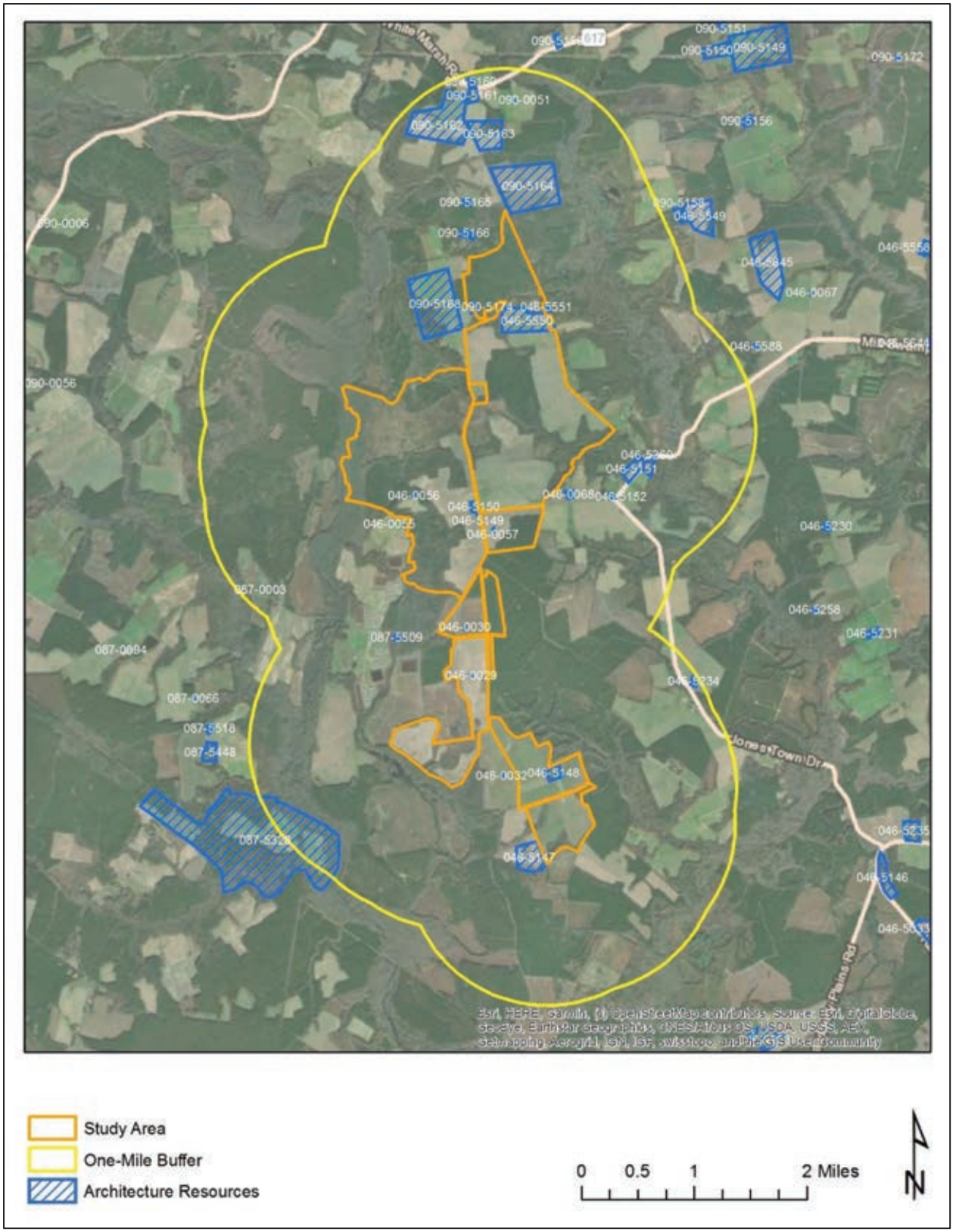

Figure 4-3: Previously recorded architectural resources within one mile of the study area. Source: V-CRIS

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5. HISTORIC MAP REVIEW

The Sycamore Cross Solar study area is located at the northwestern corner of Isle of Wight County, spanning the county line into Surry County. Prior to English arrival to Virginia, the region was home to the Warraskoyak 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). As early as 1608, the English crossed the James River to what is now Isle of Wight County though it would not be until 1619 when the first permanent English settlement was initiated in the future county (Morrison and Gwaltney 2006). 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 region a bit less desirable (Rouse 1968:17).

The study area would have remained the frontier as settlement was focused along the James River. 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 (Rouse 1969:67).

Despite unrest between European settlers and American Indians, land continued to be granted. Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland into the more swampy land. In the vicinity of the study area are Blackwater River and Mill Swamp.

By the mid-eighteenth century, the population increasingly moved inland from the James River and the farms in Isle of Wight County were typically between 500 to 1,700 acres (David 2007:9). According to V-CRIS records, several mid- to late eighteenth century homes were constructed less than two miles of the study area. During the American Revolution, though the British passed through Isle of Wight and Surry counties, closer to the James River, the war did not impact this region as it did nearby port towns, like Norfolk and Portsmouth (Figure 5-1).

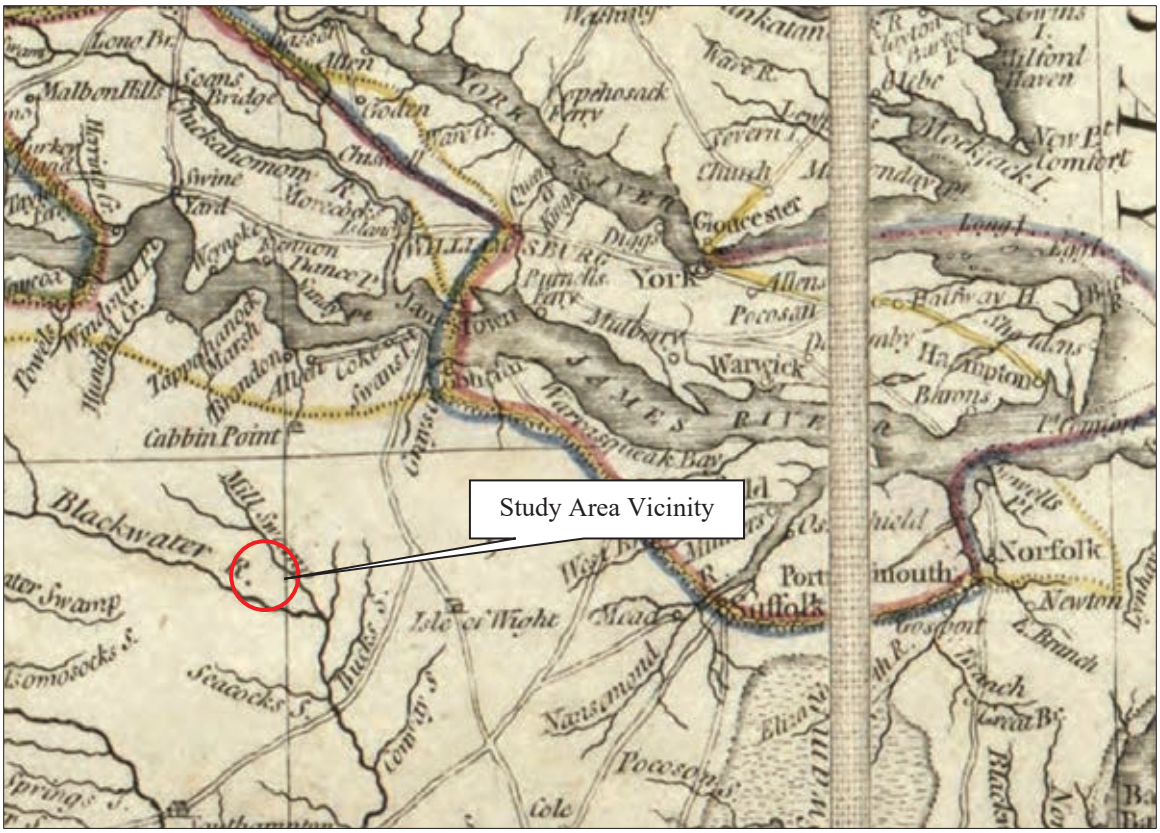

Figure 5-1: Detail of *The marches of Lord Cornwallis in the Southern Provinces*, 1787, depicting general vicinity of the study area. Source: Library of Congress

As time passed, the almost exclusively agrarian society was beginning to accommodate urban centers and small hamlets, although farming continued to be the primary means of livelihood. 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. Roads began to increasingly cross the county and homesteads continued to be erected, including within the study area and the general vicinity (Figure 5-2).

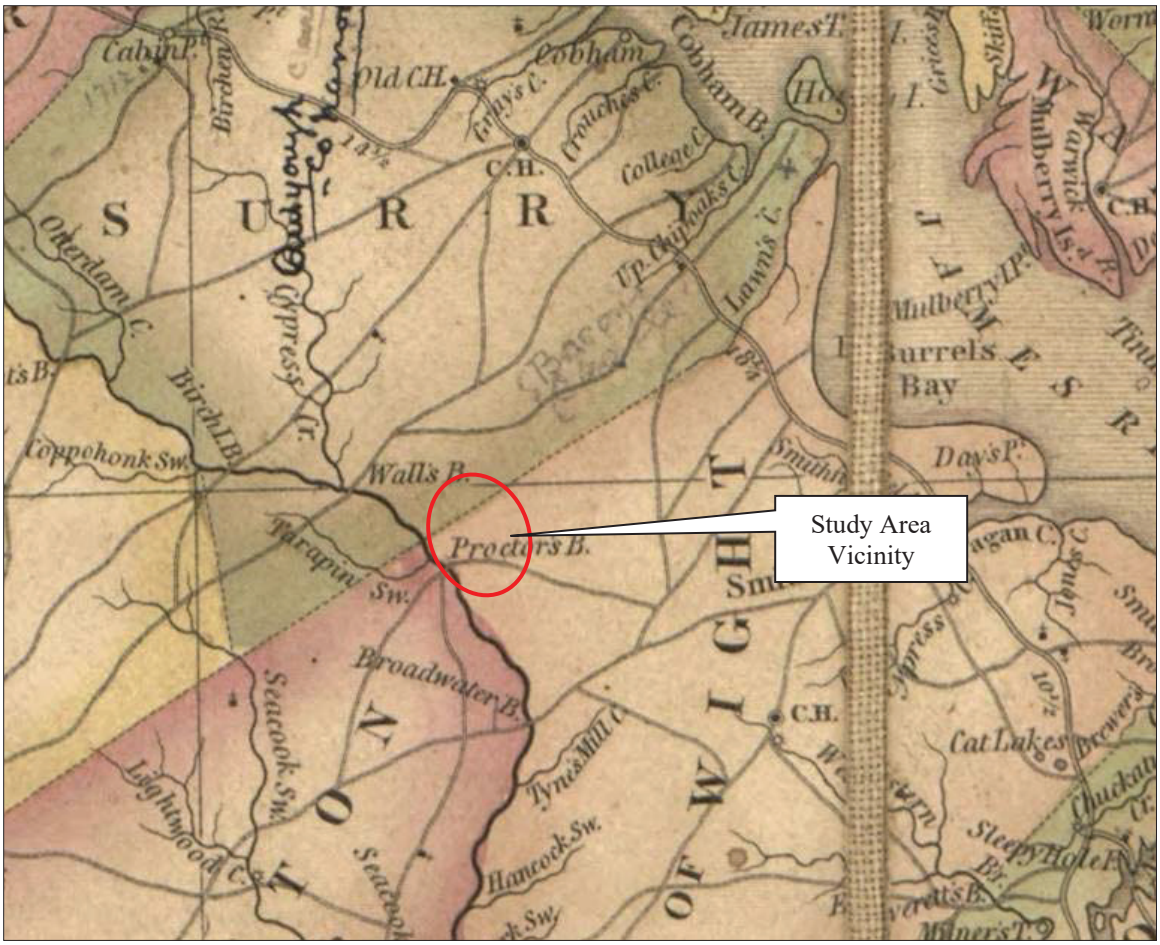

Figure 5-2: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the study area. Source: Library of Congress

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. Approximately 90 percent of the total population was involved in agriculture and identified as farmers (David 2007:10).

Despite the number of marshes crossing the study area, structures within it and in the vicinity were common by the mid-nineteenth century as evidenced by mid-nineteenth century maps. In Surry County, the study area appears to have been completed wooded (Figure 5-3). Mapping illustrates several buildings within or adjacent to the study area in Isle of Wight County, however (Figure 5-4). This includes homes related to the Bell, Betts, and Barlow families. According to a Works Progress Administration survey of Virginia's historical inventory, there was a small family cemetery associated with the Betts House that may be within the study area (Jordan 1937). The cemetery is not identified in Find-a-Grave or on topographic maps. Major roads crossed through the study area in Isle of Wight County, including that connecting to Proctor's Bridge over the Blackwater River. Also located in Isle of Wight County, on Rattlesnake Road (now Sycamore Cross Drive, Route 622) were a store and a schoolhouse.



Figure 5-3: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the portion of the study area in Surry County. Source: Library of Congress



Figure 5-4: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the primary study area parcel cluster in Isle of Wight County. Source: Library of Congress

During the Civil War, no major battles took place in the county, although a skirmishes did occur. The products of the countryside were depleted in service of the Confederate cause. Following the War Between the States, the longstanding agricultural economy of Tidewater Virginia began to recover and the production of peanuts increased. In addition to peanuts, the county produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Timbering also prospered, as did the bacon and ham industry. 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, within the study area was Sycamore Crossroads.

As the twentieth century continued, the number of farms steadily increased. Additionally, during this time many farms were subdivided and new single family homes were constructed or new dwellings replaced older homes on farms (David 2007:18). Topographic maps from this period illustrate the increase of buildings within and around the study area as well as a lumber railroad in the study area in Surry County (Figure 5-5).



Figure 5-5: Detail of the 1919 and 1920 topographic maps, *Surry* and *Ivor,* depicting the primary study area parcel cluster. Source: USGS

The end of World War II brought with it a building boom that would begin to change the character of the earlier farmsteads within counties, particularly Isle of Wight. With its proximity to Newport News, Portsmouth, and Norfolk, the county began to become a bedroom community. As the twentieth century continued and transitioned in the twenty-first, the study area remained much as it had historically, as a mixture of forested land and agricultural fields with some farmsteads (Figure 5-6 through Figure 5-10). Buildings previously depicted in the study area in Surry County, were no longer illustrated by the mid-twentieth century. Sycamore Crossroads remained, though it was referred as McClelland on the 1944 topographic map. On the same map, south of McClelland, McClelland School was depicted within the study area. This was a small school that served black students (Locations n.d.). The study area continues to show evidence of agriculture and timbering on its land.

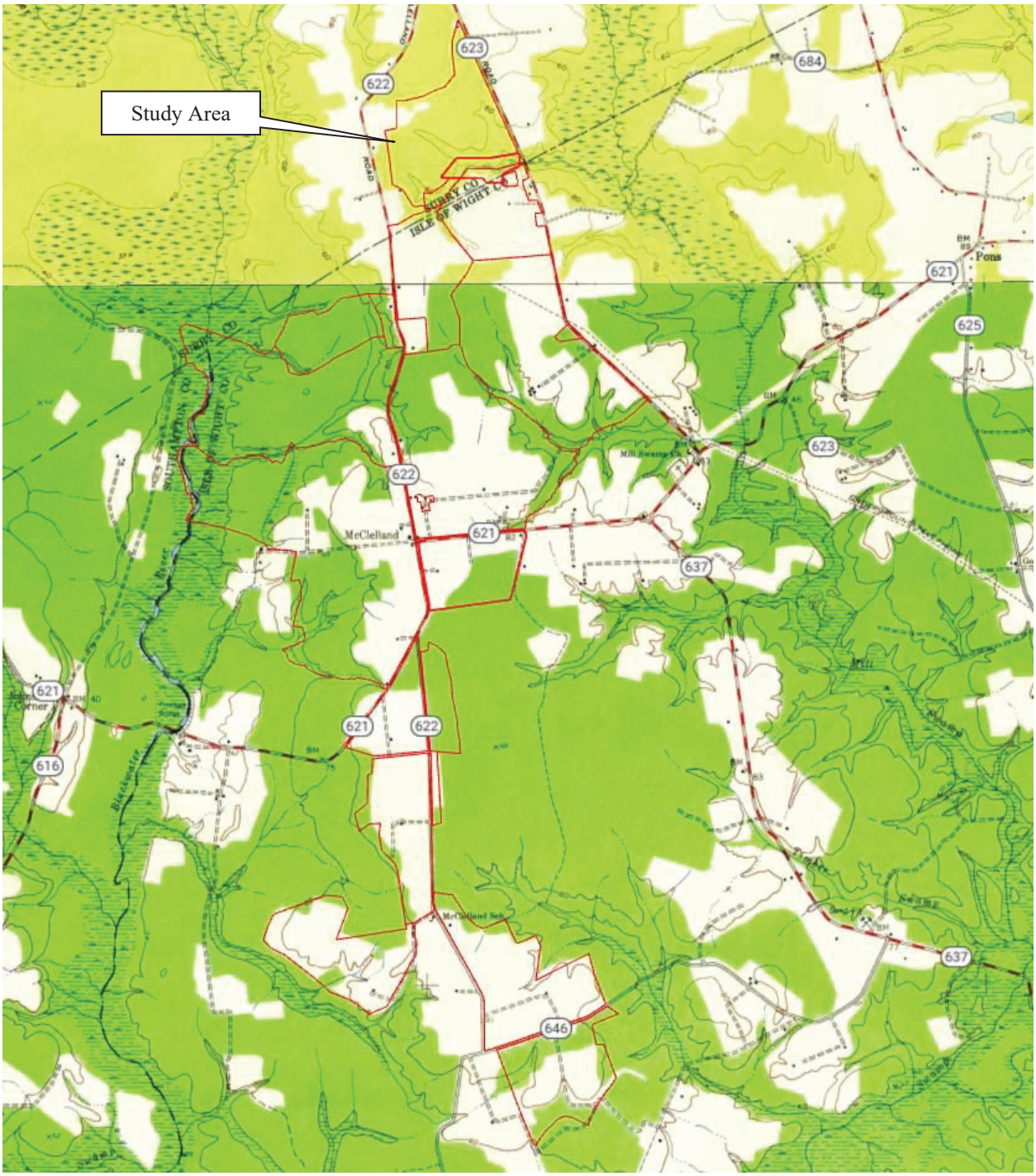

Figure 5-6: Detail of the 1944 and 1954 topographic maps, *Raynor* and *Runnymeade*, depicting the primary study area parcel cluster. Source: USGS

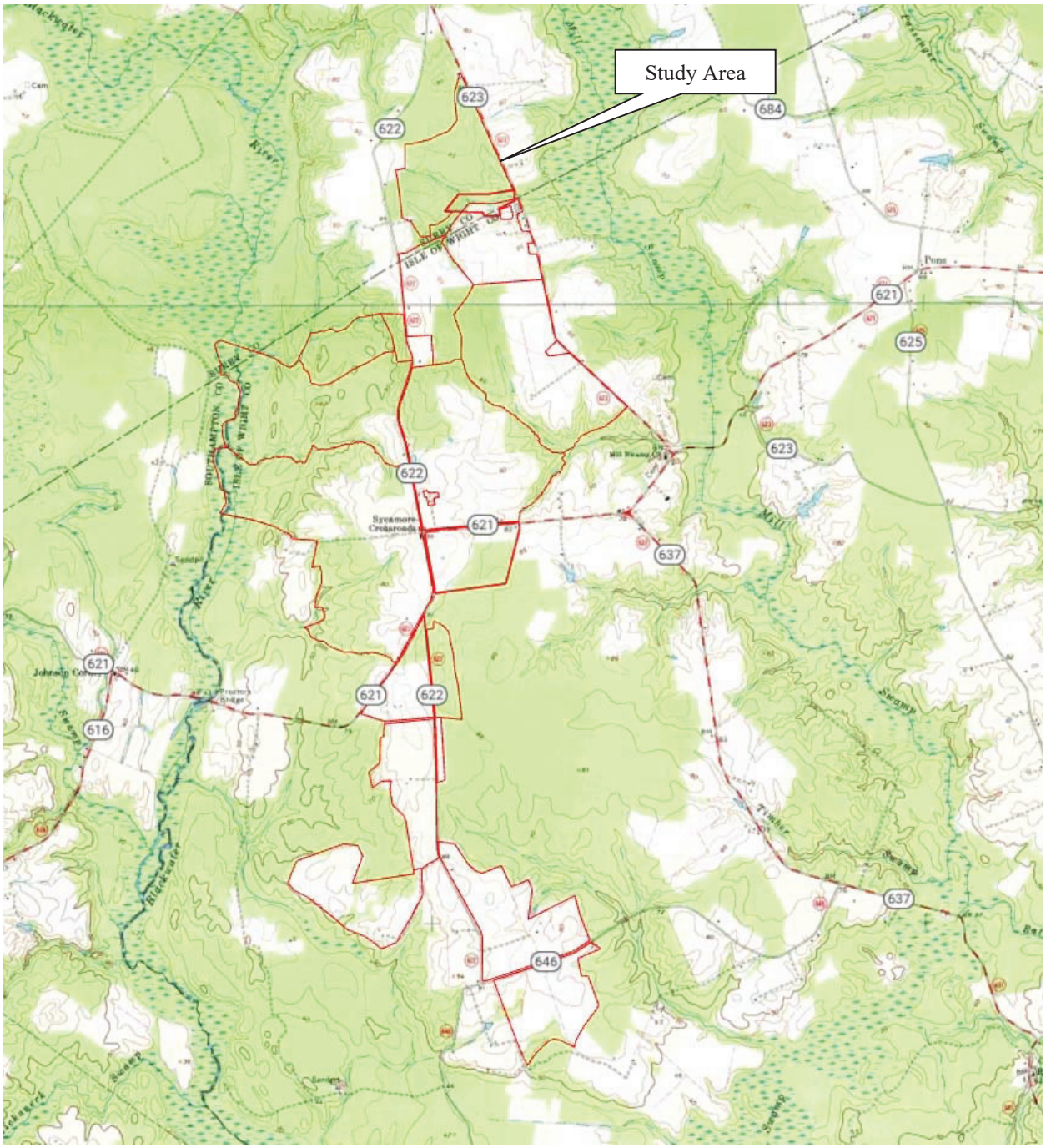

Figure 5-7: Detail of the 1968 and 1971 topographic maps, *Raynor* and *Runnymeade*, depicting the primary study area parcel cluster. Source: USGS

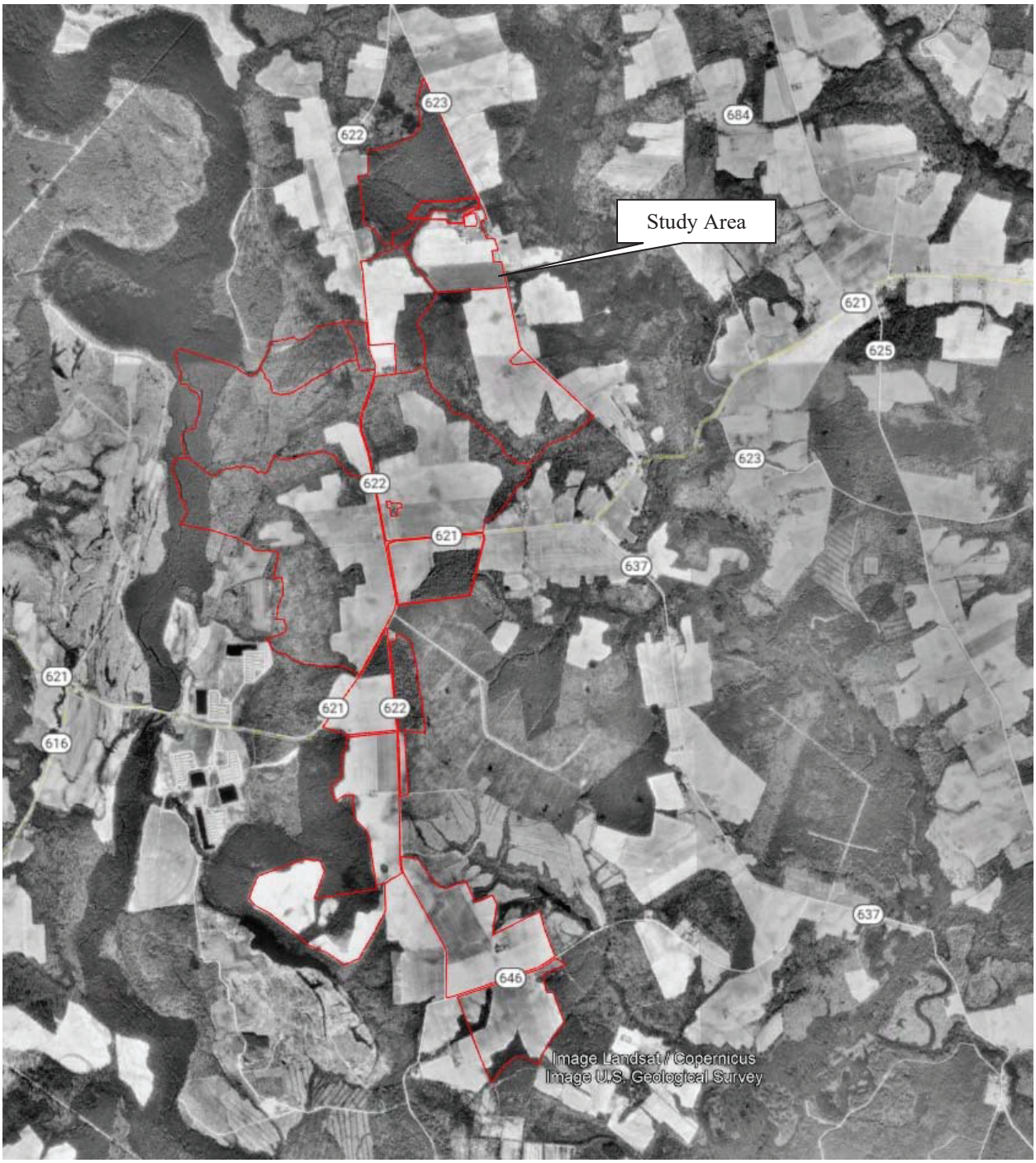

Figure 5-8: Detail of a 1990 aerial depicting the primary study area parcel cluster. Source: Google Earth



Figure 5-9: Detail of a 2003 aerial depicting the study area. Source: Google Earth

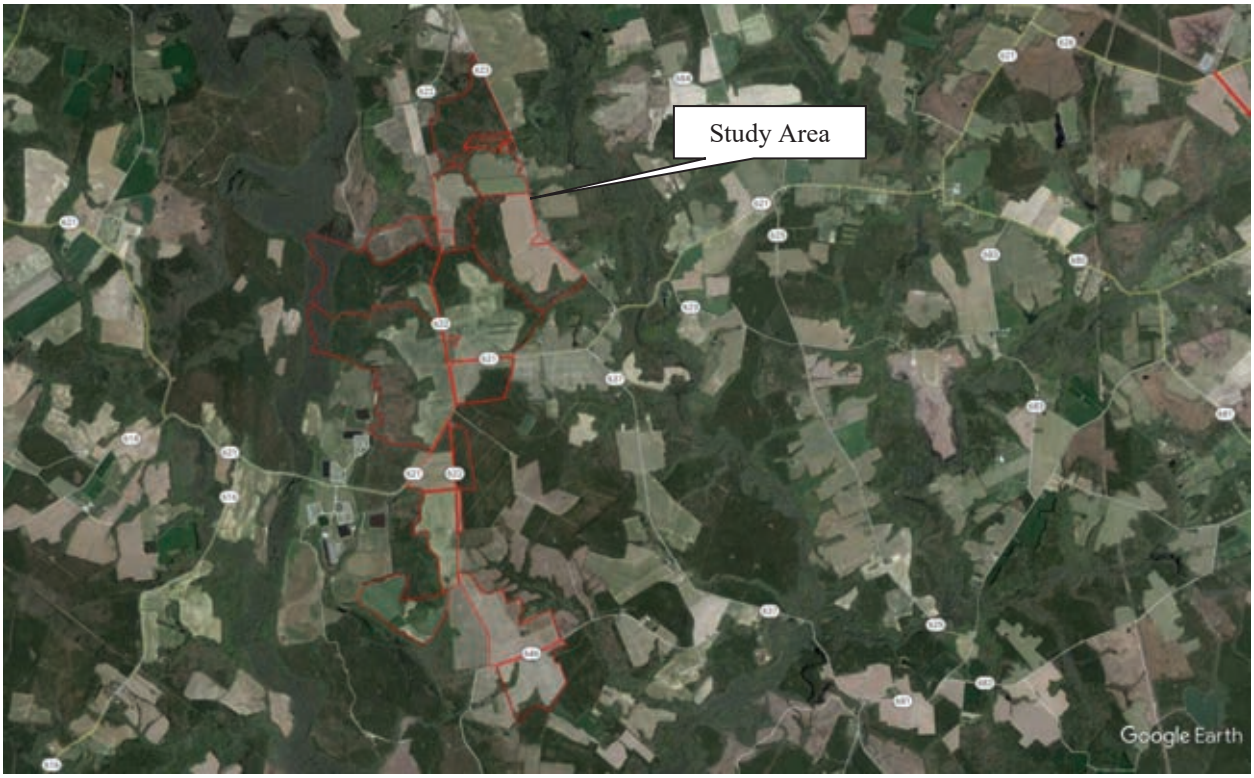

Figure 5-10: Detail of a 2017 aerial depicting the study area. Source: Google Earth

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6. ASSESSMENT RESULTS

On January 4th and 5th and June 28th and 29th, 2023, D+A performed field reconnaissance for the Phase IA cultural resources assessment of the Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The field investigations involved a walkover reconnaissance of the study area tracts, as well as the excavation of nine (9) judgmental shovel test pits in order to determine soil stratigraphy within them. To organize the field investigations, the study area was divided into three sections, including the northern, central, and southern parcels (Figure 6-1). The results of the assessment are summarized below.



Figure 6-1: Sycamore Cross Study Area depicting Field Reconnaissance Areas.

NORTHERN PARCELS

The Northern Parcels area consists of six tracts of land at the northern edge of the overall study area. The parcels are generally located between Berrymans Corner Road to the west and Mill Swamp Road to the east, and north of an unnamed tributary to Mill Swamp (Figure 6-2).

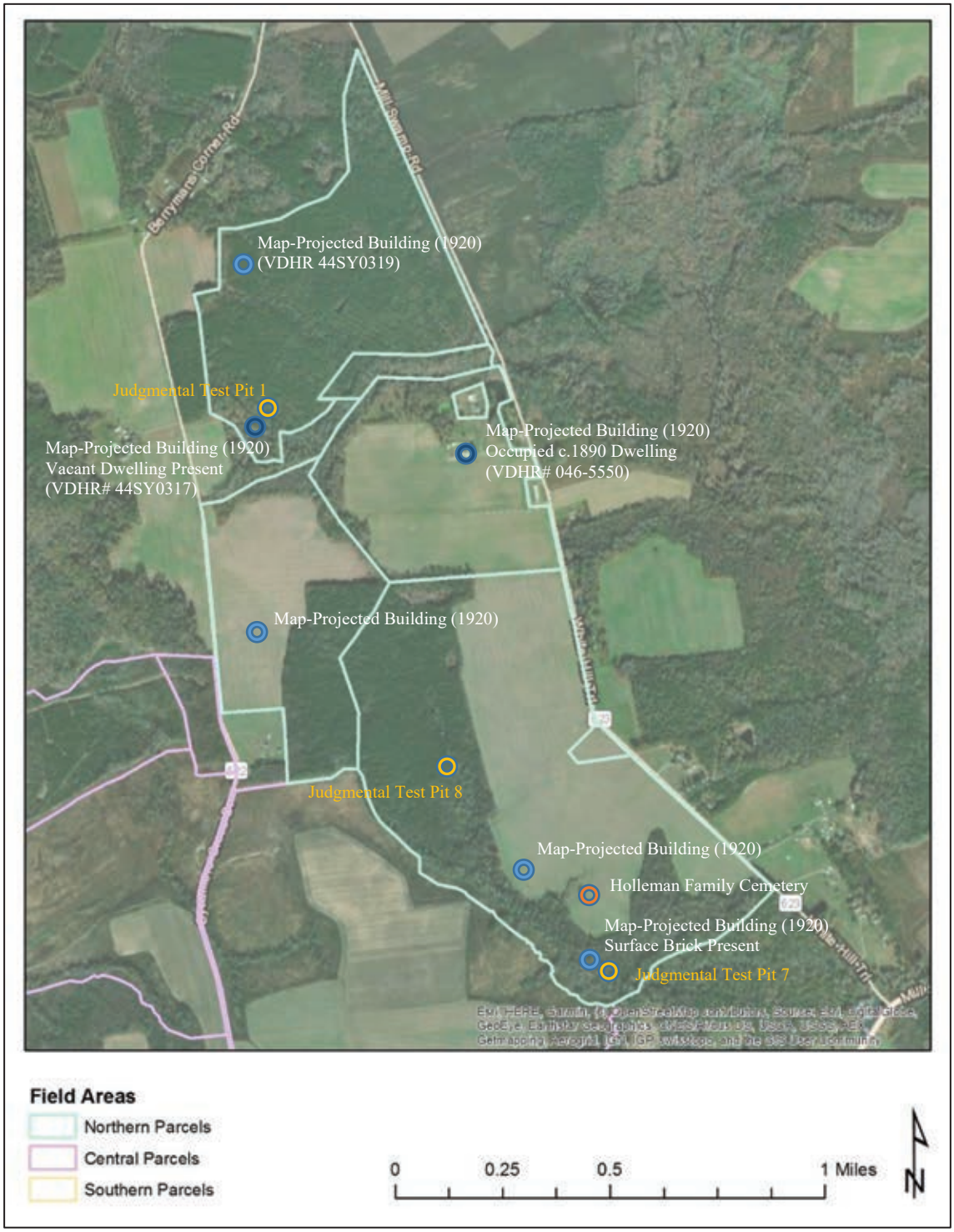


Figure 6-2: Northern parcels map.

At present time, the northernmost two parcels are completely wooded, while the lower parcels are a mix of open agricultural field, primarily occupying the portions of the area along the road while the central areas along the Mill Swamp tributary are wooded. Vegetation in the northern parcels consisted of mature planted pine with scrub understory (Figure 6-3) while the vegetation within the lower areas is a mix of native woodland along the drainage and mature planted pine (Figure 6-4 and Figure 6-5). The agricultural fields were fallow at the time of inspection in January and planted with corn as of June (Figure 6-6). The terrain of the area is generally flat, except along the drainages that cross through the lower edge of the northernmost parcel and centrally through the lower parcels, enroute towards Mill Swamp to the east.

One occupied dwelling and farm complex is located near the northern edge of this area just south of a drainage leading into Mill Swamp. This building appears to coincide with one labeled as "Turner" on Civil War-era maps and has been previously recorded as a circa 1890 dwelling (VDHR# 046-5550) (Figure 6-7). Two additional previously recorded dwellings from the early- to mid-twentieth century are located along the road to the front of this house (VDHR# 046-5551 and 046-5552), but both are excluded from the project study area.

One abandoned dwelling with an associated outbuilding was observed in the western edge of the northernmost parcel (Figure 6-8). This building is located within the limits of previously recorded site VDHR# 44SY0317, recorded as a Reconstruction and Growth (1866-1916) era site that has been determined not eligible. Civil War-era maps reveal what is now Sycamore Cross Road was present along the western edge of the area, but suggests the area remained wooded and undeveloped at that time. However, a 1920 topographic map reveals a building present by that time in generally the same location as the abandoned home. A driveway off Berrymans Corner Road (SR 622) leads to the home.

The 1920s topographic map also reveals several additional buildings scattered throughout the northern parcel area, none of which remain extant, although evidence of several remain. One in the northwestern corner of the area coincides with site 44SY0319 but no surface evidence was observed. This site has been recorded as a Reconstruction and Growth (1866-1916) era site that was determined not eligible for listing in the NRHP by the VDHR. A relic farm lane from Sycamore Cross Drive in the western most parcel leads to the location of one of the map-projected buildings although field inspection did not reveal surface evidence of the building. The 1920 map projects two additional buildings along the drainage in the southernmost parcel of this area of which a brick was observed on the surface in the vicinity of one (Figure 6-9) but no evidence was observed of the second. A family cemetery associated with the Holleman family was observed within a copse of trees set between the map-projected locations of these buildings (Figure 6-10).



Figure 6-3: Planted pine forest of northernmost Parcel, looking South from Judgmental 1



Figure 6-4: Field edge within southernmost Parcel, looking northeast from near Judgmental 7



Figure 6-5: Wooded area along drainage in southernmost parcel, looking northwest from Judgmental 8



Figure 6-6: Corn planted within southernmost parcel, looking southeast



Figure 6-7: Occupied dwelling along Mill Swamp Road generally coinciding with "Turner" on Civil War-era maps and previously recorded as circa 1890 VDHR# 046-5550.



Figure 6-8: Vacant dwelling in the northernmost parcel coinciding with Site 44SY0317.



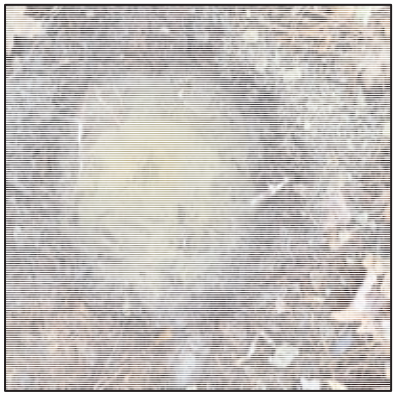
Figure 6-9: Brick on surface in the vicinity of a 1920 map projected building

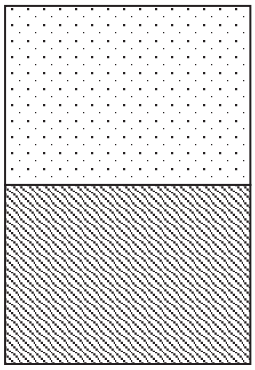


Figure 6-10: Headstone within family cemetery, looking east.

Three judgmental shovel tests were excavated throughout the northern parcel assessment area, including one in the northwestern portion of the area near a standing home in the vicinity of Site 44SY0317 (STP 1), one within a wooded area bordering the drainage that extends through the central portion of the area (STP 2), and one in the southern portion of the area in the vicinity of a 1920 map projected home where a brick was encountered on the surface (STP 3).

Judgmental STP 1 confirmed disturbed topsoil in what appears to be a previously logged area and was negative for cultural material. Soils consisted of a topsoil layer of 2.5Y 5/4 silty clay loam topsoil (A horizon) over top of 2.5Y 5/6 silty clay subsoil (B horizon) (Figure 6-11). The shovel test pit was highly disturbed, with little historic integrity remaining.





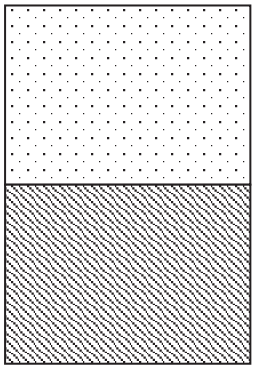
2.5Y 5/4 silty clay loam
0-33 cm

2.5Y 5/6 silty clay
33-40 cm

Figure 6-11: Soil profile of Judgmental 1.

Judgmental STP 8 confirmed disturbed topsoil in what appears to be a previously logged area and was negative for cultural material. Soils consisted of a topsoil layer of 2.5Y 5/6 sandy clay loam topsoil (A horizon) over top of 2.5Y 6/6 sandy clay subsoil (B horizon) (Figure 6-12).





2.5Y 5/6 sandy clay loam
0-41 cm

2.5Y 6/6 sandy clay
41-51 cm

Figure 6-12: Soil profile of Judgmental 8.

Judgmental STP 7 revealed natural soil stratigraphy within an area of native vegetation bordering a drainage and was negative for cultural material. Soils consisted of a topsoil layer of 10YR 7/4

sandy loam topsoil (A horizon) overlying 2.5Y 7/3 sandy clay loam, over top of 5Y 6/4 sandy clay subsoil (B horizon) (Figure 6-13).

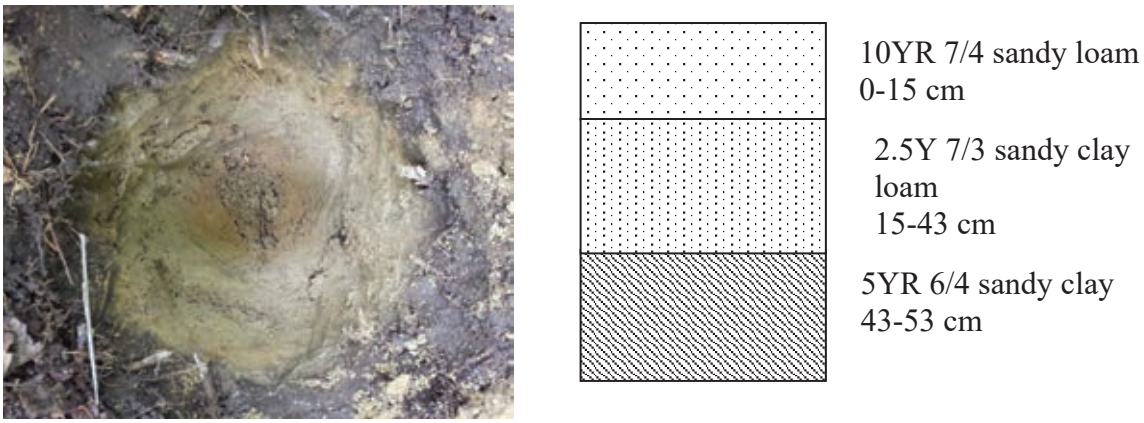


Figure 6-13: Soil profile of Judgmental 7.

CENTRAL PARCELS

The Central Parcels area consists of six tracts of land sited centrally within the overall study area. The area spans Sycamore Cross Drive/Proctors Bridge Road (State Rte 622) and borders Blackwater River to the west and an offshoot of Mill Swamp to the east (Figure 6-14).

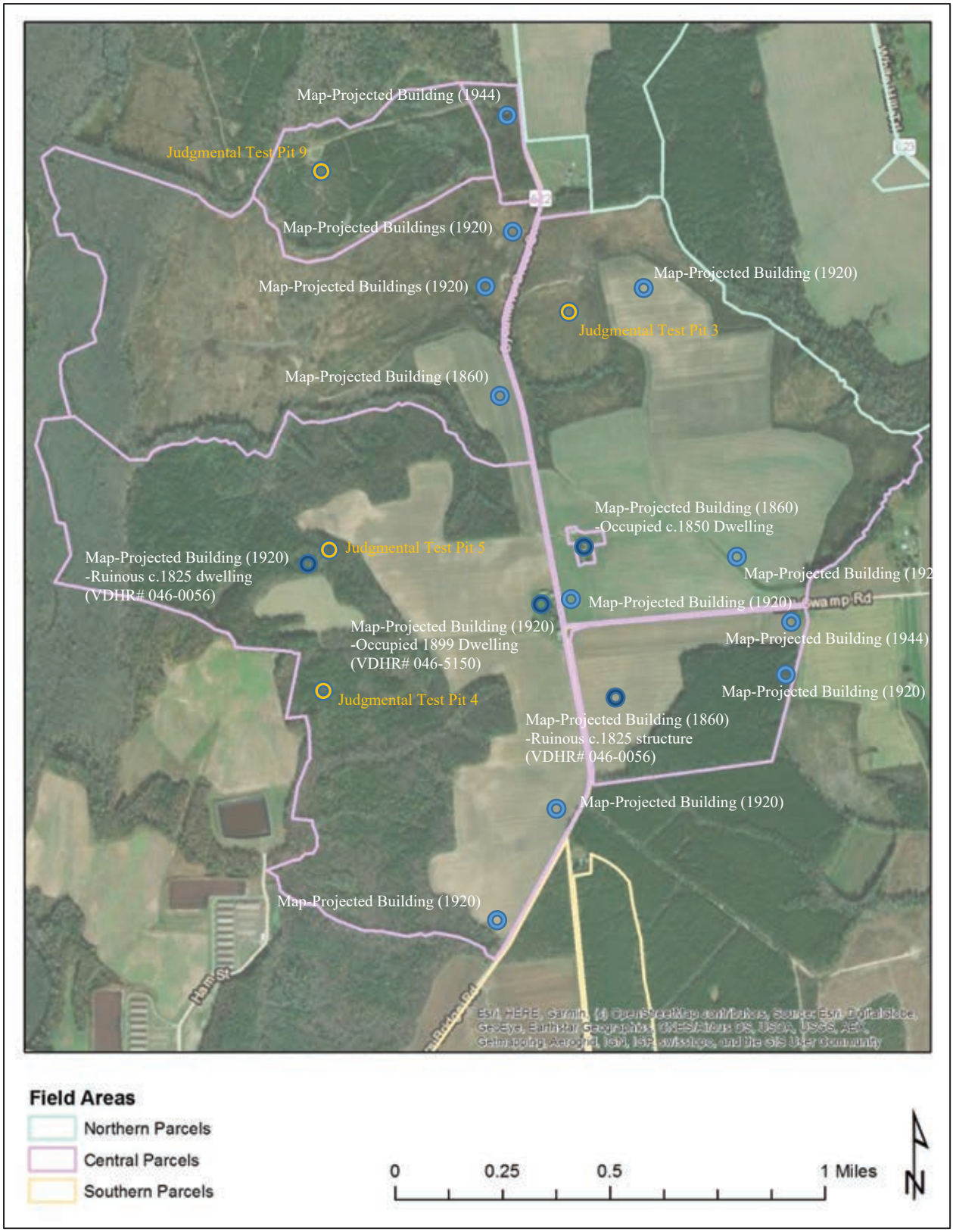


Figure 6-14: Central parcels map.

At present time, the area is a mix of open agricultural field and woodland, including both native forest and planted pine. The terrain in the crop fields of the central area parcels is generally flat while the forested and timbered areas to the rear of the parcels are slightly more rolling down to the bordering rivers and swampy areas. Most of the two parcels east of Sycamore Cross Drive are cleared as agricultural fields that are currently in crop. The northern field is bordered by a planted pine stand that has been logged within the last three years (Figure 6-15), although a narrow drainage extends through the front of the parcel along and crossing Sycamore Cross Road (Figure 6-16). The entrances to the timbered areas do not appear well maintained or easily accessible but there are farm roads in the crop fields that provide access to the properties. The southern field is bordered by a large patch of deciduous forest (Figure 6-17). Of the tracts on the west side of Sycamore Cross Road, the front portions (nearest the road) are cleared field while the rear portions nearer Blackwater River are wooded. The majority of the woodland in the southern tract is a mix of young-growth pine interspersed with native hardwood and swampy wetland vegetation along a network of drainages leading into the river (Figure 6-18). The large middle parcel was planted timber that was harvested within the last three years leaving just narrow lines of native vegetation along a drainage at the front of the tract and along Blackwater River to the rear. The northernmost two tracts on the west side of Sycamore Cross Road is a mix of native hardwood, young pine, and scrub brush (Figure 6-19 and Figure 6-20).

There were four standing buildings observed within the Central parcels area, one of which is located within a small parcel excluded from the study area footprint, while the other three are within the study area limits. Two of the extant buildings appear to coincide with structures depicted on Civil War-era maps and a third is also believed to be Antebellum but is not illustrated on maps from that period. At that time, two buildings were shown in proximity to the intersection of Sycamore Cross Road and Mill Swamp Drive including one on the northeast corner that was labeled as a "store" and an unlabeled building was mapped across the road to the south. The mapped location of the store coincides with the location of the standing building that is located within an exclusion parcel (Figure 6-21). This building functions as a dwelling, but may historically have operated as a tavern or "store". The building mapped on the south side of the intersection appears to coincide with a ruinous structure that remains within an agricultural field that is recorded as VDHR# 046-0057 (Figure 6-22 through Figure 6-24). A third building believed to be Antebellum was observed near the western edge of the assessment area, but does not appear to be depicted on Civil War-era maps. The structure has been previously recorded as the circa 1825 "Gray's House" (VDHR# 046-0056). The dwelling remains in ruinous condition, however, a variety of materials and evidence of other features, including brick fall, and subsurface pits were observed in the vicinity of the house (Figure 6-25 through Figure 6-30). Civil War-era maps do depict a building on the west side of Sycamore Cross Drive north of Gray's House and therefore may represent the same building with a mapping discrepancy. Field investigation did not reveal any surface evidence of a structure in the map-projected location of this building, however, there were artifacts such as whiteware, terracotta drainpipe, solarized glass, and brick fragments observed in the plowed field where the building was map-projected. In the trees to the west of the field, there was a push pile with a large stone and some modern detritus but no indications of extant structures or foundations (Figure 6-31).

The 1920 topographic map also reveals eight additional buildings present by that time, one of which coincides with the fourth standing buildings observed in the area. This building has been previously recorded as an 1899 dwelling (VDHR# 046-5150) (Figure 6-32). Field inspection did

not reveal surface evidence of any of the other map-projected buildings. None of the previously recorded buildings have been formally evaluated for NRHP-eligibility.



Figure 6-15: Recently timbered terrain and vegetation around Judgmental 3, looking East.



Figure 6-16: Drainage between Berrymans Corner Rd and timbered field, looking East.



Figure 6-17: Debris pile within wooded area along southeastern edge of area, looking southwest.



Figure 6-18: Planted pine and wetland vegetation, looking west from Judgmental 4.



Figure 6-19: Deciduous vegetation and scrub in northern tract on west side of Sycamore Cross Road, looking south.



Figure 6-20: Planted pine in northern tract on west side of Sycamore Cross Road, looking southeast.



Figure 6-21: Intersection of Sycamore Cross Drive and Mill Swamp Road showing Civil War-era "store" to the right (within exclusion parcel) and c.1899 farmhouse (VDHR# 046-5150) to the left, looking north.



Figure 6-22: Ruinous c.1825 structure (VDHR# 046-0057) located southeast of Sycamore Cross Road and Mill Swamp Drive, looking east.



Figure 6-23: View of ruinous c.1825 structure (VDHR# 046-0057), looking north.



Figure 6-24: Interior view of ruinous c.1825 structure (VDHR# 046-0057), looking southeast



Figure 6-25: Circa 1825 "Gray's Brick House" (VDHR# 046-0056) in western portion of assessment area, looking northeast.



Figure 6-26: Depression near Gray's Brick House, looking west.



Figure 6-27: Second depression near Gray's Brick House, looking north.



Figure 6-28: Brick pile near Gray's Brick House, looking southeast.



Figure 6-29: Gray's Brick House setting, looking north.



Figure 6-30: Swampy area at rear of western parcel, looking northeast.



Figure 6-31: Push-pile and stone in treeline near Civil War-era map-projected building site in western parcel, looking southwest.



Figure 6-32: View of c.1899 farmhouse (VDHR# 046-5150), looking west.

Four judgmental shovel test pits were excavated throughout this testing area including one near the standing c.1825 Grays Brick House (Judgmental STP 5), one within an area of native woodland (Judgmental STP 4), one within an area of young, mixed vegetation (Judgmental STP 9), and one

within a recently timbered area (Judgmental STP 3). Soils in these parcels vary drastically based on location. Soils near the Gray's House were undisturbed, primarily consisting of 10YR 4/3 sandy loam topsoil over top of 2.5Y 5/4 sandy clay subsoil (Figure 6-33). The shovel test pit in the native woodland area had similar stratigraphy; dry, although with wetland qualities, consisting of 10YR 3/2 Silty loam over 10YR 6/1 Sandy clay (Figure 6-34). The judgmental tests in the recently timbered areas were considerably deeper and disturbed. The soils in STP 3 consisted of a 2.5Y 5/6 Sandy clay loam (A horizon) over 10YR 5/6 Sandy clay (B horizon) (Figure 6-35).



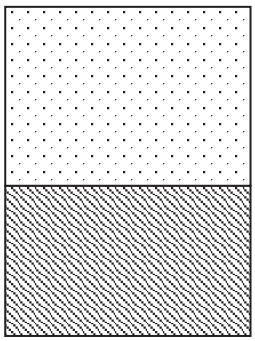


Figure 6-33: Soil Profile of Judgmental 5.



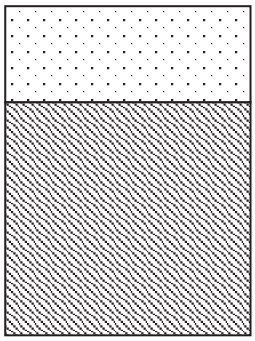
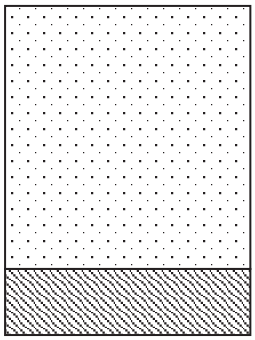


Figure 6-34: Soil Profile of Judgmental 4.





2.5Y 5/6 Sandy clay loam
0-68 cm

10YR 5/6 Sandy clay
68-80 cm

Figure 6-35: Soil Profile of Judgmental 3.

SOUTHERN PARCELS

The Southern Parcels area consists of seven tracts of land sited at the southern end of the overall study area. The area spans Ramsey Road (State Rte 622) with three parcels on the west side of the road and three on the east side, as well as one on the south side of Rattlesnake Trail. The parcels generally back up to small drainages that dissect the area (Figure 6-36).

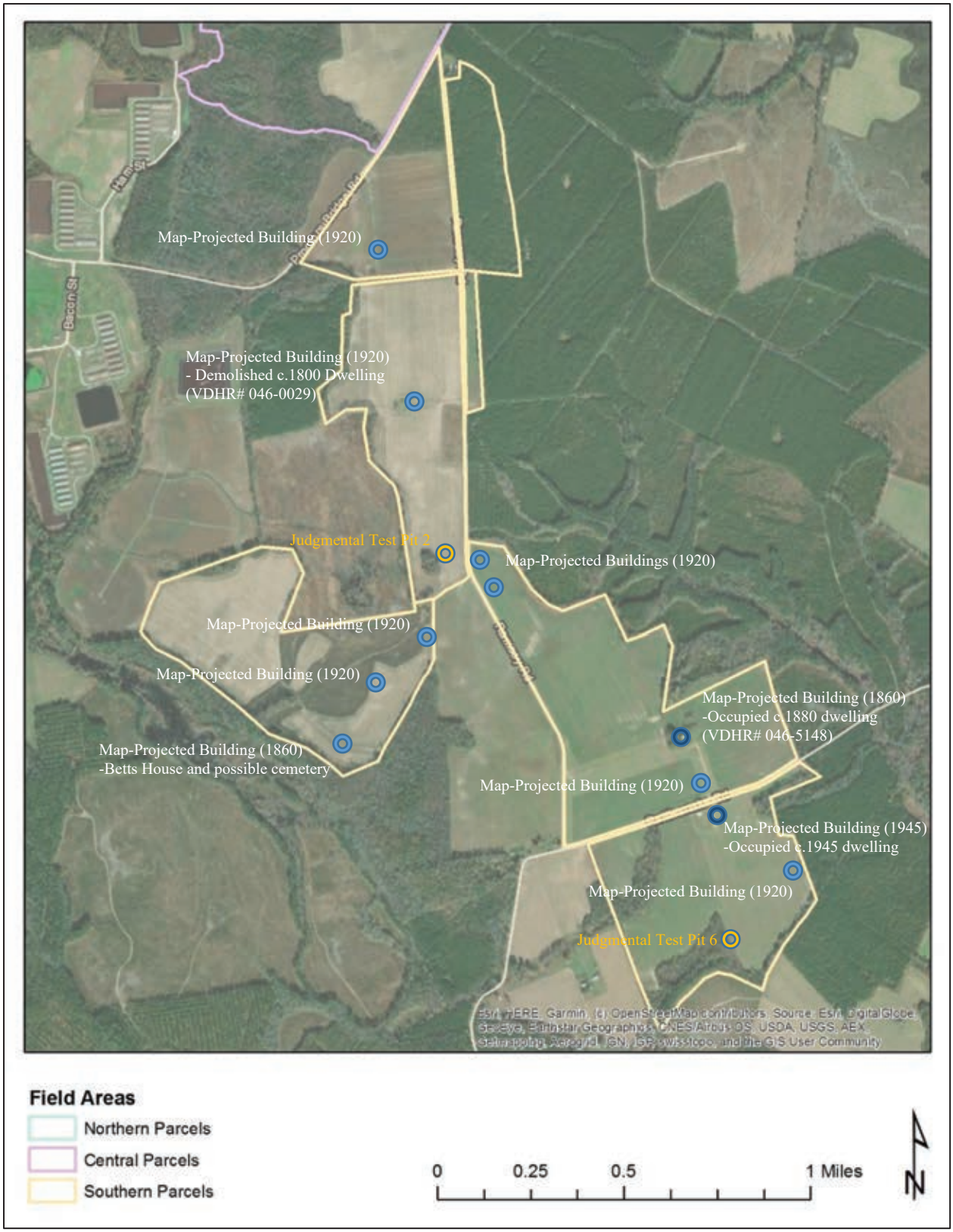


Figure 6-36: Southern parcels map.

At present time, this area is primarily open agricultural field with just small patches of planted and recently harvested timber, as well as smaller patches of vegetated native woodland. The timber harvested area is limited to the southwestern-most parcel abutting a drainage leading to Blackwater River that was harvested within the last three years. A network of logging roads leads through this parcel and beyond the timbered area to an agricultural field at the rear. Another large patch of planted pine is situated on the east side of Ramsay Road at the northeastern edge of this area. The native woodlands are limited to treelines bordering two low drainages that cross through the southeastern-most parcel and a larger patch of woodland in the northernmost parcel (Figure 6-37 and Figure 6-38). Vegetation in these areas consists of a mix of deciduous trees and some evergreens. The remaining portions of the southern parcel area are primarily agricultural fields that are currently in crop (Figure 6-39 through Figure 6-41). Terrain of this area is nearly flat, particularly within the crop field areas, while the edges and rear of the parcels slopes gently towards the short, low drainages that cross through the southernmost two parcels (Figure 6-42).

There were two standing building complexes observed within the Southern Parcels area, including a single-family home and associated outbuilding set near the road in the front of the southernmost parcel along Rattlesnake Road and a farm complex across the road to the north. The building on the north side of Rattlesnake Road appears to coincide with a Civil War-era map projected building, however, the home is previously recorded as a c.1880 dwelling (VDHR# 046-5148) (Figure 6-43 through Figure 6-45). The extant building on the south side of Rattlesnake Road coincides with a building depicted on a 1945 topographic map. The small frame building appears to date from the second-quarter of the twentieth century (Figure 6-46). Civil War-era maps reveal what is now Ramsey Road was present, as was Rattlesnake Trail, although this road was depicted at that time as secondary route. Another road crossing the area was also depicted and coincides with what is now a private farm lane along the lower edge of the southwestern-most parcel. In addition to the extant home on the north side of Rattlesnake Road that coincides with a Civil War map-projected building but is recorded as a c.1880 dwelling, another home labeled as "Betts" was depicted west of Ramsay Road. That building continues to be depicted on a 1920 topographic map of the area and was inventoried in the 1930s as part of a WPA project. That documentation noted the home as a frame structure and mentioned a family burial in the vicinity, however, no evidence of the structure or cemetery was observed at this time. The 1920 map depicts a number of additional buildings throughout the area as well, including two along the west side of Ramsay Road in the northwestern two parcels, two more set further back from Ramsay Road in the southwestern parcel, two set immediately along the east side of Ramsay Road, and two spanning Rattlesnake Road. Field investigation revealed evidence of one building projected on the west side of Ramsay Road on the 1920 topographic map, but none of the other map-projected buildings from the Civil War-era or 1920 topo map. The building site on the west side of Ramsay Road verified through field inspection was also previously recorded in 1973 as a c.1800 dwelling frame dwelling. At that time, it was noted as remaining in ruinous condition and was updated to demolished by 2005 (VDHR# 046-0029). Field inspection at this time confirmed the building is no longer extant, but the site is still evident as a grassy patch with relic hardwood vegetation at the end of a dirt lane within the center of an otherwise plowed and cultivated agricultural field. Located south of this homesite within the same parcel is a small patch of trees that is not depicted on maps until a 1960s aerial that reveals it as a ring of trees. Inspection at this time revealed a ring of hardwood trees with scrub brush and greenbriers throughout the interior (Figure 6-47). Several fence posts remain around the ring, and the soils were soft and uneven. A surface scatter of cultural materials included iron scrap and a twentieth century bottle dump (Figure 6-48 and Figure 6-49).



Figure 6-37: Wooded area in northern parcel, looking east.



Figure 6-38: View of treeline in vicinity of Judgmental 6, looking north.



Figure 6-39: Landscape within southeastern parcel, looking north.



Figure 6-40: View towards map-project building site (VDHR# 046-0029) within northwestern parcel, looking north.



Figure 6-41: Crops within fields bordering Ramsay Road, looking north.



Figure 6-42: Terrain at edge of field in southernmost parcel, looking south.



Figure 6-43: Extant building on the north side of Rattlesnake Road coinciding with a Civil War map project and previously recorded as a c.1880 dwelling (VDHR# 046-5148), looking northeast.



Figure 6-44: Barn in the vicinity of the previously recorded c.1880 dwelling (VDHR# 046-5148), looking north.



Figure 6-45: Shed in the vicinity of the previously recorded c.1880 dwelling (VDHR# 046-5148), looking northeast.



Figure 6-46: Extant twentieth century dwelling along south side of Rattlesnake Road, looking southwest.



Figure 6-47: Tree ring in northwestern parcel, looking north.



Figure 6-48: Vegetation within tree ring, looking north.



Figure 6-49: Iron scrap within tree ring, looking west.

Two judgmental shovel test pits were excavated in the southern parcels area, including one within an agricultural field in the northwestern parcel in the vicinity of the tree ring, and the other within the southwestern parcel near the edge of a field just inside the deciduous treeline. The shovel test within the field revealed a 28-cm deep 2.5Y 4/4 plow zone over a 2.5Y 5/6 A Horizon that extended to 44 cm deep resting on a 10YR 5/6 sandy clay subsoil (Figure 6-50). The shovel test within the treeline revealed a more natural soil profile consisting of a 2.5Y 4/2 sandy loam layer over 2.5YR 5/6 sandy clay loam (Figure 6-51).

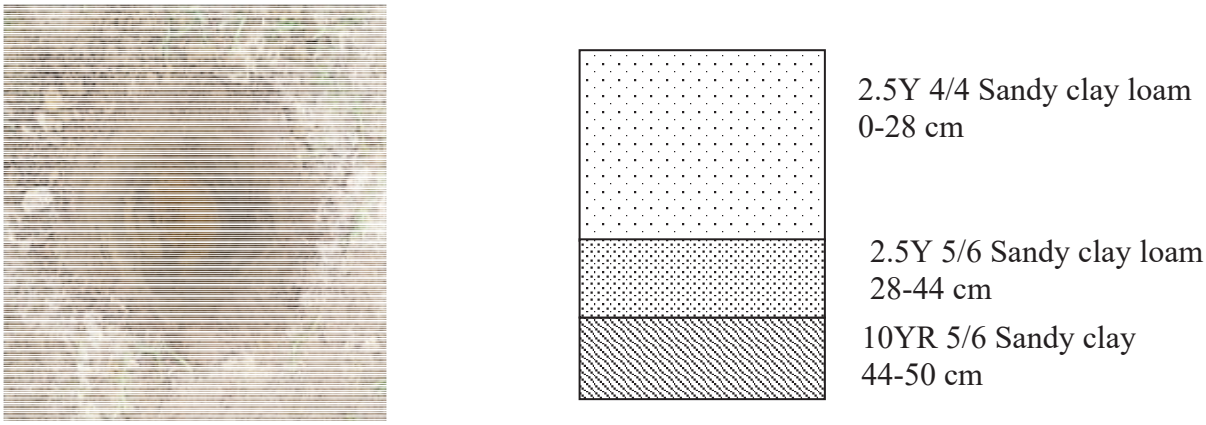
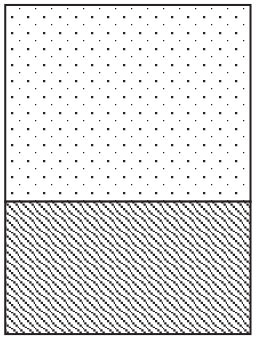


Figure 6-50: Soil Profile of Judgmental 2.





2.5Y 4/2 Sandy loam
0-24 cm

2.5Y 5/6 Sandy clay loam
24-37 cm

Figure 6-51: Soil Profile of Judgmental 6.

7. CONCLUSIONS AND RECOMMENDATIONS

In August 2023 Dutton +Associates, LLC (D+A) completed a Phase IA cultural resource assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar study area in Isle of Wight and Surry counties, Virginia. The assessment was conducted for planning purposes in order to confirm existing conditions of the study area, note surface evidence of cultural activity, and identify recommended survey methods based upon the results of the background research and field reconnaissance. The study area is located near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. The study area consists of multiple parcels and tracts of land that may not correspond precisely with the boundaries chosen for the final development of the project. Rather, the study area represents the maximum extent of the parcels being considered for development.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the study area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the study area is now sparsely developed. Just seven (7) building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the study area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The study area is bordered by Blackwater River and Mill Swamp and 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, however, no such sites have been previously recorded within the study area limits.

Although the study area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the study area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about **34 hectares (85 acres)** total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for

historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not be previously disturbed by logging. Together, the moderate potential area covers an area of about **365 hectares (901 acres)** total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder of the study area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and field depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about **170 hectares (421 acres).** A large tract of land at the northern end of the study area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort (Table 7-1 and Figure 7-1 and Figure 7-2).

Table 7-1: Summary of archaeological potential within the study area.

Potential	Reason	STP Sample	Total Area	STP Area
High	Yard space around extant and map-projected architectural resources	100%	34 hectares 85 acres	34 hectares 85 acres
Moderate	Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.	25%, chosen based on field conditions, pedestrian survey of remainder	365 hectares 901 acres	91 hectares 225 acres
Low	Areas with no site predictors	10%, chosen based on field conditions, pedestrian survey of remainder	170 hectares 421 acres	17 hectares 42 acres
No Subsurface Testing	Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas	Pedestrian survey where possible	248 hectares 613 acres	Pedestrian survey where possible
Total			**817.46 hectares 2,020 acres**	**142 hectares 352 acres**

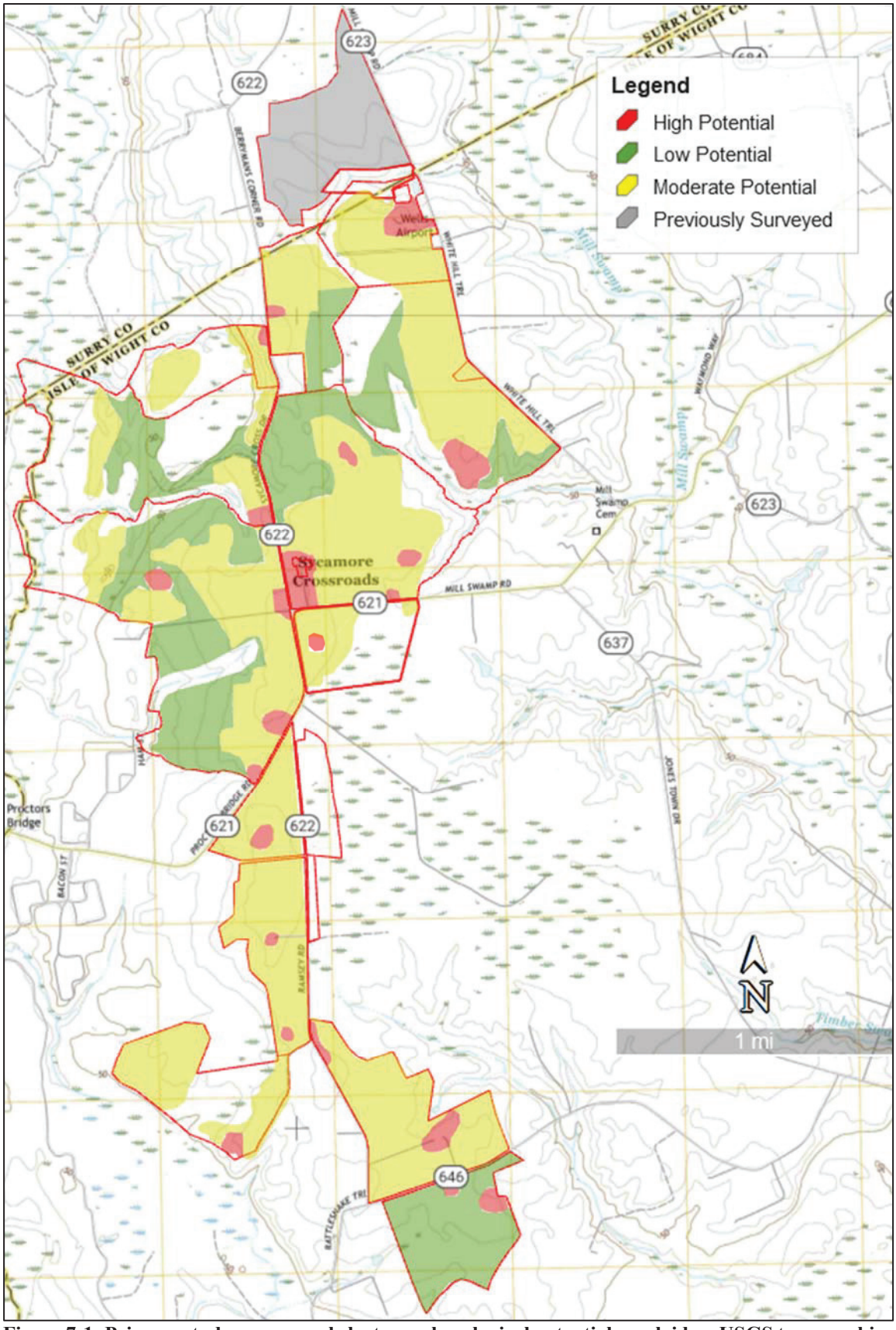


Figure 7-1: Primary study area parcel cluster archaeological potential overlaid on USGS topographic map.

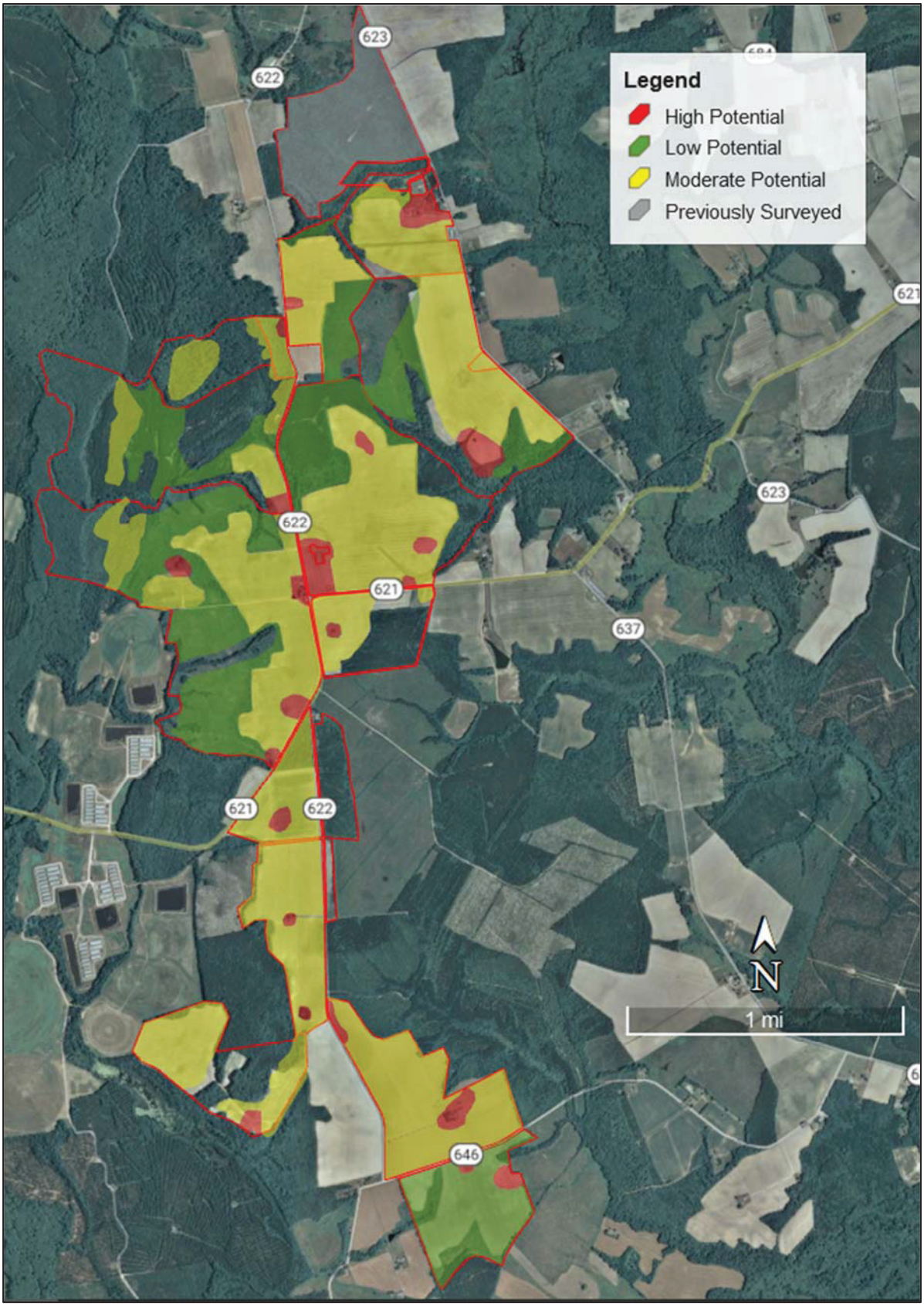


Figure 7-2: Primary study area parcel cluster archaeological potential overlaid on aerial photography.

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1919 *Surry, VA Quadrangle*. Topographical Map, Scale 1:62500.

APPENDIX A: RESUMES

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DAVID H. DUTTON
Managing Partner

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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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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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Education

PhD, 2017
Anthropology
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Bachelor of Arts, 2005
Historic Preservation
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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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Dutton + Associates
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

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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Attachment Q

Department of Historic Resources Concurrence Letter on Survey Methodology

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COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Travis A. Voyles
Secretary of Natural and Historic Resources

Julie V. Langan
Director
Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

August 28, 2023

Julia Wellman
Dept. of Environmental Quality
Office of Environmental Impact Review
P.O. Box 1105
Richmond, VA 23218

RE- Application of Sycamore Cross Solar, LLC, PUR-2023-00126
Isle of Wight and Surry Counties, VA
DEQ #23-108S
DHR File No. 2023-4691

Dear Ms. Wellman

We have received your request for comments on the project referenced above. Our comments are provided as assistance to the Department of Environmental Quality (DEQ) and the State Corporation Commission (SCC) in the review of this application. In general, the SCC application does not reflect the full record of consultation on this project, nor does it sufficiently identify potential impacts to historic properties that may be eligible for listing in the Virginia Landmarks Register (VLR)/National Register of Historic Places (NRHP).

On August 2, 2023, DHR received the OEIR review request. The application includes a Phase IA desktop analysis and proposed survey strategy for the Sycamore Cross Solar project area. Typically, DHR does not consider desktop analyses to be sufficient for identifying historic properties that may be eligible for the listing in the VLR/NRHP. Furthermore, the proposed survey strategy included in the application for the Sycamore Cross Solar project is, in our opinion, inadequate for identifying archaeological resources within the project area.

In a letter dated August 14, 2023, DHR provided comments to the applicant's consultants, Dutton and Associates (D+A) regarding the proposed survey strategy in the Phase IA desktop analysis report. DHR recommended revising the probability map to more accurately reflect previous disturbance and site probability. On August 24, 2023, DHR received a revised Phase IA report from D+A. The newly revised survey strategy is generally sufficient for identifying archaeological resources within the project area; however, this revised Phase IA is not included in the SCC application. The application should be amended to include the revised Phase IA report.

As stated earlier, desktop analyses are typically not considered sufficient for identifying historic resources that are eligible for listing in the VLR/NRHP and assessing the full impacts of a project on historic resources. Without a sufficient identification of historic properties, it is difficult for DHR to provide meaningful comments about potential adverse impacts. The desktop analysis does state that there are areas with moderate to high potential

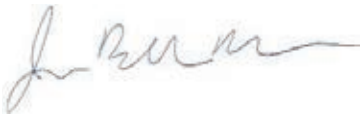
for archaeological resources. These areas should be adequately surveyed, and any identified sites should be evaluated for eligibility for listing in the VLR/NRHP and assessed for impacts. The desktop analysis also listed previously identified architectural resources within the study area that have not been evaluated for the VLR/NRHP. Moderate to severe impacts to VLR/NRHP-eligible/listed resources should be avoided, minimized or mitigated in consultation with DHR and other stakeholders.

While DHR often supports the phased review of electric transmission line projects regulated by the SCC, solar projects often have much larger footprints and more extensive impacts on historic resources. We are concerned that any approval by the SCC at this time would be made with insufficient information to make an informed decision regarding the potential impact of this project on significant historic resources. That said, in order to fully identify and address impacts to historic resources, we recommend the following:

1. The SCC application must be updated to include the revised Phase IA report and amended survey plan.
2. Any project approval should allow for sufficient flexibility in design to accommodate avoidance of significant archaeological sites and minimization of visual impacts to adjacent properties and construction should not commence until the studies and analyses listed below and completed.
3. Archaeological and architectural surveys should be completed by qualified professionals in accordance with DHR's *Survey Guidelines* and the revised Phase IA report prior to any significant project-related ground disturbance. All identified resources should be evaluated for listing in the VLR/NRHP.
4. The results of the archaeological and architectural surveys should be submitted to DHR for review and comment.
5. Potential direct and indirect impacts to all VLR/NRHP-eligible/listed resources, including previously inaccessible properties, should be assessed in consultation with DHR.
6. All moderate to severe impacts to VLR/NRHP-eligible/listed resources should be avoided, minimized, and/or mitigated by the applicant in consultation with DHR and other stakeholders.

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

Cc: Robert Taylor, Dutton and Associates

COMMONWEALTH of VIRGINIA

Travis A. Voyles
Secretary of Natural and Historic Resources

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2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
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August 28, 2023

Julia Wellman
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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

Cc: Robert Taylor, Dutton and Associates

ISLE of WIGHT COUNTY MUSEUM

MEMORANDUM

TO: Amy Ring, Director of Community Development, Isle of Wight County

FROM: Jennifer England
Director, Isle of Wight County Museum
Historic Resources Manager, Isle of Wight County

RE: Sycamore Cross Solar Energy Generation Facility
Conditional Use Permit (CUP-8-23) – Third Submittal Tax Map Numbers 09-01-001, 10-01-017, 11-01-015, 16-01-002, 16-01- 002A, 16-01-003, 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01- 001, 17-01-002, 27-01-003, and 27-01-004

DATE: March 26, 2024

After reviewing the **Updated Historical and Cultural Resources Report Dated August 2023** as prepared by Dutton + Associates for AES Clean Energy and sPower with reference to Conditional Use Permit (CUP-8-23), the Isle of Wight County Museum/Isle of Wight County Department of Historic Resources acknowledges that much of the acreage to be developed as a solar energy facility has been plowed, logged and utilized as farmland for many years. However, there are still a few notable concerns, and some of them are noted here as they were in a previous memorandum.

The report's study area includes multiple parcels and tracts of land--some of these span Isle of Wight County's border to cross into Surry County. Within the project area, there are multiple recorded archaeological and architectural resources. These sites as well as their boundaries are considered high potential for archaeological discovery. Expanding the project area by one mile adds other resources to this list. Vegetative cover may be required for the varied project locations within the viewshed of some of these historic resources.

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ISLE of WIGHT COUNTY MUSEUM

Of particular note are these sites. Avoidance with a 100-foot buffer is recommended. In the event that is not possible, a Phase II evaluation should be required.

- Site 44SYO309, farmstead
- Site 44SY0310, archaeological materials with a single grave
- Cemeteries in areas D2 and D3

There are nine previously recorded architectural resources located within the study area. Only two have been formally evaluated by Virginia Department of Historic Resources staff for eligibility on the National Register of Historic Places. Before proceeding with the project, the remaining resources should be formally evaluated. Additionally, these dwellings may or may not have associated cemeteries which will require avoidance.

Overall, the proposed project will certainly impact – both directly and indirectly - archaeological, cultural or architectural historic resources in Isle of Wight County. Determining the full extent of the project's archaeological history may not be possible because of size; however, if the project proceeds, an on-site archaeologist during site preparation and construction should be considered.

The potential on the project site for archaeological artifacts is highly likely. As the project proceeds, the Isle of Wight County Museum should be the repository for discovered artifacts and future finds on this site as they will further the interpretation or discovery of Isle of Wight County history.

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SYCAMORE CROSS SOLAR
ECONOMIC & FISCAL CONTRIBUTION TO THE COUNTIES OF SURRY AND ISLE OF WIGHT, VIRGINIA



Prepared for

aes

MANGUM economics

4198 COX ROAD, SUITE 104
GLEN ALLEN, VIRGINIA 23060
804-322-7777

MANGUMECONOMICS.COM

SEPTEMBER 2023

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About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. One recent example was an analysis of the proposed $2.3 billion Green City "net-zero eco district." The Mangum Team has also authored multiple economic development plans, including identifying industry recruitment opportunities created by the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 23 GW of proposed solar, wind, battery, and hydro projects spanning twenty states. Among those projects was Dominion Energy's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Information Technology:** Working with some of the largest names in the industry, to date the Mangum Team has produced analyses of the economic and fiscal impact of the data center industry in multiple states. Among those, were studies conducted in IL, MD, and VA that were instrumental in the passage of industry-specific legislation.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

Rebecca Kyle, *Senior Research Analyst*

Martina Arel, M.B.A., *Director – Economic Development & Energy Research*

A. Fletcher Mangum, Ph.D., *Founder and CEO*

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight, Virginia. The primary findings from that assessment are as follows:

1) **Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land.**
    - The actively used, fenced-in portion of the project site would encompass approximately 125 acres located in Surry County and approximately 1,030 acres located in Isle of Wight County.
    - The project would involve an investment of $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be located in Surry County and approximately $402.5 million would be located in Isle of Wight County.[1]

2) **The proposed Sycamore Cross Solar project would make a significant economic contribution to the counties of Surry and Isle of Wight:**
    - The proposed Sycamore Cross Solar project would provide an estimated one-time pulse of economic activity to the counties of Surry and Isle of Wight during its construction phase supporting approximately:
        - 197 direct, indirect, and induced job years.
        - $9.9 million in associated wages and benefits.
        - $91.6 million in economic output.
    - The proposed Sycamore Cross Solar project would provide an estimated annual economic impact to the counties of Surry and Isle of Wight during its ongoing operational phase supporting approximately:
        - 7 direct, indirect, and induced jobs.
        - $0.6 million in associated wages and benefits.
        - $1.6 million in economic output.

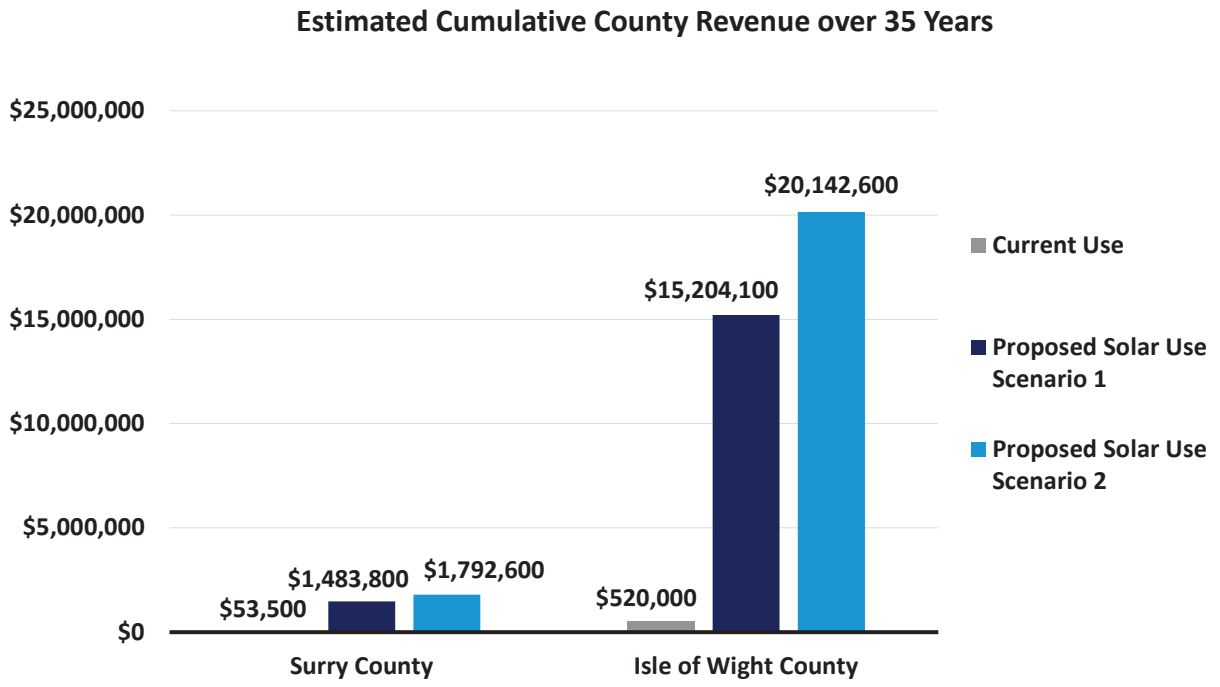
3) **The proposed Sycamore Cross Solar project would also make a significant fiscal contribution to the counties of Surry and Isle of Wight. The proposed project would generate approximately:**
    - $1.4 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.

[1] Data Source: AES Corporation. Allocation of generation capacity and investment subject to change based on final design.

- Surry County:
  - $1.5 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $1.8 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).
- Isle of Wight County:
  - $15.2 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $20.1 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).

4) **The proposed Sycamore Cross Solar project would have a significantly greater fiscal impact on The counties of Surry and Isle of Wight than the property generates in its current use:**

- Surry County: The proposed Sycamore Cross Solar project would generate approximately $1.5 million (from taxation on capital investments) or $1.8 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $53,500 in cumulative county revenue in the property's current use – that's a 28- to 34-fold increase over the current use revenues.
- Isle of Wight County: The proposed Sycamore Cross Solar project would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use – that's a 29- to 39-fold increase over current use revenues.



The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good 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 Sycamore Cross Solar project would make to the Counties of Surry and Isle of Wight, Virginia. This report was commissioned by AES Clean Energy (AES) and produced by Mangum Economics.

The Project

Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land. The estimated actively used, fenced-in solar site encompasses approximately 125 acres in Surry County and 1,030 acres in Isle of Wight County.

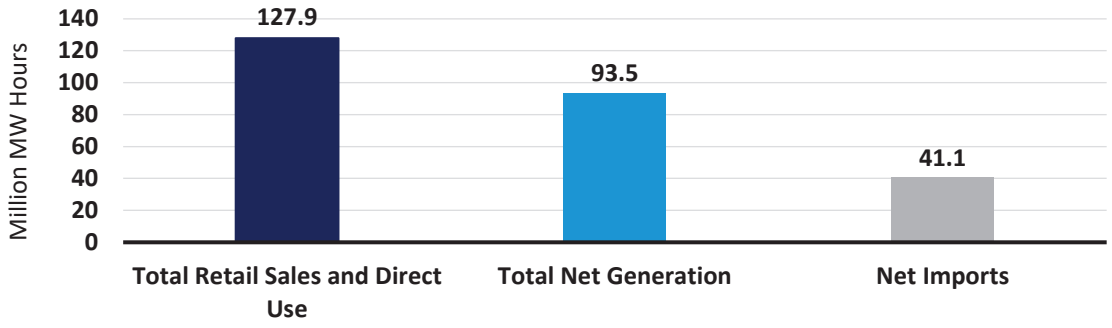
Electricity Production in Virginia

This section provides a backdrop for the proposed Sycamore Cross 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 2021 electricity sales and direct use in Virginia totaled 127.9 million megawatt hours, ranking the state 10th among the fifty states in terms of electricity consumption. However, only 73 percent of that demand was met by in-state utilities, independent producers, and other sources. As a result, Virginia had to import the remaining 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 2021 (in millions of megawatt-hours)[2]



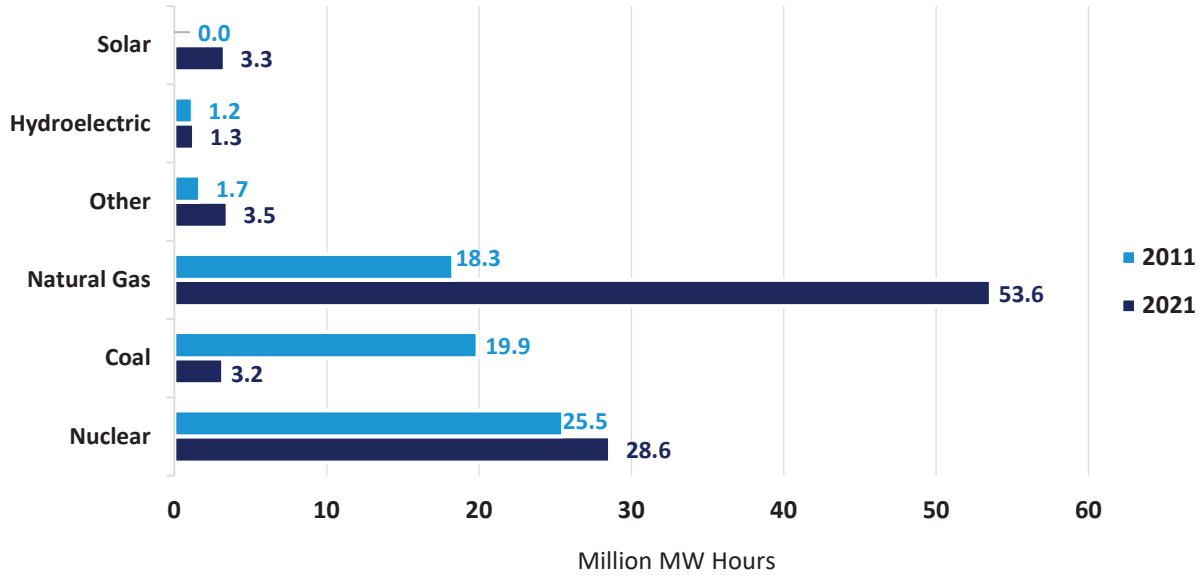
[2] Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Sources of Production

Between 2011 and 2021, the total amount of electricity produced in Virginia increased from 66.7 to 93.5 million megawatt hours, while retail and direct consumption of electricity increased from 112.1 to 127.9 million megawatt hours. Consequently, imports of electricity decreased by 11.8 million megawatt hours (or 22 percent) during this time.[3] Figure 2 provides a comparison of the energy sources that were used to produce electricity in Virginia in each of those years. As these data show, the most significant change between 2011 and 2021 was a decrease in the use of coal and an increase in the use of natural gas. Where coal was the state's second largest source of electricity in 2011, accounting for 19.9 million megawatt hours (or 29.9 percent) of production, by 2021 production had fallen by 16.7 million megawatt hours, making coal a distant fifth place source of electricity with only 3.4 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 18.3 million megawatt hours (or 27.5 percent) of Virginia's electricity production in 2011, by 2021 that proportion had almost tripled to 53.6 million megawatt hours (or 57.3 percent of production), making natural gas the state's largest source of electricity. In addition, solar, which entered the Virginia electricity production market in 2016, increased its share to 3.3 million megawatt hours in 2021.

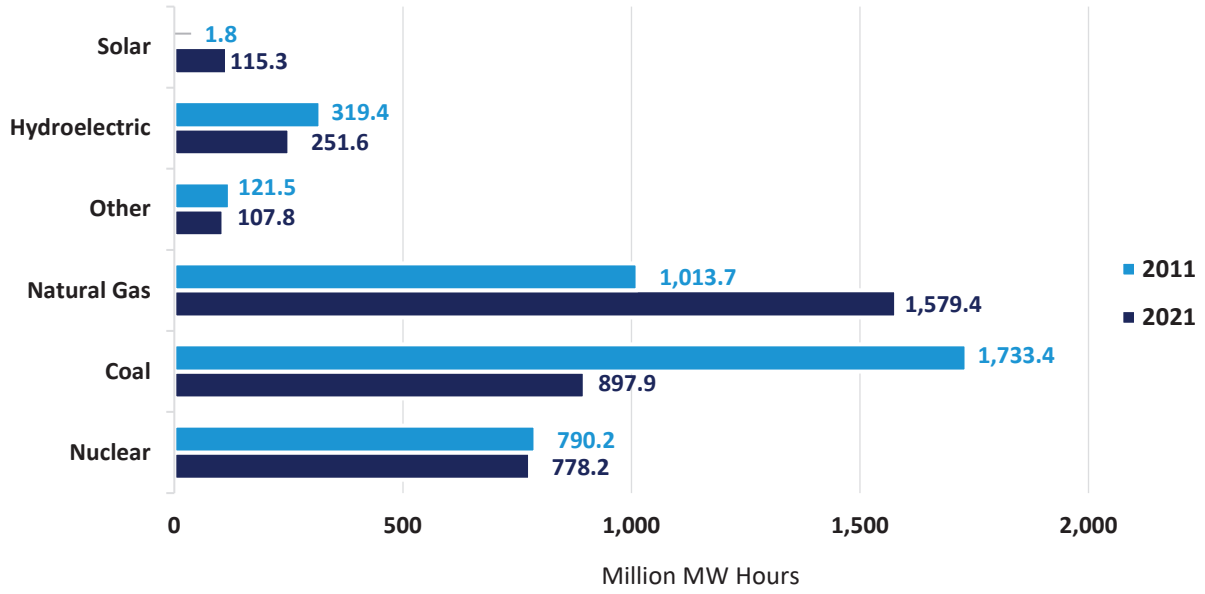
Figure 2: Electricity Generation in Virginia by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[4]



[3] Imports also takes into account losses during transmission. As a result, totals do not equal sum of components.
[4] Data Source: U.S. Energy Information Administration. The "Other" category includes battery, wood, wind, petroleum, other biomass, "other", and pumped storage.

Figure 3 provides similar data for the U.S. as a whole. A quick comparison of Figures 2 and 3 shows that although the degree of reliance on specific energy sources for electricity production is quite different between the U.S. and Virginia, the trend toward lower-emissions energy sources is the same. Nationally, between 2011 and 2021 the amount of electricity produced using coal declined by 835.5 million megawatt hours from 42 to 22 percent of production, while in contrast the amount of electricity produced using natural gas increased by 565.7 million megawatt hours from 25 to 38 percent of production. Nationwide, as in Virginia, the reliance on renewable energy sources such as solar increased during this time but at a slower pace than in Virginia. Between 2011 and 2021, the amount of electricity produced using solar increased by 113.5 million megawatt hours to 2.8 percent of total electricity production in the nation compared to 3.5 percent of total electricity production in Virginia.

Figure 3: Electricity Generation in the United States by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[5]

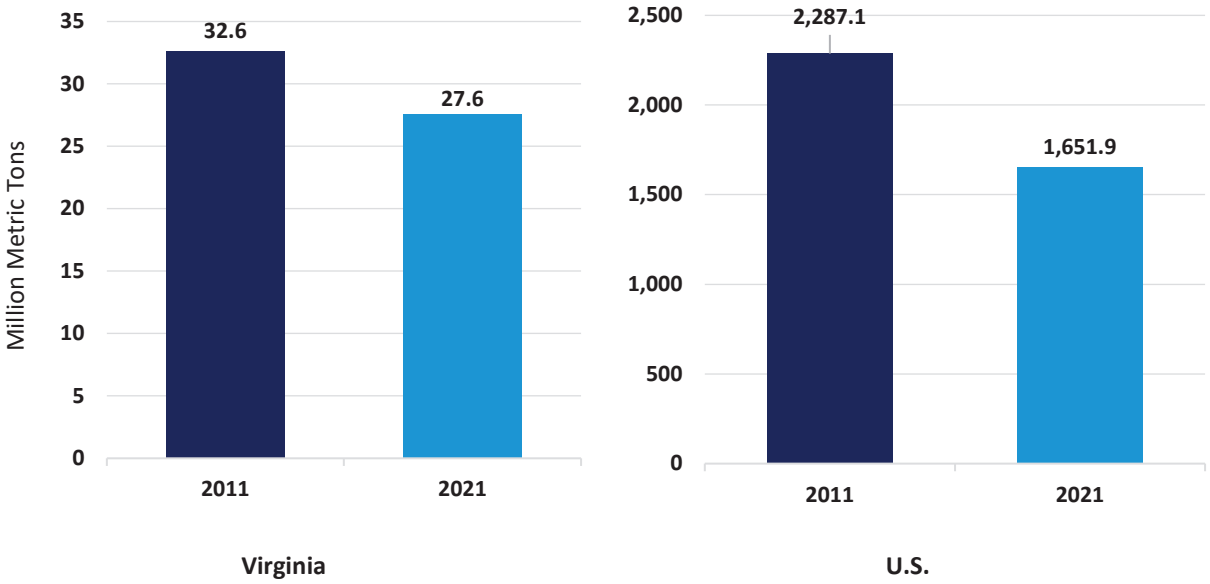


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is one of the U.S.'s largest sources of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2011 and 2021 for both Virginia and the U.S. As these data indicate, between 2011 and 2021, as the share of electricity produced in Virginia by coal fell from 29.9 to 3.4 percent, carbon dioxide emissions from electricity production fell from 32.6 to 27.6 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 42 to 22 percent, carbon dioxide emissions from electricity production fell from 2,287.1 to 1,651.9 million metric tons.

[5] Data Source: U.S. Energy Information Administration. "Other" includes battery, geothermal, hydroelectric, other, other biomass, other gas, petroleum, pumped storage, wind, and wood.

Figure 4: Carbon Dioxide Emissions from Electricity Production (millions of metric tons)[6]



[6] Data Source: U.S. Energy Information Administration.

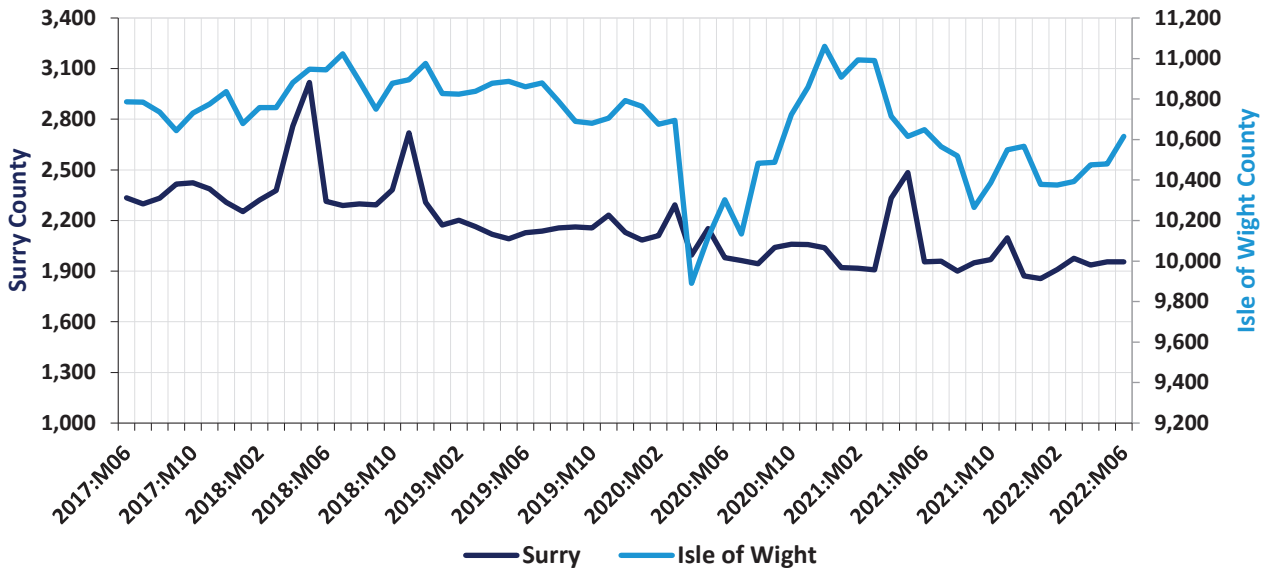
Local Economic Profile

This section provides context for the economic and fiscal impact assessments to follow by profiling the local economies of the counties of Surry and Isle of Wight.

Total Employment

Figure 5 depicts the trend in total employment in the counties of Surry and Isle of Wight from June 2017 through June 2022. As these data show, employment in Surry County generally declined through the five-year period. Employment in Isle of Wight County remained generally stable until the decrease in economic activity associated with the COVID-19 pandemic led to a steep employment decline in Isle of Wight County in April 2020. Since then, employment has rebounded back to pre-pandemic levels. As of June 2022, county employment stood at 1,956 jobs in Surry County and 10,616 jobs in Isle of Wight County. This represents an overall decrease in employment of 16.2 percent (or 379 jobs) in Surry County and 1.6 percent (or 170 jobs) in Isle of Wight County over the five-year period. To put this number in perspective, over this same period, total statewide employment in Virginia increased by 1.5 percent.[7]

Figure 5: Total Employment in the Counties of Surry and Isle of Wight– June 2017 to June 2022[8]

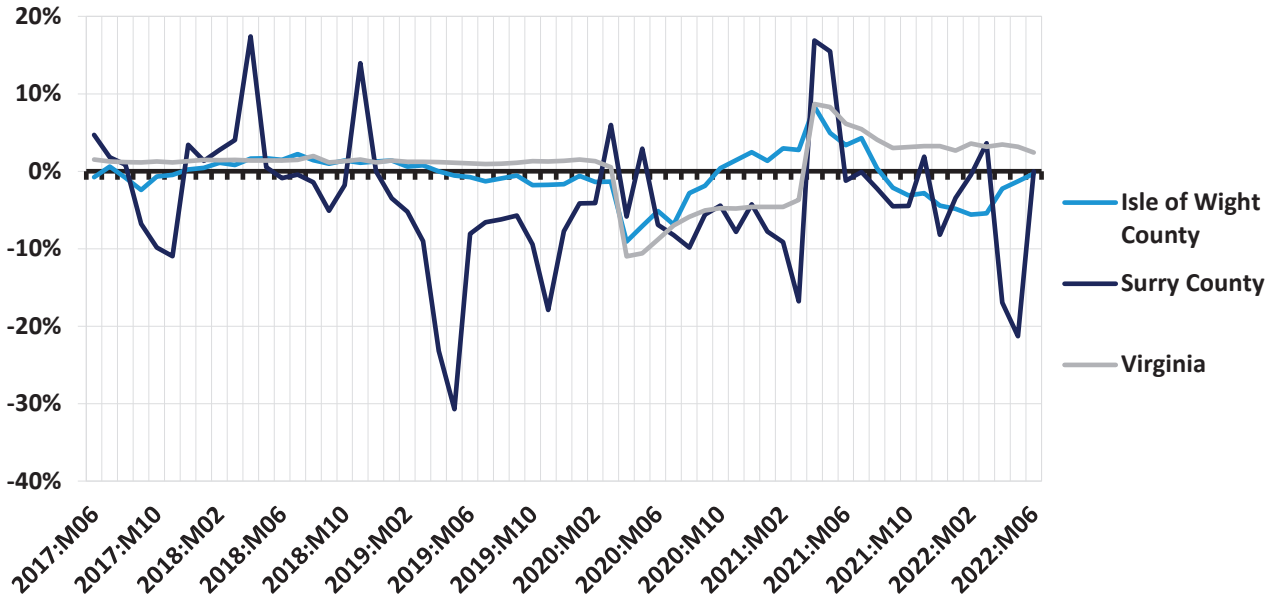


To control for seasonality and provide a point of reference, Figure 6 compares the year-over-year change in total employment in the counties of Surry and Isle of Wight to that of the state of Virginia over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, Surry County experienced periods of high employment growth and high employment loss throughout the period. Isle of Wight County tracked closely with the statewide trend throughout the

[7] Data Source: U.S. Bureau of Labor Statistics.
[8] Data Source: U.S. Bureau of Labor Statistics.

five-year period. As of June 2022, the year-over-year change in total employment was 0 percent in Surry County and minus 0.3 percent in Isle of Wight County as compared to 2.4 percent statewide in Virginia.

Figure 6: Year-Over-Year Change in Total Employment – June 2017 to June 2022[9]



Employment and Wages by Industry Supersector

To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figures 5 and 6, Figures 7 through 9 provide data on private employment and wages in the counties of Surry and Isle of Wight by industry supersector.[10]

Figure 7 provides an indication of the distribution of private sector employment across industry supersectors in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data indicate, the largest industry sector that quarter in Surry County was Trade, Transportation, and Utilities (873 jobs). In Isle of Wight County, the largest industry sector that quarter was Manufacturing (2,646 jobs).

Figure 8 provides a similar ranking for average private sector weekly wages by industry supersector in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data show, the highest paying industry sector that quarter in Surry County was Trade, Transportation and Utilities ($2,088 per week). In Isle of Wight County, the highest paying sector was Information ($2,089 per week).

[9] Data Source: U.S. Bureau of Labor Statistics.
[10] A "supersector" is the highest level of aggregation in the coding system that the Bureau of Labor Statistics uses to classify industries.

Figure 7: Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight– 2nd Qu. 2022[11]

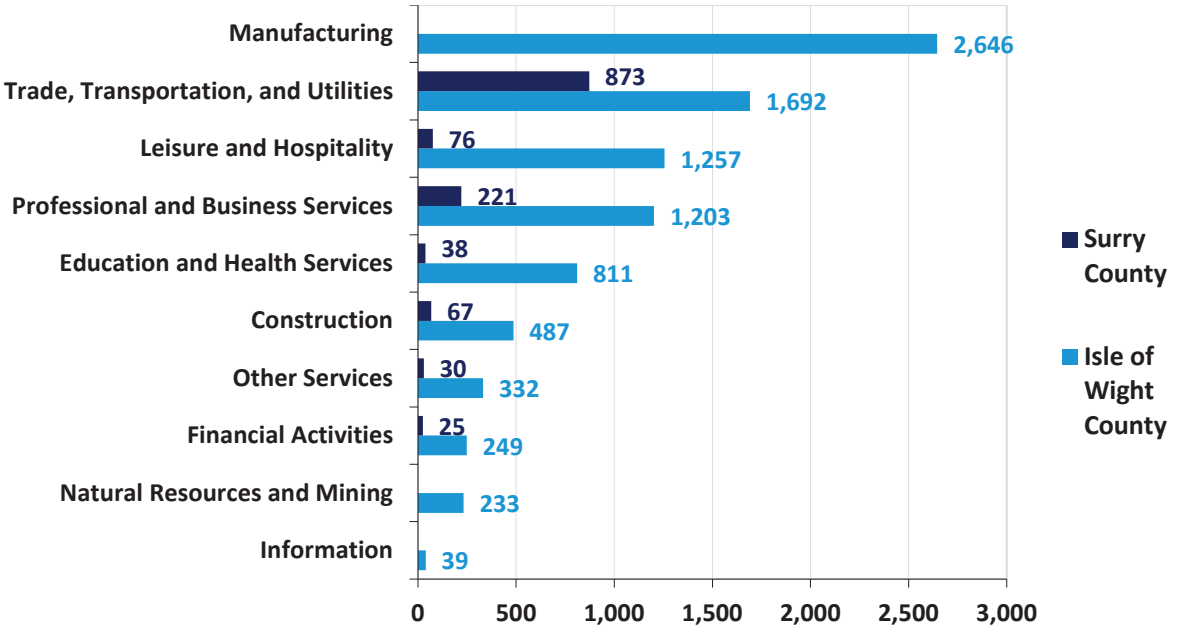
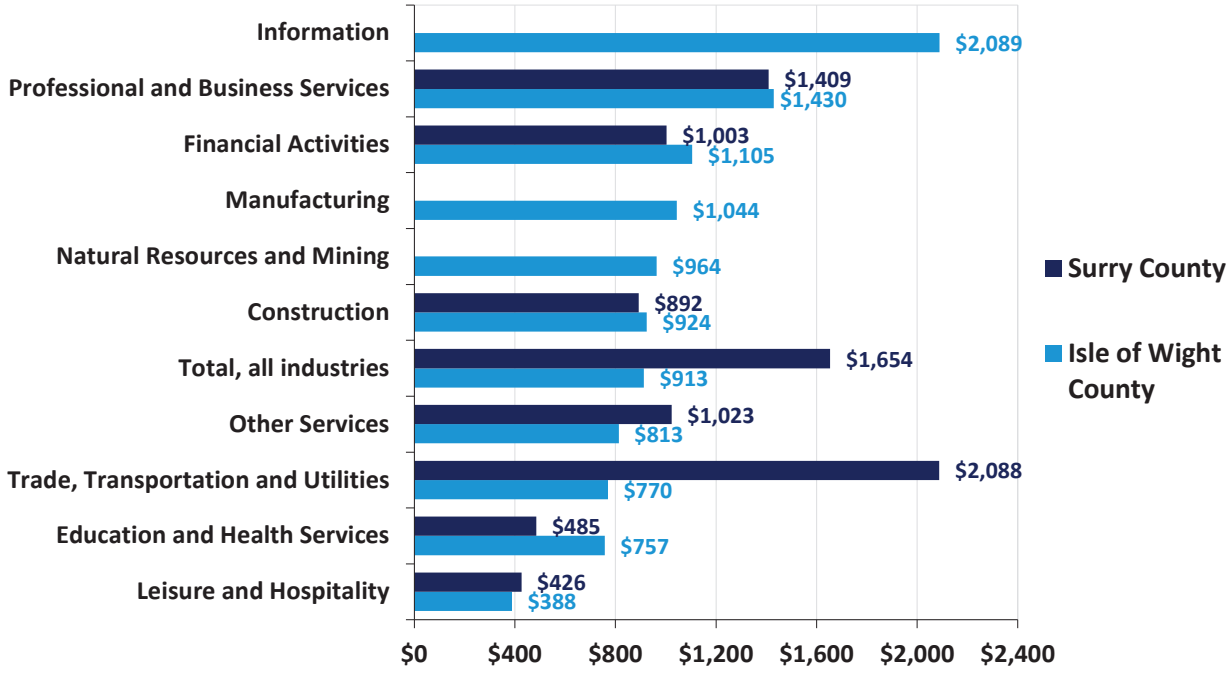


Figure 8: Average Private Weekly Wages by Industry Supersector in the Counties of Surry and Isle of Wight – 2nd Qu. 2022[12]

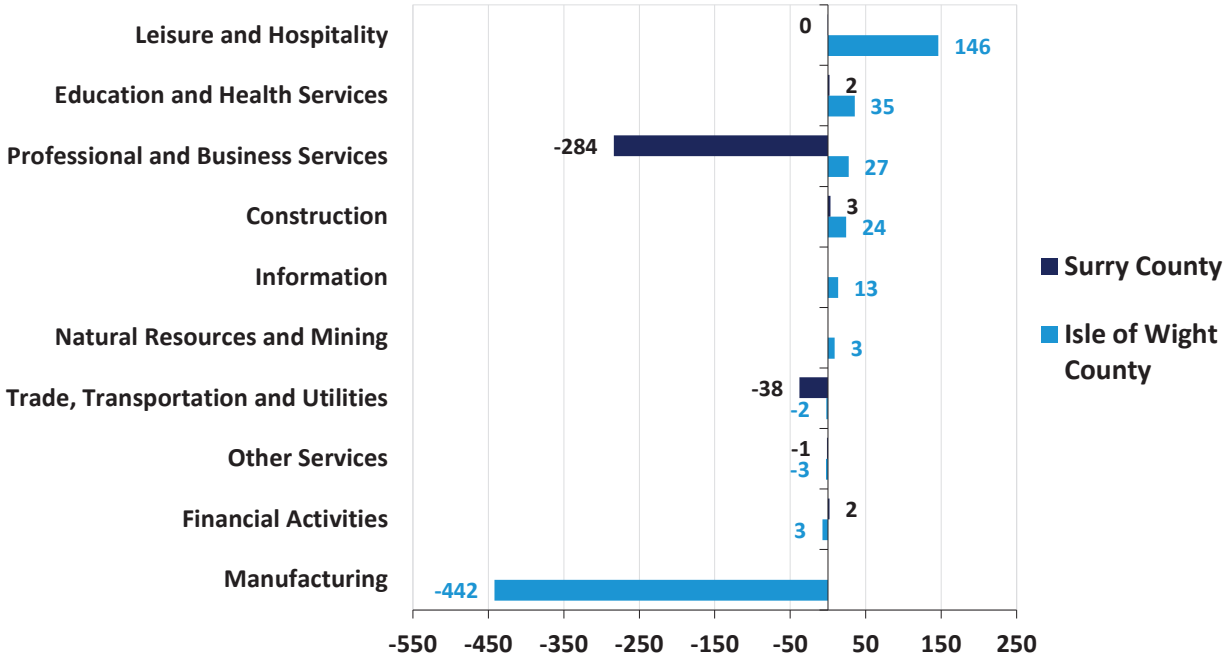


[11] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

[12] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 9 details the year-over-year change in private sector employment from the second quarter of 2021 to the second quarter of 2022 in the counties of Surry and Isle of Wight by industry supersector. Over this period, the largest employment gains in Surry County occurred in the Construction (up 3 jobs) sector, and the largest employment loss occurred in the Professional and Business Services (down 284 jobs) sector. The largest employment gain in Isle of Wight County occurred in the Leisure and Hospitality (up 146 jobs) sector, and the largest employment loss occurred in the Manufacturing (down 442 jobs) sector.

Figure 9: Change in Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight from 2nd Qu. 2021 to 2nd Qu. 2022[13]

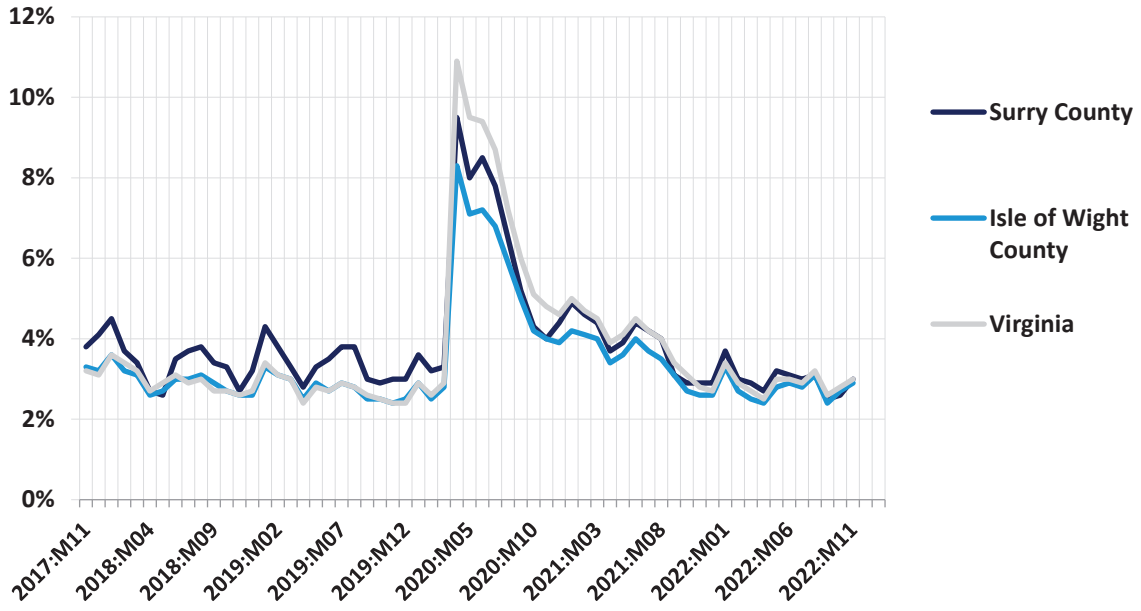


Unemployment

Figure 10 illustrates the unemployment trend in the counties of Surry and Isle of Wight over the five-year period from November 2017 through November 2022 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in the counties of Surry and Isle of Wight generally tracked closely to the statewide norm. In April 2020 unemployment in both the counties and the state significantly rose as a result of the labor dislocations caused by the COVID-19 pandemic. The counties' unemployment rates did not peak as high as the statewide rate. As of November 2022, unemployment stood at 3.0 percent in Surry County, 2.9 percent in Isle of Wight County, and 3.0 percent in Virginia as a whole.

[13] Data Source: Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 10: Unemployment Rate – November 2017 to November 2022[14]



[14] Data Source: Bureau of Labor Statistics.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight. The 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 Sycamore Cross Solar project, the analysis employs 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 Sycamore Cross Solar project purchases goods and services – or when 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 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 Sycamore Cross 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).

[15] IMPLAN is produced by IMPLAN Group, LLC.

Construction Phase

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight.

Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- Total investment in the Sycamore Cross Solar project is estimated to be approximately $437.1 million.[16]
- Of that total:
    - Architecture, engineering, site preparation, and other construction and development costs are estimated to be approximately $253.1 million.[17]
    - Capital equipment costs are estimated to be approximately $184.0 million.[18] It is anticipated that no capital equipment would be purchased from vendors in the counties of Surry and Isle of Wight.[19]
- For ease of analysis, all construction expenditures are assumed to take place in a single year.

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Sycamore Cross Solar project would directly provide a one-time pulse supporting approximately: 1) 102 job years, 2) $5.3 million in wages and benefits, and 3) $75.9 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct investment would generate, the total estimated one-time impact on the counties of Surry and Isle of Wight would support approximately: 1) 197 job years, 2) $9.9 million in wages and benefits, 3) $91.6 million in economic output, and 4) $1.4 million in state and local tax revenue.

[16] Data Source: AES.
[17] Data Source: AES.
[18] Data Source: AES.
[19] Data Source: IMPLAN Group LLC.

Table 1: Estimated One-Time Economic and Fiscal Impact on the Counties of Surry and Isle of Wight from Construction of the Sycamore Cross Solar Project[20,21]

Economic Impact	Employment (Job Years)[22]	Wages and Benefits	Output
1st Round Direct Economic Activity	102	$5,253,400	$75,938,700
2nd Round Indirect and Induced Economic Activity	95	$4,671,900	$15,708,700
Total Economic Activity	**197**	**$9,925,300**	**$91,647,400**
Fiscal Impact			
State and Local Tax Revenue			**$1,431,500**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

This portion of the section assesses the annual economic and fiscal impact that the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight during its anticipated 35-year operational phase.

Economic Impact Inputs

The analysis is based on the following inputs:

- The Sycamore Cross Solar project would employ approximately five individuals and spend approximately $1.3 million each year for maintenance and repair, vegetative control, and other operational expenditures.[23]

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Sycamore Cross Solar project would on average directly support approximately: 1) 5 jobs, 2) $0.5 million in wages and benefits, and 3) $1.3 million in economic output to the counties of Surry and Isle of Wight.

[20] It is important to note that construction sector jobs are not necessarily new jobs, but the investments made can also support an existing job during the construction of the project. Due to preliminary nature of the project, the analysis is based on industry averages. Actual spending patterns may vary based on vendor contracts and final design.
[21] A construction sector job, also referred to as a job year, is equal to one job over one year. It is used to denote employment on construction projects where the construction schedule extends beyond one year and to account for the fact that actual on-site employment may vary over the period.
[22] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[23] Data Source: AES.

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on the counties of Surry and Isle of Wight would be approximately: 1) 7 jobs, 2) $0.6 million in wages and benefits, and 3) $1.6 million in economic output.

Table 2: Estimated Annual Economic Impact on the Counties of Surry and Isle of Wight from the Ongoing Operation of the Sycamore Cross Solar Project[24]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	5	$501,200	$1,250,000
2nd Round Indirect and Induced Economic Activity	2	$82,900	$302,700
Total Economic Activity	**7**	**$584,100**	**$1,552,700**

**Totals may not sum due to rounding.*

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The Sycamore Cross Solar project would involve an investment of approximately $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be invested in Surry County and approximately $402.5 million in Isle of Wight County.[25]
- The Sycamore Cross Solar project would be situated on approximately 125 acres in Surry County and on approximately 1,030 acres in Isle of Wight County.[26]
- The actively used, fenced-in acreage in Surry County would be reassessed at $13,000 per acre.[27]
- The actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.[28]
- Tax rates and locality ratios remain constant throughout the analysis.
- The initial interconnection request for Sycamore Cross Solar was filed in March 2017.[29]
- The Sycamore Cross Solar project's total generation capacity would be 240 MW AC, of which approximately 19 MW would be located in Surry County and approximately 221 MW would be located in Isle of Wight County.[30]
- The Sycamore Cross Solar project would become operational in the fourth quarter of 2026.[31]

[24] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[25] Data Source: AES.
[26] Data Source: AES.
[27] Data Source: Surry County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[28] Data Source: Isle of Wight County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[29] Data Source: AES.
[30] Data Source: AES.
[31] Data Source: AES.

Fiscal Impact – Surry County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Surry County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Surry County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Surry County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 3 details the increased property assessments associated with reassessing the 125-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $11,600 per year, for a cumulative total of approximately $404,600 over the project's anticipated 35-year operational life expectancy.[32] In contrast, the property currently generates approximately $1,530 per year in real estate tax revenue for the county, for a cumulative total of approximately $53,500 over 35 years.[33]

Table 3: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[34]	$1,628,100
Surry County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$11,600
Cumulative Revenue over 35 Years	**$404,600**

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment

Table 4 separately details the additional annual revenue that the proposed Sycamore Cross 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 pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[35], times 2) the State Corporation Commission's utility assessment ratio for taxation of public utilities in Surry County, times 4) the State Corporation

[32] Assumes property will be reassessed at $13,000 per acre once it is under solar use.
[33] Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[34] Calculated as 125 acres times $13,000.
[35] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.

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.

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $43,600 in the project's first year of operation, with that figure projected to decline to approximately $4,800 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $1.1 million.

Table 4: Estimated Surry County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
1	$34,602,325	$6,141,221	$43,600
2	$34,602,325	$6,141,221	$43,600
3	$34,602,325	$6,141,221	$43,600
4	$34,602,325	$6,141,221	$43,600
5	$34,602,325	$6,141,221	$43,600
6	$34,602,325	$6,141,221	$43,600
7	$34,602,325	$6,141,221	$43,600
8	$34,602,325	$6,141,221	$43,600
9	$34,602,325	$6,120,068	$43,500
10	$34,602,325	$6,016,349	$42,700
11	$34,602,325	$5,906,490	$41,900
12	$34,602,325	$5,790,489	$41,100
13	$34,602,325	$5,667,664	$40,200
14	$34,602,325	$5,536,652	$39,300
15	$34,602,325	$5,398,133	$38,300
16	$34,602,325	$5,251,426	$37,300
17	$34,602,325	$5,095,848	$36,200
18	$34,602,325	$4,931,400	$35,000
19	$34,602,325	$4,756,034	$33,800
20	$34,602,325	$4,571,115	$32,500
21	$34,602,325	$4,374,596	$31,100
22	$34,602,325	$4,166,477	$29,600
23	$34,602,325	$3,946,075	$28,000

[36] Data Source: AES.
[37] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Surry County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[38] 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 $0.72 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
24	$34,602,325	$3,712,027	$26,400
25	$34,602,325	$3,464,331	$24,600
26	$34,602,325	$3,200,941	$22,700
27	$34,602,325	$2,922,539	$20,800
28	$34,602,325	$2,627,078	$18,700
29	$34,602,325	$2,314,558	$16,400
30	$34,602,325	$1,982,250	$14,100
31	$34,602,325	$1,630,835	$11,600
32	$34,602,325	$1,258,268	$8,900
33	$34,602,325	$863,183	$6,100
34	$34,602,325	$682,358	$4,800
35	$34,602,325	$682,358	$4,800
Estimated Cumulative Total			**$1,079,200**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

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 Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $1.5 million.

Table 5: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$404,600
County Revenue from Taxation of Capital Investments	$1,079,200
Total Cumulative Revenue over 35 Years	**$1,483,800**

**Totals may not sum due to rounding.*

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Surry County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 6 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 19 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $1.4 million over the anticipated 35-year operational life of the project.

Table 6: Estimated Surry County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	19	$1,540	$29,300
2	19	$1,540	$29,300
3	19	$1,540	$29,300
4	19	$1,540	$29,300
5	19	$1,540	$29,300
6	19	$1,694	$32,200
7	19	$1,694	$32,200
8	19	$1,694	$32,200
9	19	$1,694	$32,200
10	19	$1,694	$32,200
11	19	$1,863	$35,400
12	19	$1,863	$35,400
13	19	$1,863	$35,400
14	19	$1,863	$35,400
15	19	$1,863	$35,400
16	19	$2,050	$38,900
17	19	$2,050	$38,900
18	19	$2,050	$38,900
19	19	$2,050	$38,900
20	19	$2,050	$38,900
21	19	$2,255	$42,800
22	19	$2,255	$42,800
23	19	$2,255	$42,800
24	19	$2,255	$42,800
25	19	$2,255	$42,800
26	19	$2,480	$47,100
27	19	$2,480	$47,100
28	19	$2,480	$47,100
29	19	$2,480	$47,100
30	19	$2,480	$47,100
31	19	$2,728	$51,800
32	19	$2,728	$51,800
33	19	$2,728	$51,800
34	19	$2,728	$51,800
35	19	$2,728	$51,800
Cumulative Total			**$1,388,000**

Scenario 2: Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $1.8 million.

Table 7: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$404,600
County Revenue from Revenue Share Ordinance	$1,388,000
Total Cumulative Revenue over 35 Years	**$1,792,600**

Fiscal Impact – Isle of Wight County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Isle of Wight County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Isle of Wight County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 8 details the increased property assessments associated with removing the affected acreage from the land use program and reassessing the 1,030-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $109,700 per year, for a cumulative total of approximately $3.8 million over the project's anticipated 35-year operational life expectancy.[39] Adding one-time rollback taxes of approximately $157,700 increases that cumulative total to approximately $4.0 million. In contrast, the property currently generates approximately $14,900 per year in real estate tax revenue for the county, for a cumulative total of approximately $520,000 over 35 years.[40]

Table 8: Estimated Isle of Wight County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[41]	$15,455,300
Isle of Wight County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$109,700
Cumulative Revenue over 35 Years	**$3,840,600**
One-time Rollback Taxes[42]	**$157,700**
Cumulative Revenue over 35 Years	**$3,998,300**

**Totals may not sum due to rounding.*

[39] Assumes property will be reassessed at $15,000 per acre once it is under solar use.
[40] Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.
[41] Calculated as 1,030 acres times $15,000.
[42] Rollback taxes are computed as the difference between the land use value assessment tax and the tax on the fair market value for the affected acreage for five complete tax years plus the current year, including simple interest. Does not account for changes in assessment values.

Scenario 1: Taxation of Capital Investment

Table 9 separately details the additional annual revenue that the proposed Sycamore Cross 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 pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[43], times 2) the State Corporation Commission's 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 $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 9 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $452,700 in the project's first year of operation, with that figure projected to decline to approximately $50,300 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately $11.2 million.

Table 9: Estimated Isle of Wight County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
1	$402,479,675	$63,767,270	$452,700
2	$402,479,675	$63,767,270	$452,700
3	$402,479,675	$63,767,270	$452,700
4	$402,479,675	$63,767,270	$452,700
5	$402,479,675	$63,767,270	$452,700
6	$402,479,675	$63,767,270	$452,700
7	$402,479,675	$63,767,270	$452,700
8	$402,479,675	$63,767,270	$452,700
9	$402,479,675	$63,547,627	$451,200
10	$402,479,675	$62,470,669	$443,500
11	$402,479,675	$61,329,943	$435,400
12	$402,479,675	$60,125,450	$426,900
13	$402,479,675	$58,850,105	$417,800

[43] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.
[44] Data Source: AES.
[45] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Isle of Wight County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[46] 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 $0.71 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
14	$402,479,675	$57,489,736	$408,200
15	$402,479,675	$56,051,430	$398,000
16	$402,479,675	$54,528,101	$387,100
17	$402,479,675	$52,912,663	$375,700
18	$402,479,675	$51,205,118	$363,600
19	$402,479,675	$49,384,208	$350,600
20	$402,479,675	$47,464,104	$337,000
21	$402,479,675	$45,423,552	$322,500
22	$402,479,675	$43,262,550	$307,200
23	$402,479,675	$40,974,013	$290,900
24	$402,479,675	$38,543,772	$273,700
25	$402,479,675	$35,971,825	$255,400
26	$402,479,675	$33,236,918	$236,000
27	$402,479,675	$30,346,135	$215,500
28	$402,479,675	$27,278,221	$193,700
29	$402,479,675	$24,033,175	$170,600
30	$402,479,675	$20,582,658	$146,100
31	$402,479,675	$16,933,753	$120,200
32	$402,479,675	$13,065,205	$92,800
33	$402,479,675	$8,962,844	$63,600
34	$402,479,675	$7,085,252	$50,300
35	$402,479,675	$7,085,252	$50,300
Estimated Cumulative Total			**$11,205,800**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

Table 10 combines the results from the calculations depicted in Tables 8 and 9 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $15.2 million.

Table 10: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$3,998,300
County Revenue from Taxation of Capital Investments	$11,205,800
Total Cumulative Revenue over 35 Years	**$15,204,100**

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Isle of Wight County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute currently stipulates that a locality may assess an annual revenue share of up to $1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 11 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 221 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $16.1 million over the anticipated 35-year operational life of the project.

Table 11: Estimated Isle of Wight County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	221	$1,540	$340,300
2	221	$1,540	$340,300
3	221	$1,540	$340,300
4	221	$1,540	$340,300
5	221	$1,540	$340,300
6	221	$1,694	$374,400
7	221	$1,694	$374,400
8	221	$1,694	$374,400
9	221	$1,694	$374,400
10	221	$1,694	$374,400
11	221	$1,863	$411,800
12	221	$1,863	$411,800
13	221	$1,863	$411,800
14	221	$1,863	$411,800
15	221	$1,863	$411,800
16	221	$2,050	$453,000
17	221	$2,050	$453,000
18	221	$2,050	$453,000
19	221	$2,050	$453,000
20	221	$2,050	$453,000
21	221	$2,255	$498,300
22	221	$2,255	$498,300
23	221	$2,255	$498,300
24	221	$2,255	$498,300
25	221	$2,255	$498,300
26	221	$2,480	$548,100

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
27	221	$2,480	$548,100
28	221	$2,480	$548,100
29	221	$2,480	$548,100
30	221	$2,480	$548,100
31	221	$2,728	$602,900
32	221	$2,728	$602,900
33	221	$2,728	$602,900
34	221	$2,728	$602,900
35	221	$2,728	$602,900
Cumulative Total			**$16,144,300**

Scenario 2: Total Fiscal Impact

Table 12 combines the results from the calculations depicted in Tables 8 and 11 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $20.1 million.

Table 12: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$3,998,300
County Revenue from Revenue Share Ordinance	$16,144,300
Total Cumulative Revenue over 35 Years	**$20,142,600**

Current Agricultural Use

This section provides a benchmark for the previous estimates of the economic contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight by estimating the economic and fiscal contribution that the site makes to the counties in its current use.

Economic Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres are located in Surry County and 1,030 acres are located in Isle of Wight County.[47]
- The land currently is timberland and agricultural land used to produce corn, soybeans, cotton, and peanuts.[48]

Economic Impact

Applying these inputs to the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 13, in its current use, the proposed Sycamore Cross Solar project site directly supports approximately: 1) 1 job, 2) $0.1 million in wages and benefits, and 3) $0.4 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct impact generates, on average, the total annually supported impact on the counties of Surry and Isle of Wight is approximately: 1) 2 jobs, 2) $0.2 million in wages and benefits, and 3) $0.5 million in economic output.

Table 13: Total Estimated Annual Economic Impact of the Sycamore Cross Solar Project Site on the Counties of Surry and Isle of Wight– Current Use[49]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	1	$111,400	$382,200
2nd Round Indirect and Induced Economic Activity	1	$56,700	$163,800
Total Economic Activity	**2**	**$168,100**	**$546,000**

**Totals may not sum due to rounding.*

[47] Data Source: AES.
[48] Data Source: AES.
[49] Calculations based data from the U.S. Department of Agriculture and IMPLAN Group, LLC for Isle of Wight County, Surry County, and Virginia.

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres would be located in Surry County and 1,030 acres would be located in Isle of Wight County.[50]
- The current assessment value of the affected acreage in Surry County is approximately $0.2 million.[51]
- The current assessment value of the affected acreage in Isle of Wight County is approximately $2.1 million.[52]

Fiscal Impact – Surry County

Table 14 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Surry County in its current use. As the data in Table 14 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $1,530 per year, for a cumulative total of approximately $53,500 over 35 years.

Table 14: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project Site over 35 Years from Real Estate Taxes – Current Use

Estimated Assessed Value of Property – Current Use	$215,300
Surry County Current Real Estate Tax Rate	0.0071
Estimated Annual County Real Estate Tax – Current Use	$1,530
Total Cumulative Revenue over 35 Years	**$53,500**

**Totals may not sum due to rounding.*

Fiscal Impact – Isle of Wight County

Table 15 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Isle of Wight County in its current use. As the data in Table 15 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $14,900 per year, for a cumulative total of approximately $520,000 over 35 years.

[50] Data Source: AES.
[51] Data Source: Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[52] Data Source: Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.

Table 15: Estimated Isle of Wight County Revenue Generated by the Proposed Sycamore Cross Solar Project Site over 35 Years from Real Estate Taxes – Current Use

Estimated Assessed Value of Property – Current Use	$2,092,500
Isle of Wight County Current Real Estate Tax Rate	0.0071
Estimated Annual County Real Estate Tax – Current Use	$14,900
Total Cumulative Revenue over 35 Years	**$520,000**

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

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: Amy M. Ring
Community Development Director

FROM: Gerald H. Gwaltney,
Commissioner of the Revenue

DATE: May 16, 2024

RE: **Sycamore Cross Solar Project**
Conditional Use Permit (CUP-8-23), Third Submittal

I have completed the review of the Sycamore Cross Solar Project Third Submittal. The solar project's initial interconnection request for Sycamore Cross Solar was filed in March 2017. This date is important because it occurs within the period (Jan. 1, 2015 – June 30, 2018) in which all solar equipment related to the application received an 80% exemption. No other category of taxable property in Isle of Wight receives such an exemption.

Below are several deficiencies in their submittal relating to the tax revenue analysis.

- **Real Estate**

  Rollback Taxes – the third submittal incorrectly calculates the rollback taxes. The amount of rollback taxes is overstated because "simple interest" is not applied in Isle of Wight County. This error indicates Sycamore Cross Solar, LLC did not review the County's land use ordinance.

  The study did not provide the worksheet detailing the rollback taxes by year for each parcel subject to the rollback tax, making it impossible to confirm the calculations.

- **Equipment**

  The State Corporation Commission will assess the solar equipment. Table 9 lists the "Depreciated Value of Taxable Capital Investment" as $63,767,270 for years 1 through 8. The study defines the formula used to arrive at the value. This formula includes the "SCC utility assessment ratio for taxation of public utilities in Isle of Wight County." If the 2023 sales ratio was used, then the capital investment taxes are overstated.

  The study did not provide the worksheet detailing the rates used to determine the taxes on the equipment, making it impossible to confirm the calculations.

Please let me know if you have any questions.

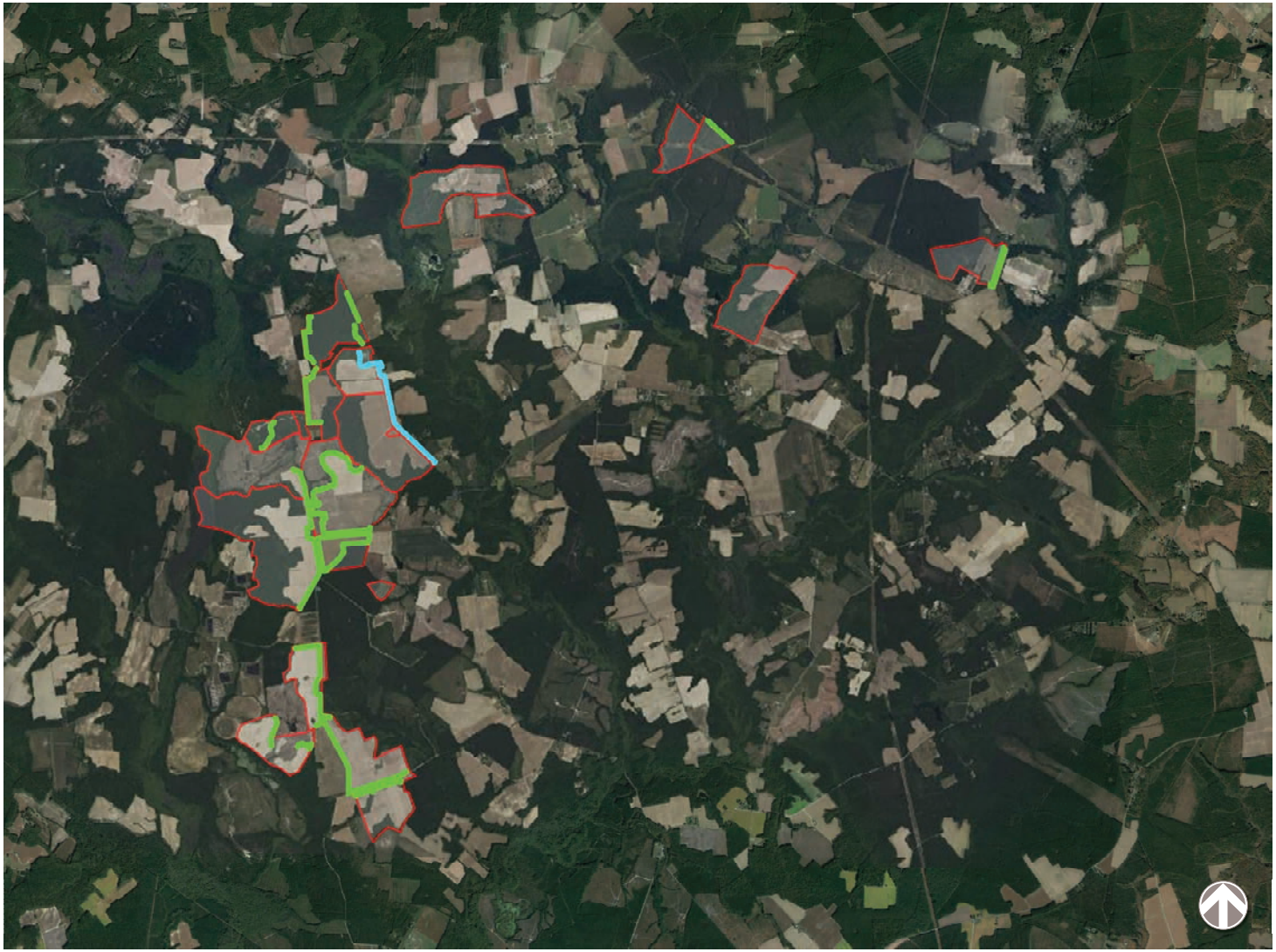
SYCAMORE CROSS SOLAR PROJECT

Isle of Wight and Surry Counties, Virginia

CONCEPTUAL LANDSCAPE

FEBRUARY 2024

LANDSCAPE SCREENING BY ZONE



LEGEND

FRONTAGE ZONE

BUFFER ZONE

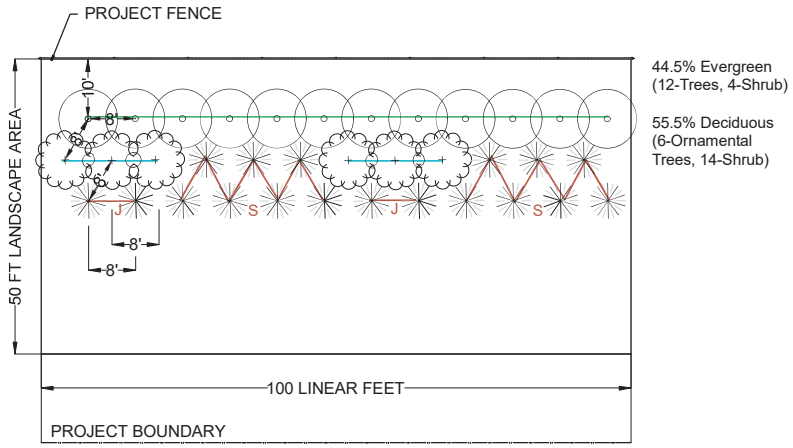
SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE SCREENING - PLANT SCHEMATICS AND CONCEPTUAL PLANT LISTS

FRONTAGE ZONE LANDSCAPE

Apply to landscape screening areaalong public roadways with ROW greater than 50 feet

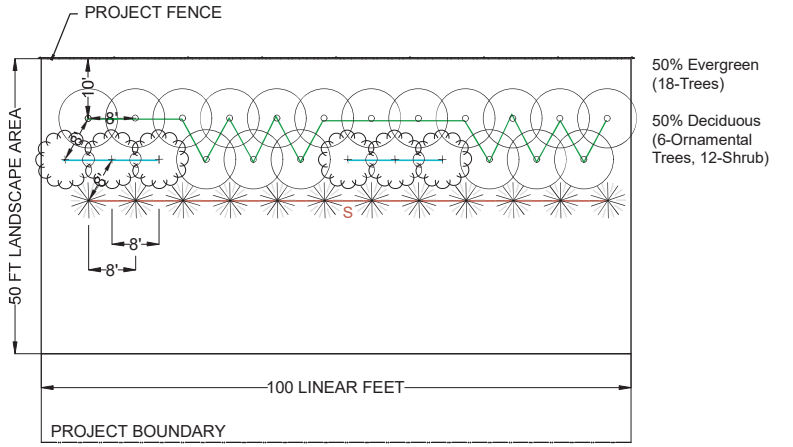


44.5% Evergreen (12-Trees, 4-Shrub)

55.5% Deciduous (6-Ornamental Trees, 14-Shrub)

BUFFER ZONE LANDSCAPE - ABUTTING RESIDENTIAL PARCELS

Apply to Abutting Residential Parcels where the existing vegetation not present



50% Evergreen (18-Trees)

50% Deciduous (6-Ornamental Trees, 12-Shrub)

CONCEPTUAL PLANT LIST

CONCEPT PLANT LIST				
Botanical Name	**Common Name**	**Height at Planting**	**Mature height**	**Mature Spread**
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

J

S

SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

SYCAMORE CROSS SOLAR FACILITY

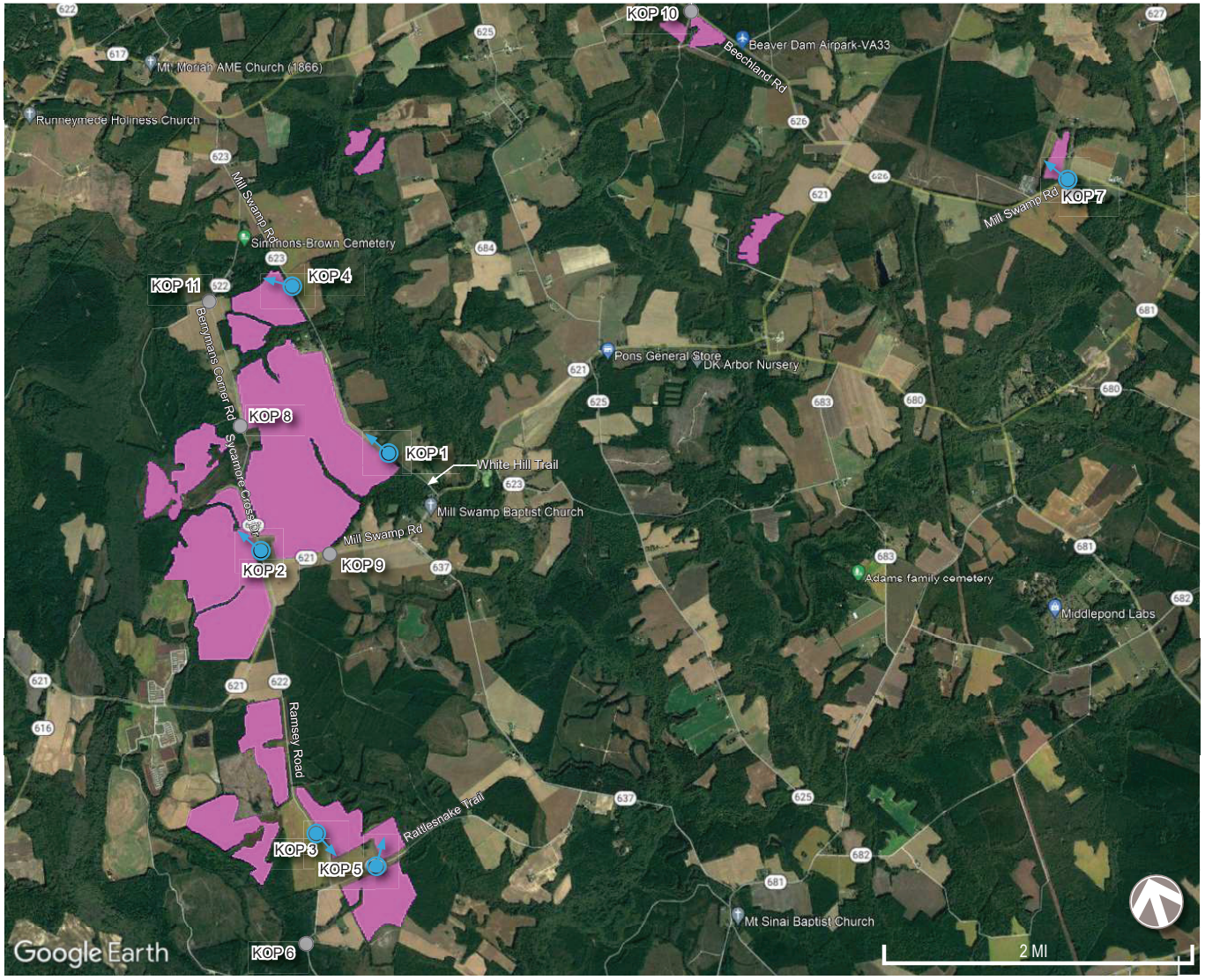
LANDSCAPE SCREENING - PLANT SCHEMATICS AND CONCEPTUAL PLANT LISTS

SYCAMORE CROSS SOLAR PROJECT

Isle of Wight and Surry Counties, Virginia

PHOTO SIMULATIONS

APRIL 2024

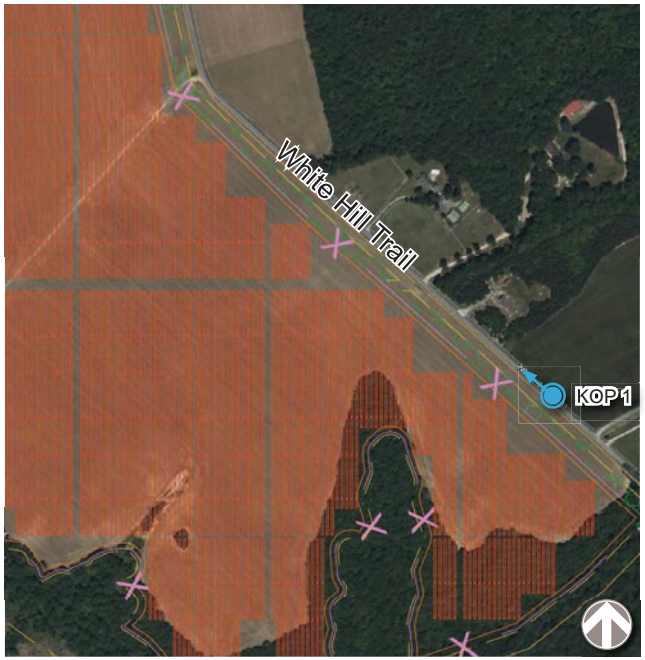


LEGEND

- Photo Simulation / Viewing Direction
- Project Area
- Candidate KOP Location

SYCAMORE CROSS SOLAR FACILITY

KEY OBSERVATION POINT LOCATION MAP



KOP 1:
WHITE HILL TRAIL



KOP 2:
SYCAMORE CROSS DRIVE



KOP 3:
RAMSEY RD

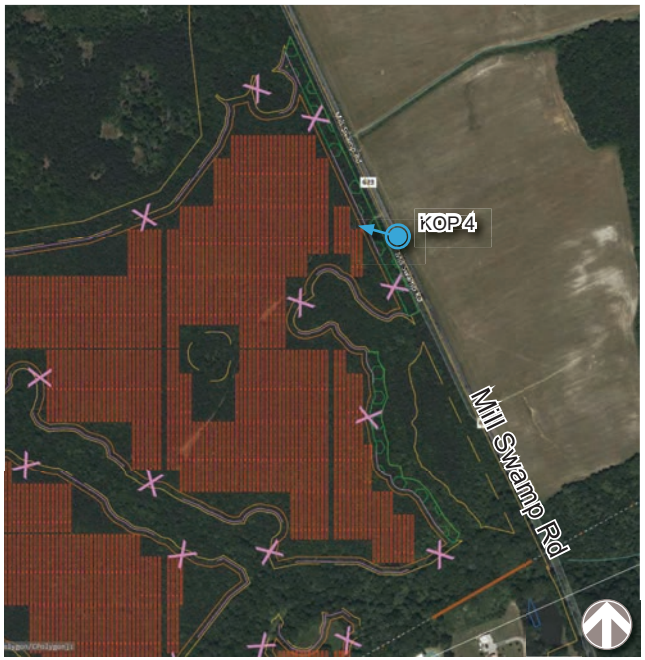
LEGEND

- PV Area
- Panels
- Fenceline
- Vegetative Buffer Area

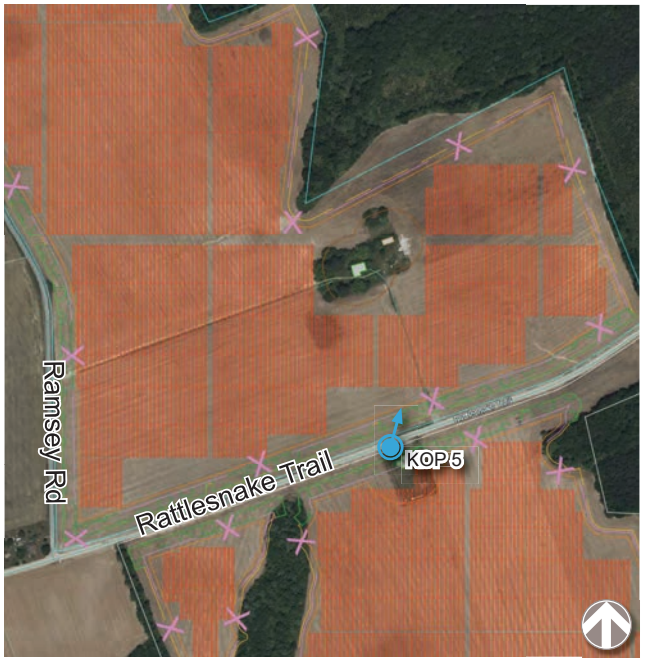
PHOTO LOCATION
& VIEWING DIRECTION

SYCAMORE CROSS SOLAR FACILITY

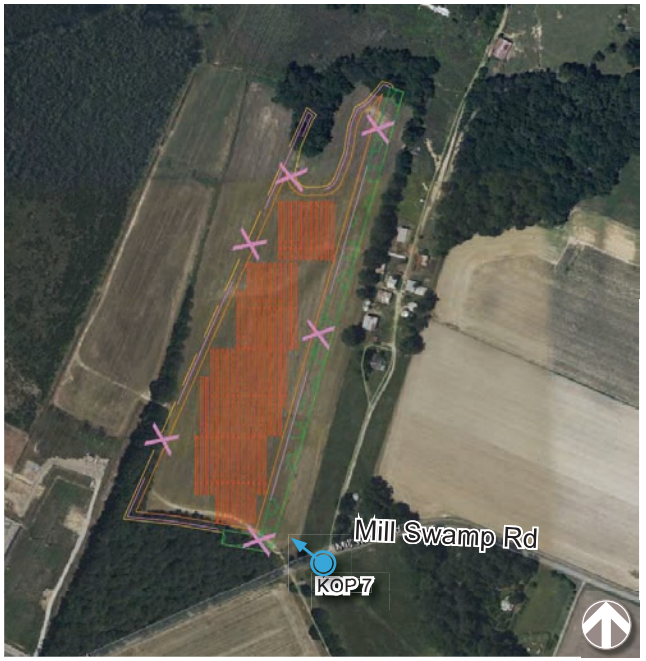
LANDSCAPE BUFFER VISUALIZATION - PHOTO LOCATIONS



KOP 4:
MILL SWAMP ROAD



KOP 5:
RATTLESNAKE TRAIL



KOP 7:
MILL SWAMP ROAD

LEGEND

- PV Area
- Panels
- Fenceline
- Vegetative Buffer Area

PHOTO LOCATION
& VIEWING DIRECTION

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - PHOTO LOCATIONS

KOP 1:
WHITE HILL TRAIL

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE TO PROJECT:	155 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 2:
SYCAMORE CROSS DRIVE

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE TO PROJECT:	175 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 3:
RAMSEY ROAD

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
LATITIUDE:	36.959386°
LONGITUDE:	-76.829939°
DISTANCE TO PROJECT:	145 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

DISCLAIMER: The photographs used as the base for these simulations were collected during winter months where existing deciduous trees are pictured in the leaf-off condition. The landscape screening simulated shows full leaf-on conditions for all vegetation used for screening. While this does not match existing conditions, it demonstrates the maximum extent of screening proposed.

SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - BEFORE AND AFTER BUFFER INSTALLATION

KOP 4:
MILL SWAMP ROAD

PHOTOGRAPH INFORMATION

TIME:	11:35 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.011385°
LONGITUDE:	-76.827799°
DISTANCE TO PROJECT:	190 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING

KOP 5:
RATTLESNAKE TRAIL

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHEAST
LATITIUDE:	36.955797°
LONGITUDE:	-76.823667°
DISTANCE TO PROJECT:	400 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

KOP 7:
MILL SWAMP ROAD

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.014834°
LONGITUDE:	-76.733937°
DISTANCE TO PROJECT:	270 FT



EXISTING



SIMULATED - WITH PLANT SCREENING: AT PLANTING



SIMULATED - WITH PLANT SCREENING: AT MATURE HEIGHT

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SYCAMORE CROSS SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION - BEFORE AND AFTER BUFFER INSTALLATION

SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE FROM PROJECT:	155 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE FROM PROJECT:	175 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

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- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION





VICINITY MAP

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- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	9:32 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTHEAST
LATITIUDE:	36.959386°
LONGITUDE:	-76.829939°
DISTANCE FROM PROJECT:	145 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 3: Ramsey Rd

PHOTO SIMULATION





VICINITY MAP

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- PHOTO SIMULATION LOCATION
- PROJECT AREA
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SYCAMORE CROSS SOLAR PROJECT

KOP 4: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	11:35 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	37.011385°
LONGITUDE:	-76.827799°
DISTANCE FROM PROJECT:	190 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 4: Mill Swamp Rd

PHOTO SIMULATION



PROJECT VIEWS ARE OBSTRUCTED BY EXISTING VEGETATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	8:53 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHEAST
LATITIUDE:	36.955797°
LONGITUDE:	-76.823667°
DISTANCE FROM PROJECT:	400 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	37.014834°
LONGITUDE:	-76.733937°
DISTANCE FROM PROJECT:	270 FT

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SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

TIME:	1:05 PM
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SYCAMORE CROSS SOLAR PROJECT

KOP 7: Mill Swamp Rd

PHOTO SIMULATION





VICINITY MAP

LEGEND

- PHOTO SIMULATION LOCATION
- PROJECT AREA
- KOP LOCATION

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Sycamore Cross A and B Solar Projects with Approved Solar Energy Generation Facilities as of 5/21/24

PROJECT	DEVELOPED AREA (PER CUP)	PRIME FARMLAND /SOILS OF STATEWIDE IMPORTANCE*	% OF TOTAL PRIME SOILS (rounded)	LOCATION	% OF TOTAL FARMLAND**	TOTAL MW	APPROVAL DATE
Woodland	180	124	0.10%	Longview	0.22%	20	2015
Solidago	170	170	0.14%	Redhouse	0.21%	20	2018
Ho-Fel	330	315	0.26%	Lees Mill	0.41%	55	2019; Amended 2023
Windsor PV1	630	630	0.52%	Windsor	0.78%	85	2019; Amended in 2021
Cavalier	500	500	0.41%	Hardy	0.62%	240	2021
Nuby Run	20	20	0.02%	Orbit	0.02%	2	2022
Carver	637	297	0.24%	Windsor	0.79% 0.00%	71	Approved 7/23/2023
Prairie Solar	152	152	0.12%	Longview	0.19% 0.00%	20	Approved 8/17/23
Courthouse Solar	18	18	0.01%	Route 258	0.02%	3	Approved 11/16/23
Sycamore Cross A & B (Proposed)	1,030	1,030	0.84%	Ramsey/Mill Swamp/White Hill Trail/Sycamore Cross/Rattlesnake	1.28%	240	Under Review
TOTAL	**3,667**	**3,256**	**2.66%**		**4.57%**	**756**	

Prime soils include Prime Farmland, Prime, If Drained, and Soils of Statewide Importance – 122,296 total acres in County

Total active agricultural lands as of 2022 Census of Agriculture – 80,316 acres

ORDINANCE NUMBER ___ _____

AN ORDINANCE TO ISSUE CONDITIONAL USE PERMIT CUP-5-24 TO ESTABLISH A MAJOR UTILITY SERVICE, SPECIFICALLY A SIX MW UTILITY-SCALE SOLAR ENERGY GENERATION FACILITY, ON APPROXIMATELY 240 ACRES WITH TAX PARCEL NUMBERS 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, AND 11-01-005 LOCATED ON JONES DRIVE (RTE. 626), BURWELLS BAY ROAD (RTE. 621), MILL SWAMP ROAD (RTE. 621) AND JAMES WILSON WAY IN THE RURAL AGRICULTURAL CONSERVATION ZONING DISTRICT

WHEREAS, Sycamore Cross Solar, LLC, applicant, has requested the issuance of a conditional use permit for a certain portion or all of the property with tax parcel numbers 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005 for a six MW utility scale solar energy generation facility which land is depicted on Exhibit "A"; 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 of denial of the application at their May 28, 2024, regular meeting;

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," "Property Map", and Exhibit "B" 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 a conditional use permit (CUP-5-24) and the withdrawal of enrolled land in the Moonlight Agricultural and Forestal District, as submitted or modified with conditions herein, the expressed purpose of which is to permit a major utility service, specifically a six MW utility-scale solar energy generation 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.

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 the most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property, subject to the attached conditions in Exhibit "B" and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a six MW major utility service solar energy generation 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

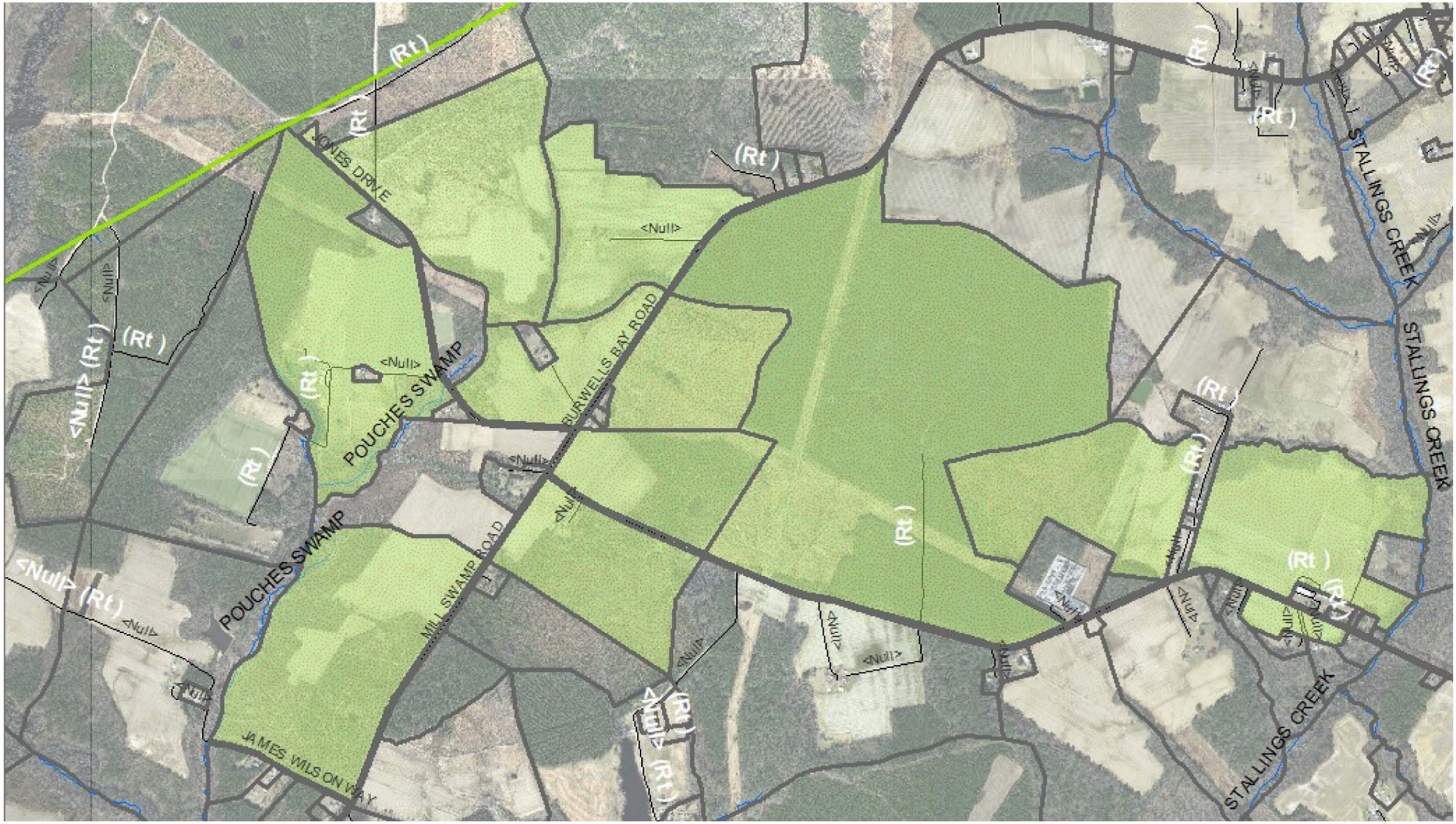
JONES DRIVE
POUCHES SWAMP
BURWELLS BAY ROAD
MILL SWAMP ROAD
JAMES WILSON WAY
STALLINGS CREEK
STALLINGS CREEK
STALLINGS CREEK
(Rt)
<Null>

EXHIBIT B

CUP-5-24
SYCAMORE CROSS B CONDITIONS OF APPROVAL

1. Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2. The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.
3. No impacts shall be permitted to the Pouches Swamp stream conservation unit area, the C1-C3 ecological core areas, or the priority forestland areas. The applicant shall submit a formal ecological core impact assessment with DCR as recommended.
4. The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.
5. The applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6. A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7. The facility perimeter fencing will be equipped with push bar pedestrian gates to permit emergency exits from the facility.
8. Adherence to the proposed transportation plan shall be required for all facility traffic. Truck traffic shall be limited to only to the preferred route as described in in the transportation plan. No other local routes in Isle of Wight County may be used. The applicant shall coordinate deliveries outside of school bus pickup and drop-off times.
9. Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10. Hours of operation for construction and post-construction operation shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. Saturdays from 7:00 a.m. to 5:00 p.m. No construction is to occur on Sundays by any party involved with the project.
11. As part of the site plan review, the applicant shall provide documentation that the selected panels and all power-generating equipment on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12. The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil

conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to at least baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13. Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

REPORT >

Phase I Cultural Resource Survey of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

LOCATION > Isle of Wight and Surry Counties, Virginia

DATE > July 2024

PREPARED FOR >
AES Clean Energy



PREPARED BY >
Dutton + Associates, LLC

VDHR FILE NO. >
2023-4691

Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I CULTURAL RESOURCE SURVEY OF THE ±817.46 HECTARE (2,020 ACRE) SYCAMORE CROSS SOLAR PROJECT AREA

ISLE OF WIGHT AND SURRY COUNTIES, VIRGINIA

PREPARED FOR:
AES CLEAN ENERGY
4200 INNSLAKE DRIVE
SUITE 302
GLEN ALLEN, VIRGINIA 23060

***PREPARED BY*:**
DUTTON + ASSOCIATES, LLC
1115 CROWDER DRIVE
MIDLOTHIAN, VIRGINIA 23113
804.897.1960

PRINCIPAL INVESTIGATOR/
ARCHITECTURAL HISTORIAN:
ROBERT J. TAYLOR, JR., M.A.

SENIOR ARCHAEOLOGIST:
HOPE SMITH, PH.D.

RESEARCH HISTORIAN:
DARA FRIEDBERG, M.S.

JULY 2024

ABSTRACT

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area (D+A July 2023).

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. As part of the project, a series of solar arrays will be built throughout the project area.

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). The surveyed resources consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.

Each of the four NRHP-eligible resources was subject to an assessment of impacts brought about by the project. Of the eligible resources, three are located directly within the study area, however, will be excluded by the project development plan and therefore will not be directly impacted by the project. With regards to indirect, visual impacts, field inspection revealed that the generally open nature of the landscape within and bordering the NRHP-eligible properties permits views of the project area that range from partially screened to nearly unobstructed. To minimize the potential for visibility of the project, a variety of measures have been employed including setbacks from roadways and property lines, and supplemental landscape buffers. ***With these measures, it is D+A's recommendation that visibility of the project from one resource, the Wilson Hollemon House (VDHR# 046-0068) will be screened and therefore the Sycamore Cross Solar Project will have no more than a minimal impact to it. With regards to the remaining three resources, the setbacks and landscape screening will reduce visibility of the project but some portions will remain visible. As such, it is D+A's recommendation that the Sycamore Cross Solar Project will result in a moderate impact to the Sycamore Cross Post Office (VDHR# 046-5149), the house at 11356 Sycamore Cross Drive (VDHR# 046-5150), and the Betts Farm (VDHR# 046-5811)****.*

Summary of NRHP-eligible architectural resources within the project survey area and recommendations of project impacts.

VDHR ID#	*Resource Name/Address*	*NRHP Eligibility*	*Proximity to Project*	*Project Impact*
046-0068	*Wilson Hollemon House, 5499 Mill Swamp Road*	*D+A: Potentially Eligible*	*Adjacent to Project*	*Minimal Impact*
046-5149	*Sycamore Cross Post Office, Mill Swamp Road*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*
046-5150	*House, 11356 Sycamore Cross Drive*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*
046-5811	*Betts Farm, 5191 Mill Swamp Road*	*D+A: Potentially Eligible*	*Within Project Area (in Exclusion Area)*	*Moderate Impact*

One (1) cemetery was identified within testing area B5 of the project area, and is an independent resource, not associated with any standing architectural resource. ***Although the cemetery represents a typical small family cemetery and is considered not eligible for listing in the NRHP, the visual limits of the cemetery should be avoided with a 100-foot avoidance zone, or be subject to further delineation, to ensure protection during and after project construction.***

Summary of Cemetery identified within the project area with proximity to project area and recommended avoidance measures.

Cemetery #	*Name, Location*	*NRHP Status*	*Proximity to Project Area*	*Avoidance/Impacts*
046-5816	*Holleman Cemetery, White Hill Trail*	*D+A: Not Eligible*	*Within Project Area*	*100-foot avoidance or further delineation*

Archaeological investigations followed an approved testing model that identified areas of high, moderate, and low archaeological potential. The testing strategy involved a combination of systematic pedestrian survey and shovel testing. A total of 1,175 shovel test pits were excavated throughout the project area. The archaeological survey resulted in the identification of 20 newly recorded sites and one previously recorded cemetery.

Of these sites, six are domestic sites associated with standing architectural resources, and fourteen are mid-nineteenth to early-twentieth century sites with no features and a light archaeological

signature. Most of these sites offer little new or significant archaeological data and are site types that are well represented in the region; ***D+A recommends these 18 sites not eligible for inclusion in the NRHP, and no additional work is required.*** *However, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and as such,* ***D+A recommends avoidance with a 50-foot buffer or further investigation of these sites.***

VDHR ID#	*Site Type*	*Tine Period*	*NRHP Eligibility*	*Treatment/ Project Impacts*
44IW0405	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0406	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0407	***Farmstead***	***Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II***	***Potentially Eligible***	***Avoidance with 50-foot buffer/ Phase II Evaluation***
44IW0408	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0409	*Farmstead*	*Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0410	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0411	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0412	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0413	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0414	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0415	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0416	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0417	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0418	*Farmstead*	*Reconstruction and Growth*	*Not Eligible*	*No Impact*
44IW0419	*Farmstead*	*Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0420	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0421	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0422	*Farmstead*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0423	*Artifact Scatter*	*Reconstruction and Growth, World War I to World War II, The New Dominion*	*Not Eligible*	*No Impact*
44IW0424	***Single Dwelling***	***Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II***	***Further Study***	***Avoidance with 50-foot buffer / Further Study***

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1. INTRODUCTION

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-hectare (2,020-acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated *Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area* (D+A July 2023).

All research, fieldwork, and recording conducted as part of these investigations conforms 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) and the Virginia Department of Environmental Quality's (DEQ) *Solar Permit by Rule Guidance* (2012) for complying with the provisions of §10.1-1197.6 B 7 of the *Code of Virginia*. Principal investigators meet the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. Robert J. Taylor, Jr. M.A. served as the Principal Investigator, oversaw architectural resource investigations, and coauthored the report. Hope Smith, Ph.D., oversaw archaeological investigations and coauthored the report. Research Historian Dara Friedberg M.S. conducted background research and prepared the historic context. Copies of all field notes, maps, correspondence, and research materials are on file at D+A's office in Midlothian, Virginia.

PROJECT DESCRIPTION

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail (Figure 1-1). The project area tracts are currently a mix of open agricultural field and woodland, including planted timber and native deciduous forest (1-2).

As part of the project, a series of solar arrays will be built throughout the project area within a project fenceline (Figure 1-3).

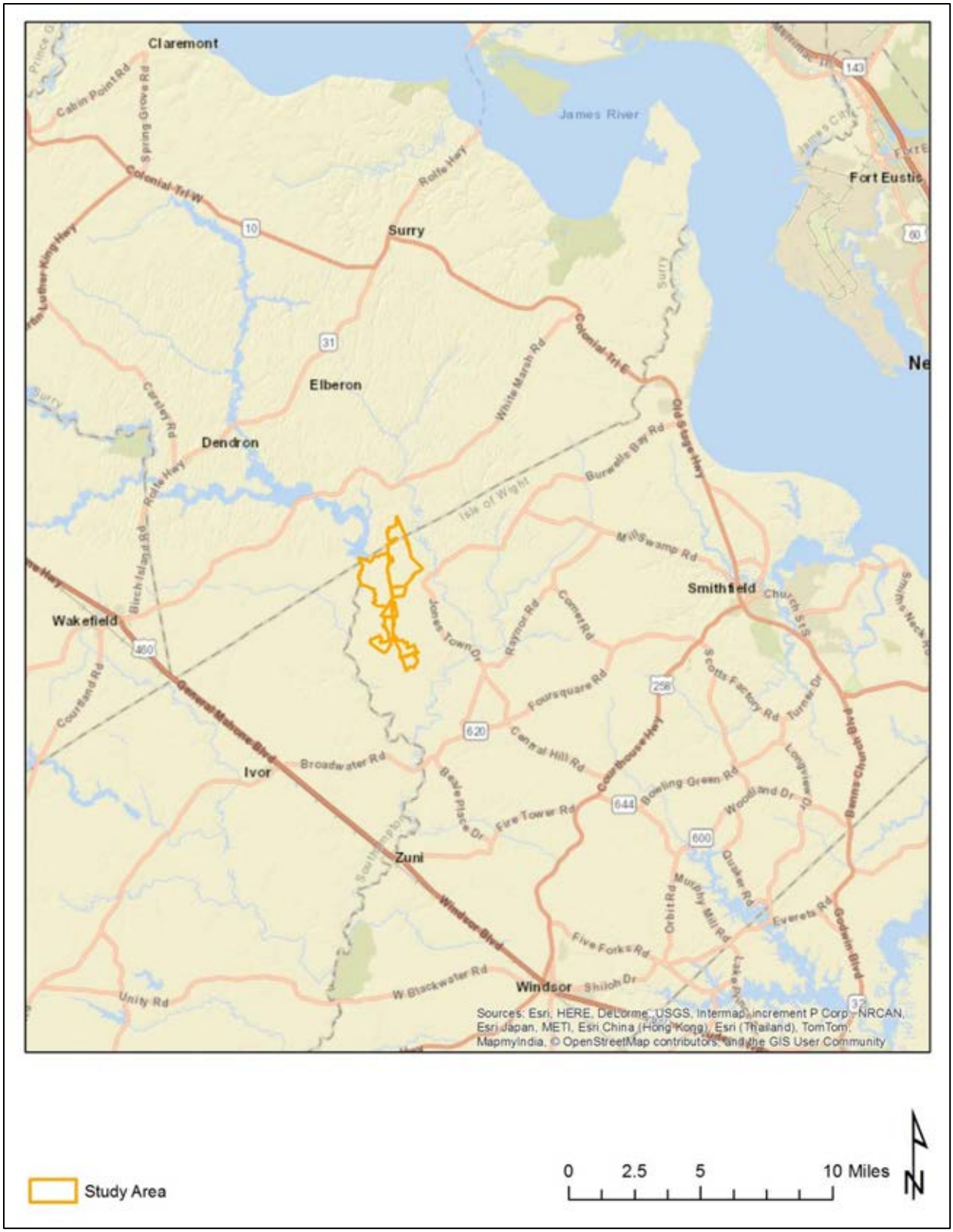

Figure 1-1: General location of the project area. Source: USGS

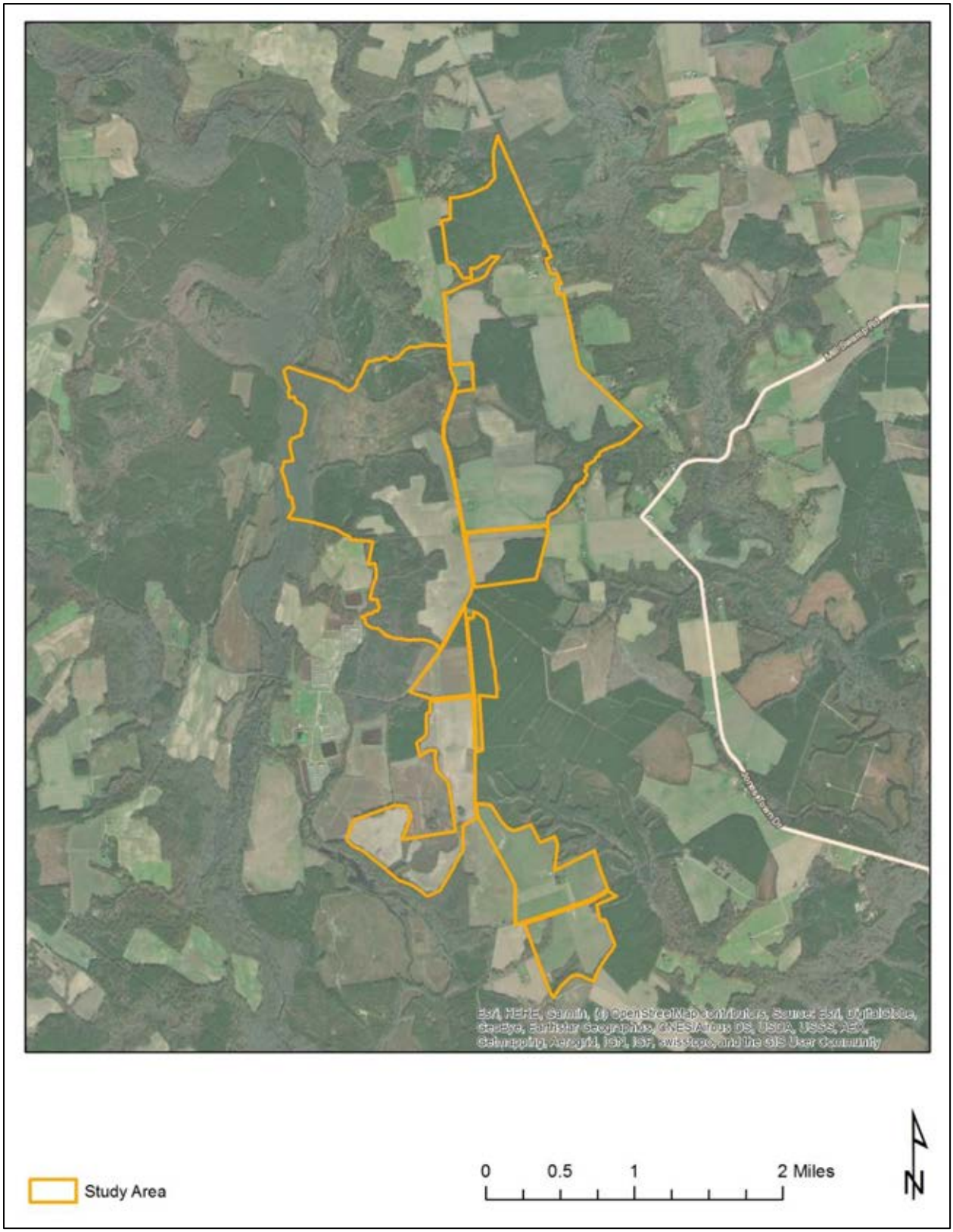

Figure 1-2: Aerial view of the project area.

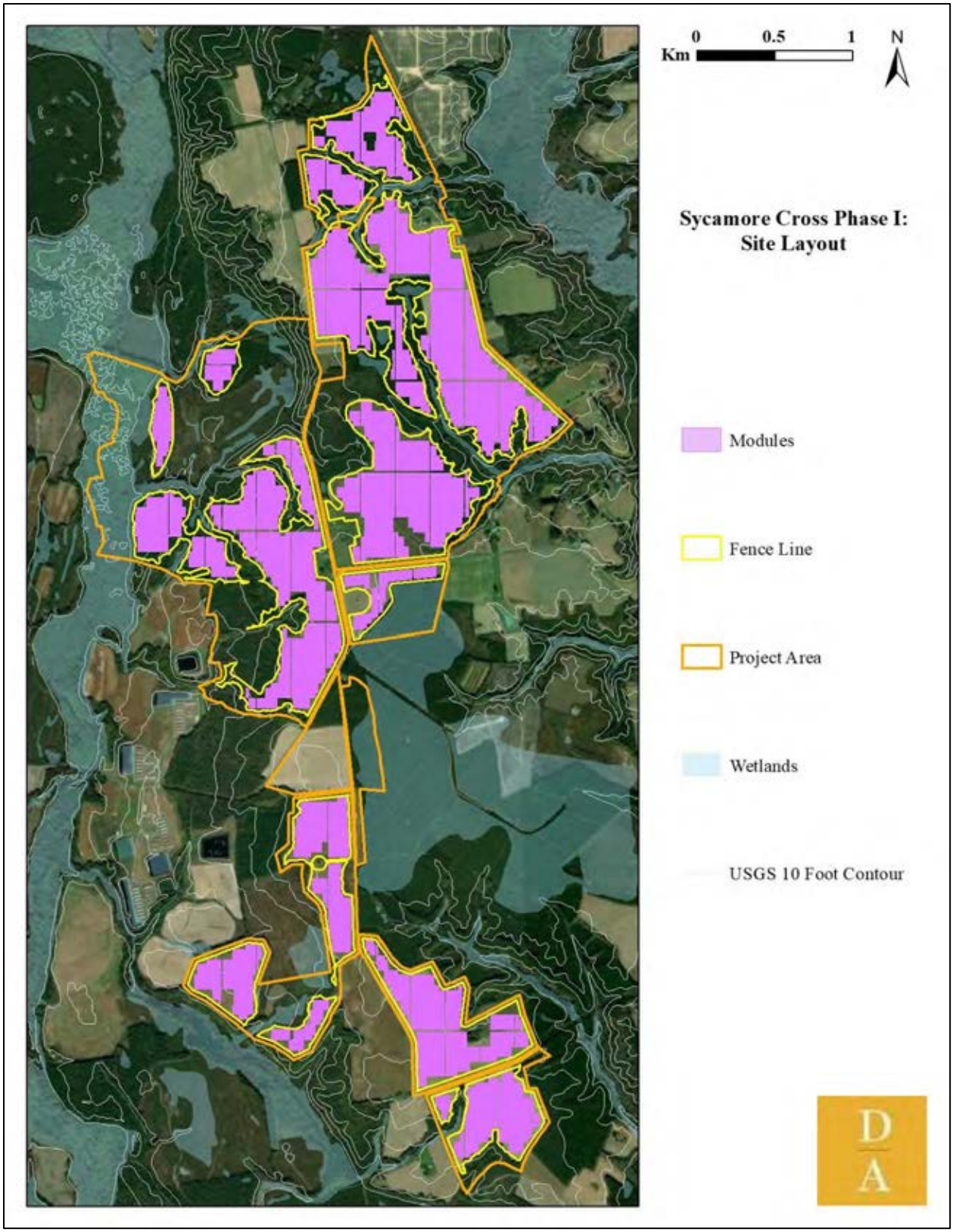

Figure 1-3: Aerial view of the project area showing proposed fencelines and array layout.

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 archaeological survey area included the entire limits of the study area, where arrays, substations, workspaces, access roads, and/or any other areas where ground-disturbing activities directly related to the project may take place. The survey strategy was further guided by, and conducted in accordance with, the testing strategy outlined in the *Phase IA Cultural Resource Assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia* (D+A 2023) and subsequent coordination with the VDHR (DHR File No. 2023-4691).

The architectural survey area includes the project area properties, 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 project according to the VDHR guidance for Solar Energy Projects is one-half mile, unless topography, vegetation, or other aspects of the landscape warrant a more refined distance. In the case of the Sycamore Cross Solar Project, the half-mile buffer was deemed appropriate and utilized. A map of the defined survey area for archaeological and architectural resources is illustrated in Figure 2-1.

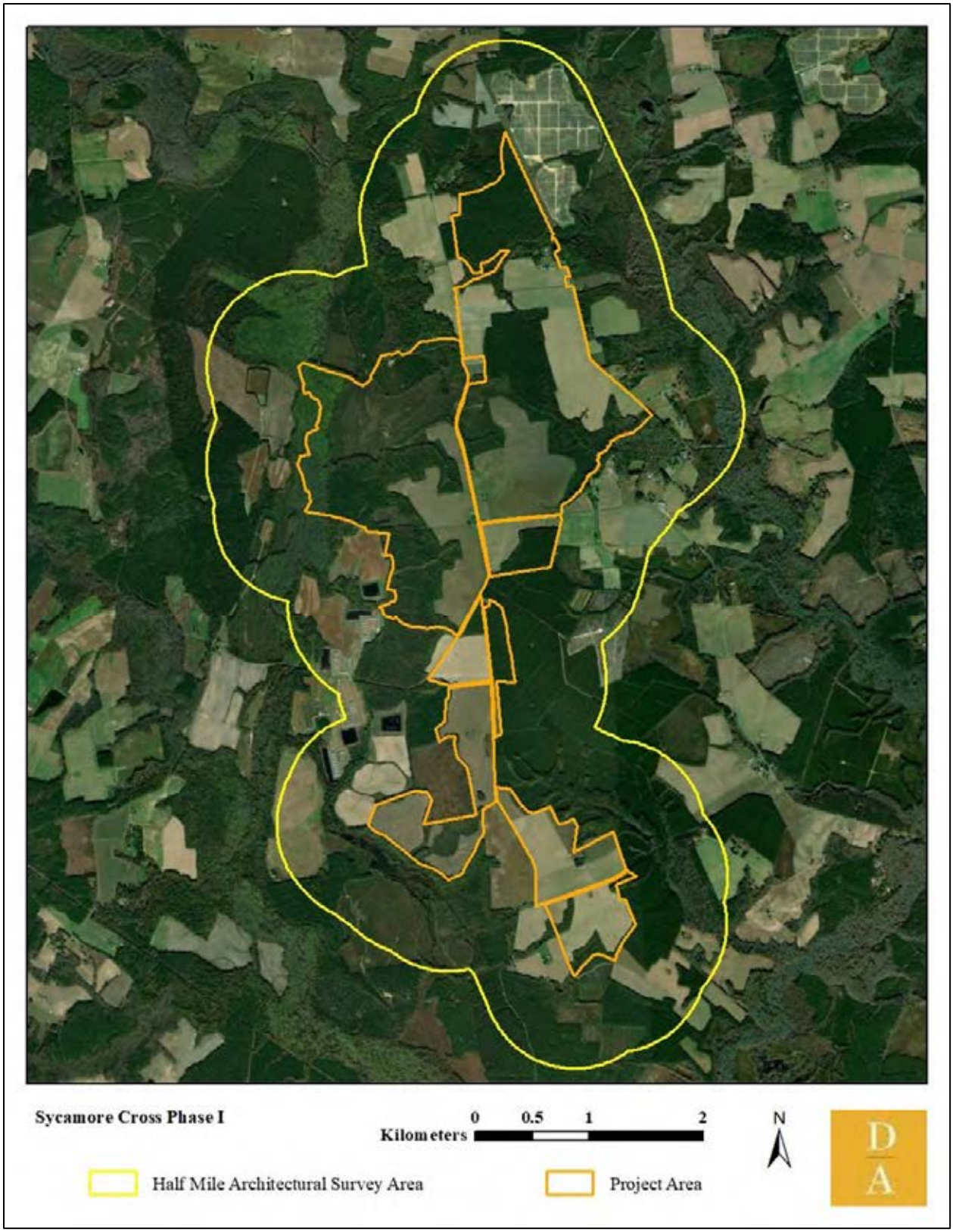

Figure 2-1: Sycamore Cross Project Area and Survey Areas.

3. RESEARCH DESIGN

The Phase I cultural resource survey of the Sycamore Cross Solar Project was undertaken in order to identify cultural resources within the project area, evaluate those resources for NRHP eligibility, and assess potential project impacts to NRHP-eligible resources. The Phase I survey methodology is summarized below and was further guided by the testing strategy outlined in the *Phase IA Cultural Resource Assessment of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia* (D+A 2023).

ARCHIVAL RESEARCH

In December 2023, D+A conducted background research with the goal of identifying all previously recorded historic properties located within one mile 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.

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 survey 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 the Isle of Wight and Surry counties was prepared summarizing general historical trends, settlement patterns, and development

with a focus on the vicinity of the study area. Further analysis and context development were undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

Archaeological Resources

Archaeological testing was conducted in accordance with the model approved by the VDHR in the Phase IA probability map. At the outset of the Phase I field investigations, a limited pedestrian survey was conducted to document existing conditions and to note any observed changes since the Phase IA was completed.

Following the pedestrian survey, systematic shovel testing was conducted throughout portions of the project deemed to have the potential for intact archaeological deposits. Shovel tests were excavated at a maximum of 15-meter (50-foot) intervals along transects spaced 15 meters (50 feet) apart with shovel test pit placement avoiding 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 0.30 meters (1 foot) 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.

Architectural Resources

The background research conducted in support of the Phase I reconnaissance survey was designed to identify architectural 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 1974 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 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.

Assessment of Project Impacts

Following identification and field inspection of historic properties, D+A assessed each resource for potential impacts brought about by the proposed project. Assessment of impacts was conducted through a combination of field inspection, digital photography, and review of topography and aerial photography. When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing in the NRHP and whether the project had the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed project would introduce new visual elements into a property's setting or viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were assessed according to DHR's *Guidelines for Assessing Impacts of. Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* and characterized as **severe** (fully visible and incompatible with character-defining viewshed or setting), **moderate** (partially visible and incompatible with character-defining viewshed or setting), **minimal** (partially visible, but screened by intervening vegetation and/or not out of character with existing viewscape) or **no impact** (not visible).

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each identified architectural 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.

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).

4. ARCHIVES SEARCH

This section includes a summary of all the cultural resource management events that have taken place within the study area registered at VDHR through December 2023. It also lists all previously identified architectural resources and archaeological sites located within the project area, as well as within one mile of the study area.

PREVIOUS SURVEYS RELEVANT TO THE STUDY AREA

VCRIS reveals that three Phase I cultural resource surveys have been conducted within one mile of the project area, one of which included portions of the project area (Table 4-1 and Figure 4-1). These surveys are archaeological in nature, although some include architectural resource investigations as well. The three surveys were conducted as part of assorted utility and infrastructure projects.

Table 4-1: Previously conducted Phase I surveys within one mile of the project area. Orange highlight denotes survey including portions of the study area.

Report Number	Survey Title	Author/ Affiliation	Year	VDHR Review File
IW-105	Phase I Cultural Resources Survey for the Align RNG Virginia – Waverly Renewable Natural Gas Project, Isle of Wight County, Virginia	TRC	2022	2021-0097
SY-079	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	DUTTON	2020	2020-0521
VA-176	Phase I Archaeological Survey, Virginia Reliability Project, Cities of Chesapeake and Suffolk, and Greensville, Isle of Wight, Prince George, Southampton, Surry, and Sussex Counties, Virginia	ERM	2022	2021-0026

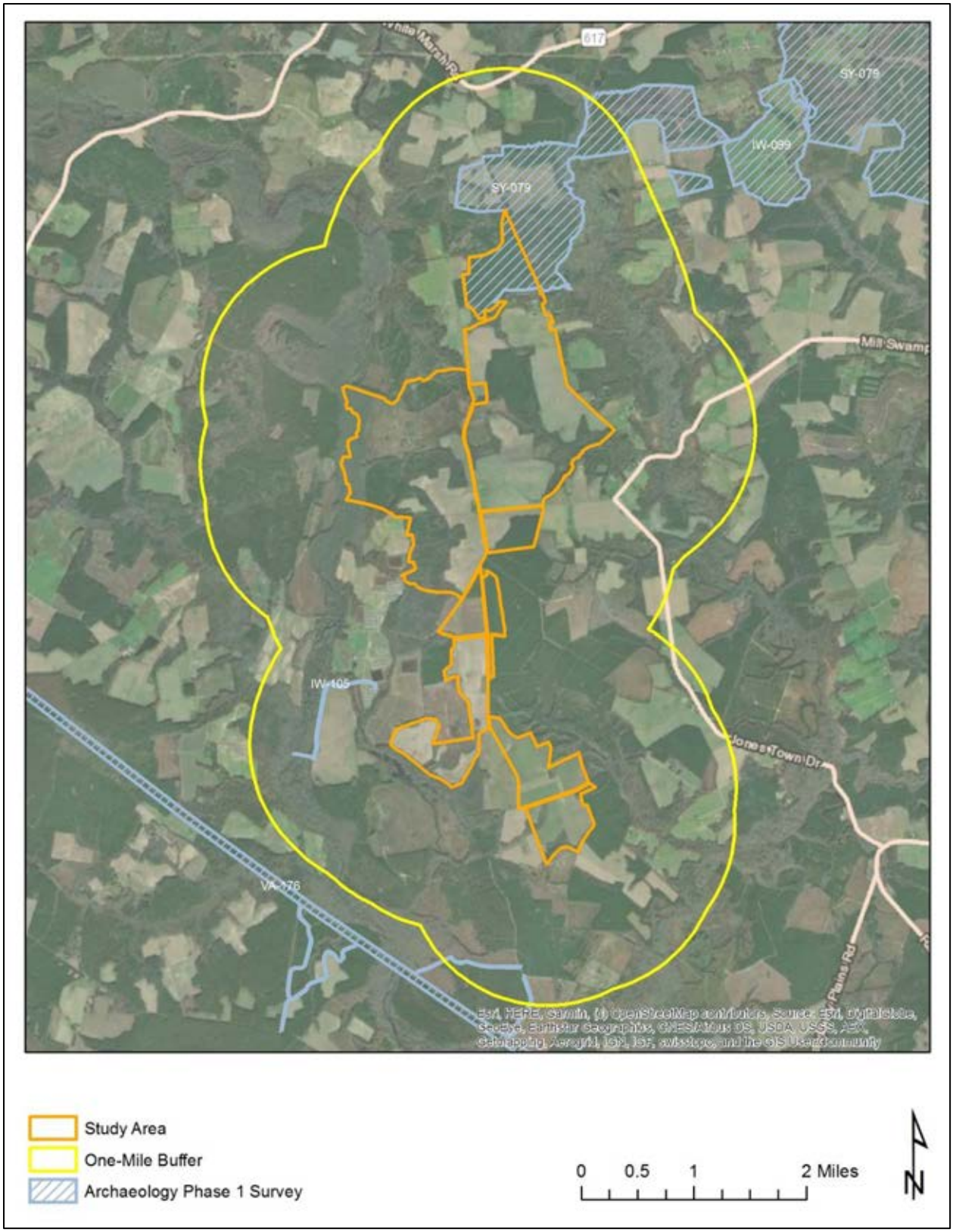

Figure 4-1: Previous Phase I surveys conducted within one mile of the project area Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are ten (10) previously recorded archaeological sites located within one mile of the project area, two of which are located within the project area (Table 4-2 and Figure 4-2). The sites within one mile include prehistoric lithic scatters and camps; as well as historic period domestic sites and refuse scatters. Of the sites within one mile, eight (8) have been determined not eligible and two (2) have not been formally evaluated by the VDHR. Of the two sites within the project area, both are historic period artifact scatters that have been determined not eligible for listing in the NRHP.

Table 4-2: Table detailing all archaeological resources within one mile of the project area. Orange highlight denotes site is within the limits of the project area.

VDHR #	Site Type	Cultural Designation	Temporal Association	NRHP Status
44IW0327	Camp	Native American	Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E)	Not Evaluated
44IW0336	Lithic scatter	Native American	Pre-Contact	DHR Staff: Not Eligible
44SY0128	Dwelling, single	Indeterminate	Historic/Unknown	Not Evaluated
44SY0316	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0317	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0318	Dwelling, single	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0319	Artifact scatter	Indeterminate	Reconstruction and Growth (1866 - 1916)	DHR Staff: Not Eligible
44SY0320	Dwelling, single	Indeterminate	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0321	Outbuilding	Indeterminate	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44SY0322	Artifact scatter, Lithic scatter	Indeterminate	Pre-Contact, Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible

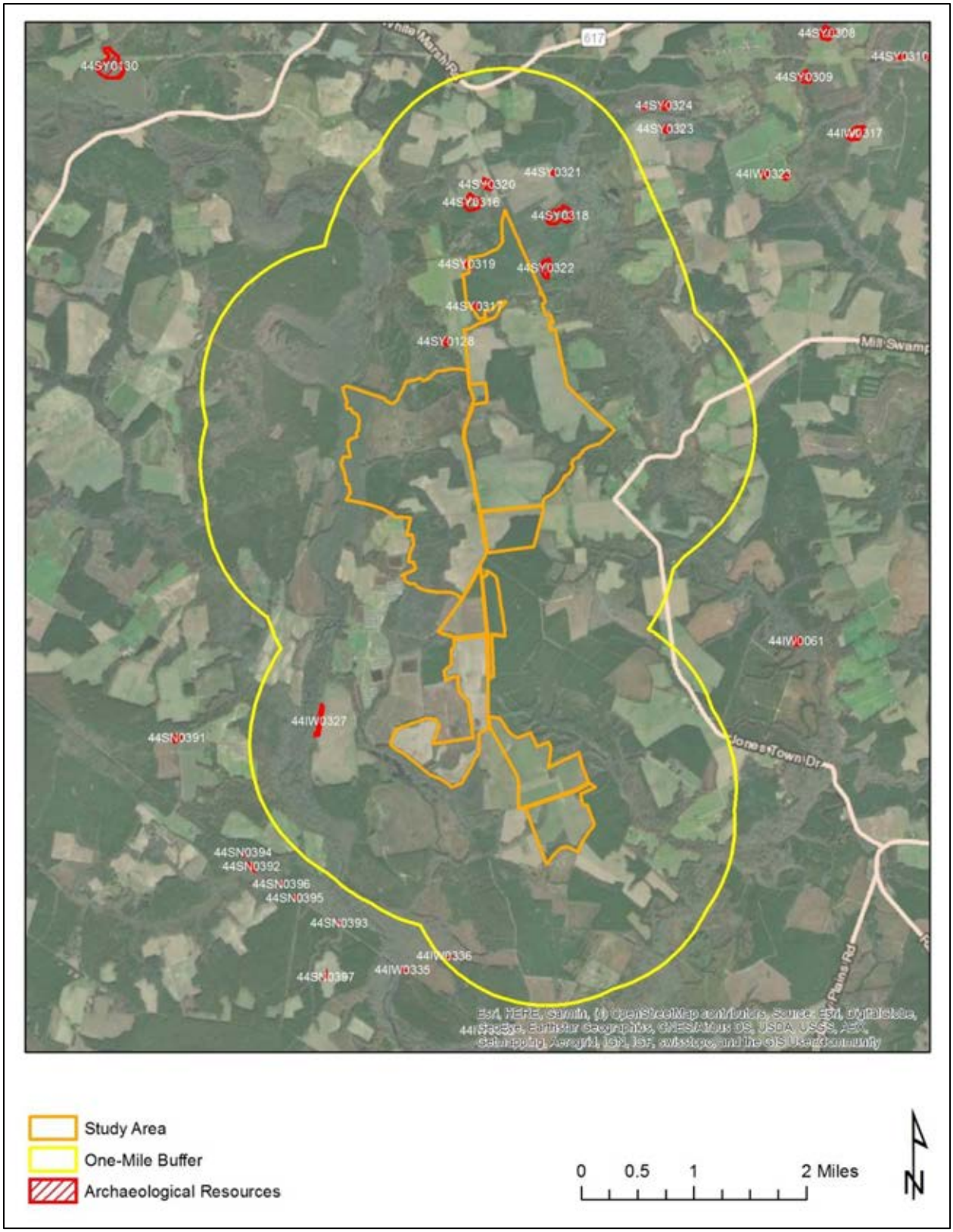

Figure 4-2: Previously recorded archaeological sites located within one mile of the project area. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

There are thirty-two (32) previously recorded architectural resources located within one mile of the project area, nine (9) of which are located within the project area (Table 4-3 and Figure 4-3). The resources within one mile include single-family homes from the mid-eighteenth to mid-twentieth century, a commercial building from the turn-of-the-twentieth century, a church from the early-twentieth century, and a family cemetery from the early-twentieth century. Thirteen of the resources have been determined not eligible for listing in the NRHP by the VDHR and the rest have not been formally evaluated. Of the nine resources within the project area, nine are dwellings with four from the early-nineteenth century, four from the late-nineteenth century, and one from the early-twentieth century; and one is a late-nineteenth century commercial building. One late-nineteenth and one early-twentieth century dwelling have been determined not eligible for listing in the NRHP and the rest have not been formally evaluated.

Table 4-3: Previously identified architectural resources located within one mile of the project area. Orange highlight denotes resource is located within the project area.

VDHR ID#	Resource Name	Type	Year	NRHP Status
046-0029	House, Route 622 (Function/Location)	Single Dwelling	c.1800	Not Evaluated
046-0030	Betts House (Historic)	Single Dwelling	c.1802	Not Evaluated
046-0032	Dudley House and Outbuildings (Historic)	Single Dwelling	c.1820	Not Evaluated
046-0055	Tenant House, Sycamore Crossroads (Historic/Current)	Secondary Dwelling	c.1800	Not Evaluated
046-0056	Grays' Brick House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-0057	Brick House (Descriptive)	Single Dwelling	c.1825	Not Evaluated
046-0068	Wilson Hollemon House, Mill Swamp Rd (Rt 621) (Historic/Location)	Single Dwelling	c.1830	Not Evaluated
046-5147	Farmhouse, 14537 Rattlesnake Trail (Function/Location)	Single Dwelling	1850	Not Evaluated
046-5148	Farmhouse, 13407 Ramsey Road (Function/Location)	Single Dwelling	1880	Not Evaluated
046-5149	Store, Intersection of Mill Swamp Road and Sycamore Cross Drive (Function/Location)	Commercial Building	1899	Not Evaluated
046-5150	Farmhouse, 11356 Proctors Bridge Road (Function/Location)	Single Dwelling	1899	Not Evaluated
046-5151	Mill Swamp Baptist Church & Cemetery (Historic/Current)	Church/Chapel	1928	Not Evaluated
046-5152	Store, 6159 Jones Town Road (Function/Location)	Service Station	c.1930	Not Evaluated
046-5234	William Gray House (Historic/Current)	Single Dwelling	c.1825	Not Evaluated
046-5260	House, 6330 Mill Swamp Road (Function/Location), Mill Swamp Baptist Church Parsonnage (Historic)	Single Dwelling	c.1900	Not Evaluated
046-5550	Dwelling, 10126 White Hill Trail (Function/Location)	Single Dwelling	1890	DHR Staff: Not Eligible
046-5551	Dwelling, 10106 White Hill Trail (Function/Location)	Single Dwelling	1944	DHR Staff: Not Eligible
046-5552	Dwelling, 10088 White Hill Trail (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
087-0003	Binford House (Historic)	Single Dwelling	c.1750	Not Evaluated

VDHR ID#	Resource Name	Type	Year	NRHP Status
087-5328	Brantley Home (Historic), Pretlow Farm (Historic)	Single Dwelling	c.1900	Not Evaluated
087-5509	1760 Henley Pretlow House (Historic), Captain Pretlow House (Historic), House 4071 Proctor's Bridge Road (Function/Location)	Single Dwelling	1760	Not Evaluated
090-0051	Stratman House (Historic/Current)	Single Dwelling	c.1750	Not Evaluated
090-5160	Dwelling, 9091 White Marsh Road (Function/Location)	Single Dwelling	1905	DHR Staff: Not Eligible
090-5161	Dwelling, 9100 White Marsh Road (Function/Location)	Single Dwelling	1949	DHR Staff: Not Eligible
090-5162	Dwelling, 274 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1890	DHR Staff: Not Eligible
090-5163	Dwelling, 337 Berrymans Corner Road (Function/Location)	Single Dwelling	1942	DHR Staff: Not Eligible
090-5164	Dwelling, 285 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1900	DHR Staff: Not Eligible
090-5165	Simmons and Brown Cemetery (Current Name)	Cemetery	c.1900	DHR Staff: Not Eligible
090-5166	Dwelling, 1122 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1930	DHR Staff: Not Eligible
090-5167	Dwelling, 1097 Berrymans Corner Road (Function/Location)	Single Dwelling	c.1965	DHR Staff: Not Eligible
090-5168	Dwelling, 1676 Berrymans Corner Road (Function/Location)	Single Dwelling	1870	DHR Staff: Not Eligible
090-5174	House, Berrymans Corner Road (Function/Location)	Single Dwelling	c.1920	DHR Staff: Not Eligible

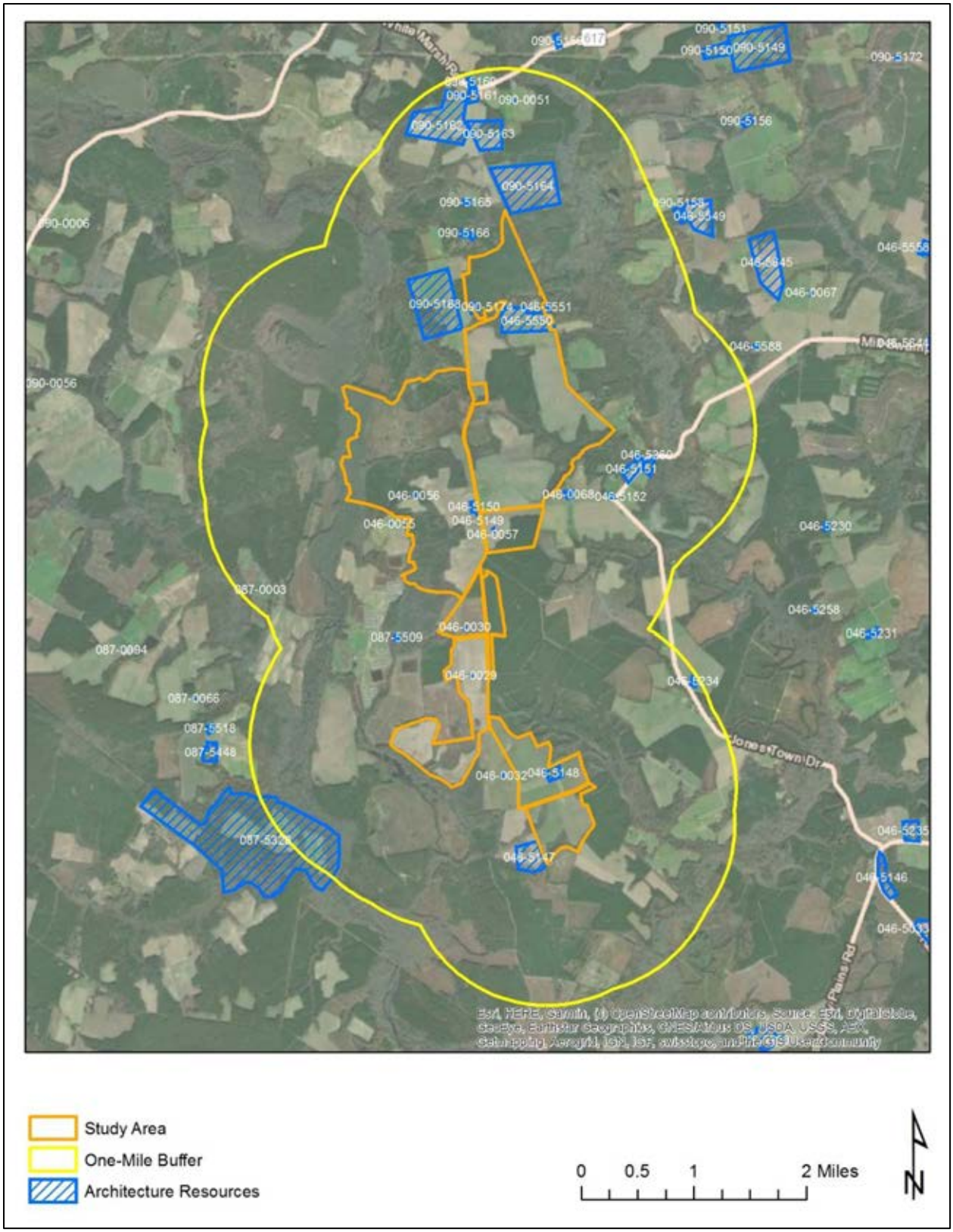

Figure 4-3: Previously recorded architectural resources within one mile of the project area. Source: V-CRIS

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5. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Sycamore Cross Solar project area consists of ±817.46 hectares (2,020 acres) of land divided into multiple contiguous and discontiguous parcels. The project area is located along the border of Isle of Wight and Surry counties within a primarily rural area of the Coastal Plain of Southside Virginia. The landscape within and bordering the project area is a mix of cultivated agricultural field, planted timber stands, and native woodland, particularly bordering the numerous drainages and swamps that dissect the area (Figure 5-1).

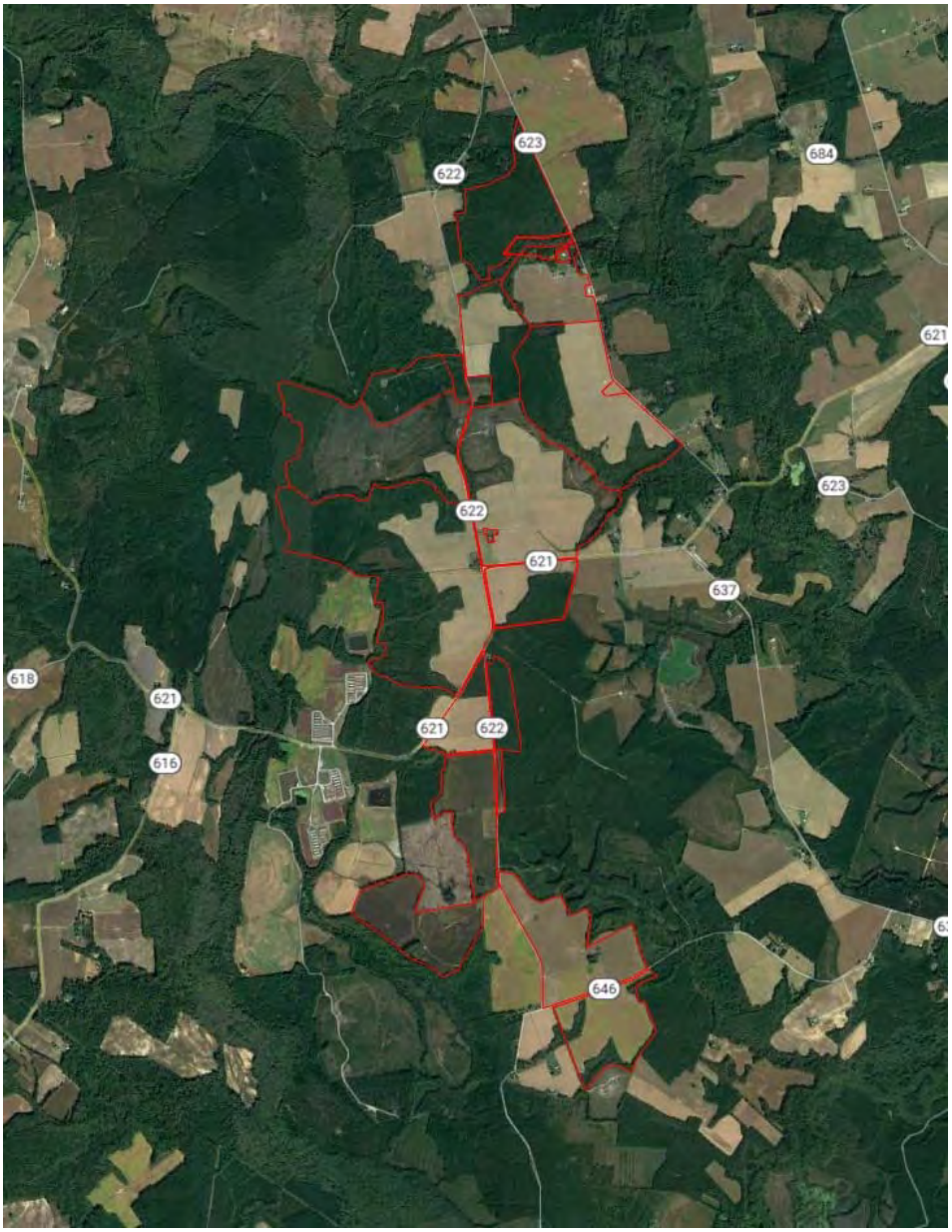

Figure 5-1. Aerial view of project area illustrating existing conditions.

GEOLOGY AND TOPOGRAPHY

The project area topography is characterized by 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 project area ranges from approximately ±7.9 meters (26 feet) to ±27.4 meters (90 feet) above mean sea level with the highest elevations located along the crest of a broad ridge along the eastern edge of the project area and the lowest elevations bordering the Blackwater River along the western edge.

HYDROLOGY

Most of the project area drains west into Blackwater River, although portions of the eastern edge drain eastward into Mill Swamp which flows into Rattlesnake Swamp and ultimately into Blackwater River. This flows south into North Carolina where it empties into the Chowan River, which flows into Albemarle Sound, which empties into the Currituck Sound before ultimately draining into the Atlantic Ocean.

PEDOLOGY

The project area is dominated by sandy loams and sandy clay loams formed from marine sediments. The most prominent soil type is Slagle fine sandy loam which is moderately well drained and covers about 25% of the study area. The second most prominent soil type is Kinston loam, which represents about 17.8% of the project area and is considered poorly drained. Well-drained Emporia fine sandy loam is the only other soil type that accounts for a significant portion of the project area at 15.2%. The rest of the study area is comprised of assorted sandy loams and complexes. Approximately 39.7% of the soils within the project area are classified as poorly to somewhat poorly drained (Figure 5-2 and Table 5-1).

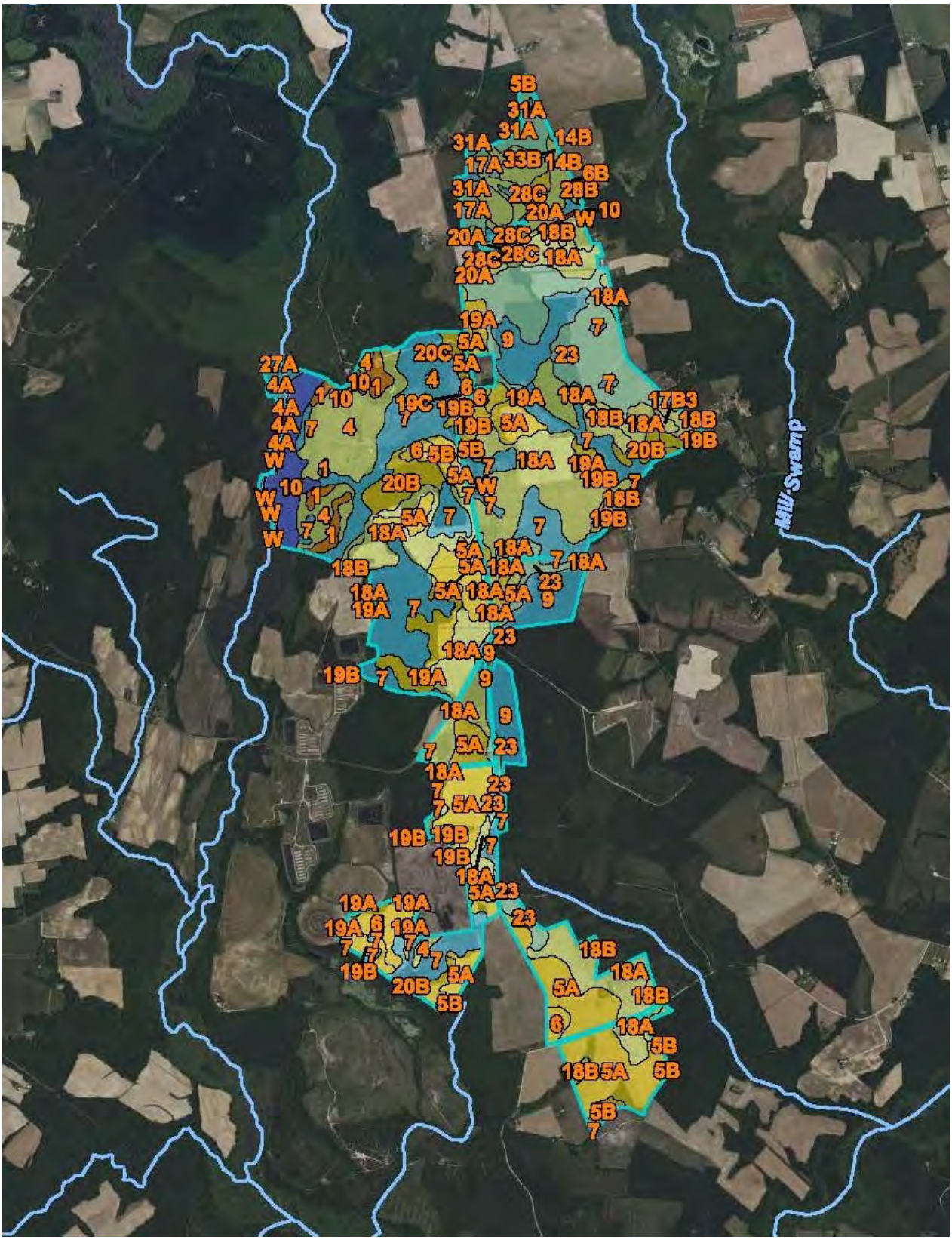

Figure 5-2: Soil survey of the Sycamore Cross project area showing drainage class (USDA 2023).

Table 5-1: Soil survey data for the project area, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alaga fine sand	Somewhat excessively drained	29.3	1.5%
4	Chipley sand	Moderately well drained	116.0	5.7%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	286.6	14.2%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	21.0	1.0%
6	Kenansville loamy sand	Well drained	41.6	2.1%
7	Kinston loam	Poorly drained	347.0	17.2%
9	Myatt fine sandy loam	Poorly drained	119.0	5.9%
10	Nawney loam	Very poorly drained	55.9	2.8%
17B3	Slagle sandy loam, 2 to 6 percent slopes, severely eroded	Moderately well drained	3.7	0.2%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	401.5	19.9%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	56.9	2.8%
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	66.8	3.3%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	40.1	2.0%
19C	Uchee loamy sand, 6 to 10 percent slopes	Well drained	2.1	0.1%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	57.3	2.8%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	9.2	0.5%
23	Yemassee fine sandy loam	Somewhat poorly drained	205.4	10.2%
W	Water		4.1	0.2%
Subtotals for Soil Survey Area			**1,863.4**	**92.2%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb sandy loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	3.9	0.2%

Table 3-1 (cont.): Soil survey data for project area, showing drainage rating. Source: USDA.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		3.4	0.2%
Subtotals for Soil Survey Area			**7.3**	**0.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Burrowsville loamy sand, 2 to 6 percent slopes	Moderately well drained	0.1	0.0%
6B	Caroline silt loam, 2 to 6 percent slopes	Well drained	0.0	0.0%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	0.5	0.0%
17A	Jedburg loam, 0 to 2 percent slopes	Somewhat poorly drained	40.1	2.0%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	Poorly drained	13.0	0.6%
21B	Lakeland sand, 2 to 6 percent slopes	Excessively drained	1.7	0.1%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	Poorly drained	9.4	0.5%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	Moderately well drained	0.5	0.0%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	Moderately well drained	28.4	1.4%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	Moderately well drained	5.7	0.3%
31A	Rains fine sandy loam, 0 to 2 percent slopes	Poorly drained	5.3	0.3%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	1.1	0.1%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	39.7	2.0%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	Well drained	4.2	0.2%
Subtotals for Soil Survey Area			**149.6**	**7.4%**
Totals for Area of Interest			**2,020.4**	**100.0%**

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6. 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. 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 project 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 project 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). Descriptions of settlement patterns, cultural characteristics, and a general description of relevant material culture of the time periods are presented below.

PALEOINDIAN PERIOD (PRIOR TO 8000 B.C.)

Recent archaeological findings in Virginia have found the first Paleoindians are projected to have arrived in southeastern North America between 15,000 and 11,000 years ago, or approximately 13000 to 9000 B.C. (McAvoy and McAvoy 1997). Three of the earliest archaeological sites associated with Paleoindian occupation in Virginia are the Cactus Hill site (VDHR #44SX0202) located along the Nottoway River in Sussex County, the Thunderbird Site (VDHR #44WR0011) in Warren County, and the Saltville site (VDHR #44SM0037) in Smyth 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 (Anderson 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 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 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 adaptation 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 bears (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, bears, 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 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 B.C.-A.D. 300) is defined by the appearance of ceramics from prehistoric archaeological context. Ceremonialism associated with the burial of the dead also appears at about 500 B.C. with stone and earth burial cairns and cairn clusters in the Shenandoah Valley (McLearen 1992; Stewart 1992). Early Woodland settlements in the Piedmont region of Virginia are located along rivers as well as in interior areas and there is evidence to suggest the Piedmont areas developed a more sedentary lifestyle during this time (Klein and Klatka 1991; Mouer 1991). Many Early Woodland sites in the Piedmont are permanent or semi-permanent villages that are large and intensively occupied. This corresponds with the domestication of weedy plants such as the goosefoot and sunflower along intentionally cleared riverine areas.

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). 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 (A.D. 1000-1606), the use of domesticated plants had assumed a role of major importance in the prehistoric subsistence system. The arrival and cultivation of beans joined corn and squash as the three major crops (Egloff and Woodward 1992:26). 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.

Virginia Indians became more settled and developed strong identities to their local settings. They began to organize into villages and small hamlets with more substantial housing that may have been placed in rows around a plaza (Egloff and Woodward 1992:26). These villages were highly nucleated and occasionally fortified with palisades. The fortifications demonstrate inter-group conflict.

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 6-1). 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).

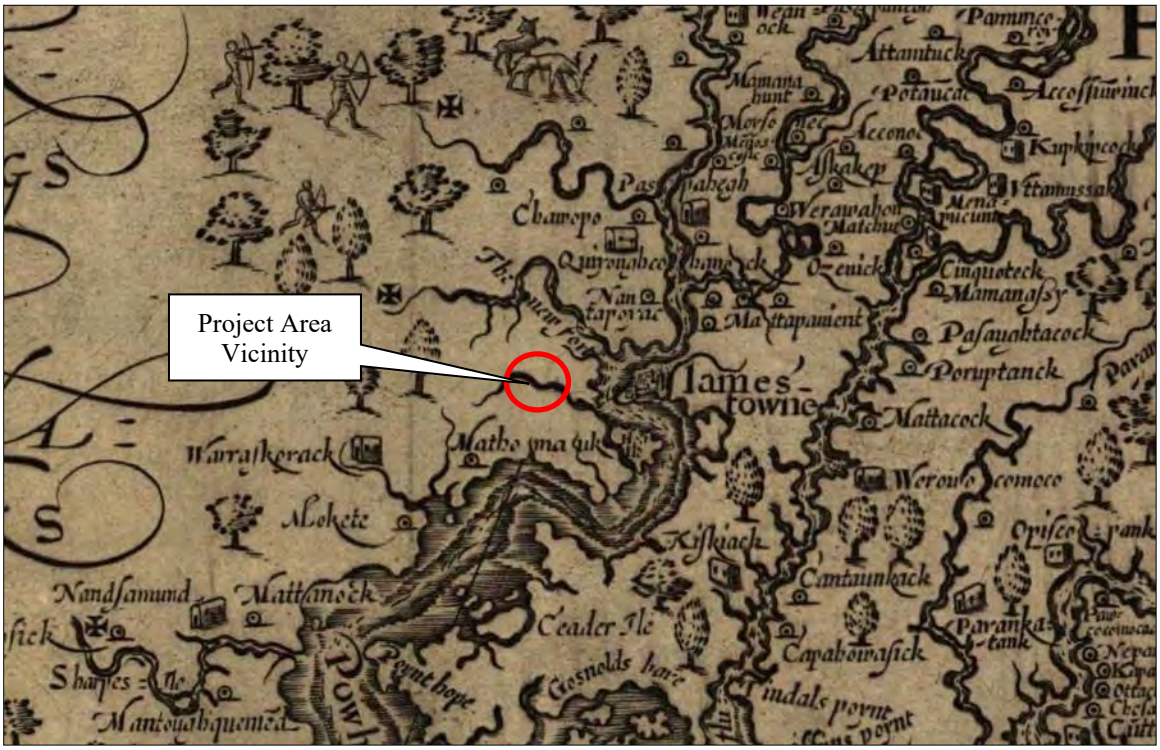

Figure 6-1: Detail of *Virginia,* by John Smith, depicting the general vicinity of the project area. Source: Library of Congress

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, approximately 14 miles northeast of the project 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 the 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). With the land patented on the south side of the river, 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 value was 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008). The Blackwater River forms a portion of the western boundary of the project area.

Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 6-2). 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). 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 along the project area (King 1993:441). The present-day Mill Swamp, or Rattlesnake Swamp, near the eastern border of the project area may be First Swamp. It appears that patenting of land around First Swamp began in the mid-seventeenth century.

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, less than nine miles northeast of the project 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).

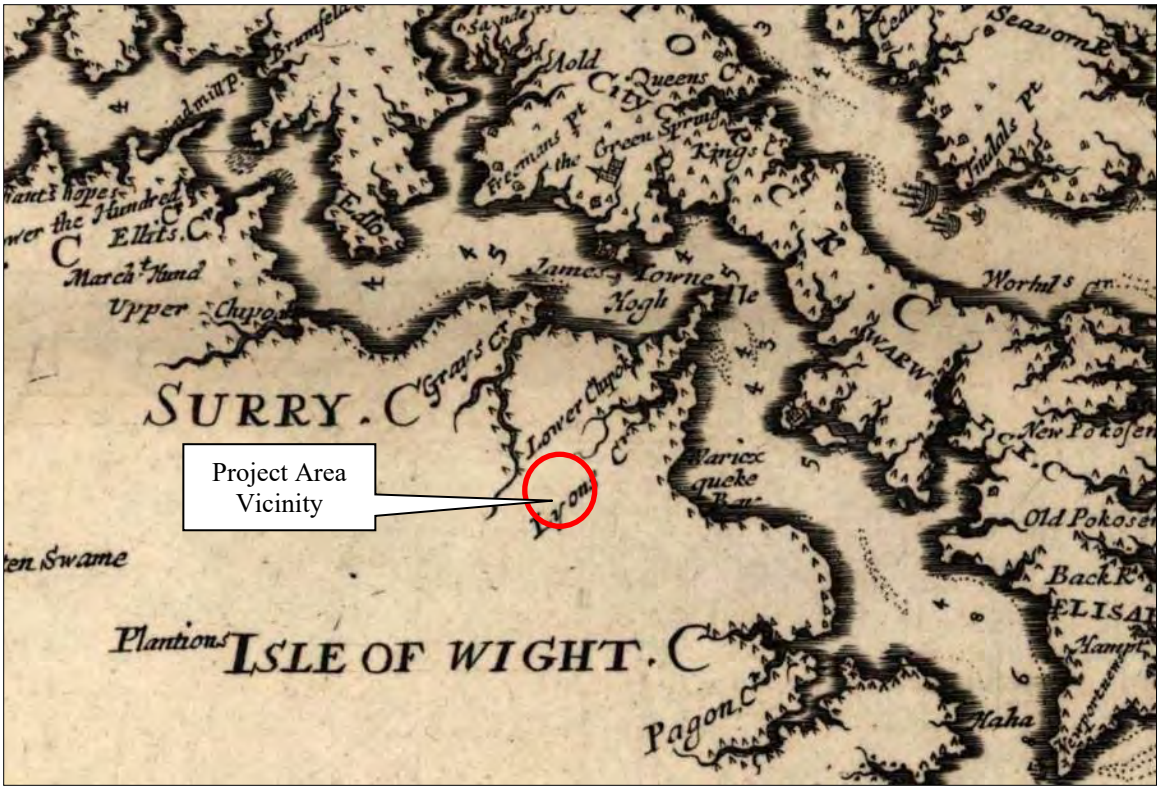

Figure 6-2: Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* depicting the vicinity of the project area. Source: Library of Congress

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). One of the earliest homesteads erected in the general vicinity of the project area was the Henley Pretlow House (VDHR# 087-5509). This home, one of multiple owned by the Pretlow family in Isle of Wight and Surry counties, was constructed in 1760 on present-day Route 621 in Isle of Wight. In 1988, the building was moved to its current location in Surry County, roughly 1.25 miles southwest of its original location, to save it from demolition. The Binford Home (VDHR #087-0003) was constructed in 1802 near the intersection of Routes 621 and 616 (Macon 1938).

To aid in getting their goods to market, two early major north-south roads extended through the two counties; the project area was situated between them. Additionally, the village of Surry, eight miles north of the project 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, approximately ten miles east of the project area, officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

As the population grew with the economy, early churches began appearing in Isle of Wight and Surry counties. One of the earliest Baptist churches in Isle of Wight was Mill Swamp Church. The church was established in 1774 by charter members of the disbanded Burleigh Church with David Barrow as its first pastor. Originally known as David Barrow's Church or the Church in Isle of Wight, the name was changed to Mill Swamp Church in 1791 for the old mill that stood a few miles away along the Surry County Line. Mill Swamp was the "mother church" to other Baptist churches in the county, including Smithfield, Moore's Swamp, Tucker Swamp, and Bethesda (King 1983:110). The current chapel on the site, located in the general vicinity east of the project area, was first built in 1832 and remodeled in 1895 (Morrison 2022:23).

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 for 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 enslaved laborers. 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 (Figure 6-3). 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. No battles were fought in Isle of Wight and Surry counties and the war was won on the Virginia Peninsula.

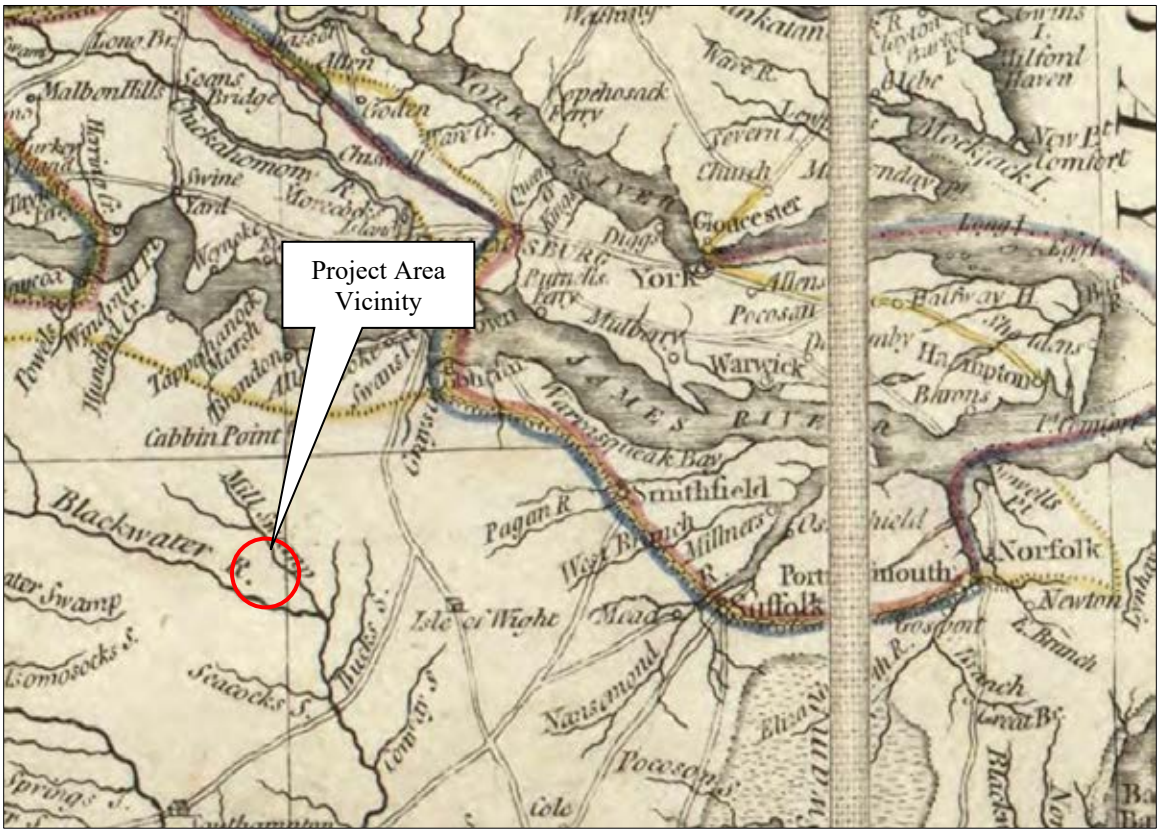

Figure 6-3: Detail of *The marches of Lord Cornwallis, with Virginia and Maryland, and the Delaware counties*, 1787, depicting the vicinity of the project area. Source: Library of Congress

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 enslaved laborers 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 general vicinity of the project area (Figure 6-4).

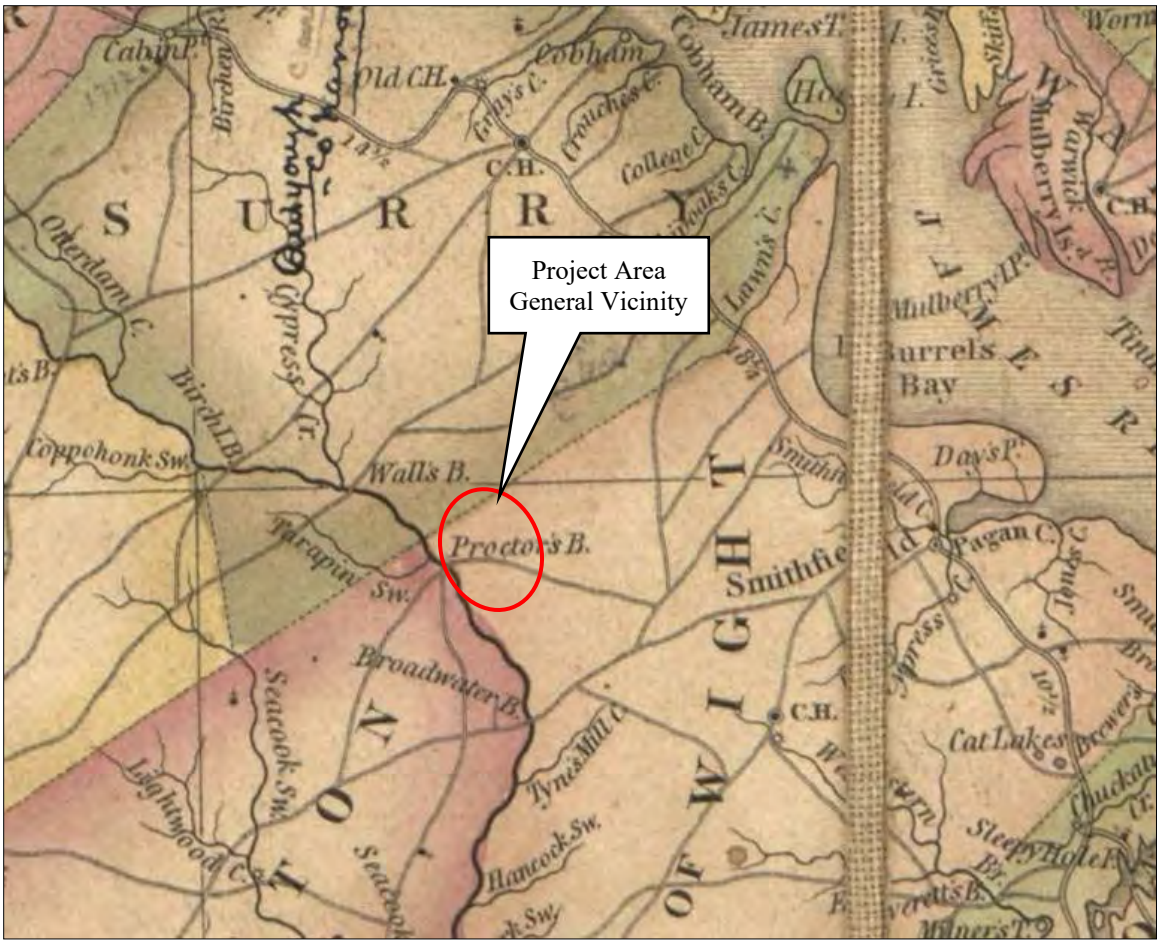

Figure 6-4: Detail of *A map of the state of Virginia*, 1827, depicting the vicinity of the project area. Source: Library of Congress

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 enslaved 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 enslaved workers 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). As agricultural industry grew, more mills were built in Isle of Wight and Surry counties. One of these mills was Pretlow's Mill, mapped to the west of the project area near the site of the Binford Home. This mill was presumably owned and operated by the Pretlows, who owned multiple properties, including the Binford home for roughly a decade, in the general vicinity in the early to mid-nineteenth century (Macon 1938). Another mill that appears on maps from this time period is White's Mill located north of the project area, however no documentation of this structure could be identified. 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 five miles southwest of the project 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 in the region, several structures were located within the project area and its general vicinity by the mid-nineteenth century (Figure 6-5 and Figure 6-6). Names that appear within the project area on Civil War period maps include Betts and Barlow, both in Isle of Wight County. Affluent families in the local community, both the Betts and the Barlow families owned large plots of land featuring grand, high-style plantation homes. Members of the Betts family presided over two properties in the general vicinity of the project area (VDHR# 046-0030 and 046-5811), built circa 1802 and 1850, respectively. The Barlow family owned a house off of what is now Ramsey Road (VDHR# 046-5148), constructed in 1880. Located on the north side of Mill Swamp Road just outside of the project area was the Mayfield post office. Built in 1830, Mayfield was one of the earliest post offices in Isle of Wight County and was discontinued in 1886 when replaced by the Sycamore Crossroads post office. The post office operated out of the Hollemon home with Wilson Hollemon as both the first owner of the house and the first postmaster (King 1993:328-330).

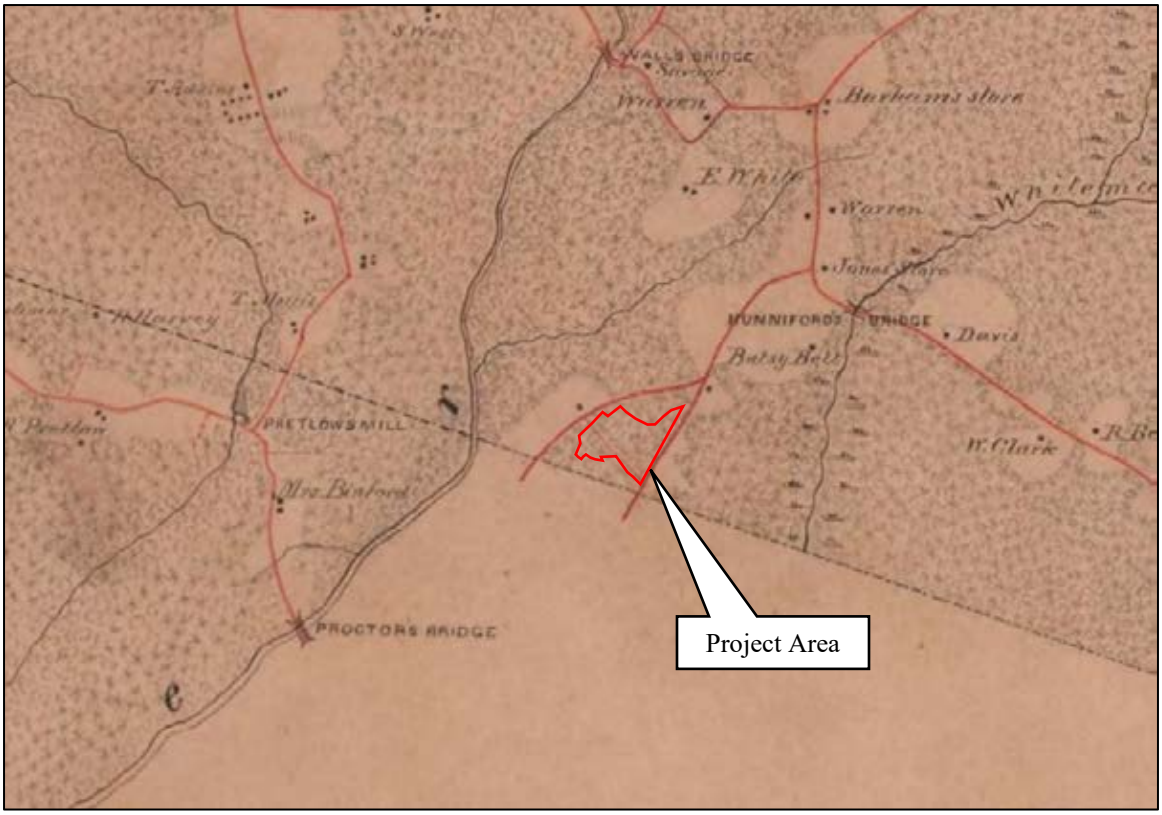

Figure 6-5: Detail of *Map of Surry Sussex and Southampton counties, Virginia*, 1863, depicting the project area in Surry County. Source: Library of Congress

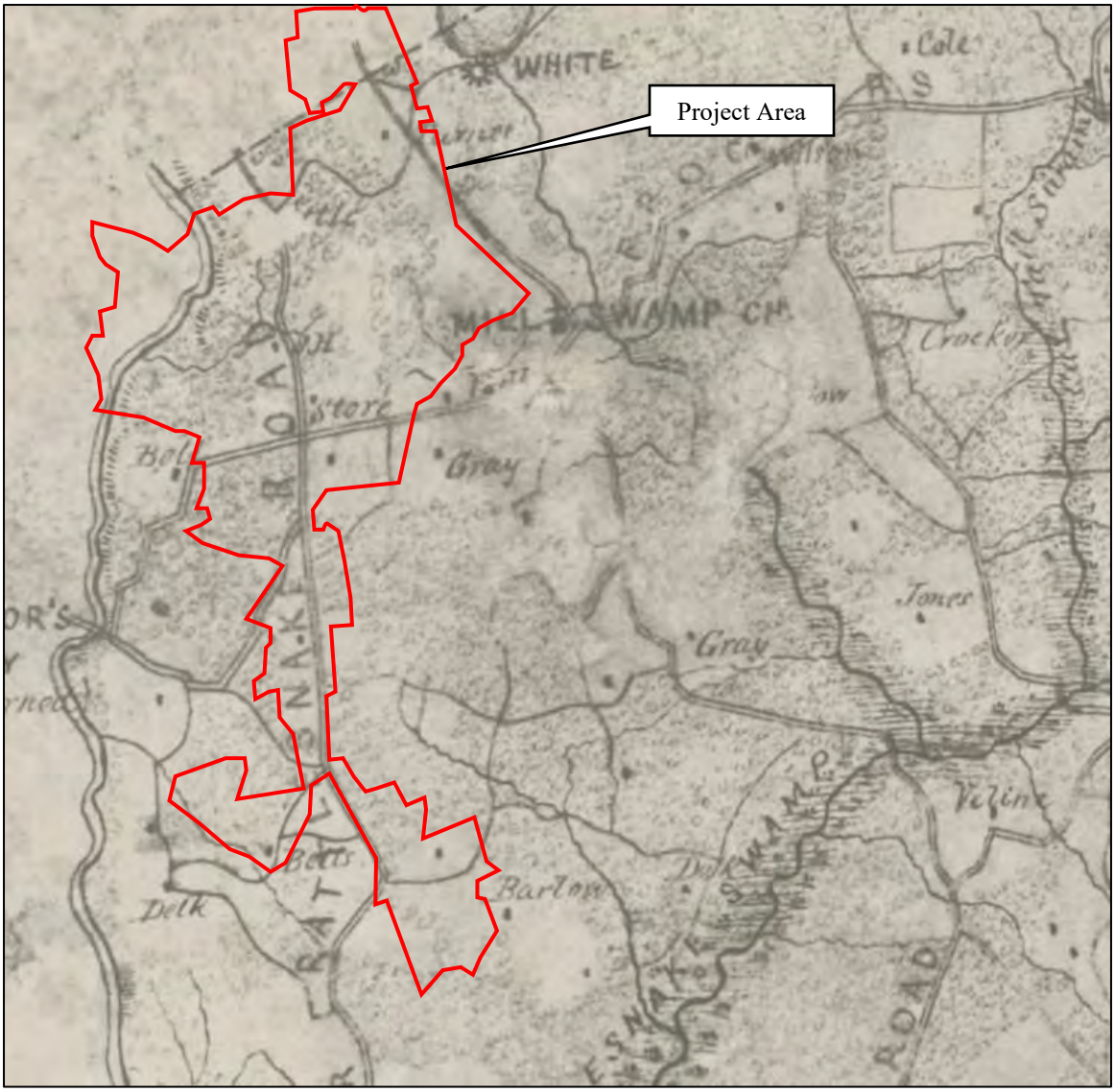

Figure 6-6: Detail of *Map of Isle of Wight and part of Nansemond*, 1864, depicting the project area in Isle of Wight County. Source: Library of Congress

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 the 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. 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).

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 project 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 northwest of the project 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 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 circa-1892 map of Virginia illustrates a number of post offices in the general vicinity of the project area (Figure 6-7). Rural free delivery came to the county in 1907. This would eliminate the need for the multiple post offices found in crossroads stores. Located at the intersection of Routes 621 and 622 within the project area, the Sycamore Crossroads post office opened in 1886, replacing the earlier Mayfield post office, and operated until it was discontinued in 1917. William Henry (Harry) McClelland was Sycamore Crossroads' first postmaster, in addition to operating a store in the same building set in the front yard of the neighboring Guy Betts House (King 1993:331; Figure 6-8).

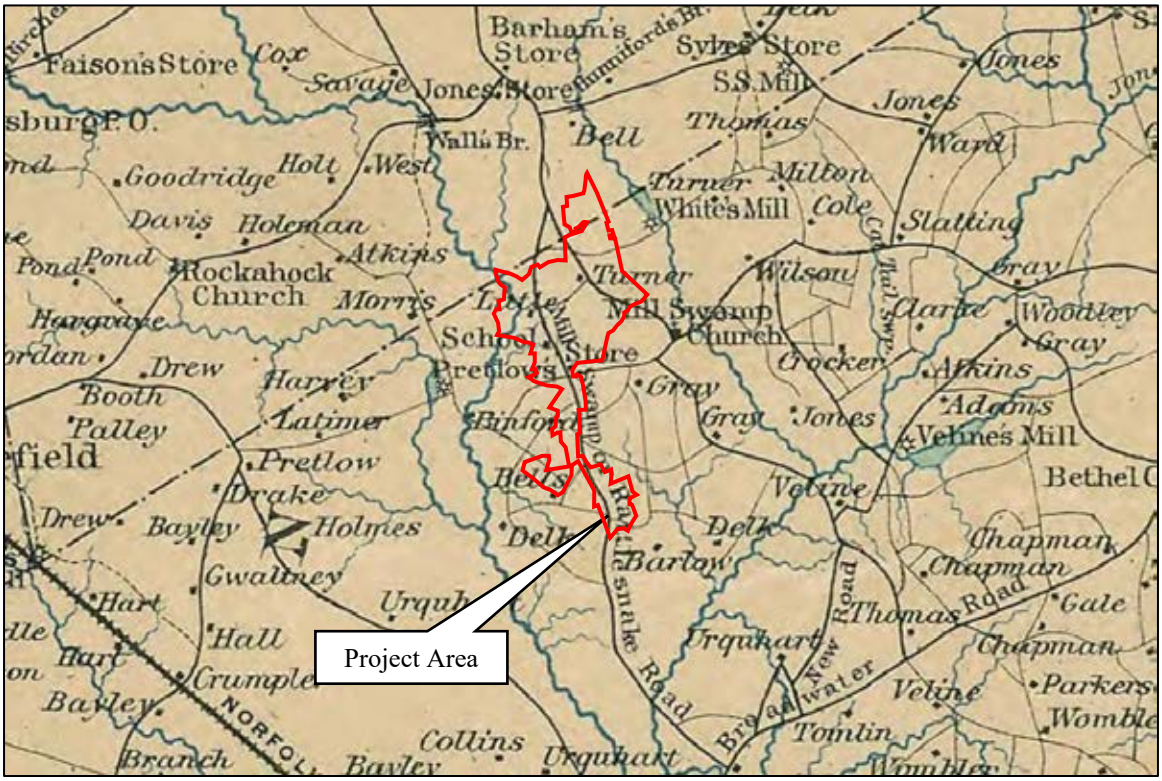

Figure 6-7: Detail of *Preliminary map of a part of the south side of James River, Va.: from surveys and reconnaissances*, c.1892, depicting the approximate location of the project area in Isle of Wight and Surry counties. Source: Library of Congress



Figure 6-8: Detail of *Battlefields of Virginia 1865*, 1900, depicting the approximate location of the project area in Isle of Wight County. 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 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).

Despite the fall in population in Isle of Wight and Surry counties, progress continued. By the 1930s, electric and telephone services were expanded into many of the rural areas in Isle of Wight. An Act by the Virginia General Assembly in 1918 provided for the improvement of roads and bridges within the county. Major roads were paved and others were widened to improve and facilitate transportation. Additionally, the prosperity of the 1920s brought the construction of new churches and schools (David 2007:18). One of these early schools was likely McClelland's School, which appears on mid-twentieth century maps, however no other documentation has been located at this time.

A 1919 topographic map depicting the project area shows several buildings within and in the general vicinity of the project area, including the Sycamore Crossroads Post Office (Figure 6-9). Proctor's Bridge, which appears on maps as early as the Civil War though it had been destroyed and rebuilt multiple times by the early twentieth century, is mapped to the west of the project area. The project area itself is comprised of a mix of wooded areas and open fields, with Blackwater River crossing the landscape to its west and Mill Swamp and Rattlesnake Swamp to the east. The crossroads community of Johnsons Corner appears on maps to the west of the project area dating to this time period. The community is located at the intersection of Routes 621 and 616 near the sites of Proctors Mill and the Binford Home, which was later owned by J.F. Johnson (Macon 1938).

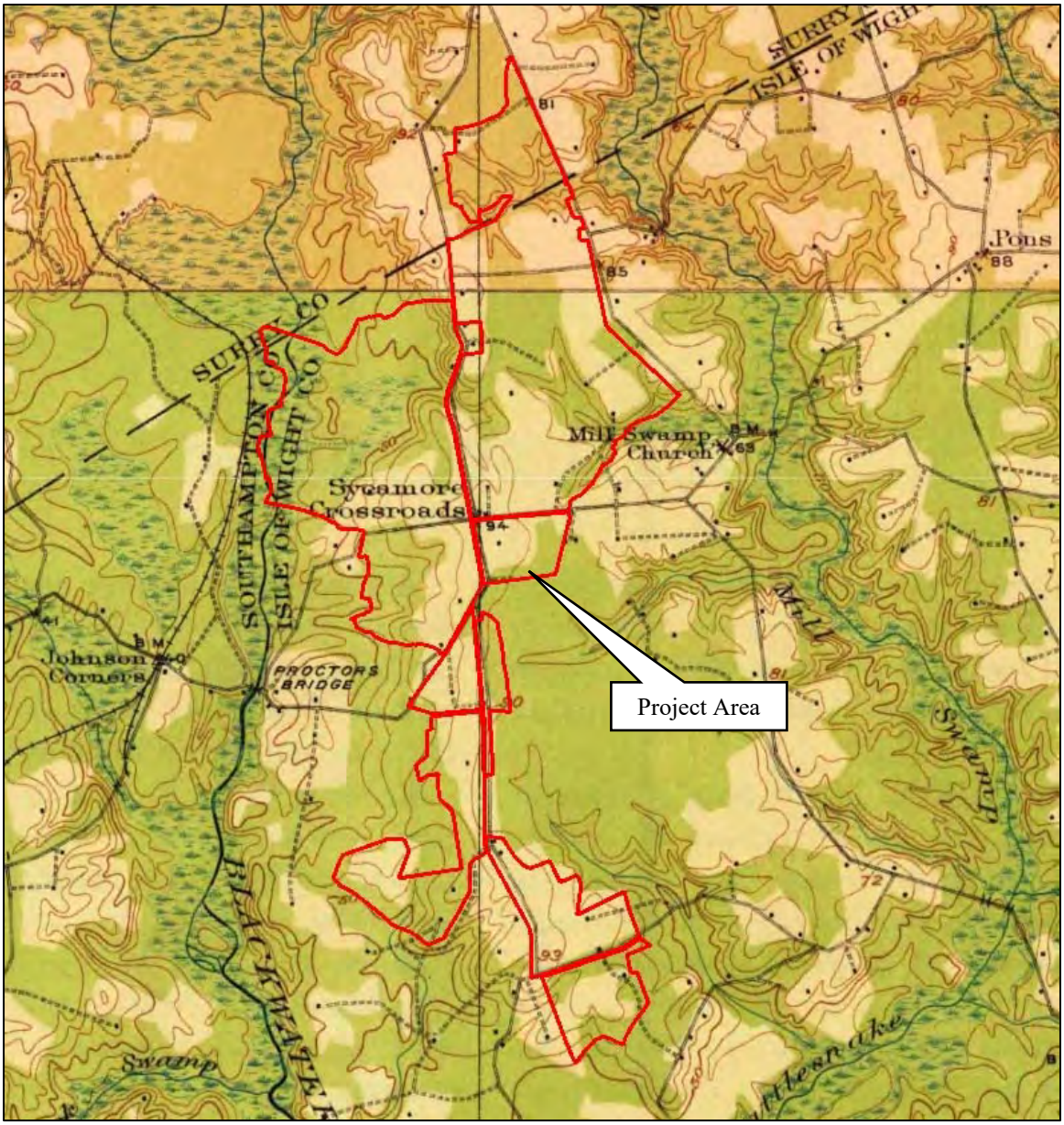

Figure 6-9: Detail of the 1919 topographic map, *Surry,* and the 1920 topographic map, *Ivor*, depicting the project area. Source: USGS

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 the project 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 to 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).

The landscape within and in the general vicinity of the project area continued to be developed. By the mid-twentieth century, major pipelines would cross the landscape to the northwest and southwest of the project area. Construction on Virginia's first nuclear energy plant on Hog Island began in 1971 (Apel and Watson 2006:27). In the early twenty-first century, Beaver Dam Airpark was opened approximately 3.5 miles northeast of the project area along the Isle of Wight-Surry county line. Despite changes in the landscape, 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). The project area remains a mixture of agricultural and forested land with few buildings which would decrease in number over time. Additionally, portions of the project area would be subject to heavy timbering as the industry gained importance in the county. The landscape in the general vicinity of the project area would continue to be developed, with structures mostly consisting of churches and small, roadside homes (Figure 6-10 through Figure 6-14).

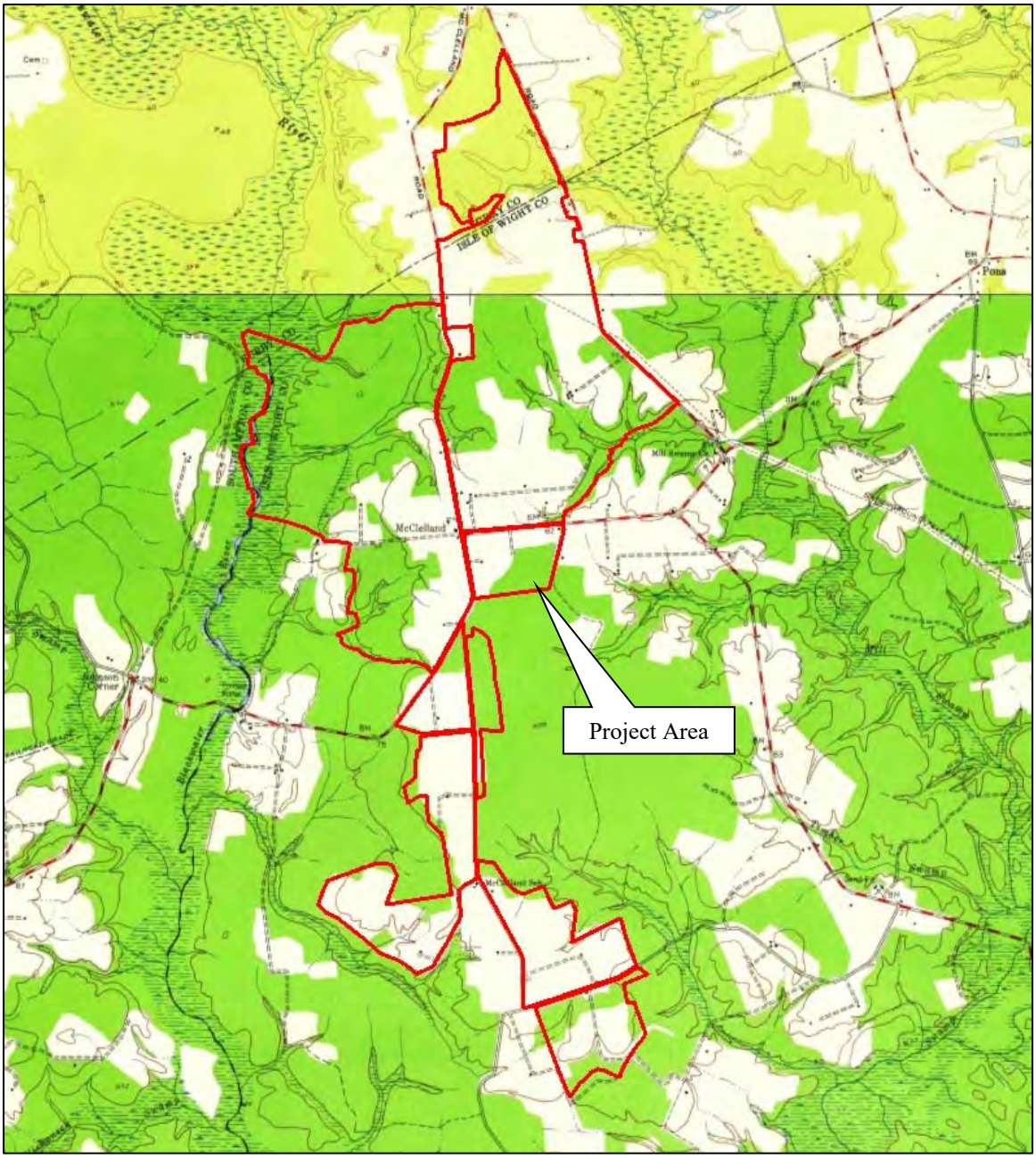

Figure 6-10: Detail of the 1944 topographic map, *Raynor*, and the 1954 topographic map, *Runnymede,* depicting the project area. Source: USGS

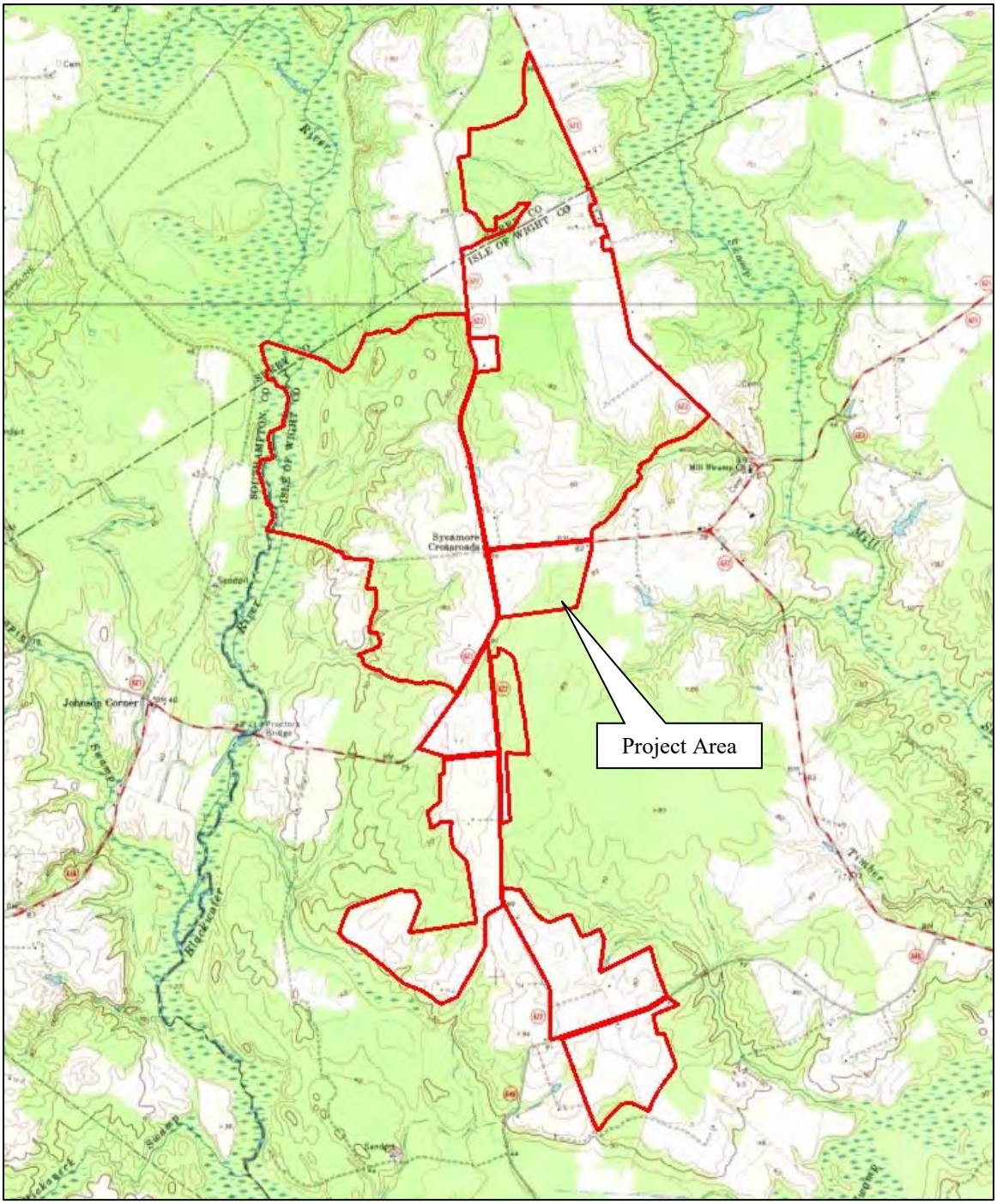

Figure 6-11: Detail of the 1968 topographic map, *Raynor,* and the 1971 topographic map, *Runnymede*, depicting the project area. Source: USGS

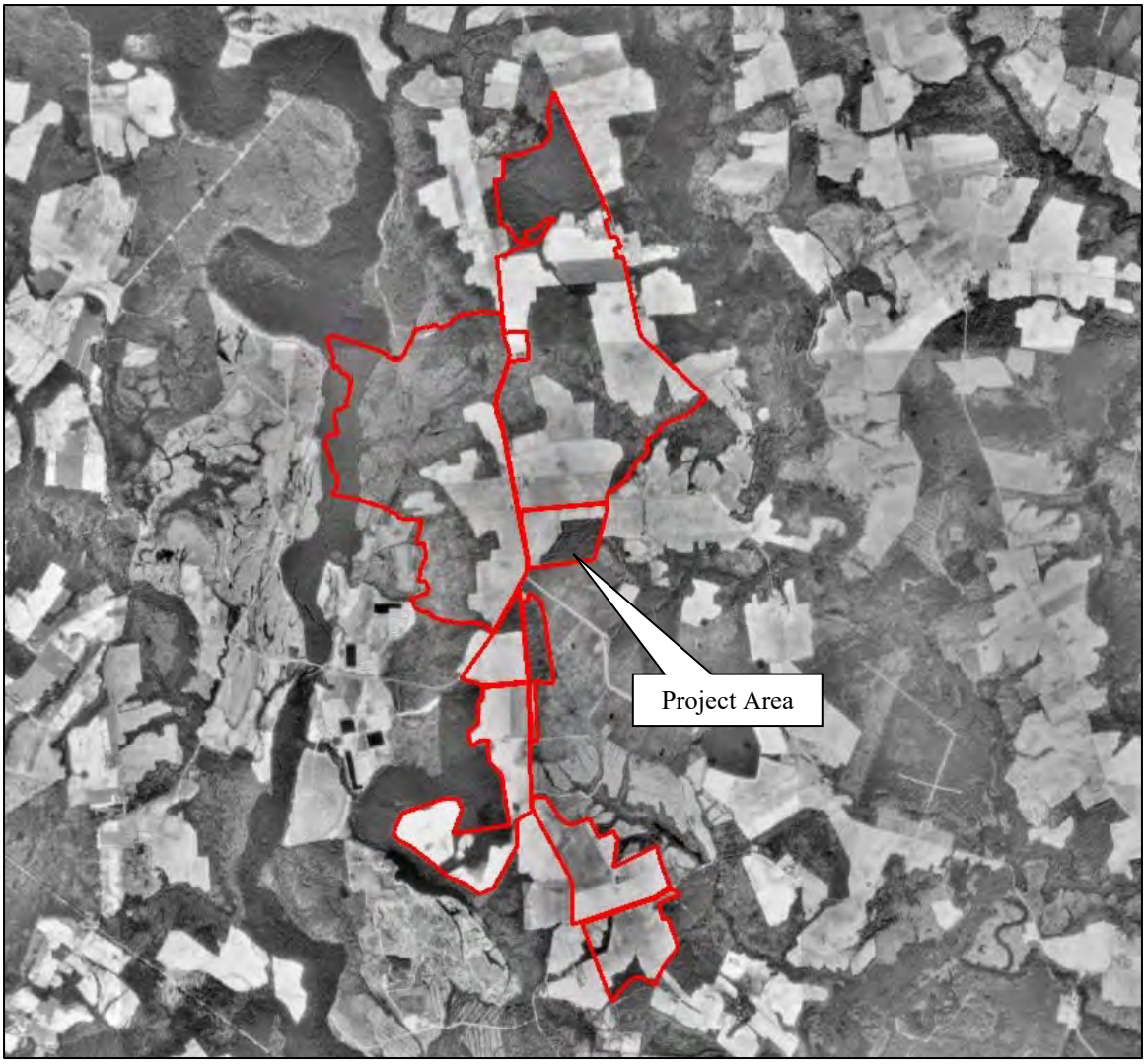

Figure 6-12: A 1990 aerial depicting the project area. Source: Google Earth

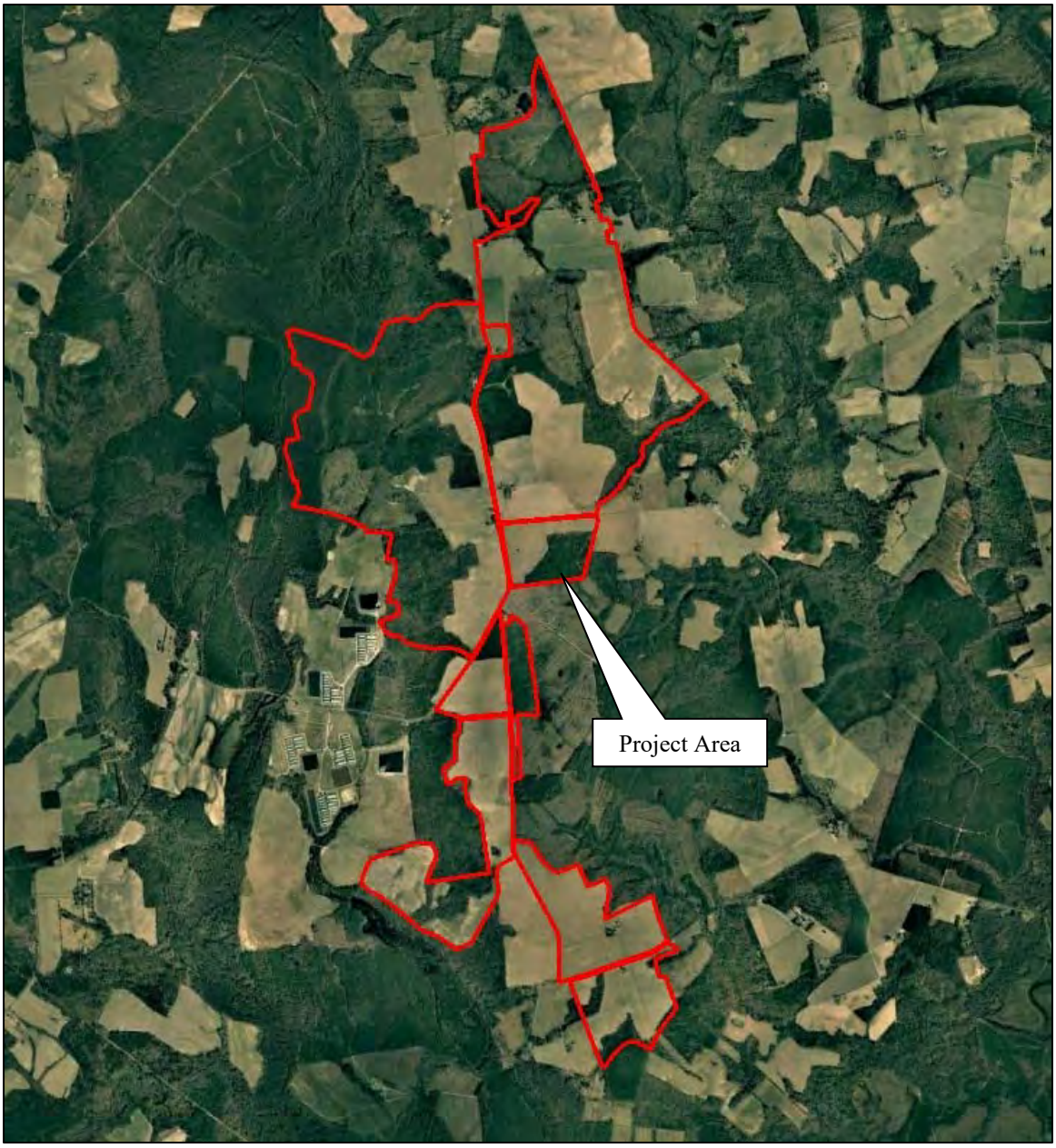

Figure 6-13: A 2007 aerial depicting the project area. Source: Google Earth

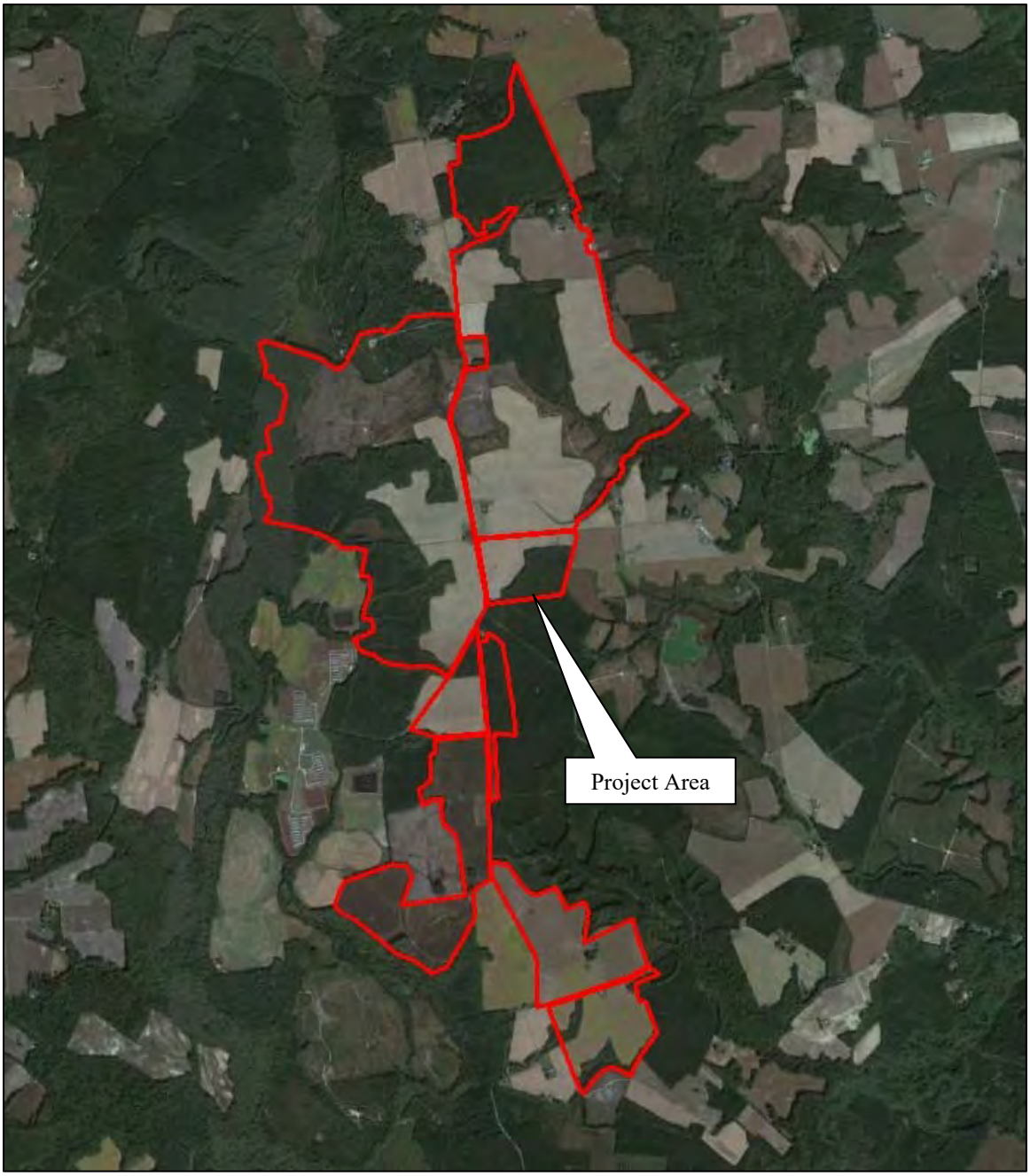

Figure 6-14: A 2021 aerial depicting the project area. Source: Google Earth

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7. EXPECTED RESULTS

Prior to initiation of fieldwork, D+A submitted a Phase IA cultural resources assessment and testing plan to VDHR for approval. The results of that assessment and testing strategy are presented below.

Analysis of historic maps and aerial photographs from the mid-nineteenth to early-twentieth century reveal a well-established network of roads and a number of dwellings scattered across the project area during that period. Previous cultural resource survey has recorded a number of buildings from that period, although many have since been demolished and the project area is now sparsely developed. Just seven building/building complexes remain extant within the study area, although they range from good condition and occupied to ruinous and abandoned. Several additional homes and building complexes are within or bordering the overall study area limits but are in carve-out parcels excluded from development. Buildings/complexes within the project area include two ruinous early-nineteenth century dwellings, three late-nineteenth century dwellings, a vacant early-twentieth century dwelling, and a mid-twentieth century dwelling. Field inspection revealed evidence of two additional map projected buildings that remain only as sites.

The project area is bordered by Blackwater River and Mill Swamp and crossed by numerous swamps, drainages, and pocosins. These natural resources would have been attractive to prehistoric hunters and gatherers, but the terrain within the project area 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, however, no such sites have been previously recorded within the project area limits.

Although the project area contains a number of site-predictive factors, such as the natural resources, a historic road network, and mapped buildings, land use throughout the twentieth and twenty-first centuries has negatively impacted the stratigraphic integrity of the soils. Much of the project area has been used to produce timber for an extended period of time and multiple harvests resulting in multiple 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, and in most cases the topsoil and eluviated layers have been destroyed or displaced. Areas not put to use for timber have been used agriculturally and therefore subject to regular plow and tilling.

Based on the above observations, the locations of the map-projected buildings that were field verified as well as previously recorded architectural resources should be considered high potential for historic sites. Together, these account for an area covering about **34 hectares (85 acres)** total. The map-projected locations of buildings that were not visible through surface reconnaissance but reveal evidence of prior disturbance from logging should be considered moderate potential for historic sites. Landforms bordering Blackwater River should likewise be considered moderate potential for prehistoric sites, in addition to open, well-drained fields that have not been previously disturbed by logging. Together, the moderate potential area covers an area of about **365 hectares (901 acres)** total. A 25% sample of the moderate potential areas should be subjected to targeted subsurface testing. This sample should include the least disturbed landforms that correspond to or share similar characteristics as the locations of buildings depicted on historic maps. The remainder

of the project area that does not lie in wetland should be considered low potential for archaeological resources. A sample constituting 10% of the low-potential area should be subjected to subsurface testing. This 10% should include the least-disturbed terraces overlooking wetlands and intersections of streams to test for prehistoric resources; along the edges of roads and fields depicted on Civil War-era maps to test for early historic sites; and any other areas that appear to be less disturbed in the field. The total low probability area is about **170 hectares (421 acres).** A large tract of land at the northern end of the project area has been subject to recent, approved phase I survey and that area will not require further investigation as part of this effort (Table 7-1 and Figure 7-1 and Figure 7-2).

Table 7-1: Summary of archaeological potential within the project area.

Potential	Reason	STP Sample	Total Area	STP Area
High	Yard space around extant and map-projected architectural resources	100%	34 hectares 85 acres	34 hectares 85 acres
Moderate	Yard space around map-projected architectural resources in areas of documented disturbance. Finger ridges and terraces overlooking Blackwater River and confluences.	25%, chosen based on field conditions, pedestrian survey of remainder	365 hectares 901 acres	91 hectares 225 acres
Low	Areas with no site predictors	10%, chosen based on field conditions, pedestrian survey of remainder	170 hectares 421 acres	17 hectares 42 acres
No Subsurface Testing	Wetlands, water-saturated soils, slopes greater than 15%, previously surveyed areas	Pedestrian survey where possible	248 hectares 613 acres	Pedestrian survey where possible
Total			**817.46 hectares 2,020 acres**	**142 hectares 352 acres**

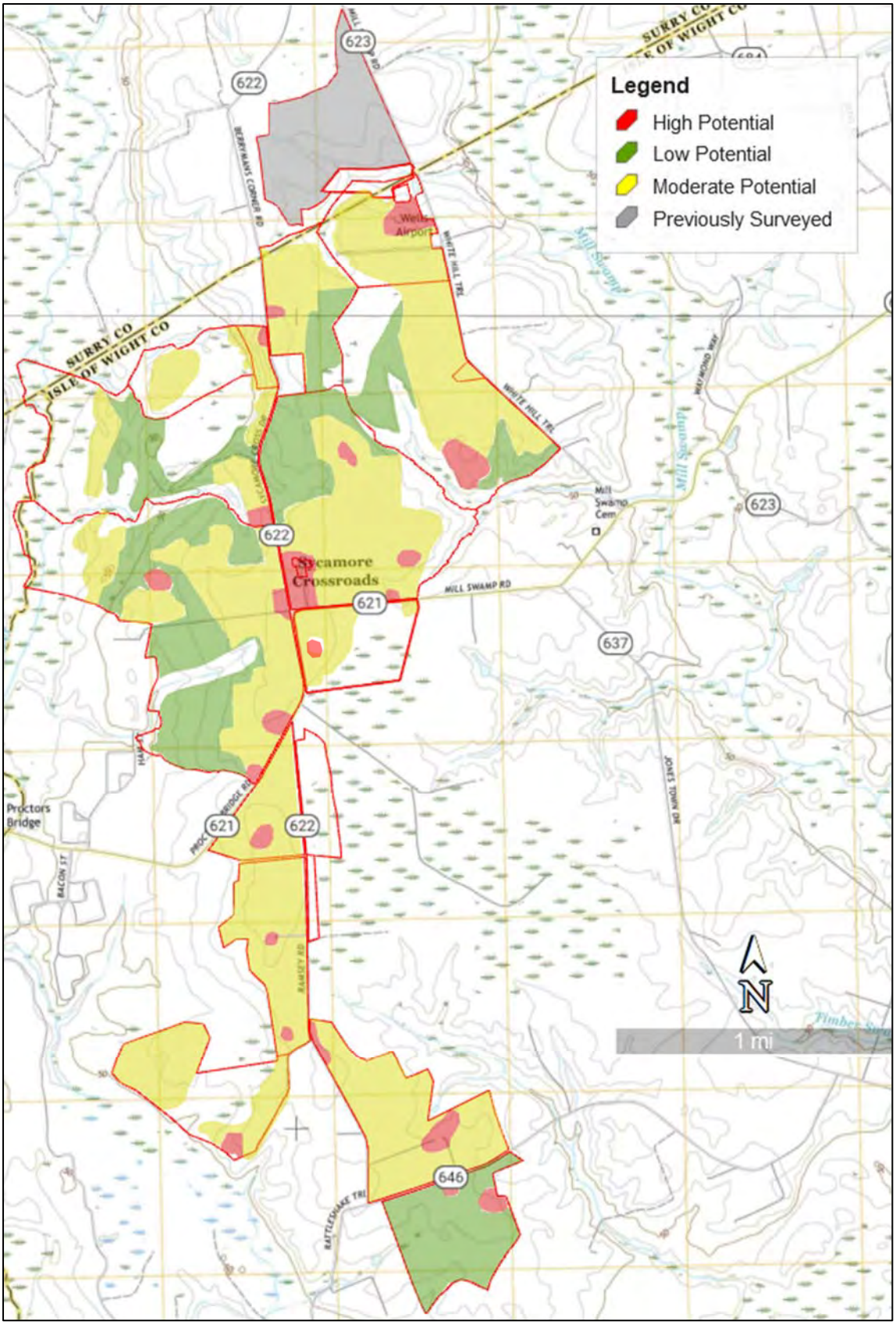


Figure 7-1: USGS topographic map with project area showing areas of archaeological potential.

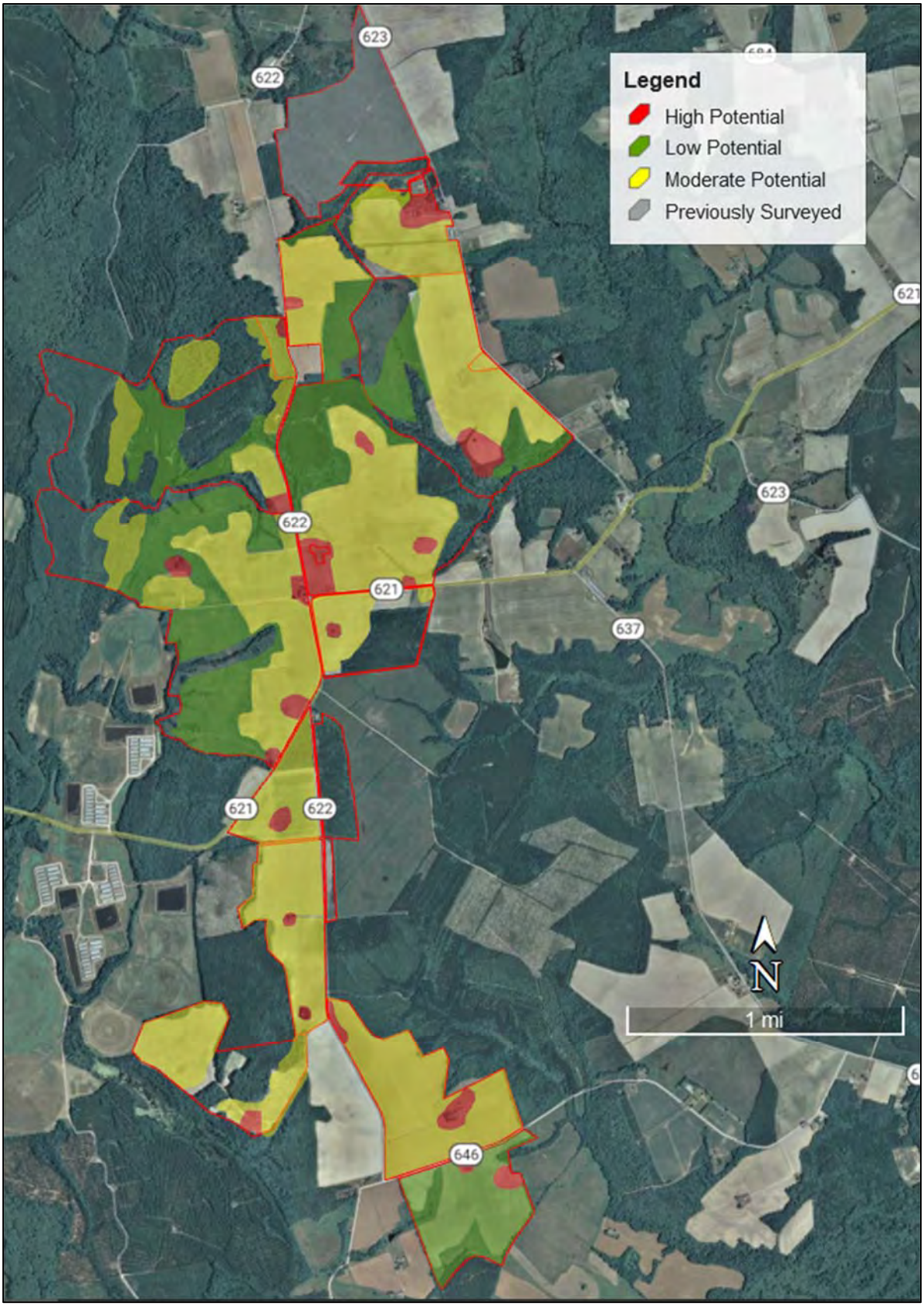


Figure 7-2: Aerial map with project area showing areas of archaeological potential.

8. FIELD SURVEY RESULTS

Phase I cultural resource survey of the Sycamore Cross Solar project area was conducted from December 2023 through April 2024. The effort included both architectural and archaeological investigations according to the survey methodology outlined in the research design and Phase IA. The results of the survey are summarized below.

ARCHITECTURAL FIELD RESULTS

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). VCRIS site file forms were prepared or updated for each resource subject to survey as part of this effort.

The 28 extant resources within the survey area and surveyed as part of this effort consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

The survey area occupies a large rural area of southern Surry and western Isle of Wight counties, situated roughly eight miles east of Wakefield. There are no incorporated or unincorporated communities within or in the immediate vicinity of the survey area, however, it is centered on the former crossroads community of Sycamore Cross. It is crossed or bordered by several local transportation corridors including Sycamore Cross Road and White Hill Trail that extend generally north-south through the survey area, and Mill Swamp Road and Proctors Bridge Road that extend generally east-west. 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.

Development patterns in the area are diverse, with older homes and farmsteads generally set back from the road on large properties while more recent, twentieth century homes tend to be set in clusters on small lots bordering the roads.

The earliest resources in the survey area are believed to date from the first and second quarters of the nineteenth century, although many of these were found to have been demolished since they were last documented. Four early-nineteenth century homes have been completed demolished and cleared from their sites, while two resources believed to both date circa 1825 remain in ruinous condition with only the brick exterior walls standing. Another four Antebellum homes, dating from c.1830, two c.1850, and 1852 all remain extant and occupied. These homes tend to be Vernacular in nature although one exhibits fairly high-style Federal to Greek Revival transitional architectural influences. There are also several resources that date from the late-nineteenth century, including two homes and a former post office. The homes reflect Folk Victorian influences popular at that time, while the post office reflects a stripped Vernacular example of a rural crossroads building. The vast majority of resources from the twentieth century, including the homes and commercial buildings reflect national trends in building styles of their period including Colonial Revival/Cape Cod, Minimal Traditional, and Ranch.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.

Provided in the following pages are a table of all surveyed resources (Table 8-1), a map with the location of each resource surveyed (Figure 8-1), 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 8-1: Architectural resources surveyed. Bold Font denotes resource is NRHP-Eligible. Orange Highlighted resources are located directly within the project area. Green highlight indicates resource was determined not NRHP-eligible within the last five years and not resurveyed at this time.

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-0029	House, 12462 Ramsey Road	c.1800	D+A: Demolished
046-0030	Betts House, Proctors Bridge Road	c.1802	D+A: Demolished
046-0032	Dudley House and Outbuildings, Ramsey Road	c.1820	D+A: Demolished
046-0055	Tenant House, Proctors Bridge Road	c.1800	D+A: Demolished
046-0056	Grays' Brick House, Proctors Bridge Road	c.1825	D+A: Not Eligible (Ruins)
046-0057	Brick House, Mill Swamp Road	c.1825	D+A: Not Eligible (Ruins)
046-0068	**Wilson Hollemon House, 5499 Mill Swamp Road**	**1830**	**D+A: Potentially Eligible**
046-5147	House, 14385 Rattlesnake Trail	1850	D+A: Not Eligible
046-5148	House, 13407 Ramsey Road	1880	D+A: Not Eligible
046-5149	**Sycamore Cross Post Office, Mill Swamp Road**	**1899**	**D+A: Potentially Eligible**
046-5150	**House, 11356 Sycamore Cross Drive**	**c.1899**	**D+A: Potentially Eligible**

VDHR ID#	Resource Name/Address	Year Built	NRHP Eligibility
046-5151	Mill Swamp Baptist Church & Cemetery; Church, 6329 Mill Swamp Road	1928	D+A: Not Eligible
046-5152	Store, 6159 Mill Swamp Road	1946	D+A: Not Eligible
046-5260	Mill Swamp Baptist Church Parsonage	c.1900	D+A: Demolished
046-5550	Dwelling, 10126 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5551	Dwelling, 10106 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5552	Dwelling, 10088 White Hill Trail		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
046-5804	House, 10325 White Hill Trail	1953	D+A: Not Eligible
046-5805	House, 10261 White Hill Trail	1972	D+A: Not Eligible
046-5806	House, 6262 Mill Swamp Road	1955	D+A: Not Eligible
046-5807	Industrial Complex, 11321 Jones Town Drive	1959	D+A: Not Eligible
046-5808	House, 6177 Mill Swamp Road	1968	D+A: Not Eligible
046-5809	Commercial Building, 6143 Mill Swamp Road	c.1970	D+A: Not Eligible
046-5810	House, 5498 Mill Swamp Road	1899	D+A: Not Eligible
046-5811	**Betts Farm, 5191 Mill Swamp Road**	**1850**	**D+A: Potentially Eligible**
046-5812	House, 14195 Rattlesnake Trail	1950	D+A: Not Eligible
046-5813	Commercial Building, 14472 Rattlesnake Trail	c.1950	D+A: Not Eligible
046-5814	House, 11235 White Hill Trail	c.1950	D+A: Not Eligible
046-5815	House, 13484 Ramsey Road	1970	D+A: Not Eligible
046-5816	House, 12085 Ramsey Road	1971	D+A: Not Eligible
046-5817	Hollemon Cemetery	Pre-1900	D+A: Not Eligible
087-5509	Captain Pretlow House, 4071 Proctor's Bridge Road	1760	VDHR- Relocated (1988) / D+A: Now outside of survey area
090-5163	Dwelling, 337 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5164	Dwelling, 3285 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5165	Simmons and Brown Cemetery		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5166	House, 1122 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5167	House, 1097 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5168	House, 10676 Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5174	House, Berrymans Corner Road		VDHR: Not eligible (2021)/ D+A: Not Re-Surveyed
090-5208	House, 1314 Berrymans Corner Road	c.1960	D+A: Not Eligible
090-5209	House, 1209 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5210	House, 1167 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5211	House, 1141 Berrymans Corner Road	c.1970	D+A: Not Eligible
090-5212	House, Berrymans Corner Road	c.1910	D+A: Not Eligible

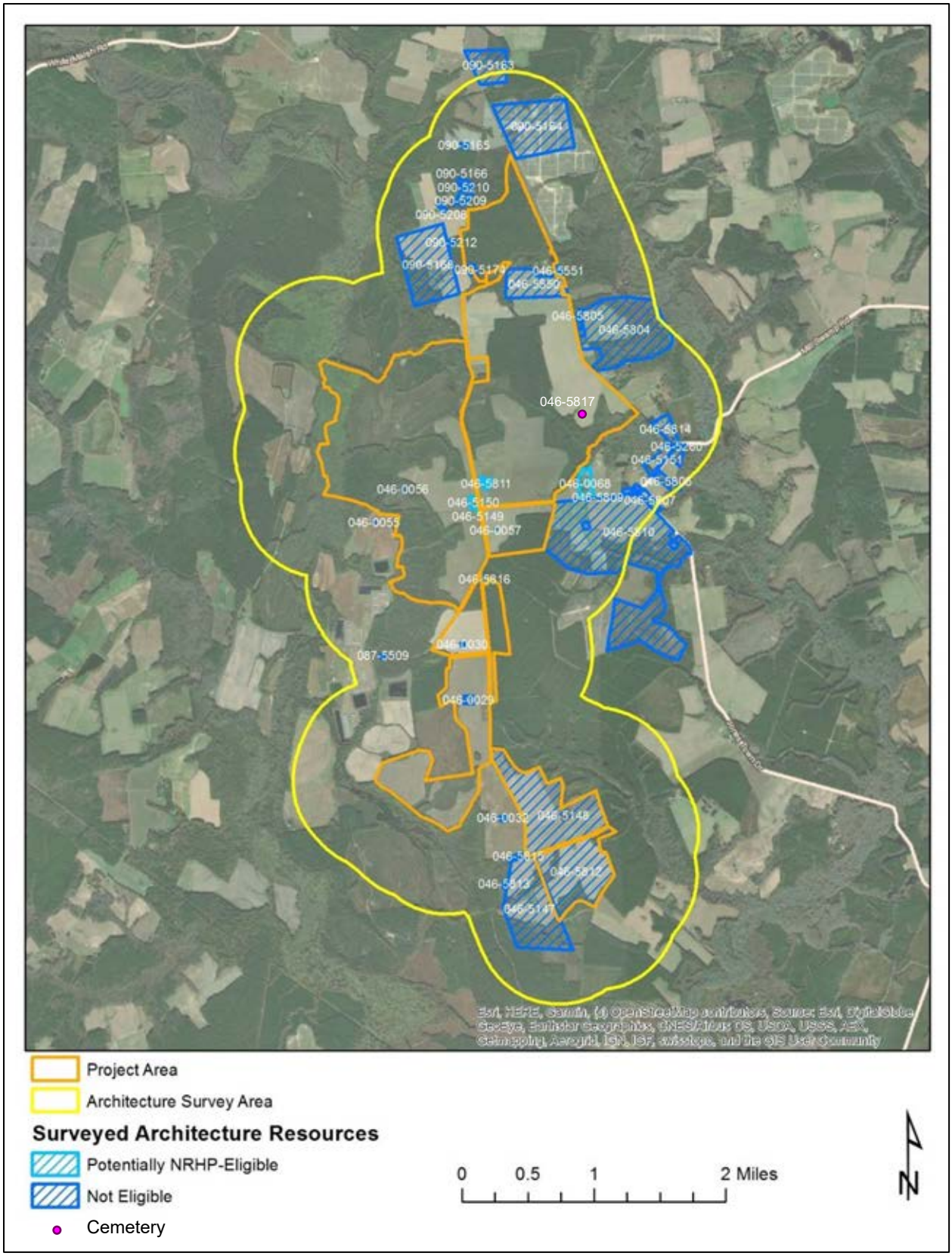


Figure 8-1: Location of surveyed architectural resources in relation to the project area.

RESOURCE NARRATIVES

VDHR# 046-0029
House, 12462 Ramsey Road



The house at 12462 Ramsey Road was constructed circa 1800 according to a previous survey. According to a previous survey, this structure was a one-and-a-half-story wood frame structure featuring a hall-parlor plan, beaded weatherboard siding, and brick exterior end chimneys laid in an American bond. This structure was not observed at the time of survey and a review of historic aerial imagery reveals that this structure has been demolished and removed from the site.

The site of the demolished resource is located on the west side of Ramsey Road between Proctors Bridge Road and Rattlesnake Trail. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field and is accessed by a long, gravel driveway. The only structure remaining on the property is a dilapidated shed.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0030
Betts House, Proctors Bridge Road



Betts House, located off of Proctors Bridge Road, was constructed circa 1802 according to a previous survey. According to a previous survey, this house was a one-story wood frame structure with a gable roof and two brick exterior end chimneys. This structure was not observed at the time of survey and inspection of historic aerial imagery indicates that it has been demolished and cleared from the site.

The site of the demolished resource is located on the southeast side of Proctors Bridge Road just south of its intersection with Ramsey Road. The landscape in the general vicinity of the site is gently rolling and characterized by a mix of wooded areas and agricultural fields with relatively light development. The house was previously mapped at the center of what is now a wide, open agricultural field. No outbuildings or other associated resources remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0032
Dudley House and Outbuildings, Ramsey Road



Dudley House, located off of Ramsey Road, was constructed circa 1820 according to a previous study. According to a previous survey, this building was a one-and-a-half-story wood frame structure featuring a hall-parlor plan, dormers on the front slope of its gable roof, and brick exterior end chimneys laid in an American bond. The house was not observed at the time of survey and inspection of historic aerial imagery reveals that the structure has been demolished and cleared from the site.

The site of the demolished resource is located on the west side of Ramsey Road between Proctors Bridge Road and Rattlesnake Trail. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field, however no structures remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0055
Tenant House, Proctors Bridge Road



The tenant dwelling off of Proctors Bridge Road was constructed circa 1800 according to a previous survey. According to a previous survey, this building was a one-story wood frame structure with a hall-parlor plan, a metal-sheathed gable roof, and brick exterior end chimneys. The site was not accessible at the time of survey, however a review of historic aerial imagery suggests that the structure has been demolished and removed from the site.

The site of the demolished resource is located on the north side of Proctors Bridge Road between Old Blackwater Road and the end of Mill Swamp Road. The landscape in the general vicinity of the site is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The former homesite is located at the center of a large agricultural field, however no structures appear to remain on the property.

As the primary resource is no longer extant, this property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-0056
Grays' Brick House, Proctors Bridge Road



The Grays' Brick House ruins, located off of Proctors Bridge Road, was constructed circa 1825 according to a previous survey. Although the home likely exhibited stylistic influences and features, any such detail is no longer extant in its current ruinous condition. All that remains of the structure are the walls of the primary block. The two-and-a-half-story masonry structure is constructed of brick laid in a 5:1 American bond and rests on a continuous foundation of the same construction. Scarring in the exterior brick indicates that it had been topped by a gable roof with a one-story gabled wing on one side, however neither of these features remain. A large, brick chimney laid in a 3:1 American bond is located on one side of the structure. Multiple door and window openings are present on the structure, however none contain their former occupants. On the interior of the structure, remnants of scratch coat plaster remain on the walls in some places.

This property is located on the west side of Proctors Bridge Road near its intersection with Mill Swamp Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The ruins is set far from the road within a densely forested area with no formal access points leading to the structure. No associated structures or other extant resources were observed on the property, however, a variety of evidence on the surrounding landscape is suggestive of archaeological features.

This property represents the remains of an early nineteenth century single dwelling in the region, that now remains in a ruinous condition. As all that remains of the building are the brick exterior walls and all other structural materials and features are gone, the ruins lack historical integrity and are therefore considered ***not eligible*** for listing in the NRHP as an architectural resource, however, warrants further archaeological investigation (recorded as Site 44IW0407).

VDHR# 046-0057
Brick House, Mill Swamp Road



The brick house ruins off of Mill Swamp Road was constructed circa 1825 according to a previous survey. Although the home likely exhibited stylistic influences and features, any such detail is no longer extant in its current ruinous condition. The two-story structure is constructed of brick laid in a 3:1 American bond and rests on a raised English Basement brick foundation of the same construction. It appears that it was once topped by a gable roof, however the roof is not intact. A large, brick chimney is located on the east side of the ruins, with hearths present on both the first and second floors in the interior of the building. The elevations appear symmetrical, with evenly spaced window openings, however none of the windows remain intact.

The ruins are located on a large, rural lot on the southeast corner of Mill Swamp Road and Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The ruins are set far back from the road within a large, open agricultural field and is immediately surrounded by overgrown vegetation in on an otherwise sparsely vegetated lot. There are no formal access points or associated structures on the property.

This property represents the remains of an early nineteenth century single dwelling in the region, that now remains in a ruinous condition. As all that remains of the building are the brick exterior walls and all other structural materials and features are gone, the ruins lack historical integrity and are therefore considered ***not eligible*** for listing in the NRHP as an architectural resource, however, warrants further archaeological investigation (recorded as Site 44IW0424).

VDHR# 046-0068
Wilson Hollemon House, 5499 Mill Swamp Road



The Wilson Hollemon House, located at 5499 Mill Swamp Road, was constructed in 1830 according to local land records. It remains in good condition and exhibits Georgian style influences. The two-story, five-bay, L-shaped masonry structure is constructed of brick laid in a 3:1 American bond and rests on a continuous foundation of the same construction. It is topped by a half-hipped gable roof sheathed in asphalt shingles and embellished with dentils lining its molded cornice. Three chimneys flank the roof – one on each gable end – and are laid in a 3:1 American bond with corbelled bases. Fenestration on the structure consists of two-over-two double-hung windows set in wood frames with wide, flared lintels. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door with a transom featuring elliptical filagree. Sheltering part of the façade is a one-story, three-bay porch supported by fluted Ionic columns and pilasters. A central, one-bay balcony rests on the flat roof of the first story porch, being a later addition constructed in 1917. This balcony is sheltered by a pedimented gable roof with the same supports as the first story porch and is enclosed by a wood balustrade with turned balusters.

This property is located on the north side of Mill Swamp Road between Proctors Bridge Road and the end of Jones Town Drive with the crossroads community of Sycamore Crossroads. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields. Set back approximately 250 feet from the road, the house rests on a gently sloping grass lawn and is accessed by a long, gravel driveway. Vegetation surrounding the house includes rows of mature shade trees and some planted shrubs along the edges of the house, along with a garden in the backyard. Several domestic and agricultural outbuildings are clustered behind the house as well as a cemetery.

The Wilson Hollemon House was constructed in 1830 according to previous documentation and functioned as both the Holleman family home and the Mayfield Post Office. Mayfield was one of the earliest post offices in Isle of Wight County and was later replaced by the nearby Sycamore Crossroads Post Office. Wilson Hollemon was both the original owner of the home and the first postmaster at Mayfield (Kind 1993:328-330). The post office was discontinued circa 1886, however the house has been passed down through the generations of the Holleman family and presently remains owned by the family. Additionally, the house represents a remarkably well-preserved example of an early Georgian-style home predating the Civil War in Isle of Wight County, as it has undergone little alteration since its original construction. For its association with Wilson Hollemon and the Mayfield Post Office, as well as its standing as a significant example of historic architecture in Isle of Wight County, this resource will be considered ***potentially eligible for listing in the NRHP*** under Criteria A and C for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located outside of the project area and not within the limits of any proposed sitework, this assessment was focused on indirect (visual) impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The Wilson Hollemon House is set on a rural lot on the north side Mill Swamp Road to the east of the project area. Although the rear edge of the property is adjacent to the project limits, the home is set closer to the front of the property and is roughly 515 feet from the project area limits at the nearest point with proposed improvements setback an additional 130 feet. The landscape between the property and the project area is characterized by open agricultural field with a treeline bordering a draw that runs along the edge of the project area.

Inspection from Mill Swamp Road along the front of the property revealed that the treeline extending between it and the project area generally screens views of the portion of the project area on the north side of the road. The treeline is a mix of deciduous trees and low evergreen shrubs, and at generally 250 feet wide, it is anticipated that it would provide screening year-round. The treeline stops short of the road, however, and therefore there is a narrow "window" in which the front edge of the project area along the road is visible, however, project improvements will be setback from the road by a minimum of 100 feet and as such would be mostly screened. While a large, wooded area screens views of the majority of the portion of the project area on the south side of the road, a narrow strip of the development area set between the road and the wooded area is visible.

As such, the project as currently designed has the potential to introduce a change to the viewshed and setting of the property. While the vast majority of the project and associated improvements are anticipated to be screened from view by existing vegetation patterns coupled with project setbacks, there are discrete areas where project components may be visible from the public road along the front of the property, as well as from within the property and in the vicinity of the house. To minimize the potential from views within these areas, supplemental landscape buffer will be planted within the 100-foot project setback. With the proposed setbacks and supplemental landscape buffer, it is D+A's recommendation that the project will be mostly screened from view

from the house and public vantage along the road to the front, and therefore result in no more than a ***minimal impact*** to the Wilson Hollemon House per VDHR's impact characterization.

Figure 8-2 illustrates the location of the Wilson Hollemon House in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-3 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-4 through Figure 8-7 provide representative photographs of and from the resource towards the project area.

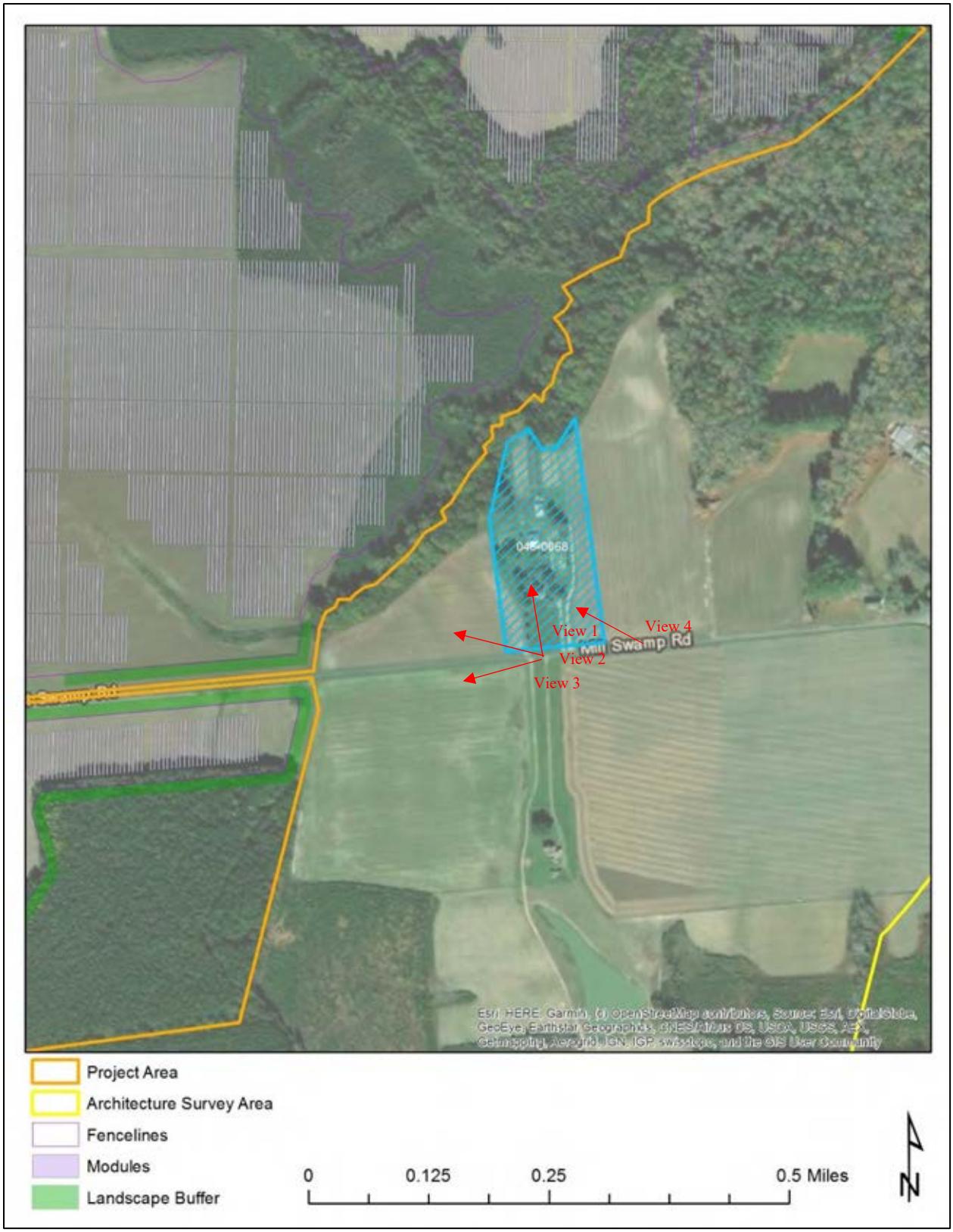
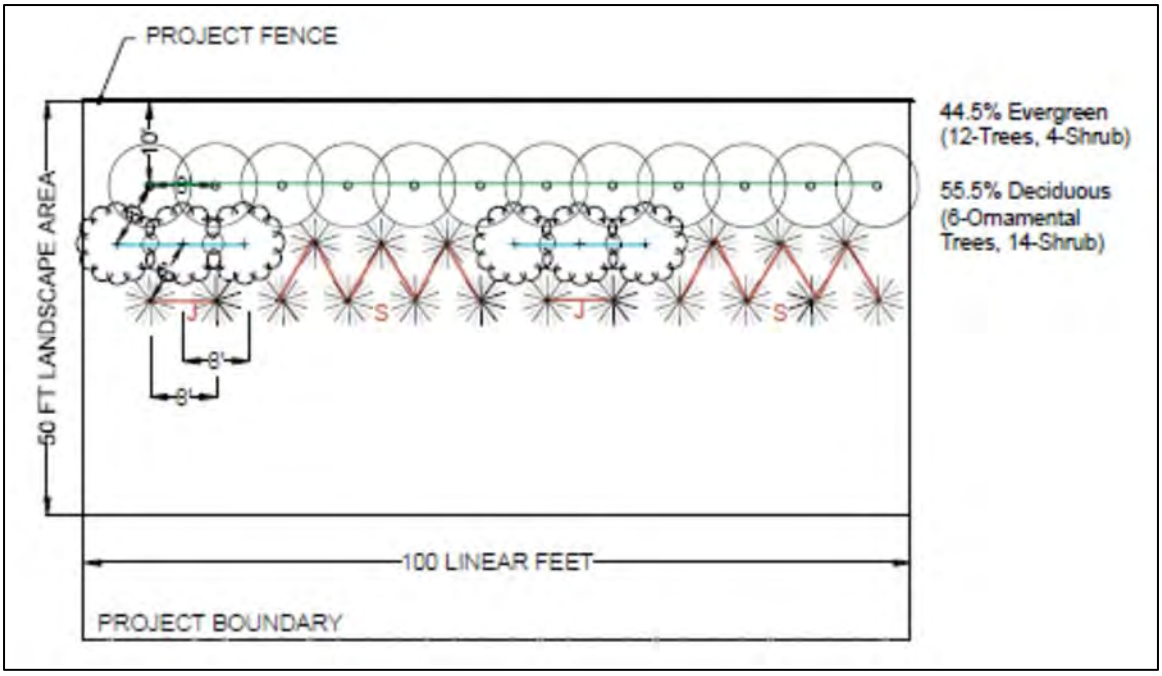


Figure 8-2: Wilson Hollemon House in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-3: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-4: View 1 – View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing north. (project area not visible – screened by treeline)



Figure 8-5: View 2 - View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing northwest. (project area mostly screened by treeline; small area visible)

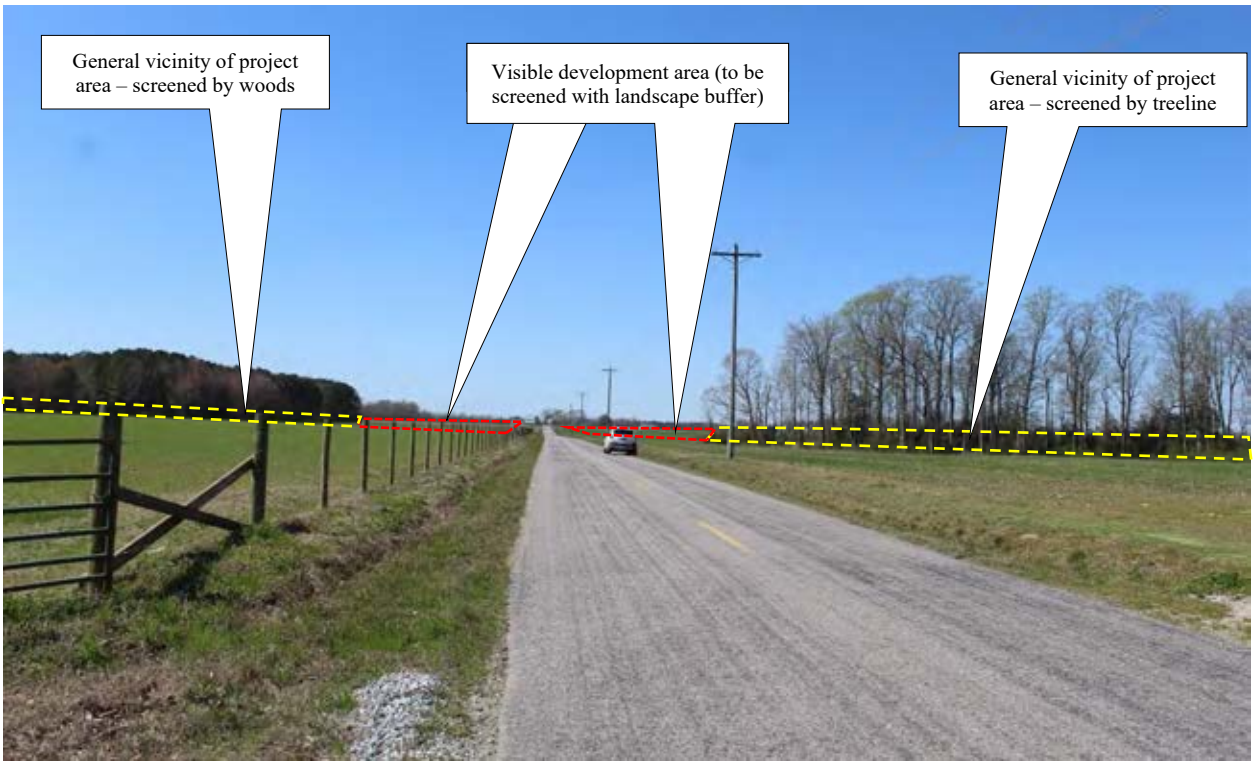


Figure 8-6: View 3 - View from Mill Swamp Road in front of the Wilson Hollemon House looking towards the project area, facing west. (project area mostly screened with exception of portions near the road that are visible)



Figure 8-7: View 4 - View from Mill Swamp Road east of the Wilson Hollemon House looking towards the project area, facing northwest. (project area not visible – screened by treeline)

VDHR# 046-5147
House, 14385 Rattlesnake Trail



The house at 14385 Rattlesnake Trail was constructed in 1850 according to local land records. It remains in fair condition and exhibits a Vernacular style. The wood frame structure is comprised of a two-and-a-half-story, three-bay main block with a two-story, two-bay wing on its east side. Both blocks are sheathed in asbestos siding and topped by a gable roof sheathed in standing seam metal. The roof of the primary block is pierced by a brick interior end chimney on its west side and embellished with gable returns. Fenestration on the structure includes four-over-four double-hung sash windows on the main block and six-over-six double-hung sash windows on the west wing. The primary entrance is located on the left side of the front (north) elevation on the main block and consists of a set of double-leaf doors flanked by sidelights. Sheltering the entrance is a one-story, one-bay entry porch with a shed roof supported by metal posts.

This property is located on the southeast side of Rattlesnake Trail adjacent to its intersection with Ramsey Road. The landscape within and around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back from the road at the center of a large agricultural field and is accessed by a long, gravel driveway that extends from the road to the south side of the lot. Vegetation surrounding the house includes several mature shade trees as well as rows of boxwoods along the edges of the structure. Parts of the lot are divided by wood and wire fencing, ponds, and thickets of trees. Several domestic and agricultural outbuildings are scattered in the fields to the north, south, and east of the house.

This property is an example of a typical mid-nineteenth century rural home in the region. This building reflects a Vernacular style with little architectural distinction. It does not embody distinctive characteristics or possess significant or unique architectural or design features and has been subject to a variety of additions and alterations. Reconnaissance-level research revealed no

known significant historical associations and therefore the property is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5148
House, 13407 Ramsey Road



The house at 13407 Ramsey Road was constructed in 1880 according to local land records. It remains in poor condition and exhibits Colonial Revival style influences as applied to an I-house form. The two-story, three-bay wood frame structure rests on a continuous brick foundation laid in an American bond and is topped by side gable roof sheathed in asphalt shingles. The roof is pierced by two brick interior central chimneys at its ridge and is embellished with pedimented gable ends. A two-story rear ell topped by a gable roof is attached to the east side of the structure and features a third brick interior central chimney. Piercing the weatherboard siding are six-over-six double-hung sash windows. The primary entrance is centered on the symmetrical front (west) elevation, consisting of a single door with a transom and sidelights. Sheltering the entrance is a two-story, one-bay porch featuring a pedimented gable, square Doric columns, and wood balustrades. A door on the second story of the house leads to the second story balcony.

This property is located on the northeast corner of Ramsey Road and Rattlesnake Trail. The landscape within and around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields. The house is set far back from the road at the center of a wide, open agricultural field. The homesite is surrounded by a wood fence with brick entry posts and vegetated with several mature shade trees and a substantial amount of overgrown shrubbery. The property is accessed by two long, gravel driveways – one that extends from Ramsey Road to the front of the house and one that extends from Rattlesnake Trail to the outbuildings behind the house. Outbuildings on the property include a barn and a vehicle shed located behind the house.

This property is an example of a typical late nineteenth century single dwelling in the region. This building reflects a Colonial Revival style as applied to a Vernacular I-house form. 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. Additionally, the structure remains in poor condition and appears to have been vacant for an extended period. Therefore, the resource is considered ***not eligible*** for listing in the NRHP..

VDHR# 046-5149
Sycamore Cross Post Office, Mill Swamp Road



The Sycamore Cross Post Office, located off of Mill Swamp Road, was constructed in 1899 according to a previous survey. It remains in fair condition and exhibits a vernacular style typical of contemporary rural commercial buildings in southeastern Virginia. The two-story wood frame structure rests on a brick pier foundation and is clad in weatherboard siding. It is topped by a gable roof sheathed in standing seam metal and embellished with gable returns. Extending from the east and west sides of the structure are two one-story, shed-roofed wings. Fenestration on the structure includes six-over-six double-hung sash windows, however few remain on the structure. The primary entrance consists of a single door centered on the symmetrical front (north) elevation and approached by a small, wood stoop.

The Sycamore Cross Post Office is located on the west side of Mill Swamp Road adjacent to its intersection with Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The building is set close to the road on a flat, sparsely vegetated grass lawn with a short, chain fence extending along the road. The property is accessed by two short, gravel driveways off of Mill Swamp Road. The only outbuilding on the property is a shed located just south of the post office.

The Sycamore Cross Post Office opened in 1886 as McClelland's Post Office and operated until 1917 with William Henry (Harry) McClelland serving as its first postmaster. Harry McClelland operated the post office out of a store he ran in the yard of the neighboring home, known as the Guy Betts House. The post office was discontinued in 1917 and the mail rerouted to Ivor (King 1993:331). This resource represents a well-preserved example of an early post office in Isle of Wight County and warrants further investigation to determine the extent of its significance within the local community. As such, this property is considered ***potentially eligible for listing in the NRHP***.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The Sycamore Cross Post Office is situated on a small roadside lot on the west side of Sycamore Cross Road, just across from the intersection with Mill Swamp Road. The entire property is located within the project lease area, however, it is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, although the building and its associated property will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape bordering the property to the west, as well as across Sycamore Cross Road on both sides of Mill Swamp Road. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads with larger setbacks in some areas. With these setbacks, the project fenceline will be roughly 150 feet from the post office building at the nearest point.

Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Crossroads community, including the c.1852 dwelling associated with the post office immediately to the north, the c.1850 Betts Farm house, and the c.1825 Brick House ruins will all remain visible from the post office, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage in the vicinity of the property, as well as within the setback area between the project fenceline and the building complex.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays, however, the visible extent of the project would be reduced through supplemental landscape buffer. Therefore, it is D+A's opinion that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in some directions, the Sycamore Cross Solar Project has the potential to result in a ***moderate impact*** overall to the Sycamore Cross Post Office per VDHR's impact characterization.

Figure 8-8 illustrates the location of the Sycamore Cross Post Office in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-9 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-10 through Figure 8-13 provide representative photographs of and from the resource towards the project area.

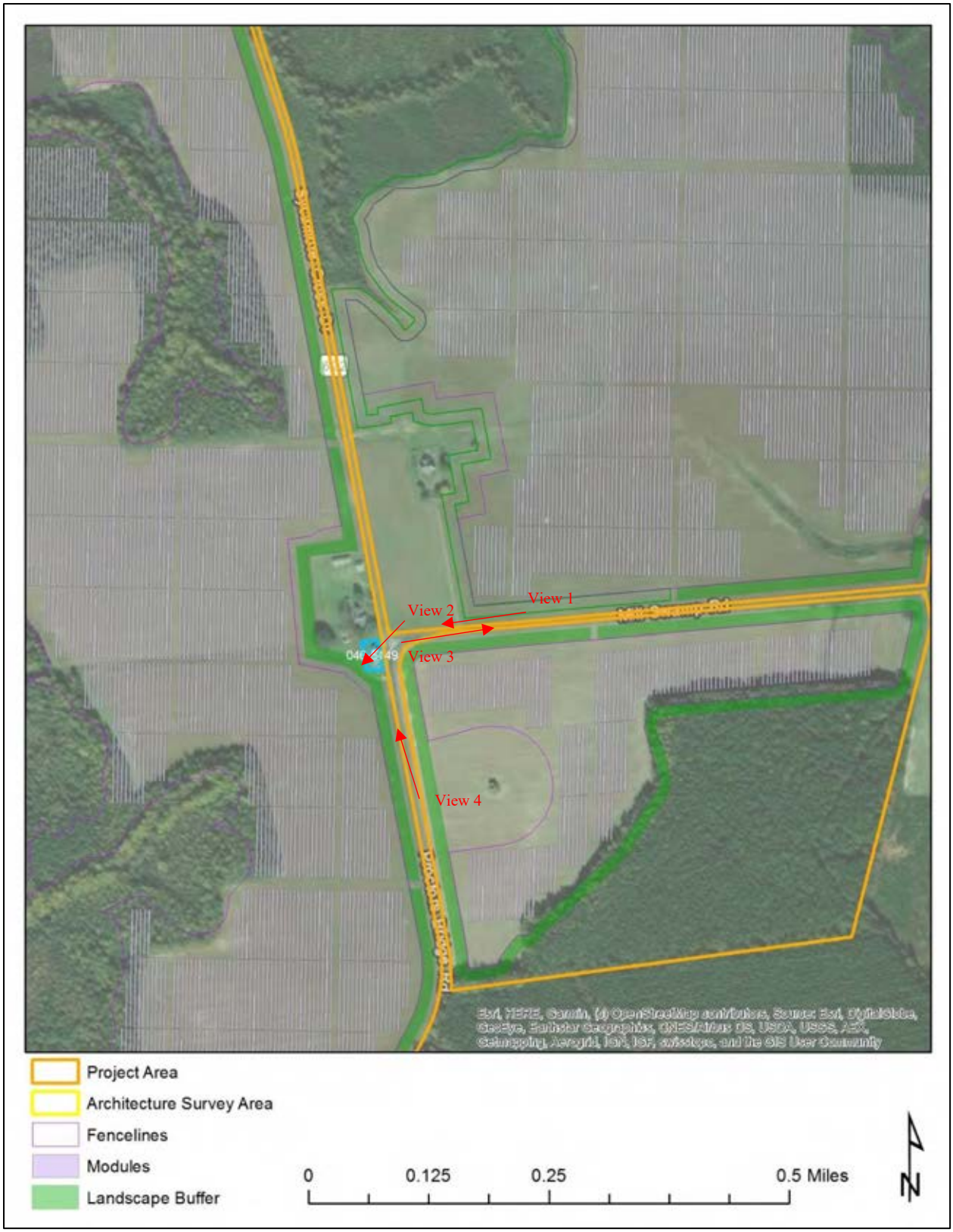
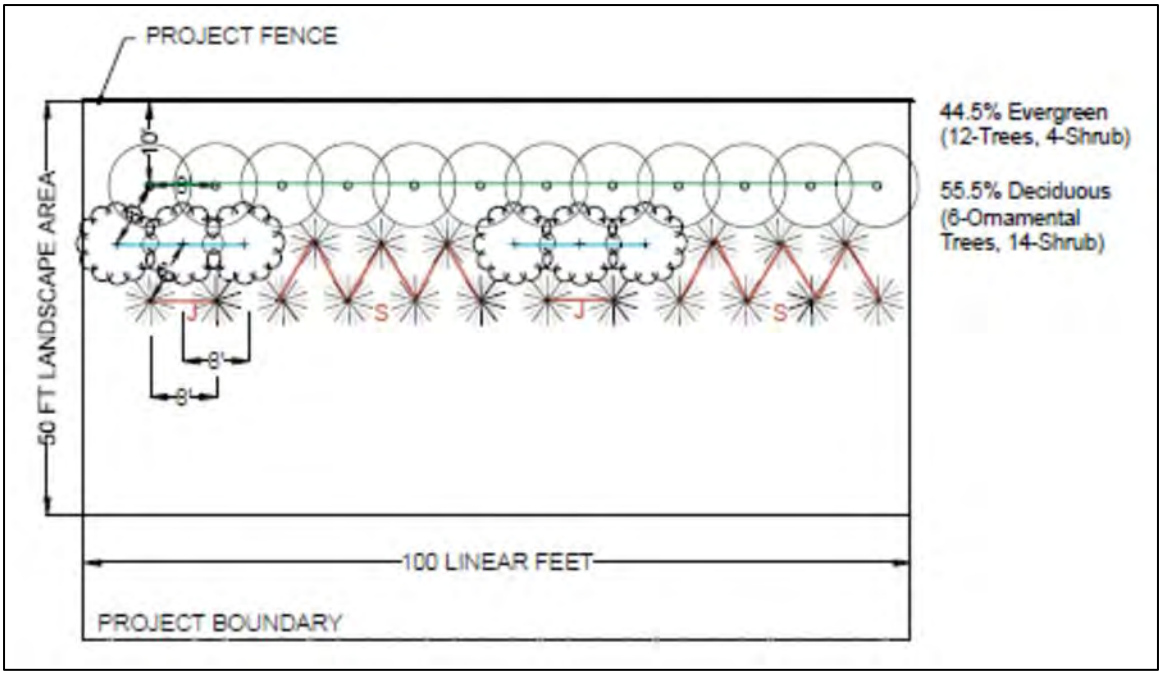


Figure 8-8: Sycamore Cross Post Office in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-9: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-10: View 1 – View of Sycamore Cross Post Office from Mill Swamp Road, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-11: View 2 - View of Sycamore Cross Post Office from intersection of Sycamore Cross and Mill Swamp Roads, facing southwest. (Development area visible in field beyond property)



Figure 8-12: View 3 - View from Sycamore Cross Post Office, facing east. (Development area visible along both sides of Mill Swamp Road)



Figure 8-13: View 4 - View of Sycamore Cross Post Office from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

VDHR# 046-5150
House, 11356 Sycamore Cross Drive



The house at 11356 Sycamore Cross Drive was likely constructed circa 1899, contemporary to the adjacent Sycamore Cross Post Office with which it was historically associated. It remains in good condition and exhibits Folk Victorian style influences. The two-story, L-shaped building is comprised of a three-bay I-house front block topped by a side gable roof with a rear ell topped by a cross gable. The wood frame structure rests on a continuous foundation and is clad in vinyl siding. The roof is sheathed in asphalt shingles and pierced by a brick interior central chimney and two brick interior end chimneys, as well as a small, central cross gable on its front slope. Fenestration on the structure includes single and paired two-over-two double-hung sash windows. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door topped by a transom. Sheltering the entrance is a one-story hipped porch that wraps around the east side of the house and is supported by Doric columns.

This house is located on a large, rural lot on the west side of Sycamore Cross Drive adjacent to its intersection with Mill Swamp Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. Set back roughly 60 feet from the road, the house rests on a flat grass lawn enclosed by a wood fence and vegetated with several mature shade trees and clusters of planted boxwoods. The property is accessed by a short, gravel driveway that extends from the road to a detached garage. Outbuildings on the property include the garage, a gazebo, a shed, and several agricultural outbuildings.

This property represents an example of a well-preserved rural home featuring a Folk Victorian style. Although the original owner of the property is unknown, historical writings refer to the home as the “Guy Betts House” and thus likely belonged to the Betts family, whose name appears on mid-nineteenth century maps within and in the general vicinity of the project area. Additionally, it appears that this property was historically associated with a neighboring property that functioned

as an early store and post office servicing the Sycamore Crossroads community. As such, this property warrants further study to determine the extent of its significance and is therefore considered ***potentially eligible for listing in the NRHP*** for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The house is situated on a small roadside lot on the west side of Sycamore Cross Road, just across from the intersection with Mill Swamp Road. The entire property is located within the project lease area, however, it is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, although the building and its associated property will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape bordering the property to the west, as well as across Sycamore Cross Road on both sides of Mill Swamp Road. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads with larger setbacks in some areas. With these setbacks, the project fenceline will be roughly 275 feet from the house at the nearest point.

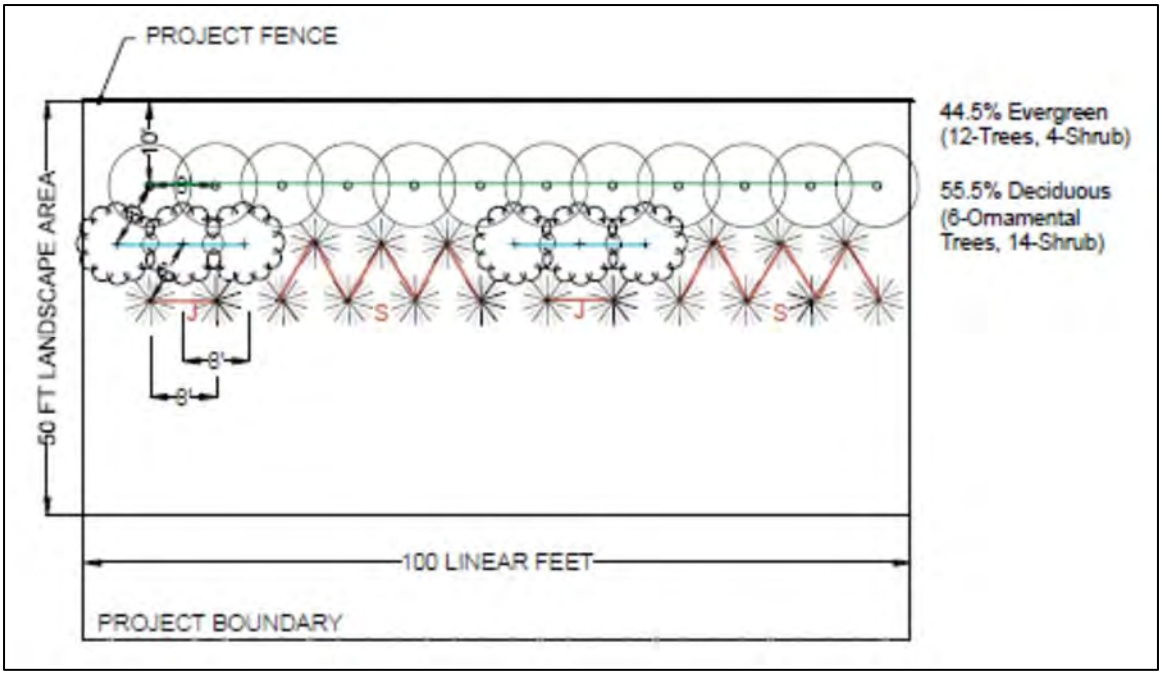
Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Crossroads community, including the c.1899 Sycamore Cross Post Office immediately to the south, the c.1850 Betts Farm house, and the c.1825 Brick House ruins will all remain visible from the Guy Betts House, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage in the vicinity of the property, as well as within the setback area between the project fenceline and the building complex.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays, however, the visible extent of the project would be reduced through supplemental landscape buffer. Therefore, it is D+A's opinion that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in some directions, the Sycamore Cross Solar Project has the potential to result in a ***moderate impact*** overall to the house at 11356 Sycamore Cross Drive per VDHR's impact characterization.

Figure 8-14 illustrates the location of the house in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-15 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-16 through Figure 8-21 provide representative photographs of and from the resource towards the project area.



Figure 8-14: House at 11356 Sycamore Cross Drive in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-15: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-16: View 1 – View of House at 11356 Sycamore Cross Drive from Mill Swamp Road, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-17: View 2 - View of House at 11356 Sycamore Cross Drive from intersection of Sycamore Cross and Mill Swamp Roads, facing northwest. (Development area visible in field beyond property)

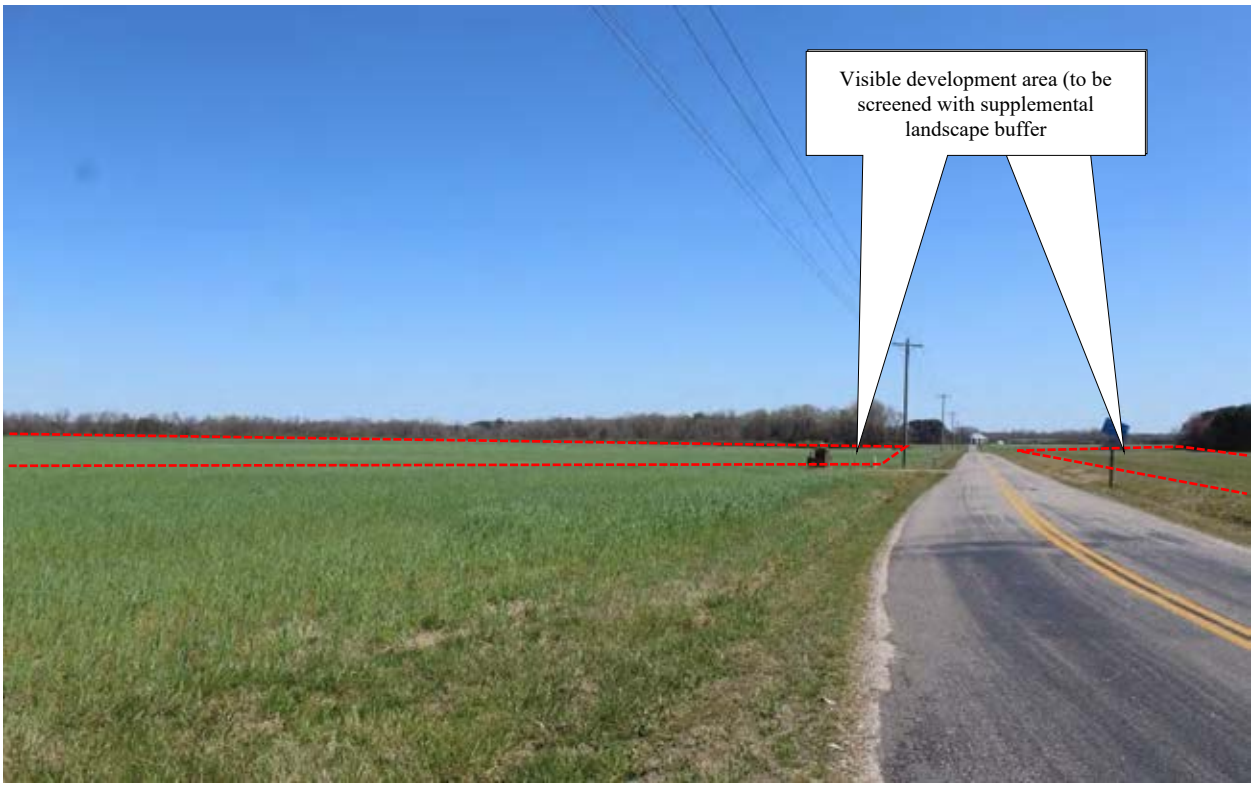


Figure 8-18: View 3 - View from House at 11356 Sycamore Cross Drive, facing east. (Development area visible along both sides of Mill Swamp Road)

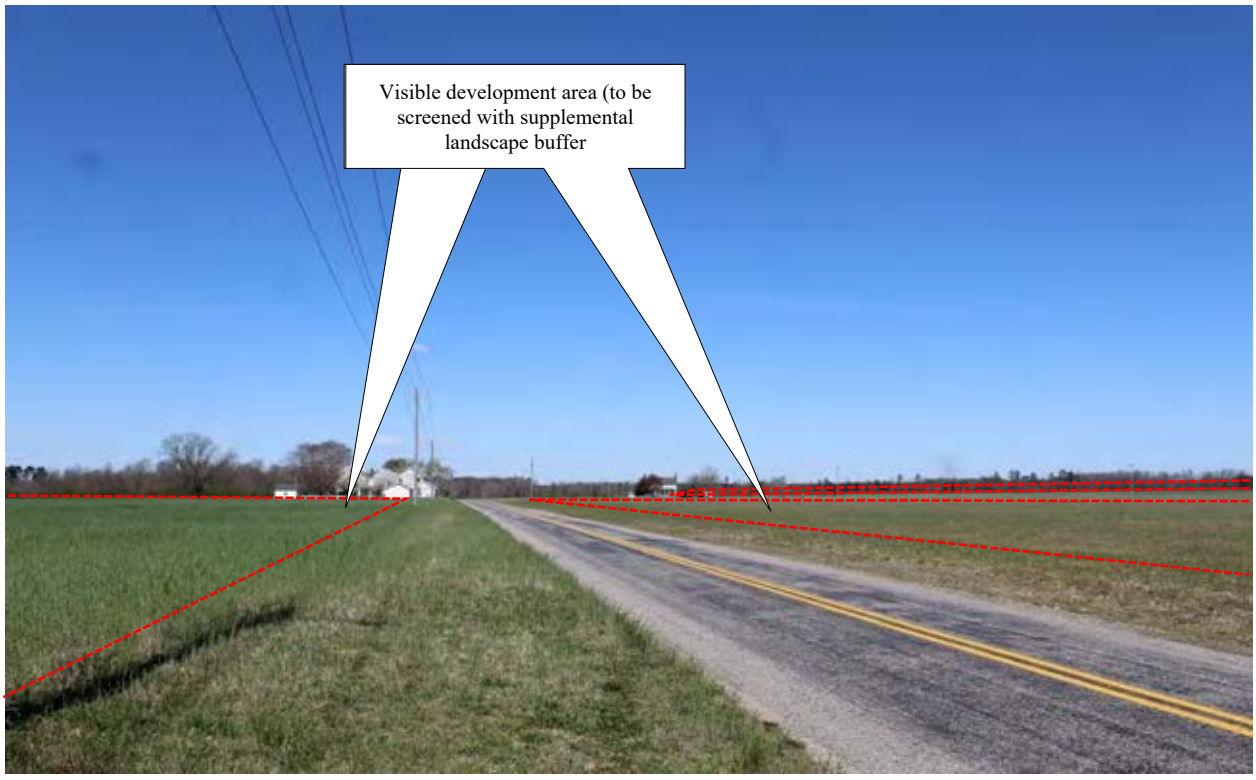


Figure 8-19: View 4 - View towards House at 11356 Sycamore Cross Drive from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

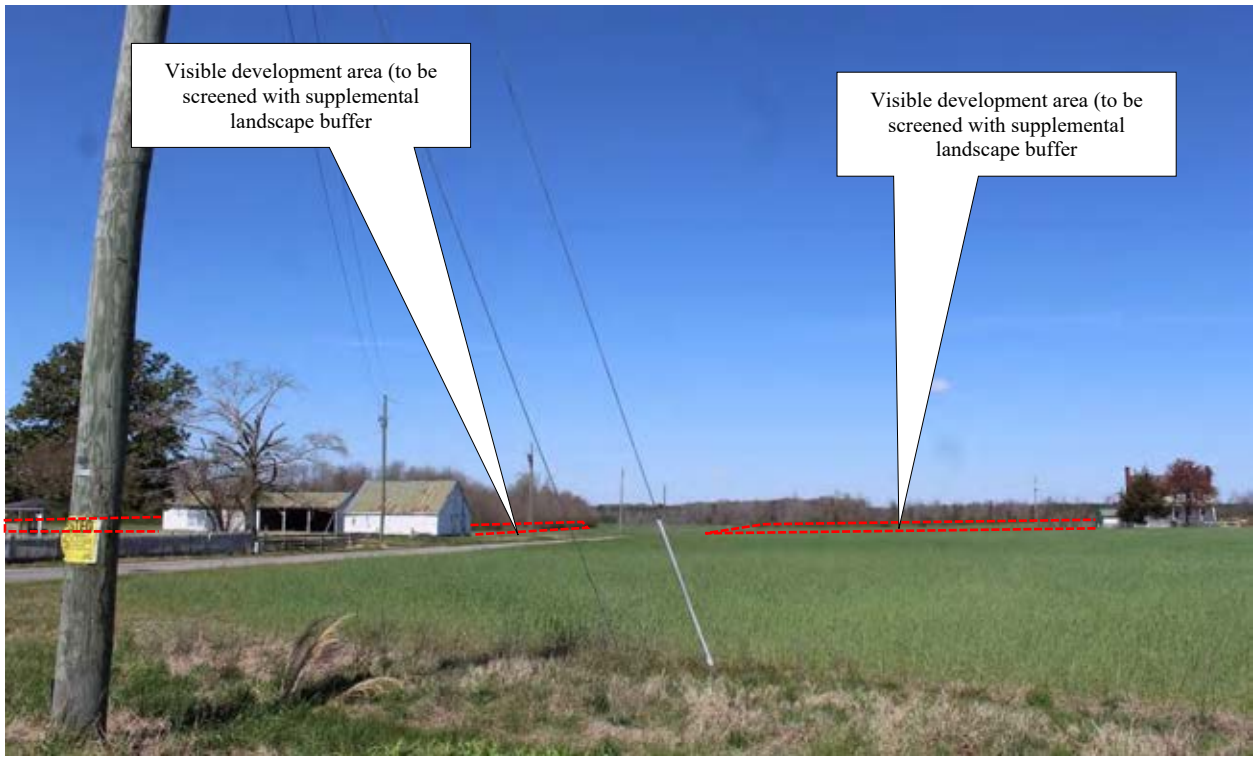


Figure 8-20: View 5 - View from Mill Swamp Road near the House at 11356 Sycamore Cross Drive, facing northwest. (Development area visible along both sides of Sycamore Cross Road)



Figure 8-21: View 6 - View of the House at 11356 Sycamore Cross Drive property from Sycamore Cross Road, facing south. (Development area visible in field bordering the property)

VDHR# 046-5151
Mill Swamp Baptist Church & Cemetery, 6329 Mill Swamp Road



Mill Swamp Baptist Church, located at 6329 Mill Swamp Road, was constructed in 1928 according to a previous survey. It remains in good condition and exhibits Colonial Revival style influences. The structure is comprised of a one-story main block topped by a front gable roof with a one-story, T-shaped rear addition topped by a metal-sheathed cross gable roof. The front block rests on a continuous concrete foundation and is clad in a brick veneer. Its roof is sheathed in asphalt shingles and embellished with modillions lining its pedimented gable. Piercing the roof of the primary block is a tall steeple near the front of the structure. Fenestration on the structure includes large stained glass windows on the main block and one-over-one double-hung sash windows on the rear addition. Three entrances are located on the front (south) elevation of the main block, each consisting of a pair of double-leaf, partially-glazed doors topped with a multi-light transom. Sheltering these entrances is a three-bay portico with a pedimented gable supported by fluted Doric columns and approached by a wide set of concrete steps.

This church is located on a rural property on the northwest corner of Mill Swamp Road and White Hill Trail. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The church is set close to the road at the top of a slight knoll and is surrounded by a large, paved parking lot accessed via driveways off of both Mill Swamp Road and White Hill Trail. Vegetation on the property is limited to sparse landscaping around the church and several mature trees shading the cemetery. To the north and west of the property is a densely forested area. There are no associated structures remaining on the property, however a large cemetery associated with the church is located to its southwest.

This property is an example of a typical early twentieth century church in the region. This building reflects a Colonial Revival style with little architectural distinction. 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# 046-5152
Store, 6159 Jones Town Road



The store at 6159 Jones Town Road was constructed in 1946 according to local land records. It remains in poor condition and exhibits a Vernacular style. The one-story, three-bay wood frame structure rests on a continuous concrete block foundation and is clad in vinyl siding. It is topped by a hipped roof sheathed in standing seam metal and pierced by a concrete block interior end chimney. The roof extends past the front elevation creating a porch on the front of the structure supported by wood posts resting on concrete piers. Fenestration on the structure includes one-over-two double-hung sash windows. The primary entrance consists of a single door centered on the symmetrical front (south) elevation.

This structure is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The structure is set close to the road and is surrounded by overgrown trees and scrub brush that partially obscures it from view. No outbuildings were observed on the property.

This property is an example of a typical mid-twentieth century rural commercial building in the region. This building reflects a Vernacular style with little architectural distinction. 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# 046-5260
Mill Swamp Baptist Church Parsonage, 6330 Mill Swamp Road



The house at 6330 Mill Swamp Road was constructed circa 1900 and historically functioned as the parsonage of the adjacent Mill Swamp Baptist Church according to a previous survey. This structure was previously recorded as a two-story wood frame structure with weatherboard siding and a side gable roof flanked by brick exterior end chimneys. A site visit, coupled with inspection of historic aerial imagery, reveals that this structure has been demolished and removed from the site.

The site of the demolished resource is located on the southeast side of Mill Swamp Road adjacent to its intersection with White Hill Trail. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The only remaining structures on the property are a concrete block wellhouse and a garage.

As the primary resource is no longer extant, this resource is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5804
House, 10325 White Hill Trail



The house at 10325 White Hill Trail was constructed in 1953 according to local land records. It remains in poor condition and exhibits a Craftsman style. The one-and-a-half-story wood frame structure rests on a continuous foundation clad in a brick veneer and topped by a side gable roof sheathed in asphalt shingles. Piercing the roof is a brick interior central chimney at its ridge as well as a large, gabled dormer on its front slope. The structure is clad in vinyl siding and features six-over-six double-hung sash windows. A one-story screened-in porch supported by square wood posts resting on brick piers spans the full width of the front (west) elevation.

This house is located on a large, rural lot on the east side of White Hill Trail northwest of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back roughly 110 feet from the road on a flat grass lawn vegetated with overgrown trees and scrub brush that partially obscures the structure from view. There are no remaining formal access points on the property. The only outbuilding on the property is a small, dilapidated shed set behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Craftsman style with little architectural distinction. 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# 046-5805
House, 10261 White Hill Trail



The house at 10261 White Hill Trail was constructed in 1972 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure rests on a continuous foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles and pierced by a brick interior slope chimney. Fenestration on the structure includes single and paired two-over-two double-hung sash windows as well as a picture window to the left of the entrance. The primary entrance consists of a single door on the front (west) elevation sheltered by the slightly overhanging eaves of the roof and approached by a small brick stoop. The eaves of the roof extend beyond the southwest corner of the structure creating an attached carport.

This house is located on the east side of White Hill Trail northwest of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the house rests on a grass lawn vegetated with several mature evergreen trees and scattered boxwoods. The property is accessed by a paved driveway that extends from the road to the attached carport. The only outbuilding on the property is a small, prefabricated shed located just off the southeast corner of the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 046-5806
House, 6262 Mill Swamp Road



The house at 6262 Mill Swamp Road was constructed in 1955 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure is clad in a brick veneer and topped by a hipped roof sheathed in asphalt shingles. Piercing the roof are two brick interior central chimneys and a single brick interior end chimney at the rear of the structure. Fenestration on the structure includes single and paired six-over-six double-hung sash windows as well as a large picture window to the left of the front entrance. The primary entrance consists of a single door slightly recessed beneath the eaves of the roof on the front (northwest) elevation.

This house is located on the southeast side of Mill Swamp Road just south of its intersection with White Hill Trail. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set far back from the road on a grass lawn surrounded by a wood fence. Vegetation on the property includes a variety of shade trees as well as rows of boxwoods along the edges of the house. The property is accessed by a long, unpaved driveway that extends past the side of the house to the detached garage. Outbuildings on the property include the garage as well as a shed located behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 046-5807
Industrial Complex, 11321 Jones Town Drive



The industrial complex at 11321 Jones Town Drive was constructed in 1959 according to local land records. It remains in fair condition and exhibits no discernable style. This complex is comprised of a tall granary surrounded by several large grain silos and a large, adjacent metal barn. Each component of the complex is a metal frame structure clad in metal siding with a metal-sheathed roof. The barn is topped by a gable roof and the silos are topped by conical roofs.

This complex is located on the southeast corner of Jones Town Drive and Mill Swamp Road. Around the property, the landscape is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. The complex is set close to the road at the edge of an open agricultural field and accessed by a short, gravel driveway. Other structures on the property include an office building and a large vehicle shed.

This property is an example of a typical mid-twentieth century commercial granary within a rural setting in the region. The structures reflect no discernable style with little architectural distinction. 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 structure 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# 046-5808
House, 6177 Mill Swamp Road



The house at 6177 Mill Swamp Road was constructed in 1968 according to local land records. It remains in poor condition and exhibits no discernable style. The one-story wood frame structure rests on a continuous concrete block foundation and is clad in asbestos siding. It is topped by a side gable roof sheathed in asphalt shingles and pierced by a concrete block interior chimney on its front slope. Fenestration on the structure includes one-over-one double-hung sash windows as well as a large, fixed window to the left of the front entrance. The primary entrance consists of a single door on the front (southeast) elevation approached by a small concrete stoop.

This house is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set back roughly 50 feet from the road, the house rests at the top of a berm extending along the road and is surrounded by overgrown trees and shrubbery. Outbuildings on the property include three sheds, a wellhouse, and a vehicle shed.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 046-5809
Commercial Building, 6143 Mill Swamp Road



The commercial building at 6143 Mill Swamp Road remains in fair condition and exhibits no discernable style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this building was constructed circa 1970. The one-story. L-shaped concrete block structure rests on a continuous concrete block foundation and is topped by a cross gable roof with overhanging eaves and exposed rafters. The roof is sheathed in asphalt shingles and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one and six-over-six double-hung sash windows. Other bays on the structure include wide loading docks and a single pedestrian entrance on its south elevation.

This structure is located on the northwest side of Mill Swamp Road adjacent to its intersection with Jones Town Drive in a rural portion of Isle of Wight County. The landscape around the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the building rests on a flat, sparsely vegetated grass lawn. No associated structures or other resources were observed on the property.

This property is an example of a typical late twentieth century commercial building in the region. This building reflects no discernable style with little architectural distinction, and based upon its form, likely functioned as an automotive shop. 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# 046-5810
House, 5498 Mill Swamp Road



The house at 5498 Mill Swamp Road was constructed in 1899 according to local land records. It remains in good condition and exhibits Folk Victorian style influences as applied to an expanded I-house form. The wood frame structure is comprised of a two-and-a-half-story, five-bay front block topped by a side gable roof with a two-story rear ell and a one-and-a-half-story wing on its east elevation. The entire structure is clad in vinyl siding and both roofs are sheathed in asphalt shingles. Piercing the roof are two brick interior central chimneys and one brick interior end chimney, as well as a small cross gable centered on the front slope of the front roof. Fenestration on the structure includes single and paired two-over-one double-hung sash windows. The primary entrance is centered on the symmetrical front (north) elevation and consists of a single door with sidelights and a transom. Sheltering the entrance is a one-story, full-width hipped porch supported by Doric columns.

This house is set on a large, rural lot on the south side of Mill Swamp Road between Proctors Bridge Road and Jones Town Drive. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. Set far back from the road, the homesite is located at the center of an expansive agricultural field on a grass lawn vegetated only with sparse scattered shrubbery and a single mature shade tree. The property is enclosed by a wire fence extending along Mill Swamp Road and Jones Town Drive and is accessed via a long, gravel driveway that extends from the road directly to the house. Outbuildings on the property include a garage and two sheds set directly behind the house and a barn set along the east edge of the lot.

This property is an example of a typical late nineteenth century commercial building in the region. This building reflects a Folk Victorian style with little architectural distinction. 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. Additionally, any historically significant architectural features have been obscured by modern alteration. 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# 046-5811
Betts Farm, 5191 Mill Swamp Road



The house at 5191 Mill Swamp Road, known locally as the Betts Farm, was constructed in 1850 according to local land records. It remains in fair condition and exhibits a Federal style as applied to an expanded I-house form. The T-shaped building is comprised of a two-and-a-half-story, five-bay front block topped by a side gable roof with a two-story rear ell and one-story wing attached to the ell, both topped by gable roofs. The wood frame structure rests on a continuous brick foundation and is clad in weatherboard siding. The roofs are sheathed in asphalt shingles and embellished with modillions, gable returns, and cornice skirts. A brick interior end chimney pierces the roof of the rear ell, while two brick exterior end chimneys featuring brick corbelling flank the side of the front block. Fenestration on the structure includes nine-over-nine double-hung sash windows on the first story and six-over-nine double-hung sash windows on the second story. The primary entrance is centered on the symmetrical front (south) elevation and consists of a single door with sidelights and a transom. Sheltering the entrance is a one-story, full-width hipped porch supported by Doric columns and accessed by a small set of concrete steps.

This house is located on a rural lot on the northeast corner of Mill Swamp Road and Proctors Bridge Road. The property is located in the small crossroads community of Sycamore Cross within an otherwise lightly developed area characterized by gently rolling topography and a mix of wooded areas and agricultural fields. The homesite is set far back from the road within a wide, open agricultural field and is enclosed by a wood fence. Vegetation immediately surrounding the house includes scattered shrubs and bushes, as well as a few mature shade trees. The property is

accessed by a long gravel driveway that loops around the house. Outbuildings on the property include a well and shed, a garage, and a domestic outbuilding that appears to have historically functioned as a kitchen or quarters.

This house, referred to locally as the "Betts Farm," represents a rare, well-preserved example of a relatively high-style Federal to Greek Revival transitional style home dating to the mid-nineteenth century within a rural setting in the region. In addition to the primary dwelling, several contemporary outbuildings also remain extant on the property. While reconnaissance-level research did not reveal any notable historical associations, the property warrants further investigation as a rare surviving example of antebellum rural high-style architecture in Isle of Wight County and is therefore considered ***potentially eligible for listing in the NRHP*** for the purposes of this effort.

As a potentially NRHP-eligible resource within the survey area, an assessment of potential impacts brought about by the project is necessary. Because the property is located directly within the project area, this assessment considered both direct and indirect impacts. To assess impacts, inspection was performed and photographs taken from representative vantage points within and bordering the property to document existing setting, visibility, and lines of sight.

The house is situated on a small rural lot that has been partitioned off a larger property occupying the northeast corner of the intersection of Mill Swamp and Sycamore Cross roads. While the home lot and large rural property bordering it is located within the project lease area, the home lot itself is situated within a proposed exclusion area. As such, solar arrays, infrastructure, and other improvements will be made around the resource boundary, but the building and its associated property tract will be excluded from the development footprint. Therefore, there will be no direct impact to the resource.

As solar arrays will be spread through the area adjoining and bordering the resource, the project also has the potential for indirect, visual impacts to the resource. Project improvements are proposed within the landscape adjacent to the property to the north and east, as well as across Sycamore Cross Road to the west and Mill Swamp Road to the south. In all areas, the fenceline and solar arrays will be setback a minimum of 75 feet from the roads and 115 feet from the property. With these setbacks, the project fenceline will be roughly 215 feet from the house at the nearest point.

Inspection from the vicinity of the property revealed that the project area and development areas are generally openly visible across open field in all directions. With setbacks and exclusion areas the several other historic buildings that remain within the Sycamore Cross community, including the c.1825 Brick House ruins across Mill Swamp Road and the c.1899 Sycamore Cross Post Office and house across Sycamore Cross Road will all remain visible from the Betts Farm, however, would be seen amongst and bordered by solar arrays. To minimize visibility of the project, supplemental landscape buffers will be planted along portions of the road frontage bordering the property.

As such, the project as currently proposed would result in a change to the viewshed and setting of and from the property as a result of the introduction of visible solar arrays. The visible extent of the project would be reduced through supplemental landscape buffer bordering the property,

however, the portions of the project located on the adjacent fields would remain visible. Therefore, it is D+A's recommendation that because the building and property will be excluded the project will have no direct impact on the resource, but as it will be visible in the bordering fields, the Sycamore Cross Solar Project will result in a ***moderate impact*** overall to the Betts Farm per VDHR's impact characterization.

Figure 8-22 illustrates the location of the Betts Farm in relation to the project area, along with array layout, setback, and proposed landscape buffer; as well as the location and direction of representative photographs. Figure 8-23 provides a detail pf the proposed supplemental landscape plan and plant list. Figure 8-24 through Figure 8-32 provide representative photographs of and from the resource towards the project area.

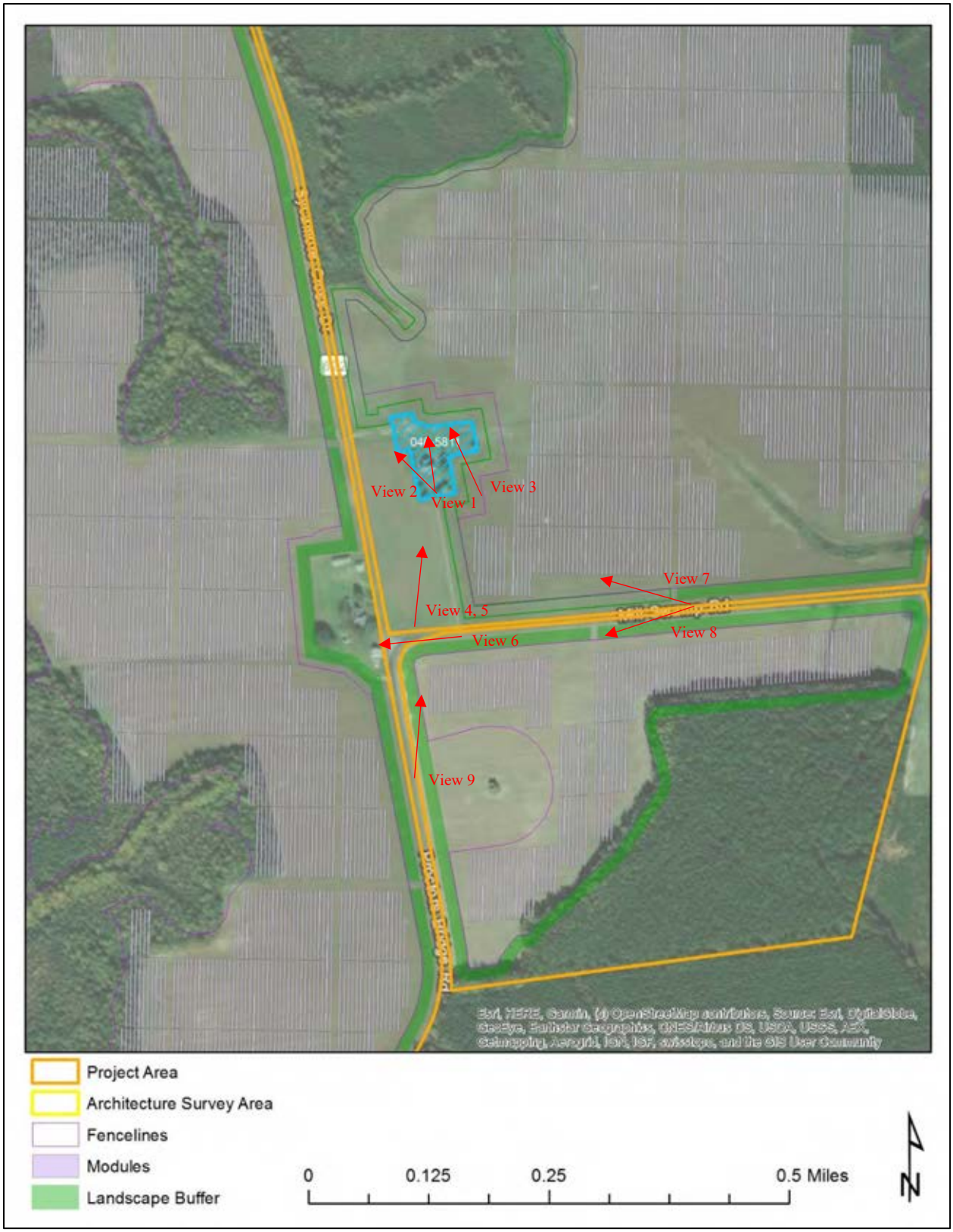
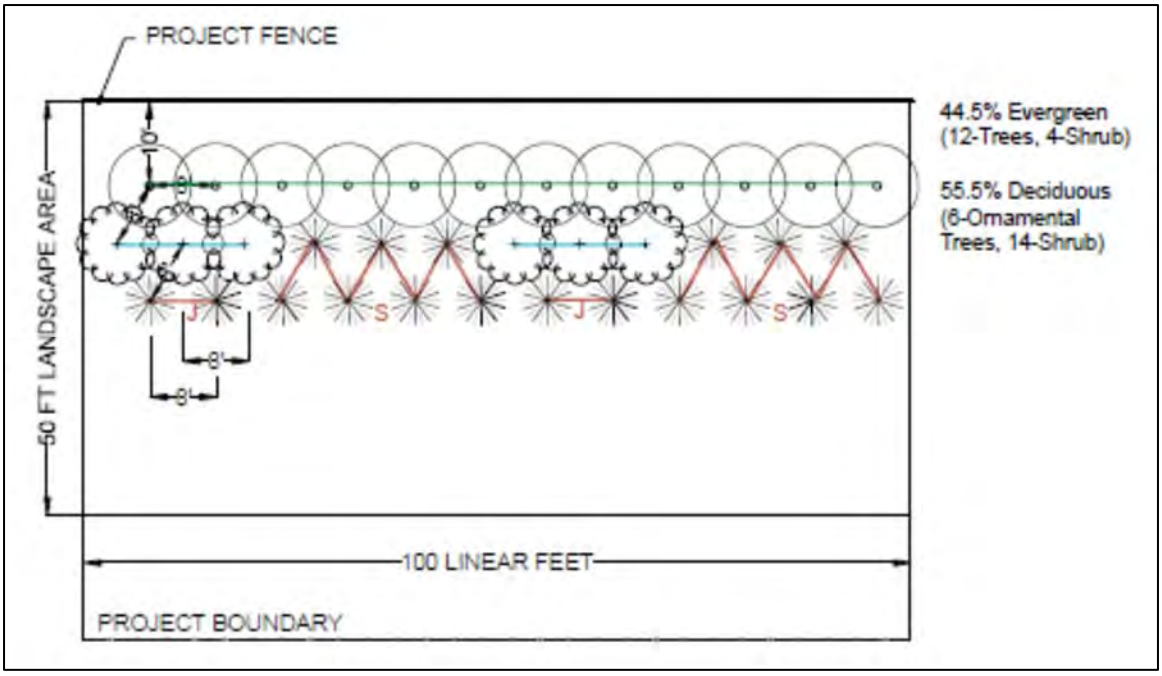


Figure 8-22: Betts Farm in relation to the project area with locations and directions of representative photographs.



CONCEPT PLANT LIST				
Botanical Name	Common Name	Height at Planting	Mature height	Mature Spread
EVERGREEN				
Ilex X 'Conap' oakleaf	Red Holly/ Oakleaf Holly	6 FT	15 FT	9 FT
Ilex X mary nell	Mary Nell Holly	6 FT	20 FT	10 FT
Juniperus virginiana 'Brodie'	Eastern Red Cedar	6 FT	15 FT	6 FT
Myrica cerifera	Southern Wax Myrtle	6 FT	15 FT	20 FT
Thuja Occidentalis 'techny'	Eastern Arborvitae	6 FT	15 FT	10 FT
ORNAMENTAL				
Amelanchier canadensis	Shadblow serviceberry	6 FT	25 FT	15 FT
Chionanthus virginicus	Fringetree	6 FT	20 FT	20 FT
Magnolia Virginiana	Sweetbay Magnolia	6 FT	20 FT	20 FT
SHRUB				
Juniperus communis var. depressa	Juniper	1.5 FT	4 FT	10 FT
Lindera benzion	Spicebush	1.5 FT	10 FT	10 FT

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SCREENING ZONE - EXISTING VEGETATION TO REMAIN AND NEW VEGETATION TO BE PLANTED WHERE NECESSARY

Figure 8-23: Supplemental landscape planting schematic and plant list. Source: AES Clean Energy



Figure 8-24: View 1 - View of front of Betts Farm house, facing north. (Development area visible in field to rear)



Figure 8-25: View 2 - View from front of Betts Farm house, facing northwest. (Development area visible in field to rear)



Figure 8-26: View 3 - View from front of Betts Farm house, facing northwest. (Development area visible in field to rear)

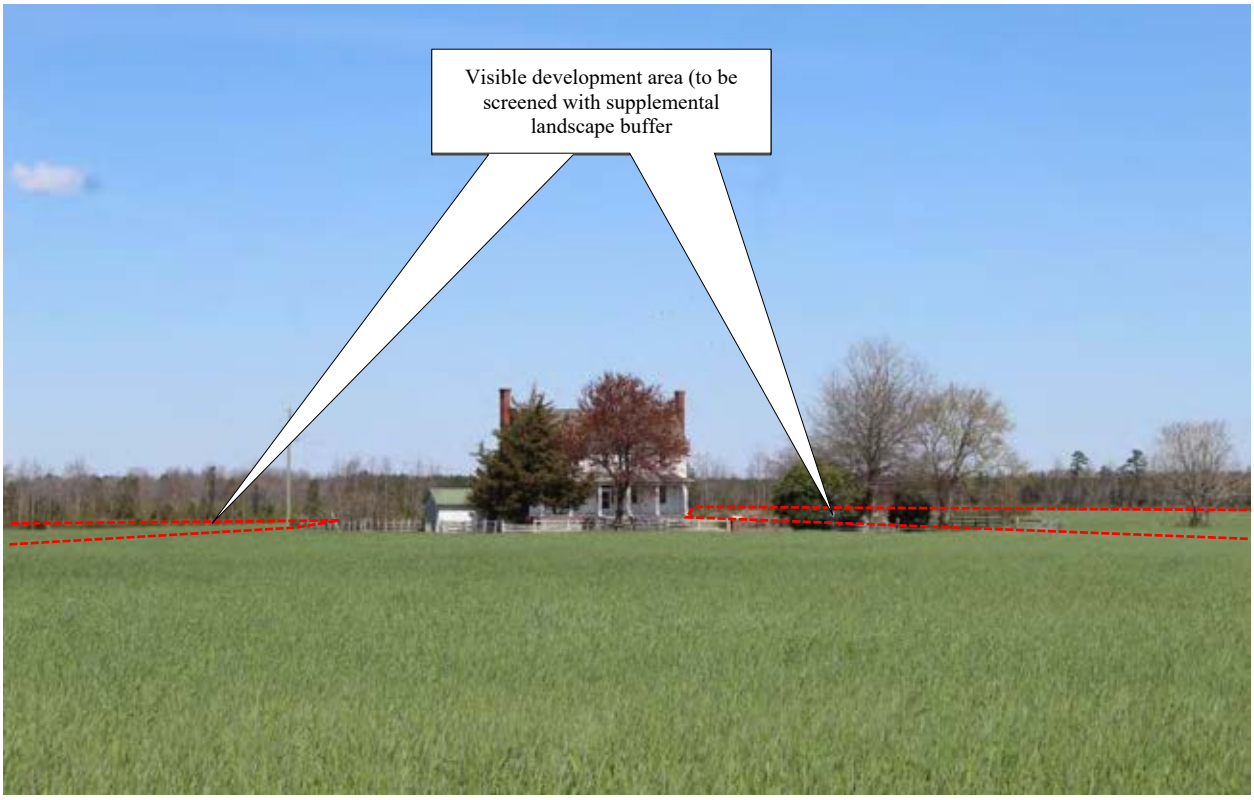


Figure 8-27: View 4 - View of Betts Farm from Mill Swamp Road, facing northeast. (Development area visible in field to rear and side)

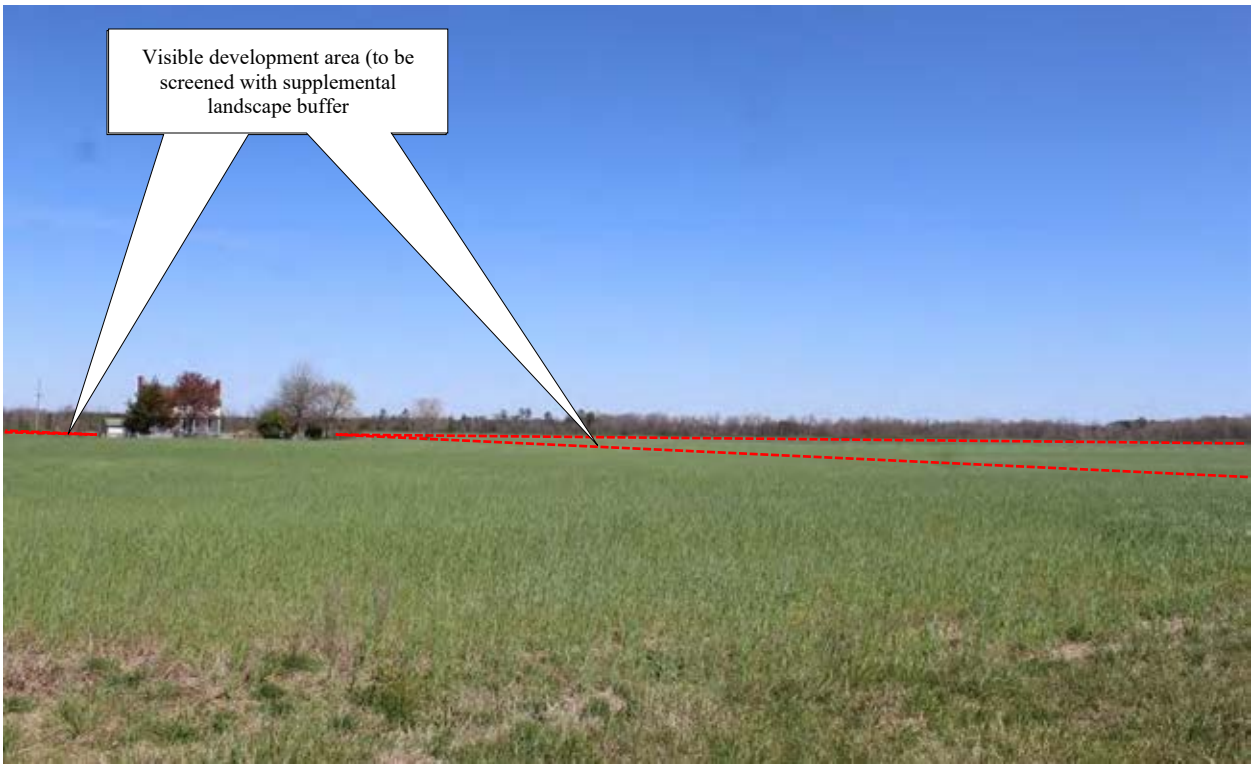


Figure 8-28: View 5 - View of Betts Farm from Mill Swamp Road, facing northeast. (Development area visible in field to rear and side)



Figure 8-29: View 6 – View from Mill Swamp Road in front of Betts Farm, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-30: View 7 – View from Mill Swamp Road east of Betts Farm, facing west. (Development area visible along road in foreground and beyond property)



Figure 8-31: View 8 – View from Mill Swamp Road east of Betts Farm, facing southwest. (Development area visible along road across from property)



Figure 8-32: View 9 - View towards Betts Farm from Sycamore Cross Road, facing north. (Development area visible along both sides of road)

VDHR# 046-5812
House, 14195 Rattlesnake Trail



The house at 14195 Rattlesnake Trail was constructed in 1950 according to local land records. It remains in good condition and exhibits a Vernacular hall-and-parlor form. The one-story, four-bay wood frame structure rests on a continuous concrete block foundation and is clad in vinyl siding.

It is topped by a side gable roof sheathed in standing seam metal and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one double-hung sash windows. The primary entrance consists of a single door on the front (north) elevation sheltered by a two-bay porch.

This house is located on the south side of Rattlesnake Trail just east of its intersection with Ramsey Road. Around the property, the landscape is gently rolling and characterized by a mix of wooded areas and agricultural fields with light development. The house is set close to the road at the edge of a wide, open agricultural field. Vegetation around the house is limited to sparse, scattered shrubbery. The only outbuilding on the property is a small wellhouse set behind the house.

This property is an example of a typical mid-twentieth century single Vernacular dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 046-5813
Commercial Building, 14472 Rattlesnake Trail



The building at 14472 Rattlesnake Trail remains in poor condition and exhibits no discernable style. Although the structure remains vacant, it appears to have historically functioned as a commercial building. As evidenced by its form and construction, this building was constructed circa 1950. The one-story, three-bay concrete block structure rests on a continuous concrete block foundation and is topped by a side gable roof sheathed in standing seam metal. Fenestration on the structure is sparse but consists of large hopper windows on either side of the primary entrance. The

primary entrance consists of a single door centered on the symmetrical front (east) elevation. Remaining wood supports above the door suggest that it was historically sheltered by an awning however the awning no longer remains intact.

This building is located on the west side of Rattlesnake Trail near its intersection with Ramsey Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. Set close to the road, the building rests on a flat grass lawn vegetated with overgrown scrub brush and surrounded by a densely forested area. No formal access points or associated structures were observed on the property.

This property is an example of a typical mid-twentieth century commercial building in the region. This building reflects no discernable style with little architectural distinction. 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. Additionally, the structure remains in poor condition and appears to have been vacant for an extended period. 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# 046-5814
House, 11235 White Hill Trail



The house at 11235 White Hill Trail remains in good condition and exhibits a Colonial Revival style as applied to a Cape Cod form. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this building was constructed circa 1950. The wood frame structure is comprised of a one-and-a-half-story, three-bay primary block with a one-story, three-bay wing on its east side. Both blocks are sheathed in vinyl siding and topped by gable roofs

sheathed in asphalt shingles. Brick exterior end chimneys are located on the east and west sides of the structure and three gabled dormers pierce the front slope of the primary roof. Fenestration on the structure includes single and paired one-over-one double-hung sash windows. The primary entrance is centered on the symmetrical front (south) elevation of the primary block and consists of a single door. Sheltering the façade of the main block is a one-story, full-width porch supported by battered wood posts resting on brick piers.

This property is located on the northeast side of White Hill Trail just north of its intersection with Mill Swamp Road. Around the property, the landscape is gently rolling and largely rural, characterized by a mix of wooded areas and agricultural fields with light development. Set back roughly 350 feet from the road, the house rests on a sloping grass lawn surrounded by a densely forested area and is accessed by a long, gravel driveway. Vegetation on the property includes several mature shade trees and some planted shrubbery immediately surrounding the house, as well as a line of trees extending along the road and the southwest edge of property. Several outbuildings are scattered around the house, however only some were visible with others obscured by vegetation and topography.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Colonial Revival style with little architectural distinction. 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# 046-5815
House, 13484 Ramsey Road



The house at 13484 Ramsey Road was constructed in 1950 according to site inspection. It remains in good condition and exhibits a Vernacular style. The one-story concrete block structure rests on a continuous concrete block foundation and is topped by a hipped roof sheathed in asphalt shingles. A brick interior chimney pierces the roof near the center of the structure. Fenestration on the structure includes one-over-one and six-over-six double-hung sash windows. The primary entrance consists of a single door centered on the symmetrical front (east) elevation sheltered by a one-bay shed roofed porch.

This house is located on a rural lot on the northwest corner of Ramsey Road and Rattlesnake Trail. The landscape in the general vicinity of the property is gently rolling and characterized by a mix of wooded areas and agricultural fields. Set back roughly 60 feet from the road, the house rests on a grass lawn vegetated with a variety of shade trees and scattered planted shrubbery. The property is accessed by short gravel driveways off of Ramsey Road and Rattlesnake Trail. The only outbuilding on the property is a shed located directly behind the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Vernacular style with little architectural distinction. 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# 046-5816
House, 12085 Ramsey Road



The house at 12085 Ramsey Road was constructed in 1971 according to local land records. It remains in good condition and exhibits a Ranch style. The one-story masonry structure rests on a

continuous foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles. Piercing the façade are one-over-one double-hung sash windows and a large, fixed window to the left of the entrance. The primary entrance consists of a single door on the front (west) elevation approached by a small, uncovered brick stoop. A one-story sunroom featuring large, fixed windows and a shed roof is attached to the north side of the structure.

This house is located on a rural lot on the southeast corner of Ramsey Road and Proctors Bridge Road. The landscape in the general vicinity of the property is gently rolling and largely rural, characterized by a mis of wooded areas and agricultural fields with light development. Set back roughly 80 feet from the road, the house rests on a flat grass lawn surrounded by a densely forested area. Vegetation on the property includes a row of boxwoods along the edges of the house and small trees and shrubs scattered on the lawn. The property is accessed by a gravel driveway that extends from the road to a parking area next to the house. Outbuildings on the property include three sheds and a mobile home.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Craftsman style with little architectural distinction. 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# 046-5817
Hollemon Cemetery, White Hill Trail



This small family cemetery contains just one memorial with a surname only and no associated dates. The marker is a granite tablet inscribed with “Holleman” which is a surname known to have historically been associated with a home to the south along Mill Swamp Road. Leaning against the

granite tablet is what appears to be an older, displaced footstone inscribed with J.J.H. The cemetery is not enclosed by a fence or any signage.

This cemetery is set on the west side of White Hill Trail roughly 0.6 miles north of the intersection with Mill Swamp Road. It is set back from the road within a copse of trees in the middle of an agricultural field. While there is evidence of relic cedar trees and groundcover, there is no enclosure or other markings.

This small family cemetery represents a typical private burial in a rural setting within the region. The one marked memorial reads the surname "Holleman" which was the family associated with a dwelling to the south along Mill Swamp Road in the mid-nineteenth century. What is believed to be a footstone that is now leaning against the granite marker reads J.J.H. which likely represents an unknown member of Holleman family. Another Holleman Cemetery is known to be located in closer proximity to the Wilson Hollemon House. As this small cemetery does not reflect any distinctive design or physical characteristics and is not known to be associated with people of transcendent significance, it does not meet Criteria Consideration D, and is considered not eligible for listing in the NRHP.

However, as the cemetery is located within the limits of the project area, it should be avoided as part of the project.

VDHR# 090-5208
House, 1314 Berrymans Corner Road



The house at 1314 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1960. The one-story masonry structure rests on a continuous

foundation and is clad in a brick veneer. It is topped by a hipped roof sheathed in asphalt shingles and pierced by a brick interior central chimney. Fenestration on the structure includes one-over-one double-hung sash windows as well as a large picture window to the right of the entrance. The primary entrance consists of a single door on the front (south) elevation flanked by sidelights and approached by a small, brick stoop. A large garage door is located on the right side of the façade.

This house is located on the northwest side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 160 feet from the road, the house rests on a grass lawn vegetated with a variety of trees and planted shrubbery. The property is accessed by a gravel driveway that extends from the road to the attached garage. The only outbuilding on the property is a small shed set behind the house.

This property is an example of a typical mid-twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 090-5209
House, 1209 Berrymans Corner Road



The house at 1209 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story masonry structure rests on a continuous

foundation and is clad in a brick veneer. It is topped by a side gable roof sheathed in asphalt shingles and flanked by a brick exterior end chimney on its southwest side. Fenestration on the structure includes single and paired one-over-one double-hung sash windows. The primary entrance consists of a single door on the front (northwest) elevation approached by a small, brick stoop. An open, wood deck is located on the south side of the house.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. The house is set close to the road on a sparsely vegetated grass lawn with a densely forested area located to its south and east. The property is accessed by a gravel driveway that extends from the road past the side of the house to the outbuildings behind the house. Outbuildings on the property include a carport and a shed located behind the house.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects a Ranch style with little architectural distinction. 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# 090-5210
House, 1167 Berrymans Corner Road



The house at 1167 Berrymans Corner Road remains in good condition and exhibits no discernable style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story, four-bay wood frame structure rests

on a continuous concrete block foundation and is topped by a side gable roof sheathed in asphalt shingles. A brick interior end chimney and a gabled, one-bay wing are located on northeast side of the structure. Piercing the asbestos siding are one-over-one double-hung sash windows, some of which are sheltered by vinyl awnings. The primary entrance consists of a single door on the front (northwest) elevation accessed by a small, uncovered, wood stoop.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 90 feet from the road, the house rests on a flat grass lawn vegetated only with a couple mature shade trees in the backyard. The property is accessed by a gravel driveway that extends from the road to a parking area behind the house. Outbuildings on the property include a mobile home, a garage, a shed, and a wellhouse.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 090-5211
House, 1141 Berrymans Corner Road



The house at 1141 Berrymans Corner Road remains in good condition and exhibits a Ranch style. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed circa 1970. The one-story masonry structure rests on a continuous

foundation and is clad in brick veneer. It is topped by a side gable roof sheathed in asphalt shingles and pierced by a brick interior end chimney near the center of the front elevation. Fenestration on the structure consists of single and paired one-over-one double-hung sash windows. Two entrances are located on the front (northwest) elevation, each consisting of a single door approached by a small, uncovered brick stoop.

This house is located on the southeast side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The property is located in a small cluster of residential properties within an otherwise lightly developed, rural area of Surrey County. Set back roughly 80 feet from the road, the house rests on a flat grass lawn and is accessed by a gravel driveway that extends to a parking lot behind the structure. Vegetation on the property is limited to rows of shrubs and bushes along the edges of the house. Outbuildings on the property include a garage and two carports.

This property is an example of a typical late twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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# 090-5212
House, Berrymans Corner Road



The house off Berrymans Corner Road exhibits no discernable style and remains in ruinous condition, appearing to have been vacant for an extended period. As evidenced by its form and construction, in conjunction with a review of historic maps of the area, this house was constructed

circa 1910. The one-story wood frame structure is clad in weatherboard siding and appears to have been topped by a side gable roof. The roof appears to have collapsed, however two central brick chimneys remain extant. Fenestration on the structure includes three-over-three double-hung sash windows.

This house is located on the east side of Berrymans Corner Road between White Hill Trail and Mill Swamp Road. The landscape in the general vicinity of the property is gently rolling and characterized by a mix of wooded areas and agricultural fields with generally light development. The house is set close to the road at the edge of a densely forested area and is partially obscured by overgrown vegetation. No formal access points or other structures were observed on the property.

This property is an example of a typical early twentieth century single dwelling in the region. This building reflects no discernable style with little architectural distinction. 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. Additionally, the structure remains in ruinous condition and appears to have been vacant for an extended period. 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.

ARCHAEOLOGICAL FIELD RESULTS

Archaeological fieldwork included both systematic pedestrian survey and subsurface testing to determine the presence of archaeological resources. The work was completed in accordance with VDHR guidelines for conducting historic resources survey in Virginia and proceeded according to the approved testing plan laid out in the document *Phase IA Cultural Resource Assessment of the ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area* (D+A August 2023). For the purposes of survey and reporting, the project area was divided into six areas labeled A through F. These areas were further subdivided into 24 discrete sub-areas for testing, with placement of shovel test grids determined by surface evidence of cultural activity, terrain, disturbance, and environmental considerations (Figure 8-33).

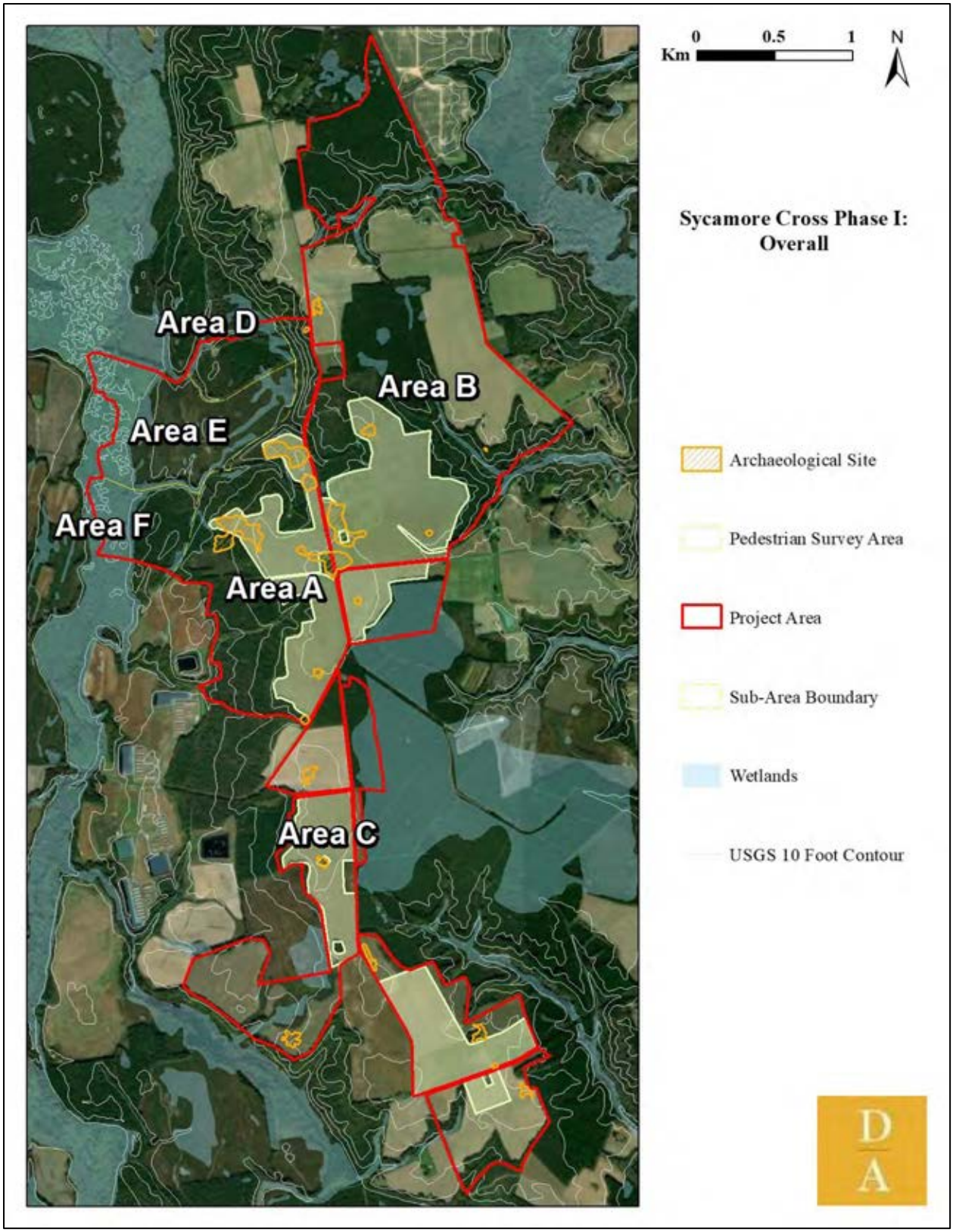


Figure 8-33: Overall map of testing areas.

A total of 1,175 shovel tests were systematically excavated throughout the project area, leading to the identification of twenty (20) new archaeological sites (Figure 8-34). The results of both the pedestrian and subsurface testing are provided below by area.

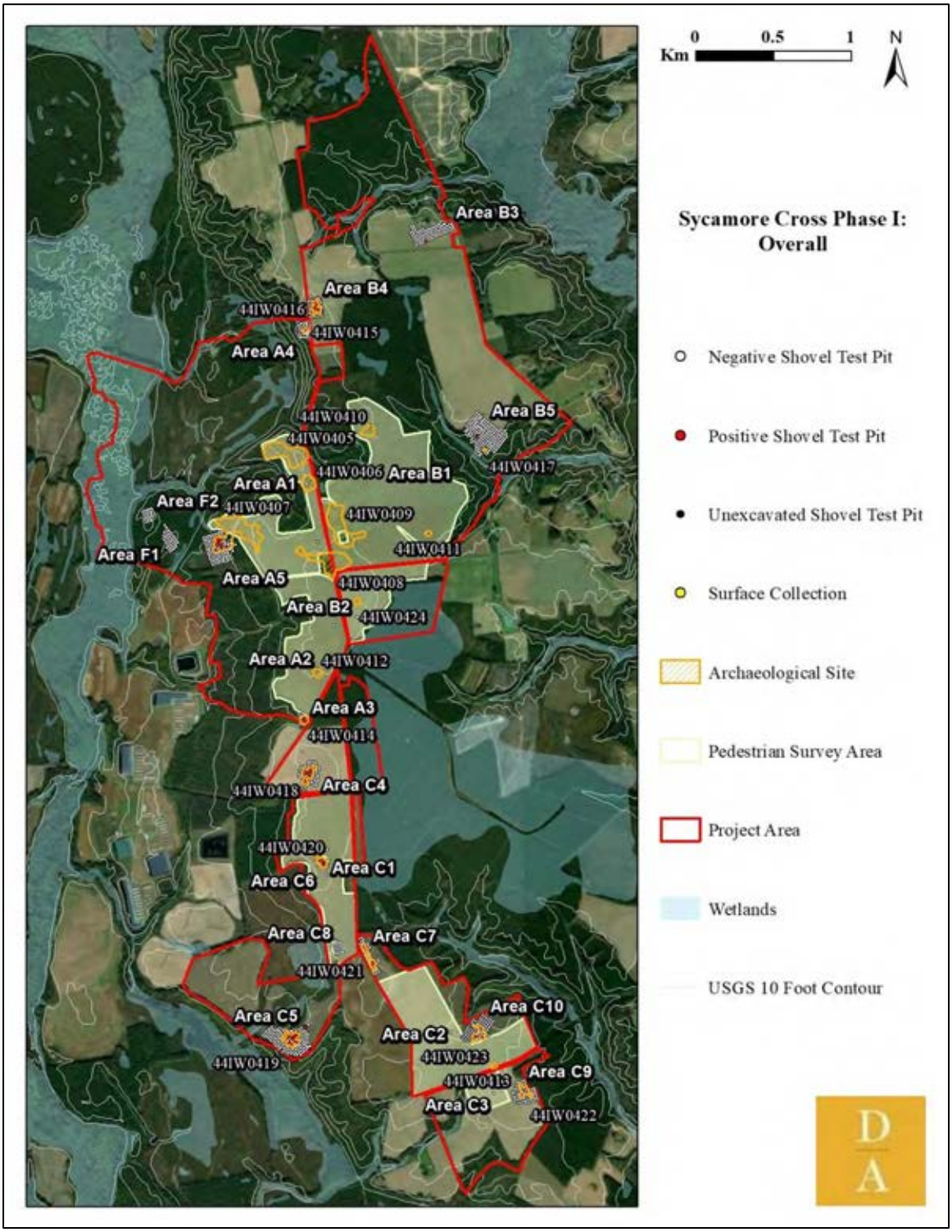


Figure 8-34: Overall view of project area with testing areas and archaeological sites.

AREA A

Area A consists of the parcels to the west of Proctors Bridge Road (Route 621) and Sycamore Cross Drive (Route 622) (Figure 8-35). Terrain in this area includes one primary large, irregular finger ridge with numerous drainages and unnamed tributaries down to Blackwater River. These drainages form smaller ridges, knolls, and terraces overlooking the river. Large, harvested agricultural fields cover the tops of the landforms. These fields exhibited excellent surface visibility at the time of survey, and pedestrian surveys were conducted in each, discussed in depth below. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the project are gentle to moderate.

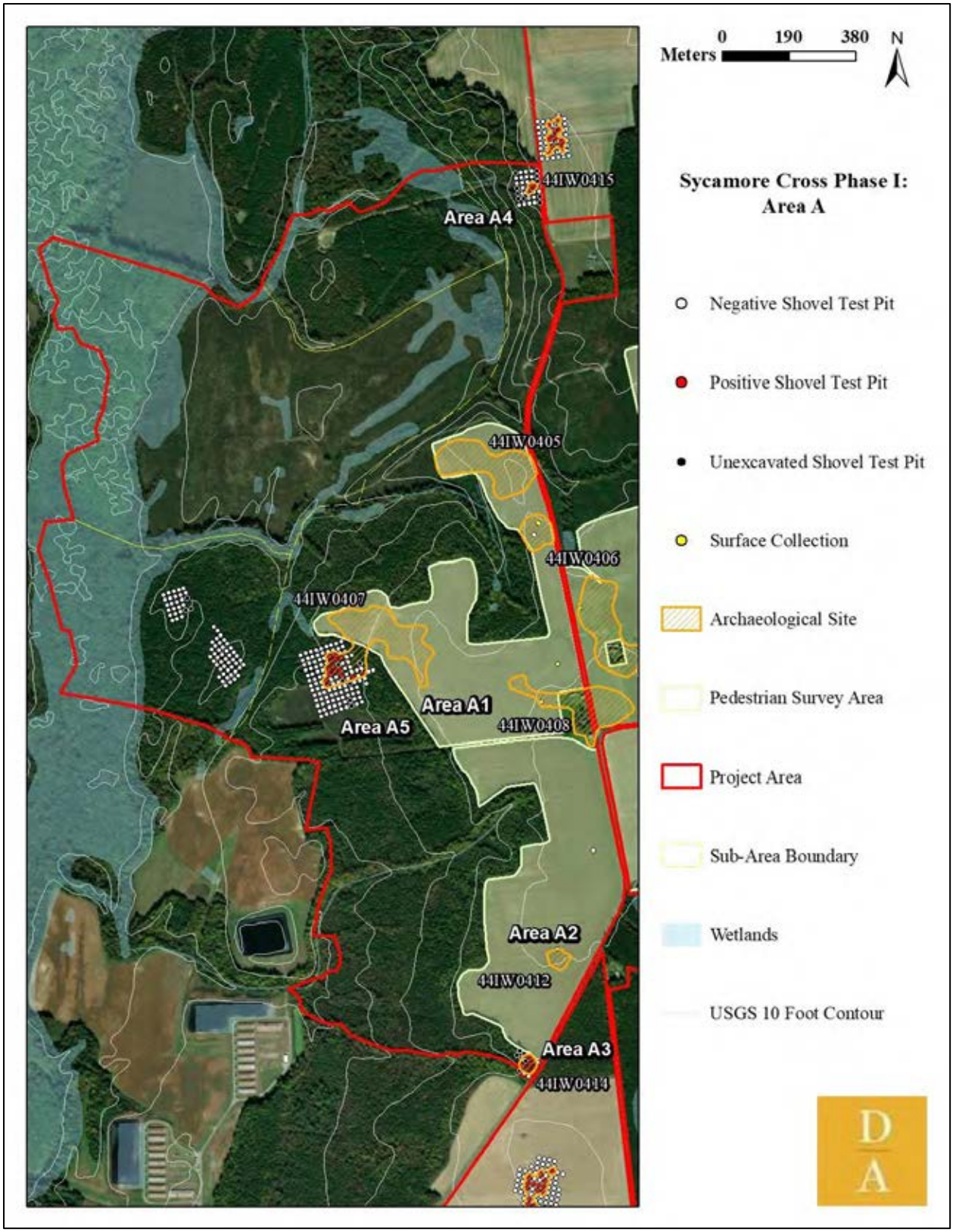


Figure 8-35: Overall map of Area A.

Area A1

This area consists of the large horseshoe-shaped agricultural field to the northeast of Sycamore Crossroads. This field sits on the north half of the top of the overall Area A landform, overlooking the Blackwater River to the west and bounded by Sycamore Cross Drive (Route 622) to the east. Access is provided by a series of farm roads running east to west off of Sycamore Cross Drive and Mill Swamp Road (Figure 8-36).



Figure 8-36: Farm road and overview of Area A1 facing east.

This part of the Area A landform is interrupted by two drainage cuts leading down to Blackwater River, forming one narrow finger ridge and a broad rectangular terrace. Vegetation bordering the agricultural field consists primarily of mature mixed woodland, with common privet and clusters of pine (Figure 8-37). Vegetation in Area A1 at the time of survey consisted of the remains of harvested soy and sparse, short grasses (Figure 8-38). A farm complex and store associated with Architectural Resources #046-5149 and 046-5150 sit at the southeast corner of the area (Figure 8-39).



Figure 8-37: Vegetation at the edge of the Area A1 agricultural field facing west.



Figure 8-38: Overview of Area A1, facing west.



Figure 8-39: Architectural Resources #046-5149 and 046-5150, facing southwest.

Surface exposure in this agricultural field was high, and systematic pedestrian survey was conducted in lieu of shovel test survey (Figure 8-40, Figure 8-41). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Many artifact fragments were observed, particularly in four dense artifact scatters. These surface concentrations were designated Sites 44IW0405 through 44IW0408, which are described in greater detail below.

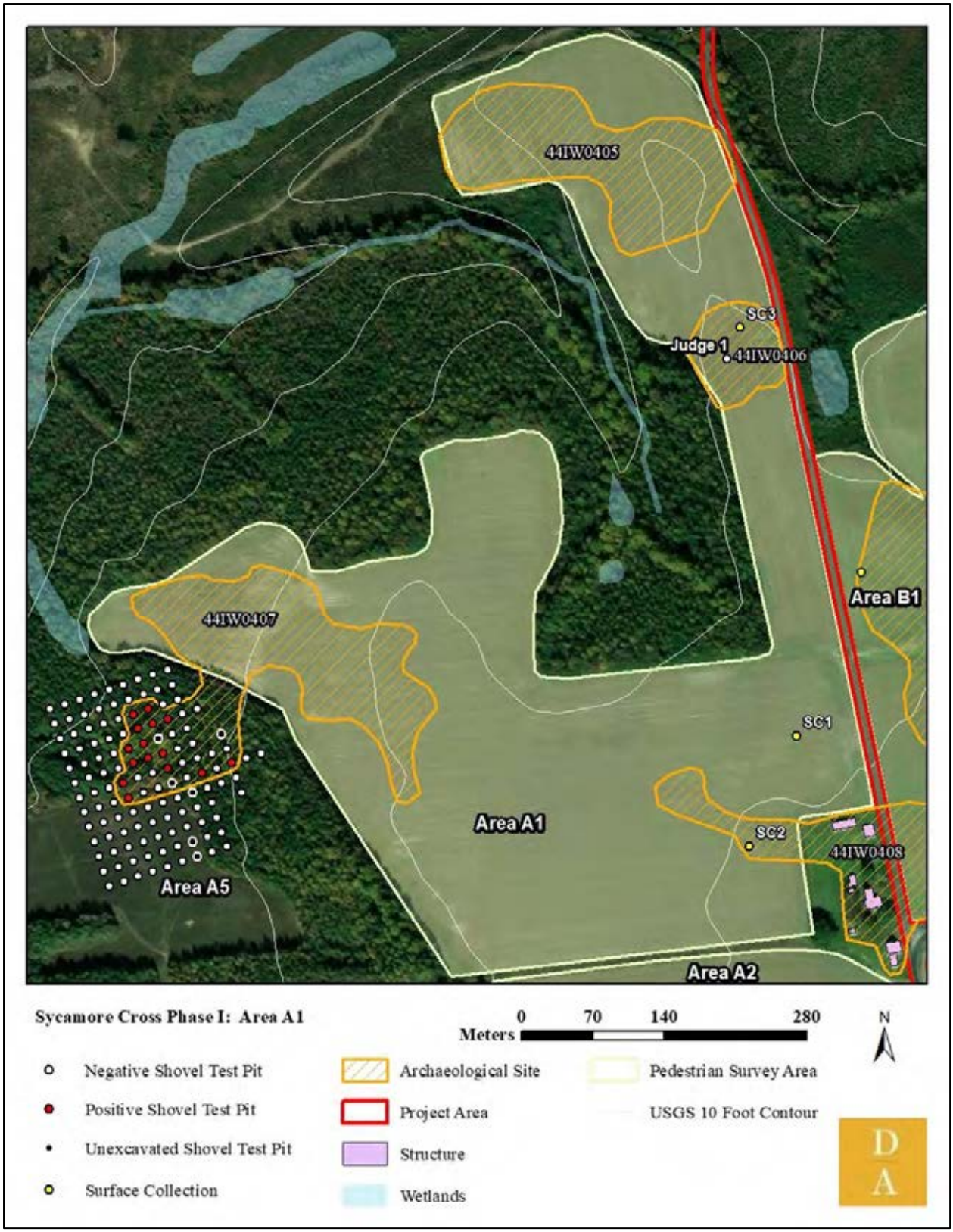


Figure 8-40: Aerial view of Area A1 survey.



Figure 8-41: Surface exposure in Area A1.

One shovel test was excavated in this artifact scatter to investigate the integrity of the soil strata. This shovel test, labeled Judgmental Shovel Test 1, exhibited a three-stratum profile of plowzone which cuts an intact transition layer over subsoil. Stratigraphy consisted of 2.5Y 3/2 very dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-42).

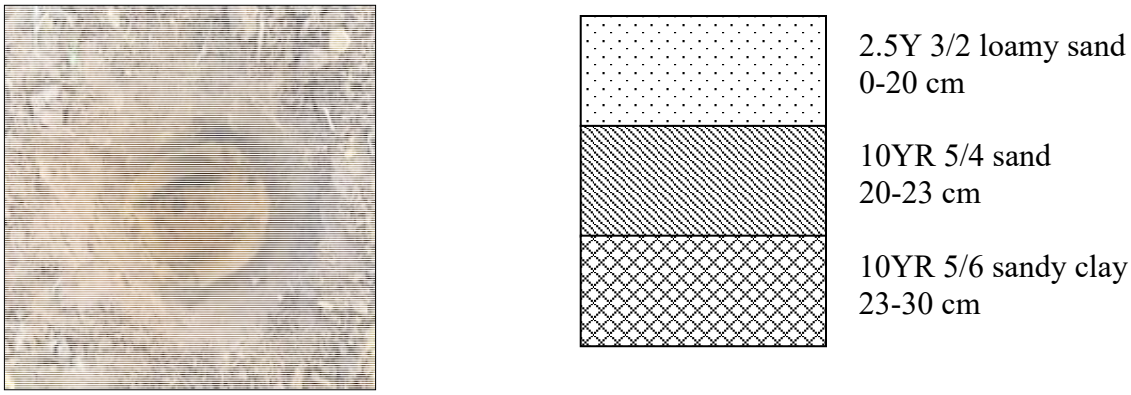


Figure 8-42: Soil profile of Judgmental Shovel Test 1 in Area A1.

44IW0405

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in the northernmost part of Area A1. No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a Prosser button, ironstone, and Bristol stoneware were observed.

44IW0406

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in Area A1, south of Site 44IW0405 (Figure 8-43). An aqua bottle finish was the only artifact collected (Figure 8-44). A dwelling is indicated here by historic topographic maps, though no surface features were observed. Artifacts observed here included fragments of ironstone, and colorless and vessel glass.



Figure 8-43: Artifacts on the surface in Site 44IW0406.



Figure 8-44: Aqua vessel finish collected in Site 44IW0406.

44IW0407

This site was first observed in the western half of Area A1, and later in Area A5 associated with Architectural Resource #046-0056. All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Site 44IW0407 as well (Figure 8-45). This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.



Figure 8-45: Artifact summary of Site 44IW0407.

The ruin is a brick structure with exterior end chimneys and an English basement that was previously recorded as being built circa 1825. In addition to the main dwelling, two rectangular depressions and some areas of brick scatter were observed in association with this site (Figure 8-46; Figure 8-47).



Figure 8-46: Interior view showing cellar entrance and fireplaces.



Figure 8-47: Square depression, facing west.

44IW0408

This field site was first observed in the southeastern corner of Area A1 and was further delineated in the southwest corner of Area B1. This site surrounds Architectural Resources #046-5149 and 046-5150. It consists of a late nineteenth to early twentieth century domestic artifact scatter. Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain (Figure 8-48).



Figure 8-48: Dipped ware collected in Site 44IW0408.

Area A2

This area consists of a long irregular agricultural field to the southeast of Sycamore Crossroads. This field is located south of Area A1 and bounded to the east by Proctors Bridge Road (Route 621). Access to this area is provided by Proctors Bridge Road and a farm road to the north. This field covers the southern half of the top of the overall Area A landform. This part of Area A is cut by two drainages, which flow west into an unnamed tributary of the Blackwater River. Vegetation in this area is the same as Area A1 (Figure 8-49).



Figure 8-49: Overview of Area A2, facing west.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-50, Figure 8-51). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Surface artifacts were observed in a scatter in the southern end of the field. These surface observations were designated Site 44IW0412, which is described in greater detail below.

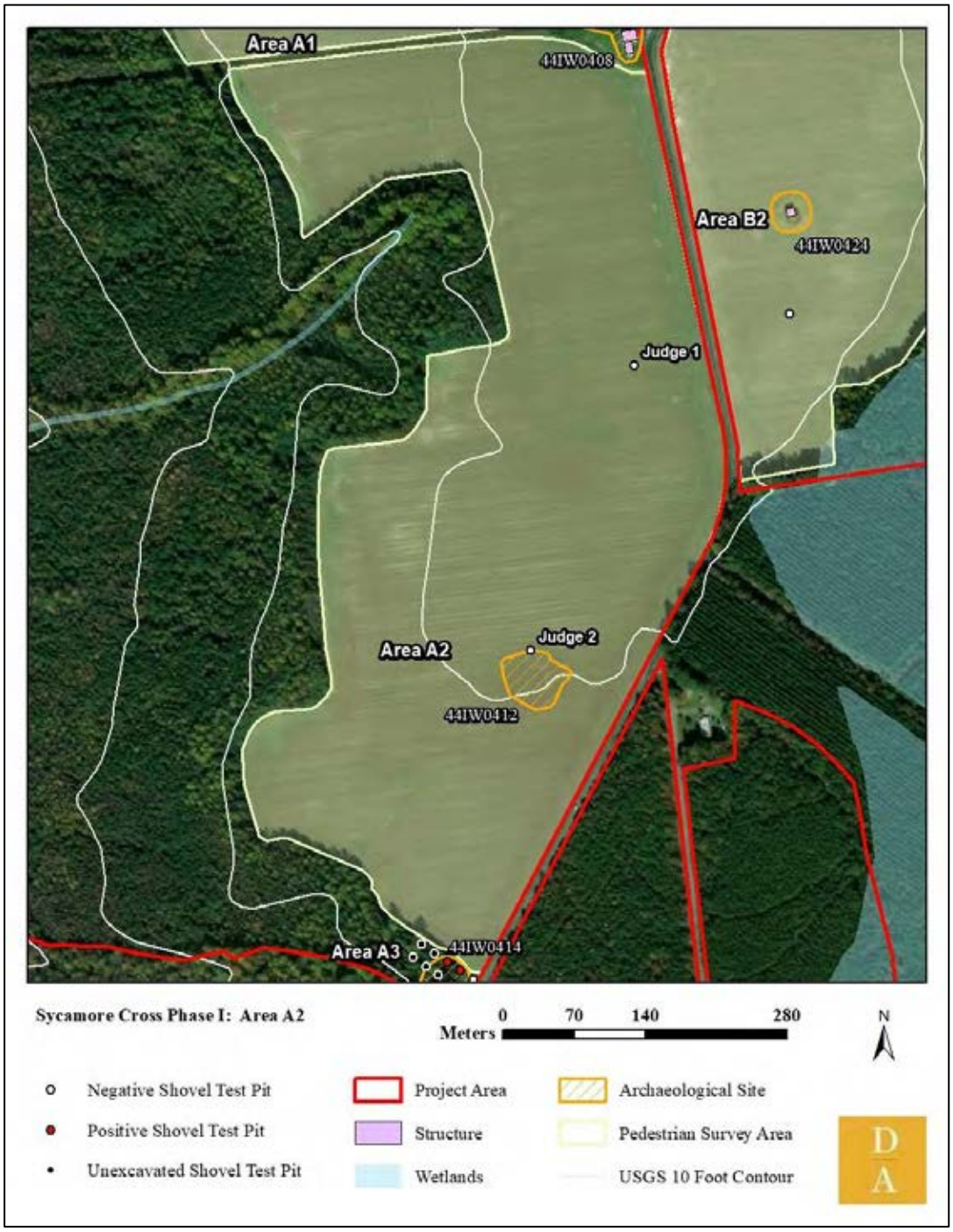


Figure 8-50: Aerial view of Area A2 survey.



Figure 8-51: Surface exposure in Area A2.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact transition layer over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-52).

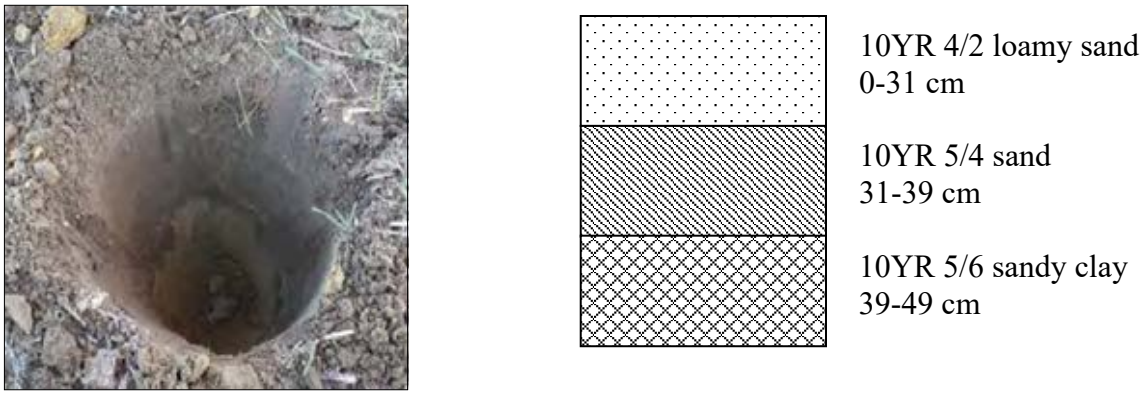


Figure 8-52: Soil profile of Judgmental Shovel Test 2 in Area A2.

44IW0412

This field site was observed in the southern part of Area A2, in the same location as a dwelling indicated on historic topographic maps. No surface features were observed; only a domestic artifact scatter was observed. Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century.

Area A3

This area sits at the southernmost point of the overall Area A, south of the Area A2 field and bounded to the east by Proctors Bridge Road (Route 621). Wetland bounds this area to the northwest (Figure 8-53). Area A3 is located at the head of a draw that drains down to the Blackwater River. This grid was placed to investigate a dwelling that is indicated in this area on historic topographic maps.



Figure 8-53: Wetland flagging in Area A3, facing southwest.

Vegetation in this area consists of mature mixed woodland with holly shrubs and vines composing the undergrowth (Figure 8-54). Terrain is flat, with minimal surface evidence of subsurface disturbance. The remains of several cars are scattered throughout the area (Figure 8-55). A scatter of twentieth century trash sits in the middle of the grid (Figure 8-56).



Figure 8-54: Vegetation in Area A3, facing south.



Figure 8-55: Fragments of old cars, facing northwest.



Figure 8-56: Twentieth century trash scatter in Area A3, facing southeast.

A total of sixteen shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D, six of which could not be excavated due to wetland (Figure 8-57). A total of seven shovel tests were positive for cultural material with fragments of window glass, vessel glass, lantern glass, and iron wire. These positive shovel tests were designated Site 44IW0414, which is described in greater detail, below.

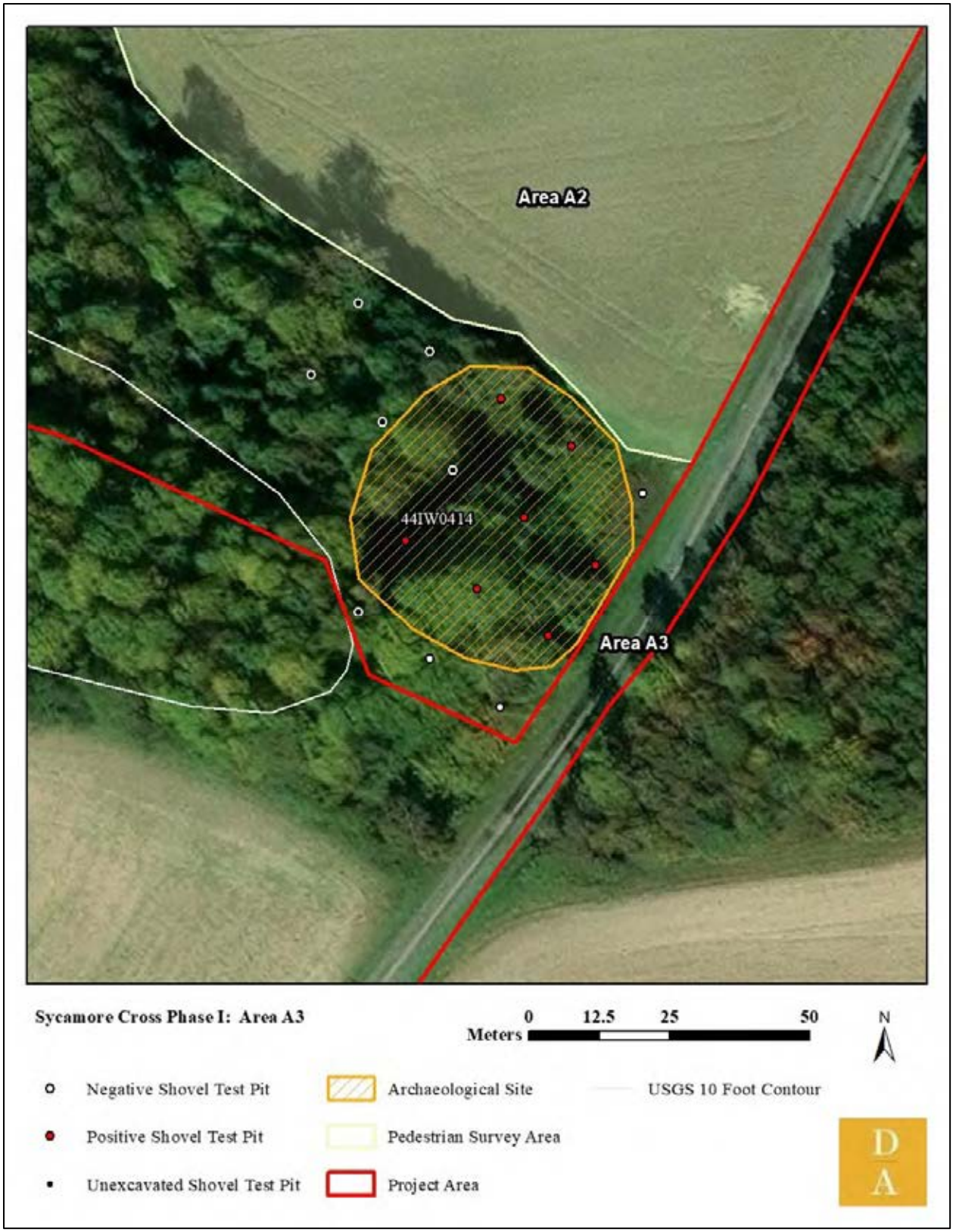


Figure 8-57: Aerial view of Area A3 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 4/4 yellowish brown sandy loam plowzone (Ap horizon) over 2/5Y 7/2 light gray sandy clay subsoil (B horizon) (Figure 8-58).



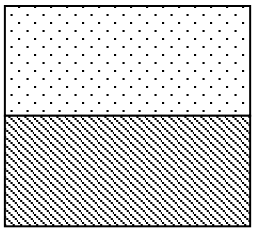


Figure 8-58: Soil profile of Judgmental Shovel Test 1 in Area A3.

44IW0414

This site consists of an early-to-mid twentieth century domestic artifact scatter associated with a dwelling indicated here by historic topographic maps. Forty-three artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire (Figure 8-59). Vessel glass makes up most of this assemblage, with 26 recovered fragments.



Figure 8-59: Artifact summary of Site 44IW0414.

Area A4

This area consists of the mixed woodland across Sycamore Cross Drive from Area B4. Access is provided by a deeply eroded logging road (Figure 8-60, Figure 8-61). Terrain is disturbed with pushpiles throughout the grid. It sits on the edge of slope down to wetlands associated with Blackwater River.



Figure 8-60: Logging road running through Area A4, facing southwest.



Figure 8-61: Erosion along logging road through Area A4, facing east.

Vegetation in Area A4 consists primarily of young deciduous forest with briary undergrowth and occasional pine (Figure 8-62). Pushpile disturbance from past timbering activity is common throughout the grid and prevented the excavation of several shovel tests (Figure 8-63). Soils in this area are also wet, with some shovel tests filling with water.



Figure 8-62: Vegetation in Area A4, facing west.



Figure 8-63: Pushpiles in Area A4, facing north.

A total of 43 shovel tests were laid out at 15-meter (50-foot) intervals in seven transects labeled A through G, fourteen of which could not be excavated due to pushpile disturbance (Figure 8-64). A total of five shovel tests were positive for cultural material, including fragments of window glass, screws, and other metal hardware fragments. These positive shovel tests were designated Site 44IW0415, which is described in greater detail, below.

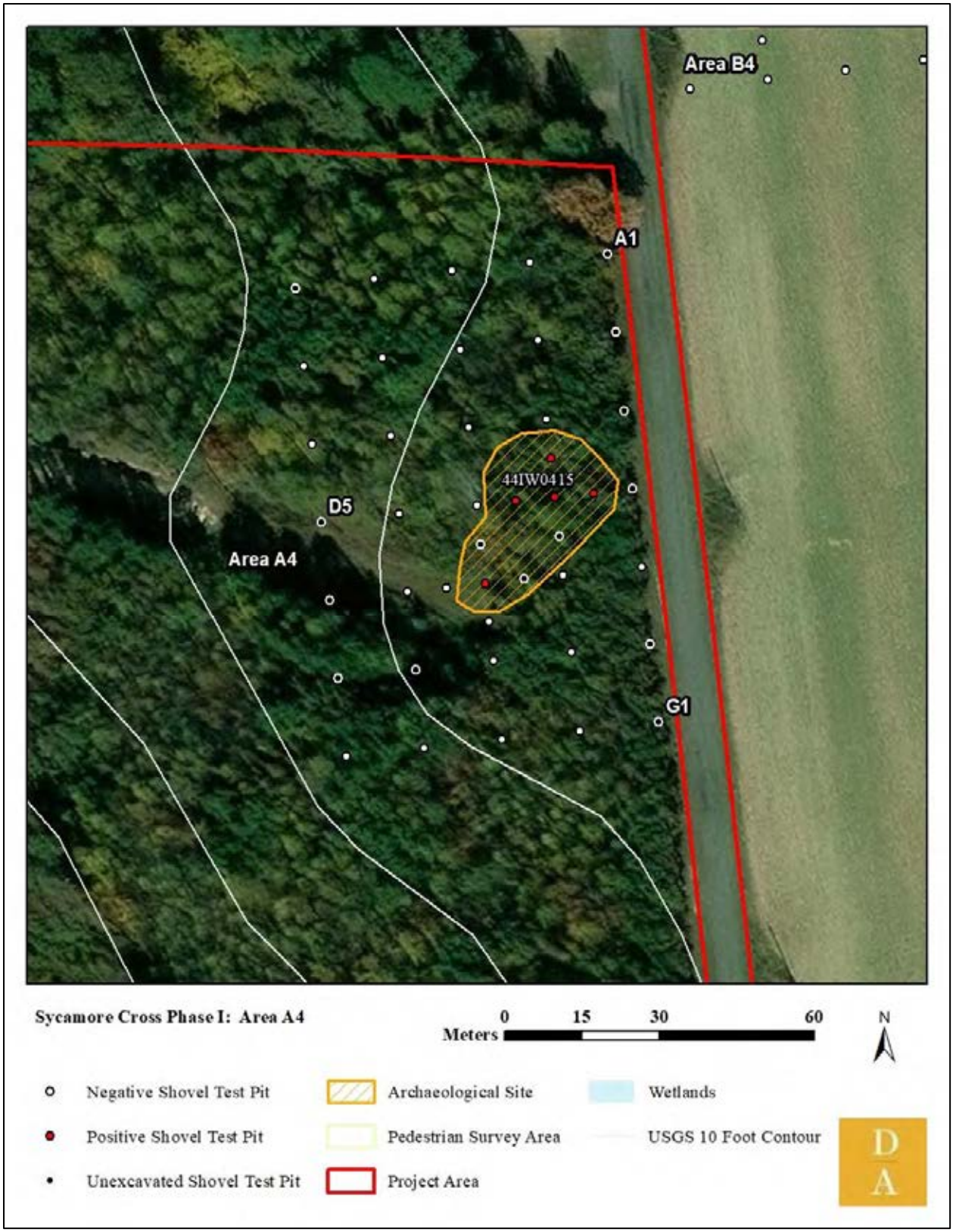


Figure 8-64: Aerial view of Area A4 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/2 grayish brown sandy loam plowzone (Ap horizon) over 10YR 6/4 light yellowish brown sand topsoil (A horizon) over 10YR 7/4 very pale brown sand subsoil (B horizon) (Figure 8-65).



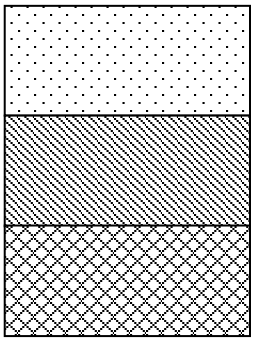


Figure 8-65: Soil profile of Shovel Test B3 in Area A4.

44IW0415

This site consists of a dense early-to-mid twentieth century artifact scatter in Area A4. 178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass (Figure 8-66). Window glass and unidentified melted glass make up the majority of this assemblage, with 128 fragments.



Figure 8-66: Artifact summary of Site 44IW0415.

Area A5

This area covers a round knoll west of the Area A1 pedestrian survey. Access is provided by a series of farm roads. This grid surrounds several large, potentially structural depressions and a three-story brick structure with a large cellar (Figure 8-67). This structure is associated with Architectural Resource #046-0056 (Figure 8-68).



Figure 8-67: Structural depression in Area A5, facing east.



Figure 8-68: Brick structure in Area A5, Architectural Resource #046-0056, facing south.

Vegetation in this area consists primarily of mature pine forest with common holly and briar undergrowth (Figure 8-69). Terrain in this part of the grid is somewhat disturbed by timbering activities, seen on the surface in the form of subtle windrows. Around the architectural remains, vegetation changes and is primarily deciduous trees with minimal undergrowth (Figure 8-70).



Figure 8-69: Vegetation in Area A5, facing south.



Figure 8-70: Vegetation in Area A5 around structural remains, facing south.

A total of 128 shovel tests were laid out at 15-meter (50-foot) intervals in nine transects labeled A through J, six of which could not be excavated due to standing water (Figure 8-71). A total of fifteen shovel tests were positive for cultural material with fragments of refined earthenware, wire nails, vessel and window glass, and oyster shell. These positive shovel tests are part of Site 44IW0407, discussed above with Area A1.

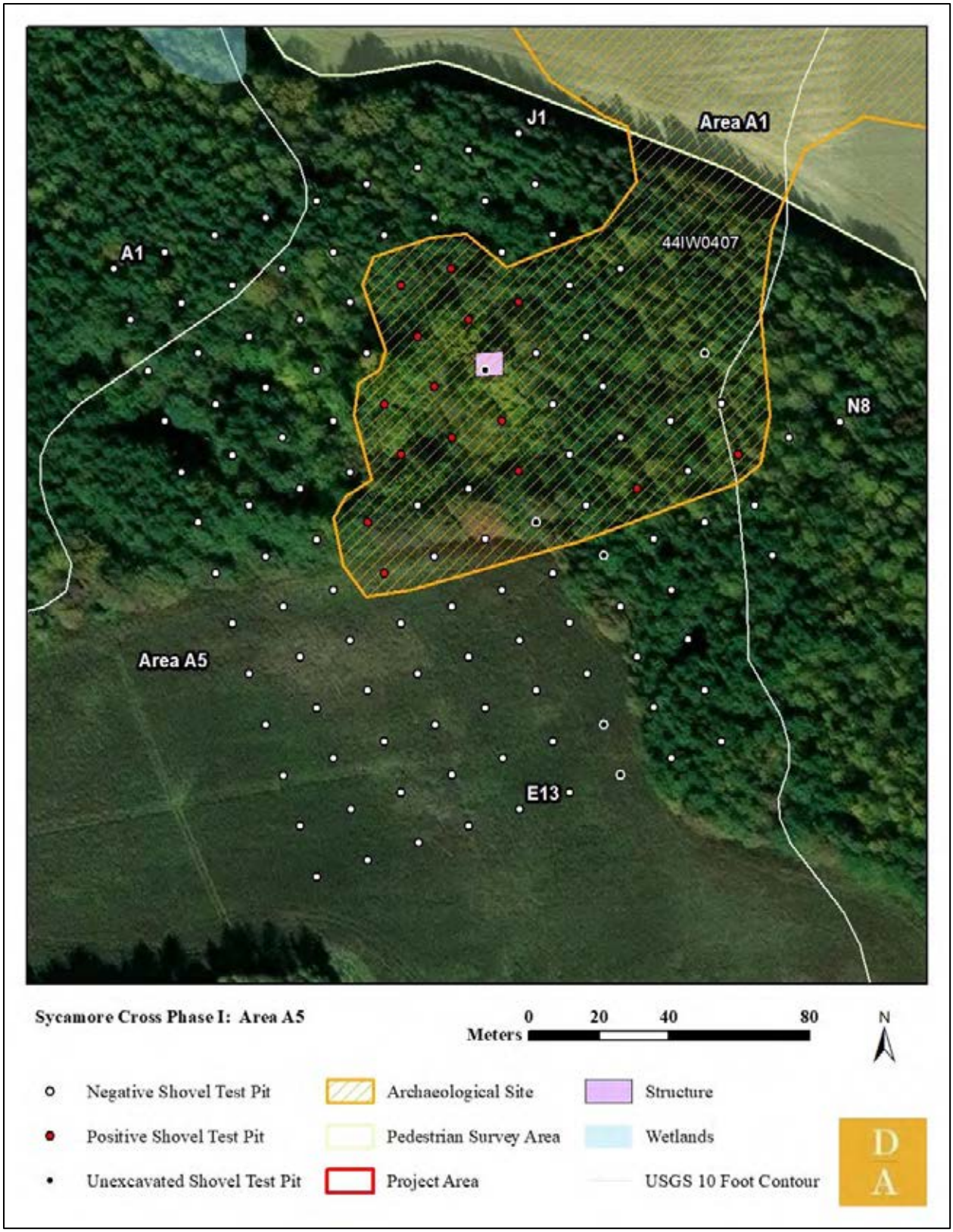


Figure 8-71: Aerial view of Area A5 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of topsoil over transitional layer over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-72).



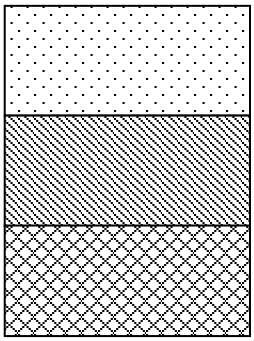


Figure 8-72: Soil profile of Shovel Test D5 in Area A5.

AREA B

The overall Area B consists of parcels to the east of Proctors Bridge Road (Route 621) and Sycamore Cross Drive (Route 622), and west of White Hill Trail (Route 623) (Figure 8-73). Terrain in this area includes two primary large, irregular finger ridges with numerous drainages and unnamed tributaries down to Mill Swamp to the east. These drainages form smaller ridges, knolls, and terraces overlooking the swamp. Large, harvested agricultural fields cover the tops of the landforms. These fields have very good surface visibility, and systematic pedestrian surveys were conducted in each, discussed in depth below. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the area are gentle to moderate. One previously known cemetery, the Hollemon Cemetery (VDHR# 046-5817) sits in the center of Area B5.



Figure 8-73: Overall map of Area B.

Area B1

This area consists of the large agricultural field northeast of Sycamore Crossroads. This field is located in the southern part of the overall Area B and bounded to the west by Sycamore Cross Drive (Route 622) and to the south by Mill Swamp Road (Route 621). Access to this area is provided by Sycamore Cross Drive and a farm road through the center of the field.

This part of Area B is cut by numerous small drainages as well as one major one, which flows east into an unnamed tributary of Mill Swamp. Vegetation in this area consists of harvested soy remnants and short, sparse grass, with mature mixed woodland and pine forest bordering the agricultural field. A small parcel is excluded from the project area on the interior of Area B1, which encompasses a complex of one dwelling and several outbuildings (Figure 8-74).



Figure 8-74: Dwelling and outbuildings in parcel cut out in Area B1, facing northwest.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-75). Transects were walked in 7.5-meter (25-foot) intervals north to south across the entirety of this field. Surface artifacts were observed in a scatter in the southeastern part of the field, and in the southwestern corner. These surface observations were designated Sites 44IW0409 through 44IW0411, which are described in greater detail below.



Figure 8-75: Aerial view of Area B1 survey.



Figure 8-76: Overview and ground cover in Area B1, facing north.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-77).

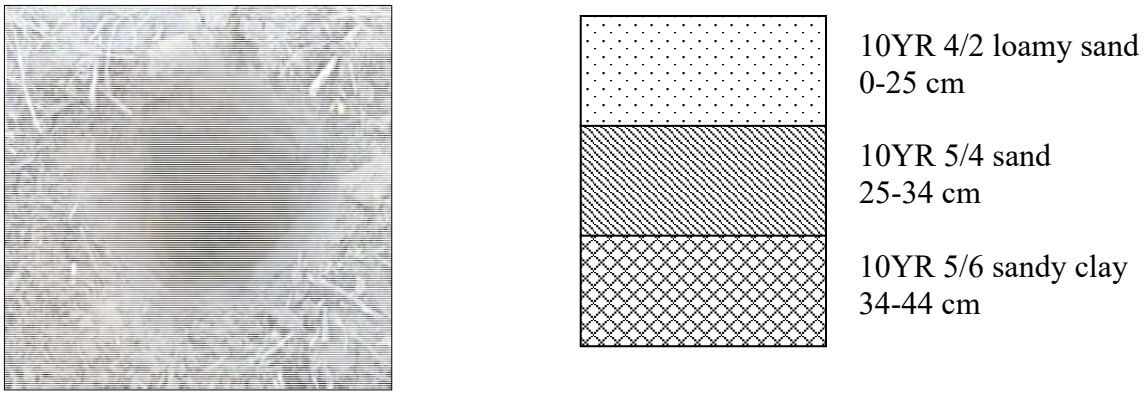


Figure 8-77: Soil profile of Judgmental Shovel Test 2 in Area B1.

44IW0409

This field site was observed by pedestrian survey in the western part of Area B1. It consists of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; stoneware, brick fragments; and one pipe stem that was the only artifact collected (Figure 8-78). This site is associated with Architectural Resource 046-5811, a circa 1850 standing dwelling.



Figure 8-78: Pipe stem collected in Site 44IW0409.

44IW0410

This site consists of a small late-nineteenth to early-twentieth century domestic artifact scatter observed in the northern part of Area B1. A sample of artifacts were collected, and observed artifacts included solarized and colorless vessel glass, aqua window glass, ironstone, and refined earthenware, Bristol and Albany-slip stoneware, and a reed pipe (Figure 8-79).



Figure 8-79: Artifact sample collected from Site 44IW0410.

44IW0411

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter observed in the southeast part of Area B1. Artifacts observed included ironstone, refined earthenware, and aqua and colorless vessel glass (Figure 8-80, Figure 8-81). Artifacts were densely clustered. No artifact samples were collected.



Figure 8-80: Artifacts flagged during pedestrian survey of Area B1 and delineating Site 44IW0411, facing west.



Figure 8-81: Artifacts on the surface in Site 44IW0411.

Area B2

This area consists of the triangular agricultural field southeast of the intersection of Sycamore Cross and Mill Swamp Roads. This field is located in the southern part of the overall Area B and bounded to the west by Proctors Bridge Road (Route 621) and to the north by Mill Swamp Road (also Route 621). In the eastern leg of Area B2, terrain slopes gently to wetland between two drainage cuts, one to the northeast and another to the southeast. Standing water prevented survey in this area. Vegetation in this area consists of harvested cotton remnants and short, sparse grass, with mature mixed woodland and pine forest bordering the agricultural field (Figure 8-82). A brick ruin stands in the western side of the field, previously recorded as Architectural Resource 046-0057. Although no artifacts were observed in association with the ruin, it has the potential for subsurface features and was recorded as an archaeological resource with the temporary designation of Site 44IW0424.



Figure 8-82: Overview of Area B2 showing Architectural Resource #046-0057, facing north.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-84). Transects were walked in 7.5-meter (25-foot) intervals east to west across the field. Surface artifacts were observed in a scatter in the southern end of the field. No artifact scatters were observed in this area.

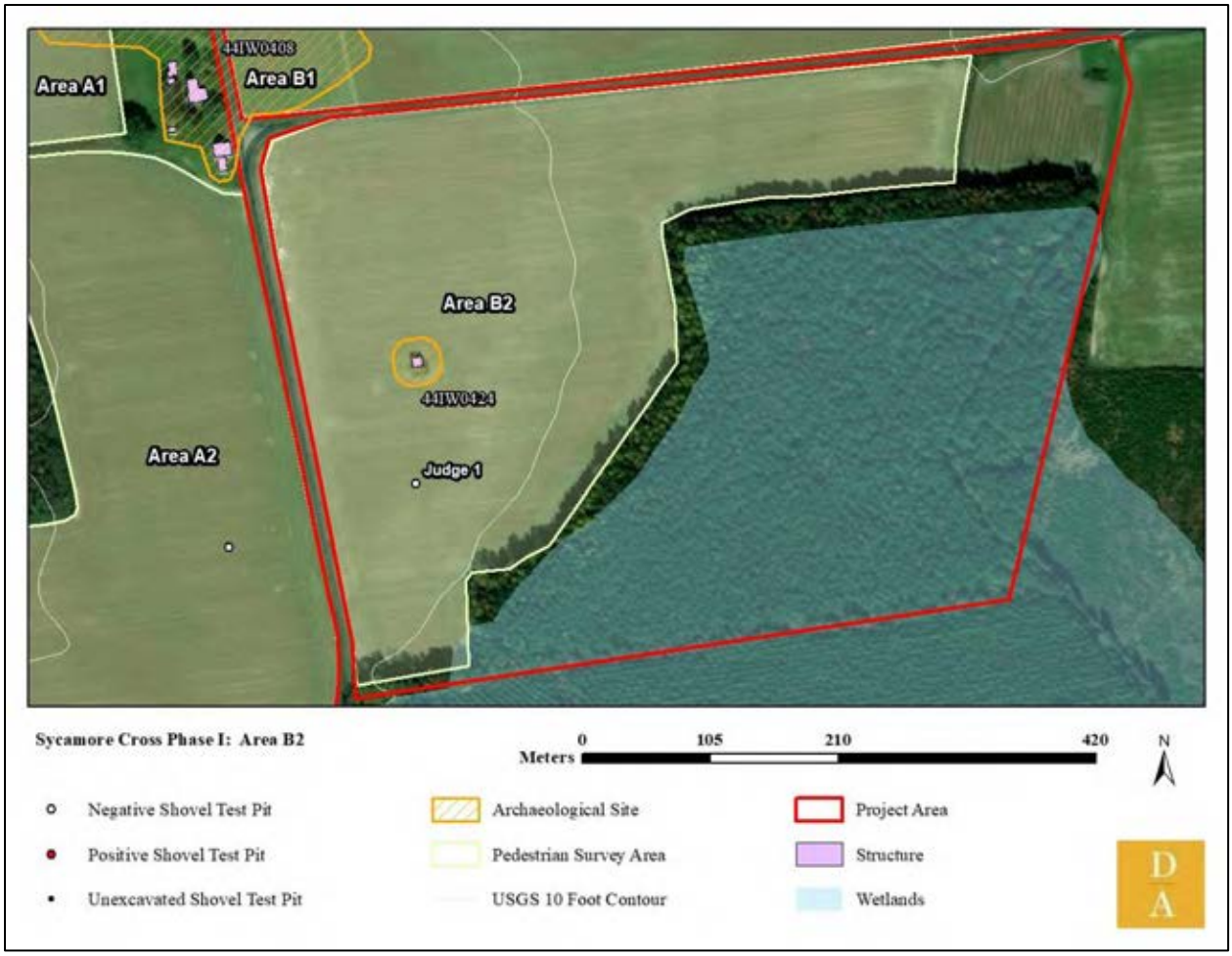


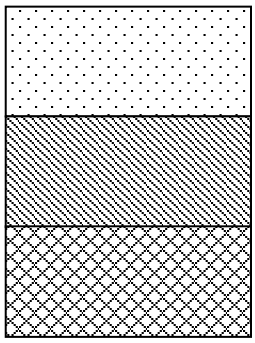
Figure 8-83: Aerial view of Area B2 survey.



Figure 8-84: Surface exposure in Area B2.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited a three-stratum profile of plowzone which cut an older topsoil or relict plowzone over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-85).





10YR 4/2 loamy sand
0-32 cm

10YR 5/4 sand
32-49 cm

10YR 5/6 sandy clay
49-62 cm

Figure 8-85: Soil profile of Judgmental Shovel Test 1 in Area B2.

Area B3

This area sits at the northern end of the long, irregular agricultural field in the northeastern part of the project area. A farm complex with several dwellings, outbuildings, and a parcel cut-out sit just to the north of this shovel test grid. This farm complex and a nearby dwelling are associated with Architectural Resources #046-5550 and 046-5551 respectively (Figure 8-86). White Hill Trail (Route 623) bounds this area to the east. Runoff from this area drains north into an unnamed tributary of Mill Swamp.



Figure 8-86: Farm complex (Architectural Resource #046-5550) and driveway in Area B3, facing west.

Vegetation in Area B3 at the time of survey consisted of the remains of harvested corn and short grasses (Figure 8-87). Surface visibility was too low for pedestrian survey. Mowed grasses and deciduous trees border the agricultural field.



Figure 8-87: Overview of Area B3, facing west.

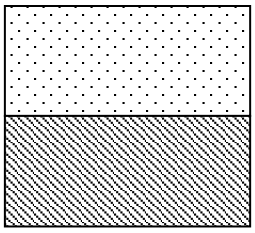
A total of 97 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F, two of which could not be excavated due to road disturbance (Figure 8-88). One shovel test was positive for cultural material with brick. This does not constitute a field site.



Figure 8-88: Aerial view of Area B3 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light olive brown sandy clay loam (Ap horizon) over 2.5Y 6/8 olive yellow clay subsoil (B horizon) (Figure 8-89).





2.5Y 5/4 sandy clay loam
0-34 cm

2.5Y 6/8 clay
34-44 cm

Figure 8-89: Soil profile of Shovel Test A4 in Area B3.

Area B4

This area consists of a small part of the agricultural field in the northwest part of the overall Area B. This field sits on the western edge of a large terrace overlooking forest and lowlands to the west. This grid was placed to investigate a dwelling indicated on historic topographic maps.

Vegetation in this area at the time of survey consisted of young winter wheat (Figure 8-90). Surface exposure was too low for pedestrian survey, though brick fragments were observed on the surface. Sycamore Cross Road bounds this grid to the west.



Figure 8-90: Sycamore Cross Road along the Area B4 baseline, facing north.

A total of 74 shovel tests were laid out at 15-meter (50-foot) intervals in eight transects labeled A through G (Figure 8-91). A total of 20 shovel tests were positive for cultural material including fragments of vessel glass, refined earthenware, window glass, terra cotta drain pipe, and unidentified nails. These positive shovel tests were designated Site 44IW0416, which is described in greater detail below.

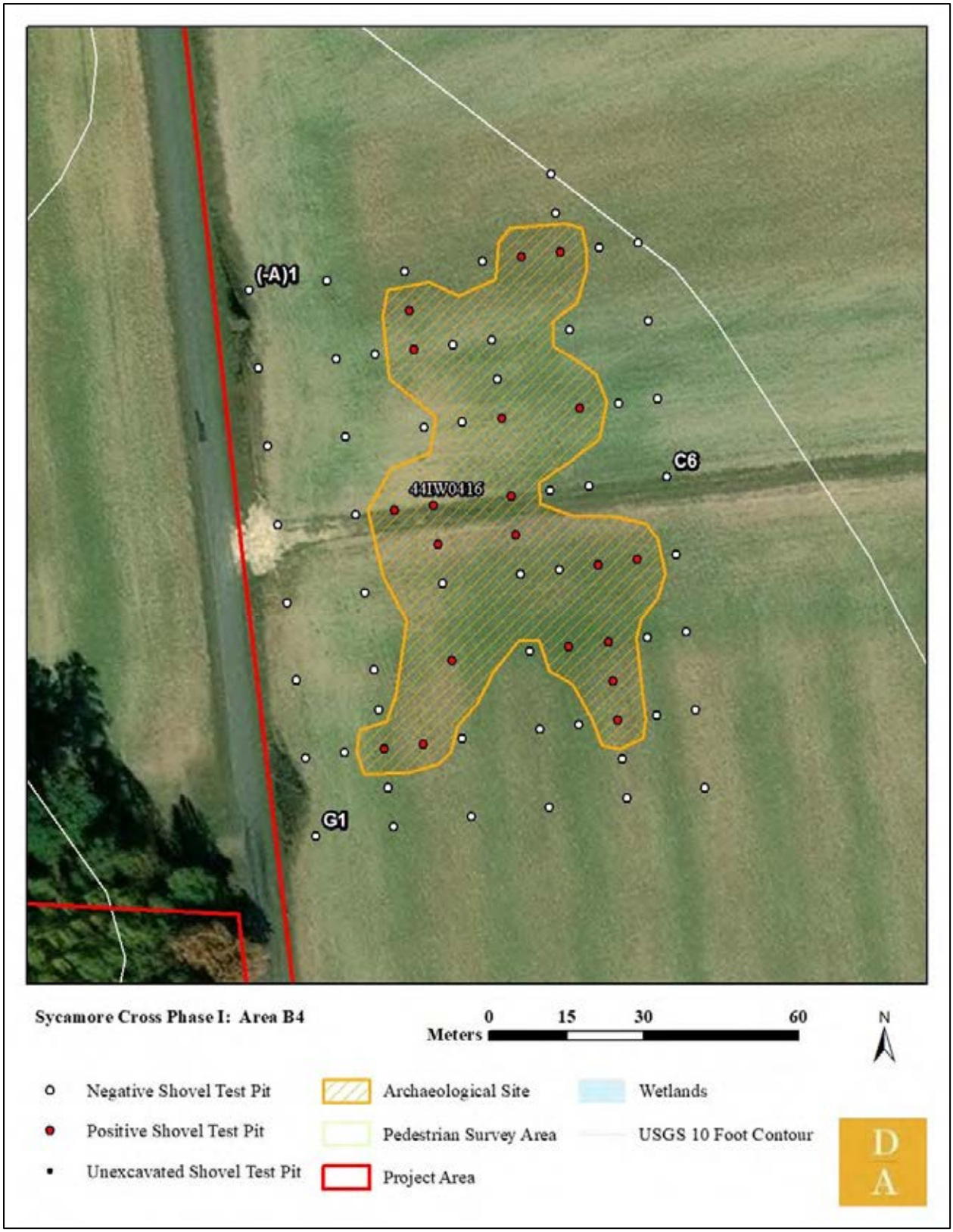


Figure 8-91: Aerial view of Area B4 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 6/4 light yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 brownish yellow compact sandy clay subsoil (B horizon) (Figure 8-92).

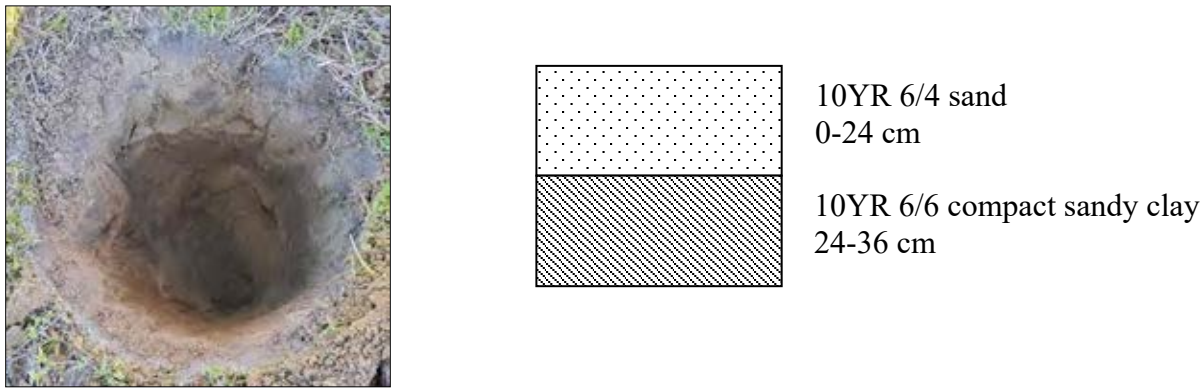


Figure 8-92: Soil profile of Shovel Test C3 in Area B4.

44IW0416

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area B4. It is located in the same place as a dwelling indicated on historic topographic maps. A total of 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, molded refined earthenware, a spark plug, and heavily corroded nails (Figure 8-93).



Figure 8-93: Artifact summary of Site 44IW0416.

Area B5

This area is located in the southeastern part of the overall Area B, bounded to the west and south by wetlands. It covers a portion of agricultural land as well as some woodland. Access is provided by White Hall Trail (Route 623) and by farm roads. A small, previously recorded cemetery sits in the middle of the grid surrounded by agricultural activity, and it contains only one headstone labeled "Holleman" and a displaced footstone labeled "J.J.H." (Figure 8-94). Mature oak, holly, and cedar surround the burial (Figure 8-95).



Figure 8-94: Head and footstone in Area B5 cemetery.



Figure 8-95: Holleman cemetery in Area B5, facing southwest.

Vegetation in this area varied between the agricultural field and the wooded part of the area. In the agricultural part of the grid vegetation consisted of harvested corn and young winter wheat (Figure 8-96). Vegetation in the woodland consisted of mature deciduous trees with a dense undergrowth of holly (Figure 8-97).



Figure 8-96: Vegetation in the agricultural field of Area B5, facing north and the Holleman cemetery.



Figure 8-97: Vegetation and wetland flagging in the wooded part of Area B5, facing south.

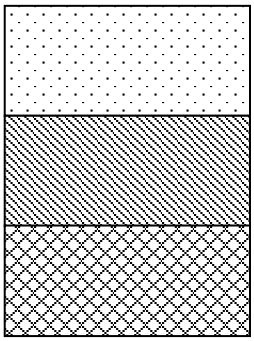
A total of 205 shovel tests were laid out at 15-meter (50-foot) intervals in seventeen transects labeled A through R, fourteen of which could not be excavated due to wetland (Figure 8-98). A total of three shovel tests were positive for cultural material with fragments of colorless and aqua vessel glass, terra cotta drain pipe, and colorless window glass. These positive shovel tests were designated Site 44IW0417, which is described in greater detail, below.



Figure 8-98: Aerial view of Area B5 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/4 yellowish brown sandy loam plowzone (Ap horizon) over 10YR 4/6 dark yellowish brown sandy clay topsoil (Ab horizon) over 10YR 6/8 brownish yellow clay subsoil (B horizon) (Figure 8-99).





10YR 5/4 sandy loam
0-7 cm

10YR 4/6 sandy clay
7-30 cm

10YR 6/8 clay
30-38 cm

Figure 8-99: Soil profile of Shovel Test E5 in Area B5.

44IW0417

This site consists of a small domestic artifact scatter in Area B5. Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe (Figure 8-100).

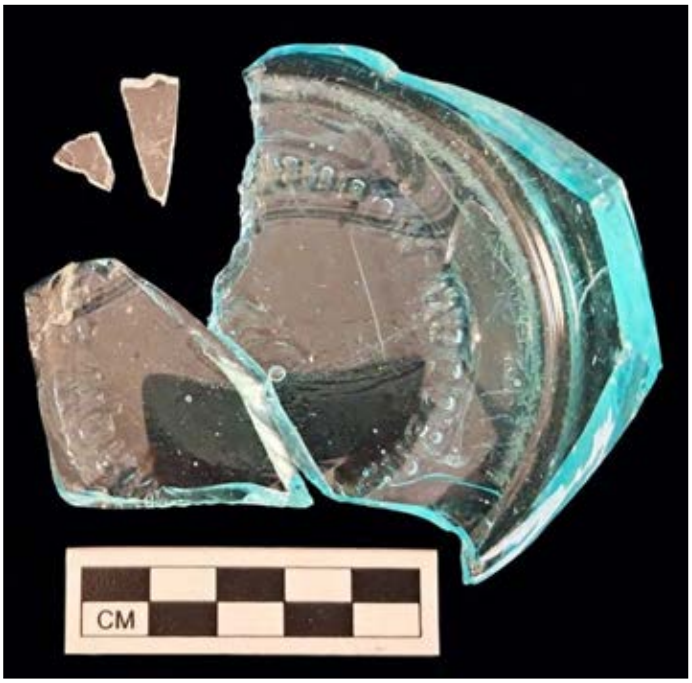


Figure 8-100: Artifact summary of Site 44IW0417.

AREA C

The overall Area C consists of the parcels south of Proctors Bridge Road (Route 621) and along Ramsey Road (Route 622) (Figure 8-101). Terrain in this area includes three primary large, irregular finger ridges with numerous drainages and unnamed tributaries down to Blackwater River to the west and Mill Swamp to the east. These drainages form smaller ridges, knolls, and terraces overlooking the wetlands. Large, harvested agricultural fields cover the tops of the landforms. These fields have very high surface visibility, allowing for systematic pedestrian

survey. Vegetation outside of the agricultural fields consists of mature mixed woodland and pine forest. The narrow corridors around streams and drainages have been avoided by timbering and contain mature mixed deciduous woodland vegetation. Planted pine woodland across the area can be found at different stages of regrowth following the last clearcutting event. Slopes within the project are gentle to moderate.

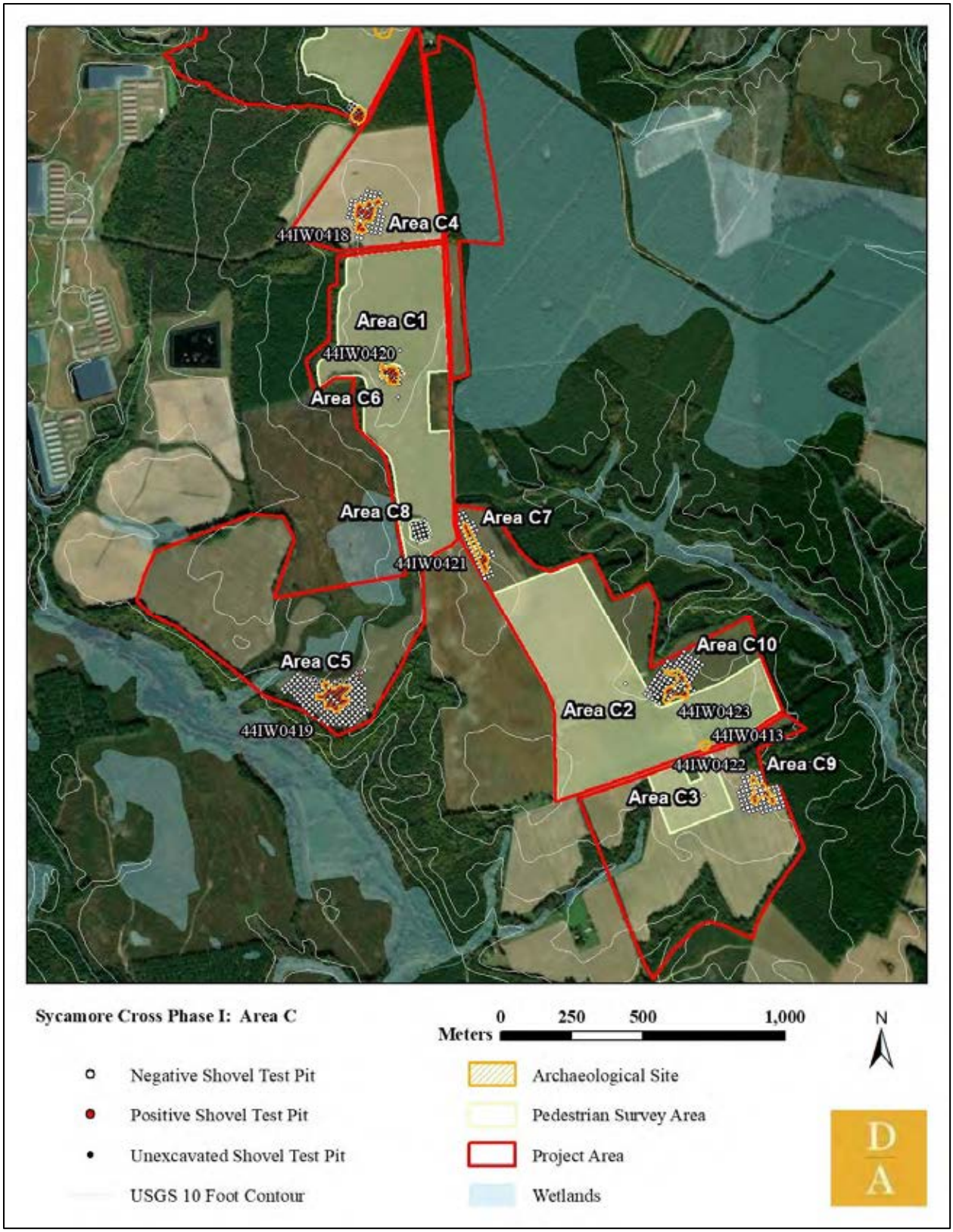


Figure 8-101: Overall map of Area C.

Area C1

This area consists of a long irregular agricultural field in the northern part of the overall Area C. It is bounded to the east by Ramsey Road (Route 622). Access to this area is provided by a short farm road running east to west in the center of the area. Terrain in this area consists of one long irregular finger ridge. Vegetation consists of harvested soy remnants with mixed woodland at the edges of the field (Figure 8-102). A dwelling is indicated on historic topographic maps, though only a grassy space, several mature trees, an outbuilding, and several utility poles remain on the surface: these surface features are associated with Architectural Resource #046-0029. An evenly rectangular space in the central and eastern part of the field was uncultivated and overgrown, for unknown reasons (Figure 8-103).



Figure 8-102: Overview of Area C1, showing Architectural Resource #046-0029, facing north.



Figure 8-103: Overgrown area in middle of Area C1, facing southeast.

Surface exposure in this area was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-104, Figure 8-105). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Only a few surface artifacts were observed across this area, including aqua vessel glass, transferware, blue shell edged refined earthenware.

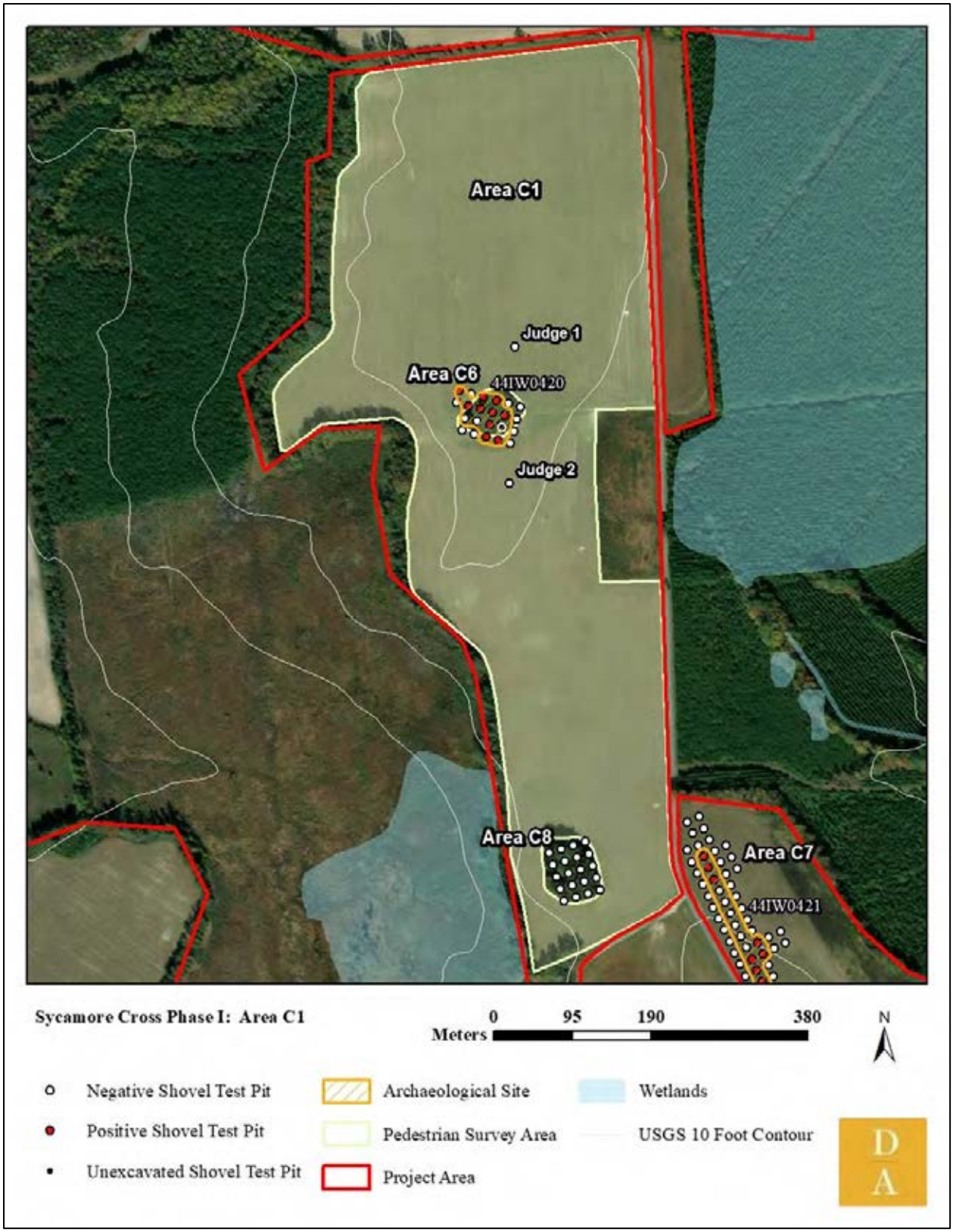


Figure 8-104: Aerial view of Area C1 survey.



Figure 8-105: Surface exposure in Area C1.

Two judgmental shovel tests were excavated in this area to investigate the integrity of the soil strata. These shovel tests exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-106).

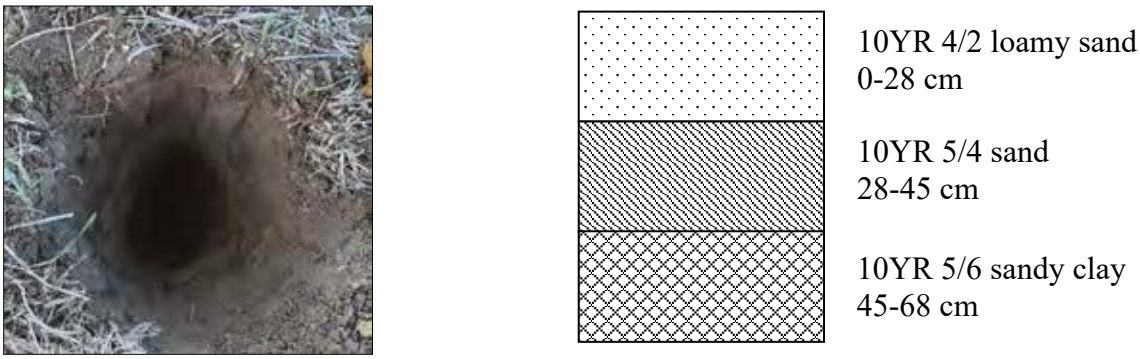


Figure 8-106: Soil profile of Judgmental Shovel Test 1 in Area C1.

Area C2

This area consists of the "L"-shaped agricultural field in the southern part of the Sycamore Cross project area and is bounded to the west by Ramsey Road (Route 622) and to the south by Rattlesnake Trail (Route 646). Access to this area is provided by farm roads to the east and south (Figure 8-107).



Figure 8-107: Farm road in Area C2, facing south.

Terrain in this area consists of two broad, flat finger ridges that overlook an unnamed tributary of Rattlesnake Swamp to the south. Vegetation consists of soy remnants and short, sparse grasses (Figure 8-108). A complex of structures associated with Architectural Resource #046-5148 is located in the southern part of this area (Figure 8-109). This complex includes a dwelling and several outbuildings.



Figure 8-108: Overview of Area C2, facing northwest.



Figure 8-109: Architectural Resource #046-5148 in Area C2, facing north.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-110, Figure 8-111). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. Surface artifacts were observed in a scatter in the southern end of the field. These surface observations were designated Site 44IW0413, which is described in greater detail below.

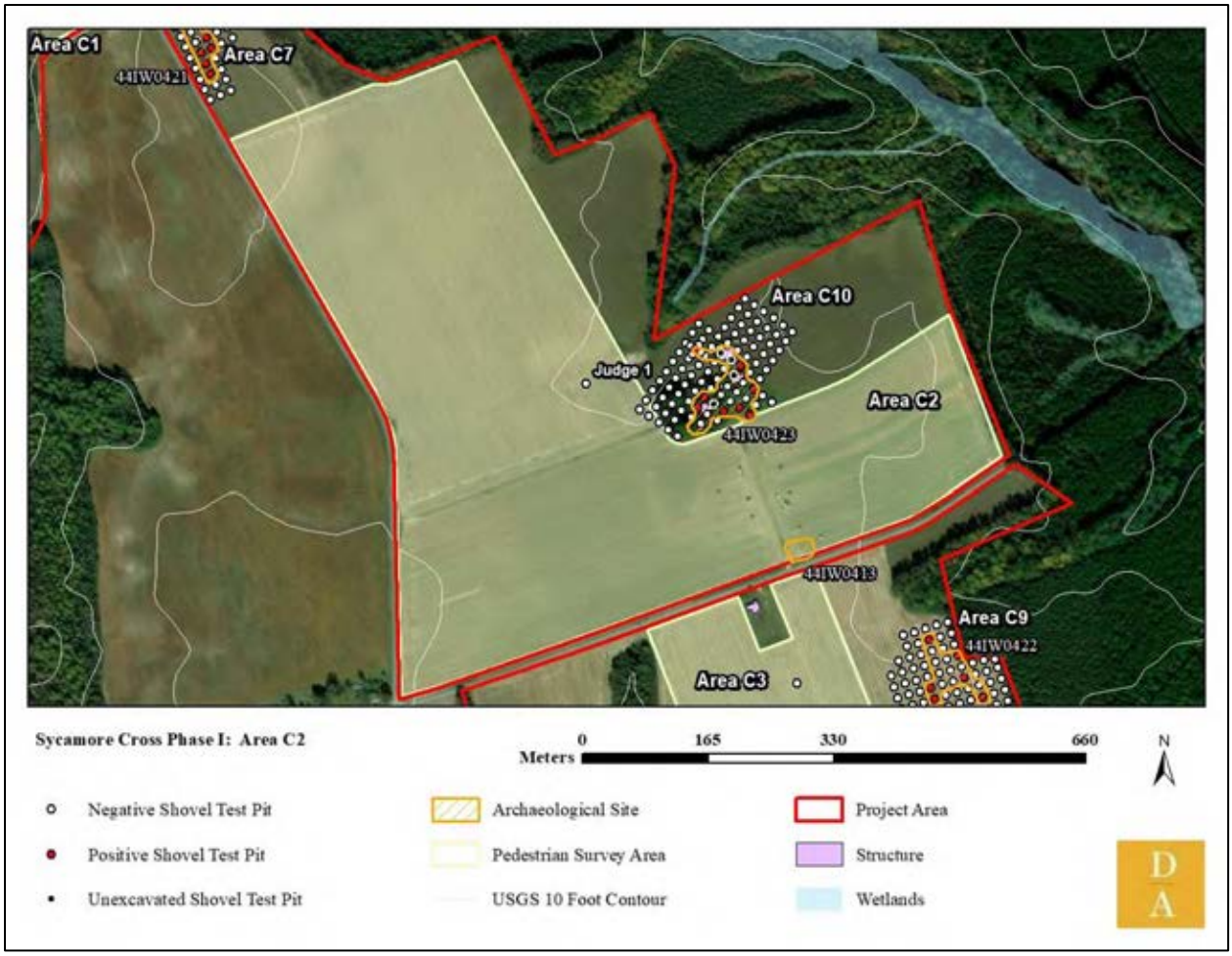


Figure 8-110: Aerial view of Area C2 survey.



Figure 8-111: Surface exposure in Area C2.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited at least a two-stratum profile of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand transition (AB horizon), and excavation reached the water table before subsoil could be observed (Figure 8-112).

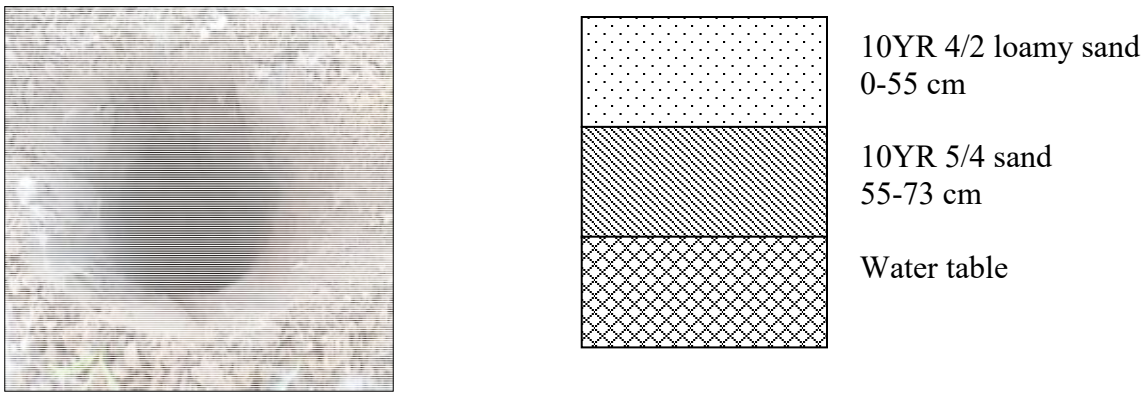


Figure 8-112: Soil profile of Judgmental Shovel Test 1 in Area C2.

44IW0413

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C2. No artifacts were collected, but artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware (Figure 8-113). No surface features were observed.



Figure 8-113: Artifacts on the surface in Site 44IW0413.

Area C3

This area consists of a smaller rectangular section of a larger agricultural field in the southernmost part of the Sycamore Cross project area (Figure 8-114). This area is south of Area C2 and bounded to the north by Rattlesnake Trail (Route 646). Access to this area is provided by a short drive off of Rattlesnake Trail, in the middle of the area.



Figure 8-114: Overview of Area C3, facing south.

Terrain in this area consists of a broad finger ridge overlooking three large drainages to the east and west, which lead to both Blackwater River and Rattlesnake Swamp. Vegetation in this area is the same as that of Area C2. One dwelling stands at the northern edge of the field (Figure 8-115).



Figure 8-115: Dwelling in Area C3, facing southwest.

Surface exposure in this agricultural field was high, and pedestrian survey was conducted in lieu of shovel test survey (Figure 8-116, Figure 8-117). Transects were walked in 7.5-meter (25-foot) intervals east to west across the entirety of this field. No artifact scatters were observed.



Figure 8-116: Aerial view of Area C3 survey.



Figure 8-117: Surface exposure in Area C3.

One judgmental shovel test was excavated in this area to investigate the integrity of the soil strata. This shovel test exhibited a three-stratum profile of plowzone which cut an intact topsoil over subsoil. Stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand topsoil (Ab horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-118).

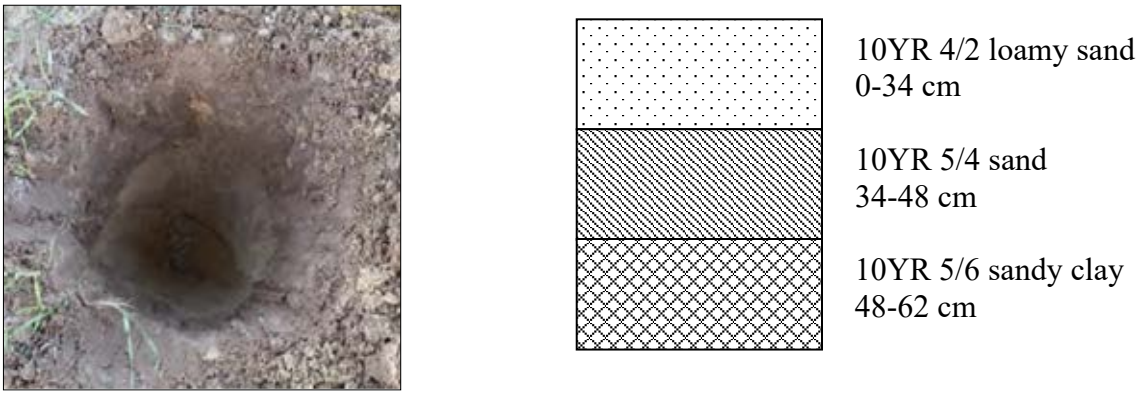


Figure 8-118: Soil profile of Judgmental Shovel Test 1 in Area C3.

Area C4

This area consists of a large rectangular agricultural field in the northern part of the overall Area C. This field sits on the top of a long, broad finger ridge that makes up much of Area C. It is bounded to the northwest by Proctors Bridge Road (Route 621), to the east by Ramsey Road (Route 622), and to the south by an unnamed farm road (Figure 8-119). This grid was placed where two outbuildings are indicated on historic maps, though no surface features remain. These outbuildings may be associated with Architectural Resource #046-0030, which is no longer standing.



Figure 8-119: Towards farm road south of Area C4, facing southwest.

Vegetation in Area C4 at the time of survey consisted of the remains of harvested corn and sparse, short grasses (Figure 8-120). Standing water earlier in the year prevented systematic pedestrian survey. Buried utilities run through the field, indicating at least some surface disturbance by farming activity.



Figure 8-120: Vegetation and utilities in Area C4, facing north.

A total of 76 shovel tests were laid out at 15-meter (50-foot) intervals in nine transects labeled -B through G (Figure 8-121). A total of fourteen shovel tests were positive for cultural material with fragments of vessel glass, refined earthenware, oyster shell, nails, brick, and window glass. These positive shovel tests were designated Site 44IW0418, which is described in greater detail below.

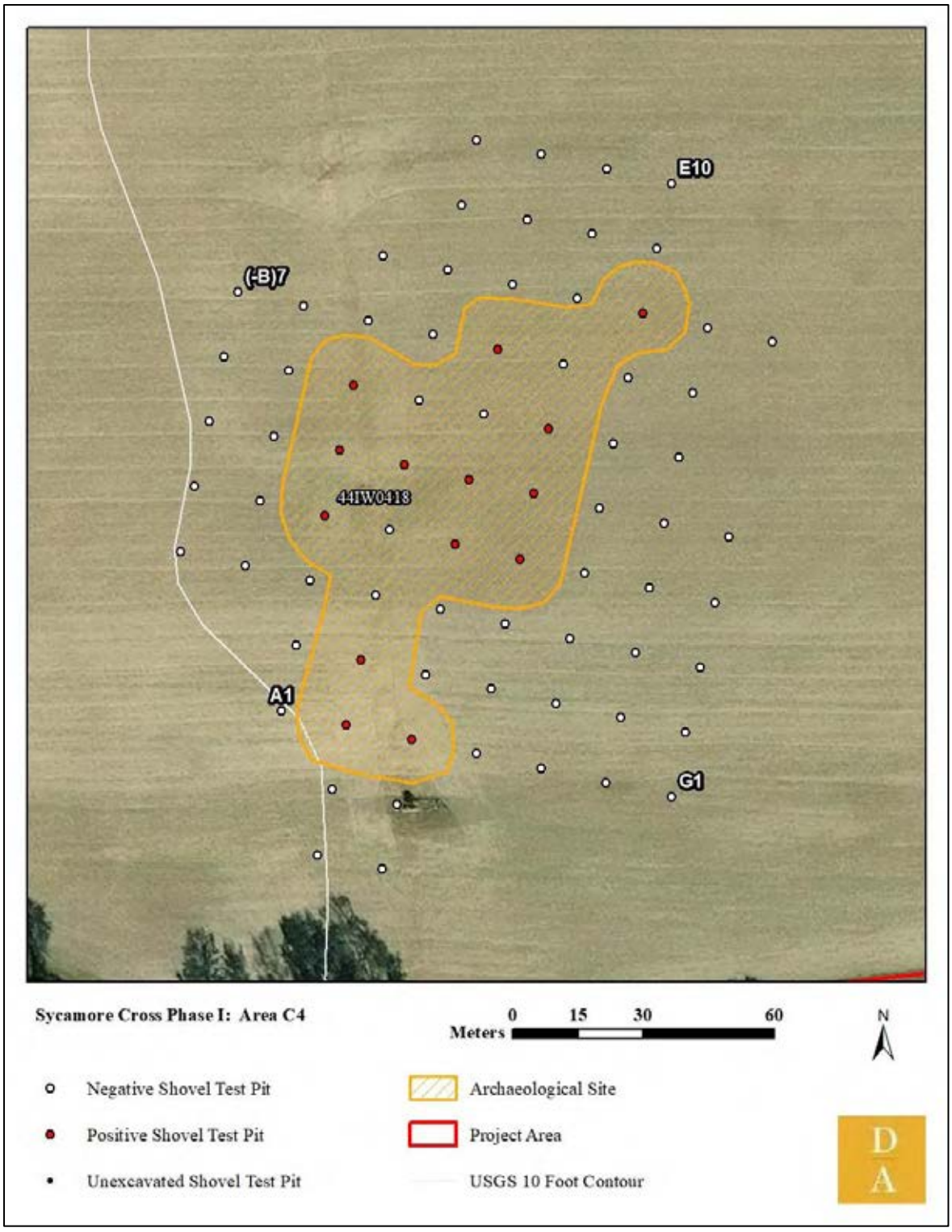


Figure 8-121: Aerial view of Area C4 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 7.5Y 4/3 brown sandy loam plowzone (Ap horizon) over 10YR 6/3 pale brown sandy loam transition layer (AB horizon) over 7.5YR 6/4 light brown sandy clay loam subsoil (B horizon) (Figure 8-122).

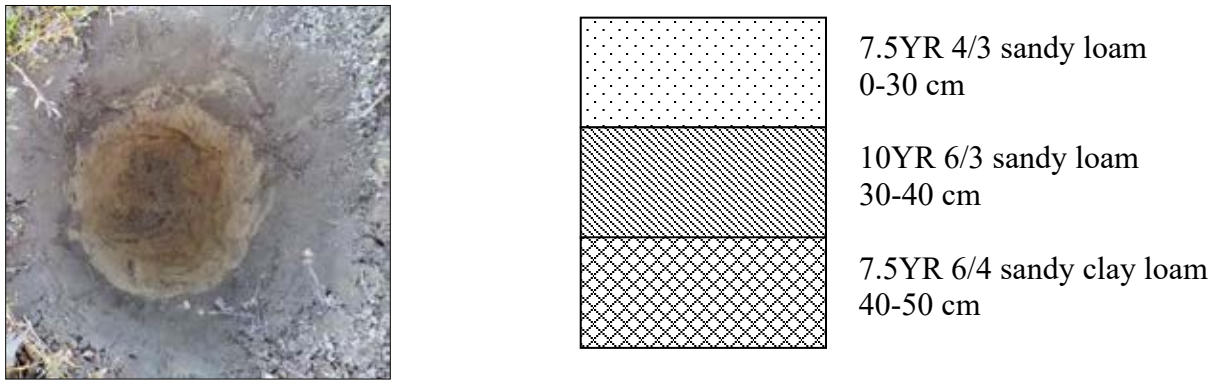


Figure 8-122: Soil profile of Shovel Test C8 in Area C4.

44IW0418

This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter associated with Architectural Resource #046-0030. This resource is no longer standing. A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass (Figure 8-123).



Figure 8-123: Artifact summary of Site 44IW0418.

Area C5

This area consists of the small horseshoe-shaped agricultural field to the southwest of the Sycamore Cross project area. This field sits at the end of a narrow, rectangular finger ridge

overlooking the headwaters of an unnamed tributary of Blackwater River. Slope is gentle and rolling. Access is provided by a farm road that runs along the finger ridge (Figure 8-124).



Figure 8-124: Farm road in Area C5, facing south.

Vegetation in Area C5 at the time of survey consisted of young winter wheat (Figure 8-125). Scrubby grasses and mixed woodland border this area. Historic topographic maps show a dwelling and associated outbuilding at the end of this landform. This grid was placed to find evidence of these structures.



Figure 8-125: Overview of Area C5, facing north.

A total of 178 shovel tests were laid out at 15-meter (50-foot) intervals in 0 transects labeled A through S, nine of which could not be excavated due to road disturbance and standing water (Figure 8-126, Figure 8-127). A total of 20 shovel tests were positive for cultural material with fragments of vessel glass, lantern glass, refined earthenware, machine cut and wire nails, and copper pipe. These positive shovel tests were designated Site 44IW0419, which is described in greater detail below.

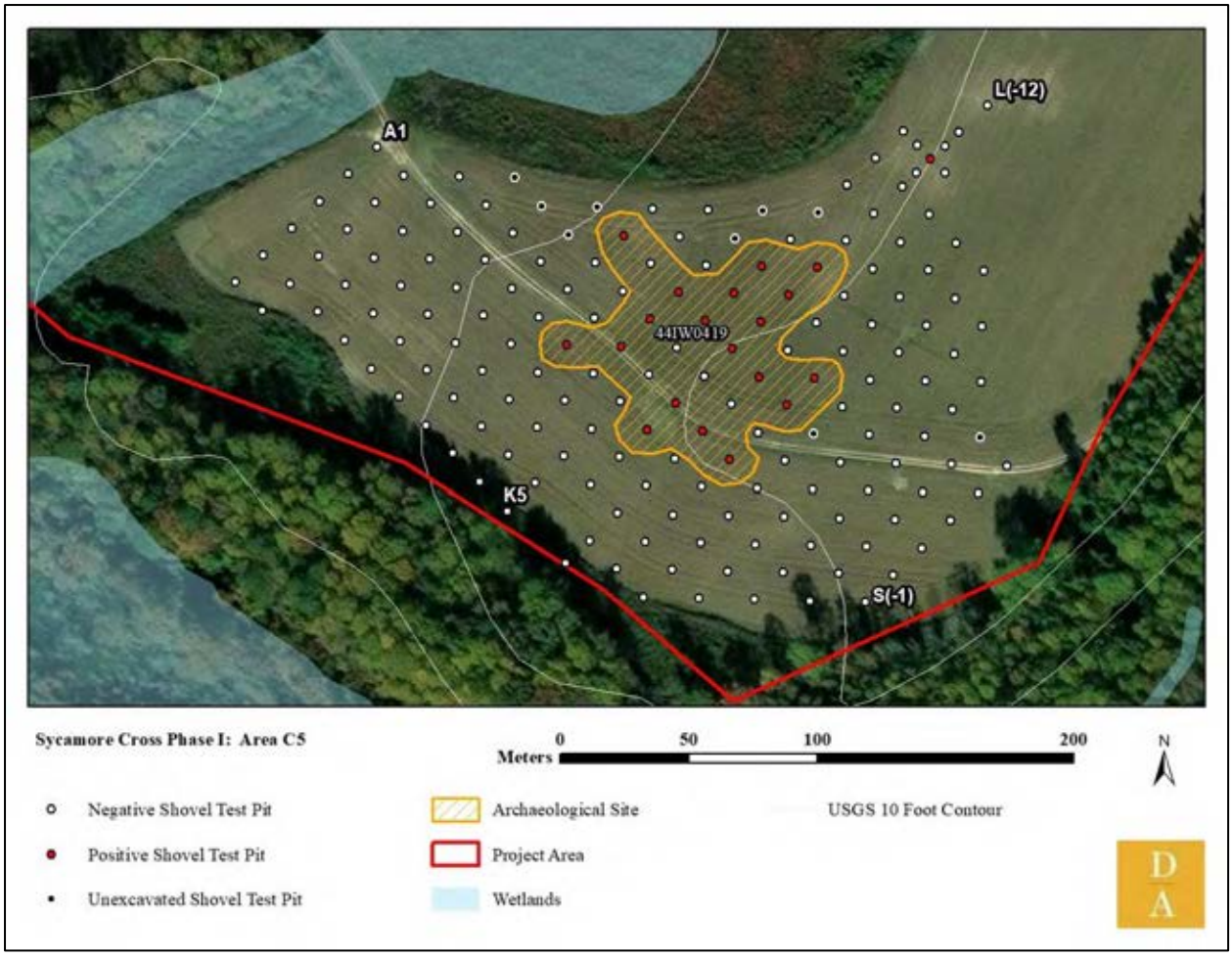


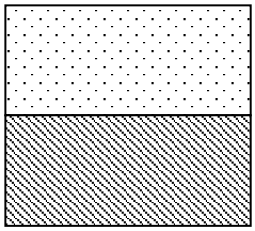
Figure 8-126: Aerial view of Area C5 shovel test grid.



Figure 8-127: Standing water in Area C5.

Shovel tests exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light yellowish brown sandy clay loam plowzone (Ap horizon) over 10YR 4/6 dark yellowish brown clay subsoil (B horizon) (Figure 8-128). Shovel Test J(-1) encountered an impasse of concrete or mortar at 20 cm below the surface (Figure 8-129).



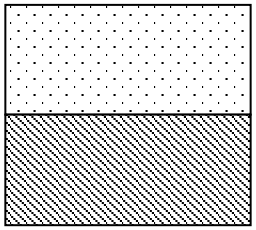


2.5Y 5/4 sandy clay loam
0-45 cm

10YR 4/6 clay
45-55 cm

Figure 8-128: Soil profile of Shovel Test N(-4) in Area C5.





10YR 4/2 sandy loam
0-20 cm

Concrete and mortar impasse
20- cm

Figure 8-129: Shovel Test J(-1), showing concrete impasse.

44IW0419

This site consists of a mid-nineteenth to early-twentieth century domestic artifact scatter in Area C5. A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe (Figure 8-130).



Figure 8-130: Artifact summary of Site 44IW0419.

Area C6

This area sits in the center of the long rectangular agricultural field of the Area C1 pedestrian survey. It focuses on a grassy space that could not be systematically pedestrian surveyed and where historic topographic maps indicate one dwelling and one outbuilding. Structural remains, one

standing structure, and farm equipment were observed on the surface (Figure 8-131, Figure 8-132). Vegetation in this area consisted of tall grasses and a few mature shrubs.



Figure 8-131: Vegetation and outbuilding in Area C6, facing west.



Figure 8-132: Structural rubble in Area C6.

A total of 22 shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D, one of which could not be excavated due to structural remains (Figure 8-133). A total of ten shovel tests were positive for cultural material with fragments of unidentified farm equipment, window and vessel glass, and refined earthenware. These positive shovel tests were designated Site 44IW0420, which is described in greater detail, below. In order to get negative space around positive shovel tests, a portion of the Area C6 shovel test grid overlaps with the Area C1 pedestrian survey.

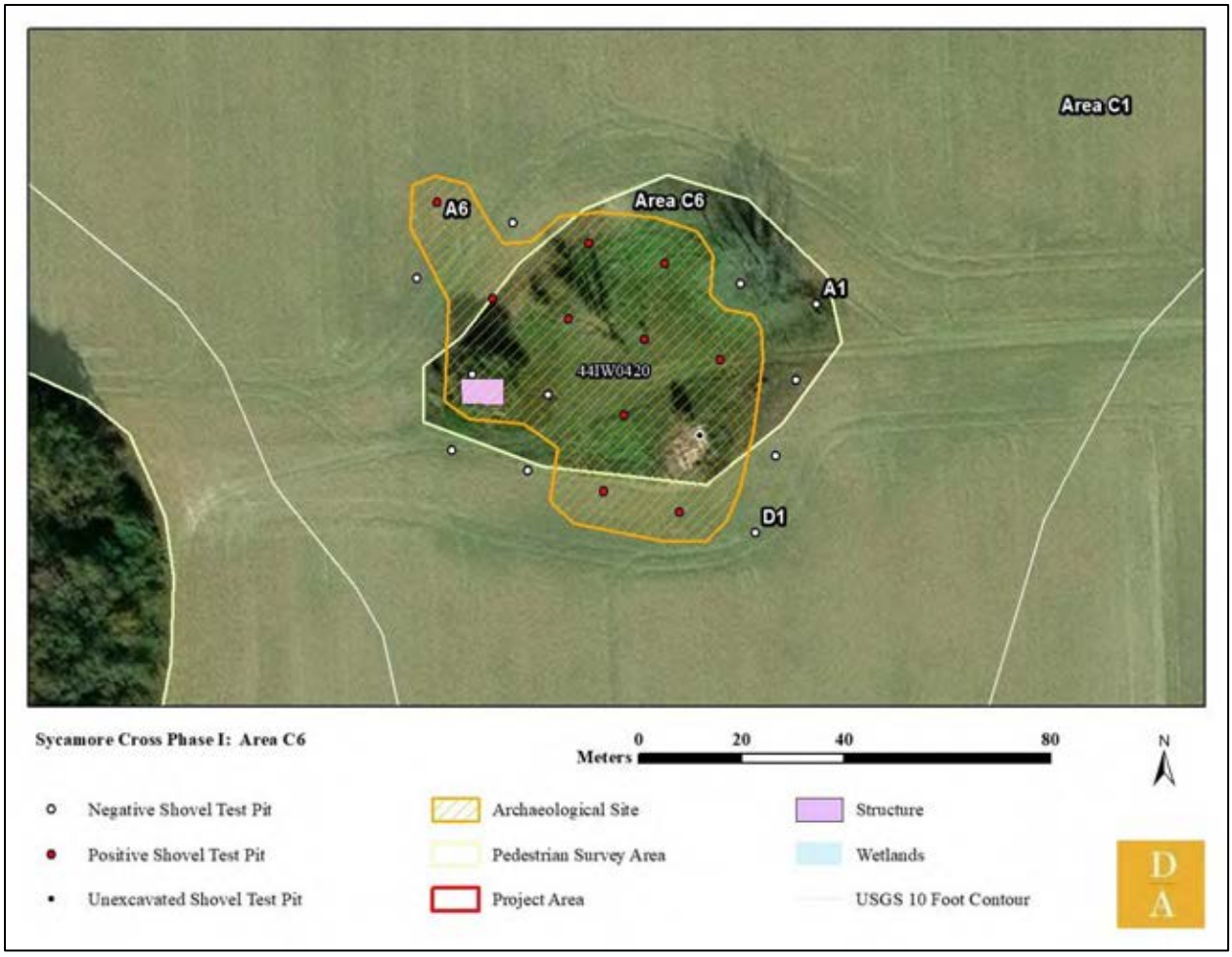
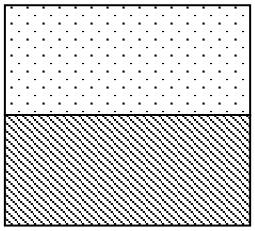


Figure 8-133: Aerial map of Area C6 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/2 grayish brown sandy loam topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-134).





10YR 5/2 sandy loam
0-35 cm

10YR 5/6 sandy clay
35-51 cm

Figure 8-134: Soil profile of Shovel Test B3 in Area C6.

44IW0420

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C6. This grid also overlaps slightly with the Area C1 pedestrian survey. This site is also associated with Architectural Resource #046-0029. A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail (Figure 8-135). Colorless vessel glass was most common in this area, with five fragments recovered.



Figure 8-135: Artifact summary of Site 44IW0420.

Area C7

This area sits in the center of the overall Area C, north of the Area C2 pedestrian survey and bounded on the west by Ramsey Road (Route 622) (Figure 8-136). It sits at the top of a large finger ridge, pinched between drainages to tributaries of the Blackwater River and Mill Swamp. This grid was excavated to find evidence of a dwelling marked on historic topographic maps. Vegetation in this area is primarily short grasses consistent with fallow agricultural fields (Figure 8-137).



Figure 8-136: Ramsey Road bounding the west of Area C7, facing south.



Figure 8-137: Vegetation and overview of Area C7, facing south.

A total of 56 shovel tests were laid out at 15-meter (50-foot) intervals in five transects labeled A through E (Figure 8-138). A total of eight shovel tests were positive for cultural material with fragments of vessel glass, unidentified nails, refined earthenware, window glass, and a glass marble. These positive shovel tests were designated Site 44IW0421, which is described in greater detail, below.

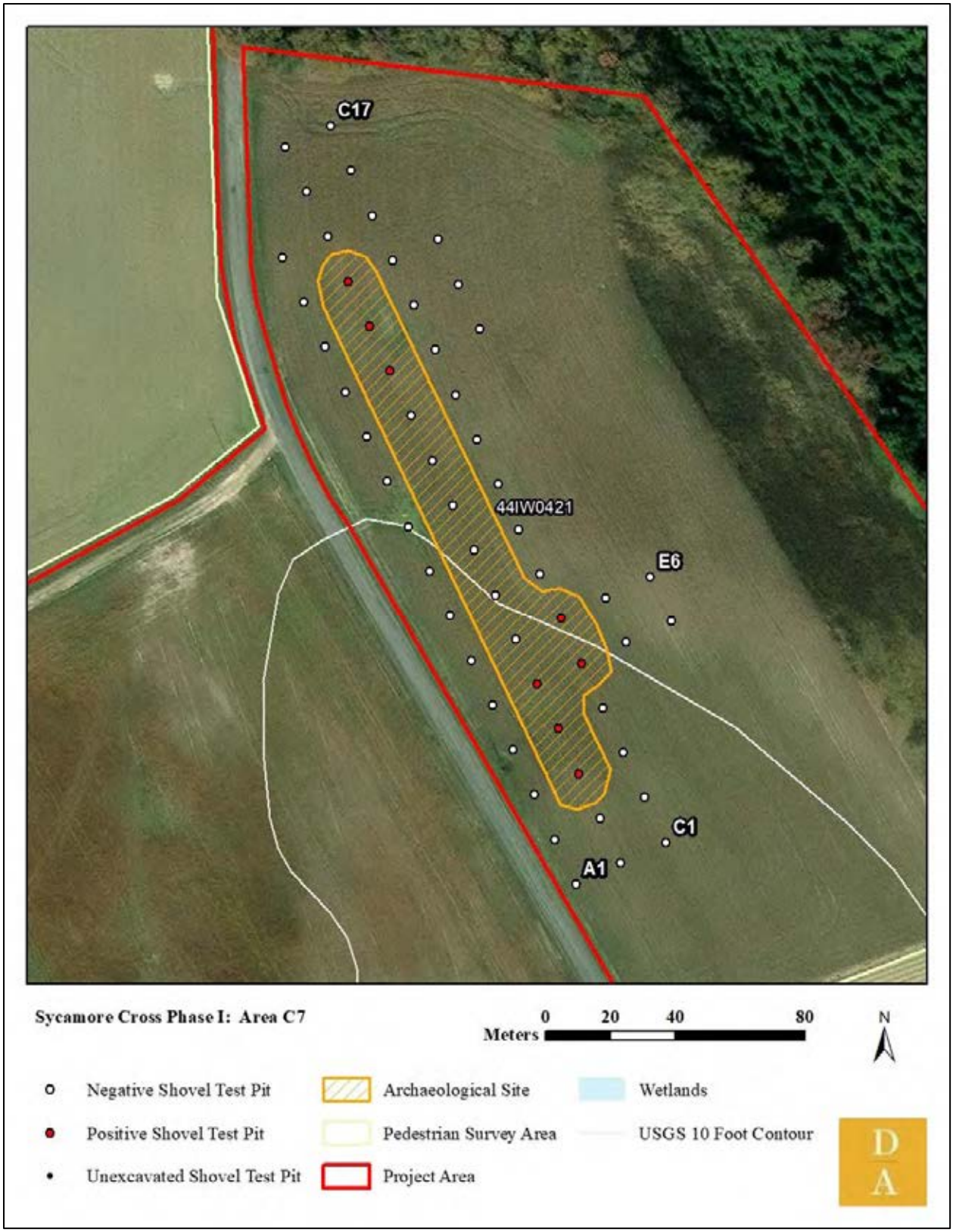
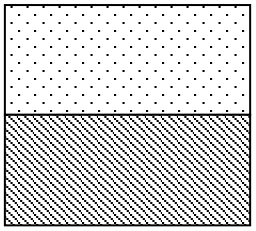


Figure 8-138: Aerial view of Area C7 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam plowzone (Ap horizon) over 10YR 5/4 yellowish brown sand subsoil (B horizon) (Figure 8-139).





10YR 3/2 sandy loam
0-31 cm

10YR 5/4 sand
31-50 cm

Figure 8-139: Soil profile of Shovel Test B12 in Area C7.

44IW0421

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C7. Fifty artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble (Figure 8-140).



Figure 8-140: Artifact summary of Site 44IW0421.

Area C8

This area covers the copse of trees in the southern end of the agricultural field that constitutes the Area C1 pedestrian survey. This small grid overlooks a large, flat, terraced finger ridge to the west.

Fence posts, sheet metal, farm equipment, and fragments of brick and plaster can be found scattered across the ground surface of this area (Figure 8-141, Figure 8-142).



Figure 8-141: Fence post in Area C8, facing east.



Figure 8-142: Equipment remnants in Area C8, facing south.

Vegetation in Area C8 at the time of survey consisted of mature deciduous trees ringing a dense briar thicket (Figure 8-143). A thick, loamy humus layer can be found across this area (Figure 8-144). Terrain in this grid is unnatural and bowl-shaped, with trees growing around the "rim" of the "bowl."



Figure 8-143: Vegetation in Area C8, facing east.



Figure 8-144: Shovel Test C4, showing 35 cm humus layer.

A total of 20 shovel tests were laid out at 15-meter (50-foot) intervals in four transects labeled A through D (Figure 8-145). No cultural material was recovered, and no historic surface features were observed.



Figure 8-145: Aerial view of Area C8 shovel test grid.

Shovel tests in this area exhibited a three-stratum profile of topsoil over transitional layer over subsoil. Stratigraphy consisted of 10YR 3/2 very dark grayish brown sandy loam topsoil (A horizon) over 10YR 6/4 light yellowish brown sand transition layer (AB horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-146).

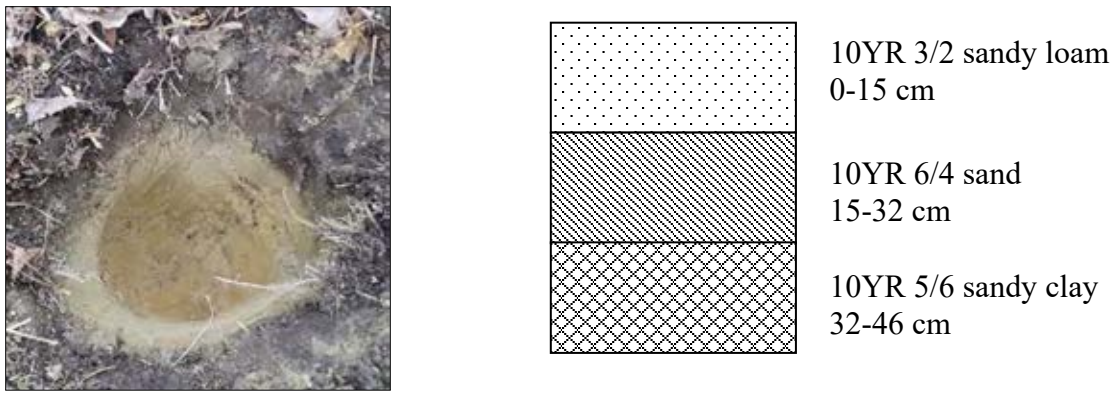


Figure 8-146: Soil profile of Shovel Test B5 in Area C8.

Area C9

This area consists of a portion of the southernmost agricultural field in Area C9, at the eastern project area boundary. It shares this agricultural field with the Area C3 pedestrian survey, though these areas do not overlap. This area overlooks several broad terraces that themselves overlook drainages down to Mill Swamp. Vegetation in Area C9 at the time of survey consisted of waist-high winter wheat, with mature mixed forest at the edge of the agricultural field (Figure 8-147). Terrain is broad and flat.



Figure 8-147: Overview of Area C9, facing north.

A total of 78 shovel tests were laid out at 15-meter (50-foot) intervals in ten transects labeled A through K (Figure 8-148). A total of six shovel tests were positive for cultural material including fragments of vessel and window glass, ironstone, and refined earthenware. These positive shovel tests were designated Site 44IW0422, which is described in greater detail, below.

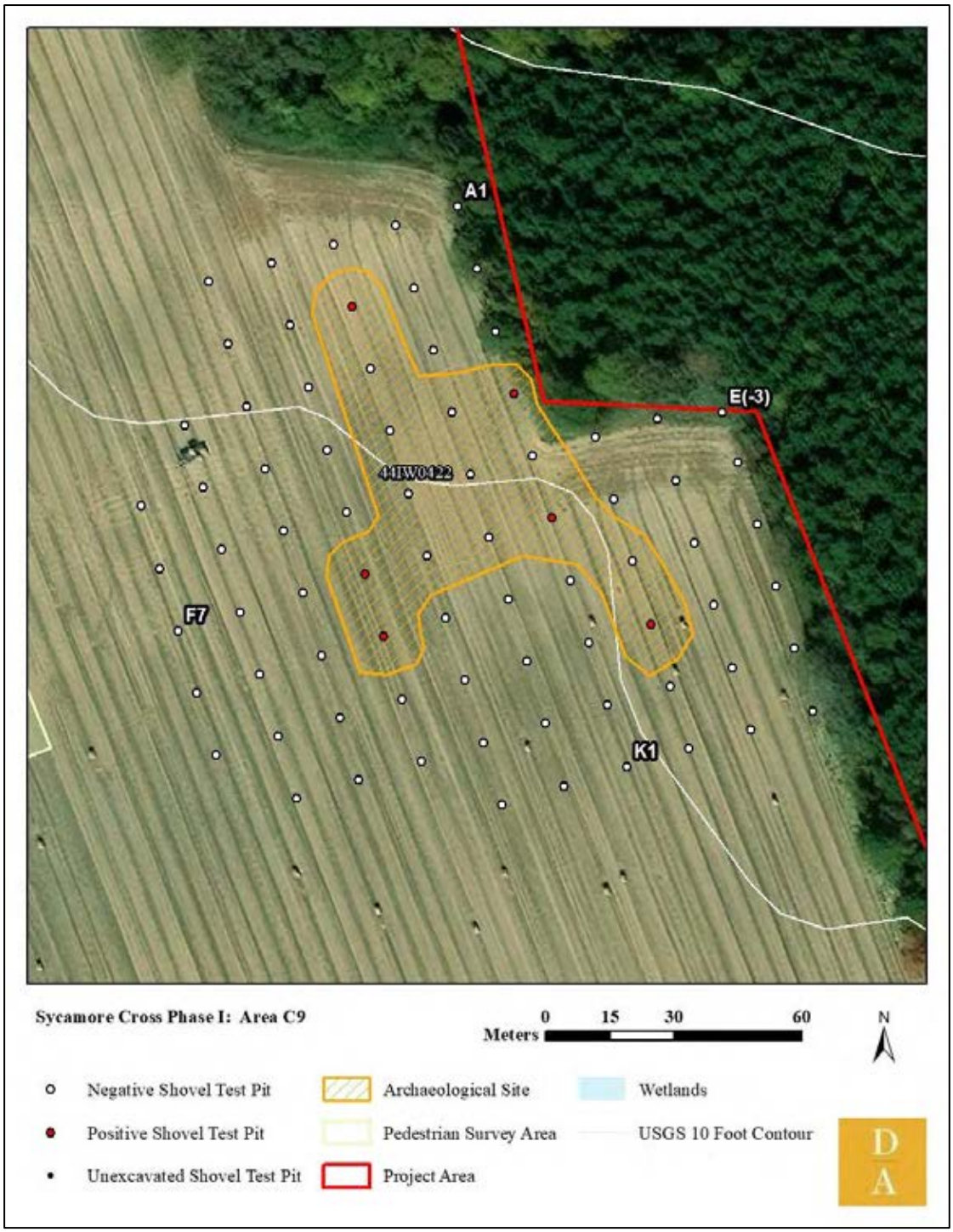


Figure 8-148: Aerial view of Area C9 shovel test grid.

Shovel tests exhibited a three-stratum profile of plowzone which cuts an intact topsoil over subsoil. Stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR6/4 light yellowish brown sand topsoil (A horizon) over 10YR 5/6 yellowish brown sandy clay subsoil (B horizon) (Figure 8-149).

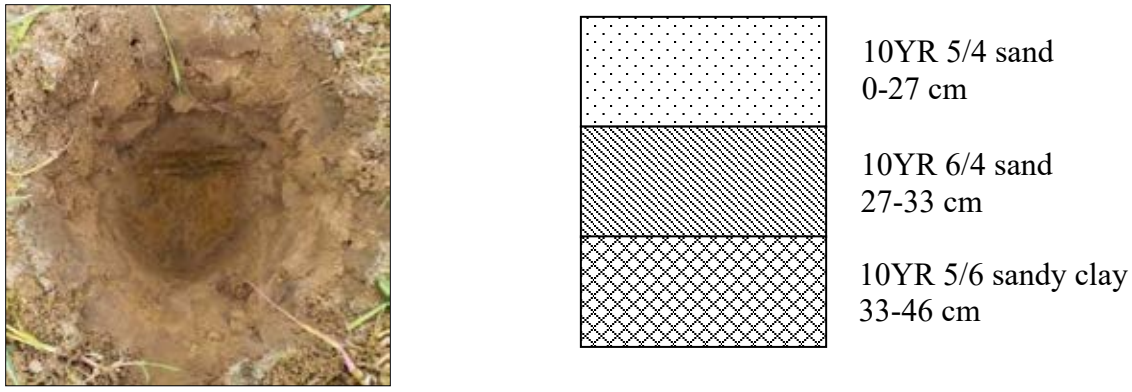


Figure 8-149: Soil profile of Shovel Test B4 in Area C9.

44IW0422

This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C9. 13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron (Figure 8-150). The most common artifact was colorless vessel glass, with four fragments.



Figure 8-150: Artifact summary of Site 44IW0422.

Area C10

This area rests in the southern part of the overall Area C, bounded by Area C2 to the west and south and by the Sycamore Cross project area boundaries to the north. This area was excavated to investigate a part of the project that could not be systematically pedestrian surveyed due to low surface visibility, as well as its proximity to Architectural Resource #046-5148 (Figure 8-151). It

sits on a narrow finger ridge at the headwaters of an unnamed tributary of Mill Swamp, where human activity has formed a dam and artificial wetland outside of the project area.



Figure 8-151: View towards an outbuilding associated with Architectural Resource #046-5148, facing east.

Vegetation in Area C10 at the time of survey varied. In the open field, vegetation consisted of short grasses (Figure 8-152). Around the farm complex, vegetation consisted of tall grasses, woody shrubs, privet, and mature trees (Figure 8-153).



Figure 8-152: Vegetation in the agricultural field in Area C10, facing west.



Figure 8-153: Vegetation around Architectural Resource #046-5148, facing south.

A total of 101 shovel tests were laid out at 15-meter (50-foot) intervals in fourteen transects labeled A through O, four of which could not be excavated due to proximity to structures (Figure 8-154). A total of eight shovel tests were positive for cultural material with fragments of mortar, unidentified nails, vessel glass, and iron bolts. These positive shovel tests were designated Site 44IW0423, which is described in greater detail, below.

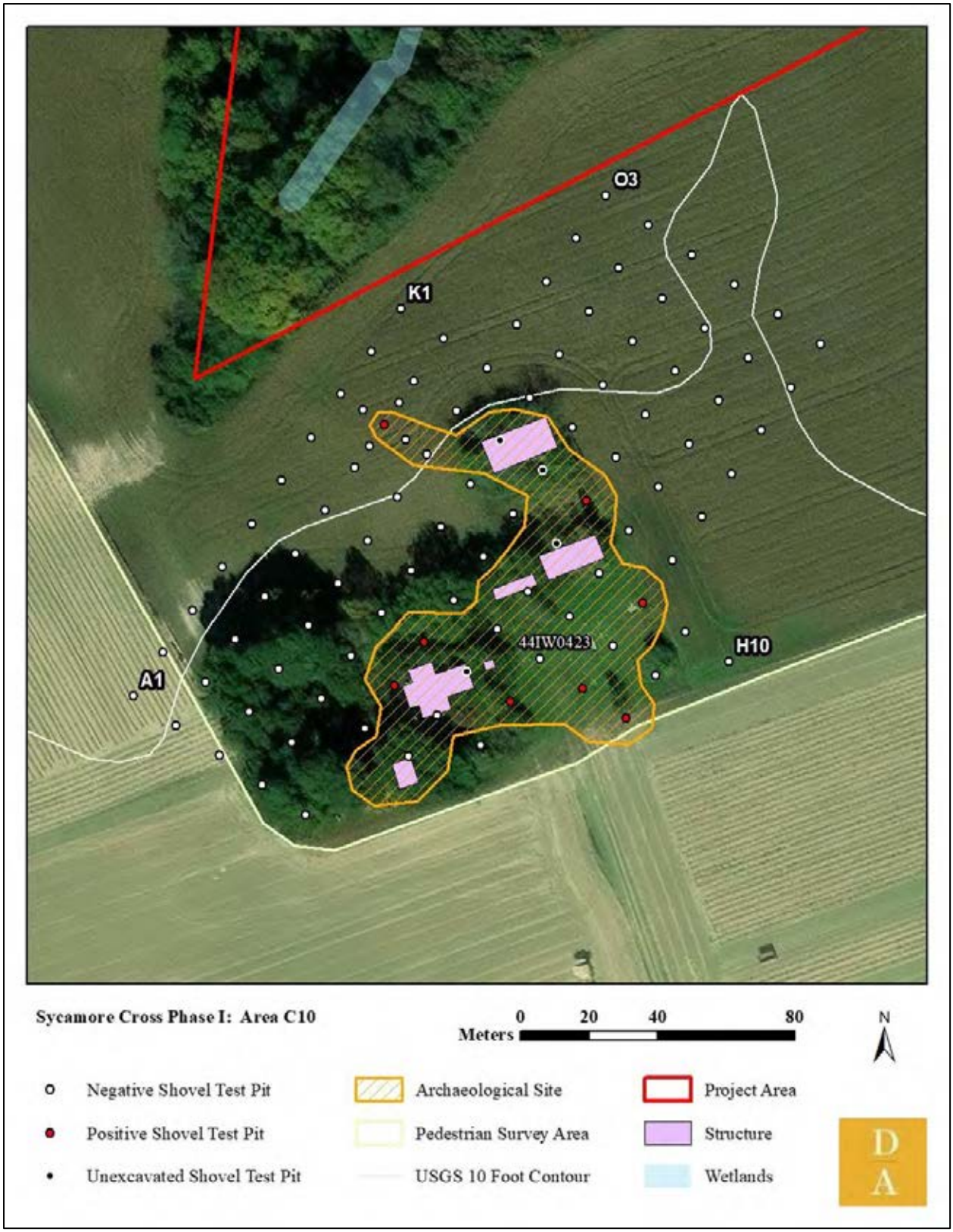


Figure 8-154: Aerial view of Area C10 shovel test grid.

Shovel tests in the agricultural field exhibited a three-stratum profile of plowzone which cuts an intact transition layer over subsoil. Stratigraphy consisted of 10YR 4/3 brown sandy loam plowzone (Ap horizon) over 2.5Y 7/4 pale brown sandy clay transition (AB horizon) over 10YR 7/6 yellow clay subsoil (B horizon) (Figure 8-155). Shovel tests in the thicker vegetation around the architectural resource exhibited a three-stratum profile of a disturbed layer over intact topsoil over subsoil. Stratigraphy here consisted of 10YR 6/6 brownish yellow clay disturbance over 10YR 3/3 dark brown sand topsoil (A horizon) over 2.5Y 6/4 light yellowish brown sandy clay subsoil (B horizon) (Figure 8-156).



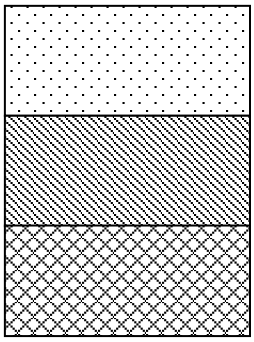


Figure 8-155: Soil profile of Shovel Test J3 in the agricultural field in Area C10.



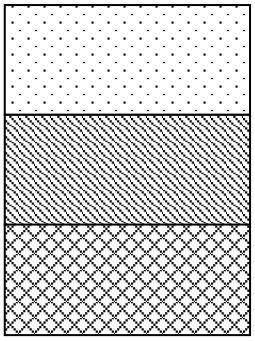


Figure 8-156: Soil profile of Shovel Test E5 in the domestic part of Area C10.

44IW0423

This site consists of an early-to-mid twentieth century artifact scatter in Area C10. Eighteen artifacts were recovered from eight shovel tests, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe (Figure 8-157).



Figure 8-157: Artifact summary of Site 44IW0423.

AREA D

Area D encompasses the parcel in the northwestern part of the Sycamore Cross project area and west of Area A4 (Figure 8-158). This area was timbered in 2017, which caused extensive disturbance. Field technicians visually inspected the area, but systematic shovel testing was not conducted.

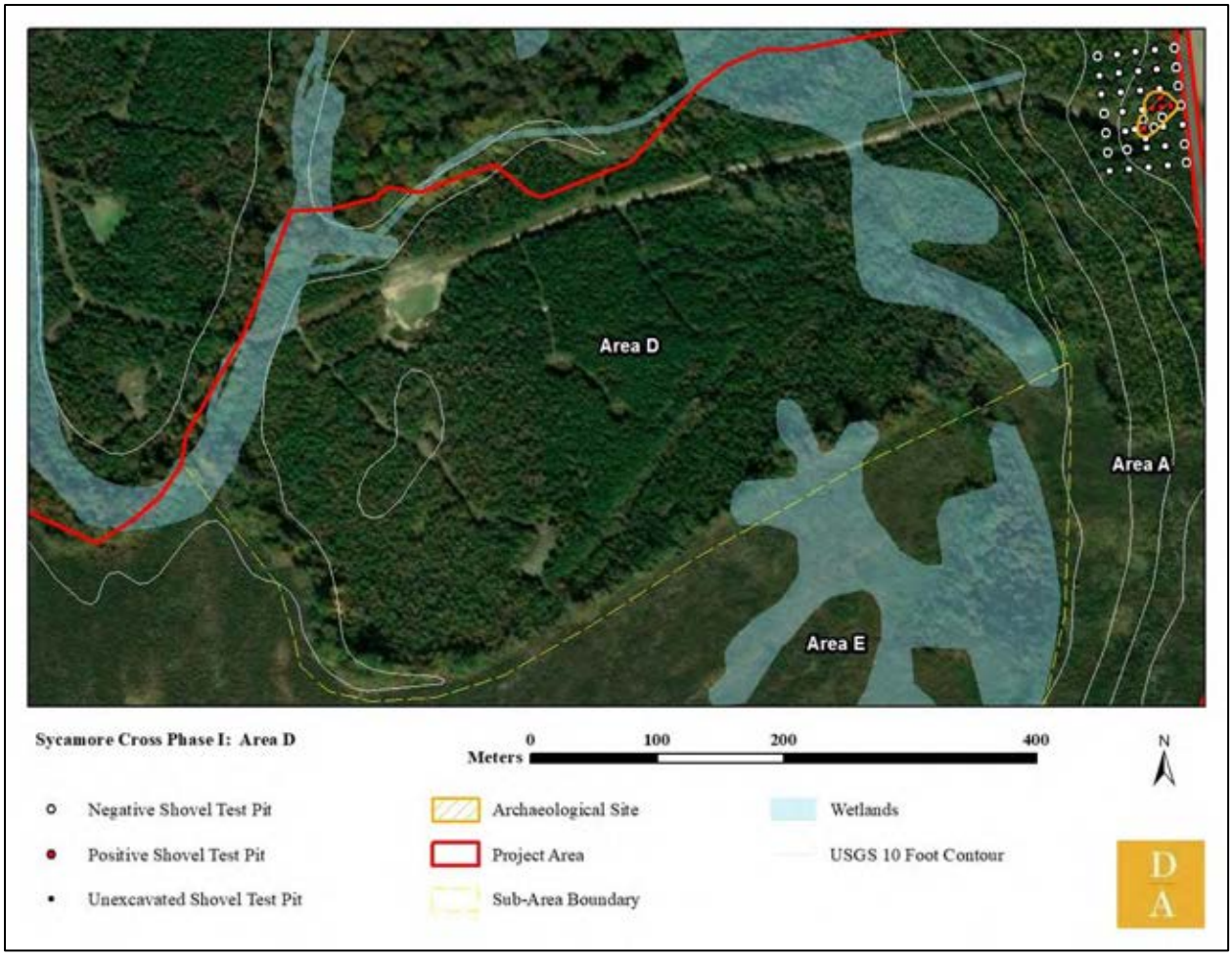


Figure 8-158: Aerial view of Area D.

Terrain in this area consists of a broad, low terrace, formed by two drainage cuts and overlooking the Blackwater River. Standing water was common, and the ground surface was disturbed by erosion and logging equipment (Figure 8-159). Vegetation is primarily densely growing young pine, with a thick undergrowth of tall grasses and briars (Figure 8-160).



Figure 8-159: Standing water in Area D, facing east.



Figure 8-160: Vegetation in Area D, facing north.

AREA E

Area E encompasses the parcel in the western part of the Sycamore Cross project area and northwest of Area A1 (Figure 8-161). This area was timbered in 2021, which caused extensive disturbance. Field technicians visually inspected the area, but systematic shovel testing was not conducted.

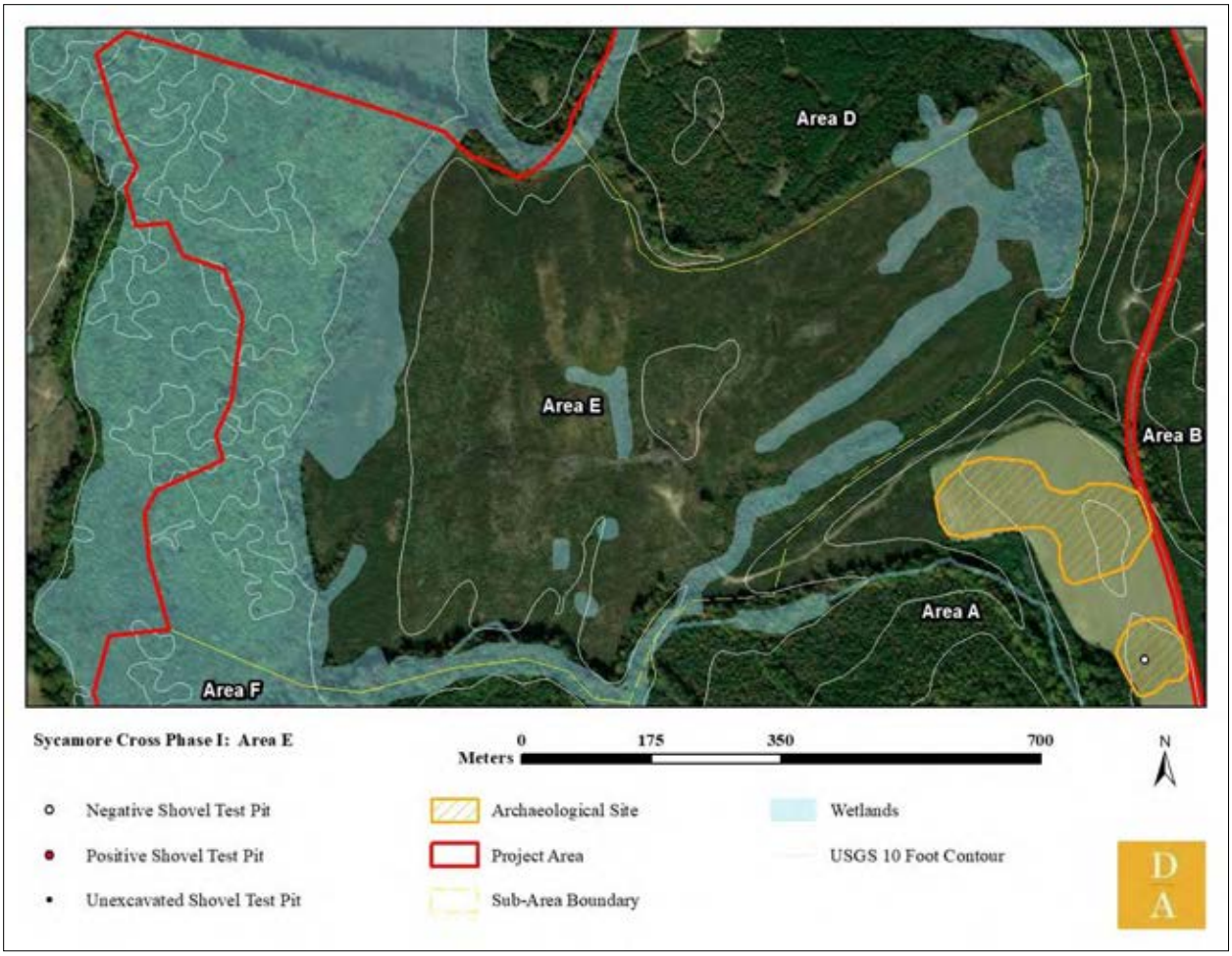


Figure 8-161: Aerial view of Area E.

Terrain in this area consists of a broad, low terrace and a series of knolls. Numerous drainages interrupt the landform, which drain west to the Blackwater River. Standing water was common, and the ground surface was disturbed by erosion and logging equipment (Figure 8-162). Vegetation is primarily sparse pine saplings, with briars and shrubs throughout (Figure 8-163). Thick layers of slash are common (Figure 8-164).



Figure 8-162: Standing water in Area E, facing south.



Figure 8-163: Vegetation in Area E, facing east.



Figure 8-164: Slash in Area E, facing north.

AREA F

Area F encompasses the low terrace west of Area A1 that overlooks Blackwater River (Figure 8-165). It is bounded on all sides by wetlands. Parts of this landform were visually inspected but not systematically shovel tested due to dense vegetation and wetlands.

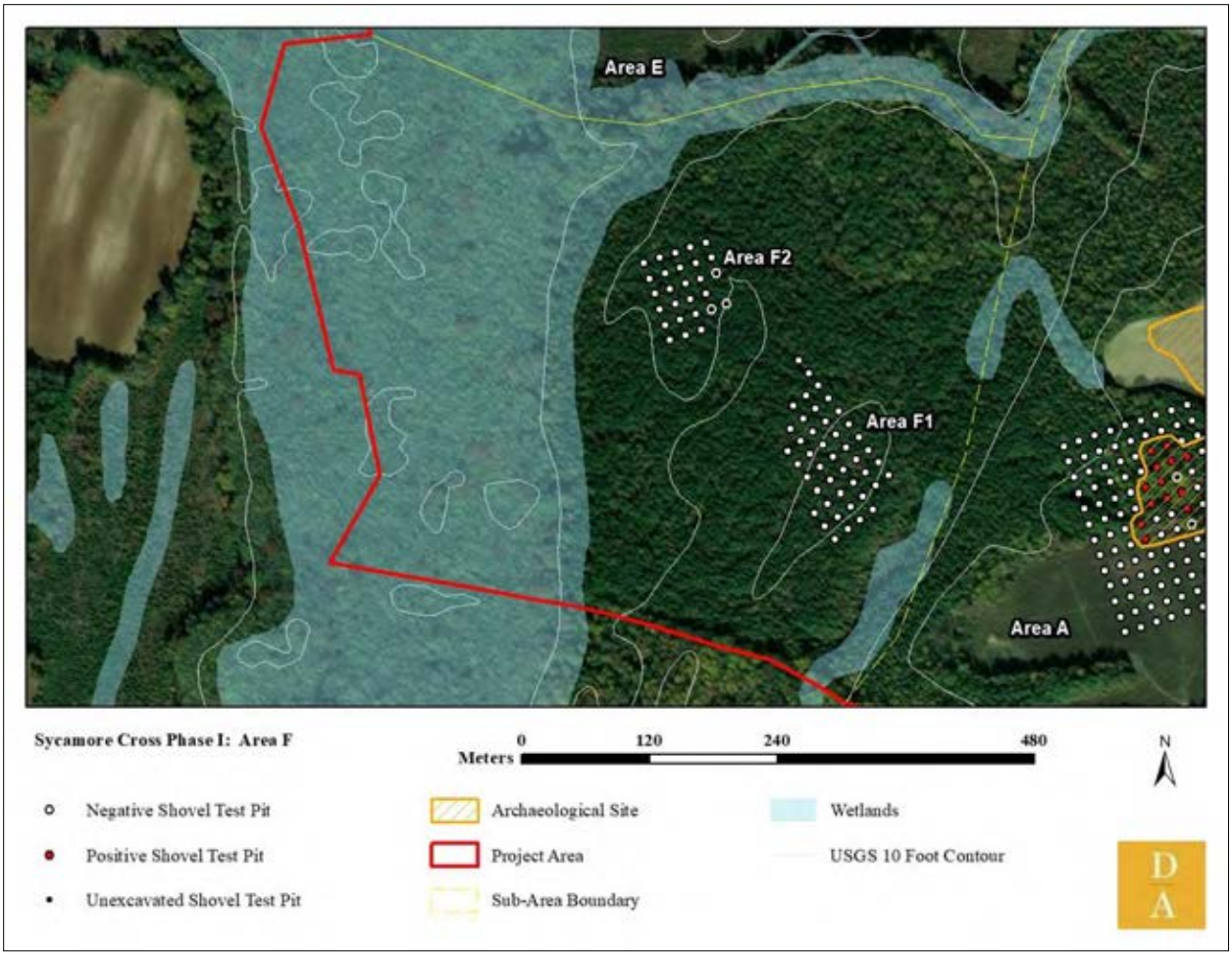


Figure 8-165: Overall map of Area F.

Vegetation in these areas ranged from mixed woodland with dense vines and briars, and pine saplings and holly with layers of slash (Figure 8-166, Figure 8-167). Access to shovel test grids was provided by a series of logging roads. Two shovel test grids were placed on the high ground of Area F, labeled F1 and F2.



Figure 8-166: Thick vegetation preventing shovel test survey in Area F.



Figure 8-167: Thick briars in Area F preventing shovel test survey.

Area F1

This area consists of the narrow ridge in the southeastern part of the overall Area F, across a narrow swamp from Area A5, and bounded to the west by wetlands associated with Blackwater River. Terrain ranged from flat to gently sloped and was minimally disturbed by timbering activity.

Vegetation in this area consisted of mature planted pine forest with an open understory of sparse holly shrubs and vines (Figure 8-168). Vegetation in the wetlands around the grid was primarily mature deciduous trees and holly (Figure 8-169).



Figure 8-168: Vegetation in Area F1 facing north.



Figure 8-169: Wetlands south and east of Area F1, facing west.

A total of 45 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F (Figure 8-170). No cultural material was recovered, and no historical features were observed.

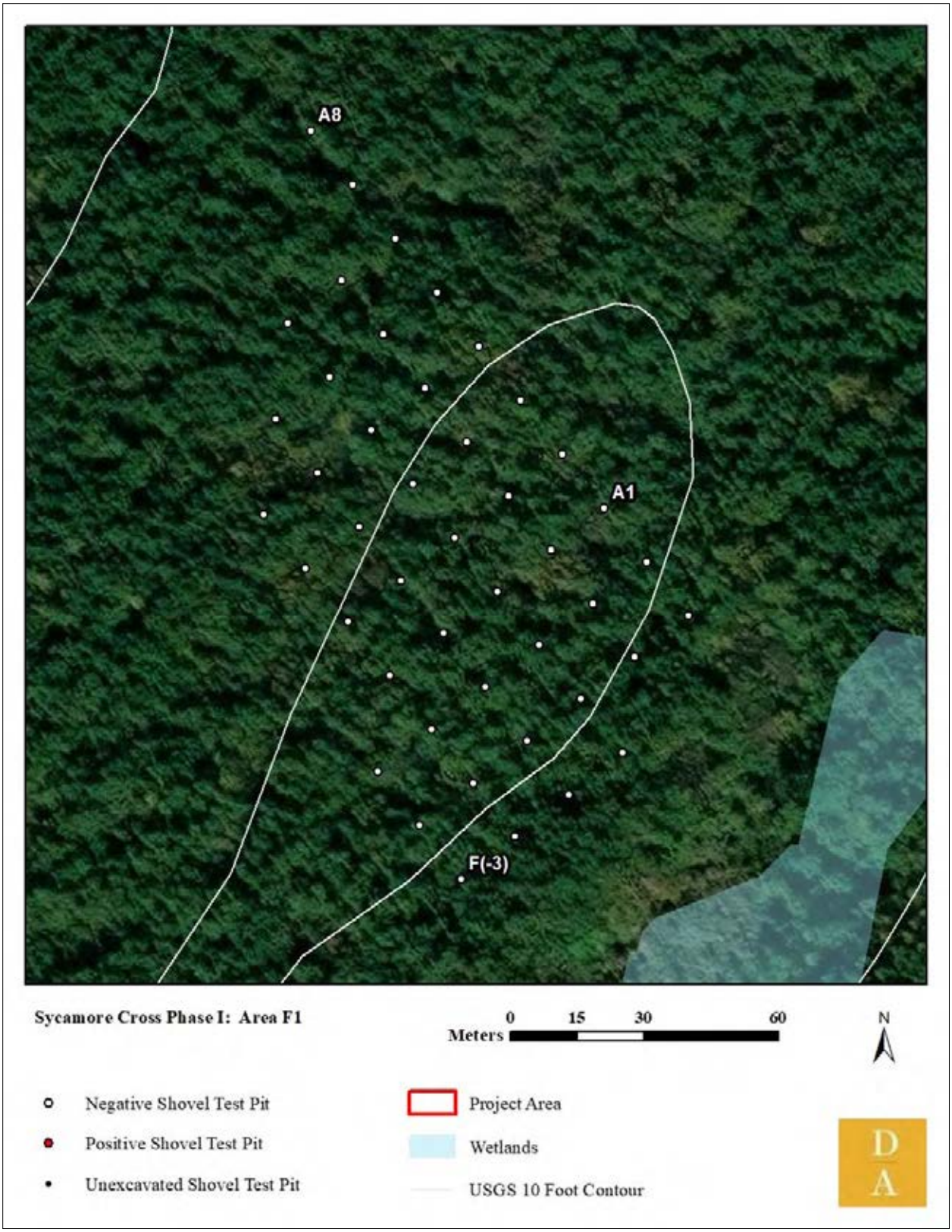


Figure 8-170: Aerial view of Area F1 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 10YR 4/3 brown sand topsoil (A horizon) over 10YR 6/6 brownish yellow clay subsoil (B horizon) (Figure 8-171).

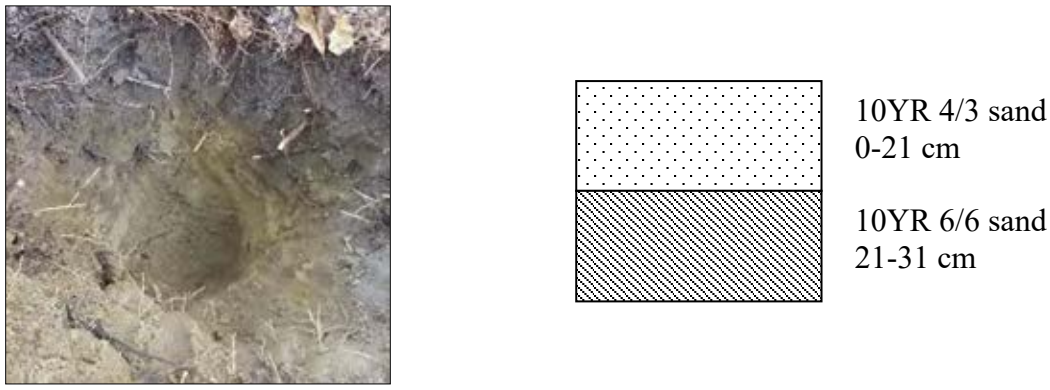


Figure 8-171: Soil profile of Shovel Test C4 in Area F1.

Area F2

This area consists of a low finger ridge in the northwestern part of the overall Area F, north of Area F1, and south of Area E. Wetlands bound the north and west of the area (Figure 8-172). Terrain was flat with steep slopes at the edge of the grid, and surface disturbance was minimal.



Figure 8-172: Wetlands and mixed deciduous woodland north of Area F2, facing north.

Vegetation in this area consisted of mature planted pine forest with an open understory of sparse holly shrubs, vines, and deciduous saplings (Figure 8-173). Vegetation in the wetlands around the grid was primarily mature deciduous trees and holly.



Figure 8-173: Vegetation in Area F2 facing south.

A total of 27 shovel tests were laid out at 15-meter (50-foot) intervals in six transects labeled A through F, three of which could not be excavated due to slope (Figure 8-174). No cultural material was recovered, and no historical features were observed.

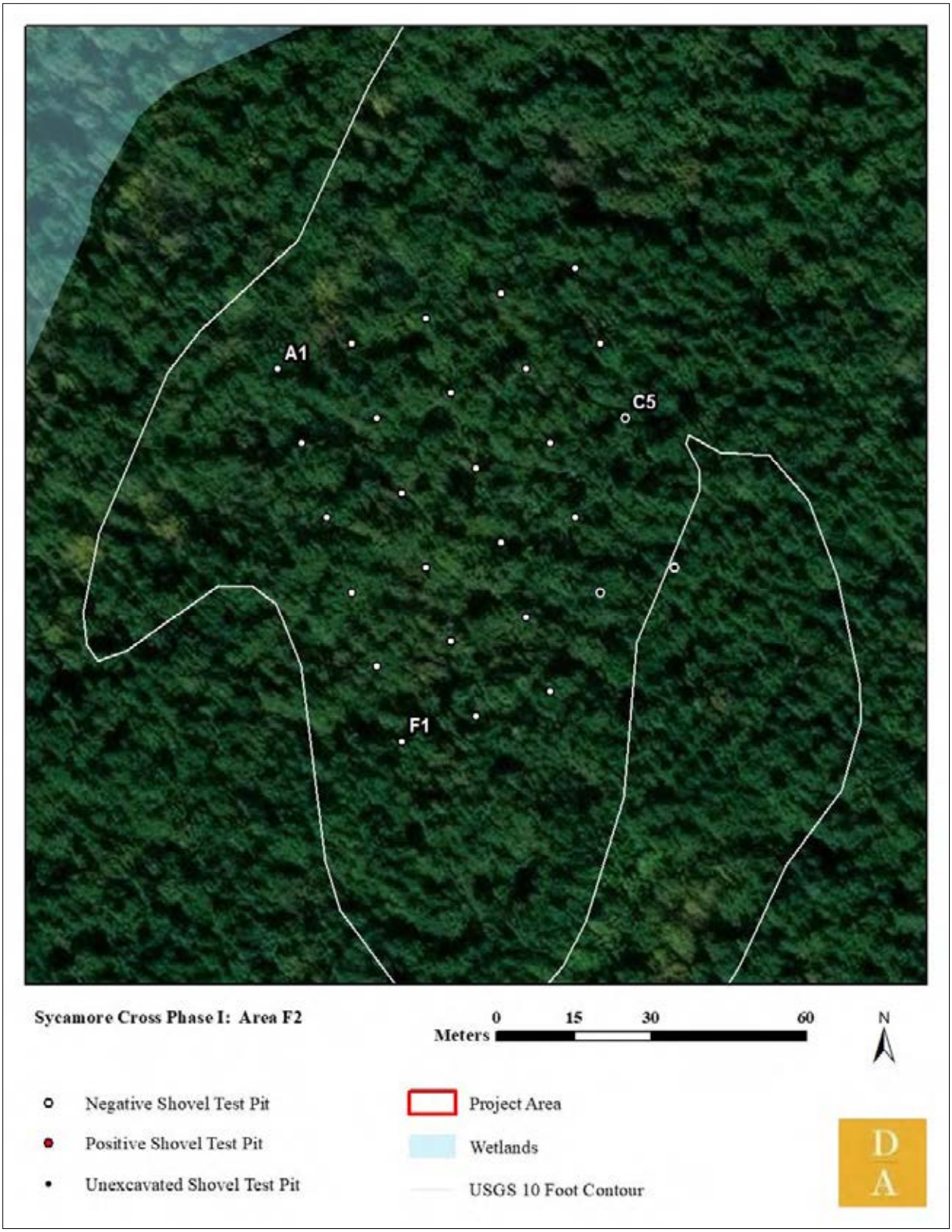


Figure 8-174: Aerial view of Area F2 shovel test grid.

Shovel tests in this area exhibited a two-stratum profile of plowzone over subsoil. Stratigraphy consisted of 2.5Y 5/4 light olive brown sandy clay loam (A horizon) over 2.5Y 6/8 olive yellow clay subsoil (B horizon) (Figure 8-175).

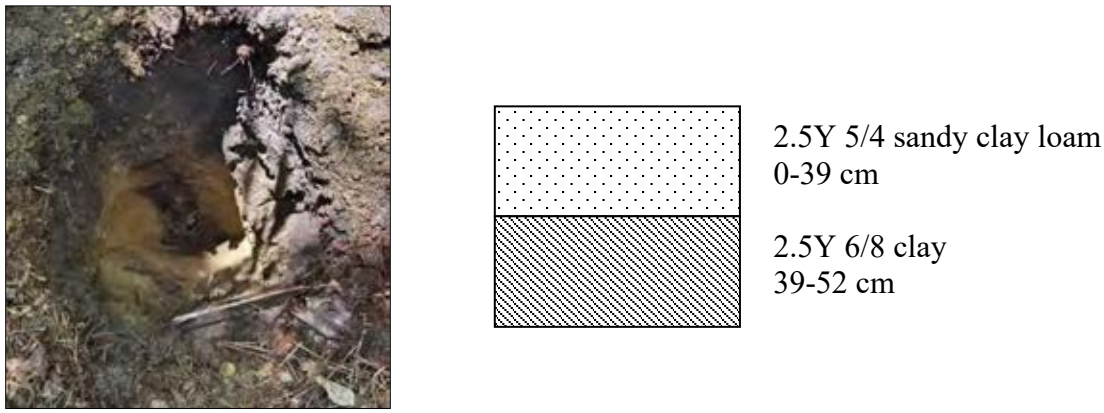


Figure 8-175: Soil profile of Shovel Test B2 in Area F2.

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9. CONCLUSIONS AND RECOMMENDATIONS

In April 2024, Dutton +Associates, LLC (D+A) completed a Phase I cultural resource survey (Phase I) of the ±817.46-Hectare (2,020-Acre) Sycamore Cross Solar project area in Isle of Wight and Surry counties, Virginia. Fieldwork for the study was conducted between December 2023 and March 2024. The effort was intended to provide documentation and assessment of cultural resources within the study 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 effort was conducted in support of an application for a Certificate of Public Convenience and Necessity (CPCN) from the Virginia State Corporation Commission (SCC) and serves as a follow-up to the previously coordinated *Phase IA Cultural Resource Assessment of the Sycamore Cross Study Area* (D+A July 2023).

The project involves the development of a solar energy production facility near the border of Isle of Wight and Surry counties generally along Sycamore Cross Road, Ramsey Road, Mill Swamp Road, Rattlesnake Trail, and White Hill Trail. As part of the project, a series of solar arrays will be built throughout the project area.

The architectural resources survey for the Sycamore Cross Solar Project resulted in the identification and recordation of forty-four (44) architectural resources greater than 50 years of age (constructed in 1974 or earlier) located within the one-half mile architectural survey area. Of the surveyed resources, twenty-five (25) were previously recorded (VDHR# VDHR# 046-0029, 046-0030, 046-0032, 046-0055, 046-0068, 046-5147/5152, 046-5260, 046-5550/5552, 087-5509, 090-5163/5168, and 090-5174) and nineteen (19) were newly recorded during this Phase I Survey (VDHR# 046-5804/5817 and 090-5208/5212). Ten (10) of the previously recorded sites were recently surveyed and determined not eligible for listing in the NRHP by the VDHR within the last five years, and therefore not subject to re-survey as part of this effort (VDHR# 046-5550/5552, 090-5163/5168, and 090-5174) and another previously recorded resource was relocated outside of the survey area and therefore also not subject to re-survey at this time (VDHR# 087-5509). Survey at this time also found that an additional five (5) previously recorded resources have been demolished since they were last updated (VDHR# 046-0029, 046-0030, 046-0032, 046-0055, and 046-5260). The surveyed resources consist primarily of domestic buildings and farmsteads from the early-nineteenth to mid-twentieth century. Also surveyed were several twentieth century commercial buildings, a former late-nineteenth century post office, a nineteenth century small family cemetery, and a mid-twentieth century church.

Of the surveyed resources, four (4) are considered potentially eligible for listing in the NRHP. This includes two Antebellum homes that represent the earliest extant development within the survey area and an important reflection of the architectural evolution of rural Isle of Wight County during that period. The other two resources are a late-nineteenth century post office and associated dwelling that remain as an example of a historically significant aspect of the crossroads community of Sycamore Cross at the turn-of-the-twentieth century. The rest of the surveyed properties generally 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.
Each of the four NRHP-eligible resources was subject to an assessment of impacts brought about by the project. Of the eligible resources, three are located directly within the study area, however,

will be excluded by the project development plan and therefore will not be directly impacted by the project. With regards to indirect, visual impacts, field inspection revealed that the generally open nature of the landscape within and bordering the NRHP-eligible properties permits views of the project area that range from partially screened to nearly unobstructed. To minimize the potential for visibility of the project, a variety of measures have been employed including setbacks from roadways and property lines, and supplemental landscape buffers. ***With these measures, it is D+A's recommendation that visibility of the project from one resource, the Wilson Hollemon House (VDHR# 046-0068) will be screened and therefore the Sycamore Cross Solar Project will have no more than a minimal impact to it. With regards to the remaining three resources, the setbacks and landscape screening will reduce visibility of the project but some portions will remain visible. As such, it is D+A's recommendation that the Sycamore Cross Solar Project will result in a moderate impact to the Sycamore Cross Post Office (VDHR# 046-5149), the house at 11356 Sycamore Cross Drive (VDHR# 046-5150), and the Betts Farm (VDHR# 046-5811)*** (Table 9-1).

Table 9-1: Summary of NRHP-eligible architectural resources within the project survey area and recommendations of project impacts.

VDHR ID#	Resource Name/Address	NRHP Eligibility	Proximity to Project	Project Impact
046-0068	Wilson Hollemon House, 5499 Mill Swamp Road	D+A: Potentially Eligible	Adjacent to Project	Minimal Impact
046-5149	Sycamore Cross Post Office, Mill Swamp Road	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact
046-5150	House, 11356 Sycamore Cross Drive	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact
046-5811	Betts Farm, 5191 Mill Swamp Road	D+A: Potentially Eligible	Within Project Area (in Exclusion Area)	Moderate Impact

One (1) cemetery was identified within testing area B5 of the project area, and is an independent resource, not associated with any standing architectural resource (Table 9-2). ***Although the cemetery represents a typical small family cemetery and is considered not eligible for listing in the NRHP, the visual limits of the cemetery should be avoided with a 100-foot avoidance zone, or be subject to further delineation, to ensure protection during and after project construction.***

Table 9-2: Summary of Cemetery identified within the project area with proximity to project area and recommended avoidance measures.

Cemetery #	Name, Location	NRHP Status	Proximity to Project Area	Avoidance/Impacts
046-5817	Holleman Cemetery, White Hill Trail	D+A: Not Eligible	Within Project Area	100-foot avoidance zone or further delineation

Archaeological investigations followed an approved testing model that identified areas of high, moderate, and low archaeological potential. The testing strategy involved a combination of systematic pedestrian survey and shovel testing. A total of 1,175 shovel test pits were excavated throughout the project area. The archaeological survey resulted in the identification of 20 newly recorded sites (Table 9-3).

Of these sites, six are domestic sites associated with standing architectural resources, and fourteen are mid-nineteenth to early-twentieth century sites with no features and a light archaeological signature. Most of these sites offer little new or significant archaeological data and are site types

that are well represented in the region; ***D+A recommends these 18 sites not eligible for inclusion in the NRHP, and no additional work is required.*** However, two sites warrant further investigation: Site 44IW0424 consists of the ruin of a circa 1825 dwelling; and Site 44IW0407 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and ***D+A recommends avoidance with a 50-foot buffer or further investigation of these sites.***

Table 9-3: Table showing archaeological sites and eligibility recommendations.

VDHR ID#	Site Type	Tine Period	NRHP Eligibility	Treatment/ Project Impacts
44IW0405	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0406	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0407	**Farmstead**	**Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II**	**Potentially Eligible**	**Avoidance with 50-foot buffer/ Phase II Evaluation**
44IW0408	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0409	Farmstead	Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0410	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0411	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0412	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0413	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0414	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0415	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0416	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0417	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0418	Farmstead	Reconstruction and Growth	Not Eligible	No Impact
44IW0419	Farmstead	Civil War, Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0420	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0421	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0422	Farmstead	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0423	Artifact Scatter	Reconstruction and Growth, World War I to World War II, The New Dominion	Not Eligible	No Impact
44IW0424	**Single Dwelling**	**Antebellum Period, Civil War, Reconstruction and Growth, World War I to World War II**	**Further Study**	**Avoidance with 50-foot buffer/ Further Study**

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APPENDIX A: RESUMES

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ROBERT J. TAYLOR, JR
Principal Investigator
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 15 years of Cultural Resource Management Experience and has taken part in projects in Virginia and throughout the East Coast.

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, writing survey reports, preparing *NRHP* evaluations and applications for individual resources and historic districts, compiling HABS/HAER documentation packages, and assisting with cultural resource consultation and compliance. 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.

As Principal Investigator and 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

ROBERT J. TAYLOR, JR
Principal Investigator
Senior Architectural Historian

Professional Experience

Dutton + Associates, LLC, Principal Investigator, Richmond, Virginia, March 2009- present.
Manages cultural resource projects, oversees architectural history team, conducts field survey and investigations, assembles architectural resource documentation, authors cultural resource survey reports, prepares NRHP nominations, prepares HABS/HAER documentation, provides regulatory and compliance consultation.

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

Cultural Resource Management Plans
Regional Integrated Cultural Resource Management Plan for Naval Installations in Hampton Roads, Virginia
Programmatic Agreement amongst NASA, the VASHPO, and ACHP for the Management of Facilities, Infrastructure, and Sites at the NASA Langley Research Center, Hampton, Virginia

Cultural Resource Survey and Compliance Reports
Phase I Cultural Resource Survey of the Southern Virginia Solar Center, Pittsylvania County, Virginia
Phase I Cultural Resource of the Gordonsville-Remington 500 kV Transmission Line Rebuild Project, Orange, Fauquier, and Culpeper County, Virginia
NRHP Evaluations of Two One Room School Houses and a Farmstead in Perrysburg Township, Ohio
Intensive-Level Architectural Survey of the Vice Admiral James H. Doyle Jr, Combat System Engineering Development Site (CSEDS), Moorestown, New Jersey
Review and Evaluation of the Adaptive Rehabilitation of Quarters D&E and G&H at the Norfolk Naval Shipyard, Portsmouth, Virginia
Cultural Resource Assessment Survey (CRAS) of the I-395 Advance Acquisition #2 in Miami-Dade County, Florida
CRAS of the I-4/Crosstown Connector Interchange Design in Hillsborough County, Florida

NRHP Nominations
Hermitage Road Historic District, Richmond, Virginia
Old Wythe Historic District, Hampton, Virginia
NASA LaRC Historic District, Hampton, Virginia
Sebrell Rural Historic District, Southampton County, Virginia
Palmetto Beach Historic District, Tampa, Florida
Rosemere Historic District, Orlando, Florida

Historic American Buildings Survey (HABS) Packages
NASA Low Turbulence Pressure Tunnel, LaRC, Hampton VA, HABS # VA-118-H
NASA Aircraft Landing Dynamics Facility, LaRC, Hampton, VA, HABS # unassigned
1st Street Bridge update package, Los Angeles, CA HAER # CA-175
Faith Temple Missionary Baptist Church, Tampa, FL, HABS # FL-542
Building 64, Melville Net and Fuel Depot, Naval Station Newport, RI, RIHRA # PORT-0004

Technical and Research Papers
"New Use for an Old Gas Station: Rehabilitation Plan and Feasibility Assessment for the Fry's Spring Service Station in Charlottesville, Virginia"
"Historic Structure Report for the Edward Valentine House (Redland Club Building) in Charlottesville, Virginia"
"Historic Linear Resources: Challenges and the Practical Applicability of NRHP Criteria"
"'A Country Doctor for Forty Years' A Historic Structure Report for the Dr. J.E. Wilson House in Haywood County, North Carolina"

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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

Dr. Smith holds a Ph.D. 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 dissertation research involved creating and interpreting data sets for the Digital Archaeological Archive of Comparative Slavery, and it was focused on the construction of race and identity through material culture on plantations in eighteenth-century Virginia. Her research interests include material culture studies, artifacts of personal adornment, and the intersection of race and gender.

Her experience in Cultural Resource Management includes managing a wide range of projects, including Phase I surveys, Phase II evaluations, and Phase III data recovery, for a variety of clients, including renewable energy, electric transmission, and transportation.

Dr. Smith has over 15 years of experience in archaeology. Prior to 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. Before pursuing graduate studies, she worked as an archaeologist at James Madison's Montpelier, helping to identify sites associated with that enslaved community and interpret them to the public.

As a Principal Investigator for Dutton + Associates, Dr. Smith manages all aspects of archaeological research, supervising both lab and field work.

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

J. HOPE SMITH
Principal Investigator

Professional Experience

Dutton+Associates, LLC, Project Archaeologist
Richmond, Virginia, 2017
Directs operation of archaeological field and lab work. Manages and conducts archaeological investigations. Prepares research designs and excavation 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; coauthored site reports and presented research to the public.

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

Dissertation:
Adorned Identities: an Archaeological Perspective on Race and Self-Presentation in 18th-Century Virginia

Phase I Surveys
Mecklenburg Timber and Prison sites, Mecklenburg Co
Remington to Gordonsville Transmission Line
Montebello Farm, Loudoun Co.
Arbordale, York Co.
Spotsylvania Town Center, City of Fredericksburg
Palmer's Creek, Spotsylvania Co.
Bristers to Chancellor 500kV Transmission Line
Skipjack Solar, Charles City Co

Phase II Evaluations
44LD1819, Loudoun Co
44GE0373, Greensville Co
44MC0970, Mecklenburg Co

Phase III Data Recoveries
44LD1244, Loudoun Co
44CC0448, Charles City Co
44LD1359, Loudoun Co

Museum Technical Reports
Object Report and Museum Purchasing Recommendations, The Montpelier Foundation,

Report of Archaeological Testing at Mount Pleasant, The Montpelier Foundation,

Archaeological Dataset and Context, Digital Archaeological Archive of Comparative Slavery (DAACS)

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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 INVENTORY

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Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
Area A1 Pedestrian Survey					
Surface Collection 1	Surface	Coarse earthenware, Drain tile	4	Body	three fragments glazed on interior and exterior, one only exterior
Surface Collection 2	Surface	Refined earthenware, Dipped ware	1	Body	
Surface Collection 3	Surface	Glass, Apothecary	1	Neck and finish	bubble inclusions
Area A3 / 44IW0414		,			
B1	I	Glass, Window, aqua	4	Pane	
B2	I	Glass, Vessel, brown	1	Base	Embossed stippling
B2	I	Glass, Vessel, colorless	4	Body	
B2	I	Glass, Window, colorless	2	Pane	
B2	I	Iron, Wire	1	Fragment	
B2	I	Synthetic, Hardware, unidentified	1	Whole	Plastic cylander with two wires in one end
B3	I	Glass, Vessel, colorless	1	Finish	Threaded finish
B3	I	Glass, Vessel, colorless	2	Body	
B3	I	Glass, Vessel, opaque	1	Body	
B3	I	Glass, Lantern	2	Body	
B3	I	Glass, Window, Aqua	3	Pane	
C1	I	Glass, Vessel, colorless	1	Body	
C1	I	Iron, Wire	1	Fragment	
C2	I	Glass, Vessel, colorless	1	Base	Embossed, stippled
D2	I	Glass, Vessel, colorless	1	Body	
D2	I	Iron, Unidentified	1	Fragment	
D3	I	Glass, Vessel, brown	2	Body	
D3	I	Glass, Vessel, colorless	9	Body	
D3	I	Iron, Bar, unidentified	1	Fragment	
D3	I	Glass, Window, aqua	1	Pane	
D3	I	Glass, Vessel, colorless	1	Body	Embossed, stippled
D3	I	Glass, Vessel, colorless	1	Base	Embossed, stippled
D3	I	Glass, Vessel, colorless	1	Base	Embossed star
Area A4 / 44IW0415		,			
CD2	I	Glass, Window, colorless	5	Pane	
D1.5	I	Glass, Vessel, colorless	1	Body	Bubble inclusions
D1.5	I	Glass, Window, aqua	8	Pane	
D1.5	I	Glass, Window, colorless	29	Pane	
D1.5	I	Glass, Vessel, aqua	8	Body	
D1.5	I	Glass, Vessel, colorless	1	Body	plastic film, unidentifiable

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
D1.5	I	Glass, Unidentified, heat altered	63	Fragment	Too melted to tell if vessel or window
D1.5	I	Iron, Washer	1	Whole	
D1.5	I	Iron, Screw	2	Whole	
D1.5	I	Iron, Nail, wire	1	Whole	
D1.5	I	Iron, Nail, unidentified	2	Head shank	
D1.5	I	Iron, Hardware, unidentified	1	Fragment	Hinge, not for a door. Two bars with one pin
D1.5	I	Iron, Plate and nail, wrought	1	Fragment	small rectangular sheet with a short nail
D1.5	I	Iron, Screw, washer, and nut	1	Whole	Rusted together
D1.5	I	Iron, Screw and washer	1	Fragment	Rusted together and to some unidentified alloy
D1.5	I	Iron, Screw, nut, and hardware	1	Fragment	Unidentified hardware fragment
D1.5	I	Lead alloy, Unidentified	1	Fragment	
D1.5	I	Lead, Unidentified	1	Fragment	
D1.5	I	Alloy, Grommet	1	Whole	"UNITED CARR"
D1.5	I	Alloy, Hardware, unidentified	1	Fragment	unidentified bracket with two corroded bolts
D1.5	I	Synthetic, Unidentified	1	Fragment	
D2	I	Iron, Wire	1	Fragment	
D2	I	Iron, Washer	1	Whole	
D2	I	Lead alloy, Unidentified	4	Fragment	
D2	I	Glass, Window, colorless	5	Pane	
D2	I	Glass, Window, aqua	2	Pane	
D2.5	I	Glass, Vessel, colorless	2	Base	Embossed stippling
D2.5	I	Glass, Vessel, colorless	13	Body	Embossed stippling
D2.5	I	Glass, Window, colorless	16	Pane	
D2.5	I	Iron, Wire	1	Fragment	
D2.5	I	Iron, Bolt	1	Whole	nut rusted on to bolt
E3	I	Terra cotta, Drain pipe	1	Fragment	Not collected
Area A5 / 44IW0407		,			
D7	I	Refined earthenware, Undecorated	1	Body	
D7	I	Iron, Sheet	8	Fragment	small fragments of very thin metal sheets
D8	I	Glass, Vessel, green	1	Body	
E5	I	Glass, Vessel, green	1	Body	
E5	I	Glass, Window, colorless	1	Pane	
E6	I	Refined earthenware, Undecorated	1	Body	
F3	I	Shell, Oyster	1	Fragment	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
F3	I	Iron, Nail, wire	1	Shank	
F3	I	Iron, Nail, unidentified	3	Fragment	
F4	I	Iron, Nail, unidentified	1	Shank	
F4	I	Glass, Lid liner	1	Rim	
F4	I	Refined earthenware, Undecorated	2	Body	
F4	I	Glass, Vessel, solarized	3	Body	
F4	I	Glass, Vessel, aqua	2	Body	
F4	I	Glass, Window, aqua	1	Pane	
F5	I	Refined earthenware, Transfer print	1	Body	Diaper pattern
F6	I	Refined earthenware, Undecorated	1	Body	
F6	I	Glass, Window, colorless	1	Pane	
G3	I	Refined earthenware, Undecorated	1	Rim	
G3	I	Glass, Vessel, colorless	1	Body	
G3	I	Glass, Window, aqua	1	Pane	
G4	I	Refined earthenware, Spall	2	Body	
G4	I	Glass, Vessel, solarized	1	Body	
G4	I	Glass, Window, aqua	4	Pane	
G4	I	Iron, Unidentified	1	Fragment	
G6	I	Refined earthenware, Undecorated	1	Body	
G6	I	Glass, Vessel, colorless	2	Body	
G6	I	Glass, Vessel, opaque	1	Body	
G7	I	Stoneware, American, bristol, albany slip	1	Body	Bristol glaze exterior, albany slip interior
H4	I	Refined earthenware, Spall	1	Body	
H4	I	Refined earthenware, Undecorated	1	Body	Buff glaze
H4	I	Glass, Vessel, colorless	1	Body	
H4	I	Glass, Window, aqua	2	Pane	
J8	I	Glass, Vessel, solarized	1	Body	Bubble inclusions
L8	I	Brick,	1	Fragment	Not collected
Area B1 Pedestrian Survey / 44IW0409					
Surface Collection 1	Surface	Clay, Pipe	1	Stem	molded hobnail pattern at edge of stem
Area B1 Pedestrian Survey / 44IW0410					
Surface Collection 2	Surface	Glass, Window, aqua	2	Pane	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
Surface Collection 2	Surface	Glass, Vessel, dark green	1	Base	
Surface Collection 2	Surface	Refined earthenware, Spall	1	Body	
Surface Collection 2	Surface	Stoneware, Bristol	1	Body	Bristol exterior, albany slip interior
Surface Collection 2	Surface	Stoneware, Reed Pipe	1	Stem	ribbed pattern
Area B1 Pedestrian Survey					
Surface Collection 3	Surface	Stoneware, Westerwald	1	Body	
Area B3		,			
A11	I	Brick,	1	Fragment	Not collected
Area B4 / 44IW0416		,			
(-A)5	I	Glass, Vessel, solarized	1	Body	
(-A)4.5	I	Iron, Unidentified	1	Fragment	heavily corroded
(-A)A3	I	Brick,	1	Fragment	Not collected
A3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, green	1	Body	
B5	I	Brick,	1	Fragment	Not collected
C2.5	I	Glass, Vessel, colorless	1	Body	
C2.5	I	Glass, Vessel, opaque	2	Body	
C3	I	Refined earthenware, Undecorated	1	Handle	
C3	I	Refined earthenware, Spall	1	Body	
C3	I	Glass, Window, colorless	1	Pane	
C3	I	Iron, Nail, unidentified	5	Shank	
C4	I	Brick,	1	Fragment	
C4	I	Terra cotta, Drain pipe	1	Fragment	
C4	I	Iron, Nail, unidentified	1	Shank	
C4	I	Iron, Unidentified	2	Fragment	heavily corroded
CD3	I	Brick,	1	Fragment	Not collected
CD4	I	Iron, Hardware, unidentified	1	Fragment	
D5	I	Glass, Vessel, colorless	1	Finish	Threaded finish
D5	I	Glass, Vessel, colorless	2	Body	
D5	I	Glass, Window, aqua	1	Pane	
D5	I	Composite, Spark plug	1	Whole	"CHAMPION N-14Y" heavily corroded
D5.5	I	Iron, Nail, unidentified	1	Fragment	
E3	I	Terra cotta, Drain pipe	6	Body	DISCARDED
E3	I	Iron, Buckle	1	Whole	An iron rectangle with a partial hook on one end, 6x4 cm

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
E4.5	I	Refined earthenware, Spall	2	Body	
E4.5	I	Glass, Window, colorless	1	Pane	
E4.5	I	Brick,	1	Fragment	
E4.5	I	Glass, Vessel, aqua	2	Body	
E4.5	I	Glass, Vessel, colorless	4	Body	
E4.5	I	Glass, Vessel, colorless	1	Body	Embossed, diamond pattern
E4.5	I	Glass, Vessel, colorless	1	Fragment	Melted
E5	I	Glass, Vessel, colorless	3	Body	
E5	I	Glass, Vessel, brown	1	Body	
E5	I	Brick,	1	Fragment	
EF5	I	Glass, Vessel, aqua	1	Body	
EF5	I				
EF5	I	Refined earthenware, Molded	2	Rim	Mend
EF5	I	Refined earthenware, Molded, royal pattern	2	Rim	Mend
EF5	I	Coal, Anthracite	1	Fragment	
EF5	I	Brick,	1	Fragment	
EF5	I	Iron, Nail, unidentified	1	Shank	
EF5	I	Synthetic, Plastic, vessel	1	Rim	too small to tell what kind of vessel
F2	I	Iron, Nail, unidentified	1	Shank	
F2.5	I	Glass, Vessel, colorless	1	Finish	
F5	I	Glass, Vessel, colorless	1	Body	
F5	I	Iron, Nail, unidentified	1	Shank	
Area B5					
G9	I	Glass, Vessel, colorless	1	Body	
Area B5 / 44IW0417		,			
N11	I	Glass, Vessel, aqua	2	Base	Mend. Embossed "WOODBU- - ASSWORK-" "2" and one illegible word embossed over the rest
NO11	I	Terra cotta, Drain pipe	83	Fragment	DISCARDED
NO11	I	Glass, Window, colorless	2	Pane	
Area C4 / 44IW0418		,			
A4	I	Brick,	1	Fragment	DISCARDED
A4	I	Glass, Vessel, colorless	1	Base	
A4	I	Glass, Vessel, aqua	2	Body	
A4	I	Glass, Window, aqua	2	Fragment	
A5	I	Refined earthenware, Undecorated	2	Rim	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
A5	I	Refined earthenware, Undecorated	2	Body	
A5	I	Glass, Vessel, green	1	Body	
A5	I	Glass, Vessel, solarized	1	Body	
A5	I	Glass, Vessel, brown	3	Body	
A5	I	Glass, Vessel, colorless	15	Body	
A5	I	Glass, Window, aqua	1	Pane	
A5	I	Glass, Vessel, colorless	1	Finish	Threaded finish
A5	I	Brick,	6	Fragment	
A5	I	Shell, Oyster	1	Fragment	
A5	I	Iron, Nail, unidentified	2	Shank	Heavily corroded
A5	I	Iron, Unidentified	3	Fragment	Heavily corroded
A6	I	Glass, Vessel, brown	1	Body	
A6	I	Glass, Vessel, colorless	3	Body	
A6	I	Refined earthenware, Undecorated	1	Rim	
A6	I	Iron, Nail, unidentified	1	Shank	
A6	I	Brick,	4	Fragment	
B1	I	Glass, Vessel, opaque	1	Body	
B2	I	Refined earthenware, Spall	1	Body	
B5	I	Refined earthenware, Undecorated	1	Body	
B5	I	Glass, Window, aqua	1	Pane	
C1	I	Iron, Nail, unidentified	1	Shank	
C1	I	Glass, Window, aqua	1	Pane	
C4	I	Glass, Vessel, solarized	1	Base	
C4	I	Refined earthenware, Molded, royal pattern	1	Rim	
C4	I	Refined earthenware, Spall	1	Body	
C4	I	Shell, Oyster	3	Fragment	
C5	I	Brick,	1	Fragment	Not collected
C7	I	Refined earthenware, Yellowware	1	Body	buff bodied, buff glazed
C7	I	Glass, Vessel, blue	1	Body	Cobalt
C7	I	Glass, Vessel, brown	1	Body	
C7	I	Glass, Vessel, aqua	1	Body	
C7	I	Glass, Vessel, colorless	3	Body	
D4	I	Brick,	2	Fragment	
D4	I	Iron, Nail, unidentified	1	Shank	
D5	I	Brick,	1	Fragment	Not collected
D6	I	Glass, Window, aqua	1	Pane	
E8	I	Glass, Vessel, aqua	1	Body	
Area C5 / 44IW0419		,			

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
G(-3)	I	Brick,	1	Fragment	Not collected
H1	I	Brick,	1	Fragment	Not collected
J(-1)	I	Brick,	1	Fragment	Not collected
J(-3)	I	Iron, Nail, unidentified	1	Shank	
J(-2)	I	Iron, Nail, machine cut	1	Shank	
J(-2)	I	Iron, Unidentified	4	Fragment	small iron fragments
K(-5)	I	Glass, Vessel, aqua	2	Body	
K(-5)	I	Glass, Vessel, colorless	2	Body	
K(-5)	I	Glass, Lantern	1	Body	
K(-4)	I	Refined earthenware, Undecorated	1	Base	
K(-4)	I	Refined earthenware, Undecorated	1	Body	
K(-4)	I	Glass, Vessel, solarized	1	Body	Molded, star and diamond pattern
K(-4)	I	Glass, Vessel, colorless	1	Base	
K(-3)	I	Refined earthenware, Undecorated	1	Body	
K(-3)	I	Glass, Vessel	1	Body	
K(-3)	I	Iron, Nail, machine cut	1	Whole	
L(-6)	I	Iron, Nail, unidentified	1	Head shank	
L(-5)	I	Glass, Vessel, aqua	2	Body	
L(-4)	I	Refined earthenware, Twentieth century, undecorated	2	Body	
L(-4)	I	Iron, Nail, unidentified	2	Shank	
L(-3)	I	Glass, Vessel, colorless	2	Body	
L(-3)	I	Refined earthenware, Edge ware, shell edged	1	Rim	Curved impressed lines
L(-3)	I	Iron, Nail, unidentified	2	Shank	
L(-3)	I	Brick,	2	Fragment	
L(-1)	I	Iron, Nail, wire	1	Whole	
L1	I	Glass, Vessel, colorless	1	Body	
L1	I	Brick,	1	Fragment	
M(-3)	I	Brick,	1	Fragment	
M(-3)	I	Iron, Nail, unidentified	2	Shank	
M(-1)	I	Glass, Vessel, opaque	1	Base	molded verticle ribbing
M(-1)	I	Glass, Vessel, brown	1	Body	
M(-1)	I	Brick,	1	Fragment	
N(-4)	I	Copper, Pipe	1	Fragment	
N(-3)	I	Glass, Vessel, colorless	1	Body	
N(-3)	I	Iron, Nail, machine cut	1	Shank	
N(-3)	I	Brick,	1	Fragment	
N(-3)	I	Mortar,	1	Fragment	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
N(-1)	I	Glass, Vessel, green	1	Finish	Dark olive green
Area C5					
L(-10)	I	Porcelain, Industrial	1	Rim	molded
Area C6 / 44IW0420		,			
A3	I	Iron, Farm equipment, unidentified	1	Fragment	Potentially a tooth from unidentified equipment
A3	I	Iron, Farm equipment, unidentified	1	Fragment	Potentially mends with above
A4	I	Glass, Vessel, brown	1	Base	Embossed stippling, "57" and A.R. Samuel/Mason Fruit Jar Co. makers mark
A6	I	Iron, Nail, machine cut	1	Shank	
B2	I	Glass, Vessel, colorless	2	Body	
B2	I	Glass, Window, colorless	1	Pane	
B2	I	Brick,	1	Fragment	
B3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, colorless	1	Body	Embossed "-T-"
B4	I	Iron, Chain	1	Fragment	5 links
B5	I	Glass, Vessel, aqua	2	Body	
B5	I	Glass, Window, colorless	1	Pane	
C3	I	Glass, Vessel, colorless	1	Body	
C3	I	Glass, Window, colorless	1	Pane	
D2	I	Glass, Vessel, colorless	1	Body	Embossed, too small to identify
D2	I	Glass, Vessel, brown	1	Body	
D3	I	Refined earthenware, Unidentified	1	Body	
D3	I	Refined earthenware, Undecorated	1	Body	
Area C7 / 44IW0421		,			
B3	I	Glass, Vessel, colorless	1	Body	
B4	I	Glass, Vessel, aqua	1	Base	
B4	I	Glass, Vessel, blue	1	Body	
B4	I	Glass, Vessel, colorless	1	Body	
B4	I	Iron, Nail, unidentified	3	Shank	
B4	I	Brick,	4	Fragment	
B5	I	Iron, Nail, unidentified	1	Shank	
B5	I	Glass, Marble	1	Whole	
B12	I	Glass, Vessel, brown	2	Body	Embossed, illegible
B12	I	Glass, Vessel, aqua	1	Body	
B12	I	Glass, Window, aqua	1	Pane	
B12	I	Iron, Nail, unidentified	2	Shank	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
B12	I	Brick,	2	Fragment	
B13	I	Brick,	1	Fragment	Not collected
B14	I	Glass, Vessel, colorless	1	Body	
B14	I	Glass, Vessel, colorless	1	Body	Molded, ribbed
B14	I	Glass, Window, colorless	1	Pane	
B14	I	Brick,	1	Fragment	
B14	I	Coal, Anthracite	1	Fragment	
C5	I	Glass, Vessel, colorless	9	Body	
C5	I	Glass, Vessel, colorless	1	Rim	
C5	I	Glass, Vessel, aqua	2	Body	
C5	I	Glass, Vessel, brown	1	Body	
C5	I	Refined earthenware, Undecorated	1	Body	
C5	I	Glass, Window, colorless	1	Pane	
C5	I	Iron, Nail, unidentified	3	Shank	
C5	I	Brick,	1	Fragment	
C6	I	Glass, Vessel, aqua	2	Body	
C6	I	Glass, Vessel, colorless	1	Body	
C6	I	Iron, Nail, unidentified	1	Head shank	
Area C9 / 44IW0422		,			
B3	I	Iron, Unidentified	1	Fragment	nail or fragment of barbed wire
D1	I	Glass, Vessel, blue	2	Body	Cobalt
D1	I	Glass, Window, colorless	1	Pane	
F1	I	Stoneware, Ironstone	1	Base	Fragment of makers mark, "-TONE CHIN-"
F4	I	Glass, Vessel, aqua	1	Body	
F4	I	Glass, Vessel, solarized	1	Body	
F4	I	Glass, Vessel, colorless	1	Body	
G4	I	Refined earthenware, Undecorated	1	Rim	
G4	I	Refined earthenware, Spall	1	Body	
G4	I	Glass, Vessel, colorless	1	Body	
G4	I	Glass, Window, aqua	1	Pane	
H(-1)	I	Glass, Vessel, colorless	1	Body	
Area C10 / 44IW0423		,			
D5	I	Refined earthenware, Undecorated	1	Body	
E5	I	Iron, Bolt	1	Fragment	nut rusted to it
E5	I	Iron, Washer	1	Whole	was on the above bolt, not rusted to it
E5	I	Iron, Nail, unidentified	1	Shank	

Provenience	Stratigraphy	Main Material, Subtype, Decoration and Color	Qty.	Part	Notes
E7	I	Brick,	1	Fragment	Not collected
F8	I	Glass, Vessel, colorless	2	Body	
F8	I	Glass, Vessel, blue	1	Body	Cobalt
F8	I	Iron, Bolt	1	Head shank	
F8	I	Iron, Unidentified	1	Fragment	unclear if part of wire or nail
F9	I	Iron, Nail, unidentified	3	Shank	
H2	I	Glass, Vessel, colorless	1	Body	
H8	I	Iron, Nail, unidentified	1	Shank	
H8	I	Terra cotta, Drain pipe	1	Fragment	
J6	I	Iron, Nail, wire	1	Whole	
J6	I	Mortar,	1	Fragment	

APPENDIX C: V-CRIS FORMS

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Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 6.580
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in the northernmost part of Area A1. No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a prosser button, ironstone, and Bristol stoneware were observed.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

No artifacts were collected during the pedestrian survey, but cobalt glass, blue transferware, yellowware, aqua vessel glass, a Prosser button, ironstone, and Bristol stoneware were observed.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter in Area A1, south of Field Site 1. An aqua bottle finish was the only artifact collected. A dwelling is indicated here by historic topographic maps, though no surface features were observed. Artifacts observed here included fragments of ironstone, and colorless and vessel glass.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

An aqua apothecary bottle finish was the only artifact collected.

Summary of Specimens Observed, Not Collected:

Artifacts observed here included fragments of ironstone, and colorless and 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-0056
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 9.530
Landform: Ridge Toe
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site was first observed in the western half of Area A1, and later in Area A5 associated with Architectural Resource #046-0056. All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Field Site 3 as well. This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	12/27/2023	*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:

All artifacts collected are from Area A5 shovel tests; these are representative of those observed in the Area A1 portion of Field Site 3 as well. This site consists of a late-nineteenth to mid twentieth century domestic artifact scatter. A total of 54 artifacts were recovered from fifteen positive shovel tests, including a milk glass canning jar lid liner, one wire nail, colorless vessel glass, solarized vessel glass, aqua window and vessel glass, oyster shell, and Bristol stoneware.

Summary of Specimens Observed, Not Collected:

Artifacts observed in the agricultural field included brick fragments, vessel glass, refined earthenware, and American stoneware.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: Field Site 3 contains surface features and artifacts and is also associated with an early-nineteenth-century house ruin. These two sites have the potential to provide new data about the early nineteenth century history of the area, and, D+A recommends avoidance or further investigation of this site.

Surveyor's Eligibility Recommendations: Recommended Potentially Eligible

Surveyor's NR Criteria Recommendations: D

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-5149, 046-5150
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 6.180
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This field site was first observed in the southeastern corner of Area A1 and was further delineated in the southwest corner of Area B1. This site surrounds Architectural Resources #046-5149 and 046-5150. It consists of a late nineteenth to early twentieth century domestic artifact scatter. Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

The only diagnostic artifact collected was one sherd of blue, white, and brown dipped ware.

Summary of Specimens Observed, Not Collected:

Artifacts observed here included dipped ware, brick fragments, ironstone, colorless vessel glass, terra cotta drain pipe, solarized vessel glass, aqua vessel glass, and porcelain.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1830 - 1860, 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 7.270
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Antebellum Period (1830 - 1860), 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: This field site was observed by pedestrian survey in the western part of Area B1. It consists of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; brick fragments; and one pipe stem that was the only artifact collected.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

The only diagnostic artifact collected was a white clay pipe stem with a single raised ring of hobnails around the very end.

Summary of Specimens Observed, Not Collected:

Observed artifacts consist of a mid-nineteenth to mid-twentieth domestic artifact scatter, including green shell edged earthenware; redware; ironstone; colorless window glass; aqua, colorless, and solarized vessel glass; porcelain; stoneware, 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.040
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a small late-nineteenth to early-twentieth century domestic artifact scatter observed in the northern part of Area B1. A sample of artifacts were collected, and observed artifacts included solarized and colorless vessel glass, aqua window glass, ironstone, and refined earthenware, Bristol and Albany-slip stoneware, and a reed pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

Collected artifacts include refined earthenware, Bristol glaze and Albany-slip stoneware, a stoneware reed pipe, aqua and colorless window glass, and dark green wine bottle glass.

Summary of Specimens Observed, Not Collected:

Artifacts observed but not collected are similar to those collected in the sample: refined earthenware, American stoneware, aqua and colorless window glass, and dark green wine bottle 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.250
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a domestic artifact sample observed in the southeast part of Area B1. Artifacts observed included ironstone, refined earthenware, and aqua and colorless vessel glass. Artifacts were densely clustered. No artifact samples were collected

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/3/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Artifacts observed included densely clustered ironstone, refined earthenware, and aqua and colorless 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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.670
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This field site was observed in the southern part of Area A2, in the same location as a dwelling indicated on historic topographic maps. No surface features were observed; only a domestic artifact scatter was observed. Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Surface artifacts included yellowware, milk glass, and brick fragments, indicating a date range of early-to-mid-twentieth century

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.210
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C2. No artifacts were collected, but artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware. No surface features were observed.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Artifacts observed included aqua and colorless vessel glass, brick fragments, and refined earthenware.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.500
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter associated with a dwelling indicated here by historic topographic maps. 43 artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire. Vessel glass makes up most of this assemblage, with 26 recovered fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

43 artifacts were collected from seven positive shovel tests, including aqua and colorless window glass, lantern glass, colorless and brown vessel glass, milk glass, and wire.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.170
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a dense early-to-mid twentieth century artifact scatter in Area A4. 178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass. Window glass and unidentified melted glass make up the majority of this assemblage, with 128 fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

178 artifacts were recovered from five positive shovel tests including aqua and colorless window glass, washers, screws, wire, terra cotta drain pipe, and colorless vessel glass.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR, 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: 0.910
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area B4. It is located in the same place as a dwelling indicated on historic topographic maps. A total of 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, royal-pattern molded refined earthenware, a spark plug, and heavily corroded nails.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*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 65 artifacts were recovered from 20 positive shovel tests, including brick fragments; colorless vessel glass, milk glass, colorless and aqua window glass, terra cotta drain pipe, molded refined earthenware, a spark plug, and heavily corroded nails.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.040
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Indeterminate
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of a small domestic artifact scatter in Area B5. Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Artifacts recovered include two fragments of aqua vessel glass, two fragments of colorless window glass, and 83 fragments of terra cotta drain pipe.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name:	No Data
Site Classification:	Terrestrial, open air
Year(s):	1830 - 1860, 1861 - 1865, 1866 - 1916, 1917 - 1945
Site Type(s):	Artifact scatter
Other DHR ID:	046-0030
Temporary Designation:	No Data

Site Evaluation Status

Locational Information

USGS Quad:	RAYNOR
County/Independent City:	Isle Of Wight (County)
Physiographic Province:	Coastal Plain
Elevation:	No Data
Aspect:	No Data
Drainage:	Albemarle-Chowan
Slope:	No Data
Acreage:	1.380
Landform:	Ridge Finger
Ownership Status:	Private
Government Entity Name:	No Data

Site Components

Component 1

Category:	Domestic
Site Type:	Artifact scatter
Cultural Affiliation:	Indeterminate
Cultural Affiliation Detail:	No Data
DHR Time Period:	Antebellum Period (1830 - 1860), 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:	This site consists of a late-nineteenth to early-twentieth century domestic artifact scatter associated with Architectural Resource #046-0030. This resource is no longer standing. A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 89 artifacts were recovered from fourteen positive shovel tests, including refined earthenware, oyster shell, solarized vessel glass, milk glass, green vessel glass, cobalt vessel glass, brick fragments, corroded nails, yellowware, and aqua window glass

Summary of Specimens Observed, Not Collected:

Some artifacts were observed on the surface but not collected, including vessel glass, yellowware, brick, refined earthenware, and brick.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1830 - 1860, 1861 - 1865, 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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.700
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Antebellum Period (1830 - 1860), 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: This site consists of a mid-nineteenth to early-twentieth century domestic artifact scatter in Area C5. A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

A total of 51 artifacts were recovered from 20 positive shovel tests, including brick fragments, machine-cut and wire nails, aqua vessel glass, solarized vessel glass, colorless vessel glass, dark green vessel glass, blue shell edged ceramic, industrial porcelain, lantern glass, and a fragment of copper pipe.

Summary of Specimens Observed, Not Collected:

Artifacts observed but not collected on the surface include primarily brick fragments, but include the same types as those collected in shovel tests.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-0029
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.770
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C6. This grid also overlaps slightly with the Area C1 pedestrian survey. This site is also associated with Architectural Resource #046-0029. A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail. Colorless vessel glass was most common in this area, with five fragments recovered.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

A total of 20 artifacts were recovered from ten positive shovel tests, including a length of chain, two fragments of unidentified farm equipment, brown vessel glass, colorless vessel and window glass, aqua vessel glass, brick fragments, and one machine cut nail.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.990
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C7. 50 artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

50 artifacts were recovered from eight positive shovel tests, including corroded nails, aqua vessel glass, colorless vessel and window glass, brown vessel glass, refined earthenware, brick fragments, and a glass marble.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

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: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.930
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century domestic artifact scatter in Area C9. 13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron. The most common artifact was colorless vessel glass, with four fragments.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

13 artifacts were recovered from six shovel tests, including colorless, aqua, cobalt, and solarized vessel glass; ironstone; refined earthenware; and unidentified iron.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1866 - 1916, 1917 - 1945
Site Type(s): Artifact scatter
Other DHR ID: 046-5148
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 1.370
Landform: Ridge Finger
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Artifact scatter
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
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: This site consists of an early-to-mid twentieth century artifact scatter in Area C10. Eighteen artifacts were recovered from eight artifacts, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	2/6/2024	*No Data*

Threats to Resource: Public Utility Expansion

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation, Subsurface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

Eighteen artifacts were recovered from eight artifacts, including iron bolts, nuts, unidentified and wire nails, colorless and blue vessel glass, and terra cotta drain pipe.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site offers little new or significant archaeological data and is a type that is well represented in the region. D+A recommends this site not eligible for inclusion in the NRHP, and no additional work is required.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Snapshot

Date Generated: June 18, 2024

Site Name: No Data
Site Classification: Terrestrial, open air
Year(s): 1790 - 1829, 1830 - 1860
Site Type(s): Dwelling, single
Other DHR ID: 046-0057
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: RAYNOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Albemarle-Chowan
Slope: No Data
Acreage: 0.310
Landform: Ridge Top
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Indeterminate
Cultural Affiliation Detail: No Data
DHR Time Period: Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
Start Year: 1825
End Year: No Data
Comments: This site consists of a single brick structure recorded as Architectural Resource 046-0057. No artifacts or surface features were observed in association with it.

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: 2023-4691

Sponsoring Organization: No Data

Organization/Company: Dutton + Associates, LLC

Investigator: Delaney Hunter

Survey Date: 4/1/2024

Survey Description:

This survey was conducted in anticipation of development. Following a pedestrian reconnaissance of the project area, systematic pedestrian survey and 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	1/9/2024	*No Data*

Threats to Resource: Public Utility Expansion, Structural Failure

Site Conditions: Unknown Portion of Site Destroyed

Survey Strategies: Observation

Specimens Collected: No

Specimens Observed, Not Collected: Yes

Artifacts Summary and Diagnostics:

No Data

Summary of Specimens Observed, Not Collected:

Some brick fragments were observed scattered around the structure, but not collected.

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 ±817.46 Hectare (2,020 Acre) Sycamore Cross Solar Project Area

Survey Report Repository: D+A

DHR Library Reference Number: No Data

Significance Statement: This site has the potential for associated artifacts and subsurface features, and is recommended for further survey.

Surveyor's Eligibility Recommendations: Recommended for Further Survey

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Proposed Revisions to Isle of Wight County Staff Suggested Conditions from Planning Commission Hearing on May 28, 2024, as of August 7, 2024 – Red-Line Version

1) Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.

2) The Applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.

3) No impacts shall be permitted to the Pouches Swamp stream conservation unit area~~,~~. The applicant shall comply with Virginia Department of Conservation and Recreation ("DCR") recommendations regarding the C1-C3 ecological core areas, and shall coordinate with Virginia Department of Forestry on efforts to mitigate impact to~~, or~~ the priority forestland areas. ~~The applicant shall submit a formal ecological core impact assessment of ecological cores C1 and C2 with DCR as recommended.~~

4) The Applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.

5) The Applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.

6) A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.

7) The facility perimeter fencing will be equipped with ~~push bar pedestrian~~ gates to permit emergency exits from the facility subject to compliance with applicable requirements, including those of the National Electric Code and the North American Electric Reliability Corporation.

8) Adherence to the ~~proposed~~ approved transportation plan shall be required for all facility traffic during construction of the facility. Oversized vehicle ~~Truck~~ traffic shall be limited to only to the ~~preferred~~ approved route as described in in the transportation plan. ~~No other local routes in Isle of Wight County may be used.~~ The applicant shall coordinate with the Isle of Wight County school administration ~~deliveries outside of~~ on school bus pickup and drop-off times and locations for incorporation into the transportation plan.

9) Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.

10) Hours of operation for construction (including construction associated with repairs during operation of the facility) ~~and post-construction operation~~ shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. and Saturdays from 7:00 a.m. to 5:00 p.m., except in cases of emergency. Except in cases of emergency, ~~N~~no construction is to occur on Sundays by any party involved with the project. In the event of any emergency event necessitating divergence from the foregoing hours and days of operation, the applicant shall notify the zoning administrator as soon as reasonably possible.

11) As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).

12) The applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/ Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to ~~at least~~ substantially similar or better condition as in the baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.

13) Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.

Applicant's suggested conditions as of April 30, 2024 Submittal:

14) The Property shall be developed in general conformance with the submitted conceptual plan prepared by AES and dated December 12, 2023.

15) During the Project life, the Applicant shall preserve and maintain existing and newly installed buffer landscaping and shall not clear cut live trees within required setbacks or buffer zones except as necessary for access roads, utility crossings, and to avoid shading of solar panels per the approval of the Zoning Administrator.

16) The Applicant shall submit a combined Stormwater Management Plan and a combined Erosion and Sediment Control Plan for Sycamore Cross A and Sycamore Cross B with the submission of the site plan for review by the Virginia Stormwater Management Program authority having jurisdiction at the time of submission.

17) The Applicant shall submit a combined Unanticipated Discovery Plan for Sycamore Cross A and Sycamore Cross B prior to final site plan approval. The plan shall include emergency protection protocols, curation processing of cultural materials, disposition of cultural materials, and a contact list including an on-call archaeologist, Project contacts, and state/regional contacts.

Applicant's additional suggested conditions as of July 9, 2024:

18) The Applicant will coordinate with landowners and the Zoning Administrator to install enhanced landscape buffers in proximity to occupied residential properties as needed to mitigate potential viewshed impacts.

19) The Applicant shall submit an initial combined Transportation Plan, as referenced in Condition 8 of Staff Recommended Conditions, for Sycamore Cross A and Sycamore Cross B with the first submission of the site plan. The final Transportation Plan shall address traffic control measures, an evaluation of the condition of the public roads along delivery routes prior to construction, and a plan to address repairs to public roads that may be needed due to damages attributable to Project construction. The Applicant shall obtain Isle of Wight County approval of the final Transportation Plan prior to approval of the site plan. Additionally, the Transportation Plan shall include each of the following:

i) Third party enforcement of the approved transportation plan.
ii) Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through coordination with the applicable Virgina Department of Transportation (VDOT) office.
iii) Limit construction traffic on White Hill Trail (State Route 623).
iv) Upon commencement of construction, Applicant will engage a Project Liaison to facilitate communication between citizens, construction crews, maintenance teams, and the Applicant. The contact information for the Project

Liaison will be posted at each permanent site gate, published on the Project's website, and provided to Isle of Wight County Staff. A Project Liaison will remain in place until completion of construction.

20) The Applicant will commit to agricultural uses on site, including, but not limited to, sheep grazing and forage crops. The Applicant will develop and submit as part of the site plan review process a Farming Plan for such agricultural uses on site, which will require a performance bond to secure Applicant's obligations under the Farming Plan.

21) The Applicant will commit at least eight (8) acres of land to agricultural community support. The Applicant will develop a program to manage the land identified for agricultural community support.

22) Pursuant to Va. Code 15.2-2209.1:2, the Applicant must commence construction of the Project within three years from the date of approval of this Conditional Use Permit, unless otherwise extended by the Board of Supervisors or applicable law.

23) This Conditional Use Permit, including these conditions, shall run with the land and shall not be affected by a change in ownership of the Applicant or the Project.

Sycamore Cross Solar A and B
Recommended Conditions as amended August 7, 2024

1. Topsoil shall be stockpiled on the site and shall be stored out of view from adjacent properties and public roads.
2. The Applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.
3. No impacts shall be permitted to the Pouches Swamp stream conservation unit area. The Applicant shall comply with Virginia Department of Conservation and Recreation ("DCR") recommendations regarding the C1-C3 ecological core areas and shall coordinate with Virginia Department of Forestry on efforts to mitigate impact to the priority forestland areas.
4. The Applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR.
5. The Applicant will work directly with the Isle of Wight County Chamber of Commerce, Paul D. Camp Community College, and the Economic Development Department to ensure inclusion of local contractors in the bidding process.
6. A laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.
7. The facility perimeter fencing will be equipped with gates to permit emergency exits from the facility subject to compliance with applicable requirements, including those of the National Electric Code and the North American Electric Reliability Corporation.
8. Adherence to the approved transportation plan shall be required for all facility traffic during construction of the facility. Oversized vehicle traffic shall be limited only to the approved route as described in in the transportation plan. The Applicant shall coordinate with the Isle of Wight County school administration on school bus pickup and drop-off times and locations for incorporation into the transportation plan.
9. Excluding the bufferyards, the ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be planted and maintained with a vegetative cover. This vegetative cover will be managed with mowing and/or grazing.
10. Hours of operation for construction (including construction associated with repairs during operation of the facility) shall be limited to Monday through Friday, 7:00 a.m. to 6:00 p.m. and Saturdays from 7:00 a.m. to 5:00 p.m., except in cases of emergency. Except in cases of emergency, no construction is to occur on Sundays by any party involved with the Project. In the event of any emergency event

necessitating divergence from the foregoing hours and days of operation, the Applicant shall notify the zoning administrator as soon as reasonably possible.

11. As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are “Tier 1” modules, as established by the most recent “PV Module Tier 1 List” issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
12. The Applicant shall implement a program for the collection of baseline data establishing pre-construction soil conditions for the production of row crops for the agricultural areas within the Project area. The program shall establish the relevant characteristics of the topsoil. The baseline data shall be derived from field and laboratory testing of soil conditions, including depth, density, and quality from representative locations. Laboratory testing shall be conducted by an accredited laboratory. Parameters for assessing soil quality may include the following: infiltration rate, bulk density, water holding capacity, pH, percent organic matter, cation exchange capacity, Phosphorous/ Phosphate (P), Nitrogen (N), and Potassium/Potash (K). After 30 years of operation and again after 35 years of operation, soil conditions shall be determined for the same sampling locations using the same parameters and the results used to plan soil restoration activities. After equipment is removed as part of decommissioning, soil conditions shall be determined for the same sampling locations using the same parameters. Soil restoration activities shall be performed as necessary during operations or decommissioning to return soil conditions to substantially similar or better condition as in the baseline conditions. The County will be provided with data of soil conditions within 30 days after the receipt of results.
13. Any recommendations provided by VDHR during site plan review will be adhered to, in addition to requirements in the zoning ordinance.
14. The Property shall be developed in general conformance with the submitted conceptual plan prepared by AES and dated December 12, 2023.
15. During the Project life, the Applicant shall preserve and maintain existing and newly installed buffer landscaping and shall not clear cut live trees within required setbacks or buffer zones except as necessary for access roads, utility crossings, and to avoid shading of solar panels per the approval of the Zoning Administrator.
16. The Applicant shall submit a combined Stormwater Management Plan and a combined Erosion and Sediment Control Plan for Sycamore Cross A and Sycamore Cross B with the submission of the site plan for review by the Virginia Stormwater Management Program authority having jurisdiction at the time of submission.
17. The Applicant shall submit a combined Unanticipated Discovery Plan for Sycamore Cross A and Sycamore Cross B prior to final site plan approval. The

plan shall include emergency protection protocols, curation processing of cultural materials, disposition of cultural materials, and a contact list including an on-call archaeologist, Project contacts, and state/regional contacts.

18. Applicant will coordinate with landowners and the Zoning Administrator to install enhanced landscape buffers in proximity to occupied residential properties as needed to mitigate potential viewshed impacts.
19. The Applicant shall submit an initial combined Transportation Plan, as referenced in Condition 8 of Staff Recommended Conditions, for Sycamore Cross A and Sycamore Cross B with the first submission of the site plan. The final Transportation Plan shall address traffic control measures, an evaluation of the condition of the public roads along delivery routes prior to construction, and a plan to address repairs to public roads that may be needed due to damages attributable to Project construction. The Applicant shall obtain Isle of Wight County approval of the final Transportation Plan prior to approval of the site plan. Additionally, the Transportation Plan shall include each of the following:
    i. Third party enforcement of the approved transportation plan.
    ii. Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through coordination with the applicable Virgina Department of Transportation (VDOT) office.
    iii. Limit construction traffic on White Hill Trail (State Route 623).
    iv. Upon commencement of construction, Applicant will engage a Project Liaison to facilitate communication between citizens, construction crews, maintenance teams, and the Applicant. The contact information for the Project Liaison will be posted at each permanent site gate, published on the Project's website, and provided to Isle of Wight County Staff. A Project Liaison will remain in place until completion of construction.

20. The Applicant will commit to agricultural uses on site, including, but not limited to, sheep grazing and forage crops. The Applicant will develop and submit as part of the site plan review process a Farming Plan for such agricultural uses on site, which will require a performance bond to secure Applicant's obligations under the Farming Plan.
21. The Applicant will commit at least eight (8) acres of land to agricultural community support. The Applicant will develop a program to manage the land identified for agricultural community support.
22. Pursuant to Va. Code 15.2-2209.1:2, the Applicant must commence construction of the Project within three years from the date of approval of this Conditional Use Permit, unless otherwise extended by the Board of Supervisors or applicable law.
23. This Conditional Use Permit, including these conditions, shall run with the land and shall not be affected by a change in ownership of the Applicant or the Project.

ISSUE:

Consideration of a Siting Agreement for the Sycamore Cross Solar, LLC Project

BACKGROUND:

Sycamore Cross Solar, LLC desires to construct and operate a solar facility in the County. In this regard, the Code of Virginia allows the County and Sycamore Cross Solar, LLC to enter into a siting agreement relative to solar facilities.

The Board may wish to discuss/consider a Siting Agreement for the project.

BUDGETARY IMPACT:

This amendment will potentially increase anticipated revenues over the course of 40 years.

RECOMMENDATION:

Per the Board's discussion and direction.

ATTACHMENTS:

Description	Type	Upload Date
Siting Agreement	Agreement	8/9/2024

SOLAR FACILITY SITING AGREEMENT

This Solar Facility Siting Agreement (the "**Agreement**"), dated as of _____ (the "**Effective Date**"), is by and between Isle of Wight County, Virginia, a political subdivision of the Commonwealth of Virginia (the "**County**") and Sycamore Cross Solar, LLC, a Delaware limited liability company (the "**Applicant**"). The County and Applicant are herein each a "**Party**" and collectively, the "**Parties**".

RECITALS

WHEREAS, Applicant intends to develop, install, build, and operate an up to 240 megawatt solar project to be located in the Counties of Surry and Isle of Wight (the **"Project"**);

WHEREAS, the County Board of Supervisors (the "**Board**") pursuant to Conditional Use Permit # 8-23 and Conditional Use Permit # 5-24 approved the portion of the Project located in Isle of Wight County (on certain parcels of land identified as the County Tax Map Parcels listed on Exhibit A-1 attached hereto (collectively, the **"Property");**

WHEREAS, pursuant to Chapter 22, Title 15.2, Article 7.3 of the Code of Virginia ("**Code**") titled "Siting of Solar Projects and Energy Storage Projects," Applicant and the County may enter into a siting agreement for such facilities;

WHEREAS, pursuant to Code § 15.2-2316.7(B), said siting agreement may contain terms and conditions, including (i) mitigation of any impacts of such solar project or energy storage project; (ii) financial compensation to the host locality to address capital needs set out in the (a) capital improvement plan adopted by the host locality, (b) current fiscal budget of the host locality, or (c) fiscal fund balance policy adopted by the host locality; or (iii) assistance by the Applicant in the deployment of broadband, as defined in § 56-585.1:9, in such locality;

WHEREAS, after negotiation between the County and the Applicant, the Parties desire to enter into this Agreement to provide said financial compensation to the County and to address impacts of the Project;

WHEREAS, pursuant to Code § 58.1-2636, the County may adopt an ordinance assessing a revenue share of (i) up to $1,400.00 per megawatt, as measured in alternating current (AC) generation capacity of the nameplate capacity of a solar facility ("**Revenue Share Ordinance**").

WHEREAS, the County has not adopted a Revenue Share Ordinance, but may choose to do so at a later date;

WHEREAS, pursuant to Code § 58.1-3660, "certified pollution control equipment" is exempt from state and local taxation pursuant to Article X, Section 6(d) of the Constitution of Virginia;

WHEREAS, solar photovoltaic (electric energy) systems and energy storage systems are certified pollution control equipment, and therefore, subject to certain qualified tax exemptions as provided in Code § 58.1-3660;

WHEREAS, if the County adopts a Revenue Share Ordinance, such certified pollution control equipment exemption is 100% of the assessed value, pursuant to Code § 58.1-3660(D) (for solar photovoltaic (electric energy) projects);

WHEREAS, if the County does not adopt a Revenue Share Ordinance, such certified pollution control equipment exemption would be 80% of the assessed value as provided by state law and local ordinances, including Code § 58.1-3660(C)(iii)(a) because the Project's initial interconnection request was filed between January 1, 2015 and June 30, 2018, with the Project being larger than 20 megawatts ("M&T Taxes");

WHEREAS, Applicant has agreed to the payments and financial terms contained herein, including payment of the M&T Taxes together with the payments as provided in Exhibit B; and

WHEREAS, pursuant to the requirement of Code § 15.2-2316.8(B), the County held a public hearing in accordance with subdivision A of Code § 15.2-2204 for the purpose of considering this Agreement, after which a majority of a quorum of the members of the Board approved this Agreement.

NOW, THEREFORE, intending to be legally bound hereby and in consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the County and Applicant do hereby agree as follows:

Article I

Project Features, Conditions and Mitigation

1. Conditional Use Permit Conditions. Applicant acknowledges and agrees that it is subject to all the terms and conditions contained in the Conditional Use Permits (collectively, the "**CUP**") approved by the Board for the Project. The CUP approved by the Board on _____ is attached as **Exhibit A** and is hereby incorporated herein.

2. Violations/Enforcement. Violation by the Applicant or by any of Applicant's agents, assigns, or successors in interest of any terms and conditions of the CUP shall constitute a violation of this Agreement. An uncured violation of this Agreement enables the County to suspend or revoke the CUP in accordance with Section __ of the CUP.

3. Decommissioning Financial Assurance. Notwithstanding any provision of the County Zoning Ordinance now existing or hereafter adopted, for as long as the Project has an offtake contract for the sale of power, the financial assurance provided by the Applicant for decommissioning of the Project may include and be net of the salvage value of the portion of the Project's equipment, facilities, and devices located in the County.

4. Exemption. By virtue of the Project's use permit application date before revisions to the County Zoning Ordinance adopted by the Board on May 8, 2023, the Project is grandfathered as to and exempt from Section 5-5003(M)(4)(k) and Section 5-5003(M)(4)(l) of the County Zoning Ordinance.

Article II

Payments

1. Payment Structure. The Applicant shall make payments to the County, in the amounts and at such times as set forth in **Exhibit B** (each a "**Payment**" and collectively, the "**Payments**"). Applicant's obligation to make the Payments shall be conditioned upon the Project commencing Commercial Operation, except that the Additional Payments (as defined in Exhibit B) shall be due in advance of Commercial Operation as set forth in Exhibit B. As used herein, "**Commercial Operation**" or "**Commercial Operation Date**" means the date on which the Project becomes fully operational and begins selling power under the terms of a power purchase or offtake agreement. Generation of test energy shall not be deemed Commercial Operation.

2. Statutory Structure of Payments; **Statement of Benefit**. Applicant agrees that, by entering into this Agreement, pursuant to Chapter 22, Title 15.2, Article 7.3 of the Code, the Payments are authorized by statute, and Applicant acknowledges that it is bound by law to make the Payments in accordance with this Agreement. The Parties acknowledge that this Agreement is fair and mutually beneficial to both Parties. Applicant acknowledges that this Agreement provides for a reasonably predictable stream of future payments to the County in amounts fair to both Parties.

3. Use of Payments by the County. The Payments may be used for any lawful purpose, and as allocated in Exhibit B.

Article III

Miscellaneous Terms

1. Term; Termination. This Agreement shall commence on the Effective Date and shall continue until completion of decommissioning of the Project in accordance with the decommissioning plan (the "**Termination Date**"). **Applicant shall have no obligation to make Payments after the Termination Date.** The Payment due for the year in which the Project or material part thereof is decommissioned shall be prorated as of the Termination Date.

2. Mutual Covenants. The Applicant covenants to the County that it will pay the County the amounts due hereunder when due in accordance with the terms of this Agreement, and will not seek to invalidate this Agreement, or otherwise take a position adverse to the purpose or validity of this Agreement. The County covenants to the Applicant that it will not seek to invalidate this Agreement or otherwise take a position adverse to the purpose or validity of this Agreement.

3. No Obligation to Develop. Applicant has no obligation to develop or construct the Project. It is understood that development of the Project by Applicant is contingent upon a number of factors including regulatory approvals, availability and cost of equipment and financing, and market demand for the Project's energy. No election by Applicant to terminate, defer, suspend, or modify plans to develop the Project shall be deemed a default of Applicant under this Agreement.

4. Successors and Assigns. This Agreement shall be binding upon the successors or assigns of Applicant, and the obligations created hereunder shall be covenants running with the Property. If Applicant sells, transfers, leases, or assigns all or substantially all of its interests in the Project or the ownership of the Applicant (a "**Transfer**"), the Transfer agreement shall require this Agreement to be assumed by and be binding on the purchaser, transferee or assignee. Such Transfer, upon full execution of the Transfer agreement, shall relieve Applicant of all obligations and liabilities under this Agreement accruing from and after the date of such Transfer, and the purchaser or transferee shall become responsible under this Agreement. Applicant shall execute such documentation as reasonably requested by the County to memorialize the assignment and assumption by the purchaser or transferee.

5. Execution of Agreement Deems Project "Substantially In Accord" with County's Comprehensive Plan. Pursuant to Code § 15.2- 2316.9(C), execution of this Agreement deems the Project to be substantially in accord with the County's Comprehensive Plan in satisfaction of the requirements of Code § 15.2-2232.

6. Memorandum of Agreement. A memorandum of this Agreement, in a form substantially similar to that attached as **Exhibit C** hereto, shall be recorded in the land records of the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia. Such recordation shall be at Applicant's sole cost and expense and shall occur as soon as reasonably practicable after the Effective Date. If in Applicant's sole discretion, it chooses to not develop the Project, the County shall execute a release of the memorandum filed in the aforementioned Clerk's Office.

7. Notices. Except as otherwise provided herein, all notices required to be given or authorized to be given pursuant to this Agreement shall be in writing and shall be delivered or sent by registered or certified mail, postage prepaid, by recognized overnight courier, or by commercial messenger to:

If to the County:

Post Office Box 80
17090 Monument Circle
Isle of Wight, Virginia 23397
Attn: Randy R. Keaton, County Administrator

With a copy to:

Robert W. Jones, Jr., County Attorney

Post Office Box 80
Isle of Wight, Virginia 23397

If to the Applicant:

Sycamore Cross Solar, LLC
c/o AES Clean Energy Development, LLC
2180 South 1300 East, Suite 500
Salt Lake City, Utah 84106
Attn: Greg Creswell

With a copy to:

Sycamore Cross Solar, LLC
c/o AES Clean Energy Development, LLC
2180 South 1300 East, Suite 500
Salt Lake City, Utah 84106
Attn: General Counsel

With a copy to:

Gentry Locke
Post Office Box 780
Richmond, Virginia 23218
Attn: D. Scott Foster, Jr. Esq.

The County and Applicant, by notice given hereunder, may designate any further or different persons or addresses to which subsequent notices shall be sent.

8. **Governing Law; Jurisdiction; Venue**. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE COMMONWEALTH OF VIRGINIA, WITHOUT REGARD TO ANY OF ITS PRINCIPLES OF CONFLICTS OF LAWS OR OTHER LAWS WHICH WOULD RESULT IN THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION. THE PARTIES HERETO (A) AGREE THAT ANY SUIT, ACTION OR OTHER LEGAL PROCEEDING, AS BETWEEN THE PARTIES HERETO, ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE BROUGHT AND TRIED ONLY IN THE CIRCUIT COURT OF ISLE OF WIGHT COUNTY, VIRGINIA, (B) CONSENT TO THE JURISDICTION OF SUCH COURT IN ANY SUCH SUIT, ACTION OR PROCEEDING, AND (C) WAIVE ANY OBJECTION WHICH ANY OF THEM MAY HAVE TO THE LAYING OF VENUE FOR ANY SUCH SUIT, ACTION, OR PROCEEDING IN SUCH COURT AND ANY CLAIM THAT ANY SUCH SUIT, ACTION, OR PROCEEDING HAS BEEN BROUGHT IN AN INCONVENIENT FORUM. THE PARTIES HERETO AGREE THAT A FINAL JUDGMENT IN ANY SUCH SUIT, ACTION, OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER

JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW.

9. Confidentiality. This Agreement, once placed on the docket for consideration by the County Board of Supervisors, is a public document, subject to production under the Virginia Freedom of Information Act ("**FOIA**"). The County understands and acknowledges the Applicant, and as applicable, its associates, contractors, partners and affiliates, utilize confidential and proprietary "state-of-the-art" information and data in their operations ("**Confidential Information**"), and that disclosure of any such information, including, but not limited to, disclosures of technical, financial or other information concerning the Applicant or any affiliated entity could result in substantial harm to them and could thereby have a significant detrimental impact on their employees and also upon the County. The County acknowledges that during the development and negotiation of this Agreement, certain Confidential Information may be, or may have been, shared with the County by the Applicant. Applicant agrees to clearly identify any information it deems to be Confidential Information and not subject to mandatory disclosure under FOIA or other applicable law as Confidential Information at the time it provides such information to the County. The County agrees that, except as required by law and pursuant to the County's police powers, neither the County nor any employee, agent, or contractor of the County will knowingly or intentionally disclose or otherwise divulge any such Confidential Information to any person, firm, governmental body or agency, or any other entity unless a request for such Confidential Information is made and granted under an applicable provision of local, state or federal law. Upon receipt of such a request but before transmitting any documents or information which may contain Confidential Information to the requestor, the County shall contact Applicant to review the request for information and associated documents to determine if any Confidential Information is at risk of disclosure. If Confidential Information exists, Applicant may intervene on behalf of the County and defend against disclosure of the Confidential Information. The County agrees to cooperate in this defense and to the extent allowed by law, work to protect the Confidential Information of the Applicant.

10. **Severability; Invalidity Clause**. Any provision of this Agreement that conflicts with applicable law or is held to be void or unenforceable shall be ineffective to the extent of such conflict, voidness, or unenforceability without invalidating the remaining provisions hereof, which remaining provisions shall be enforceable to the fullest extent permitted under applicable law. If, for any reason, including a change in applicable law, it is ever determined by any court or governmental authority of competent jurisdiction that this Agreement is invalid, then the Parties shall, subject to any necessary County meeting vote or procedures, undertake reasonable efforts to amend and or reauthorize this Agreement so as to render the invalid provisions herein lawful, valid, and enforceable. If the Parties are unable to do so, this Agreement shall terminate as of the date of such determination of invalidity, and the Property and Project will thereafter be assessed and taxed as though this Agreement did not exist. The Parties will cooperate with each other and use reasonable efforts to defend against and contest any challenge to this Agreement by a third party.

11. **Entire Agreement**. This Agreement and any exhibits or other attachments constitute the entire agreement and supersedes all other prior agreements and understandings, both written and oral, between the Parties hereto with respect to the subject matter hereof. No provision

of this Agreement can be modified, altered or amended except in a writing executed by all Parties hereto.

12. **Construction**. This Agreement was drafted with input by the County and the Applicant, and no presumption shall exist against any Party. The headings contained in this Agreement are for the convenience of the Parties and for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

13. **Force Majeure**. Neither Party will be liable for any failure or delay in performing an obligation under this Agreement that is due to any of the following causes, to the extent beyond its reasonable control: acts of God, accident, riots, war, terrorist act, epidemic, pandemic, quarantine, civil commotion, breakdown of communication facilities, breakdown of web host, breakdown of internet service provider, natural catastrophes, governmental acts or omissions, changes in laws or regulations, national strikes, fire, explosion, generalized lack of availability of raw materials or energy. For the avoidance of doubt, Force Majeure shall not include (a) financial distress nor the inability of either party to make a profit or avoid a financial loss, (b) changes in market prices or conditions, or (c) a party's financial inability to perform its obligations hereunder.

14. **No Third Party Beneficiaries**. This Agreement is solely for the benefit of the Parties hereto and their respective successors and permitted assigns, and no other person shall have any right, benefit, priority, or interest in, under, or because of the existence of, this Agreement.

15. **Counterparts; Electronic Signatures**. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which shall constitute one and the same instrument. A signed copy of this Agreement delivered by e-mail/PDF or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

[signature page follows]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the Effective Date by the authorized representatives whose names and titles appear below.

SYCAMORE CROSS SOLAR, LLC

By: _____
Name: _____
Title: _____

ISLE OF WIGHT COUNTY, VIRGINIA

By: _____
Name: Joel C. Acree
Title: Chairman, Board of Supervisors

By: _____
Name: Randy R. Keaton
Title: County Administrator

Approved as to form:

By: _____
County Attorney

EXHIBIT A

CONDITIONAL USE PERMITS

EXHIBIT A-1

TAX PARCELS

CUP-8-23: Isle of Wight County Tax Parcels 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, and 27-01-004

CUP-5-24: Isle of Wight County Tax Parcels 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005

EXHIBIT B

SCHEDULE OF PAYMENTS

(A) Annual Payments: Within sixty (60) days after the Commercial Operation Date of the Project, Applicant shall make annual payments to the County equal to the sum of the M&T Taxes and the Supplemental Voluntary Payments (the "**Annual Payments**"). Both the M&T Tax and Supplemental Voluntary Payments shall be made irrespective of the County's election to adopt a Revenue Share Ordinance, which would otherwise exempt the Project from M&T Taxes. The Annual Payments shall continue annually and successive payments shall be made on the anniversary of the first such Annual Payment for each year thereafter until the Termination Date. The Annual Payments shall consist of the following:

1. **M&T Taxes.** The annual M&T Taxes (which will fluctuate in any given year, depending on the Project's machinery and tools).
2. **Supplemental Voluntary Payments**. For the first ten (10) Annual Payments, the Supplemental Voluntary Payment shall be an amount equal to One Million Dollars ($1,000,000.00) less the actual amount of the M&T Taxes. For clarity and avoidance of doubt, in the event M&T Taxes equal or exceed One Million Dollars (1,000,000.00) within the first ten (10) years, no Supplemental Voluntary Payment will be made. After the tenth (10th) Annual Payment and for the remainder of the Annual Payments, the Supplemental Voluntary Payment shall be Zero Dollars ($0.00).

(B) Additional Payments: Subject to the terms as provided below, Applicant shall make the following additional payments (the "**Additional Payments**"):

(1) **Initial Payment:** Subject to the County approving the CUP and this Agreement by August 19, 2024, Applicant shall make a one-time payment of One Million Five Hundred Thousand Dollars ($1,500,000.00), to be made within sixty (60) days after approval of a CUP for the Project by the later to approve of Isle of Wight County and Surry County if no appeal is filed to either such approval or if such an appeal is filed, then within sixty (60) days after the resolution of any such appeal, provided that the result of such appeal is to allow the Project to proceed.

(2) **Community Impact Payment:** A one-time payment of Five Hundred Thousand Dollars ($500,000.00), to be made within sixty (60) days after approval of a CUP for the Project by the later to approve of Isle of Wight County and Surry County if no appeal is filed to either such approval or if such an appeal is filed, then within sixty (60) days after the resolution of any such appeal, provided that the result of such appeal allows the Project to proceed. The Community Impact Payment shall be used by the County for the general benefit of County residents.

(3) **Final Site Plan Payment:** A one-time payment of One Million Five Thousand Dollars ($1,500,000.00), to be made within sixty (60) days after the County approves a final site plan for the Project.

(4) **Commercial Operation Date Payment:** A one-time payment of Two Hundred Fifty Thousand Dollars ($250,000.00), to be made within sixty (60) days after the Commercial Operation Date.

The following illustrative schedule of payments assumes an estimated 187 MWac generation capacity for the portion of the Project located in Isle of Wight County; provided, however, the following illustrative schedule is for example only and all payments shall be adjusted proportionally if the nameplate capacity and/or capital investment of the constructed Project within Isle of Wight County increases or decreases from such estimate.

(*Exhibit B continues on following page(s)*)

EXHIBIT B (CONTINUED)

Project Year	Estimated M&T @187MWac*	Estimated Supplemental Voluntary Payments	Estimated Annual Payments
1	$410,653.77	$589,346.23	$1,000,000.00
2	$410,653.77	$589,346.23	$1,000,000.00
3	$410,653.77	$589,346.23	$1,000,000.00
4	$410,653.77	$589,346.23	$1,000,000.00
5	$409,421.81	$590,578.19	$1,000,000.00
6	$398,288.53	$601,711.47	$1,000,000.00
7	$386,470.82	$613,529.18	$1,000,000.00
8	$373,968.70	$626,031.30	$1,000,000.00
9	$360,736.52	$639,263.48	$1,000,000.00
10	$346,683.04	$653,316.96	$1,000,000.00
11	$331,762.62		$331,762.62
12	$315,975.26		$315,975.26
13	$299,229.71		$299,229.71
14	$281,525.97		$281,525.97
15	$262,727.15		$262,727.15
16	$242,787.63		$242,787.63
17	$221,661.78		$221,661.78
18	$199,258.33		$199,258.33
19	$175,531.67		$175,531.67
20	$150,344.91		$150,344.91
21	$123,698.04		$123,698.04
22	$95,408.56		$95,408.56
23	$65,430.83		$65,430.83
24	$45,628.20		$45,628.20
25	$45,628.20		$45,628.20

26	$45,628.20		$45,628.20
27	$45,628.20		$45,628.20
28	$45,628.20		$45,628.20
29	$45,628.20		$45,628.20
30	$45,628.20		$45,628.20
31	$45,628.20		$45,628.20
32	$45,628.20		$45,628.20
33	$45,628.20		$45,628.20
34	$45,628.20		$45,628.20
35	$45,628.20		$45,628.20
*Assumes $328,970,412 Capital investment in Isle of Wight County, 80% exemption, and a tax rate of $0.7300/$100			

EXHIBIT C

FORM OF MEMORANDUM

Full exhibit follows

PREPARED BY AND RETURN TO:
Sycamore Cross Solar, LLC
c/o AES Clean Energy Development, LLC
2180 South 1300 East, Suite 500
Salt Lake City, Utah 84106

County Tax Map ID Nos. 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, 27-01-004, 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005

[NOTE TO CLERK: ISLE OF WIGHT COUNTY, VIRGINIA, A POLITICAL SUBDIVISION OF THE COMMONWEALTH OF VIRGINIA, IS A PARTY TO THIS INSTRUMENT WHICH, ACCORDINGLY, IS EXEMPT FROM RECORDATION TAX PURSUANT TO VA. CODE SEC. 58.1-811.A.3.]

MEMORANDUM OF SOLAR FACILITY SITING AGREEMENT

This Memorandum of Solar Facility Siting Agreement (this "Memorandum"), dated and effective as of _____, is made by and between **Isle of Wight County, Virginia**, a political subdivision of the Commonwealth of Virginia (the "County") and **Sycamore Cross Solar, LLC,** a State limited liability company ("Company"), with regard to the following:

1. Siting Agreement. The County and Company are parties to that Solar Facility Siting Agreement, dated _____ (the "Siting Agreement"), which describes the intent of Company to develop, install, build, and operate a solar facility ("Project") on that certain parcel of land identified as County Tax Map Parcels 09-01-001, 16-01-002, 16-01-002A, 16-01-003, 16-01-005. 16-01-008, 16-01-009, 17-01-003, 17-01-003C, 17-01-001, 17-01-002, 17-01-011, 27-01-003, 27-01-004, 10-01-017, 11-01-015, 10-01-023, 10-01-025, 10-01-027, 10-01-028A, 10-01-030, and 11-01-005 (the "Property").

2. Authorization. The County's execution of the Siting Agreement was authorized during that certain regular meeting of the Board of Supervisors of the County on _____.

3. Substantially in Accord. The Siting Agreement states, *inter alia*, that, pursuant to Virginia Code § 15.2-2316.9(C), by entering into the Siting Agreement, the County acknowledged that the Project is deemed to be substantially in accord with the County Comprehensive Plan under Virginia Code § 15.2-2232.

4. Obligations. The Siting Agreement sets forth, *inter alia,* certain obligations of Company to comply with the Conditional Use Permit approved by the County for the Project, and to make certain payments to the County.

5. Siting Agreement Controls. This Memorandum does not supersede, modify, amend or otherwise change the terms, conditions or covenants of the Siting Agreement, and the County and Company executed and are recording this Memorandum solely for the purpose of providing constructive notice of the Siting Agreement and the County's and Company's rights thereunder. The terms, conditions and covenants of the Siting Agreement are incorporated in this

Memorandum by reference as though fully set forth herein.

6. Counterparts. This Memorandum may be executed in counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same document.

WITNESS the following signature and seal:

ISLE OF WIGHT COUNTY, VIRGINIA:

_____
Name: Randy R. Keaton
Title: County Administrator

COMMONWEALTH OF VIRGINIA,
COUNTY OF ISLE OF WIGHT to-wit:

The foregoing Memorandum was acknowledged before me this ___ day of _____, 2024, by Randy R. Keaton, County Administrator of Isle of Wight County, Virginia.

_____
Notary Public

My Commission expires:

WITNESS the following signature and seal:

ISLE OF WIGHT COUNTY, VIRGINIA:

_____
Name: Joel C. Acree
Title: Chairman, Board of Supervisors

COMMONWEALTH OF VIRGINIA,
COUNTY OF ISLE OF WIGHT to-wit:

The foregoing Memorandum was acknowledged before me this ___ day of _____, 2024, by Joel C. Acree, Chairman of the Board of Supervisors of Isle of Wight County, Virginia.

_____
Notary Public

My Commission expires:

WITNESS the following signature and seal:

Sycamore Cross Solar, LLC,
a Delaware limited liability company

By: _____
Name: _____
Title: _____

STATE OF _____ }
}
COUNTY OF _____ }

The foregoing Memorandum was acknowledged before me this ___ day of _____, 2024, by _____, who acknowledged that they executed the foregoing instrument in their capacity as _____ of Sycamore Cross Solar, LLC, a Delaware limited liability company, on behalf of said limited liability company.

_____
Notary Public

My Commission expires:

ISSUE:

Consideration of Bids Received for an Addition to the Windsor Library Building

BACKGROUND:

The County recently received bids for construction of an addition to the Windsor Library facility. Staff will provide information regarding the bids and options for the Board's consideration.

This is a rebid of the project which consists of a new 1800sf 1st floor, 680sf 2nd floor addition, new lighting, flooring, paint, and new bathroom fixtures in the existing library.

BUDGETARY IMPACT:

TBD

RECOMMENDATION:

Per the Board's discussion and direction.

ISSUE:

Consideration of Bids for an Addition to the Rushmere Volunteer Fire Station

BACKGROUND:

The County recently received bids for construction of an addition to the Rushmere Volunteer Fire Station. Staff will provide information regarding the bids and options for the Board's consideration.

The scope of work includes a 1116 SF addition to the north end of the existing building for bunkrooms, men/women shower facilities, and minor storage space, and a new 2886 SF apparatus bay on the south end of the station.

BUDGETARY IMPACT:

The apparent low bid for the project is $1,828,916.

RECOMMENDATION:

Per the Board's discussion and direction.

ISSUE:

Discussion of Potential Benns Church Blvd/Turner Dr Intersection Improvements as Outlined in the Benns Church Master TIA

BACKGROUND:

The Board has previously discussed options for the Benns Church Blvd/Turner Dr intersection. The Benns Church Master TIA has been completed and the Board may wish to review and consider the analysis and suggested options.

BUDGETARY IMPACT:

TBD

RECOMMENDATION:

Per the Board's discussion and direction.

ATTACHMENTS:

Description	Type	Upload Date
Various Information	Backup Material	8/9/2024

Benns Church/Turner Dr Improvements

2029 Build Out Scenario (per page 43-44, Figure 5, Master Plan)

*revised 07/08/2024

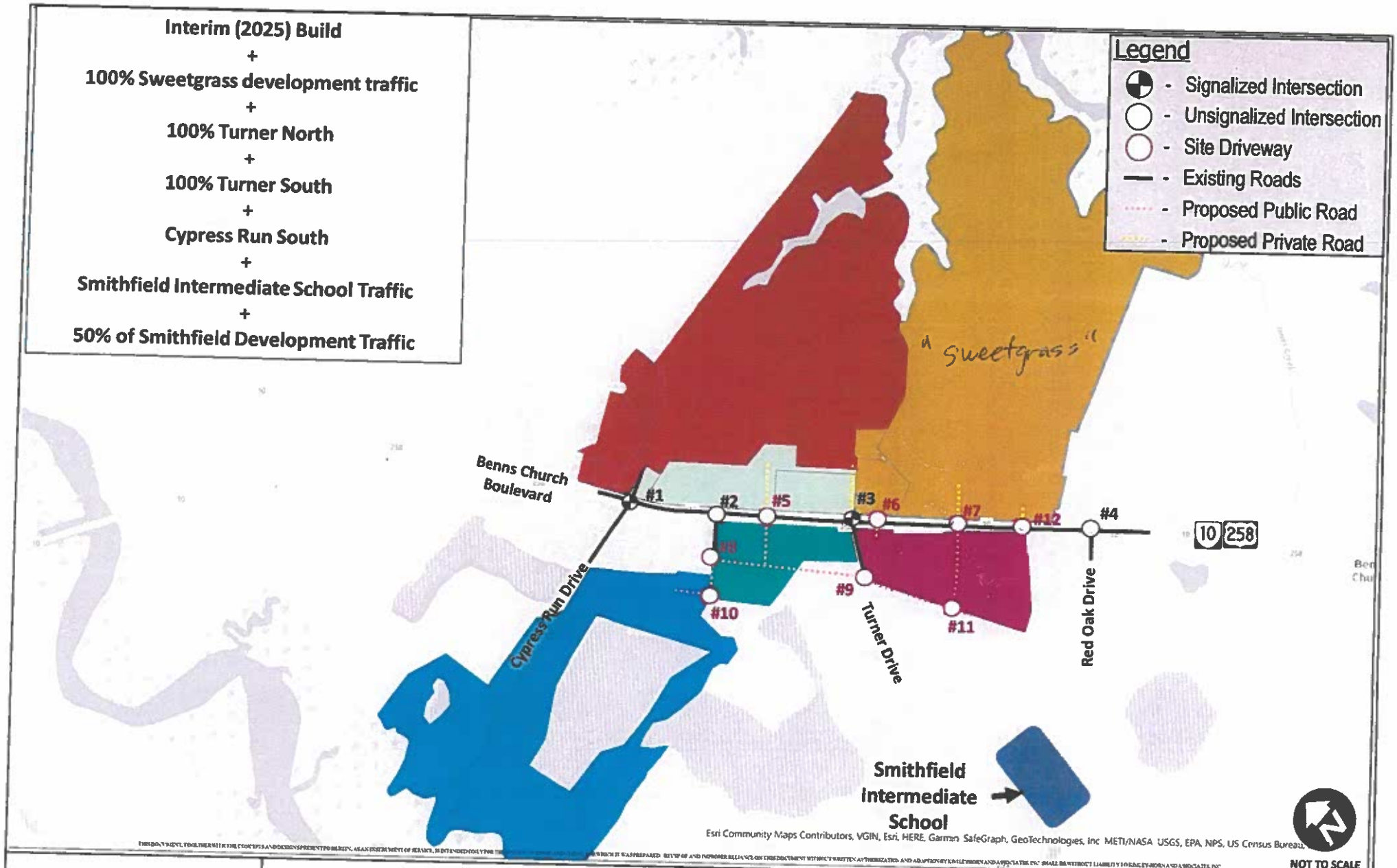
	Contribution as % of total *(PM Peak)*	Contribution as % of New Dev ONLY *(PM Peak)*	Staff Proposal Contribution % as $ of total Funding Needed *($4,513,268)*	Mr. Layden Prop. Contribution per Layden Proposal (see sheet #2)	Contribution as % of total cost per Layden Proposal	
Turner North Yeoman/H+L	3%	13%	$ 586,725	$ 600,000	13%	same
Turner South Layden	4%	17%	$ 767,256	$ 400,000	9%	less
Cypress Run South Greenwood	3%	13%	$ 586,725	$ 1,059,000	24%	more
Sweetgrass ?	8%	33%	$ 1,489,378	$ 500,000	11%	less
problem IOW Middle School ? High School	1%	4%	$ 180,531	$ 785,000	17%	more
Other Smfd Dev *(at 50% bld out in 2029)*	5%	21%	$ 947,786	$ 1,156,000	26%	more
		100%	**$ 4,558,401**	**$ 4,500,000**	**100%**	
Background Traffic	76%					
	100%					

Total New Dev	**24%**	*1. Turner North includes Wawa, Harrison & Lear parcels (Fig 5, dk red)*
Background	76%	
	100%	*2. Turner South includes Rt 10 frontage from TSC to Turner. (Fig 5, dk green)*
Project Estimate	**$ 7,686,167**	*3. Cyprus Run South includes Greenwood homes development. (Fig 5, blue)*
Rev Shar Grant	$ 2,200,655	
IOW Smart Scale Grant	$ 972,244	*4. Sweetgrass includes the boundaries of Sweetgrass as approved*
other IOW funds	$ -	*in the recent rezoning. (Fig 5, mustard yellow)*
other Town Smfd funds	$ -	
		5. Other Smfd Dev includes 50% build out projections based on
Funding Needed	**$ 4,513,268**	*general land uses from the comp plan for other nearby areas*
		(Fig 5, lt green & dk brown)
Rev Shar Match Required	$ 2,200,655	
Shortfall Required	$ 2,312,613	*6. Sheet 2 "Layden Proposal" outlines how developments*
Funding Needed	**$ 4,513,268**	*are attributed to the approved TIA sections.*
5% Admin value of total project estimate	$ 384,308.35	
Original funding needed	$ 4,513,268	

Wawa dring force but theirs goes down
- traffic count Greenwood + Layden doesn't even need it.

County pays until c/o issued.

Interim (2025) Build
+
100% Sweetgrass development traffic
+
100% Turner North
+
100% Turner South
+
Cypress Run South
+
Smithfield Intermediate School Traffic
+
50% of Smithfield Development Traffic



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.

Kimley»Horn

Benns Church TIA
Isle of Wight, Virginia

Future (2029) Build Conditions

Figure 5

Layden Proposal

		Amount Proposed as Written	Amt Proposed by TIA Land Use Sections
	Turner North		$ 600,000
	Frontier #1--Wawa (dk red)	$ 200,000	
	Frontier #2 (dk red)	$ 200,000	
	Harrison & Lear (dk red)	$ 200,000	
	Turner South		$ 400,000
	L&L Land Development/Layden (dk green)	$ 400,000	
	Cypress Run South		$ 1,059,000
	Greenwood Homes (blue)	$ 600,000	
??	*Turner Family Partnership (blue)*	$ 459,000	
	Sweetgrass		$ 500,000
	Sweetgrass (mustard yellow)	$ 500,000	
	IOW Middle School		$ 785,000
??	*Isle of Wight County --existing relief (gray)*	$ 200,000	
	IOW/Town future school (gray)	$ 585,000	
	Other Smfd Developments*		$ 1,156,000
	Pomoco Parcel (light green)	$ 316,000	
??	*Edwards Farm (dk brown)*	$ 640,000	
??	*Cornett Parcel (lt green)*	$ 200,000	
		$ 4,500,000	$ 4,500,000

*Layden proposal does not acknowledge the 50% build out for 2029. I believe these numbers assume a 100% build out contribution.

AC. and Units

> Un additon to $400K cash offer – $600 k public VDOT rd.

> Layden + Greenwood $200k 2ac.

pay as c/o's are delivered.

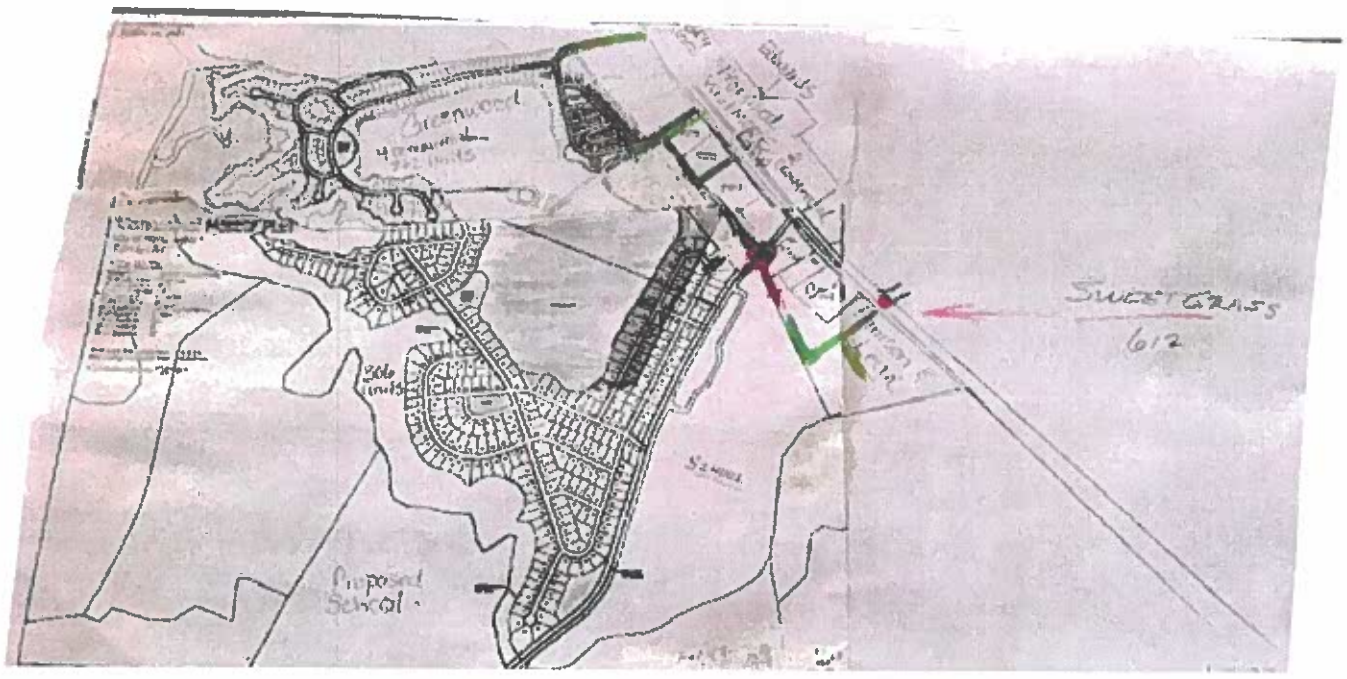
> H + L traffic study $400K / ingress egress + school rd.

TERMS AND CONDITIONS

- Isle of Wight County will "be the Bank" and Manage the Funds as well as the Project
- There will be no Interest Carry passed to the Participants
- No Payment from Participant until Project Approval (County & Town) and Plat Recordation
- Participants Funds are Capped as originally committed
- Should the project be changed or deemed unnecessary, any funds collected will be refunded to Participant
- Approvals and Project Schedules will not be hindered by Roundabout Completion timeline

ADDITIONAL NOTES FOR CONSIDERATION

- Greenwood Homes commitment is over and above $200,000.00 required to purchase 2 acres for roundabout from Turner Family Partnership making total commitment $800,000.00
- Frontier's commitment is over and about the $275,000.00 required for a right deceleration lane making a total commitment of $675,000.00
- Harrison & Lear's commitment is over and above the costs required to extend stacking lanes (approximately $250,000) into project as well as $110,000.00 Comprehensive Traffic Study (which legally should have been at the County's expense)making total commitment +/- $560,000.00
- L & L Land/Layden's commitment is over and above $300,000.00 to install public road with access to Turner Drive making total commitment $700,000.00.



MEMORANDUM

To: Michael Stallings
Town of Smithfield
911 South Church Street
Smithfield, VA 23430

From: Devin Simpson, P.E.
Benjamin Reim, P.E.
Kimley-Horn and Associates, Inc.

Date: July 10, 2024

Subject: Benns Church Master TIA Consistency Memorandum
for The Promontory (Turner North and Cypress Run South)

Introduction

This memorandum summarizes a review of land use, densities, and access associated with The Promontory for consistency with the Benns Church Master Traffic Impact Analysis (TIA) that was completed and approved in October 2023. The Promontory is a commercial and residential development located in Isle of Wight County, Virginia and consists of both the Turner North and Cypress Run South developments analyzed as part of the Benns Church Master TIA.

The purpose of this TIA was to assess the cumulative impact of multiple developments on the surrounding roadway network to anticipate future roadway needs. The intended use of the approved TIA was to plan for anticipated future roadway improvements needed and be used as a baseline tool for comparing planned development impacts to actual development impacts as individual developments progress further toward rezoning, site plan, or construction.

The intent of this memorandum is to confirm that the land use, densities, and access for the proposed Promontory development are consistent with the TIA and thus, no additional impacts are anticipated on the surrounding roadway network.

Site Traffic Assessment

In the approved TIA, the following land uses and densities for Turner North and Cypress Run South were analyzed:

Turner North

- Fast Food Restaurant with Drive-Through Window (5,000 SF)
- Automated Car Wash (3,000 SF)
- High-Turnover (Sit-Down) Restaurant (6,000 SF)
- Drive-In Bank (4 Lanes)

Cypress Run South

- Single Family Detached (154 Dwelling Units)
- Single-Family Attached (108 Dwelling Units)

The updated engineering site plan for Turner North indicates there are no proposed changes to land uses and densities. Within Cypress Run South, the only change observed is the land use description (i.e., number of dwelling units remain consistent):

- Single Family Detached (154 Dwelling Units)
- Townhouses (88 Dwelling Units)
- Villas (20 Dwelling Units)

Based on a review of the descriptions, townhouses and villas would have been analyzed using the same ITE Trip Generation Land Use Code (i.e., ITE Code 215 – Single Family Attached); therefore, no change in trip generation potential is anticipated. The latest site plan for The Promontory (Turner North and Cypress Run South) is shown in **Attachment A**.

Site Access Assessment

Based on the latest site plan, the proposed access points for Turner North and Cypress Run South are consistent with the TIA therefore, no additional traffic impacts are anticipated. These access points include the following intersections:

- Public Road D at Cypress Run Drive (Unsignalized, "T" Intersection)
- Public Road A at Benns Church Boulevard (Unsignalized, Right-In, Right-Out)
- Public Road J at Benns Church Boulevard (Unsignalized, Right-In, Right-Out)
- Public Road B at Turner Drive (Unsignalized, Roundabout)

Interim Traffic Control Assessment

As previously mentioned, the purpose of the TIA was to assess the cumulative impact of future development to anticipate future roadway needs. As such, the TIA included three (3) new developments—Turner North, Turner South, and Cypress Run South—as well as three (3) background developments—Smithfield Development, Smithfield Intermediate School, and Sweetgrass—in addition to background traffic growth.

Based on the TIA, a roundabout was proposed at the intersection of Public Road B and Turner Drive, just west of Benns Church Boulevard, beginning in the Build 2025 scenario. This intersection would also serve Turner South on the southern leg at the time of that development. The intent of this interim traffic control assessment is to analyze vehicle operations at this intersection under an additional interim condition should The Promontory development complete construction prior to the remaining developments in the approved TIA.

The additional interim condition would not include Turner South development or its approach to the proposed intersection, resulting in the proposed intersection being a three-legged "T-Intersection". The proposed intersection would be unsignalized, and not configured with a

roundabout. Instead, the proposed intersection would operate with stop-control along the Turner North/Cypress Run South approach (Public Road B) and free conditions along Turner Road.

This condition configuration was evaluated using *Synchro 12* and *SimTraffic* software. **Table 1** and **Table 2** depicts the anticipated vehicle delays and maximum queue lengths at the Turner North/Cypress Run South and Turner Road intersection in the proposed interim conditions for a build year of 2025.

Table 1: Level of Service Summary for Interim Stop-Control Condition

ID	Intersection	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
				Eastbound			Westbound			Northbound			Southbound		
				LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour															
9	Turner Drive at Public Road B (Turner North Driveway)	Unsignalized	A 1.2	A (8.0)			- (0.0)						C (17.3)		
PM Peak Hour															
9	Turner Drive at Public Road B (Turner North Driveway)	Unsignalized	A 2.0	A (8.3)			- (0.0)						B (14.8)		

Table 2: Maximum Queue Summary For Interim Stop-Control Condition

ID	Intersection	Maximum Queue Per Movement (Feet)			
		Eastbound		Southbound	
		LT	TH	LT	RT
AM Peak Hour					
9	Turner Drive at Public Road B (Turner North Driveway)	69		67	
PM Peak Hour					
9	Turner Drive at Public Road B (Turner North Driveway)	57		70	

Based on a review of anticipated interim conditions, a three-legged intersection without Turner South development is expected to operate acceptably with the stop-controlled southbound approach expected to operate with minimal delays and at a LOS C and LOS B in the AM and PM peak hours, respectively. Furthermore, queue lengths on the Turner North/Cypress Run South southbound approach and eastbound left-turn from Turner Road turning into the Turner North/Cypress Run South developments are expected to be less than 70 feet in the interim condition and of minimal impact to Turner Drive. It should be noted that this stop-controlled condition should be an interim condition only and as additional developments come online, the proposed roundabout is intended to be the ultimate intersection condition.

Synchro and *SimTraffic* reports for this interim scenario are provided in **Attachment B**.

Conclusion

Based on this assessment, The Promontory development is expected to remain consistent with the approved TIA and not create additional traffic impacts to the surrounding roadway network. Furthermore, it is expected that an interim traffic control condition of stop-control for the southbound approach (Public Road B) to Turner Drive will be sufficient to support the development until additional development activity occurs as presented in the TIA.

ISSUE:

Discussion of the Nike Missile Restoration Project