

A G E N D A
ISLE OF WIGHT COUNTY PLANNING COMMISSION
November 22, 2022

1. CALL TO ORDER

INVOCATION

PLEDGE OF ALLEGIANCE

2. ROLL CALL/DETERMINATION OF A QUORUM

BRIAN CARROLL, CHAIRMAN

BOBBY BOWSER, VICE-CHAIRMAN

CYNTHIA TAYLOR

JAMES FORD

JENNIFER S. BOYKIN

GEORGE RAWLS

THOMAS J. DISTEFANO

RICK SIENKIEWICZ

RAYNARD GIBBS

MATTHEW SMITH

3. ACTION ON REQUESTS TO WITHDRAW OR TABLE PENDING AGENDA ITEMS

4. APPROVAL OF AGENDA

5. CONSENT AGENDA

A. October 25, 2022, Regular Meeting Minutes

B. OCTOBER 20, 2022 BOARD OF SUPERVISORS ACTION LIST

6. CITIZENS' COMMENTS

7. PUBLIC HEARINGS

A. Carver Solar Energy Generation Facility Conditional Use Permit Request

Application of Carver Solar I, LLC (CUP-6-22), applicant, and Carter R. Clements, Joyce G. Clements, Travis W. Williams, Lewis Clarence Lee Trust (Clarence Lee Lewis, Trustee), Joshua Pretlow, Jr., Garrison Farm Solar LLC, Delman Lew Carr Trust (Delman Lew Carr, Trustee), Chester G. Carr Trust (Glenn and Susan S. Carr, Trustees), Helene Johnson Hobbs, Joest Properties, LLC, Scott L. Thomason, Carla A. Thomason, James K. Edwards, Marsha F. Edwards, Cobb Land Limited Partnership, Troy L. Robinson, and Margaret F. Robinson, property owners, for a conditional use permit to establish a major utility service, specifically a 71 MW utility-scale solar energy facility and substation, on 637 acres located on Yellow Hammer Road (Rte. 645), Windsor Boulevard (Rte.460), Winston Drive (Rte. 639), Cut Thru Road (Rte. 638), Ecella Road (Rte. 639), Barrett Town Road (Rte. 641), Mill Creek Drive (Rte. 638), and Antioch Road (Rte. 657) with tax parcel numbers 52-01-028, 52-01-034, 52-01-035, 52-01-036, 45-01-059, 45-01-059A, 45-01-061,45-01-061B, 45-01-061C, 45-

01-065, 45-01-068, 52-01-037, 52-01-039, 53-01-001, 53-01-003, 53-01-003M, 53-01-006, 53-01-022, 53-01-022E, and 46-01-019A in the Rural Agricultural Conservation, Conditional General Commercial, and Conditional Rural Residential zoning districts. The current uses of the properties are agricultural and silvicultural uses.

B. Proposed Cemetery Setback Zoning Ordinance Change

An ordinance to amend the following section of Appendix B, Zoning, of the Isle of Wight County Code: Article 5 (Supplementary Use Regulations), Section 5-5003.B.1, “Cemetery,” in order to reduce the front yard setback requirement for any burial plot on land abutting a public or private street to 25 feet.

C. Share the Isle Comprehensive Plan Amendment

An ordinance to amend the Isle of Wight County Comprehensive Plan, *Envisioning the Isle*, to incorporate by reference the plan known as, “Share the Isle: Isle of Wight County’s Plan for an Aging and Mixed Ability Inclusive Community,” as Appendix XII in the Comprehensive Plan

8. OLD BUSINESS

9. NEW BUSINESS

A. Ad Hoc Energy Task Force Discussion

Discussion on the Creation of an Ad Hoc Energy Task Force

B. COUNTY ATTORNEY'S REPORT

C. PLANNING DIRECTOR'S REPORT

10. CLOSED MEETING

11. ADJOURNMENT

PLANNING REPORT

ATTACHMENTS:

Description	Type	Upload Date
October 25, 2022 Planning Commission Meeting Minutes	Minutes	11/16/2022

**MINUTES OF THE MEETING OF THE ISLE OF WIGHT COUNTY
PLANNING COMMISSION HELD ON THE TWENTY-FIFTH DAY OF
OCTOBER IN THE YEAR TWO THOUSAND AND TWENTY-TWO**

CALL TO ORDER

Brian Carroll, Chairman, called the Isle of Wight County Planning Commission meeting to order at 6:00 PM on October 25, 2022, in the Board of Supervisors Room at the Isle of Wight County Courthouse, Isle of Wight, Virginia.

INVOCATION

Don Robertson delivered the invocation.

PLEDGE OF ALLEGIANCE

Chairman Carroll invited everyone present to join in the Pledge of Allegiance.

ROLL CALL/DETERMINATION OF A QUORUM

PRESENT

Brian Carroll, Chairman
Bobby Bowser, Vice-Chairman
Cynthia Taylor
James Ford
Jennifer Boykin
George Rawls
Thomas Distefano
Raynard Gibbs
Matthew Smith

A quorum was determined.

ABSENT

Rick Sienkiewicz

ALSO IN ATTENDANCE

Robert W. Jones, Jr., County Attorney
Don Robertson, Assistant County Administrator
Amy Ring, Community Development Director
Jeryl Phillips, Assistant Director, Planning and Zoning
Trenton Blowe, Planner I

Caleb Kitchen, Planner I
Amanda Landrus, Secretary

ACTION ON REQUESTS TO WITHDRAW OR TABLE PENDING AGENDA ITEMS

Chairman Carroll asked if there were any requests to table or withdrawal agenda items. Amy Ring, Community Development Director, stated there were no requests.

APPROVAL OF AGENDA

Chairman Carroll called for a vote to approve the agenda. Commissioner Boykin made a motion to approve the agenda. Commissioner Gibbs seconded the motion. Chairman Carroll asked for all in favor to signify by saying aye. The motion passed unanimously.

APPROVAL OF CONSENT AGENDA

Chairman Carroll called for a vote to approve the consent agenda. Commissioner Taylor made a motion to approve the consent agenda. Commissioner Ford seconded the motion. Chairman Carroll asked for all in favor to signify by saying aye. The motion passed unanimously.

CITIZENS' COMMENTS

There being no citizens comments, Chairman Carroll closed Citizens Comments.

PUBLIC HEARINGS

Chairman Carroll called for the public hearing for the following application:

Application of Ho-Fel Solar, LLC (CUP-02-22), applicant, and Dustin and Brandy Atkins and Cobb Land Limited Partnership, property owners, for a conditional use permit to establish a major utility service, specifically a utility-scale solar energy facility and substation, on eighteen acres located on property on Lees Mill Road with tax parcel numbers 69-01-086 and 72-01-022, in the Rural Agricultural Conservation zoning district. This application is an expansion of previously approved conditional use permit, CUP-8-18, for a 40 MW utility scale solar facility on parcel 69-01-087.

Trenton Blowe, Planner I, gave the following presentation.

CUP-02-22 HO-FEL SOLAR

Planning
Commission
Meeting
October 25,
2022

MAJOR UTILITY SERVICE (UTILITY SCALE SOLAR ENERGY FACILITY) CONDITIONAL USE PERMIT REQUEST

DETAILS

Location – Lee’s Mill Road

Tax Map Parcel Numbers: 69-01-086
and 72-01-022

Zoning – Rural Agricultural
Conservation (RAC)

Election District – District 5

Purpose – Conditional Use Permit
(CUP) to establish a utility-scale solar
generation facility and substation on
parcels currently zoned RAC



BACKGROUND

- A CUP was approved for 69-01-087 for a 300-acre solar facility in February 2019. That parcel is north of the two proposed parcels. The applicant has reduced the acreage use of the original parcel to 182 acres.
- Applicant proposes to use approximately 17.7 acres of the proposed parcels for an expansion of the previously approved solar facility including their point of interconnection and substation.
- 40-megawatt installation proposed.



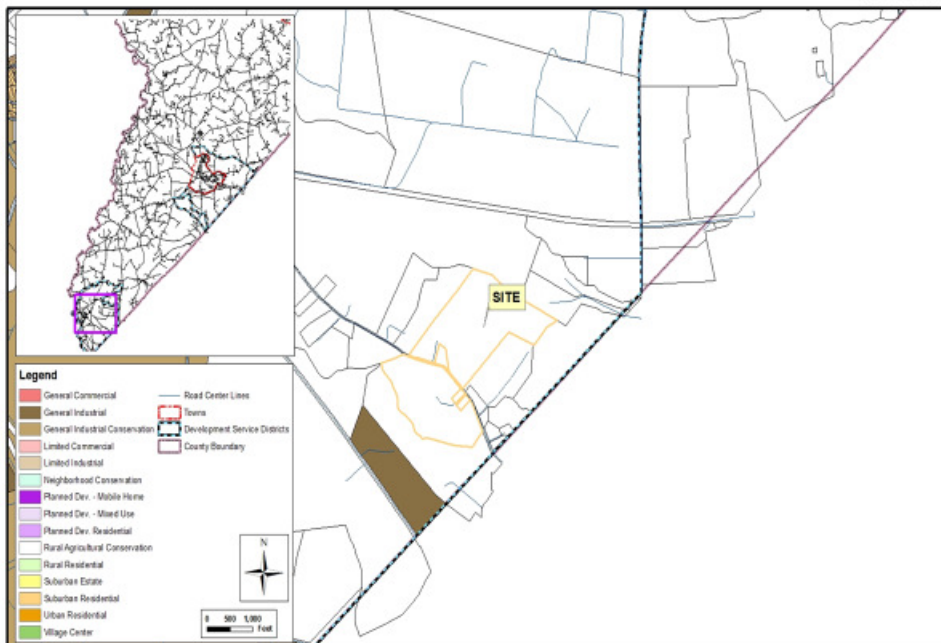
CUP-02-22 Conditional Use Permit - Location Closeup



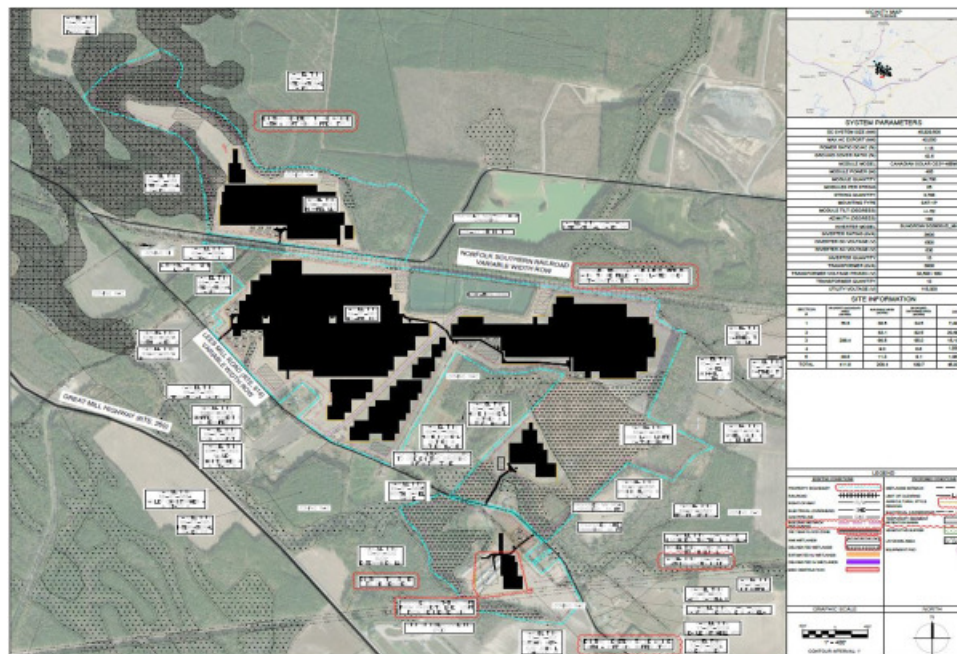
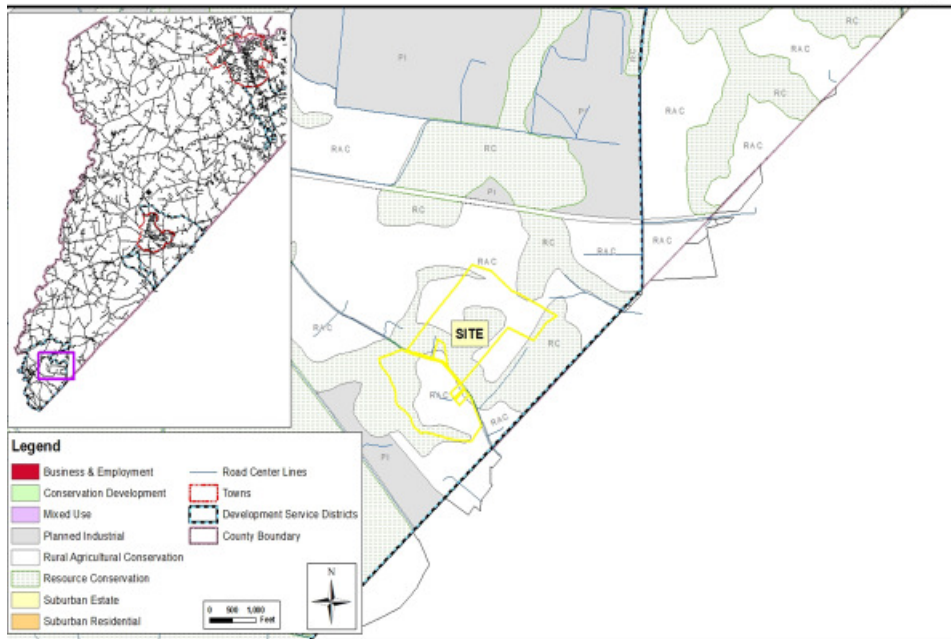
CUP-02-22 Conditional Use Permit - Location Map



CUP-02-22 Conditional Use Permit- Zoning Map



CUP-02-22 Conditional Use Permit - Land Use Map



Concept Plan





**LOOKING
WEST ON
PARCEL
72-01-022**



**LOOKING WEST
TOWARDS PARCEL
72-01-022 AT THE
ISLE OF WIGHT
COUNTY/
SUFFOLK
BOUNDARY**





**EXISTING
ENTRANCE
TO 69-01-086**



**LOOKING
NORTH ON
PARCEL
69-01-086**





THE PLANNING COMMISSION AND BOARD OF SUPERVISORS SHALL CONSIDER THE FOLLOWING CRITERIA BEFORE THE GRANTING OF A CONDITIONAL USE PERMIT:

1. Will not be detrimental to or endanger the public health, safety, and general welfare;
2. 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. Adequate utilities, water, sewer or septic system, access roads, storm drainage and/or other necessary public facilities and improvements will be provided;
4. Ingress and egress so designed as to minimize traffic congestion on the public streets;
5. Not contrary to the goals and objectives of the Isle of Wight County Comprehensive Plan;
6. Shall conform to all other applicable regulations of the zoning district classification in which it is located and to the special requirements established for the specific use; and
7. Will not result in a multiplicity or saturation of similar uses in the same general neighborhood of the proposed use.



BOARD MAY IMPOSE ADDITIONAL CONDITIONS OR LIMITATIONS ON CUPS. SUCH CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO:

1. Number of persons living or working in the immediate area and the proposed hours of operation;
2. Traffic conditions, sidewalks, parking facilities, vehicle access, peak periods of traffic; and proposed roads, but only if construction of such roads will commence within the reasonably foreseeable future;
3. Orderly growth of the neighborhood and community and the fiscal impact on the County;
4. 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 resource landmarks.



**AGENCY
REVIEW**

IOW General Services – No Concerns,
complete design review at site plan to
include new state stormwater regulations

IOW Emergency Services – No Concerns

IOW Economic Development – No
Concerns

VDOT –No Concerns

IOW Env. Planner – No concerns

Isle of Wight County Museum – No
concerns with the application, provided that
the conclusions and recommendations set
forth in the report are followed.

**Virginia Department of Historic
Resources** - Proposed additional buffers on
the acreage containing the Oak Crest home.
Additional delineation was requested for the
cemetery found on parcel 72-01-022



STRENGTHS & WEAKNESSES

Strengths:

- The application is generally consistent with the Comprehensive Plan and can meet all ordinance requirements
- The proposed use will have minimal impact on the community facilities and resources with the conditions presented.
- The project is not visible from a major right-of-way.
- Enhanced landscape buffering, beyond the required minimums of the Zoning Ordinance, has been proposed by the applicant.

Weaknesses:

- The proposed use would remove agricultural land from production.
- Temporary impact to residential development in the area from construction traffic and noise is expected during the construction phase
- There is some minor impact on some historical and archeological resources which may be addressed with the recommended conditions.

RECOMMENDATIONS

Staff recommends approval of the CUP with the following conditions:

- The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type that is harmonious with the rural, agricultural, and historical character of the County while meeting federal and state regulations for solar electric generating facility fencing as determined by the zoning administrator prior to final site plan approval.
- The applicant shall permanently preserve and maintain both existing forest and vegetation as well as planted buffer landscaping and shall not clear or cut live trees within required setbacks or buffer yards except as necessary to avoid shading of solar panels as approved by the Zoning Administrator.

RECOMMENDATIONS CTD.

- The applicant shall submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.
- The applicant shall meet any additional VDHR delineation and buffer requirements before receiving final site plan approval.
- Hours of operation for construction activities to be limited to 7:00 am to 6:00 pm Monday through Friday and 9:00 am to 5:00 pm on Saturday. No construction is to occur on Sundays.

RECOMMENDATIONS CTD.

- The applicant shall reimburse the County for reasonable costs related to retaining such third-party inspectors as deemed necessary for project inspections.
- Enhanced buffer landscape plan proposed on the concept plan exhibit is conceptual only at this time. The buffer design and required plantings will be reviewed in detail for approval during the site plan review and, at a minimum must include a double-staggered row of plantings in areas where the existing vegetation is not being retained to include a mix of evergreen and deciduous species to provide an effective screen.
- The applicant shall maintain a 25-foot setback from cemeteries found in the Phase 1 study and from any additional gravesites found in further evaluation recommended by VDHR. Any cemetery found in the project area must remain clear of obstruction.

Chairman Carrol opened the public hearing and invited the applicant to speak.

Matt Boerger, Pine Gate Renewables, gave the following presentation. Scott Foster, Gentry Locke, presented the legal slides.

Ho-Fel Solar CUP

Ho-Fel Solar, LLC

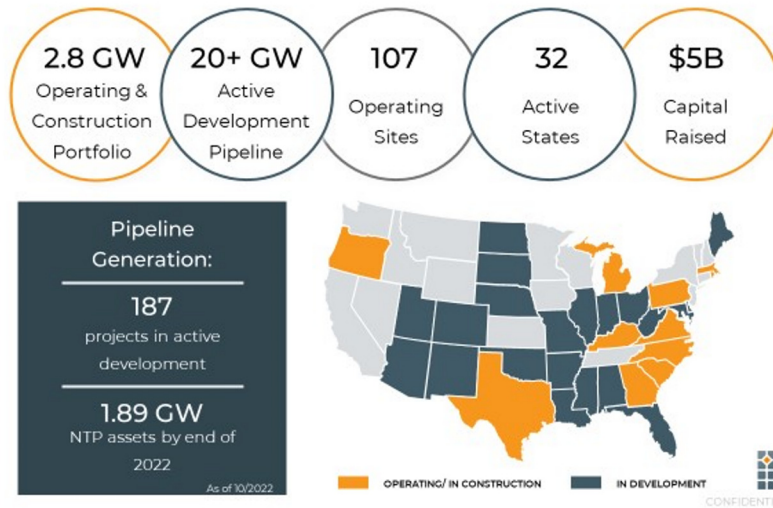


Pine Gate Renewables ("PGR")

- PGR is a turn-key developer, contractor, owner, and operator of utility scale solar energy facilities in the US.
- PGR currently operates over 90 solar farms in 32 states.
- PGR has 1 GW of operational assets and over 20 GW in active development.
- Our solar farms generate energy that connects onto the local electric grid, provides tax dollars to local economies, and increases the diversity of energy sources powering a region.
- We only operate in the US and are based out of Asheville, NC.



Milestones and Achievements



Project History and Overview

- The project is located north and south of Lees Mill Rd, east of Route 258
- Project was originally approved in February 2019
- Project has since been purchased by Ho -Fel Solar, LLC and will be developed by Pine Gate Renewables
- The project was originally proposed as a 55 MW facility and located on 300 acres
- Approximately 190 acres was proposed for development
- The revised project adds two more parcels
- Approximately 18 acres of the two additional parcels are proposed for development.



Project History and Overview

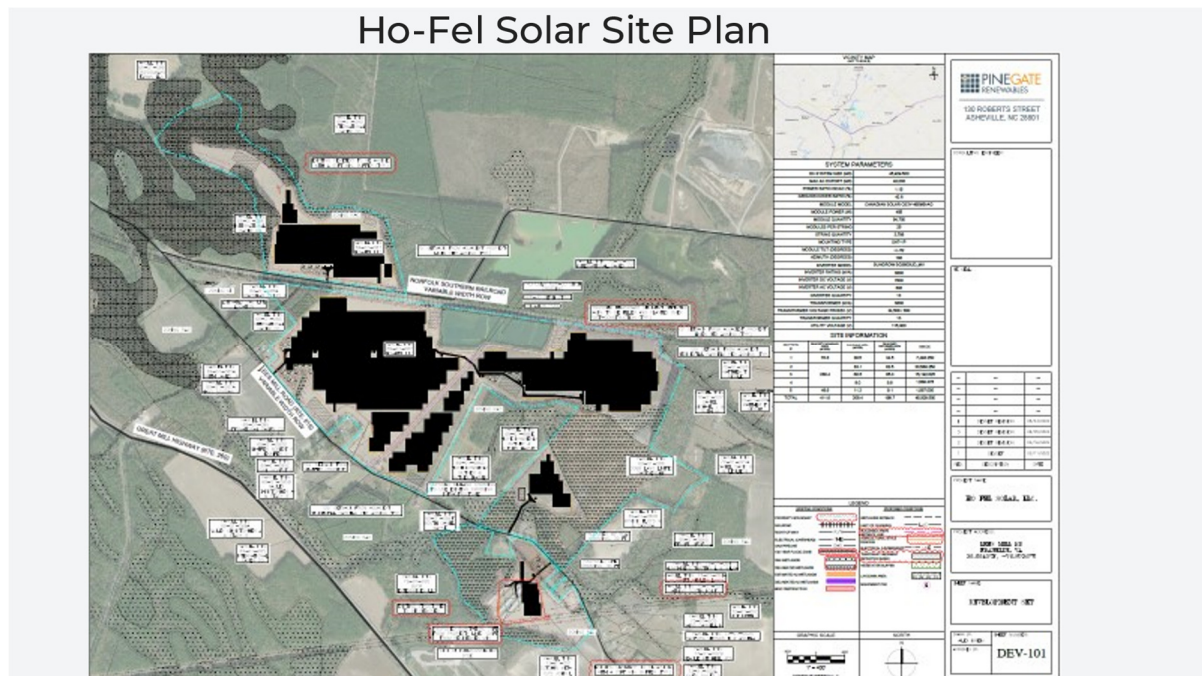
- Therefore, the amended project would be located on approximately 400 acres of total land area, but only 200 of the 400 acres are being developed leaving plenty of surrounding land for screening and buffering from adjacent areas.
- The newly proposed developed area, actually shrinks in size from 55mw to 40 mw and roughly the same proposed developable area of 200 acres
- Ho-Fel Solar could power up to 6,000 homes and will be connected to the Dominion distribution grid via an executed Interconnection Agreement.
- Different from many developers, Ho-Fel Solar will own and operate the project.



Project History and Overview

- Advances in Technology since the original CUP approval are more efficient and allow us to generate more power/panel, but does require more site design constraints
- The panels do have to be oriented NS and spaced further apart which is why we need more land to hit our target energy export and allow for increased setbacks and buffering.



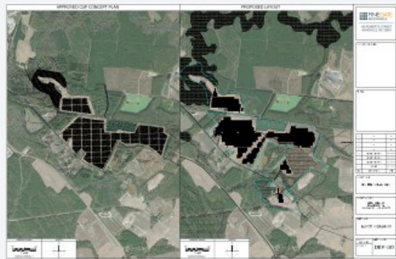


CUP Site Plan Overview

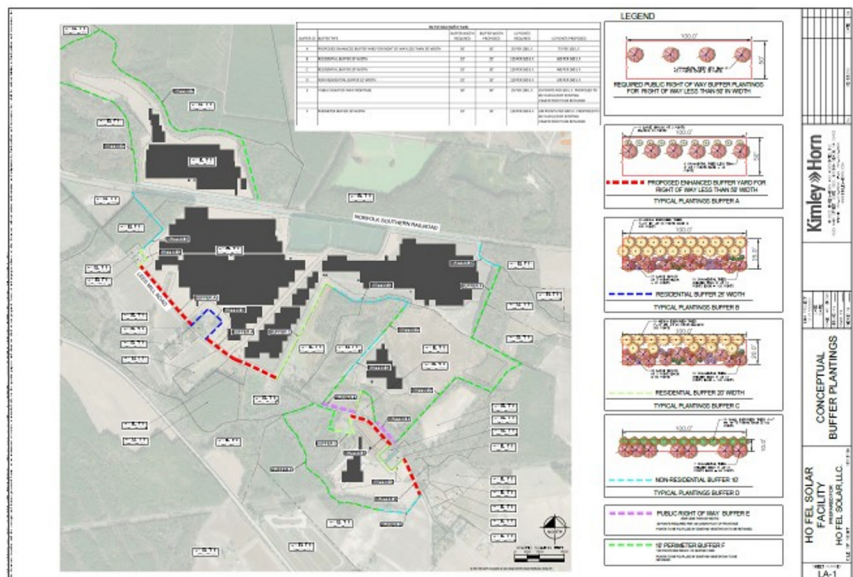
- Setbacks:

Required	Proposed
75 feet from all adjacent property lines	75 feet from all adjacent property lines
125 feet from all other residential properties	150 feet from Shaffer residential property perimeter
125 feet from all other residential properties	125 feet from all other residential properties

- Note: The panels are setback further from Lees Mill Road than the previous approved project

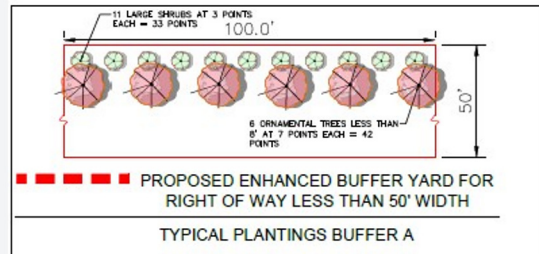
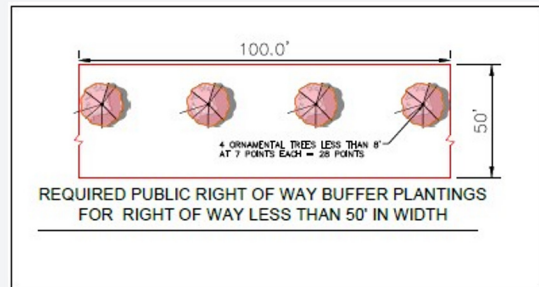
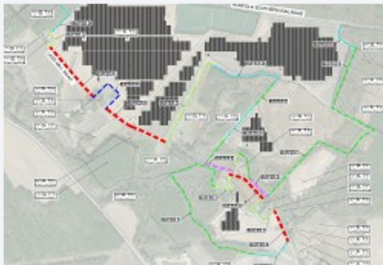


Ho-Fel Solar Landscape Plan



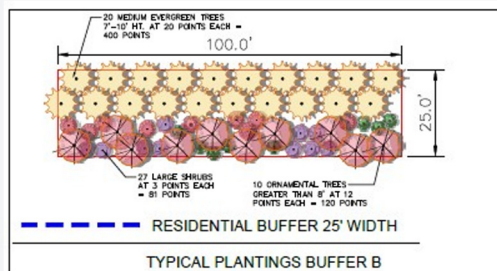
CUP Site Plan Overview

- Vegetative Landscape Buffer – Lees Mill Rd
 - Provide a 50' enhanced Landscape Buffer road where there is no existing vegetation
 - Trees will be at least 4 -feet tall at the time of planting
 - 6 trees placed every 100 feet (about every 20')
 - Trees are expected to grow to a height of 8' -10 feet within 3 years.
 - Proposed buffer along Lees Mill Rd. exceeds county requirements



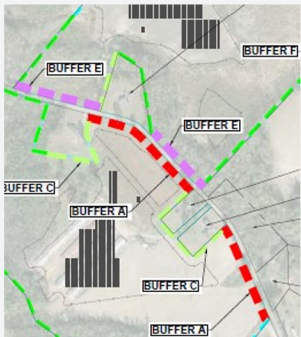
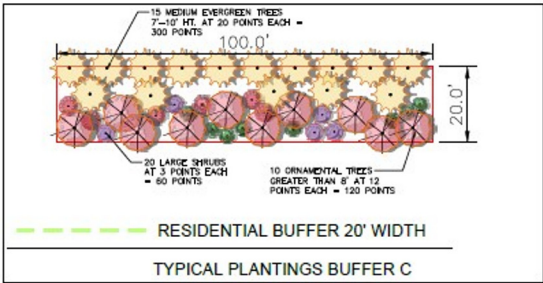
CUP Site Plan Overview

- Vegetative Landscape Buffer – Oak Crest/Shaffer Property
 - Provide a 25' enhanced Landscape around three sides of the Oak Crest property
 - 10 ornamental trees, at least 8' tall, placed every 100 feet and staggered
 - 20 medium evergreen trees 7' -10', placed every 100 feet
 - 27 large shrubs placed every 100 feet

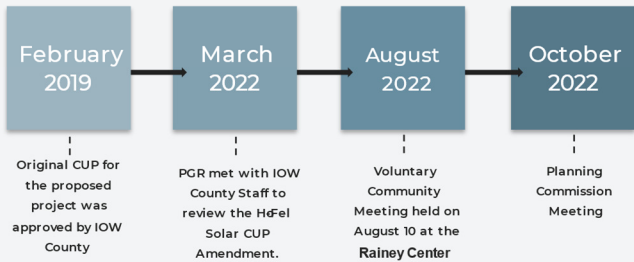


CUP Site Plan Overview

- Vegetative Landscape Buffer – all other residential buffers
 - Provide a 25' enhanced Landscape Buffer along the few residential areas adjacent to the project (5 –6 homes)
 - 10 ornamental trees, at least 8' tall, placed every 100 feet and staggered
 - 15 medium evergreen trees 7' –10', placed every 100 feet
 - 27 large shrubs placed every 100 feet



Project Timeline

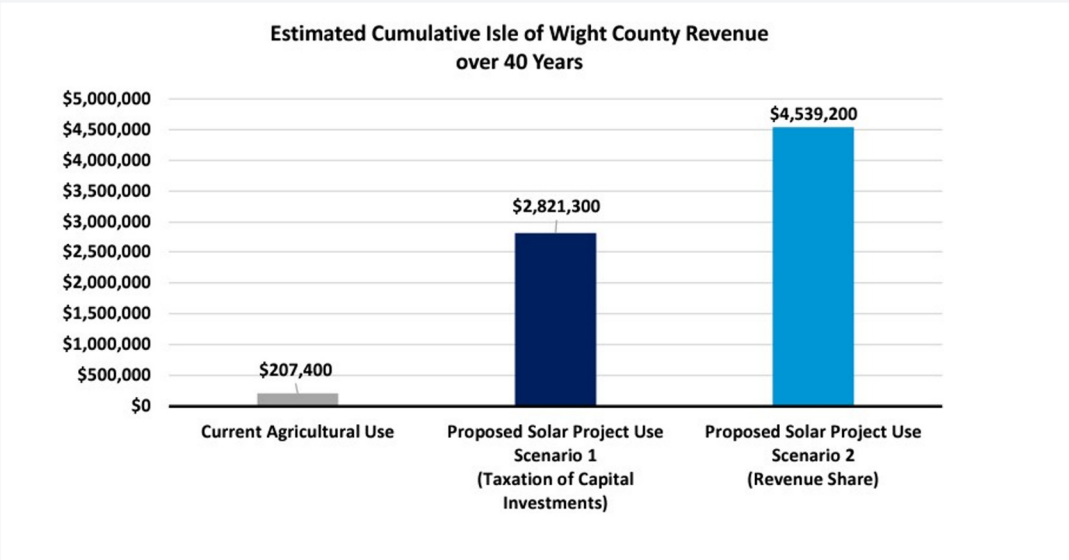


Revenue Background and Legal Review

- Project Fully Complies with County Zoning Ordinance, and exceeds certain requirements
- Enhanced CUP Conditions
- Changes in project taxation
- Siting Agreement Proposed to Board of Supervisors



County Revenue for Project Area



Thank You



Chairman Carroll called for public comment.

David Tucker, 6251 Old Stage Hwy, asked if the retention ponds on site will be storm BMP's and asked if there would be soil and water testing before, during and after the project. Mr. Tucker also asked what nation the panels would be coming from. He also stated the tariffs against China and their dumping activity have been lifted.

Ashley Wall, Kimley-Horn, stated that for this site, they will be looking at state requirements for channel and flood protection. Ms. Wall stated that the conversion from agricultural to meadow condition in post development decreases the peak water runoff from the site. The basins will serve as temporary sediment basins during construction and will be converted to permanent stormwater basins for the duration of the project and will remain in place.

Mr. Boerger stated the reason for the change is because the panels now move to track the sun and require more space compared to the fixed panels.

Chairman Carroll closed the public hearing and called for discussion from the Planning Commission.

Commissioner Distefano asked about the toxicity testing of the panels, if and when that will be performed.

Mr. Boerger stated the technology of these panels change rapidly, and procurement is still some time away. He added that all the panels go through a procurement process which requires the panels cannot contain hazardous materials which EPA classifies as hazardous if they are over a certain threshold of certain types of heavy metals. Mr. Boerger stated that the environmental

science engineering team reviews the specification sheets during procurement, and if any of the levels are above what the EPA allows, a red flag will be raised. He also stated the soil testing would be done every five years specifically for those contaminants along with the requirement for any damaged panels to be removed and replaced.

Commissioner Distefano asked if it is a condition made by the County that if any of the hazardous materials are found on the TCLP test it would prevent that panel from being installed.

Mr. Boerger stated he didn't believe that was a County condition but rather a requirement from the EPA but would be happy to add this to the conditions if that would help.

Commissioner Taylor asked how the cemetery would be protected during and after construction.

Mr. Boerger stated construction fencing would be put up 25 feet outside the delineated cemetery area along with do not enter signage on that fencing. Sediment fencing would also be placed up to prevent any erosion. Mr. Boerger did add that there would be an open access maintained for anyone visiting the cemetery.

Commissioner Taylor asked if the process has been started for permission to cross wetlands.

Brown Hobson, Pine Gate Renewables. stated the final engineering has not been done on this site, so the impact to the wetlands has not been fully assessed. Once complete, they will begin the application process.

Commissioner Smith asked if a large number of panels were damaged would any testing be done at that time.

Mr. Boerger stated that is not in the conditions at this time but can be explored.

Commissioner Bowser asked if the panels proposed are being used at another location.

Mr. Boerger stated that this project will not be online in terms of construction for another year plus, so the panels that will be available at that time is unknown.

Commissioner Rawls asked where the tracker panels are made.

Mack Burger stated they are manufactured in four countries in Asia, not China. He added there are not domestic manufacturing options right now.

Commissioner Rawls asked if there have been any farms decommissioned.

Mr. Boerger stated no solar facilities have been decommissioned.

Commissioner Rawls asked what happens or what was the plan for the panels once the facility is decommissioned.

Mr. Boerger stated currently there are a few companies who will come in to decommission the project and recycle and take the materials off site.

Commissioner Rawls asked if the cemetery was inside the fencing and if a sign for access could be placed at the site.

Mr. Boerger stated the state requires them to have open access to the cemetery.

Commissioner Gibbs asked how long it will take to reestablish a site after decommissioning.

Mr. Boerger stated its projected to take less than twelve months.

Commissioner Bowser asked if there has ever been a solar facility decommissioned.

Commissioner Rawls stated there has and he has a list.

Commissioner Boykin asked without the expansion, how many megawatts (MW) will this facility produce.

Mr. Boerger stated that the MW may stay the same, but the cost of the equipment could be cheaper with the new technology. He added it is not a MW to MW comparison as it is capturing more sunlight with less cost.

Commissioner Boykin asked how many projects this company has developed.

Mr. Boerger stated over ninety projects across the country.

Commissioner Boykin asked how many projects the company owns.

Mr. Boerger stated he was unsure of the total amount. He added they have a sister company, Blue Ridge Power, who is the builder with Pine Gate as the developer and the projects remain under the Pine Gate/Blue Ridge umbrella.

Commissioner Boykin asked if they have sold any of their projects.

Mr. Boerger stated he was sure they have; however, their goal is to keep the majority of them depending on the market. He added their goal is to own, operate and maintain the solar facilities.

Commissioner Boykin asked why the one resident has a larger buffer than the others.

Mr. Boerger stated that the property looks like an outparcel of the project and is also a historical property identified by the Virginia Department of Historic Resources, so they wanted to lower visual impact to the property.

Commissioner Gibbs asked if this was in the area that was previously approved.

Mr. Boerger stated yes, this was in the previously approved section.

Commissioner Taylor asked under condition two, how will the landscape buffer be permanently preserved.

Trenton Blowe stated they are not allowed to clear cut any trees that they don't need to cut for shading and a site plan would show these trees remaining.

Commissioner Taylor asked if a conservation easement would be required to protect this area.

Trenton Blowe stated no.

Amy Ring added that once the site plan is approved and the existing forested buffer is shown to meet the screening requirements, if that area was to be cut, the applicant would be in immediate violation and risk of having their conditional use permit revoked.

Robert Jones added that would be required for the planted buffer as well.

Chairman Carroll stated that if the land is in current agriculture production and the applicant allows that to go fallow, he would like to see a condition added that they be required to maintain and cut that property at least once a year, before its allowed to go to seed. Chairman Carroll added his farmland is surrounded by four hundred acres of weeds.

Commissioner Boykin stated she would like to restate the conditions that were discussed to verify everything that was requested is captured in the conditions.

Mr. Blowe stated some of the conditions that were in the original application is now part of our Zoning Ordinance.

Commissioner Distefano asked if having panels that are free from toxic metals is in the Zoning Ordinance or part of their proffered conditions.

Mr. Blowe stated there is not a condition stating nontoxic panels will be used but believes it is a standard practice to not allow those. Mr. Blowe stated that can be added as condition.

Mr. Boerger stated they would meet the TCLP testing requirements.

Scott Foster restated the discussed additional conditions.

1. TCLP testing requirements;
2. Signage with phone number of project manager; and
3. Mowing the property between now and construction.

Commissioner Smith asked what the difference of efficiency was of the panels that were originally approved compared to now.

Brown Hobson stated panel efficiency hasn't changed however the tracking system being able move to track the sun has.

Commissioner Smith asked if this application was not approved would the amount of power exceed the amount of power with the new panels tracking system compared to what was approved in 2019.

Brown Hobson stated there would not be more power generated, the fixed panel system is higher than what is being proposed now.

Commissioner Distefano made the motion to recommend approval to the Board of Supervisors with the conditions recommended by staff along with following conditions;

1. The selected panels will be tested for hazard constituents using laboratory testing (such as a toxicity characteristic leaching procedure, TCLP) validating that hazardous constituents are below EPA control levels for all power generating equipment initially installed and replaced on the site;
2. Name and phone number posted for local project manager;
3. No salvage value to be included in the bond; and
4. Mowing before August 1st if the land is currently in agriculture production and is allowed to go fallow.
- 5.

Commissioner Gibbs seconded the motion, which was adopted with Commissioners Bowser, Boykin, Distefano, Ford, Rawls, Taylor, Gibbs, Smith and Carroll voting in favor of the motion, and no commissioners voting against the motion (9-0).

Motion was carried and will go to the Board of Supervisors November 17, 2022.

Chairman Carroll asked how the county will enforce the conditions.

Ms. Ring stated staff helps to coordinate enforcement of the conditions by contacting local agencies in which they are in violation with or communicate with the applicant to help resolve the matter.

OLD BUSINESS

Amy Ring confirmed there is no old business items

NEW BUSINESS

Amy Ring gave a brief overview of the proposed cemetery setback ordinance change to allow for cemeteries to have a reduced front yard setback. Ms. Ring stated the ordinance change allows for a minimum setback of 25 feet from all property lines. The current Ordinance requires that cemeteries meet the front yard setback of the underlying zoning district. She added she feels that 25 feet is sufficient and allows for road access, pedestrian access and utility easements.

Chairman Carroll asked what determines the establishment of a church cemetery.

Ms. Ring stated there should be some historical records showing that information.

Ms. Ring stated she will advertise the proposed setback change for public hearing for the November Planning Commission Meeting.

Commissioner Taylor made the motion to move this forward to public hearing, Commissioner Ford seconded the motion. Chairman Carroll asked for all in favor to signify by saying aye. The motion passed unanimously.

COUNTY ATTORNEY'S REPORT

Bobby Jones confirmed there was no items for the County Attorney's Report.

PLANNING DIRECTOR'S REPORT

Amy Ring confirmed there was no items for the Planning Directors Report.

CLOSED MEETING

Chairman Carroll confirmed there were no items to discuss in closed meeting.

ADJOURNMENT

There being no further information to discuss, Chairman Carroll adjourned the meeting at 7:16 PM.

Adopted this 22th day of November , 2022.

Brian Carrol, Chairman, Isle of Wight County Planning Commission

Attest: _____
Amanda Landrus, Secretary

PLANNING REPORT

ATTACHMENTS:

Description	Type	Upload Date
OCTOBER 20, 2022 BOARD OF SUPERVISORS ACTION LIST	Cover Memo	11/17/2022

Action List
Board of Supervisors
October 20, 2022

1. Approval of Agenda

Supervisor Acree moved that the agenda be adopted with the following amendments:

- . Under New Business, discussion and consideration of appointing two taskforces at the Board's work session of November 3, 2022. The first an energy needs and land use taskforce tasked with recommending residential development within the County's three Development Service Districts specifically to generate workforce housing and growth equity within the three Development Service Districts.
- . Move Consent Agenda Item (D), Resolution to Amend the FY2022-23 Budget and Appropriate Funding for Heritage Park Improvement Projects (Canopy Buildings) (\$70,478) to Old Business for further discussion.
- . Under Old Business, add discussion of the Nike missile.
- . Under New Business, add the VDOT Sugar Hill report

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

On motion of Supervisor McCarty, which was adopted unanimously (5-0), a matter was added under Old Business regarding the Farmer's Market.

2. Closed Meeting

No action was taken following the closed meeting.

3. Citizens' Comments

- A. Steven Kirkpatrick, on behalf of the Board of Directors of the Western Tidewater Free Clinic, acknowledged the County's past financial support and provided an update on the County patients swerved in the first part of 2022. He reported that the dental practice is being expanded and there are plans to expand the footprint of the building.
- B. Steven Turner, President of Carrollton Meadows HOA and on behalf of the 78 homes in the HOA, requested the Board to deny the request of Heritage Apartments for a height exception amendment.
- C. Albert Burckard, on behalf of the Carrollton Civic League, spoke in favor of the Heritage Apartments height exception amendment.
- D. Herb DeGroft of the Carrsville District spoke in opposition to the return of \$1.2 million to the school division. He requested that VDOT be reminded that the center line on the Cypress Creek Bridge needs to be repainted. He concluded his remarks with a request to proceed with having the Nike missile painted and erected.

4. Consent Agenda

The following Consent Agenda items were summarized by County Administrator Keaton for the benefit of the public and on motion of Supervisor McCarty were unanimously adopted as summarized:

- A. Resolution to Amend the FY21022-23 Grant Fund Budget and Appropriate Funding from the Virginia Department of Motor Vehicles Animal Friendly License Plate Program (\$1,050)

Assignment: Robertson

- B. Resolution to Amend the FY2022-23 Grant Fund Budget and Appropriate Funding from the Virginia Department of Motor Vehicles Alcohol Enforcement Program (\$13,850)

Assignment: S. Humphries

- C. Resolution to Amend the FY2022-23 Grant Fund Budget and Appropriate Funding from the Virginia Department of Motor Vehicles Speed Enforcement Program (\$14,250)

Assignment: S. Humphries

- D. Resolution to Amend the FY2022-23 Operating Budget & Appropriate Funding for Repair of County Property from Insurance Proceeds for Repairs of County Vehicles (\$2,829)

Assignment: S. Humphries

- E. Resolution to Amend the FY2022-23 Budget and Appropriate Funds from the Virginia Department of Education School-Based Health Workforce Grant (\$80,000)

Assignment: S. Humphries

- F. Resolution to Amend the FY2022-23 Operating Budget and Appropriate Funding for School Resource Office Grant Program (\$267,743)

Assignment: S. Humphries

- G. Resolution to Assign Fund Balance for School Security and Public Safety Equipment (\$1,120,000)

Assignment: S. Humphries

- H. Resolution to Amend the FY2022-23 Budget and Appropriate Funding from the Virginia DHCD Covid-19 ARPA SLFRF Municipal Utility Assistance Program (\$4,126)

Assignment: S. Humphries

- I. Resolution to Amend the FY2022-23 Grant Fund Budget and Appropriate Funding from the Virginia Criminal Justice Foundation for out-of-state training for prosecutors and the elected Commonwealth's Attorney (\$4,000)

Assignment: S. Humphries

- J. Minutes

- . September 1, 2022 Work Session Minutes
- . September 15, 2022 Regular Meeting Minutes

Assignment: Storm

5. Regional and Inter-Governmental Reports

There were no reports offered.

6. Appointments

There were no appointments offered for consideration.

7. Special Presentations / Appearances

- A. In honor and recognition of the County's efforts during its United Way campaign, the Board accepted a 2022 Community Cares Award of the United Way of South Hampton Roads presented by Mr. Peterson, Vice President of Research Development of United Way of South Hampton Roads.
- B. Resolution to Designate October 9-15-2022 as Fire Prevention Week: Supervisor Acree moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

8. County Attorney's Report

- A. Responsive to an offer to purchase County property located adjacent to the YMCA in Smithfield in the amount of \$35,000 from Mr. and Mrs. Ippolito, Supervisor McCarty moved that the Chairman be authorized to execute the contract subject to the contingencies contained therein. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Jones

- B. County Attorney Jones advised that he would be providing information on surrounding communities' sign ordinances and giving an update on proffers at the Board's work session of November 3, 2022.

Assignment: Jones

9. Public Hearings

- A. Auto Auction Salvage Yard Conditional Zoning Request Application of Advanced Construction Development, LLC, Applicant, and Locust Grove Partners, LP and H&B Railroad Company, Inc., Property Owners, for a Change and Amendment to Existing Zoning to Conditional-Limited Industrial (C-LI) to Allow an Auction Establishment and a Scrap and Salvage Service on Approximately 5 Acres of Property Located on the North Side of the Western Terminus of IWIP Road (Rte. 1032) Together with Approximately 70 Acres of Property Located at 17094 Benns Church Boulevard (Rte. 10): Supervisor Acree moved that the application be approved as proffered. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Ring

- B. Resolution to Amend the Joint Isle of Wight/Southampton Enterprise Zone: Supervisor McCarty moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Morello

- C. Fee Schedule for Heritage Park: Supervisor McCarty moved that the matter be tabled to allow staff additional time to obtain information. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Robertson

- D. Jamie Oliver, Transportation Manager, reported on a recent accident on Route 17 and Sugar Hill Road and advised that she would be presenting additional information from VDOT which has requested that the County consider interim median control measures to be put in place in the short term before the County finds out about the SmartScale application that the County has put in for a left turn merge lane.

10. County Administrator's Report

- A. County Administrator Keaton reported on a recent staff turnover in the Treasurer's office resulting in certain reports being unavailable.
- B. County Administrator Keaton reported that the monthly sales tax reflects a 10.5% increase in September.

11. Unfinished / Old Business

- A. WaWa Convenience Store and Gasoline Station Conditional Use Permit Request Application of Remus Brustur of Frontier Development, Applicant, and the William G. Yeoman, III, Trust, Property Owner, for a Conditional Use Permit (CUP-8-21) for a Wawa Convenience Store and Gas Station on 5.69 Acres Located on the Southwest Corner of Turner Drive (Rte. 644) and Benns Church Boulevard (Rte. 10): Supervisor McCarty moved that the application be deferred to the Board's November 17, 2022 meeting. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Ring

- B. Phase II- Route 10 Waterline Low Bid: Supervisor Acree moved to approve the low bid in the amount of \$2,499,999. The motion passed

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

Assignment: Jennings

- C. Resolution Establishing Isle of Wight County's Legislative Priorities for the 2023 Session of the General Assembly: Supervisor McCarty moved that the Resolution be adopted with inclusion of language in support of the regional jail. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Robertson

- D. Resolution Requesting Support to be Added as a Qualifying Locality in Section 58.1-602 of the Code of Virginia: Supervisor McCarty moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Robertson

- E. Resolution to Amend the FY2022-23 Budget and Appropriate Funding for Heritage Park Improvements Projects (Canopy Buildings) (\$70,428): Supervisor McCarty moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Responsive to Supervisor's request for the status of equestrian trails and other projects proposed for the Blackwater property, Assistant

County Administrator Robertson offered to return to the Board at its November 3, 2022 work session with a status report.

Assignment: S. Humphries/Robertson

- F. Nike Missile: Supervisor McCarty spoke favorably in moving forward with this project and advised he would like to get community partners involved again after the missile is painted.

12. New Business

- A. Heritage Apartments Height Exception Amendment Request of KS Carrollton, LLC, Property Owner, to Amend the Conditions of Approval of a Height Exception for the Heritage Apartments Located at 23321 Sugar Hill Road in Order to Allow Required Trees to be a Minimum of Ten Feet at Planting Instead of Twelve Feet at Planting: Supervisor McCarty moved to amend the previously approved conditions of the Kooiman's height exception to allow the required trees to be a minimum of ten feet at planting instead of twelve feet at planting. The motion passed (4-1) with Supervisors McCarty, Acree, Rosie and Jefferson voting in favor of the motion and Supervisor Grice voting against the motion.

Assignment: Ring

- B. Conditional Zoning Amendment for Archer's Meade (ZA-3- 22) Conditional Zoning Amendment Request to Amend Proffered Conditions for the Archer's Meade Mixed-Use Planned Development Conditional Zoning Approval for the Development of 63 Single-Family Residential Units and Commercial Uses with Proffered Conditions on Approximately 24.33 Acres Located on the East Side of Carrollton Boulevard (Route17): Supervisor McCarty moved that the Board waive the public hearing requirements for this application. The

motion passed (4-1) with Supervisors McCarty, Rosie, Grice and Jefferson voting in favor of the motion and Supervisor Acree voting against the motion.

Supervisor McCarty moved to accept the new proffered conditions. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Ring

Staff was requested to bring back reconsideration of the Channell Way intersection.

Assignment: Ring

- C. Resolution to Adopt a Title VI Program for Isle of Wight County, Virginia: Supervisor Acree moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Robertson

- D. VACo Voting Credentials Motion to Designate the County's Voting Delegate and Alternate Delegate Authorized to Vote at the VACo Annual Business Meeting: Supervisor Acree moved that Chairman Jefferson be designated as the County's Voting Delegate and Vice-Chairman McCarty be designated as the County's Alternate Delegate. The motion passed unanimously (5-0) with Supervisors McCarty, Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Robertson

- E. Workforce Taskforce (energy land use options): Supervisor Grice requested County Administrator Keaton to place an item on the agenda for the Board's November 3, 2022 work session pertaining to the creation of a task force charged with a mission of developing a comprehensive approach and how the County might manage energy going forward (to include implications).

Assignment: Keaton/Robertson

- F. Workforce Taskforce (housing and equity within Development Service Districts): Supervisor Grice requested County Administrator Keaton to place an item on the Board's agenda for its November 3, 2022 work session regarding development of a plan with suggestions on how Development Service Districts are developed.

Assignment: Keaton

- G. Sugar Hill Road: Responsive to a request by Supervisor McCarty, County Administrator Keaton agreed to look at some dates and locations to conduct a town hall meeting with citizen interaction. Topics include, but are not limited to, the use of golf carts and speed bumps.

Assignment: Keaton

- H. Farmer's Market: Supervisor Grice moved to commit to a sum up to, but not to exceed, \$1.4 million towards the development of a new public market subject to the negotiation of terms acceptable to the County to include, but limited to, design, management and ongoing

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

Assignment: S. Humphries

PLANNING REPORT

APPLICATION:

Application of Carver Solar I, LLC (CUP-6-22), applicant, and Carter R. Clements, Joyce G. Clements, Travis W. Williams, Lewis Clarence Lee Trust (Clarence Lee Lewis, Trustee), Joshua Pretlow, Jr., Garrison Farm Solar LLC, Delman Lew Carr Trust (Delman Lew Carr, Trustee), Chester G. Carr Trust (Glenn and Susan S. Carr, Trustees), Helene Johnson Hobbs, Joest Properties, LLC, Scott L. Thomason, Carla A. Thomason, James K. Edwards, Marsha F. Edwards, Cobb Land Limited Partnership, Troy L. Robinson, and Margaret F. Robinson, property owners, for a conditional use permit to establish a major utility service, specifically a 71 MW utility-scale solar energy facility and substation, on 637 acres located on Yellow Hammer Road (Rte. 645), Windsor Boulevard (Rte. 460), Winston Drive (Rte. 639), Cut Thru Road (Rte. 638), Ecella Road (Rte. 639), Barrett Town Road (Rte. 641), Mill Creek Drive (Rte. 638), and Antioch Road (Rte. 657) with tax parcel numbers 52-01-028, 52-01-034, 52-01-035, 52-01-036, 45-01-059, 45-01-059A, 45-01-061, 45-01-061B, 45-01-061C, 45-01-065, 45-01-068, 52-01-037, 52-01-039, 53-01-001, 53-01-003, 53-01-003M, 53-01-006, 53-01-022, 53-01-022E, and 46-01-019A in the Rural Agricultural Conservation, Conditional General Commercial, and Conditional Rural Residential zoning districts. The current uses of the properties are agricultural and silvicultural uses.

ELECTION DISTRICT:

Districts 4 and 5

LOCATION:

The proposed project is located on twenty properties approximately 3/4 mile from the Town of Windsor jurisdictional boundary at its closest point. The project will have frontage on eight different roads listed in the application description. It is adjacent to agricultural and forestal lands, a few single-family residences, and the Antioch Church and cemetery. The project lies both to the north and south of Windsor Boulevard (Rte. 460) and lies directly to the north of the previously approved Windsor PV1 solar energy facility. The project lies almost entirely within one mile of the existing 115 kv Myrtle-Windsor powerline located to the south of and parallel to Route 460. A property location map is attached to this staff report.

BACKGROUND:

The properties on which the proposed project is located are currently in agricultural, silvicultural, and residential uses. The majority of properties are zoned Rural Agricultural Conservation (RAC) with the exception of two which include tax map number 45-01-061B which is zoned conditional-General Commercial (C-GC) and 52-01-039 which is zoned conditional-Rural Residential (C-RR). The Board of Supervisors changed the zoning for tax map number 45-01-061 to C-GC in 1998 to allow a number of commercial uses such as building material, garden supply, and equipment sales and service, welding shops, dry cleaning plants, and other low-volume traffic businesses. The conditional zoning was amended in 2009 to allow the outdoor display of storage sheds and other goods. The only portion of the proposed solar project to be located on this property is an underground conduit measuring one to two inches in diameter buried three feet underground.

The Board of Supervisors changed the zoning for a 4.09 acre portion of tax map number 52-01-039 to C-RR in 2011 for a single family residential lot. The lot has not yet been subdivided from the parent tract. No portion of the solar energy generation facility is proposed for this portion of the property.

DESCRIPTION:

The applicant has proposed a 71 MW solar energy generation facility on a total of 637 acres that spans across twenty different parcels. Any acreage of the properties not within the project area will remain in their current uses. The project will consist of solar panels along with their racking systems and metal posts, inverters, collection lines, a substation, fencing, underground conduits lines, and access roads that will connect different sections of the projects. No new upgrades are proposed to the existing transmission lines or substation. A project narrative provided by the applicant is attached to this staff report.

Public Facility Impacts:

The impacts of the proposed facility on public roads will occur primarily during construction and will be minimal once 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 traffic route which has been reviewed and approved by the Virginia Department of Transportation. The plan is attached to this staff report. The applicant states that most of the deliveries will be coming from the east along Route 460 in order to take advantage of the ports.

In order to ensure adequate provision of emergency services, staff recommends the applicant submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.

Environmental Assessment:

The project lies within the Blackwater River watershed area and has several wetland areas within it which have been confirmed by the US Army Corps of Engineers. In addition, a portion of the property lies within the Antioch Swamp Stream Conservation Unit (SCU). The Department of Conservation and Recreation's Division of Natural Heritage ranks this SCU as a site with very high significance and includes species of concern. The SCU is shown on the concept plan map sheet C3.0 and generally follows the floodplain boundary.

Little to no impacts are proposed to wetlands, streams or floodplain except for several access road crossings. The concept plan shows the stream corridors remaining open which may serve as wildlife corridors. To help ensure these opportunities, fencing could be placed around the facilities only and not the whole site.

Environmental reports provided by the applicant and state agency responses are attached to the staff report.

Historic Resources Assessment:

Phase I archaeological and architectural studies were conducted for the project area and are included in the attachments to this report. The Phase I archeological study resulted in the identification of fourteen archeological sites identified within the project area. Three of these sites are considered eligible for listing in the National Register for Historic Places (NRHP) and are within the proposed development area for the project. When asked for information about any proposed impacts to these resources, the applicant stated that they plan to excavate and donate artifacts during the Permit by Rule (PBR) process with the Virginia Department of Historic Resources (VDHR) and Department of

Environmental Quality (DEQ). The PBR will not be issued until the project elects to either avoid the areas or conduct the excavation of artifacts.

The Phase I Architectural Study resulted in the identification of 82 architectural resources greater than 50 years of age (constructed in 1972 or earlier) located within the survey area. Of the surveyed resources, 54 were previously recorded and 28 were newly recorded during this Phase I Survey. Of the previously recorded resources, 29 were evaluated and determined not eligible for listing in the NRHP in 2020 and were therefore not subject to resurvey or evaluation as part of this effort. An additional two of the previously recorded resources were revealed to have been demolished. The resources surveyed as part of this effort primarily include domestic and agricultural buildings from the mid-nineteenth to late-twentieth century, as well as a nineteenth century family cemetery, a railroad corridor, and several twentieth century commercial buildings. A total of four resources identified within the survey area are considered eligible or potentially eligible for listing in the NRHP including two homes, a commercial building, and a railroad corridor. Of the two homes, the farm at 23255 Barrett Town Road (VDHR# 046-5089) has previously been determined potentially eligible as a good example of a mid-nineteenth century plantation home in the area with a relatively intact property and several potentially nineteenth century outbuildings. The second home, a farm located at 7431 Deerfield Drive (VDHR# 046-5671) is believed to have been built circa 1894, but replaced an eighteenth-century dwelling, and retains several nineteenth century outbuildings as well as family cemetery. The commercial building is the 1930s roadside “Hobb’s Store” (VDHR# 046-5101) that has been determined eligible for its association to the development of U.S. 460 and a unique example of a service station with a complex of motor lodge cabins. The Norfolk and Western Railroad (VDHR# 091-5098) has also been determined potentially eligible for its association to the growth and development of commerce in the region from the nineteenth century through the present-day.

Out of the four eligible architectural resources within the project study area, two can be considered impacted by the project. The first is Hobbs Store adjacent to Route 460 and the other is 23255 Barrett Town Road.

VDHR has stated that in order to minimize impacts to both resources, the sites should be subject to their review and approval of an appropriate landscaping and screening plan. Staff has reached out to VDHR staff to determine whether this has been done yet. The applicant's consultant recognized that the impacts to the Barrett Town property will be more substantial, because its associated property, field/woodland patterns, and landscape are contributing to its character as a farm.

In order to minimize the visual impacts to both historic properties in the project area, staff recommends that all solar arrays, inverters, substations and all other associated structures should be subject to a minimum 200 foot setback from these structures in addition to an enhanced landscaping buffer. For comparison purposes, the setback from the Jones House as part of the Cavalier Solar CUP application was over 1,200 feet while the setback from the Delk Farm on Mill Swamp Road was over 900 feet, both of which left existing vegetation intact as well. Southampton County requires a setback of 500 feet for new connector or substations, and inverters and transformers are to be setback 250 feet from any existing dwellings, schools, places of worship, state scenic rivers and rights of way. Surry County is currently considering a policy to require that no part of a facility site be located within 0.5 miles of historic sites or other existing community scale or utility scale solar energy facilities. In addition, no part of the facility may be within 750 feet of the property lines for any place of worship or cemetery.

Economic Impact Assessment:

According to the applicant's economic impact report, the project will include 596 acres with improvements to support the solar energy facility and support two permanent, full-time jobs for grounds maintenance. The report states about half of the site is timberland and the other half is used for the agricultural production of corn, soybeans, cotton, and peanuts. The current assessment value of the affected acreage is approximately \$773,325.30. Based on the assessed value, the property generates about \$6,573 in real estate tax revenue per year, or \$262,931 over forty years. Independent of a siting agreement, the solar facility would be reassessed at \$15,000 an acre and generate \$75,990 in real estate taxes annually, or \$3,093,652 over forty years. In addition, the County would derive revenue from machinery and tools tax on the capital facilities at \$3,049,427 over forty years. In total, the facility would generate over \$6 million in additional tax revenue over forty years.

Using the IMPLAN model to assess direct and indirect impact of the current agricultural activity, the report states that the current use generates 3 jobs, \$58,400 in labor income, and \$236,600 in economic output. This is in addition to \$6,573 in real estate taxes per year. Agricultural operations are exempt from machinery and tools tax.

In contrast, the on-going operation of a solar facility on the same property would generate two jobs, \$68,900 in labor income, and \$210,600 in economic output per year. This is in addition to \$75,990 in real estate taxes per year in addition to an

average of \$76,236 in machinery and tools tax revenue.

Currently, agriculture and silviculture are two of the County's top industries. The Carver Solar Facility would be the seventh solar energy generation facility in the County and represents a subtraction of approximately 0.8 percent of the County's cultivated land (USDA-NASS, 2017). While this project represents almost 1% of the collective 3% of cultivated land encompassed by all seven solar energy projects, longer-term cumulative land conversions could create adverse effects on the local agricultural industry. A table showing the previously approved and proposed solar energy facilities is attached to this 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 viewshed analysis includes perspectives from Yellow Hammer Road, Winston Drive, Rte. 460, Cut Thru Road, Barrett Town and Antioch Road. The analysis is included as an attachment to the staff report.

The viewshed analysis illustrates views from each of these right-of-way locations as well as from the historic home at 23255 Barrett Town Road utilizing the proposed setbacks for the solar facility. The applicant proposes a setback of 200 feet from Rte. 460, 125 feet from residential properties, and 75 feet from agricultural properties and other roads in the project area. Although the applicant shows a double-stacked buffer of small and medium evergreen trees, the landscaping plan will be required to meet the ordinance requirements of a mix of large and small deciduous and evergreen trees and shrubs in addition to any conditions of approval.

In order to minimize the visual impacts to historic, civic and residential properties, staff recommends that all solar arrays, inverters, substations and all other associated structures should be subject to a minimum 200 foot setback from these structures in addition to an enhanced landscaping buffer of triple-stacked evergreen and deciduous species meeting the minimum specifications of the landscaping ordinance and of varying heights at maturity, with trees to be planted to no more than 10 feet on center. In addition, staff recommends fencing along the right of way and adjacent to residential, historic, and civic properties be an agricultural style fence as approved by the Zoning Administrator at site plan approval.

COMPREHENSIVE LAND USE PLAN:

The future recommended land use designation for these properties is Rural Agricultural Conservation (RAC) and Resource Conservation (RC) 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 RC 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 areas designated as RC should be preserved due to environmental constraints unless site-specific analysis demonstrates there are no environmental concerns in a specific area. The proposed use will be required to use screening landscaping and appropriate fencing to minimize its visual impacts on the surrounding area.

ORDINANCE REVIEW:

The zoning district classification for all but two of the subject properties is RAC. The RAC zoning district is intended to preserve and protect areas of the County that are predominantly in agricultural and forestal use and to maintain the existing land base to support those activities. One property is zoned C-GC and another has a split zoning designation of RAC and C-RR. No portion of the proposed solar facility is to be located on the RR zoning portion of parcel 52-01-039. An underground cable conduit is to be constructed through the property zoned C-GC with no above-ground structures.

The applicant proposes to establish a 71 MW 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, RR, and GC zoning districts and may be considered compatible with appropriate conditions to mitigate any potential negative impacts on the surrounding community.

Several of the parcels are located in the Highway Corridor Overlay District which includes those areas which lie within 500 feet of either side of the County's major arterial roads, including Route 460. The applicant is proposing a minimum setback of 200 feet from Route 460 for the solar facility to help mitigate any visual impacts from the right-of-way.

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.

Following approval of the CUP, 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:

- Economic Development: No concerns.
- Emergency Services: The recommended condition for submission of a fire response plan and annual training addresses concerns.
- Utility Services: Site plan will have to meet stormwater requirements.
- Isle of Wight County Museum: No concerns with the application, provided that the conclusions and recommendations outlined in the Phase 1 reports are followed.
- Virginia Department of Historic Resources (VDHR): Please see attached review comment letter.
- Virginia Department of Transportation (VDOT): No concerns.

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 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 with the conditions presented.
3. Enhanced setbacks from Route 460 have been proposed by the applicant.

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 will create visual impacts to historical properties and the highway corridor overlay district which can be substantially mitigated with the attached conditions.

STAFF RECOMMENDATION:

Staff recommends approval of the CUP with the following conditions: 1. The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type that is harmonious with the rural, agricultural, and historical character of the County while meeting federal and state regulations for solar electric generating facility fencing as determined by the Zoning Administrator adjacent to all public rights-of-way, residential property, properties eligible for listing on the National Register of Historic Places, and civic uses prior to final site plan approval. 2. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site in order to provide wildlife corridors. 3. In order to minimize the visual impacts to historic, civic and residential properties, staff recommends that all solar arrays, inverters, substations and other associated structures be subject to a minimum 200 foot setback from these structures if part of the project and 200 feet from the property line of these properties if outside the project. 4. The enhanced landscape buffer plan proposed on the concept plan exhibit is conceptual only at this time. The landscape buffer design and required plantings will be reviewed in detail for approval during site plan review and, at minimum, must include a triple row of staggered evergreen and deciduous species meeting the minimum specifications of the landscaping ordinance and of varying heights at maturity where existing vegetation is not being retained. Trees shall be planted no more than ten (10) feet on center. 5. The applicant shall permanently preserve and maintain existing and newly installed buffer landscaping and shall not clear or cut live trees within required setbacks or buffer zones except as necessary to avoid shading of solar panels as approved by

the Zoning Administrator. 6. Excluding the bufferyards described above, 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. 7. The applicant shall meet any additional delineation and buffer requirements specified by the Virginia Department of Historic Resources prior to receiving final site plan approval. 8. The applicant shall submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise. 9. Hours of operation for construction activities to be limited to 7:00 am to 6:00 pm Monday through Friday and 7:00 am to 5:00 pm on Saturdays. No construction is to occur on Sundays. 10. Topsoil will be conserved on site. 11. The applicant shall reimburse the County for reasonable costs related to retaining such third-party inspectors as deemed necessary for project inspections. 12. Prior to site plan approval, the Applicant shall either adjust the site plan to avoid areas that were determined potentially eligible for the National Register of Historic Places as part of the Phase 1 Archaeological Survey or shall undergo the appropriate Phase 2 close-interval testing to determine if any material is eligible for listing. 13. As part of the site plan review, the Applicant shall provide documentation that the selected panels and all power generating equipment onsite 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, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP). 14. There shall be a sign posted with the contact information for the local project liaison. 15. No salvage value be added to the decommissioning surety bond. 16. If the land area being leased was under crop cultivation prior to lease, it shall be maintained and cut annually during the growing season prior to August 1 until site construction begins.

ATTACHMENTS:

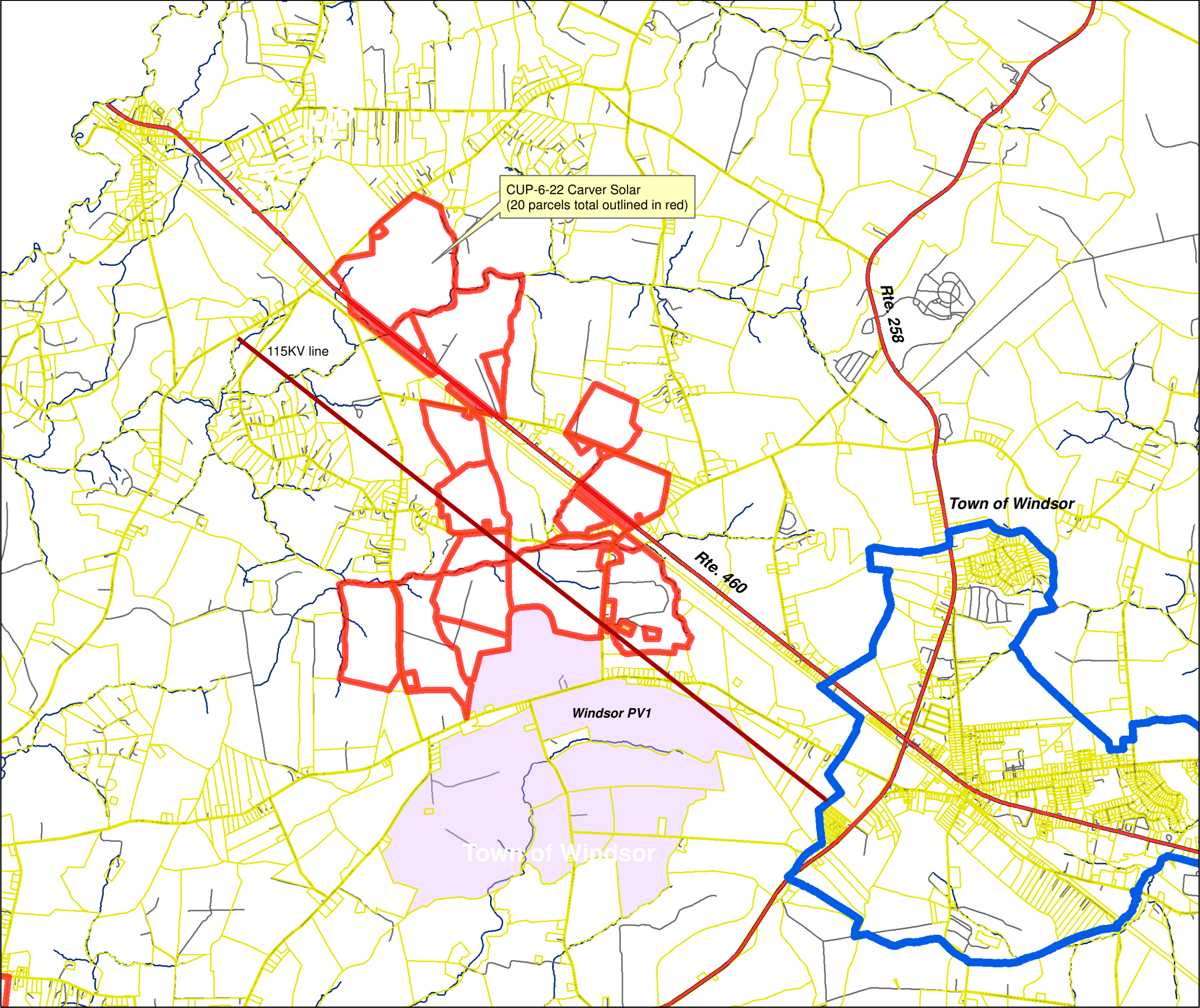
Description	Type	Upload Date
Location Map	Backup Material	11/16/2022

Future Land Use Map	Backup Material	11/16/2022
Zoning District Map	Backup Material	11/16/2022
April 2022 Application	Backup Material	11/15/2022
Carver Solar Parcel Map and List	Backup Material	11/16/2022
Project Narrative	Backup Material	11/15/2022
Concept Plan Sheet 3.0	Backup Material	11/15/2022
Proposed Construction Traffic Plan	Backup Material	11/15/2022
Environmental Impact Assessment	Backup Material	11/15/2022
Corps Confirmation	Backup Material	11/15/2022
Phase I Archeological Report	Backup Material	11/15/2022
Phase I Architectural Report	Backup Material	11/15/2022
VDHR Review Comments	Backup Material	11/15/2022
Economic Impact Report	Backup Material	11/15/2022
Approved Solar Facility Table	Backup Material	11/15/2022
Visual Impact Analysis	Backup Material	11/16/2022
Planning Commission Resolution	Backup Material	11/16/2022

Property Location Map

Legend

-  Carver Solar CUP layer 080422
-  Town Limits
-  US Highways
-  Parcels
-  Windsor PV1 2021



Future Recommended Land Use Map

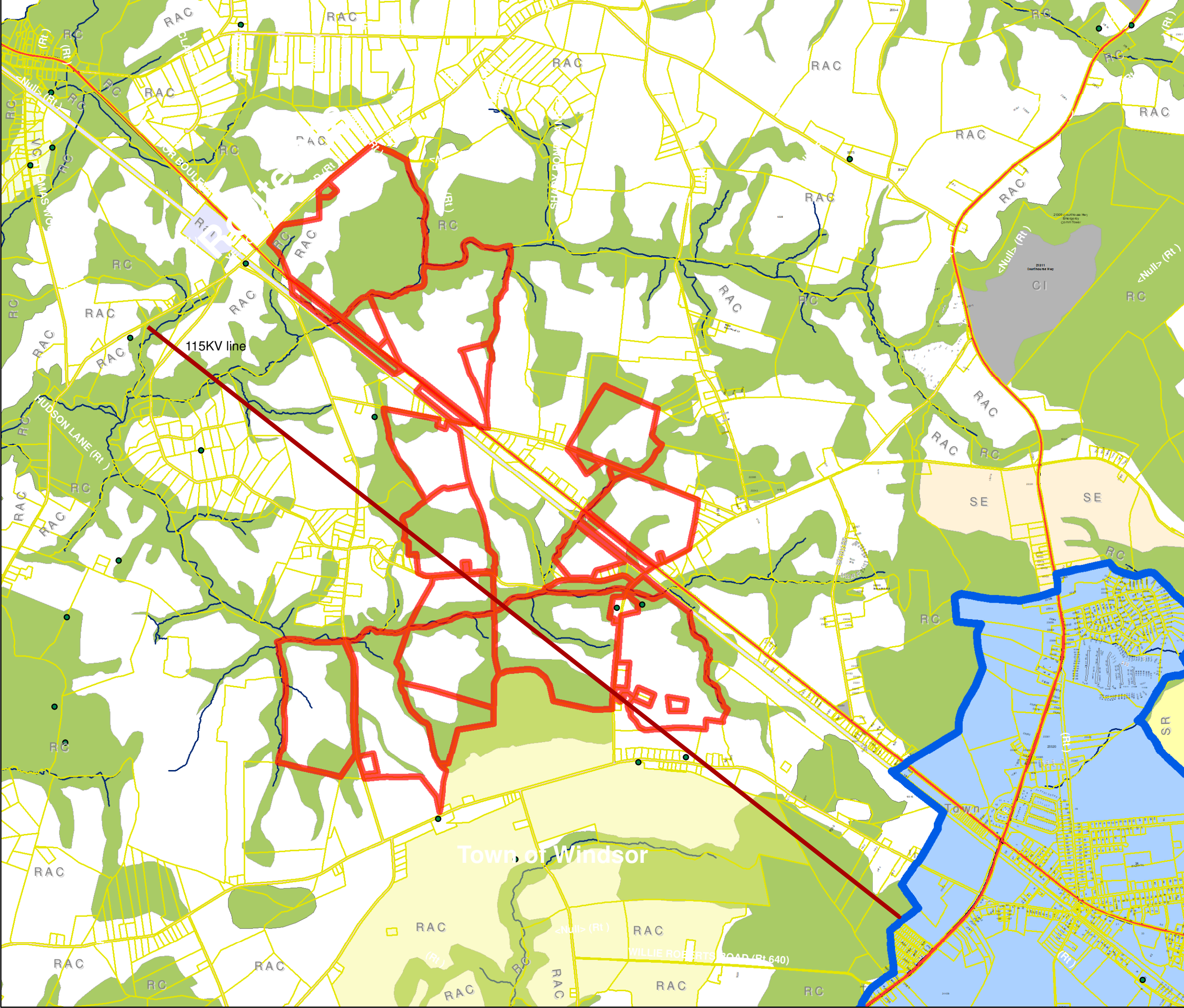
Legend

- Carver Solar CUP layer 080422
- Town Limits
- Parcels
- Windsor PV1 2021
- US Highways

Land Use Designations

LAND_USE

- BE
- CD
- CI
- MU
- PI
- RAC
- RC
- Rail
- Road
- SE
- SR
- Town
- UR
- VC



Zoning District Map

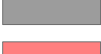
Legend

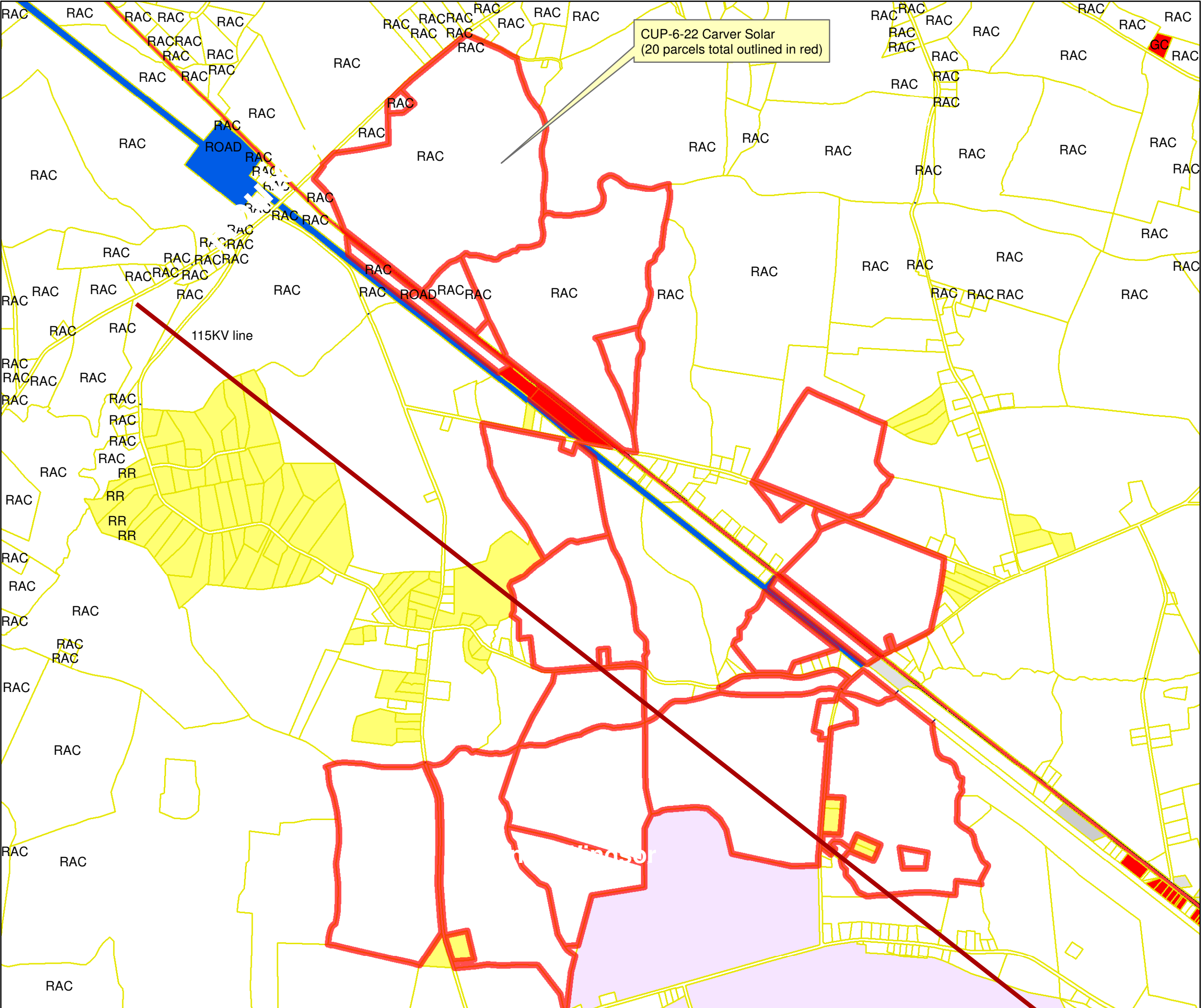
-  Carver Solar CUP layer 080422
-  Town Limits
-  Parcels
-  Windsor PV1 2021

Zoning

-  <all other values>

Zoning

-  A-1
-  C-GC
-  C-PD-MX
-  GC
-  GI
-  GIC
-  LC
-  LI
-  NC
-  PD-MH
-  PD-MX
-  PD-MX
-  PD-R
-  RAC
-  ROAD
-  RR
-  SE
-  SR
-  UR
-  VC
-  US Highways





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):

☒ Conditional Use Permit (Are applicant proposed conditions attached?): ☒ 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: Utility Scale Solar Energy Facility

B. PROJECT DESCRIPTION:

Project Name: Carver Solar

Property Address (if any): _____

Election District: D4 and D5

Comprehensive Plan Designation: Solar Farm

The use permit will apply to 765 acres out of 1,329 total acres

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

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 _____

N/A

Public Sewer _____ Private Septic _____

*637
ACRES
PER
RYAN
GILCHRIST
11/12/2022
AMR

Attachment to Application for Conditional Use Permit

List of Parcels and Participating Owners

TPIN	Parcel Acres	Owner Name	Address	City	State	Zip
53-01-022	140.86	CLEMENTS, CARTER R & JOYCE G	23093 ANTIOCH RD	WINDSOR	VA	23487
53-01-022E	3.02	CLEMENTS, CARTER R	23093 ANTIOCH RD	WINDSOR	VA	23487
53-01-006	118.83	WILLIAMS, TRAVIS W (40 acre partial)	301 MURPHYS MILL RD	SUFFOLK	VA	23434
45-01-065	64.3	LEWIS, CLARENCE LEE TRUSTEE LEWIS CLARENCE LEE TRUST	1203 PONDFIELD WAY	DURHAM	NC	27713
45-01-061	180.75	PRETLOW, JOSHUA JR	6045 EVERETS RD	SUFFOLK	VA	23434
45-01-061C	14.4	PRETLOW, JOSHUA JR	6045 EVERETS RD	SUFFOLK	VA	23434
53-01-001	96.09	GARRISON FARMS SOLAR LLC	519 GREENE RIDGE	RICHMOND	VA	23229
46-01-019A	74.61	GARRISON FARMS SOLAR LLC	519 GREENE RIDGE	RICHMOND	VA	23229
52-01-028	147	CARR, DELMAN LEW TRUSTEE OF DELMAN LEW CARR TRUST	844 COLONEL MEADE DR	SUFFOLK	VA	23434
52-01-039	95	CARR, CHESTER GLENN & SUSAN S TRS CHESTER G CARR TRUST	28124 SPIVEY TOWN RD	WINDSOR	VA	23487
52-01-037	30.5	CARR, CHESTER GLENN & SUSAN S TRS CHESTER G CARR TRUST	28124 SPIVEY TOWN RD	WINDSOR	VA	23487
52-01-036	90	CARR, CHESTER GLENN & SUSAN S TRS CHESTER G CARR TRUST	28124 SPIVEY TOWN RD	WINDSOR	VA	23487
45-01-059	245.62	HOBBS, HELENE JOHNSON	21539 BARRETT TOWN RD	ZUNI	VA	23898
45-01-068	98	HOBBS, HELENE JOHNSON	21539 BARRETT TOWN RD	ZUNI	VA	23898
45-01-059A	2.38	HOBBS, HELENE JOHNSON	21539 BARRETT TOWN RD	ZUNI	VA	23898
45-01-061B	6.27	JOEST PROPERTIES LLC	PO BOX 204	WINDSOR	VA	23487
52-01-034	84.87	THOMASON, SCOTT L & CARLA A	7419 MILL CREEK DR	ZUNI	VA	23898
52-01-035	42.21	EDWARDS, JAMES K & MARSHA F	22149 LITTLE BEACH LN	CARROLLTON	VA	23314
53-01-003	43.88	COBB LAND LIMITED PARTNERSHIP	8135 W BLACKWATER RD	WINDSOR	VA	23487
53-01-003M	5.96	ROBINSON, TROY L & MARGARET F	22451 ANTIOCH RD	ZUNI	VA	23898
TOTALS:	1,329					

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Carver Solar 1, LLC

Address: 1105 Navasota St

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@carversolar.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: ↓

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

[Signature]
Applicant Signature

3/17/22
Date

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: _____

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Carver Solar I, LLC

Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date

[Signature] March 22, 2022
Owner Signature if different Date

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____ County Attorney

Verified By: _____ Date: _____

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Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist

March 17, 2022

Applicant Signature

Date

Belman Lee Carr

March 22, 2022

Owner Signature if different

Date

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Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
Costa R. Clements 3-23-22
Owner Signature if different Date

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____ Budget & Finance
____ County Attorney

Verified By: _____ Date: _____

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Applicant(s) Name(s): _____

Address: _____

City, State, Zip Code: _____

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

Property Owner(s) Name(s): _____

Address: _____

City, State, Zip Code: _____

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

Applicant Signature

Date

March 17, 2022

Owner Signature if different

3-24-22

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City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date

James K. Edwards 3/24/22
Owner Signature if different Date

Marsha J Edwards

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Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date

William E. Garrison, III March 22, 2022
Owner Signature if different Date
as Managing Member,
Garrison Farms Solar, LLC

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

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____ Schools
____ Budget & Finance
____ County Attorney

Certified By: _____ Date: _____

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City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist

March 17, 2022

Applicant Signature

Date

I agree to holden, Indemnify

Mar 30, 2022

Owner Signature if different

Date

and in the Event of the Estate
of Helen Johnson Holla Deceased.

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____ VDOT
____ Schools
____ Budget & Finance
____ County Attorney

Verified By: _____ Date: _____

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Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
[Signature] March 23, 2022
Owner Signature if different Date

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☐ Other _____	

Certified By: _____ Date: _____

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Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
[Signature] MARCH 31, 2022
Owner Signature if different Date

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Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
[Signature] 3/21/22
Owner Signature if different Date

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Certified By: _____ Date: _____

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Carver Solar I, LLC

Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
Tony L. Edwin Margaret Relina 3-22-2022
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
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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	☐ 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: _____ Date: _____

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Carver Solar I, LLC

Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
[Signature] March 30, 2022
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

Certified By: _____ Date: _____

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Carver Solar I, LLC

Address: 1105 Navasota Street

City, State, Zip Code: Austin, TX 78702

Phone No.: 512-524-1195 Email: contact@openroadrenewables.com Fax No.: _____

Property Owner(s) Name(s): attached

Address: attached

City, State, Zip Code: attached

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

Ryan Gilchrist March 17, 2022
Applicant Signature Date
[Signature] 3/28/2022
Owner Signature if different Date

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

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☐ Environmental Planner	☐ VDOT
☐ Health Department	☐ Schools
☐ Transportation Manager	☐ Budget & Finance
☐ Commission of Revenue	☐ County Attorney
☐ Other _____	

Verified By: _____ Date: _____

**COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS**

Applicant Carver Solar 1, LLC
Address 1105 Navasota St
Austin TX 78702
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
<u>attached</u>	

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
<u>attached</u>	

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 ☒

If yes, names of members:

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

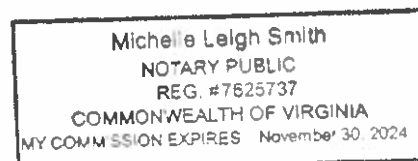
Applicant: Ryan Gilchrist Applicant: [Signature] Date: 4/5/22
Printed or Typed Name Signature

Commonwealth of Virginia
County of ~~Isle of Wight~~ Albemarle
_{MS}

Subscribed and sworn to before me Michelle Leigh Smith
A Notary Public in and for the County of ~~Isle of Wight~~ Albemarle, Commonwealth
of Virginia, this 5th day of April, 2022.

Michelle Leigh Smith
Notary Public

My Commission Expires November 30 2024



Attachment to Real Estate Disclosures

Carver Solar I, LLC

PARTICIPATING PROJECT PARCELS					
MAP IDENTIFIER	PARCEL IDENTIFIER	OWNER	OWNER CONTINUED	ZONING	FENCED ACREAGE
1	52-01-028	CARR DELMAN LEW TRUSTEE OF DELMAN LEW CA	RR TRUST	RAC	Fenced Area
2	52-01-036	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	RAC	Fenced Area
3	45-01-059	HOBBS HELEN JOHNSON		RAC	Fenced Area
4	45-01-059A	HOBBS M E & HELEN J		RAC	Fenced Area
5	45-01-061	PRETLOW JOSHUA JR TRUSTEE JOSHUA PRETLOW	JR REVOC TRUST	RAC	Fenced Area
6	45-01-061C	PRETLOW JOSHUA JR TRUSTEE JOSHUA PRETLOW	JR REVOC TRUST	RAC	Fenced Area
7	45-01-065	LEWIS CLARENCE LEE TRUSTEE LEWIS CLARENC	E LEE REVOCABLE TRUST	RAC	Fenced Area
8	45-01-068	HOBBS HELEN JOHNSON L/E		RAC	Fenced Area
9	52-01-037	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	RAC	Fenced Area
10	52-01-039	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	RAC	Fenced Area
11	53-01-001	GARRISON FARMS SOLAR LLC		RAC	Fenced Area
12	53-01-006	WILLIAMS TRAVIS W		RAC	Easement
13	53-01-022	CLEMENTS CARTER R & JOYCE G		RAC	Fenced Area
14	53-01-022E	CLEMENTS CARTER R		RAC	Fenced Area
15	46-01-019A	GARRISON FARMS SOLAR LLC		RAC	Fenced Area
16	52-01-034	THOMASON SCOTT L & CARLA A		RAC	Easement
17	52-01-035	EDWARDS JAMES K & MARSHA F		RAC	Easement
18	45-01-061B	JOEST PROPERTIES LLC		GC	Easement
19	53-01-003	COBB LAND LIMITED PARTNERSHIP		RAC	Easement
20	53-01-003M	ROBINSON TROY L & MARGARET F		RAC	Easement

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, **unless the Zoning Administrator reduces the number of required copies.**

Ten (10) copies of the original, executed application and one (1) original executed application, **unless the Zoning Administrator reduces the number of required copies.** Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 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 **unless the Zoning Administrator reduces the number of required copies.** and if applicable, a statement of conditions.

Ten (10) of a narrative description of the property which shall include the Tax Parcel Identification Number **unless the Zoning Administrator reduces the number of required copies.**

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 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 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 application will be placed on the next available Planning Commission agenda.

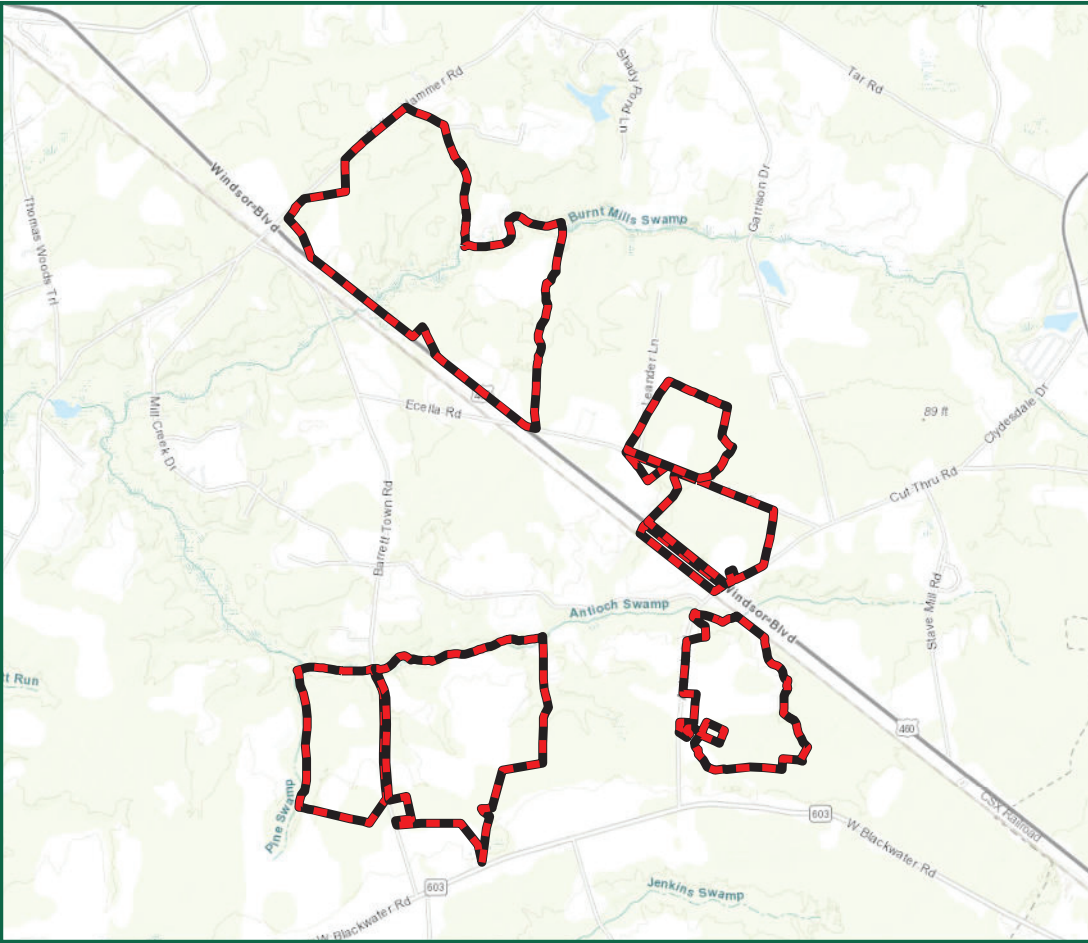
Ryan Gilchrist

Printed or Typed Name

Signature

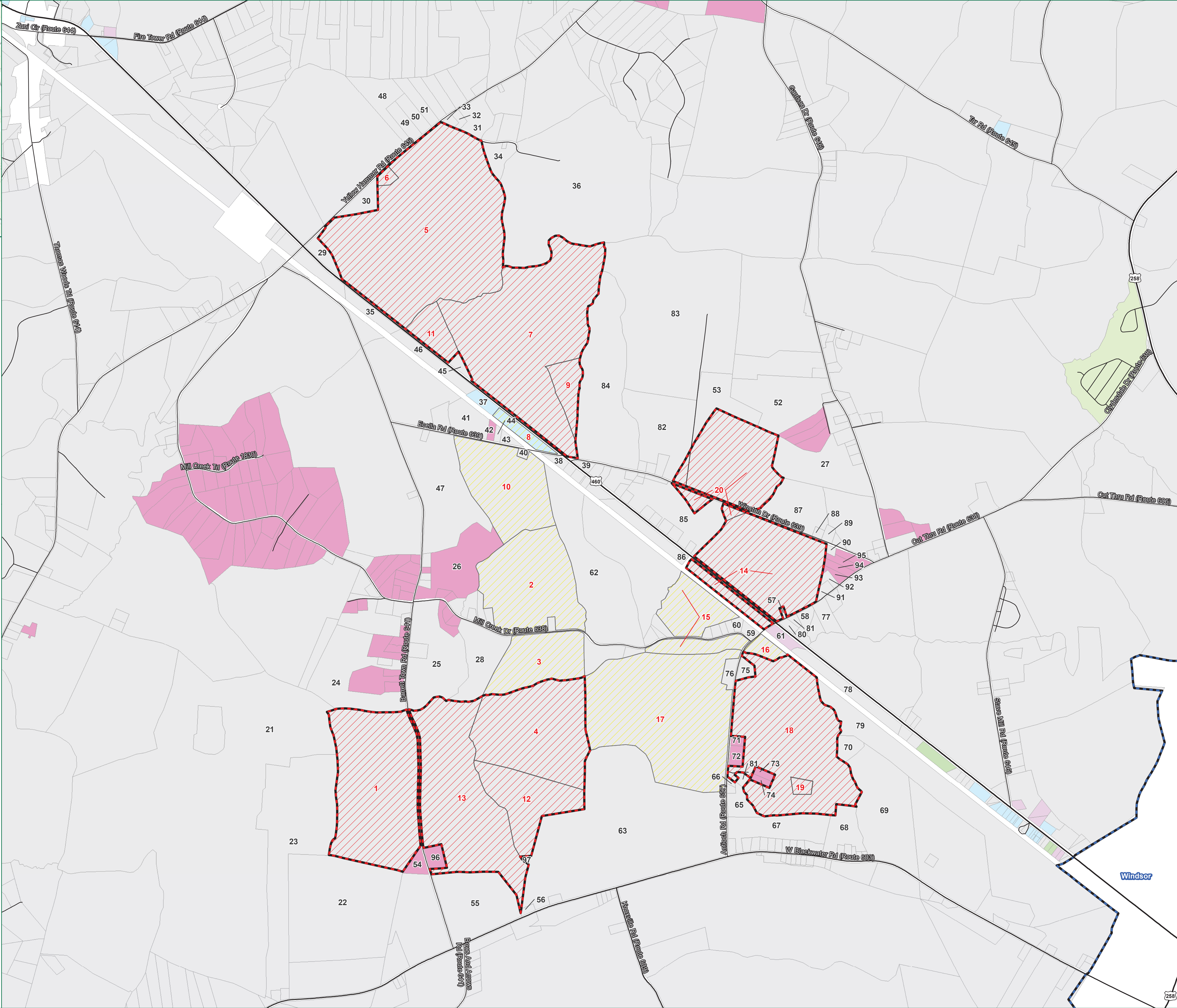
4/5/22

Date



Legend

- Property Limits - 1,584.6
- Project Parcel
- Easement Parcel
- Zone**
- General Commercial District (GC)
- General Industrial District (GI)
- Limited Industrial District (LI)
- Planned Development Manufactured Home Park District (PD-MH)
- Rural Agricultural Conservation District
- Rural Residential District (RR)



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www.timmons.com

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RENEWABLES
1105 Navasota Street
Austin, TX 78702
TEL 512.524.1195
www.openroadrenewables.com

CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

DATE	08/30/2022
PROJECT NUMBER	38786.012
PROJECT NAME	CARVER SOLAR
DESIGNED BY / DRAWN BY	J. FRAZIER

NOTES:
1. PROJECT STUDY LIMITS ARE APPROXIMATE.
2. PARCEL AND ZONING DATA IS FROM ISLE OF WIGHT COUNTY.
3. SEE SHEET C2.1 FOR PARCEL PIN AND OWNER INFORMATION.

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REVISIONS	
#	DESCRIPTION

DRAWING DESCRIPTION
PARCEL AND ZONING MAP

SCALE (FEET)
0 1,000 2,000
PLANS PRINTED AS 11X17 ARE HALF SCALE
SCALE SHEET NUMBER
H:1" = 1,000' C2.0

PARTICIPATING PROJECT PARCELS							
MAP IDENTIFIER	PARCEL IDENTIFIER	OWNER	OWNER CONTINUED	PARCEL ACREAGE	PARCEL TYPE	LAND ACREEMENT	ZONING
1	52-01-028	CARR DELMAN LEW TRUSTEE OF DELMAN LEW CA	RR TRUST	147.00	Project Parcel	Purchase	RAC
2	52-01-034	THOMASON SCOTT L & CARLA A		84.87	Easement	Easement	RAC
3	52-01-035	EDWARDS JAMES K & MARSHA F		42.21	Easement	Easement	RAC
4	52-01-036	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	90.00	Project Parcel	Purchase	RAC
5	45-01-059	HOBBS HELEN JOHNSON		245.62	Project Parcel	Lease	RAC
6	45-01-059A	HOBBS M E & HELEN J		2.38	Project Parcel	Lease	RAC
7	45-01-061	PRETLOW JOSHUA JR TRUSTEE JOSHUA PRETLOW	JR REVOC TRUST	180.75	Project Parcel	Purchase	RAC
8	45-01-061B	JOEST PROPERTIES LLC		6.27	Easement	Easement	GC
9	45-01-061C	PRETLOW JOSHUA JR TRUSTEE JOSHUA PRETLOW	JR REVOC TRUST	14.40	Project Parcel	Purchase	RAC
10	45-01-065	LEWIS CLARENCE LEE TRUSTEE LEWIS CLARENC	E LEE REVOCABLE TRUST	64.30	Easement	Lease	RAC
11	45-01-068	HOBBS HELEN JOHNSON L/E		98.00	Project Parcel	Lease	RAC
12	52-01-037	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	30.50	Project Parcel	Purchase	RAC
13	52-01-039	CARR CHESTER GLENN & SUSAN S TRS CHESTER	G CARR REVOCABLE TRUST	95.00	Project Parcel	Purchase	RAC
14	53-01-001	GARRISON FARMS SOLAR LLC		96.09	Project Parcel	Lease	RAC
15	53-01-003	COBB LAND LIMITED PARTNERSHIP		43.88	Easement	Easement	RAC
16	53-01-003M	ROBINSON TROY L & MARGARET F		5.96	Easement	Easement	RAC
17	53-01-006	WILLIAMS TRAVIS W		118.83	Easement	Easement	RAC
18	53-01-022	CLEMENTS CARTER R & JOYCE G		140.86	Project Parcel	Lease	RAC
19	53-01-022E	CLEMENTS CARTER R		3.02	Project Parcel	Lease	RAC
20	46-01-019A	GARRISON FARMS SOLAR LLC		74.61	Project Parcel	Lease	RAC

TOTAL ACREAGE =	1,584.6
-----------------	---------

ADJACENT PARCELS				
MAP IDENTIFIER	PARCEL IDENTIFIER	OWNER	ZONING	LAND USE
21	52-01-004	BOSTON TIMBER OPPORTUNITIES LLC C/O HANC	RAC	Commercial Timber
22	52-01-026	AUSTIN EMORY J & PAULINE C TRS AUSTIN RE	RAC	Agriculture
23	52-01-027	JONES WILLIAM F & JONES JAMES R & KYLE C	RAC	Agriculture
24	52-01-029	COUNCIL RAYMOND JR & TINIKA S	RAC	Forest
25	52-01-031	COFIELD JASON E	RAC	Agriculture
26	52-01-031N	THOMASON SCOTT L & CARLA ANNE	RR	Residential
27	46-01-010	CROCKER MINNIE C	RAC	Forest
28	52-01-035A	TUCK PRENTICE G JR & MADELINE R	RAC	Residential
29	45-01-028	MUNFORD RICHARD S MD	RAC	Forest
30	45-01-029	MUNFORD RICHARD S MD	RAC	Agriculture/Forest
31	45-01-056	GARRIS PAUL J III & SHERRY J	RAC	Residential
32	45-01-056B	DAVIS NATHANIEL LLOYD	RAC	Residential
33	45-01-058	ROYES ADRIENNE	RAC	Residential
34	45-01-058B	HANSON GARY J & KATHY TAYLOR	RAC	Residential
35	45-01-059	HOBBS HELEN JOHNSON	RAC	Forest
36	45-01-060	HASKINS ROSS S JR & MARY L	RAC	Timber/Industry
37	45-01-061A	JOEST PROPERTIES LLC	GC	Open Space
38	45-01-063A2	SLOAN DAVID R	RAC	Residential
39	45-01-063A3	SPRATLEY GLORIA B	RAC	Forest
40	45-01-064	LEWIS THOMAS L JR	RAC	Residential
41	45-01-066	CHAPMAN JOSEPH S ESTATE C/O CYNTHIA SMIT	RAC	Agriculture
42	45-01-066A	DOUGLAS JOHN A	RR	Residential
43	45-01-066B	WILDER TOM J & HAZEL M	RAC	Residential
44	45-01-066C	LEWIS CLARENCE LEE TRUSTEE LEWIS CLARENC	RAC	Residential
45	45-01-067	KELLEY HELEN J	RAC	Residential
46	45-01-068	HOBBS HELEN JOHNSON L/E	RAC	Forest
47	45-01-070	PHILLIPS BRENDA M L/E	RAC	Agriculture/Forest
48	45-04-001	BREWSTER-YATOR DEBORAH K	RAC	Residential
49	45-04-002	WRIGHT LINDA	RAC	Residential
50	45-04-003	ARNOLD ROBERT E & LAURA W	RAC	Residential
51	45-04-004	PHIELPS HARRELL R	RAC	Residential
52	46-01-011	HARDISON THEODORE M & JANICE A L/E	RAC	Residential/Agriculture
53	46-01-011B	FRANKLIN HERBERT D & SANDRA G	RAC	Residential
54	52-01-038A	CARR DELMAN LEW TRUSTEE OF DELMAN LEW CA	RAC	Forest
55	52-01-040	AUSTIN EMORY J & PAULINE C TRS AUSTIN RE	RAC	Residential/Agriculture
56	52-01-041	TR CHAPEL GROVE CHURCH CEM	RAC	Forest
57	53-01-002	GARRISON FARMS LLC C/O GARRISON WILLIAM	RAC	Open Space
58	53-01-003B	PILAND ALAN ERIC	RAC	Residential

MAP IDENTIFIER	PARCEL IDENTIFIER	OWNER	ZONING	LAND USE
59	53-01-003F	ROBINSON TROY L & MARGARET F	RAC	Residential
60	53-01-003H	MOSS KYLE A	RAC	Residential
61	53-01-003L	TSBA INVESTMENTS LLC	LI	Business
62	53-01-004	WILLIAMS TRAVIS W	RAC	Residential/Agriculture
63	53-01-007	COBB LAND LIMITED PARTNERSHIP	RAC	Residential/Agriculture/Forest
64	53-01-008		RAC	VEPCO Substation
65	53-01-009	MONROE CHERYL B & BOSTIC HAYWOOD W JR	RAC	Agriculture
66	53-01-009A	LANKFORD MELVIN L & LORETTA H	RAC	Residential
67	53-01-010	MONROE CHERYL B & BOSTIC HAYWOOD W JR	RAC	Residential/Agriculture/Forest
68	53-01-014	WRIGHT CLARENCE E & WRIGHT CARLTON E & D	RAC	Residential/Forest
69	53-01-020	COBB LAND LIMITED PARTNERSHIP	RAC	Agriculture/Forest
70	53-01-021	BYRUM RICHARD L & JANICE F & BYRUM JOHN	RAC	Forest
71	53-01-022A	CLEMENTS CARTER R & JOYCE G	RR	Residential
72	53-01-022B	WOOTEN YOLANDA	RR	Residential
73	53-01-022C	BLOUNT KENNETH M & YOLANDA B	RR	Residential
74	53-01-022D	BLOUNT KENNETH M & YOLANDA B	RR	Forest
75	53-01-023	TR ANTIOCH CHRISTIAN CHURCH	RAC	Church
76	53-01-024	TR ANTIOCH CHURCH CEMETERY	RAC	Cemetery
77	53-01-026	STEPHENSON FAYE E	RAC	Residential
78	53-01-027	SPECIAL K'S LLC	RAC	Forest/Agriculture
79	53-01-105	NORFOLK SOUTHERN CORP TAXATION DEPT	RAC	Forest
80	53-05-000A	ARANA VICKIE LYNN	RAC	Residential
81	53-05-000B	HULETT EMBER R	RAC	Residential
82	46-01-012	EVANS-GALLIEN KATINA L & DURHAM MIRANDA	RAC	Residential/Agriculture
83	46-01-012A	EVANS-GALLIEN KATINA L & DURHAM MIRANDA	RAC	Agriculture/Forest
84	46-01-013	DUCKS FARMS LLC	RAC	Residential/Agriculture/Forest
85	46-01-016	CHAPMAN JOSEPH S ESTATE C/O CYNTHIA SMIT	RAC	Residential
86	46-01-018	BOOKER VIRGINIA M	RAC	Residential
87	46-01-020	PIERCE ELLA M EST C/O HOWELL NANCY P	RAC	Agriculture/Forest
88	46-01-020A	TOMLIN HARVEY N	RAC	Residential
89	46-01-020B	GPSP PROPERTIES LLC	RAC	Residential
90	46-01-021B	BRASWELL EARL WAYNE & DEBORAH	RAC	Residential
91	46-02-000A	GOODWIN AUSTIN C & JOANNE E	RAC	Forest
92	46-02-000B	SATORRE-HARRIS CASIANA	RAC	Residential
93	46-05-000A	BRYAN RONALD P H JR	RR	Residential
94	46-05-000B	CHERRY DAWN P	RR	Residential
95	46-05-000C	JOHNSON CLAYTON L & PEGGY J	RR	Residential
96	52-01-039	CARR CHESTER GLENN & SUSAN S TRS CHESTER	RR	Forest
97	52-01-038	JONES JAMES JR & JONES MILDRED O &	RAC	Forest

CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

DATE	08/30/2022
PROJECT NUMBER	38786.012
PROJECT NAME	CARVER SOLAR
DESIGNED BY / DRAWN BY	J. FRAZIER

NOTES:
1. PARCEL AND ZONING DATA IS FROM ISLE OF WIGHT COUNTY.

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REVISIONS	
#	DESCRIPTION

DRAWING DESCRIPTION
PARCEL INFORMATION SHEET

PLANS PRINTED AS 11X17 ARE HALF SCALE	
SCALE	SHEET NUMBER
	C2.1



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1001 Boulders Parkway, Suite 300
Richmond, VA 23226
www.timmons.com



OPEN ROAD
RENEWABLES
1105 Navasota Street
Austin, TX 78702
TEL 512.524.1195
www.openroadrenewables.com

APPLICATION
FOR
CONDITIONAL USE PERMIT
FOR THE
CARVER SOLAR PROJECT

ISLE OF WIGHT COUNTY, VIRGINIA

September 2022

Prepared by: Carver Solar I, LLC
1105 Navasota Street
Austin, TX 78702
Contact: Ryan Gilchrist
Tel: (203) 804-1207

With Assistance From: The Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, VA 23225

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Exhibits

Exhibit 1	Application for Conditional Use Permit
Exhibit 2	Request for Substantially in Accord Determination
Exhibit 3	Description of Project Components
Exhibit 4	Parcel and Zoning Map
Exhibit 5	Concept Plan
Exhibit 6	Preliminary Landscaping Plan
Exhibit 7	Visual Impact Analysis
Exhibit 8	Transportation Plan and Intersection Site Distance Plan
Exhibit 9	Proposed Access/Haul Routes
Exhibit 10	Environmental Resource Impact Analysis
Exhibit 11	Phase 1 Environmental Site Assessment
Exhibit 12	Phase 1A Historical and Cultural Resource Impact Analysis
Exhibit 13	Phase 1 Architectural Resources Survey
Exhibit 14	Phase 1 Archaeological Resources Summary of Findings
Exhibit 15	Preliminary Decommissioning Plan
Exhibit 16	Economic Impact Analysis
Exhibit 17	Proposed Conditions
Exhibit 18	Interconnection Application
Exhibit 19	Preliminary Jurisdictional Determination of Wetlands

I. Summary

This Application for a Conditional Use Permit (“CUP”) for the Carver Solar Project, a solar facility with a capacity of 71 megawatts alternating current (“Application”), is submitted to Isle of Wight County, Virginia (“County”) by Carver Solar I, LLC (“Applicant”) to construct, operate and decommission the Carver Solar Project (“Project”). The completed application forms are attached in **Exhibit 1**. The Project will fully comply with the County’s zoning requirements for utility-scale solar facilities, including revisions recently recommended by the Planning Commission. The Application provides the information needed for the County to issue a CUP for the Project. The corresponding request for a “Substantially in Accord” determination is attached as **Exhibit 2**. Note that approval of the CUP, if issued with a statement affirming consistency or lack of conflict with the Comprehensive Plan, will be sufficient from Applicant’s perspective to constitute a “Substantially in Accord” determination.

The Project will be a solar electric generation facility consisting of a series of separately-fenced fields of ground-mounted solar panels connected by buried cables and access roads to a new point of interconnection on one of the County’s primary transmission lines. The Project will connect with an existing transmission line and will not require any upgrades to the transmission line. The Project will generate electricity with virtually no light, noise, odor, dust or traffic, and it will not produce any air pollution, water pollution or waste or use any pipelines or fuel.

Most of the Project will consist of open space between and around the solar panels. Within the Project’s fence lines, the ground surface will be planted with native grasses that will preserve the soil, minimize erosion, and improve water quality. The Project will require relatively few changes to the land, with topsoil remaining within the Project Area and few underground foundations. At the end of the useful life of the solar panels, the equipment will be removed, and the land can again be used for farming (or other uses).

As a highly passive use, the Project will do no harm to the rural character of the area. The solar panels will have a low and consistent visual profile and the Project’s perimeter will include substantial setbacks from parcel lines and public roads, which will contain landscaping consisting of retained existing and/or planted vegetation exceeding the County’s requirements. The Project will be monitored remotely with workers visiting

different areas of the Project only as needed to perform inspections, maintenance, and repairs.

The Project will provide a minimum of \$6.1 million in new revenue to the County over its 40-year life, and this figure is conservative since it does not include additional, voluntary payments that Applicant could be in a position to make to the County under a “solar siting agreement” authorized under recent state legislation. It also will boost economic activity in the form of additional local spending during construction. Most of the land for the Project will be leased, and the participating families will earn steady revenue for decades, much of which may be spent and reinvested locally.

II. Project Description

A. Project Components

The Project will consist of long rows (also called “arrays”) of solar panels mounted on metal posts in open fields that are connected with electric cables. The power from each solar panel will be combined, converted from direct current (“DC”) to alternating current (“AC”), and its voltage will be stepped up to match that of the existing “Myrtle-Windsor 115 kV” transmission line, to which the Project will connect. The Project will include the following primary components:

Component	Description
Solar Panels	Devices that generate low-voltage electricity using the photovoltaic effect
Racking	Metal frames to which solar panels and electrical cables are attached
Piles	Metal posts driven into the ground and to which racking is attached
Inverters	Metal cabinets with equipment that converts DC to AC, increases voltage and performs related functions
Collection Lines ¹	Electrical and communication cables either mounted on racking or buried
Substations	A facility that gathers electricity from the inverters, increases the voltage, and delivers it to the transmission

¹ The lines connecting the arrays to the point of interconnection are proposed to be located underground, and installed using horizontal directional boring in order to eliminate impact on wetlands and forest stands. These transmission lines will be contained within easements ranging from 25' to 40' in width. The ground surface will be maintained in its current use.

	system. The Project will have two substations, a project-owned “collection yard” and a utility-owned substation.
SCADA	“Supervisory Control and Data Acquisition” system that allows for remote monitoring and control of the solar panels, inverters, and other components
Roads	Unpaved roads, grassy driving aisles, and entrances to the Project from public roads
Pyranometers	Instruments that measure solar energy and weather conditions
Fencing	Metal fencing that meets applicable electric codes and insurance standards
Stormwater Controls	Basins, level spreaders and other structures that manage stormwater run-off

Each of these primary components is described in greater detail and with illustrative photographs in **Exhibit 3**.

The fenceline encompasses approximately 503 acres, and the Project Area encompasses approximately 637 acres, therefore 134 acres located within the Project Area, but outside of the fenceline will be left as open space. This translates to approximately 21%. Furthermore, within the fenceline, roughly 60-70% of the ground surface within each solar field will be open space. Relatively wide corridors between arrays are needed to prevent them from shading each other, and the open space between the arrays will be wider than the arrays themselves. Additionally, space is needed between and around the arrays for vehicles and workers to perform inspections, maintenance and repairs and to occasionally clean the solar panels of accumulated dust and dirt.²

The surface in each solar field—including almost all the area below the solar panels themselves—will be planted with a robust, low-growing seed mix, primarily native grasses and other low-maintenance varieties. This ground cover will be maintained with regular mowing and supplemented with approved herbicides. The vegetative cover will absorb precipitation, provide wildlife habitat, and improve water quality by filtering stormwater and reducing the use of farm-related pesticides and herbicides. Because it will always remain in place, the ground cover also will reduce erosion, run-off, and nutrient

² This “soiling” of solar panels reduces the amount of energy they produce. Typical rainfall in the County should be sufficient to clean the solar panels, but occasional cleaning with water may occur.

loss in a manner consistent with the Virginia DEQ Erosion and Sediment Control Handbook.

B. Project Location and Setbacks

The Project Area (not including buried collection lines and connecting roads) is comprised of approximately 637 acres of private land, consisting primarily of small- to medium-sized farm fields about 2 miles northwest of Windsor, surrounded by areas of relatively low population density. The predominate land use in the Project Area is agricultural with some land in silvicultural use. Solar panels generally avoid water features including streams, wetlands and floodplains, and the Project Area readily accommodates the Project because it contains sufficient dry and relatively level upland areas.

A key reason for the Project's location and size is its proximity to a transmission line. In the vicinity of the Project, a transmission line travels parallel to and approximately ½ mile south of Route 460. Studies conducted by Dominion and the operator of the multi-state electrical grid, PJM, show that the Project can deliver its power at this location in a cost-effective manner and no upgrades to the transmission line will be required.

The Property Limits consists of 20 parcels owned by 13 different families. A map of the participating and adjacent properties including a list of the corresponding parcel owners is provided in **Exhibit 4**. All of the participating parcels are located within the Rural Agricultural conservation ("RAC") District, in which solar projects are permitted with a CUP. The Project is in the vicinity of, but does not overlap with, the Windsor Development Services District ("DSDs"). Except for limited access road crossings, all above-ground infrastructure for the Project will avoid water-related features in the area, including wetlands and floodplains. The wetlands delineation has been completed for the entire Project Area, and the total projected impact within the Project Area is 0.07 acres. As shown in the Concept Plan, these impacts are limited to the construction of access roads in areas where wetlands impact is unavoidable. An overlay of the various environmental features in the vicinity of the Project is included in the Concept Plan for the Project, which is discussed further below, and is which is included as **Exhibit 5**.

The Project will incorporate substantial minimum setbacks from other uses and public roads. Specifically, the Project will adhere to the following setbacks:

- 1. Setback from Route 460.** Applicant proposes a 200 foot setback from Route 460 in all places.
- 2. Setback from Cut Thru Rd.** Applicant proposes a 200 foot setback from Cut Thru Rd in all places.
- 3. Property Line Setback.** 75 feet from any property line of a parcel not participating in the Project, except 125 feet for adjacent residential parcels.
- 4. Road Setback.** 75 feet from the edge of any public road right-of-way.

Setbacks will be measured from the closest above-ground structure, which is the fence.

C. Low Visibility

Due to the nature and location of the Project, implementation of solar development “best practices,” and the County’s Zoning Ordinance, the Project will have very low visual impact on surrounding residents and the travelling public.

First, the Project is located in an area of the County with relatively low population density. Although substantial when combined, the Project is divided into separate northern and southern units on each side of Route 460. Relatively little of the Project perimeter will actually be road frontage on Route 460. Further, each of the separate units will be comprised of separate, smaller solar fields, each of which will be “nested” within existing forested areas. As a result, although the Project is substantial in size as a whole, it will not be highly visible nor appear prominently to neighbors and travelers.

Second, as noted above, the Project will incorporate substantial setbacks between all above-ground components and neighboring land and roads. These robust setbacks will reduce the visual impact of Project infrastructure by moving it father away from neighbors, area residents, and visitors.

Third, the Project will incorporate robust vegetative buffering along its entire perimeter and will exceed the highly-detailed vegetative buffer requirements of the Zoning

Ordinance for frontage zones and adjoining residential parcels. The Applicant anticipates that most of the Project will be naturally obscured from view by existing vegetation and tree stands. In areas where existing vegetation is insufficient to meet the target landscaping points, the Applicant will plant vegetation to screen the Project from view. The proposed landscaping for the Project is depicted in the Preliminary Landscape Plan, which is included as **Exhibit 6**. The maximum height of all of the equipment within a given solar field (solar panels, inverters and pyranometers) will be 12 feet. The relatively low profile of the equipment combined with significant existing vegetation and planned vegetation means that the Project will be fully obscured from view.

An analysis of the visibility of the Project is provided in a Visual Impact Analysis, which is included as **Exhibit 7**. It demonstrates that the Project will only modestly affect the scenic quality of the rural landscape, mainly by adding vegetation where there traditionally has been none. This will be especially true for neighboring homes. There are relatively few homes along substantial portions of the Project's perimeter. Existing timber, vegetation on neighboring parcels, and other existing homes and structures will largely obscure views of the solar panels from most occupied locations.

D. Development Plans

As noted above, accompanying the Application are a series of maps (over-sized versions provided separately) designed to assist the County in the review of this Application (Exhibit 5, the Concept Plan). The Concept Plan depicts the parcels on which the Project will be constructed, the areas within these parcels that will host the solar fields, wildlife corridors, probable locations of entrances from public roads, the approximate routes of the buried collection lines, and location of the collection yard and utility-owned substation. These features are shown against a background of the public roads and neighboring parcels in the vicinity of the Project. The Concept Plan also includes indicative locations for solar panel arrays and indicative fence lines inside which the panels, inverters, and other surface equipment will be located.³ Note that the three-rail

³ The locations of panels and fences in the Concept Plan are for illustrative purposes only. Panel arrays and other surface equipment may be located anywhere within the Project Area.

fence adjacent to Windsor Boulevard on Parcel No. 45-01-061 will be retained. Note that the Project Area (the area within the “Property Limits”) shown on the Concept Plan encompasses approximately 637 acres, whereas the indicative fence line (the area likely to be encompassed within the eventual Site Plan) encompasses considerably less: approximately 503 acres.

The Concept Plan shows the location and acreage of forest cover within the Project Area. A total of 22 acres of non-commercial timber will be impacted, which represents 3% of the Project Area. Additionally, 110 acres of forest historically used for commercial timber would be cut prior to construction, which represents an additional 17% of the Project Area.

All of these features in the Concept Plan plus considerable additional detail will be included in the Site Plan that will be submitted for review and approval prior to construction by the Zoning Administrator (“Site Plan”). The Site Plan will depict the various components of the Project within the solar fields, including the arrays, inverters, roads, and pyranometers. The precise number and location of these components will be based on final engineering and design using the model of each type of component selected. In contrast to the Site Plan, the Concept Plan shows for purposes of the CUP the “buildable area” that will contain all above-ground equipment and, therefore, shows the Project’s “maximum extent” relative to the public. The only features of the Project outside this buildable area will be the driveways from the public roads to the gates, access roads connecting panel array areas, buried collection lines, and vegetative buffering.

The Application also includes several additional plans reflecting studies and surveys for the Project required by the Zoning Ordinance. These plans are a Transportation Plan (**Exhibit 8**), a Proposed Access/Haul Routes figure (**Exhibit 9**), an Environmental Resource Impact Analysis (**Exhibit 10**), a Phase 1 Environmental Site Assessment (**Exhibit 11**), a Phase 1A Historical and Cultural Resource Impact Analysis (**Exhibit 12**), a Phase 1 Architectural Resource Survey (**Exhibit 13**), a Phase 1 Archaeological Resource Summary of Findings (**Exhibit 14**), the Interconnection Application (**Exhibit 18**), and the Preliminary Jurisdictional Determination of wetlands issued by the Army Corps of Engineers (**Exhibit 19**).

III. Decommissioning

At the end of the Project's useful life, with the exception of the utility-owned substation, the equipment can be removed, and the land can be returned to its condition prior to construction. If desired by the landowner at that time, the land can be return to productive agricultural use following decommissioning. This is possible because the Project will have a minimal impact on the land. The piles are simple galvanized steel posts driven into the ground (typically to a depth of about 6-8 feet), which are easily removed. The inverters and pyranometers are installed on gravel pads, metal skids, or small concrete foundations. Although portions of the utility-owed substation and collection yard will be installed on poured concrete, they will cover only a small area. Roads will be constructed of aggregate material or covered in grass, not paved.

As noted by a N.C. State University study, "[d]ecommissioning is basically the construction process in reverse: it involves removal of the solar panels, break-up of support pads, removal of access roads, replacement of any displaced spoil, and revegetation."⁴ The study recognizes that farm fields hosting solar panels essentially preserve farmland, stating "(m)odern solar facilities may be considered a temporary, albeit long-term, use of the land, in the sense that the systems can be readily removed from the site at the end of their productive life."⁵

The Zoning Ordinance contains comprehensive provisions requiring and governing the decommissioning of the Project at the end of the useful life of the Project (expected to be 40 years). These provisions and Va. Code § 15.2-2241.2 require a decommissioning agreement, and financial surety to guarantee that decommissioning will occur, to be in place prior to the start of construction. The agreement must provide for an estimate the cost of decommissioning by a professional engineer. To ensure decommissioning is funded in the unlikely event that the owner/operator does not meet its obligations, the agreement must be backed by financial surety.

A draft plan for decommissioning the Project consistent with the above requirements is included in Exhibit 15 ("Preliminary Decommissioning Plan"). It outlines

⁴ N.C. Clean Energy Technology Center, N.C. State University "Balancing Agricultural Productivity with Ground-Based Solar Photovoltaic (PV) Development" (August 2017), p. 4.

⁵ Id.

the responsible parties, methodologies, regulatory framework, and financial assurance for decommissioning the Project and restoring the area to substantially its pre-construction condition. The Preliminary Decommissioning Plan provides for the safe removal and sale, re-deployment, recycling, or proper disposal of all components of the Project, including components containing rare or valuable materials.⁶ Restoration will include decompaction of soil, and seeding with an appropriate, low-growing vegetative cover to stabilize the soil and increase its fertility. The final Decommissioning Plan with detailed procedures, timelines, and projected costs will be submitted, along with the decommissioning agreement, for review and approval by the Zoning Administrator prior to construction.

IV. Project Benefits

A. Minimal Use of County Services

Many types of new development, such residential subdivisions or road-side strips of commercial establishments, bring economic and fiscal benefits but also can stress local services and resources, and therefore fiscal resources. A uniquely positive feature of the Project relative to most other kinds of development is that it will require no taxpayer-supported services. The Project will not use any public water, require any extension of sewer, or upon completion of construction activities, add to the daily traffic load. The only County-supplied services needed are coordination with fire and rescue personnel to ensure the proper response in the unlikely event of an emergency.

⁶ The Preliminary Decommissioning Plan prioritizes reuse and recycling over disposal. Reuse may be an option because solar panels typically are warranted to produce about 80% of their original power after 25 years. Recycling also is an option because most of the materials making up a solar project are recyclable; solar panels themselves are comprised mostly of commonly-recycled materials such as glass and aluminum. Although there has been little recycling to date in the U.S. due to the relative youth of the industry, the Solar Energy Industry Association launched a program in 2016 to develop a national recycling program with the ultimate goal of making the entire U.S. solar industry landfill-free. Even if the solar panels are not fully recyclable in 40 years, it is highly unlikely that they would present any disposal concerns because the vast majority of models now qualify as non-hazardous waste eligible for disposal in municipal landfills.

B. New County Revenue

The Project will represent a total investment of approximately \$75-\$85 million and will make significant revenue contributions to the County over its 40-year life: a minimum of \$6.1 million from the taxation of equipment, and this revenue will likely be significantly higher due to the potential for a solar siting agreement to be agreed upon between the County and the Project. The fiscal benefits to the County will be 25 to 50 times more than the approximately \$262,900 in taxes that are expected to be paid for the unimproved properties over the same 40-year period.⁷

To determine the economic and fiscal benefits that the County and its taxpayers will receive from this investment, the Applicant commissioned a study from Virginia-based Mangum Economics.⁸ A copy of Mangum's report is attached as **Exhibit 16**. The Mangum study found that, in addition to the County revenue, the Project will result in the creation of approximately 67 jobs from the one-time "pulse" of economic activity during construction of the Project and 2-3 permanent jobs during the operations phase of the Project.

The Project also offers a unique opportunity for participating families to diversify their income by securing a robust and stable long-term source of revenue from a portion of their land. The long-term operating costs of solar facilities can be estimated with confidence because the amount of solar energy that can be produced by a particular area is a known amount (both now and in the future), and because there is no fuel price volatility (the only "fuel" is the sun). This predictability enables participating landowners to be paid fixed amounts over decades. In contrast to farm and timber income, which can vary significantly based on weather, commodity prices and tariffs, this certainty of income allows participating families to manage their land and revenue-producing activities over a generation.

⁷ These figures are conservative since they do not include additional, voluntary payments that Applicant could be in a position to make to the County under a "solar siting agreement" authorized under recent state legislation.

⁸ Mangum has decades of experience assessing the economic consequences of proposed regulations and government policies, economic impact assessment, workforce issues and economic development. The firm's principal serves on the Governor's and General Assembly's Joint Advisory Board of Economists and is past president of the Virginia Association of Economists.

V. Other Regulations and Permits

A. Site Plan

After the CUP process and after final design and engineering is complete, but before construction begins, Applicant will submit to the Zoning Administrator for review and approval a Site Plan pursuant to Zoning Ordinance. The Site Plan submitted by Applicant will build on the Concept Plan, incorporating all the requirements of the Zoning Ordinance, and meeting all the usual specifications such plans.

B. Erosion Control and Stormwater Management

The Project will submit for approval the final design for Erosion and Sediment Control to the County. The plan will conform to the Virginia Erosion and Sedimentation Control Regulations and the Virginia Erosion and Sedimentation Control Handbook (3rd Ed. 1992). Stormwater Management design will be approved by the County, and the approved design and plan will be reflected in Site Plan. Construction will start only after the posting of surety to guarantee performance of the required control measures and a land-disturbing permit has been issued.

For permanent storm-water controls during operations of the Project, Applicant also will obtain, prior to construction, a Virginia Stormwater Management Program Permit from the County. This permit, which typically takes solar facilities the size of the Project 8 to 10 months to obtain, will be based on near-final engineering and design and involves detailed computer modeling of potential future stormwater flows. The permit will ensure that the Project is designed to protect area water resources from stormwater.

Although the Project will entail substantial ground disturbance, erosion management during construction will be facilitated by several factors. First, solar arrays do not require perfectly flat land; the rows of solar panels can be constructed so as to conform to modest slopes (5%-10%), thereby reducing the scope of earth-moving activities. Second, the vast majority of the racking used to support the panels will be secured to posts that are merely driven down through the existing surface, without excavation. Also, Applicant will not remove any topsoil from the Project Area, but will use it to expeditiously establish ground cover. In order to comply with soil testing requirements of Sec. 5-5003.M.4.f. of the Zoning Ordinance, site plan submission will be accompanied

by a proposed soil sampling protocol that identifies, based on the selection of model of solar panels for the project, the proposed contaminants and test methods, as well as proposed procedures for qualification of personnel, sampling frequency, handling of samples, and sharing of test results with the county.

Applicant is aware of the recent memorandum issued by DEQ classifying solar facilities as impervious surface for stormwater purposes, and the Project will comply with all requirements, county regulations, state law, and DEQ regulations applicable to the Project at the time that the application for a stormwater management permit for the Project is submitted.

C. State Solar Approval

In addition to the above, the Project will require approval by DEQ under a regulatory program the General Assembly has put in place for solar generation facilities called the “Permit By Rule” or PBR program. Given that local land use approval is one of the required elements of a PBR application, the Applicant has not yet submitted the application. The requirements of the PBR process are extensive and include public comment periods. Only if all of these requirements of the program are satisfied will the project obtain the necessary clearance to proceed. The Virginia Department of Conservation and Resources (VDCR) is the state agency charged with providing feedback during the Permit by Rule process regarding the environmental attributes of the project.

D. Wetlands.

If impacts to USACE jurisdictional wetlands and streams are unavoidable, the Project will obtain the appropriate permits for any unavoidable impacts including authorization via USACE’s Nationwide Permits 51 and 58. Timmons Group has completed a field wetland delineation, and the U.S. Army Corps of Engineers has reviewed the delineation and provided a Preliminary Jurisdictional Determination. The Project will continue with this coordination as design plans become finalized in order to obtain these appropriate authorizations.

VI. Consideration of CUP Criteria

Applicant believes that the Project favorably compares to the County's criteria for granting a CUP. The Zoning Ordinance provides that a CUP shall be approved only upon finding that the proposed use conforms to the following criteria:

- Not detrimental or dangerous to the public health, safety and general welfare
- Not injurious to the use and enjoyment of other property in the immediate vicinity nor substantially impair use of other property
- Adequate utilities, water, sewer or septic system, access roads, storm drainage and/or other necessary public facilities and improvements are provided
- Adequate measures will be taken to provide ingress/egress to minimize traffic congestion
- Not contrary to the goals and objectives of the Comprehensive Plan
- Conforms to zoning district regulations and special requirements for the use
- Will not result in a multiplicity or saturation of similar uses in the same general neighborhood

Each of these criteria is discussed below in relation to the Project.

A. Public Health, Safety and General welfare

The Project will not adversely affect the public health, safety, and general welfare of the County.

The only aspect of construction that needs to be managed for public safety is construction traffic. Construction is expected to take 9-12 months and may be inconvenient at times to area residents, but is expected to have only very modest impacts on traffic and roads in the community. Although there will be a number of component-related deliveries, almost all of these will be by conventional commercial trucks, not oversized vehicles. There will be a substantial increase in worker-related traffic during the construction period, but not so much as to cause significant adverse effects in the area as a whole. Construction traffic will be manageable and can readily be addressed by

Applicant in cooperation with VDOT and the County. In order to comply with road repair and maintenance requirements of Sec. 5-5003.M.4.g.ii of the Zoning Ordinance, prior to the start of construction Applicant will take video of key road segments near the project to be used for deliveries so as to create a firm baseline of beginning conditions, and then at least monthly during construction and with VDOT upon completion of construction, inspect those road segments for any project-related damage.

With regard to operations, solar energy is based on well-established technology developed in the 1950s and is very safe. Solar panels are made mostly of metal, glass, and plastic. Within these common materials, a thin layer of solid-state semi-conducting material is encapsulated within a water-tight envelope (to avoid air moisture from adversely affecting the function and warranty of the solar panels). Even if a solar panel is broken open, and the semi-conducting material exposed, which is very difficult to do, there are no liquids that can spill. A recent study from N.C. State University concluded that “[p]hotovoltaic (PV) technologies and solar inverters are not known to pose any significant health dangers to their neighbors.”⁹ Virginia-based Southern Environmental Law Center has reported that “[t]here are no confirmed public health impacts from solar panels at levels encountered by the public.”¹⁰

B. Use and Enjoyment of Other Property in Immediate Vicinity

The Project will include the necessary safeguards to protect the use and enjoyment of property in its immediate vicinity. As noted above, the Project will generate electricity with virtually no light, noise, odor, dust or traffic, and it will not produce any air pollution, water pollution or waste. Inverters will be placed at sufficient distances from property lines in order to comply with the noise restrictions of Section 5-5003.M.4.c. of the Zoning Ordinance. Inverters typically have sound power levels of 80 to 90 dBA near the source, and rapidly dissipate with distance. Generally, sound power levels declines 6 dBA for every doubling of the distance from the source. So, for instance, if an inverter produces

⁹ N.C. Clean Energy Technology Center, N.C. State University “Health and Safety Impacts of Solar Photovoltaics” (May 2017), p. 3.

¹⁰ Southern Environmental Law Center, “The Environmental Review of Solar Farms in the Southwest U.S.” (March 2017), p. 6.

sound of 90 dBA at a distance of 3 feet, then the sound will decline with distance as follows: 84 dBA at 6 feet, 78 dBA at 12 feet, 72 dBA at 24 feet, 66 dBA at 48 feet, 60 dBA at 96 feet, and so on. To further protect neighbors and minimize any adverse visual impacts, the Project will incorporate perimeter-wide setbacks and rigorous vegetative buffering.

C. Public Facilities and Improvements

Adequate utilities will be provided for the Project with no burden on the County. With the exception of obtaining distribution-level electric power from the existing electric utility for the SCADA facility, the Project will require no utilities. It will not require County-supplied water or sewer.

D. Ingress and Egress

Adequate road entrances and off-street parking will be provided for the Project with no burden on the County. All parking will be provided for within the footprint of the Project itself and, during operations, needed parking will be almost negligible as the Project will only require infrequent service and maintenance visits.

E. Comprehensive Plan

In addition to this Application, the Applicant is requesting a determination from the Planning Commission that the Project is “substantially in accord” (“SIA”) with the County’s Comprehensive Plan under Va. Code § 15.2-2232 (“Section 2232”). Because of the similarity between the standard provided in Section 2232 and the Comprehensive Plan element here, the Applicant is addressing the Comprehensive Plan solely in the SIA request, which is incorporated by reference in this Application.

F. Zoning Regulations and Use Requirements

As discussed above, the Project will fully comply with all applicable provisions of the County’s Zoning Ordinance and solar-specific use requirements.

G. Multiplicity of Similar Uses in Same General Neighborhood

The southern unit of the Project will be near another solar facility that received a CUP from the County, and that is planned to be located south of Blackwater Road. No part of the Project, however, will front Blackwater Road. Also, due to intervening forests that will not be cut, the two projects will not be visible from each other. For this reason, the general neighborhood will not experience a multiplicity or saturation of solar energy uses.

H. Applicant's Proposed CUP Conditions

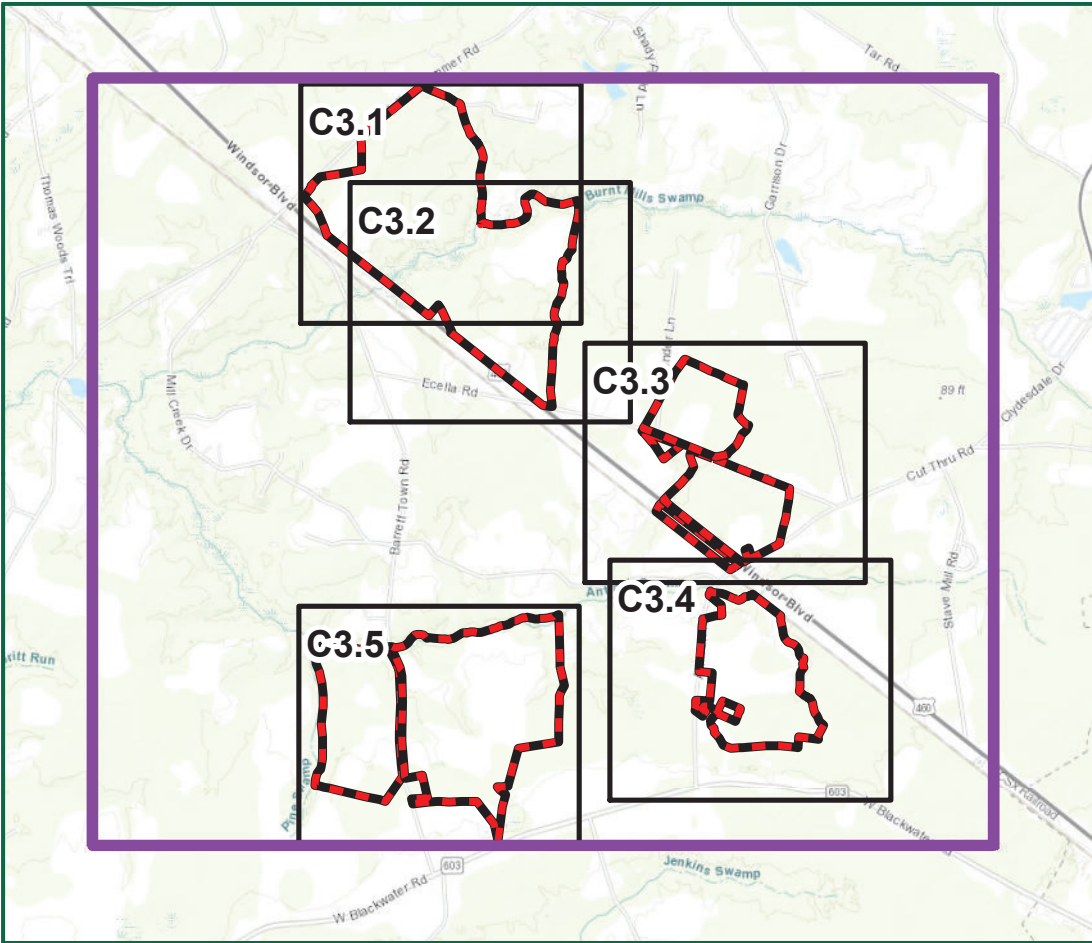
Applicant proposes conditions for consideration by Planning Staff, the Planning Commission, and the Board of Supervisors. The proposed conditions are included in Exhibit 17.

I. Consideration of General Design Standards

Applicant has considered how the general design standards required by Sec. 7-1004.A.1.h. through Sec.7-1004.A.1.o. of the Zoning Ordinance, as applicable, will be addressed. Please find this information below:

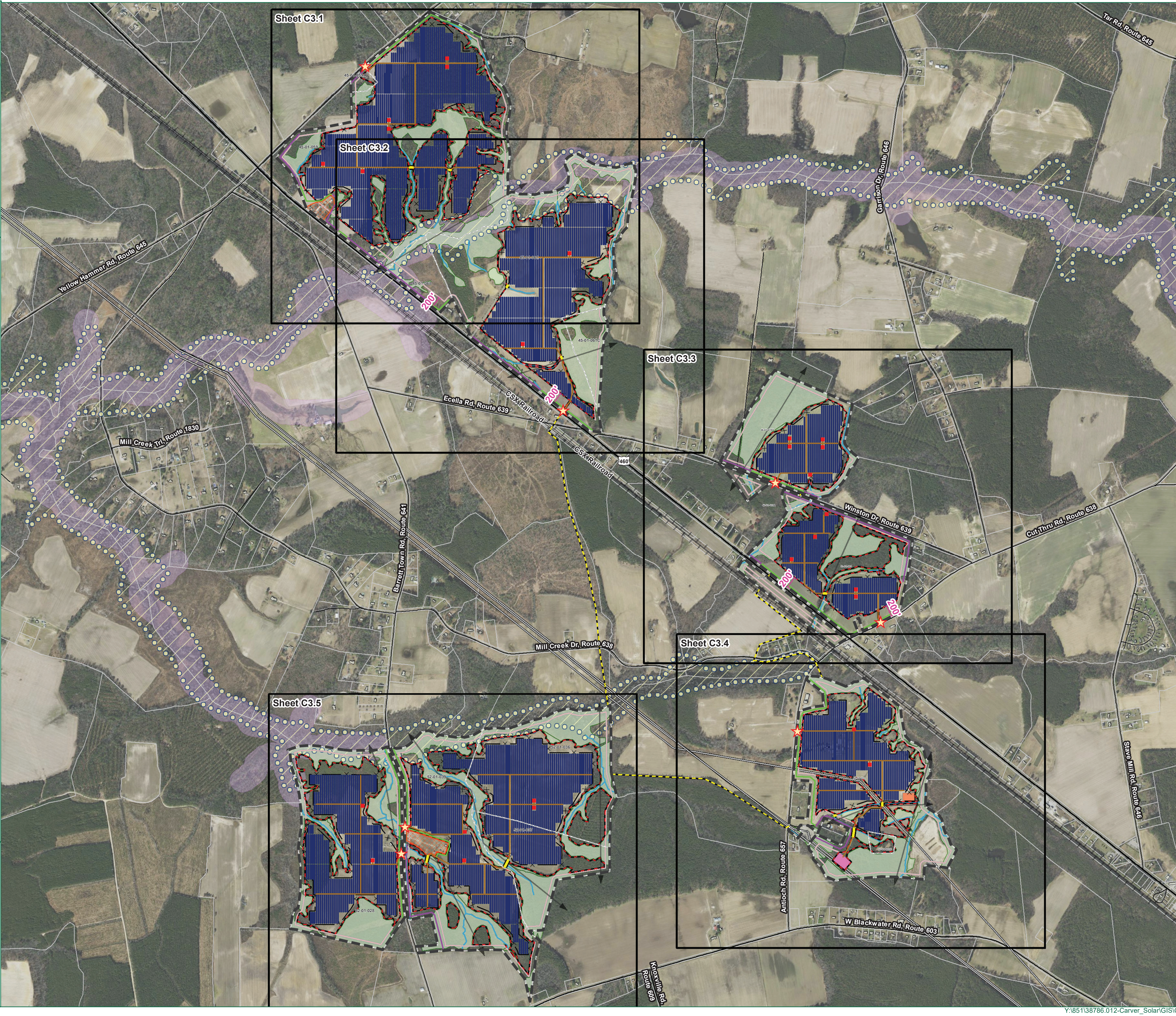
Standard	Compliance plan
Sec.7-1004.A.1.h. Public water and sewer facilities	Not applicable. The Project will not use public water/sewer facilities.
Sec.7-1004.A.1.i. Emergency vehicle access	As detailed in the proposed CUP conditions, emergency access will be managed by keycode or other remote access technology with specific entry credentials issued to county personnel.
Sec.7-1004.A.1.j Schools	Not applicable. There is no anticipated impact on schools and no anticipated need for new school facilities
Sec.7-1004.A.1.k. Recreation	Not applicable. There is no anticipated impact on recreation and no anticipated need for new recreational facilities
Sec.7-1004.A.1.l. Essential services	In the unlikely event of an emergency, fire & rescue may be called.
Sec.7-1004.A.1.m. Impact on adjoining land uses	Perimeter landscaping, upon maturity, will obscure the Project from view, and the required Erosion and Sediment Control approvals will ensure that the Project

	is designed to protect area water resources from stormwater.
Sec.7-1004.A.1.n. Plans for the surrounding area	The Project will be in harmony with the plans for the surrounding area, as detailed in Exhibit 2.
Sec.7-1004.A.1.o. Relation to pedestrian pathways and bikeways	Not applicable. There are no existing or proposed pedestrian pathways or bikeways within the immediate vicinity of the Project.



Legend

Project Area - 637.2 Acres

Property Limits**Proposed Features (Conceptual)****Existing Features****Vegetative Buffer**

TIMMONS GROUP
YOUR VISION. ACHIEVED THROUGH OURS.
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www.openroadrenewables.com

CARVER SOLAR

**ISLE OF WIGHT COUNTY,
VIRGINIA**

DATE: 08/30/2022

PROJECT NUMBER: 38786.012

PROJECT NAME: CARVER SOLAR

DESIGNED BY / DRAWN BY: L. WHEELER

NOTES

Project Limits are approximate.
Site layout is conceptual. Not for construction.
Wetlands and streams have been delineated by Timmons Group and are pending USACE confirmation.
Setbacks are 75' from all property boundaries, 125' from residential parcels, and 200' from Route 460.
Parcel data from Isle of Wight County.
The existing fence along Pretlow's 460 frontage will be retained.
Aerial imagery from VGIN.

REVISIONS

#	MM/DD/YY	DESCRIPTION

DRAWING DESCRIPTION

CONCEPT PLAN

SCALE (FEET)

08001600

PLANS PRINTED AS 11X17 ARE HALF SCALE

SCALE

SHEET NUMBER

H:1" = 800'

C3.0

Y:\851\38786.012-Carver_Solar\GIS\CUP\38786.012-CUP Site Plan.mxd



MEMORANDUM

TO: Isle of Wight County Planning and Zoning Department
FROM: Timmons Group on behalf of Carver Solar, LLC
DATE: August 30, 2022
RE: Carver Solar Environmental Resource Impact Analysis

Timmons Group, on behalf of Carver Solar, has updated the limited environmental review of resources that may be present within a one-mile radius of the proposed project location. This environmental review includes National and State forests, National and State parks, wildlife management areas, conservation easements, recreational areas, and cultural and historic resources.

Federal, State, and Local Conservation and Recreation Lands

Carver Solar does not intersect any federal, state, or local conservation or recreational lands, and there are no such resources within one mile of the project limits. The nearest managed lands are over one mile away: Heritage Park is a local park approximately 1.2 miles to the east, and Antioch Pines State Natural Area Preserve is approximately 1.3 miles to the west.

Wetlands and Streams

Wetlands and streams onsite have been delineated by Timmons Group. A Preliminary Jurisdictional Determination has been issued by the U.S. Army Corps of Engineers confirming the jurisdictional waters/wetland limits. If wetland or stream impacts are unavoidable, the Applicant will obtain the appropriate USACE permit for any unavoidable impacts to USACE jurisdictional wetlands and streams.

Wetlands and streams form a natural wildlife corridor, and as they will generally not be impacted by the project, will remain as interior corridors for wildlife utilization. Wetlands and streams are generally outside the fenced area so free passage of wildlife will be allowed for the duration of the project. The Virginia Department of Wildlife Resources advises that interior passages through solar projects helps reduce potential impacts to wildlife, to which this project will adhere.

Threatened and Endangered Species

Timmons Group has conducted a threatened and endangered (T&E) species review of the Carver Solar project. The following databases were reviewed for the potential presence of T&E species:

- Virginia Department of Conservation and Recreation (VDCR) – Natural Heritage Review Service
- Virginia Department of Wildlife Resources (VDWR) – Virginia Fish and Wildlife Information Service (VaFWIS)
- US Fish and Wildlife Service (USFWS) – Information for Planning and Consultation (IPaC)
 - Official Species List
 - Consistency Letter

Based on the queried databases, there is the potential for four T&E species to occur near the Project.

- Northern Long-eared Bat *Myotis septentrionalis* Federal, State Threatened USFWS
- Tri-colored Bat *Perimyotis subflavus* State Endangered VDWR
- Eastern Big-eared Bat *Corynorhinus rafinesquii macrotis* State Endangered VDCR
- Monarch Butterfly *Danaus plexippus* Candidate Species USFWS

There is limited potential habitat for bat species to exist on the Project, as the majority of the land is agricultural land and timber tracts previously harvested. Furthermore, there are no known hibernacula or roost trees for these species within the vicinity of the Project. A common strategy recommended by reviewing agencies to avoid potentially harmful impacts to bat species is implementation of a time of year restriction on tree clearing. Additionally, the Antioch Swamp Stream Conservation Unit (SCU) is located within the project site, and this SCU has a biodiversity significance ranking of B2, which represents a site of very high significance. To minimize adverse impacts to the aquatic ecosystem, VDCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/stormwater management laws and regulations.

During permitting efforts at the state level, the Applicant will coordinate with agencies to ensure the protection and avoidance of T&E species.

Cultural and Historical Resources

The Project is not expected to have any impacts to cultural and historical resources due to the amount of cultural work required at the state permitting level. In-depth cultural surveys conducted by qualified professionals will be submitted for approval and concurrence by the Virginia Department of Historic Resources (VDHR).

The Applicant has submitted Phase 1 Architectural and Phase 1 Archaeological survey reports separately, and these reports provide details regarding resources that are eligible or potentially eligible for listing on the National Register of Historic Places (NHRP).

Attachment

- T&E Species Database Reviews



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: 2022-0053689
Project Name: Carver Solar

June 14, 2022

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/eo-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: 2022-0053689

Event Code: None

Project Name: Carver Solar

Project Type: Power Gen - Solar

Project Description: Carver Solar is a proposed utility scale solar facility. The project limits is approximately 1,182 acres and the project area is approximately 670 acres; the project is in Isle of Wight County, Virginia. The proposed project involves the development of forested lands for the construction and operation of a solar site and associated facilities.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.85063405,-76.79984776037925,14z>



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 Fisheries¹, 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.

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 <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> 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 Act¹ and the Bald and Golden Eagle Protection Act².

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
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> 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

NAME	BREEDING SEASON
Eastern Whip-poor-will <i>Antrostomus vociferus</i> 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 <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler <i>Dendroica discolor</i> 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 <i>Protonotaria citrea</i> 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 <i>Melanerpes erythrocephalus</i> 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 <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> 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 (1)

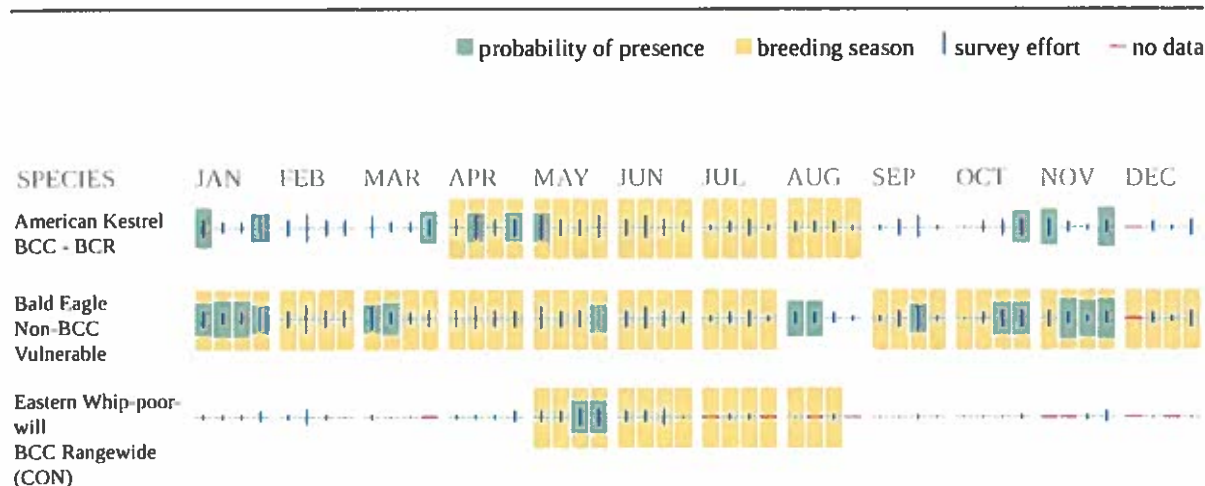
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

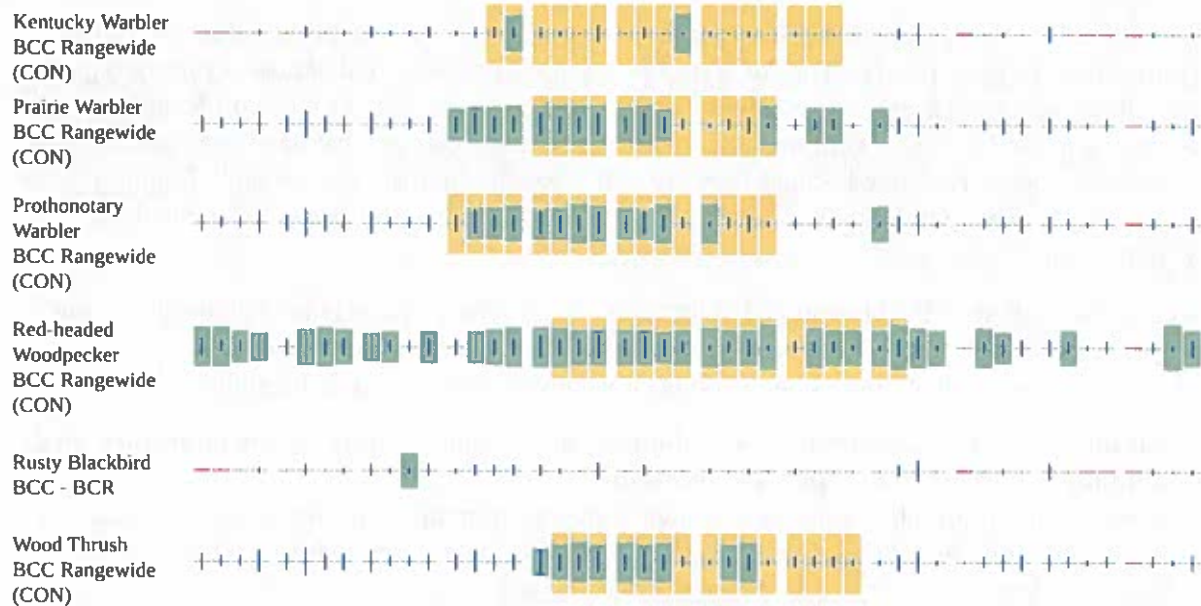
No Data (—)

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 migratory birds potentially occurring 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 [AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). 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: Timmons Group
Name: Timmons Group
Address: 1001 Boulders Pkwy
City: Richmond
State: VA
Zip: 23225
Email: 804@timmons.com
Phone: 8042006500



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: 2022-0053689
Project Name: Carver Solar

June 14, 2022

Subject: Consistency letter for the 'Carver Solar' 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 Timmons Group:

The U.S. Fish and Wildlife Service (Service) received on June 14, 2022 your effects determination for the 'Carver Solar' (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" 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.

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

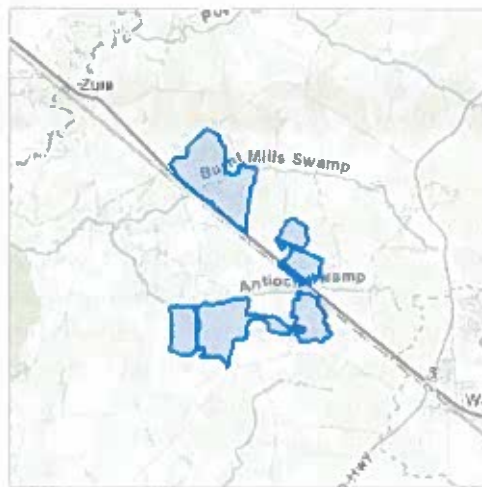
Carver Solar

2. Description

The following description was provided for the project 'Carver Solar':

Carver Solar is a proposed utility scale solar facility. The project limits is approximately 1,182 acres and the project area is approximately 670 acres; the project is in Isle of Wight County, Virginia. The proposed project involves the development of forested lands for the construction and operation of a solar site and associated facilities.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.85063405,-76.79984776037925,14z>

**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. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. 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

5. 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

6. Will the action involve Tree Removal?

Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

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:

154

2. If known, estimated acres of forest conversion from April 1 to October 31

154

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: Timmons Group
Name: Timmons Group
Address: 1001 Boulders Pkwy
City: Richmond
State: VA
Zip: 23225
Email: 804@timmons.com
Phone: 8042006500



Frank N. Stovall
Deputy Director
for Operations

Darryl Glover
Deputy Director for
Dam Safety,
Floodplain Management and
Soil and Water Conservation

Laura Ellis
Interim Deputy Director for
Administration and Finance

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

March 18, 2022

Lauren Wheeler
Timmons Group
1001 Boulders Parkway
Virginia Beach, VA 23462

Re: 38786.012, Carver Solar

Dear Ms. Wheeler:

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 Antioch Swamp Stream Conservation Unit (SCU) is located within the project site. 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 given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Antioch Swamp SCU has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern associated with this SCU are:

<i>Epitheca spinosa</i>	Robust baskettail	G4/S3/NL/NL
<i>Isoetes hyemalis</i>	Winter quillwort	G2G3/S2/SOC/NL
<i>Lampsilis radiata</i>	Eastern lampmussel	G5/S2S3/NL/NL
<i>Mitreola petiolata</i>	Lax hornpod	G5/S1/NL/NL
<i>Lipocarpa micrantha</i>	Small-flowered halfchaff sedge	G5/S2/NL/NL
Aquatic Natural Community (SC-Blackwater First Order Stream)		G2G3/S2S3/NL/NL
Aquatic Natural Community (SC-Blackwater Second Order Stream)		G2?/S2?/NL/NL

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.

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

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation

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 18, 2022) has passed before it is utilized.

A fee of \$120.00 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 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
Natural Heritage Locality Liaison

CC: Susan Tripp, DEQ
Amy Martin, VDWR
Randy Keaton, Isle of Wight County Administrator

VaFWIS - Department of Game and Inland Fisheries

36.83744 -76.79231
is the Search Point

Submit

Cancel

Search Point

- ☒ Change to "clicked" map point
☐ Fixed at 36.83744 -76.79231

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

Search Point is at map center

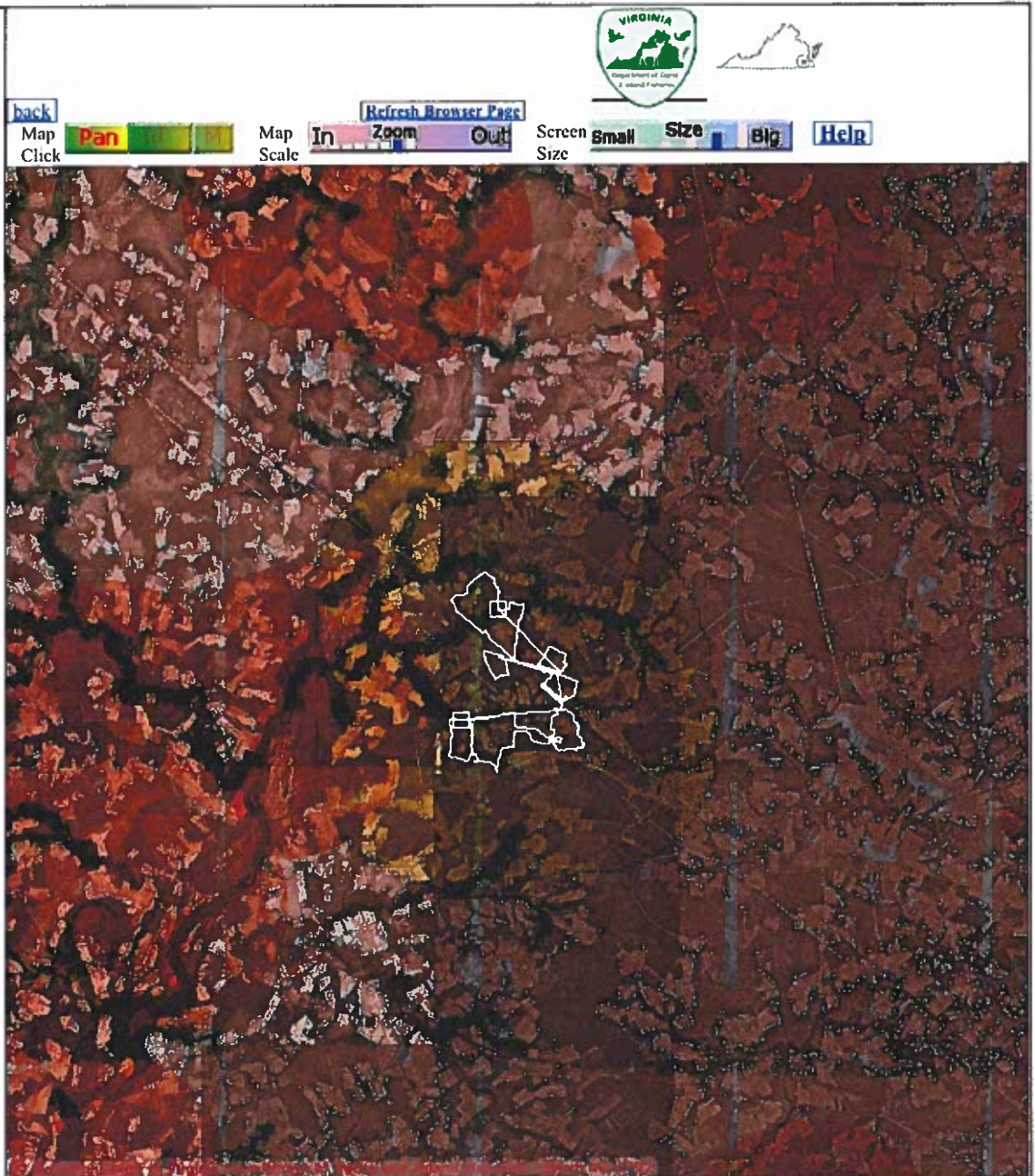
Base Map Choices

BW Aerial Photography ▾

Map Overlay Choices

Current List: Anadromous, TEWaters, BAEANests, BECAR, Trout, TierII, Habitat, Search

Map Overlay Legend



Point of Search 36.83744 -76.79231

Map Location 36.83744 -76.79231

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: Black & White USGS Aerial Photography (see Microsoft.terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 327383 and top 4091139. Pixel size is 19. Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 800 columns by 800 rows for a total of 640000 pixels. The map display represents 25600 meters east to

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 2 mile radius
Search Area**Bald Eagle
Concentration Areas
and Roosts** Bald Eagle Nests Data
Observation Site

west by 25600 meters north to south for a total of 655.3 square kilometers. The map display represents 84003 feet east to west by 84003 feet north to south for a total of 253.1 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 acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.nationalgeographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2022-03-23 14:00:59 (qa/qc March 21, 2016 12:20 - tn=1171622 dist=32181
)
\$poi=36.8267700 -76.8079900

VaFWIS Initial Project Assessment Report Compiled on 3/23/2022,[Help](#)

2:02:42 PM

Known or likely to occur within a **2 mile buffer around polygon; center 36.8267700 -76.8079899**
 in **093 Isle of Wight County, 175 Southampton County, VA**

[View Map of
Site Location](#)

541 Known or Likely Species ordered by Status Concern for Conservation
 (displaying first 37) (37 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
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		BOVA
010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon		BOVA,Habitat
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	SE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA,SppObs
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
040385	ST	Ia	Sparrow, Bachman's	Peucaea aestivalis		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
030031	CC	IIIc	Kingsnake, scarlet	Lampropeltis elapsoides		BOVA
010174		Ia	Bass, Roanoke	Ambloplites cavifrons		BOVA
070131		Ic	Isopod, Phreatic	Caecidotea phreatica		BOVA

020063		Ila	Toad, oak	Anaxyrus quercicus		BOVA, Habitat
020002		Ila	Treefrog, barking	Hyla gratiosa		BOVA
040052		Ila	Duck, American black	Anas rubripes		BOVA
040033		Ila	Egret, snowy	Egretta thula		BOVA
040029		Ila	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		Ila	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		Ila	Tern, common	Sterna hirundo		BOVA
040320		Ila	Warbler, cerulean	Setophaga cerulea		BOVA
040140		Ila	Woodcock, American	Scolopax minor		BOVA
060071		Ila	Lampmussel, yellow	Lampsilis cariosa		BOVA
040105		Ilb	Rail, king	Rallus elegans		BOVA
040304		Ilc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA

To view **All 541 species** [View 541](#)

*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 Wildlife 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 (1 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 **	
C106	Balckwater River 2	Confirmed	1			Yes

Impediments to Fish Passage (1 records)

[View Map of All Fish Impediments](#)

ID	Name	River	View Map
204	JENKINS DAM	JENKINS SWAMP	Yes

Colonial Water Bird Survey

N/A

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 (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					
Antioch Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Britt Run (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Burnt Mills Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
Pope Swamp (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enneacanthus chaetodon	Yes
tributary (03010202)	SE	010347	SE	Ia	Sunfish, blackbanded	Enncacanthus 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	Ia	Rattlesnake, canebrake	Crotalus horridus	Yes
020044	ST	Ia	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	Ia	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes

Yes

Name	Agency	Level
Antioch Pines State Natural Area Preserve	VA Dept. of Conservation and Recreation	State
Blackwater Ecological State Natural Area Preserve	VA Dept. of Conservation and Recreation	State

PixelSize=64; Anadromous=0.024865; BECAR=0.02903; Rats=0.02045; Buffer=0.161286; County=0.063181; Impediments=0.021843; Inl=0.2957; PublicLands=0.030165; SppObs=0.129422; TEWaters=0.030923; Tier1Reaches=0.078767; TierTerrestrial=0.176342; Total=1.311773; Tracking_BOVA=0.187481; Trout=0.028691

Species Observations
where Bat, tri-colored
(050027) observed
629597

36.82677 -76.80798
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
buffer

Display Search Point is not
at center at map center

Base Map Choices

BW Aerial Photography ▾

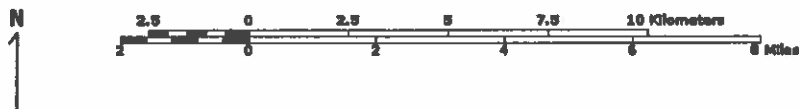
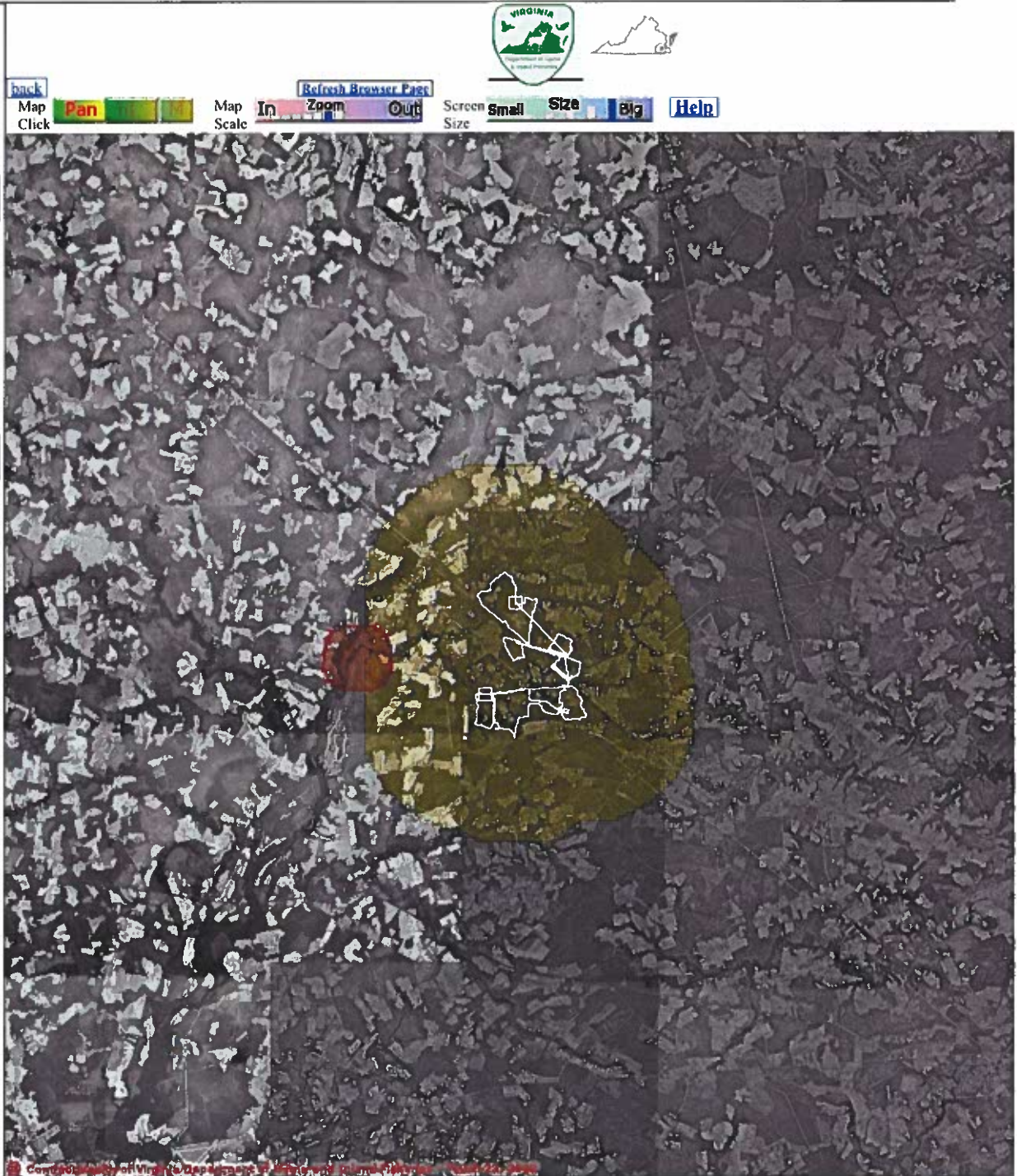
Map Overlay Choices

Current List: Search,
Observation

Map Overlay Legend

 2 mile radius
Search Area

 Data
Observation Site



Point of Search 36.82677 -76.80798

Map Location 36.83744 -76.79231

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: Black & White USGS Aerial Photography (see [Microsoft terrainserver-usa.com](https://www.microsoft.com/terrainserver-usa) for details)

Map projection is UTM Zone 18 NAD 1983 with left 324183 and top 4094339. Pixel size is 19. Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 1000 columns by 1000 rows for a total of 1000000 pixels. The map display represents 32000 meters east to west by 32000 meters north to south for a total of 1024.0 square kilometers. The map display represents 105004 feet east to west by 105004 feet north to south for a total of 395.5 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 acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

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<http://www.national Geographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2022-03-23 15:19:57 (qa/qc March 21, 2016 12:20 - ln=1171693.1 dist=32181)

\$poi=36.8267700 -76.8079899\$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 vafwis_tables.dbo.udf_List2Table('629597','') list on list.item = obs.obsID

| DGIF | Credits | Disclaimer | Contact vafwis_support@dgif.virginia.gov | Please view our [privacy policy](#) |
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Virginia Department of Game and Inland Fisheries

3/23/2022 2:03:08 PM

Fish and Wildlife Information Service

VaFWIS Search Report Compiled on 3/23/2022, 2:03:08 PM

[Help](#)

Known or likely to occur within a **2 mile buffer around polygon; center 36.8267700 -76.8079899**
 in **093 Isle of Wight County, 175 Southampton County, VA**
 where (050027) **Bat, tri-colored** observed.

[View Map of Site Location](#)

Species Observations where Bat, tri-colored (050027) observed (1 records , 1 Observation with Threatened or Endangered species)

[View Map of All Query Results](#)

[Species Observations where Bat, tri-colored \(050027\) observed](#)

obsID	class	Date Observed	Observer	N Species			View Map
				Different Species	Highest TE*	Highest Tier**	
629597	SppObs	Jul 31 2017	Chris Hobson; Megan Ayers	1	SE	I	Yes

Displayed 1 Species Observations where Bat, tri-colored (050027) observed

*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 Wildlife 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.

Compiled on 3/23/2022, 2:03:08 PM 1171622.1 report=BOVA searchType= P dist= 3218 poi= 36.8267700 -76.8079899

audit no. 1171622 3/23/2022 2:03:08 PM Virginia Fish and Wildlife Information Service

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

04 May 2022

PRELIMINARY JURISDICTIONAL DETERMINATION

Eastern Virginia Regulatory Section
NAO-2021-03069 (Burnt Mills Swamp, Antioch Swamp, Pine Swamp)

Mr. Patrick Buckley
Open Road Renewables
1105 Navasota Street
Austin, TX 78702

Mr. Dan Cox
Timmons Group
1001 Boulders Parkway
Suite 300
Richmond, VA 23225

Dear Mr. Buckley and Mr. Cox:

This letter is in regard to your request for a preliminary jurisdictional determination (PJD) of the aquatic resources (e.g., wetlands, streams, and ponds), on an approximately 937-acre property generally situated south of Burnt Mills Swamp, east of Pine Swamp, north of SR 603, and west of SR 646 in Isle of Wight County, Virginia.

The attached maps entitled "CARVER SOLAR, ISLE OF WIGHT COUNTY, VIRGINIA, FIGURE 4: WETLANDS AND WATERS DELINEATION MAP" (5 sheets, including the index sheet) dated 08 March 2022 by the Timmons Group and date-stamped received by the U.S. Army Corps of Engineers (Corps) on 09 March 2022, provide the approximate locations of the aquatic resources within the project area referenced above. This letter does not confirm the Cowardin classifications of these aquatic resources.

These aquatic resources exhibit wetland criteria as defined in the Corps of Engineers Wetlands Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 (2010). This site also contains aquatic resources with an ordinary high-water mark. This PJD and associated aquatic resource delineation map may be submitted with a permit application.

Please be aware that you may be required to obtain a Corps permit for any discharge of dredged and/or fill material, either temporary or permanent, into a water of the U.S. In addition, you may be required to obtain a Corps permit for certain activities

occurring within, under, or over a navigable water of the U.S. subject to the Section 10 of the Rivers and Harbors Act. Furthermore, you may be required to obtain state and local authorizations, including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC), and/or a permit from your local wetlands board.

This delineation and PJD may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. Therefore, if you or your tenant are US Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

The Norfolk District has relied on the information and data provided by the agent to make this PJD. If it is determined such information and data are materially false or materially incomplete, a new PJD would be required.

This is a PJD and is not a legally binding determination regarding whether Corps jurisdiction applies to the aquatic resources in question. To determine Corps' jurisdiction, you may request and obtain an approved jurisdictional determination.

This delineation of aquatic resources can be relied upon for no more than five years from the date of this letter. New information may warrant revision. Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to me.

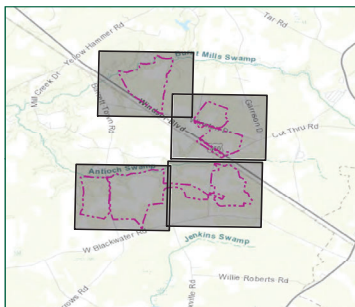
If you have any questions, please contact me either by telephone at (757) 201-7488 or by email at david.a.knepper@usace.army.mil.

Sincerely,



David A. Knepper
Environmental Scientist
Eastern Virginia Regulatory Section

Enclosure(s)



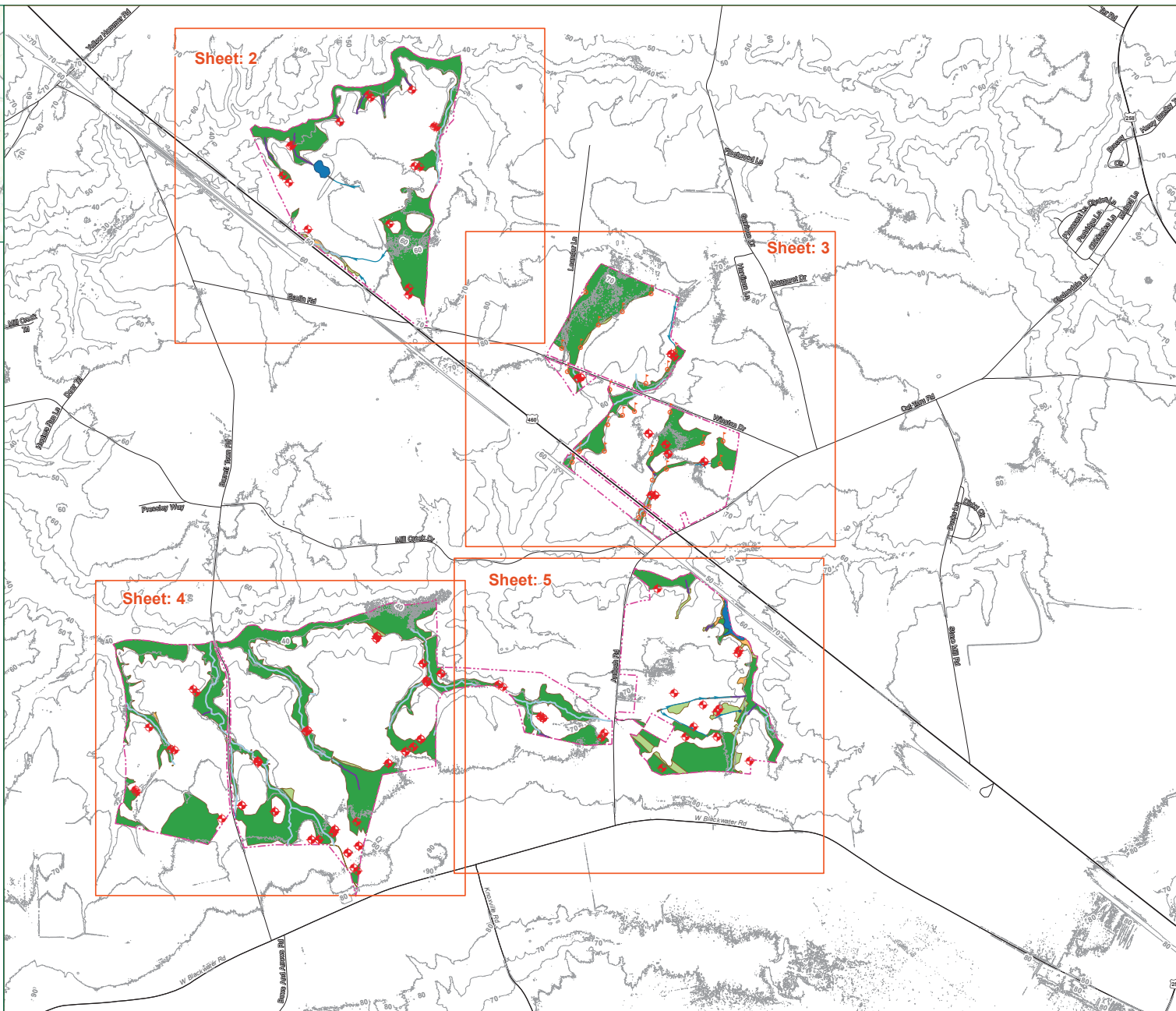
Legend

- Project Study Limits - 937.3 Acres
- ✕ Stream Identifier
- ⊙ Wetland Identifier
- ⬮ Flag
- ✕ Field Data Station
- Culvert
- Ditch (5,234 lf.)
- Perennial Stream (R3) (24,143 lf. / 130,616 sq. ft.)
- Intermittent Stream (R4) (4,170 lf. / 10,949 sq. ft.)
- Palustrine Open Water (POW) (106,481 sq. ft.)
- Palustrine Scrub-Shrub (PSS) Wetland (63,767 sq. ft.)
- Palustrine Emergent (PEM) Wetlands (403,049 sq. ft.)
- Palustrine Forested (PFO) Wetlands (10,298,824 sq. ft.)

Topographic Contours

- Major - 10ft
- Minor - 2ft

US Army Corps of Engineers
Norfolk District Regulatory Branch
Reviewed by: DAK
Date: 10 March 2022



TIMMONS GROUP
YOUR VISION. REALIZED THROUGH OUR TEAM.
10101 Old Dominion Blvd., Suite 205
Richmond, VA 23235
www.timmons.com

CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

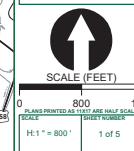
DATE: 01/19/2021
PROJECT NUMBER: 38786.012
PROJECT NAME: CARVER SOLAR
DESIGNED BY: M. COOLEY

1. Waters of the U.S. within the project study limits have been located using a combination of GPS antennae by Timmons Group.
2. Waters of the U.S. have not been confirmed by the U.S. Army Corps of Engineers until stamped.
3. Project limits are approximate.
4. Topography based on USGS LIDAR.

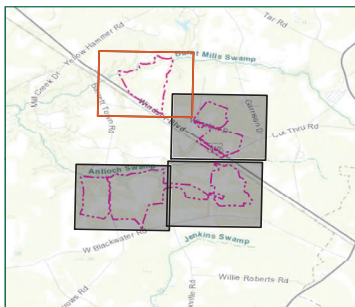
These plans and associated documents are the property of TIMMONS GROUP and may be used for the purposes of the project and only for the specific project and location. They are not to be used for construction, bidding, or other construction related activities without the express written consent of TIMMONS GROUP.

REVISIONS	
NO.	DESCRIPTION

FIGURE 4: WETLANDS AND WATERS DELINEATION MAP



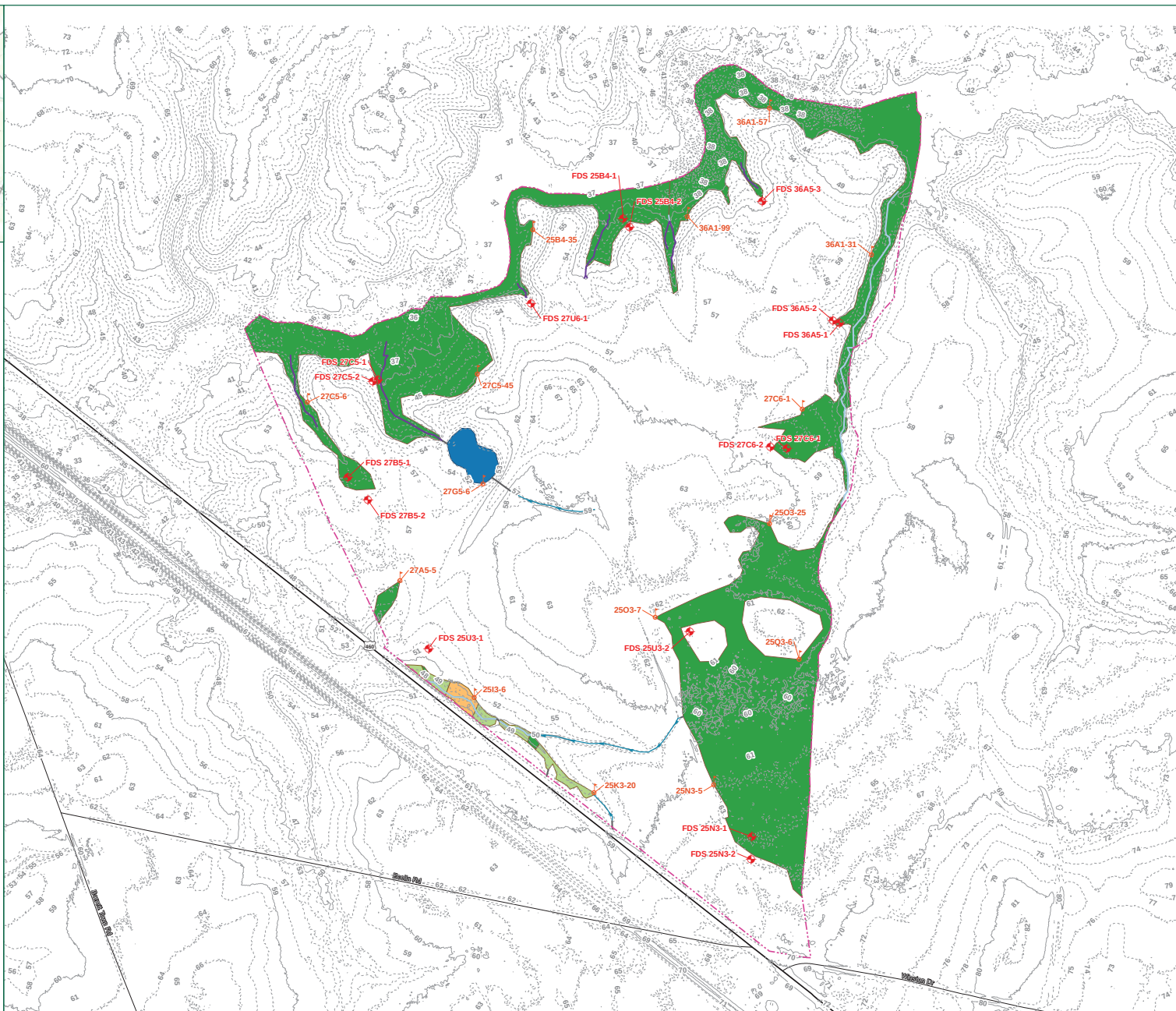
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Legend

- Project Study Limits - 937.3 Acres
- Stream Identifier
- Wetland Identifier
- Flag
- Field Data Station
- Culvert
- Ditch (5,234 lf.)
- Perennial Stream (R3) (24,143 lf. / 130,616 sq. ft.)
- Intermittent Stream (R4) (4,170 lf. / 10,949 sq. ft.)
- Palustrine Open Water (POW) (106,481 sq. ft.)
- Palustrine Scrub-Shrub (PSS) Wetland (63,767 sq. ft.)
- Palustrine Emergent (PEM) Wetlands (403,049 sq. ft.)
- Palustrine Forested (PFO) Wetlands (10,298,824 sq. ft.)
- Topographic Contours
 - Major - 10ft
 - Minor - 2ft

U.S. Army Corps of Engineers
Norfolk District Regulatory Branch
Received by BAAK
Date: 09 March 2022



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CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

DATE: 01/29/2021
PROJECT NUMBER: 38786.012
PROJECT NAME: CARVER SOLAR
DESIGNED BY: M. COOLEY

1. Waters of the U.S. within the project study limits have been located using summer. Bluetooth GPS antennas by Timmons Group.
2. Waters of the U.S. have not been confirmed by the U.S. Army Corps of Engineers until stamped.
3. Project limits are approximate.
4. Topography based on USGS LIDAR.

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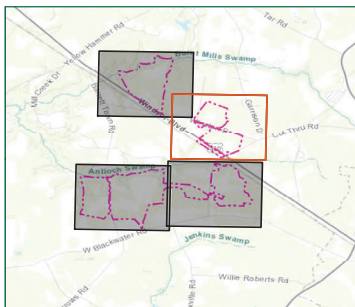
REVISIONS	
NO.	DESCRIPTION

FIGURE 4: WETLANDS AND WATERS DELINEATION MAP



SCALE (FEET)
0 250 500
H1" = 250' 2 of 5

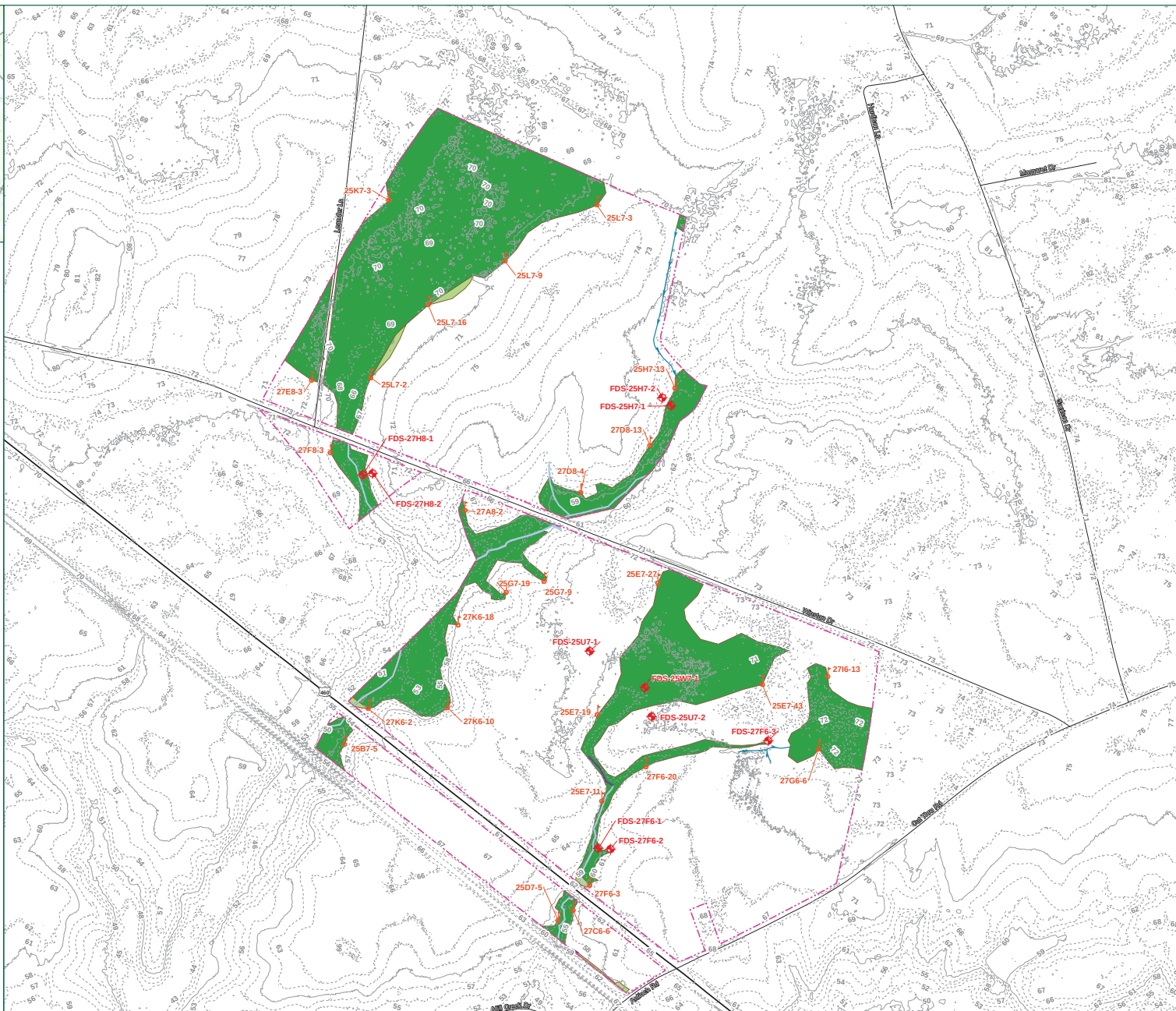
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 - Minor - 2ft

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 09 March 2022



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2010
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DENVER, CO 80202
www.timmonsgroup.com

CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

DATE: 01/19/2021
PROJECT NUMBER: 38786.012
PROJECT NAME: CARVER SOLAR
DESIGNED BY: M. COOLEY

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REVISIONS	
NO.	DESCRIPTION
1	ISSUED FOR BIDDING

FIGURE 4: WETLANDS AND WATERS DELINEATION MAP

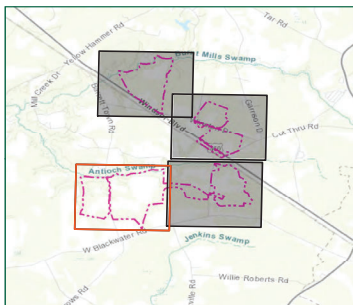
SCALE (FEET)

0 250 500

PLANS PRINTED AT 1/8" = 1' SCALE

H1" = 250' 3 of 5

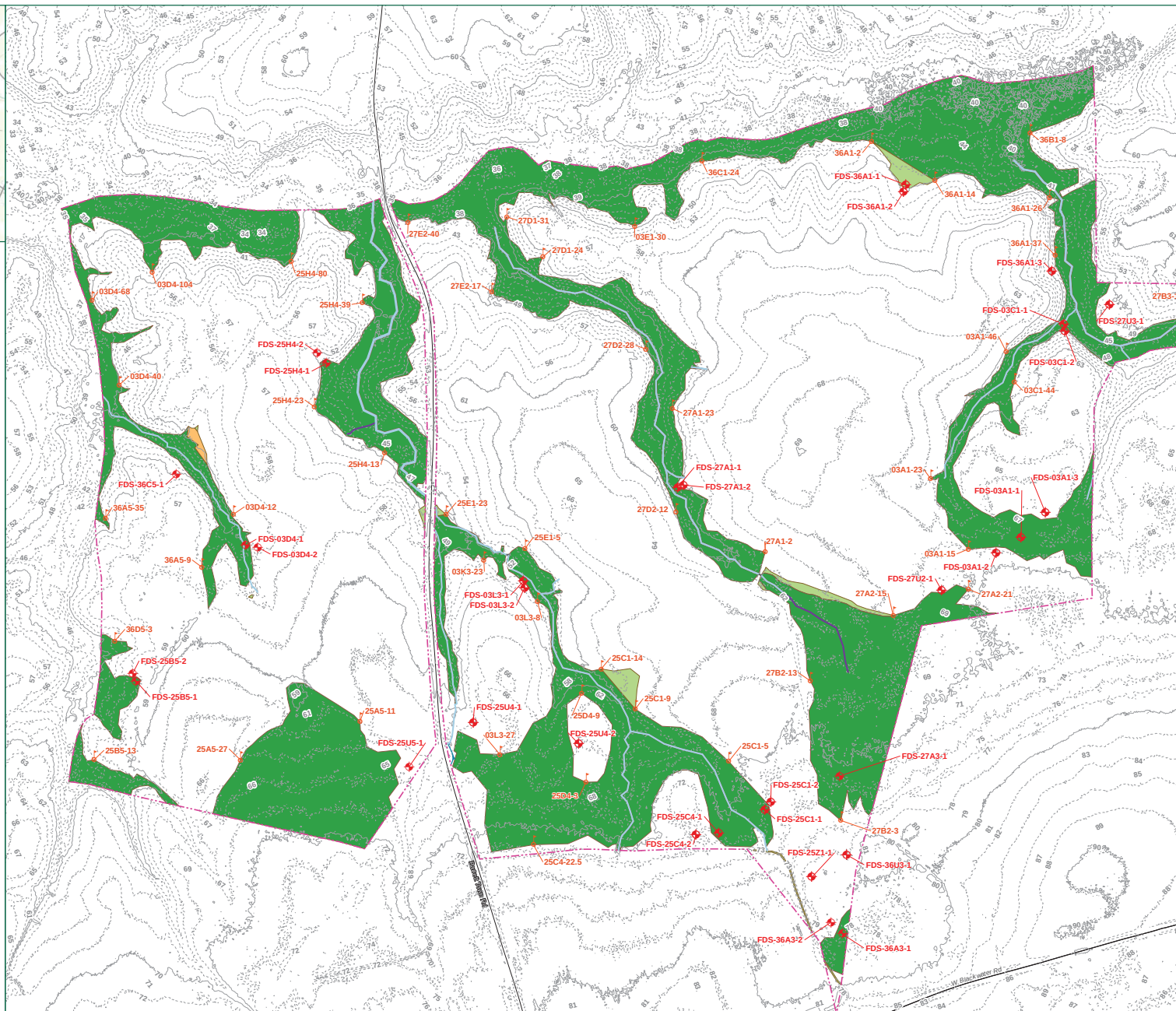
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U.S. Army Corps of Engineers
Norfolk District Regulatory Branch
Reviewed by BAAK
Date: 09 March 2022



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CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

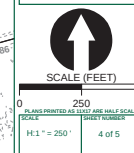
DATE: 01/19/2021
PROJECT NUMBER: 38786.012
PROJECT NAME: CARVER SOLAR
DESIGNED BY: CONSULTANT
M. COOLEY

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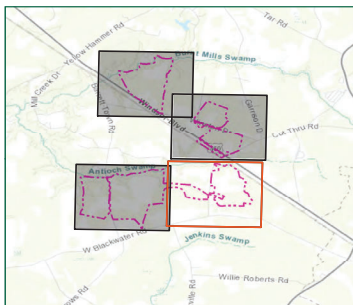
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REVISIONS	
NO.	DESCRIPTION
1	AS SHOWN

FIGURE 4:
WETLANDS AND
WATERS
DELINEATION MAP



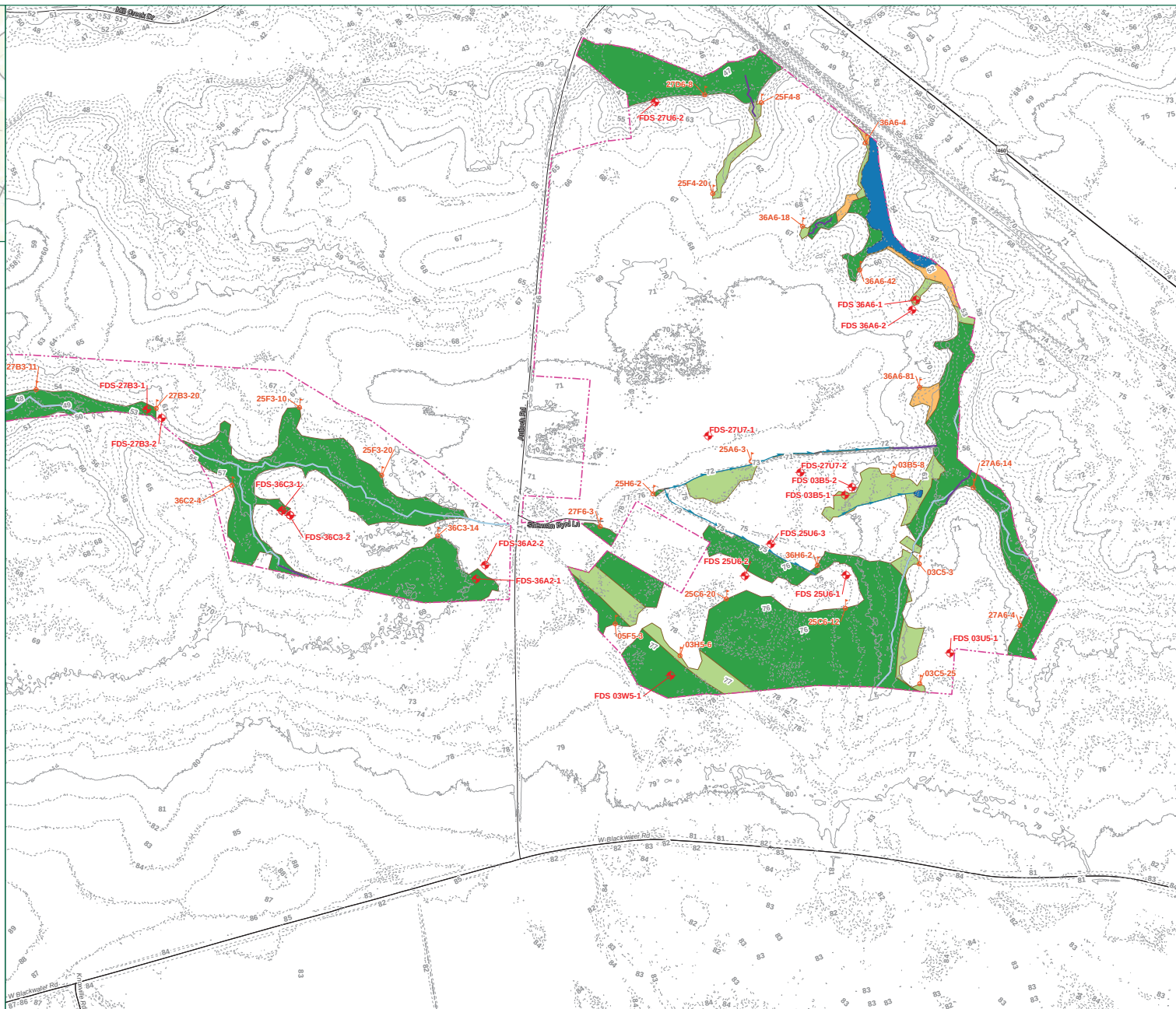
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U.S. Army Corps of Engineers
Norfolk District Regulatory Branch
Reviewed by DAK
Date: 09 March 2022



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FARMERSBURG, MD 21051
www.timmons.com

CARVER SOLAR
ISLE OF WIGHT COUNTY,
VIRGINIA

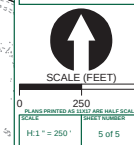
DATE: 01/19/2021
PROJECT NUMBER: 38786.012
PROJECT NAME: CARVER SOLAR
DESIGNED BY: M. COOLEY

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REVISIONS	
NO.	DESCRIPTION
1	REVISED FOR SCALE

FIGURE 4: WETLANDS AND WATERS DELINEATION MAP



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**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Open Road Renewables (c/o Mr. Patrick Buckley)		File Number: NAO-2021-03069	Date: 04 May 2022
Attached is:			See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
☐	PERMIT DENIAL	C	
☐	APPROVED JURISDICTIONAL DETERMINATION	D	
☒	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the Norfolk District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the Norfolk District Engineer. Your objections must be received by the Norfolk District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the Norfolk District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the Norfolk District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the Norfolk District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Norfolk District Engineer.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Norfolk District Engineer.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Norfolk District Engineer.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
U.S. Army Corps of Engineers, Norfolk District
c/o Mr. David Knepper
803 Front Street
Norfolk, VA 23510-1096
Telephone: (757) 201-7488
Email: david.a.knepper@usace.army.mil

If you only have questions regarding the appeal process you may also contact:
Ms. Amanda Regan
Regulatory Program Manager (CENAD-PD-OR)
U.S. Army Corps of Engineers
Fort Hamilton Military Community
301 General Lee Avenue
Brooklyn, New York 11252-6700
Telephone number: (917) 831-9105
Amanda.M.Regan@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

04 May 2022

Supplemental Preapplication Information

Project Number: NAO-2021-03069

1. A search of the Virginia Department of Historic Resources data revealed the following:

☒ Potential Tribal interest:

Pamunkey Tribe

Delaware Nation, Oklahoma

☒ The following known architectural resources are located on the property:

#	DHR ID	Property Name	Address	Historic Name	NR Eligibility
1	046-0116	Farm, 8151 Blackwater Road (Function/Location), James R. Cobb Farm (Historic), Roberts Farm (Historic), Rocking Horse Stables (Historic)	8151 Blackwater Road	No Data	DHR Staff: Not Eligible
2	046-5112	Clements Farm (Current), Farm, 23093 Antioch Road (Function/Location)	23093 Antioch Road	No Data	DHR Staff: Not Eligible
3	046-5089	Farm, 23255 Barrett Town Road (Function/Location), Walters Hunt Club (Historic/Current)	23255 Barrett Town Road, Route 641	No Data	DHR Staff: Potentially Eligible
4	046-5026	Austin Farm, 7095 W. Blackwater Rd (Historic/Location), House, 7095 West Blackwater Road (Function/Location)	7095 Blackwater Road West - Alt Route 603	No Data	DHR Staff: Not Eligible
5	091-5098	AM&O Railroad (Historic), Norfolk & Petersburg Railroad (Historic), Norfolk & Western Railway (Historic), Norfolk Southern Railway (Current)	General Mahone Highway - Alt Route 480	Windsor Historic District	DHR Staff: Eligible
6	046-5028	Chapel Grove Congregational Christian Church (Current Name), Chapel Grove United Church of Christ Cemetery (Current), Church, 7366 West Blackwater Road (Function/Location)	7366 Blackwater Road West - Alt Route 603	No Data	DHR Staff: Not Eligible
7	046-5277	House, 23258 Barrett Town Road (Function/Location)	23258 Barrett Town Road, Route 641	No Data	DHR Staff: Not Eligible
8	046-5501	House, 9108 Cut Thru Road (Function/Location)	9801 Cut Thru Road - Alt Route 638	No Data	DHR Staff: Not Eligible
9	046-5154	Antioch Independent Church (Historic/Current), Church, 23011 Antioch Road (Function/Location)	23011 Antioch Road, Route 657	No Data	DHR Staff: Not Eligible
10	046-5027	Austin Farm #2 (Current), House, 7289 West Blackwater Road (Function/Location)	7095 W. Blackwater Road (Route 603), 7289 Blackwater Road West - Alt Route 603	No Data	DHR Staff: Not Eligible
11	046-5111	Leland Duck House (Current)	8027 Winston Drive	No Data	DHR Staff: Not Eligible
12	046-5102	Dale and Helen Kelley House (Current)	7229 Windsor Boulevard	No Data	DHR Staff: Not Eligible
13	046-5575	Antioch Church Cemetery (Current Name), Cemetery, Antioch Road (Function/Location)	Antioch Road	No Data	DHR Staff: Not Eligible

☒ The following known archaeological resources are located on the property:

#	DHR ID	Site Name	Site Category	Time Period	Restricted
1	44IW0248	No Data	Domestic	18th Century (1700 - 1799)	Restricted: No release
2	44IW0286	No Data	Domestic	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	No Data
3	44IW0251	No Data	Domestic, Subsistence/Agriculture	Historic/Unknown	Restricted: No release

NOTE:

- 1) The information above is for planning purposes only. In most cases, the property has not been surveyed for historic resources. Undiscovered historic resources may be located on the subject property or adjacent properties and this supplemental information is not intended to satisfy the Corps' requirements under Section 106 of the National Historic Preservation Act (NHPA).
- 2) Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.

2. A search of the data supplied by the U.S. Fish & Wildlife Service, the Virginia Department of Conservation and Recreation and the Virginia Department of Wildlife Resources revealed the following:

- ☒ The following federally-listed species may occur within the vicinity of the subject property:

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Please note this information is being provided to you based on the preliminary data you submitted to the Corps relative to project boundaries and project plans. Consequently, these findings and recommendations are subject to change if the project scope changes or new information becomes available and the accuracy of the data.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 04 May 2022

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Mr. Dan Cox Timmons Group 1001 Boulders Parkway Suite 300 Richmond, VA 23225

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

NAO-2021-03069

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Virginia County/parish/borough: Isle of Wight City: N/A

Center coordinates of site (lat/long in degree decimal format): 36.834931° / -76.780864°

Lat.: xx.xxx° Long.: yy.yyy°

Universal Transverse Mercator:

Name of nearest waterbody: Burnt Mills Swamp, Antioch Swamp, Pine Swamp

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 04 May 2022

☒ Field Determination. Date(s): 03 March 2022

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
PJD figure +			~247 acres	non-tidal wetlands	404
PJD figure +			~33,547 linear ft.	non-tidal streams/ditch	404
PJD figure +			~2.4 acres	other non-tidal waters	404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: cited PJD figures.
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report. Rationale: as modified
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: accessed via Google Earth Pro
- ☒ Natural Resources Conservation Service Soil Survey. Citation: accessed via Google Earth Pro
- ☒ National wetlands inventory map(s). Cite name: accessed via Google Earth Pro
- ☐ State/local wetland inventory map(s): _____.
- ☐ FEMA/FIRM maps: _____.
- ☐ 100-year Floodplain Elevation is: _____. (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Google Earth Pro, Bing, ArcGIS Pro, Digital Globe, etc.
or ☒ Other (Name & Date): various dates
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☒ Other information (please specify): LiDAR, AGCP Regional Supplement, USGS National Map, APT

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

KNEPPER.DAVID
D.A.1229503576

Digitally signed by
KNEPPER.DAVID.A.1229503576
Date: 2022.05.04 15:41:43 -04'00'

Signature and date of
Regulatory staff member
completing PJD

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

REPORT >

Phase I Archaeological Survey of the Carver Solar Project Area

LOCATION > Isle of Wight County, Virginia

DATE > August 2022

PREPARED FOR >
Carver Solar I, LLC

PREPARED BY >
Dutton + Associates, LLC



Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

PHASE I ARCHAEOLOGICAL SURVEY OF THE CARVER SOLAR PROJECT AREA

ISLE OF WIGHT COUNTY, VIRGINIA

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AUGUST 2022

ABSTRACT

From March 23 through June 3, 2022, D+A completed Phase I archaeological survey of the proposed ±309.5-hectare (±765-acre) Carver Solar project area. The archaeological survey specifically covered the ±241-hectare (±596.1-acre) fenced area of the proposed facility, which is where ground disturbance is planned for solar array installation. Survey consisted of systematic pedestrian survey and subsurface testing of areas deemed to have potential for the presence of archaeological deposits. The survey was also guided in part by the Phase IA archaeological assessment titled, Phase IA Cultural Resource Assessment of the ±379.3 Hectares (±937.3 Acre) Carver Solar Project Area (2021), which was prepared for the original proposed project area.

The project area is comprised of pine forests, poorly drained lowlands, and agricultural fields. Antioch Swamp runs east-west between the discontinuous parcels which comprised the project area. Likewise, Windsor Boulevard (Route 460) runs northwest-southeast through the parcels and Winston Drive runs southeast-northwest through two parcels in the eastern portion of the project area. Burnt Mill Swamp is north of the project area, and Blackwater Road is south of the project area. At the time of the survey, a large number of the project area parcels located south of Route 460 had recently been plowed and surface visibility was excellent. Some project area parcels were in pasture or winter wheat, with woodlands typically lining streams and wetlands. For most larger forested areas, timber harvesting had occurred within the last decade and in many areas visible evidence of soil disturbance such as push piles, slash, and exposed soils were still evident.

Archaeological field survey consisted of a combination of systematic pedestrian survey and subsurface shovel testing. Pedestrian survey was conducted when agricultural fields were plowed and surface visibility was greater than 50% per the Virginia Department of Historic Resources (VDHR) survey guidelines. Pedestrian survey was conducted along transects varying between 7.5 meters (25 feet) and 15 meters (50 feet) apart. For areas where surface visibility was less than 50% and where the potential for archaeological deposits was present, systematic shovel testing was conducted. A total of 261 shovel test pits were excavated.

*A total of fourteen archaeological sites were identified during the survey. Four sites were identified on project area parcels north of Route 460 and the remaining ten sites on parcels south of Route 460. All identified sites date to the historic period, although some prehistoric lithic material was recovered in isolated locations in too few numbers to be classified as archaeological sites. Of the newly identified sites, the majority represent late nineteenth to mid twentieth century domestic sites with a wide date range of artifacts and no remaining structural components (Sites 44IW0367, 44IW0368, 44IW0370, 44IW0371, 44IW0372, 44IW0373, 44IW0374, 44IW0376, 44IW0377, 44IW0378, and 44IW0379). Several of these sites are illustrated on historic mapping and aerial imagery of the project area and represent common site types in the area and throughout the region. As such, these sites offer limited research value and are **recommended as not eligible for listing in the NRHP**.*

Previously identified site 44IW0248, a light scatter of eighteenth-century artifacts, was determined by VDHR to not be eligible for listing in the NRHP. A sherd of tin-glazed earthenware was the only related artifact that was recovered during the current effort. Previously recorded site 44IW0286 was not reidentified and is presumed to be located outside of the current proposed

project's limits of disturbance. This site was also previously determined by the VDHR to not be eligible for listing in the NRHP.

*Sites 44IW0366, 44IW0369, and 44IW0375 contained pre-Civil War archaeological material and represent antebellum settlement and occupation in the area. Site 44IW0366 contains eighteenth and early nineteenth century domestic artifacts and represents early settlement and occupation of the area. Sites 44IW0369 and 44IW0375 both represent early nineteenth century domestic sites. Both sites are associated with early documented structures with supporting oral history. **Based on the dates and types of material observed, D+A recommends Field Sites 44IW0366, 44IW0369 and 44IW0375 potentially eligible for listing in the NRHP.** Avoidance or further study is recommended. No ground disturbance will take place in the location of Site 44IW0375, so this site will be avoided.*

A summary of all identified sites and their potential NRHP status is provided in the table below

All identified sites and their NRHP recommendation.

Temporary Site #	Temporal Affiliation	NRHP Recommendation	Treatment
44IW0366	Mid-18 th – 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0367	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0368	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0369	Late-18 th – 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0370	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0371	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0372	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0373	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0374	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0375	Early 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0376	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0377	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0378	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0379	Late 19 th – 20 th century domestic	Not eligible	No further work

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1. INTRODUCTION

From March 23 through June 3, 2022, Dutton +Associates, LLC (D+A) conducted a Phase I cultural resource survey (Phase I) of the ± 379.3 -hectare (± 937.3 -acre) Carver Solar project area. This survey consisted of both architectural and archaeological investigations to identify cultural resources greater than 50 years in age and assess their potential eligibility for inclusion in the National Register of Historic Places (NRHP). This volume contains the results of the archaeological survey. The architectural survey is being submitted as a separate volume.

The project area consists of discontinuous parcels in Isle of Wight County in Zuni (Figures 1-1 and 1-2). It is roughly bounded on the south by Blackwater Road, bisected by Windsor Boulevard (Route 460), and bounded to the north by Burnt Mill Swamp. The archaeological survey area consisted of the portions of the property where ground disturbance could potentially take place. This survey area was located within the parcel boundaries of the project and excludes all wetlands (Figure 1-3).

Hope Smith, PhD., served as the Principal Investigator, prepared the research design, and coauthored the report. 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.

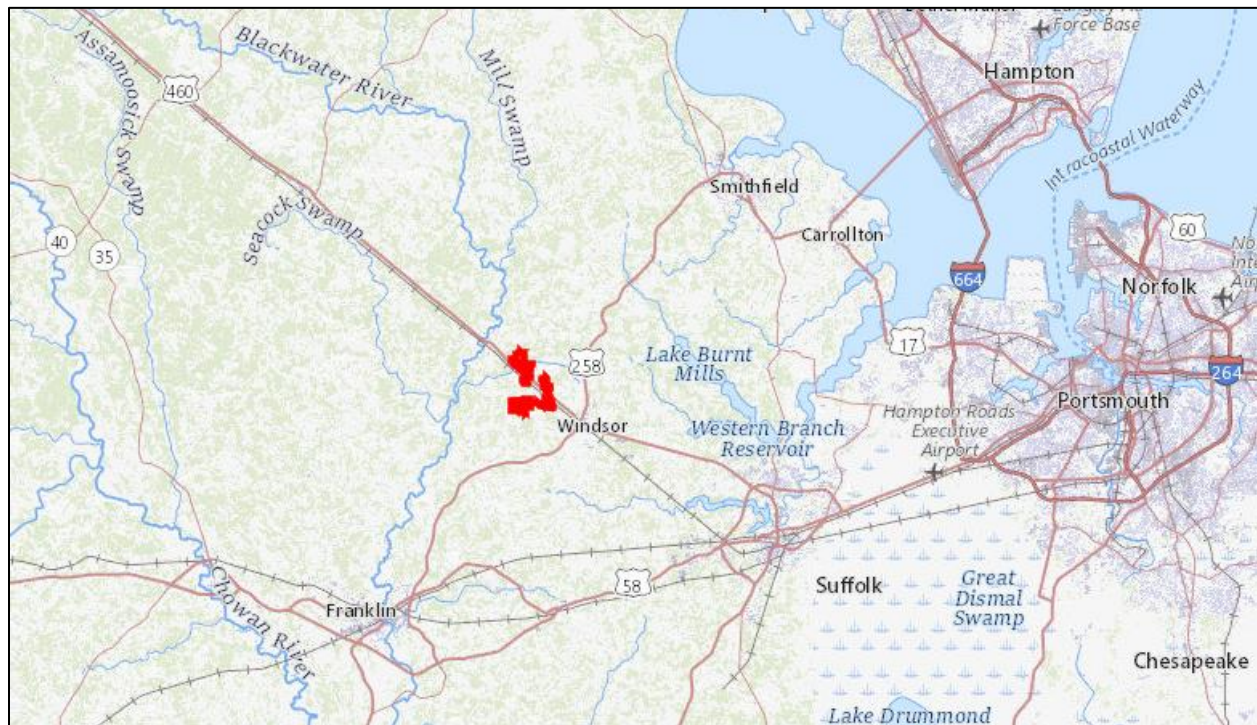


Figure 1-1: General location of the project area. Source: USGS the National Map 2022



Figure 1-2: Aerial view showing parcels of entire project area.

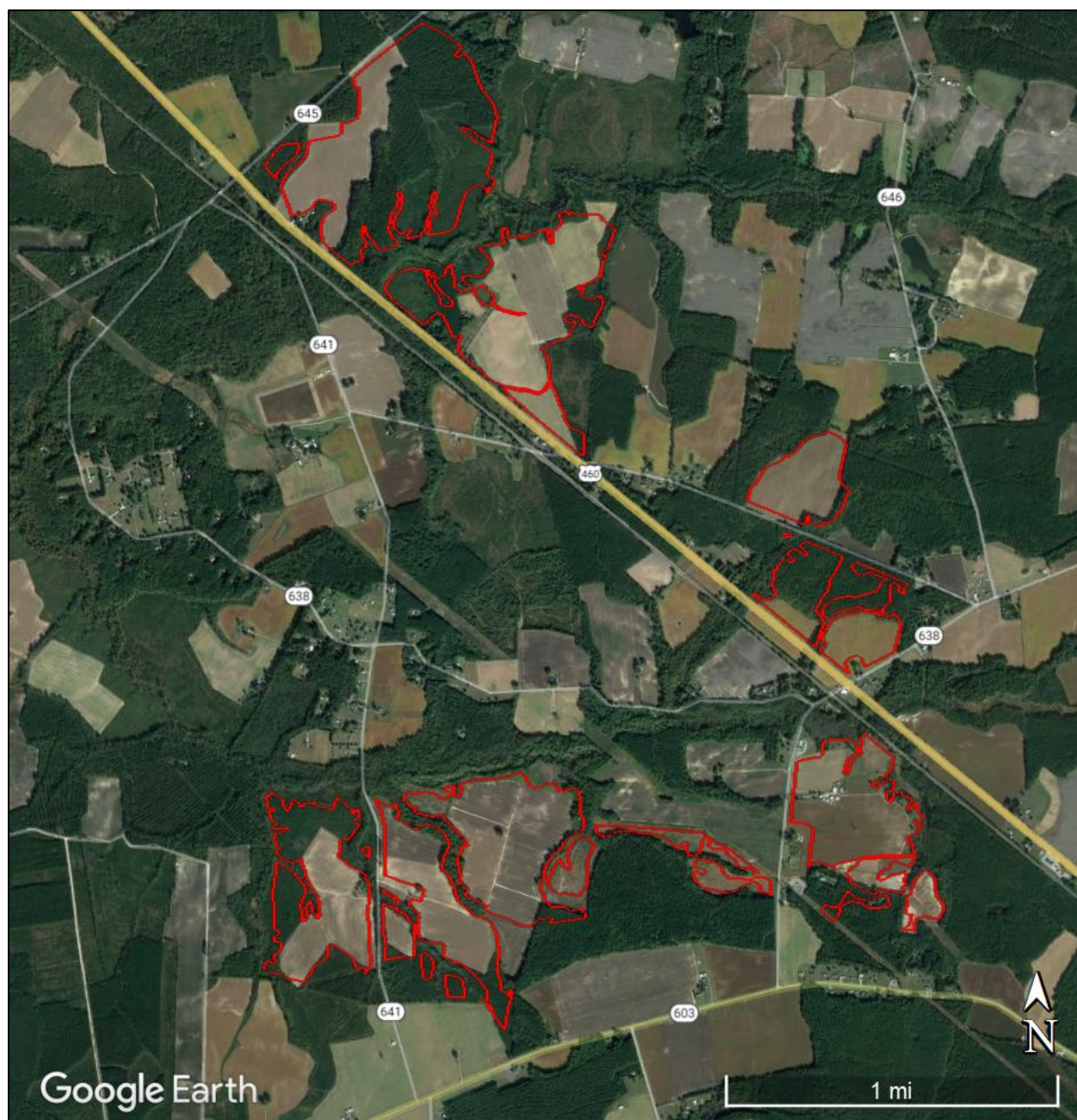


Figure 1-3: Aerial view of archaeological survey area shown in red. Source: Google Earth 2019

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2. RESEARCH DESIGN

The Phase I cultural resource survey of the Carver Solar project area was undertaken in order to confirm the existing condition of the property, note any surface evidence of cultural activity, recommend and implement an appropriate survey methodology for the property based upon the results of the background research and field reconnaissance, and identify the presence or absence of cultural resources on the property. The background research, field reconnaissance, and field survey methodologies are summarized below.

ARCHIVAL RESEARCH

In March 2022, D+A conducted background research with the goal of identifying all previously recorded historic properties located within and in the vicinity of the project area in accordance with VDHR's guidance document titled *Guidelines for Conducting Cultural Resources Survey in Virginia* (rev. 2017). Background research was conducted at the VDHR and on the internet and including the following sources:

- VDHR V-CRIS site files; and
- National Park Service, American Battlefield Protection Program, maps and related documentation.

As part of this Phase I study, D+A checked resource data at each of the above sources to verify accuracy and ensure the information was up to date at the time of the survey. In further preparation for the Phase I survey, D+A conducted additional review of the following documents and sources for information relative to unrecorded archaeological sites in the project area:

- USDA Historic Aerial Imagery;
- U.S. Geological Survey Topographic Maps;
- Previous historic resource survey documents; and
- Local historical society archives.

The additional review conducted in support of the Phase I survey was designed to identify all properties greater than 50 years of age located within the project area.

CONTEXT DEVELOPMENT

Information from the literature review and background search was used in conjunction with additional research to develop a cultural and historical context to place the project area and any identified historic resources within their appropriate context for evaluations of historical significance. This context was developed through review of previous cultural resource studies, published and unpublished manuscripts, historic maps, aerial photographs, local histories, and a variety of internet sources.

For the purposes of this effort, a comprehensive cultural context of Isle of Wight County was prepared summarizing general historical trends, settlement patterns, and development with a focus

on the vicinity of the project area. Further analysis and context development was undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

Archaeological Resources

At the outset of field investigations, a pedestrian survey of the project area was conducted to document existing conditions and to note surface evidence of cultural activity or material and identify areas with the potential for intact subsurface archaeological resources. For any newly encountered archaeological resources identified during the reconnaissance, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing feature locations, permanent landmarks, topographic and vegetation variation, as well as sources of disturbance. Sufficient information was included on the map to permit easy re-identification of the resources.

Following the pedestrian survey, systematic shovel testing was conducted in accordance with a probability model submitted to VDHR and DEQ as part of the *Phase IA Cultural Resources Assessment of the ±379.3-Hectare (±937.3-Acre) Carver Solar Project Area*. This model divided the project area into areas of high, medium, and low potential, with no subsurface testing recommended for areas of documented or visible significant ground disturbance, slopes in excess of 15 percent, and areas in statutory wetlands or water saturated soils at the time of the survey. Shovel tests were excavated at a maximum of 15-meter (50-foot) intervals along transects spaced 15 meters (50 feet) apart. The shovel test interval may be extended in areas where soils and topography indicate that the potential for archaeological deposits to be present was considered low. The soil excavated from all shovel tests was passed through 0.63-centimeter (1/4-inch) mesh screen and all shovel tests were approximately 0.38 meters (15 inches) in diameter and excavated to sterile subsoil or the practical limits of excavation. Isolated positive shovel tests were bracketed with radial shovel tests (half the distance to the next shovel test in all four directions) until two negative shovel tests in each direction were documented.

For any archaeological resources identified during the survey, photographs were taken of the general vicinity and of any visible features. A field map was prepared showing site limits, feature locations, permanent landmarks, topographic and vegetational variation, sources of disturbance, and all surface and subsurface investigations. GPS coordinates for all identified site locations were recorded and sufficient information was included on maps to permit easy relocation of sites. Notes were taken on surface and vegetational conditions, soil characteristics, dimensions and construction of features evident, and the amount and distribution of cultural materials present. All subsurface archaeological excavations were backfilled and returned to pre-survey conditions.

LABORATORY ANALYSIS

All artifacts recovered in the course of the survey were provenienced in the field and recorded. Following fieldwork, the artifacts were transported to the D+A laboratory facilities where they were cleaned, sorted, and identified. After processing, all artifacts were inventoried using

Microsoft Excel. A computer-printed artifact inventory of prehistoric and historic artifacts is included as an appendix to this report.

Identification of diagnostic artifacts was made by consulting existing comparative collections and available regional literature regarding artifact types. Artifacts were assigned dates through the comparison of identified artifacts with other material culture classes having documented use-popularity patterns. Ceramics and glass provided primary chronological information. All artifacts were placed in polyethylene re-sealable storage bags and placed in acid free boxes suitable for permanent curation. At the conclusion of the survey, arrangements will be made with the client regarding final deposition of the artifacts.

REPORT AND RECORD PREPARATION

Information from field survey was used in conjunction with background research and context development to assess each identified cultural resource for potential NRHP-eligibility. A results section was prepared that summarizes the field findings, assessment of significance and NRHP-eligibility. The results of the study are accompanied by maps and photographs as appropriate and were synthesized and summarized in this report along with the research design, archives search, and cultural contexts. All research material and documentation generated by this project are on file at D+A's office in Midlothian, Virginia. VDHR site forms (Virginia Cultural Resources Information System (V-CRIS) were completed for all cultural resources, 50 years of age or older, identified during the survey. Site forms for archaeological sites are include as an appendix to this report.

QUALIFICATIONS AND STANDARDS

The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9). All work was conducted in accordance with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (Federal Register 48:44716-44742, September 29, 1983), and VDHR's *Guidelines for Conducting Historic Resource Survey in Virginia* (rev. 2017).

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3. ENVIRONMENTAL CONTEXT

PHYSICAL DESCRIPTION AND LOCATION

The Carver project area is situated in the Coastal Plain physiographic region of Virginia in a rural area with a modest amount of commercial and residential development nearby. Land use consists of planted pine woodlands and agricultural fields. The project area is partially bordered by Route 460. It is intersected to the northwest by Route 645, to the southeast by Route 638, and to the southwest by Route 641. This environmental context chapter details the geology and soils of the entire lease area, which extends beyond the area to be disturbed by the development of the solar field (Figure 3-1).



Figure 3-1: Aerial view of the Carver project area. Source: Google Earth 2022

GEOLOGY AND TOPOGRAPHY

The project area is predominantly flat, with gentle slopes leading into drainage ways. Landforms are well defined only where several drainages bound upland areas on multiple sides; for example, the southern section of the project area on either side of Barrett Town Road contains several landforms dissected by Antioch Swamp and its tributaries. Low relief and gentle slopes are associated with the Upland subprovince of the Coastal Plain physiographic region. The region is underlain by unconsolidated and poorly consolidated Coastal Plain sediments, and the project area specifically is underlain by the Charles City formation, which dates to the Quarternary Period. A dendritic drainage pattern occurs throughout this region with flat topography and shallow, sluggish drainage ways, often bordered by broad wetlands or floodplains. Elevation ranges from 10 meters (33 feet) above mean sea level (AMSL) in the eastern side of the project area to 26 meters (85 feet) AMSL in the southern portion of the western side of the project area.

HYDROLOGY

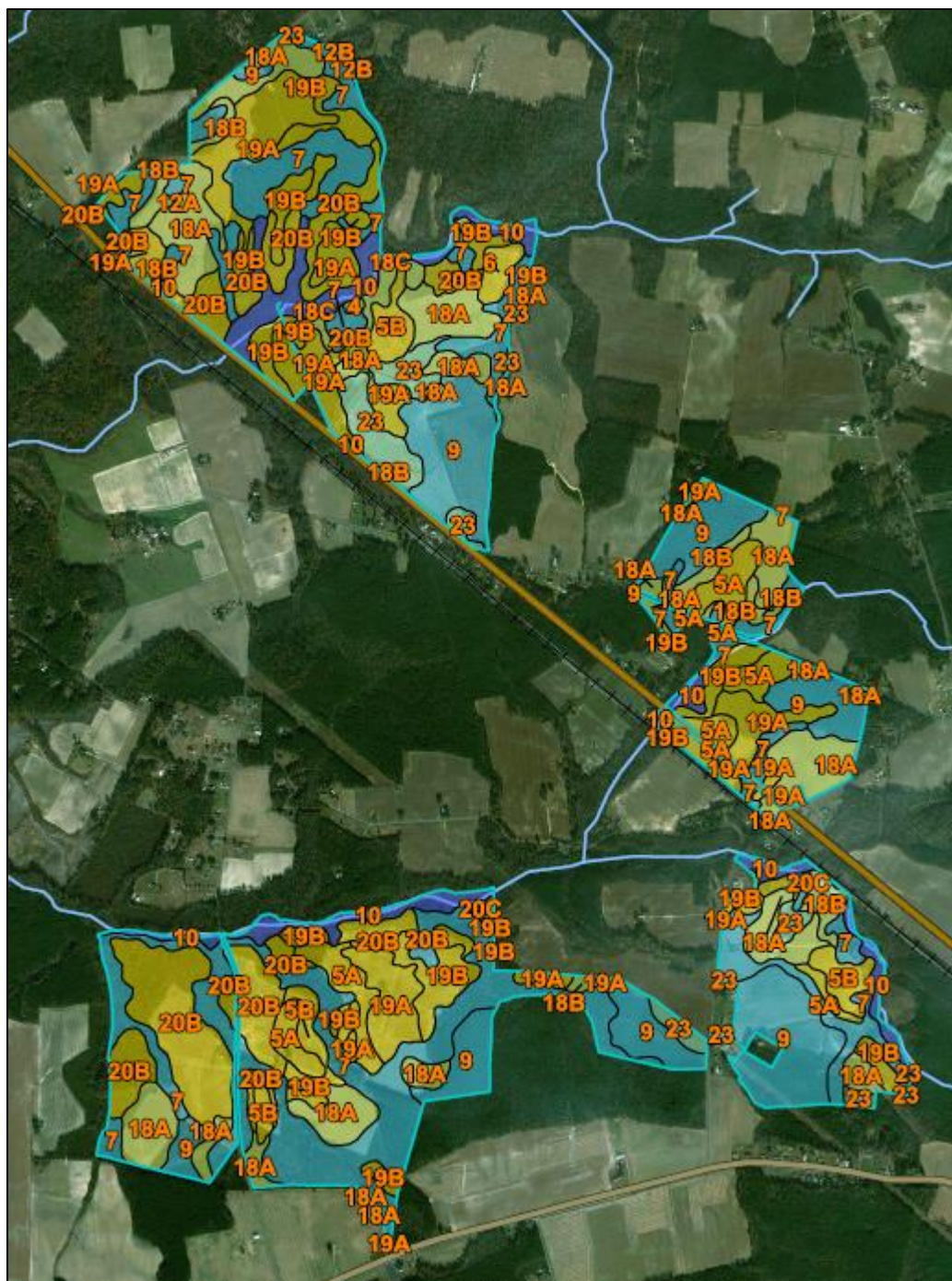
Runoff from the northern parcels drains north and south into Burnt Mills Swamp, which empties to Antioch Swamp. Runoff from the central and southern parcels drains directly to Antioch swamp and its several unnamed tributaries. Water from Antioch Swamp flows sequentially into the Chowan River, the Albemarle Sound, and ultimately the Atlantic Ocean.

PEDOLOGY

The project area is dominated by loamy marine deposits. The most abundant soil types in the project area are Kinston loam, Myatt fine sandy loam, Slagle fine sandy loam, and Uchee loamy sand (Figure 3-2, Table 3-1). Approximately 46% of the survey is poorly drained or somewhat poorly drained. The remaining 56% of the project area is well drained or moderately well drained. Slopes range from 1% to 8% grade (Figure 3-3).

Table 3-1: Unit summary of soils within the Carver project area. Source: USDA

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Chipley sand	Moderately well drained	1.0	0.1%
5A	Emporia fine sandy loam, 0 to 2 percent slopes	Well drained	59.2	5.0%
5B	Emporia fine sandy loam, 2 to 6 percent slopes	Well drained	35.3	3.0%
6	Kenansville loamy sand	Well drained	7.5	0.6%
7	Kinston loam	Poorly drained	263.1	22.2%
9	Myatt fine sandy loam	Poorly drained	170.2	14.4%
10	Nawney loam	Very poorly drained	67.6	5.7%
12A	Peawick silt loam, 0 to 2 percent slopes	Moderately well drained	4.4	0.4%
12B	Peawick silt loam, 2 to 6 percent slopes	Moderately well drained	0.4	0.0%
18A	Slagle fine sandy loam, 0 to 2 percent slopes	Moderately well drained	161.1	13.6%
18B	Slagle fine sandy loam, 2 to 6 percent slopes	Moderately well drained	23.8	2.0%
18C	Slagle fine sandy loam, 6 to 10 percent slopes	Moderately well drained	9.0	0.8%
19A	Uchee loamy sand, 0 to 2 percent slopes	Well drained	116.0	9.8%
19B	Uchee loamy sand, 2 to 6 percent slopes	Well drained	76.4	6.5%
20B	Uchee-Peawick complex, 2 to 6 percent slopes	Well drained	140.5	11.9%
20C	Uchee-Peawick complex, 6 to 10 percent slopes	Well drained	6.8	0.6%
23	Yemassee fine sandy loam	Somewhat poorly drained	42.1	3.6%
W	Water		0.5	0.0%
Totals for Area of Interest			1,184.9	100.0%



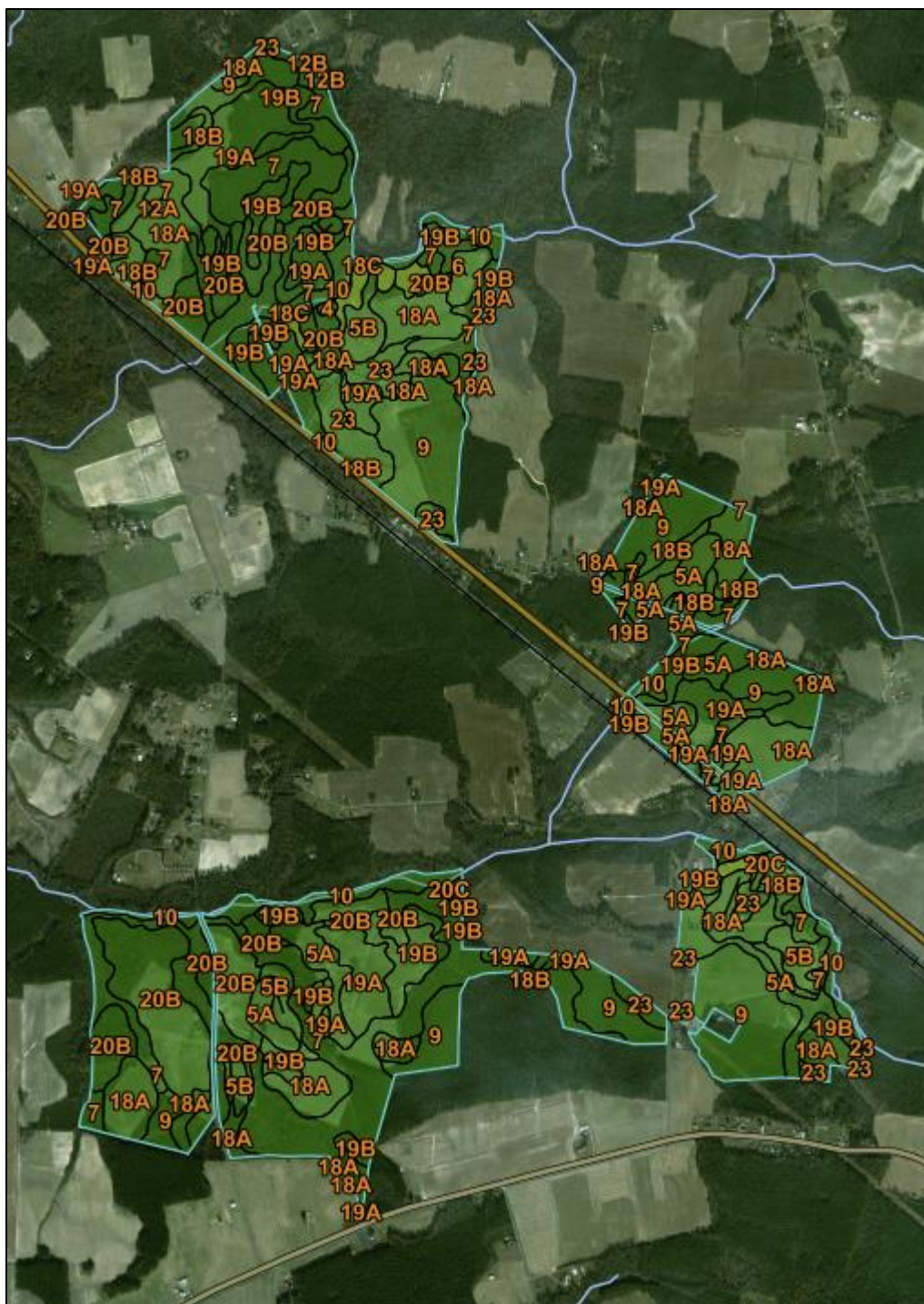


Figure 3-3: Soils map of the Carver project area, showing representative slope. Source: USDA

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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 project area registered at VDHR through March 2022. It also lists all previously identified architectural resources and archaeological sites located within the project area, as well as within one mile of the project area.

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at VDHR reveals that eight surveys have been conducted within one mile of the project area (Figure 4-1; Table 4-1). These surveys were conducted between 1996 and 2020. Five surveys have been conducted within the project area.



Figure 4-1: Previous surveys (gray) conducted within 1.0 mile (yellow) of the project area (orange). Source: V-CRIS

Table 4-1: Surveys conducted within a mile of the project area. Bolded surveys are within the project area.

Report Number	County	Report Title	Report Author	Author Affiliation	Report Year
PG-158	Prince George	Results of the Archaeological Identification Survey of Approximately 3.18 Miles of the Proposed Route 460 PPTA Project in Isle of Wight and Southampton Counties and Supplemental Evaluation Testing at Site 44PG0504 in Prince George County, Virginia	Thomas Fugate	Gray and Pape, Inc.	2009
SK-107	Suffolk	A Phase I Cultural Resources Survey of the Proposed Approximately 60-Mile Dominion Virginia Power Carson-Suffolk 500 kV Transmission Line in Dinwiddie, Prince George, Sussex, Southampton, and Isle of Wight Counties, and the City of Suffolk, Virginia	Aimee Leithoff, Mike Klein, Sandra DeChard, Emily Lindveit, Ellen Brady	Cultural Resources, Inc.	2009
IW-022	Isle of Wight	Phase I Cultural Resources Survey of Proposed Improvements to Route 603, in Isle of Wight County, Virginia	R. Taft Kiser, Robin L. Ryder, Mary Ellen Bushey, Douglas C. McLearen, Christopher P. Egghart, Luke Boyd	Virginia Commonwealth University Archaeology Research Center	1996
IW-038	Isle of Wight	Archaeological Survey of Two Proposed Temporary Sediment Basins Associated With the Route 603 Widening Project	Kenneth E. Stuck	Virginia Department of Transportation (Highways and Transportation)	2004
IW-052	Isle of Wight	Final Letter Report: Results of the Archaeological Identification Survey of Approximately 6.06 Miles of the Proposed Route 460 PPTA Project, Isle of Wight and Southampton Counties, Virginia	Thomas Fugate	Gray and Pape, Inc.	2008
SK-108	Suffolk	Additional Phase I Archaeological Survey Addendum to: A Phase I Cultural Resources Survey of the Proposed Approximately 60-Mile Dominion Virginia Power Carson-Suffolk 500 kV Transmission Line in Dinwiddie ... City of Suffolk, Virginia	Aimee J. Leithoff, Ellen M. Brady	Cultural Resources, Inc.	2009
SX-031	Sussex	Archaeological Survey Route 460 Location Study, Sussex, Southampton, Isle of Wight Counties and City of Suffolk, Virginia	Lee Tippet, Megan Rupnik, Daniel Gregory, Tom Fugate	Archaeological Survey Route 460 Location Study, Sussex, Southampton, Isle of Wight	2006

Report Number	County	Report Title	Report Author	Author Affiliation	Report Year
				Counties and City of Suffolk, Virginia	
IW-094	Isle of Wight	Phase I Cultural Resources Survey of the ± 121.4 -Hectare (± 300 -Acre) Windsor Solar Project Area, Isle of Wight County, Virginia	J. Hope Smith, Dara Friedberg	Dutton & Associates	2020

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES WITHIN ONE MILE

There are 29 previously recorded archaeological sites located within one mile of the project area, three of which are located within the project area: Sites 44IW0248, 44IW0286, and 44IW0296 are located within the project area (Figure 4-2, Table 4-1). Site 44IW0248 is an eighteenth-century farmstead which has been determined not eligible for inclusion in NRHP. Sites 44IW0286 and 44IW0296 are both artifact scatters with wide occupation date ranges and have not been evaluated by DHR. Ten sites have been determined not eligible for inclusion in the NRHP. The remaining have not been evaluated.

Table 4-2: Previously identified archaeological sites located within 1.0 mile of the project area. Resources highlighted in orange are within the project area.

DHR ID	Site Types	Time Periods	Evaluation Status
44IW0253	Cemetery	20th Century (1900 - 1999)	N/A
44IW0252	Cemetery	20th Century (1900 - 1999)	N/A
44IW0024	Dwelling, single	<Null>	N/A
44IW0251	Outbuilding	Historic/Unknown	DHR Staff: Not Eligible
44IW0168	Farmstead	19th Century (1800 - 1899), 20th Century (1900 - 1999)	N/A
44IW0167	Not recorded	19th Century (1800 - 1899), 20th Century (1900 - 1999)	N/A
44IW0231	Dwelling, single	19th Century: 4th quarter (1875 - 1899), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44IW0173	Farmstead	19th Century (1800 - 1899), 20th Century (1900 - 1999)	DHR Staff: Not Eligible
44IW0257	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible
44IW0248	Farmstead	18th Century (1700 - 1799)	DHR Staff: Not Eligible
44IW0170	Farmstead	19th Century (1800 - 1899), 20th Century (1900 - 1999)	N/A
44IW0172	Farmstead	19th Century (1800 - 1899), 20th Century (1900 - 1999)	N/A
44IW0171	Farmstead	20th Century (1900 - 1999)	N/A
44IW0174	Farmstead	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century (1800 - 1899), 20th Century (1900 - 1999)	N/A

DHR ID	Site Types	Time Periods	Evaluation Status
44IW0280	Artifact scatter	Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	N/A
44IW0295	Artifact scatter	World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0282	Artifact scatter	Early Woodland (1200 B.C. - 299 A.D.), Middle Woodland (300 - 999 A.D.)	N/A
44IW0296	Artifact scatter, Other	Late Archaic Period (3000 - 1201 B.C.), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0286	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0287	Artifact scatter	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0288	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0294	Dwelling, single	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1988)	N/A
44IW0312	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44IW0313	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44IW0314	Artifact scatter	Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44IW0169	Artifact scatter, Farmstead	Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991)	DHR Staff: Not Eligible
44IW0315	Artifact scatter	World War I to World War II (1917 - 1945)	DHR Staff: Not Eligible
44IW0025	Dwelling	<Null>	N/A
44IW0281	Earthworks	Civil War (1861-1865), Reconstruction and Growth (1866-1916)	N/A

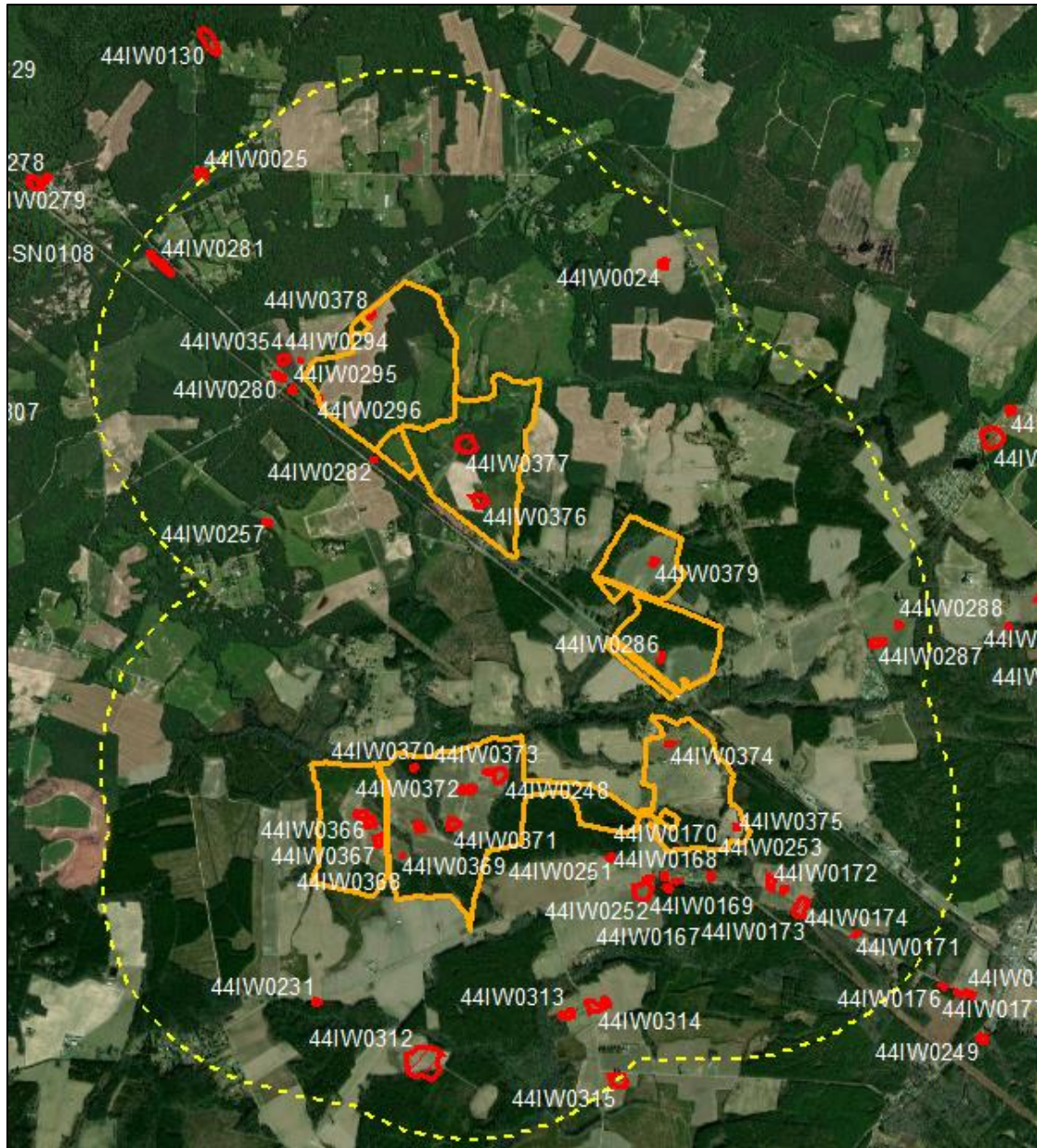


Figure 4-2: Map detailing all archaeological resources (red) within 1.0 mile (blue) of the project area (orange). Source: V-CRIS

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5. CULTURAL CONTEXT

The following section provides a brief summary of the general overarching regional prehistoric and historic themes relevant to Virginia and Isle of Wight County. 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).

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, graters, and adzes. Paleoindian projectile points tended to be fluted and bifacially sharpened. Due to time and rising sea levels, many Paleoindian material culture finds are limited to isolated projectile points. Researchers differentiate the Paleoindian Period into three smaller

periods reflecting changes in the morphology of projectile points. These periods include the Early Paleoindian (9500-9000 B.C.), the Middle Paleoindian (9000-8500 B.C.), and the Late Paleoindian (8500-8000 B.C.).

During the Early Paleoindian, Paleoindians produced large fluted Clovis points, a style widespread throughout North America, which could be affixed to a spear shaft. Sites from this period are found throughout the eastern seaboard in very low densities. Regions depicting greater concentrations of these sites are in Tennessee, the Cumberland and Ohio River Valley, western South Carolina, the northern Piedmont of North Carolina, and southern Virginia (Anderson 1990:164-71; Daniel 1996; Ward and Davis 1999).

The Middle Paleoindian saw a modification of Clovis points, such as the disappearance of the fluting in some cases and the addition of “ears” at the base of the point. The appearance of these new types, such as the Cumberland, Simpson, Clovis variants, and Suwanee points, might reflect changes in subsistence patterns as the result of rising global temperatures. During this time, it is theorized that American Indians began to radiate out from their previous range of occupation to exploit resources from more distant environments (Anderson 1990; Anderson et al. 1996; Ward and Davis 1999:31).

Changes to the projectile points intensified during the final centuries of the Paleoindian Period resulting in an increased number of changes in projectile point morphology. The Dalton and Hardaway types and other variants allowed late Paleoindian peoples to hunt new species.

The Paleoindian’s scattered settlement pattern and simple culture contribute to the limited number of associated sites in the region, fewer than 75 sites have been identified in present-day Virginia and only 25 have been positively identified in the entire Chesapeake (Turner 1989; Dent 1995). Those Paleoindian sites that have been located tend to be quarry sites, which groups frequently visited and areas where several bands gathered (Meltzer 1988; McAvoy 1992). Many sites were likely destroyed when warming global temperatures melted the glaciers and inundated the low-lying Paleoindian settlements.

ARCHAIC PERIOD (8000 TO 1200 B.C.)

Dramatic climatic changes beginning about 10,000 years ago prompted a reconfiguration of prehistoric people’s subsistence strategies and social organization. Specifically, global temperatures began rising with the dawn of the Holocene geological period, simultaneously shrinking the glaciers and raising sea levels. In North America, the Laurentide Ice Sheet gradually receded northward, making the southeastern portion of the modern-day United States warmer and drier. The boreal forest of the Pleistocene era slowly gave way to a mixed conifer and northern hardwood forest. The area began to assume its modern-day climate and floral and faunal species. This warming also resulted in dramatic hydrological changes for coastal Virginia. As the sea level gradually climbed, the land was flooded; as a result, the lower reaches of the Susquehanna River flooded to form the Chesapeake Bay.

These climatic changes created new food sources for prehistoric people. The warmer, drier climate led to a greater biodiversity, especially floral, as spruce and fir forests gave way to nut- and fruit-

bearing trees (Aaron 2009:17). This allowed humans to rely more heavily on gathering wild plants, nuts, and berries. Indeed, archaeologists have discovered tools, such as nutting stones and pestles, for processing vegetable materials. The creation of the Chesapeake Bay, furthermore allowed Archaic people to exploit seafood, such as anadromous fish and shellfish. The appearance of shell middens during the period testifies to the importance of mollusks to the Archaic diet (Dent 1995).

To exploit these new resources, Archaic people likely intensified their seasonal movement, splitting their time between a semi-permanent base camp and smaller, dispersed hunting and gathering camps. Bands of as many as 30 people may have gathered in the base camp for part of the year, and then dispersed into “microbands,” composed of a single family or two, in other seasons (Griffin 1952; Anderson and Hanson 1998; Ward and Davis 1999). The range of band movement would have occurred over relatively large regions. These larger base camps are theorized to have been located along rich environmental areas near the Fall Line or along main rivers.

New subsistence patterns also required new technologies and the adaption of existing technologies to be suitable to existing game. “The spear thrower [called an atlatl] added range and power to the hunter’s arm. The axe enabled people to fell trees. The mortar and pestle made it easy to pound and grind nuts, seeds, and roots” (quoted in Aaron 2009:18). With new technologies, smaller game could be more easily hunted and plants could be processed more effectively. The resulting products of these technologies differentiate the Archaic Period into three smaller periods. The period also saw innovations in projectile point manufacturing. In a further divergence with the paleoindians who relied heavily on cryptocrystalline lithics, Archaic people utilized more materials, such as quartzite and quartz.

The Early Archaic (8000-6500 B.C.) is characterized by projectile points with corner and side-notches, rather than hafting the points to a wood shaft by fluting as the Paleoindians did. The resulting points, such as the Kirk Stemmed and Notched, Palmer Corner-Notched, Fort Nottoway, Kessell, Charleston, and Amos, are thus readily distinguishable from Paleoindian points (Custer 1990). Early Archaic people hunted caribous, elk, moose, deer, and bear (Egloff and Woodward 1992:12). Additionally, there appears to be an increase in population at this time.

The Middle Archaic (6500-3000 B.C.) is defined primarily by the appearance of stemmed projectile points which were fitted into a hold in the spear shaft. Therefore, points such as the LeCroy, Stanly, Morrow Mountain, and Guilford are diagnostic of middle Archaic assemblages. Some evidence also points to the use of grinding technology to make atlatls, or spear throwers, in this period. Mortar and pestles also began to appear during the Middle Archaic, as did axes. The ability to more easily clear forests, resulted in a change in hunting as deer, bear, turkey, and other animals came to the cleared land to eat the new, low-lying growth (Egloff and Woodward 1992:14-15).

Researchers have also pointed out that contexts from this period contain a larger amount of “expedient” stone tools, owing in part to the rapid environmental changes of the Climatic Optimum, which dates from 6000 to 2000 B.C. (Wendland and Bryson 1974; Claggett and Cable 1982; Ward and Davis 1999). These tools were makeshift and less formal, allowing their owners to use them for a wider variety of activities than tools designed for specific uses. The greater

density and disbursement of archaeological sites from this period indicates a consistent rise in American Indian populations.

By the Late Archaic (3000-1200 B.C.), a more congenial climate and more abundant food sources led to dramatic population increases, there are estimates of tens of thousands of Virginia Indians during this time (Egloff and Woodward 1992:20). To be certain, this apparent increase might be exaggerated because late Archaic people had a richer material culture than previous peoples and hence left more archaeological evidence of their existence (Klein and Klatka 1991). Nonetheless, the greater number of late Archaic sites relative to earlier periods suggests that the human population did in fact expand over the course of the Archaic Period. According to Barber et al. (1992), late Archaic sites were more than twice as numerous as middle Archaic sites. As humans occupied the land more densely, they also became more sedentary and less mobile, perhaps owing to the greater reliance on plant-based food resources compared to hunting and fishing. Late Archaic people settled along fertile flood plains (Egloff and Woodward 1992:20).

American Indians from this region may also have begun to domesticate plants such as goosefoot, squash, and gourds (Yarnell 1976:268; Chapman and Shea 1981:70). They also used squash and gourds for food storage, in addition to earthen pits (Egloff and Woodward 1992:22). The projectile point technology of the Late Archaic Period is dominated by stemmed and notched point forms, many with broad blades, likely used as projectiles or knives. These points diminish in size towards the latter portion of this period (Dent 1995; Justice 1995).

It should also be noted that prehistoric sites that consist of lithic debitage, no diagnostic artifacts, and an absence of ceramic artifacts likely date to the Archaic Period. These sites are described in the records as “Prehistoric/Unknown,” however they are most likely to date to this period despite not having a specific temporal designation.

WOODLAND PERIOD (1200 B.C. TO 1600 A.D.)

The American Indians of the Woodland Period began to maintain a greater reliance on horticulture and agriculture based on the cultivation of maize, imported from Mesoamerica via the Mississippi Valley, as well as squash, beans, and other crops. This increased sedentism and the nucleating of societies (Klein and Klatka 1991; Mouer 1991). Populations during this time began to consolidate into villages near rivers and floodplains with fertile soil, favorable terrain, and access to fauna. Satellite procurement camps are far less frequent than in the Archaic Period.

The Woodland Period is defined foremost by the development of a ceramic technology for storing and cooking food. Although Archaic people had carved out vessels from soft soapstone, prehistoric Americans did not begin shaping ceramic vessels until around 1200 B.C. The earliest pottery produced on the coastal plain, the Marcey Creek Plain, and other types, in fact resembled those soapstone vessels, suggesting that they were used for similar purposes. Woodland peoples, however, modified the square- or oval-shape soapstone inspired vessels. They began decorating the pieces with cord and tempering them with soapstone and other types of grit to make them stronger. Examples include Selden Island ceramics (tempered with soapstone) and Accokeek pieces (which used sand and grit for tempering). Anthropologists divide the period up into smaller periods based on changing projectile points and ceramics, as well as settlement patterns.

The beginning of the Early Woodland (1200 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 Mockley 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.

Most of the coastal Virginia Indians, with the exception of the Meherrins and the Nottoways, were Algonquian-speaking people. The majority of this population of approximately 14,000 to 21,000 were brought under the rule of Wahunsunacock (Chief Powhatan), who formed the Powhatan chiefdom by the early seventeenth century (Egloff and Woodward 2000:43).

SETTLEMENT TO SOCIETY (1607 – 1750)

Upon the arrival of Europeans to Virginia, American Indian towns and villages lined the James River (Figure 5-1). The vicinity of present-day Isle of Wight County was occupied by 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). They lived under the wider rule of Wahunsunacock, commonly known to the English as Chief Powhatan.

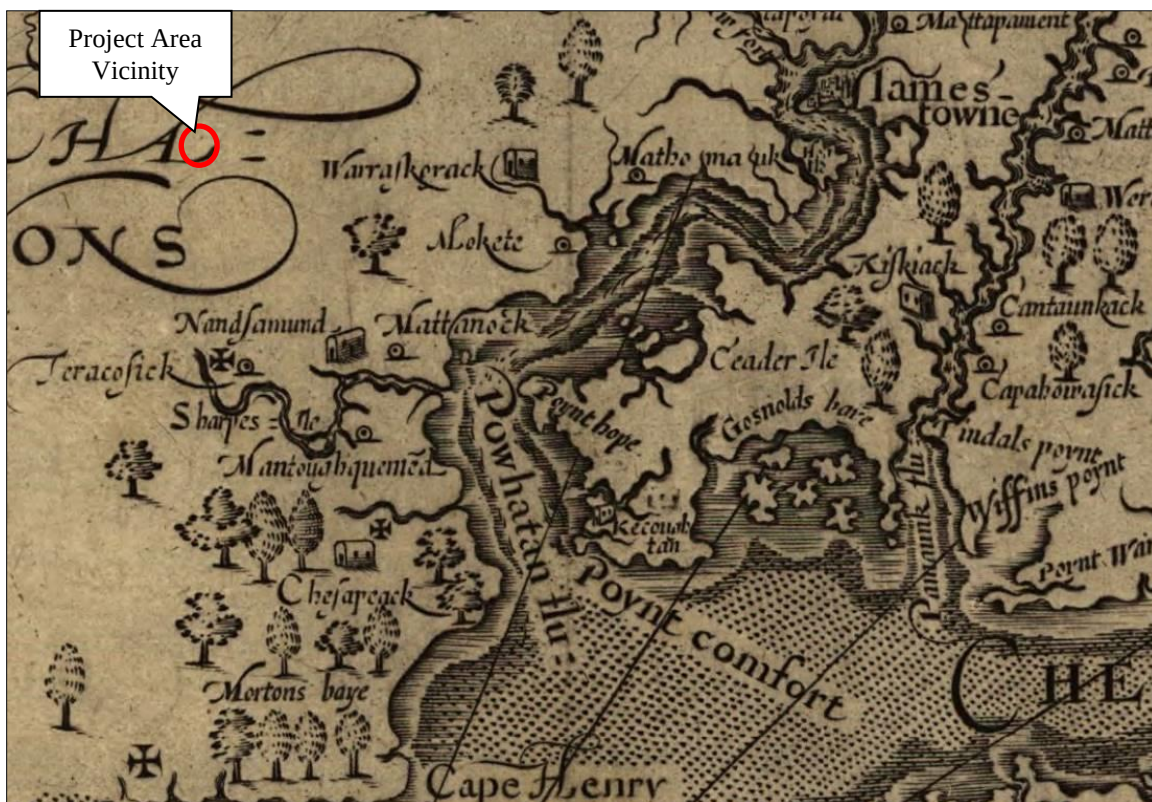


Figure 5-1: Detail of Virginia, by John Smith, depicting the general vicinity of the project area.
Source: Library of Congress

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. 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 natives 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, years later 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; 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.

Within a few decades, additional settlers arrived and conditions in Virginia became more favorable. Settlement spread out through the area with homes and plantations clustered along the banks of rivers and other navigable streams (Turner 1984:101-115). The first English settlement in the future Isle of Wight County was initiated by Capt. Christopher Lawne and Sir Richard Worsely in 1619. They settled on the south side of the James River at Lawne's Creek, now the dividing line of Isle of Wight and Surry counties. Initially known as Lawne's Plantation, the London Company changed the name of the area to Isle of Wight Plantation in 1625. Throughout the early 1620s, settlements ranged along the south side of the James River such as Warrsquoyacke (also known as Edward Bennett's Plantation) and Basse's Choice on the Pagan River (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 area a bit less desirable (Rouse 1968:17). The project area would have remained the frontier.

The continued spreading of European settlement increasingly stressed relations between them and American Indians. Wahunsunacock 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 Nemattanew in early March 1622 provided pretext for a mass attack. On the morning of March 22, members of the Powhatan Confederacy and the Chickahominy Tribe killed English colonists along a 70-mile stretch on both sides of the James River. The result was a loss of more than a quarter of the total European population. By this time there had been 1,240 new residents of Virginia, so the massacre resulted in a loss of approximately 348 people; 53 of those killed lived in Isle of Wight County. 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.

Despite this setback, the colonists persevered and completed expeditions against the American Indians taking all land and resources they were able. 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 early 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 (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 or counties. One of these counties was Warroaquyoake, now Isle of Wight. To the east was Nansemond County. The boundary between the two counties was disputed until 1674 when the Virginia House of Burgesses established “a southwest by south line be designed, runned and plainly marked from the river side of the plantation of Hayes, extending to the creek at or near the plantation called Nevill Oyster Bank; thence a line or lines up Col Pitt’s creek to the head of his lands; thence in a southwest half a point westerly line” (quoted in Morrison and Gwaltney 2006). To the west was James City County, which spanned the James River. This became Surry County in 1652.

The region of the project area is also home to a change in drainage to the James River and to the Blackwater River. Waterways draining into the Blackwater River drained into the Albemarle Sound in North Carolina. The Sound, unlike the Chesapeake Bay, had no ports which placed a constraint on settlement and early planters trying to get products to markets. It is likely for this reason that the land was worth less than that closer to the James River. In the 1690s, the average land values were 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008). Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 5-2).

The colony and county continued to grow in population. This growth 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).

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).

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. A later owner of a portion of the project area would participate in the Rebellion. William West was “a rebel absconding, who took up arms against the Indians by whom his father had been most barbarously murdered” (Boddie 1938:162). 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 enslaved Africans and American Indians (Holloway n.d.).

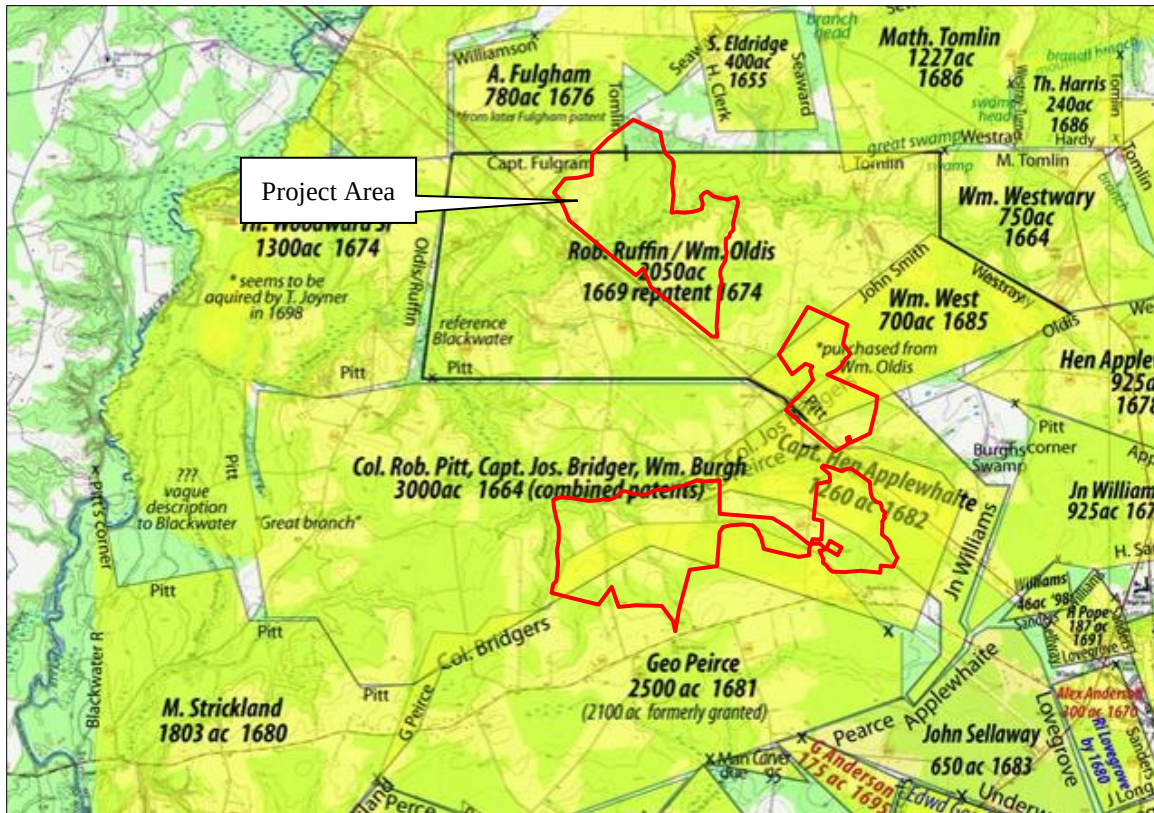


Figure 5-3: Map of early land grants in Isle of Wight County depicting the project area. Source: *The Southern Roots*

COLONY TO NATION (1750 – 1789)

By the mid-eighteenth century, the population continued to increase and colonists moved inland more. Smithfield, a settlement since circa 1740, officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

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 county that were not conducive for growing tobacco, coupled with the collapse of the European tobacco market precipitated a shift in the economy. Farmers began to focus more on corn, grains, and orchards for the production of liquors such as apple and peach brandy. The farms in Isle of Wight County were typically between 500 to 1,700 acres (David 2007:9). According to V-CRIS records, there was possibly an eighteenth century farm within the project area (VDHR #44IW0248). Additionally, a Works Progress Administration survey of historic properties indicate that Hall Home was constructed circa 1786 within or near the project area. This records also makes note of an old burying ground that had no markers and was under cultivation at the time of the survey (Jordan 1937).

To get their goods to market, in addition to waterways there were two early major routes within the County. Courthouse Highway (Route 258) connected Smithfield to the south end of the County

along its approximate midpoint. The Old Stage Road (Route 10) connected Smithfield to Surry County (David 2007:9).

While the market for crops grown in Virginia and throughout America was in high demand in European markets, tensions between the colonies and England began to put a strain on trade. At the end of the Seven Years' War (or the French and Indian War in North America) in 1763, the British government had an immense amount of debt. To pay it, Parliament imposed heavy taxes on its subjects and tightened the administration of trade and navigation acts (Salmon 1983:22). These actions sparked a strong response from the colonies. In 1774, the Virginia Convention adopted resolves against the importation of British goods and the importation of slaves. It also required each county to form a volunteer company of cavalry or infantry to prepare for an armed conflict.

Once the American Revolution was underway, it did not impact Isle of Wight County as it did nearby port towns, like Norfolk and Portsmouth. In addition to the "725 men of military age" who joined the fight, residents of the 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 county twice under British Cavalry Colonel Tarleton. He and his men made a raid on Smithfield with the intent to destroy the records; the records were previously removed. The British left a wake of destruction wherever they went (Morrison and Gwaltney 2006).

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).

In addition to diversification, a more scientific method of farming was adopted to help restore the soil's nutritive qualities. In his 1817 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, Edmund Ruffin, of Prince George, Hanover, and Amelia counties, experimented with crop rotation, fertilizers, and farm machinery. In the early 1820s, he publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Plantations began to be replaced by smaller-scale farmsteads that were increasingly situated along the system of interior roads in the county. These changes would strengthen central Virginia's economy (McCartney 2009). The value of farmland in the region increased dramatically in the early nineteenth century. In the Antebellum Period, these practices had become accepted and widely used and by 1860 Virginia was in the best condition agriculturally of her history according to historian Avery O. Craven (Agee 1969:3).

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, Isle of Wight County had 9,028 residents. During this period the population rose slightly to 10,517, approximately 42 percent of whom were enslaved. There was also a growing free black population in the county (USCB). Throughout the nation, “Black labor became the foundation stone not only of the Southern social structure, but of Northern manufacture and commerce, of the English factory system, of European commerce, of buying and selling on a worldwide scale” (DuBois 2007).

By 1818, there was a post office in the present-day town of Windsor, east of the project area. According to V-CRIS records, Clements Farm was constructed within a portion of the project area circa 1820 (VDHR #046-5112). Adjacent to the project area, Antioch Congregational Christian Church (VDHR #046-5154), on Antioch Road, opened in 1828. Antioch Church would be the mother church for multiple churches in the county (King 1993:317, 432). With this shifting population, the distance to the courthouse in Smithfield proved to be too great and the courthouse was moved to a more central location in 1800. The new town, Isle of Wight, was located along Courthouse Highway, approximately six miles northeast of the project area (Figure 5-4) (David 2007:9-10).

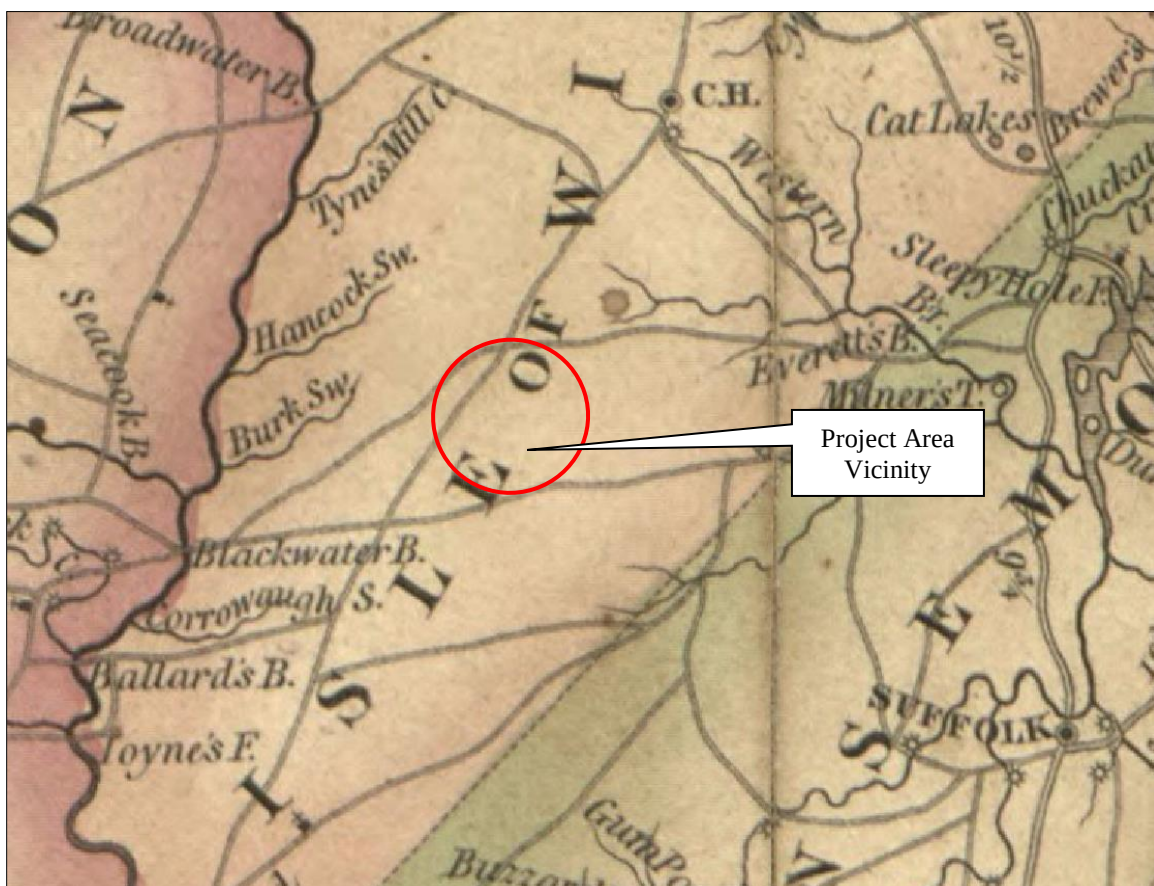


Figure 5-4: Detail of A map of the state of Virginia, 1827, depicting the vicinity of the project area.
Source: Library of Congress

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 (USCB). Despite the drop in population, the enslaved and free black population remained about 50 percent of the total population. The high slave population led to unease and in 1831 there was an insurrection in nearby Southampton County 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 African Americans and free blacks (Atkins 2008).

Approximately 90 percent of the 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 its place of tobacco in southeast Virginia included cotton, corn, and peanuts. Grains and corn grown in the region were processed at mills. Before the Civil War, peanuts, also known as "goober peas" or "ground peas" were little known outside of the southern states (Morrison and Gwaltney 2006). Isle of Wight's first peanut export was in 1849; the county would eventually become the center of the peanut belt (David 2007:10). Additionally, the ham and bacon industry continued growing. Before the coming of the railroad, the bacon trade reached out 30 to 40 miles into surrounding counties and hogs were driven in by foot from as far away as Kentucky, Tennessee, and North Carolina (Morrison and Gwaltney 2006). The railroad would create a bigger market.

In 1833, the Portsmouth and Weldon Railroad was organized; it ran in the southern portion of the county. The Norfolk and Petersburg Railroad was chartered in 1851 and was completed in 1858. Land for this line was purchased in 1854. When it became apparent that a station would be erected in Corrowaugh, a couple of local residents purchased the surrounding land for the establishment of a town and Windsor became a railroad stop. With the railroad crops could be sent out to markets much quicker than by water and large quantities of lumber, bacon, and peanuts were sent to market (King 1993).

Forests in Isle of Wight County were rich with tall cedar, cypress, pine, oak, and other hardwoods. Lumbering prospered in the region and forests could be quickly cleared with products transferred to the large market in Norfolk. Homes were built, and families began to establish themselves in the growing community of Windsor (King 1993:122). The town of Zuni also grew around a passenger depot for the Norfolk and Western Railroad northwest of the project area (Monroe et al. 2005:48).

A Civil War era map depicts a project area that consisted of a mixture of forested land and cleared fields (Figure 5-5). The waterways of Burnt Mills Swamp and Antioch Swamp crossed or formed borders to the project area. Though early historical mapping can prove difficult in overlaying with modern maps due to artistic license and changes in road and waterway alignments, this 1864 map depicts buildings within and near the project area. Several homes were constructed during this period within and outside of the project area. This includes a dwelling at 23255 Barrett Town Road

(VDHR #046-5089) constructed circa 1850, which roughly corresponds with a building illustrated in the southern portion of the project area, and the James R. Cobb Farm (VDHR #046-0116) constructed circa 1830, which corresponds to the Roberts house near the southern portion of the project area. In the northern portion of the project area were two dwellings, one of which was identified as associated with the Stevens family. There is also a building within or near the center portion of the project area

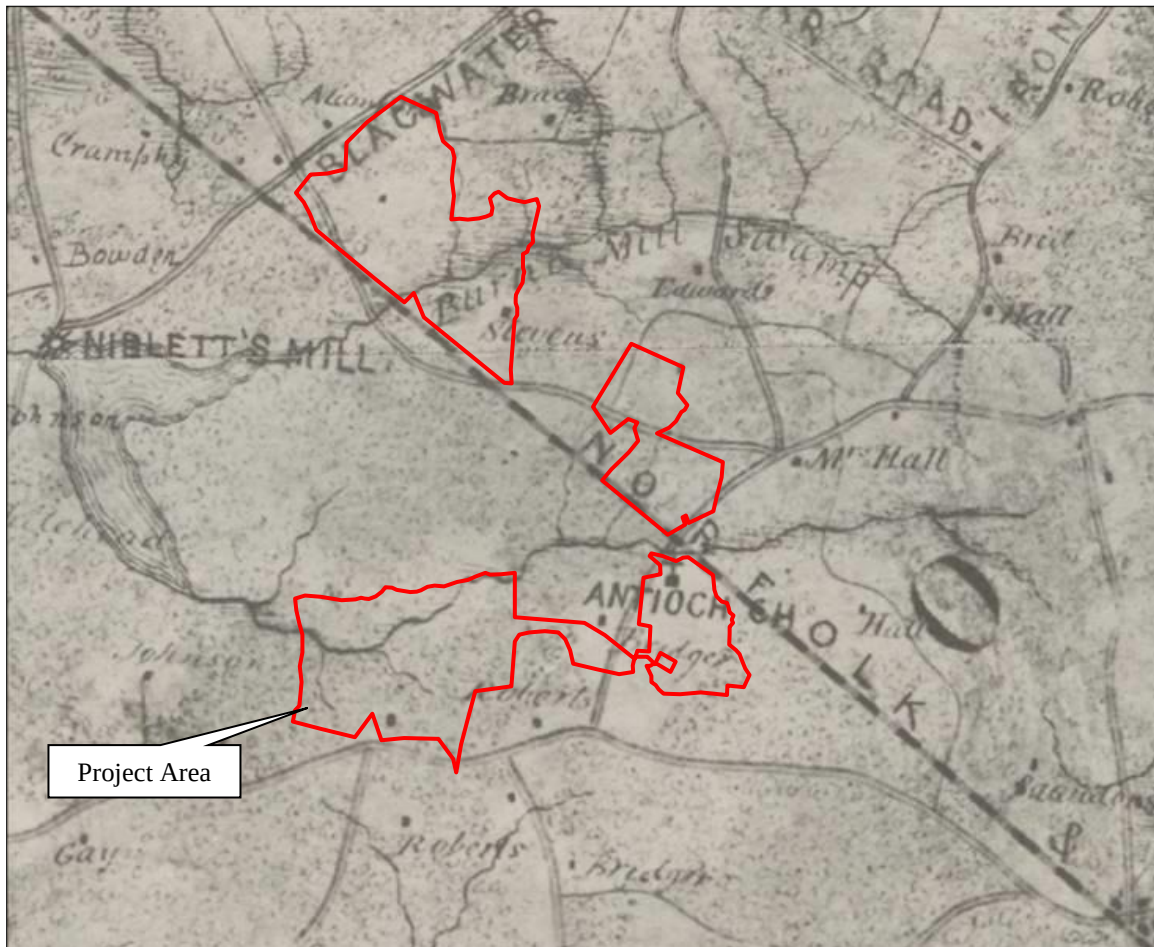


Figure 5-5: Detail of Map of Isle of Wight and part of Nansemond, 1864, depicting the project area.
Source: Library of Congress

CIVIL WAR (1861 – 1865)

Prior to the Civil War, Isle of Wight County had the eighth largest number of free blacks of the 148 counties in the state of Virginia. It ranked 52nd among the number of slaves. When the vote for secession came to the county, it was unanimously approved (Morrison and Gwaltney 2006). On the shoreline of Isle of Wight County, two forts were constructed or reinstituted during the war, Fort Huger and Fort Boykin. Men of Isle of Wight County fought for the Confederacy and the Isle of Wight Grays formed under the command of Captain Watkins (King 1993:122).

No major battles took place in the county, although skirmishes did occur. As depicted on a 1906 map, there were a few skirmishes in the vicinity of the project area (Figure 5-6). In spring 1863,

the New York 99th Infantry took an active role in the defense of Suffolk and in May of that year there was a skirmish at Antioch Church (NYSDMNA n.d.). Throughout the war, Confederates defended the Blackwater River and there were two skirmishes at the bridge of Blackwater Road over the river in 1862 and 1863. In both cases, Federals drove Confederates away but did not destroy the bridge (VDHR 2000).

Additionally, Union forces occupied many areas of the state including in Isle of Wight County and, at times, Windsor:

The Northern occupiers claimed this territory as their own, and so it was, in a strictly military sense: Union forces regularly patrolled it, could project their power at will anywhere within it, and were able to exclude Confederate power and authority from it (aside from the occasional Rebel cavalry). By that reckoning, the citizen there were – and they considered themselves to be – in enemy hands (quoted in Wills 2001:204).

According to one Union soldier “We’ve burned their fences, destroyed their railroad and thus lessened the value of their property” (quoted in Wills 2001:118). The time Federals spent in the area created a lasting impression on residents.

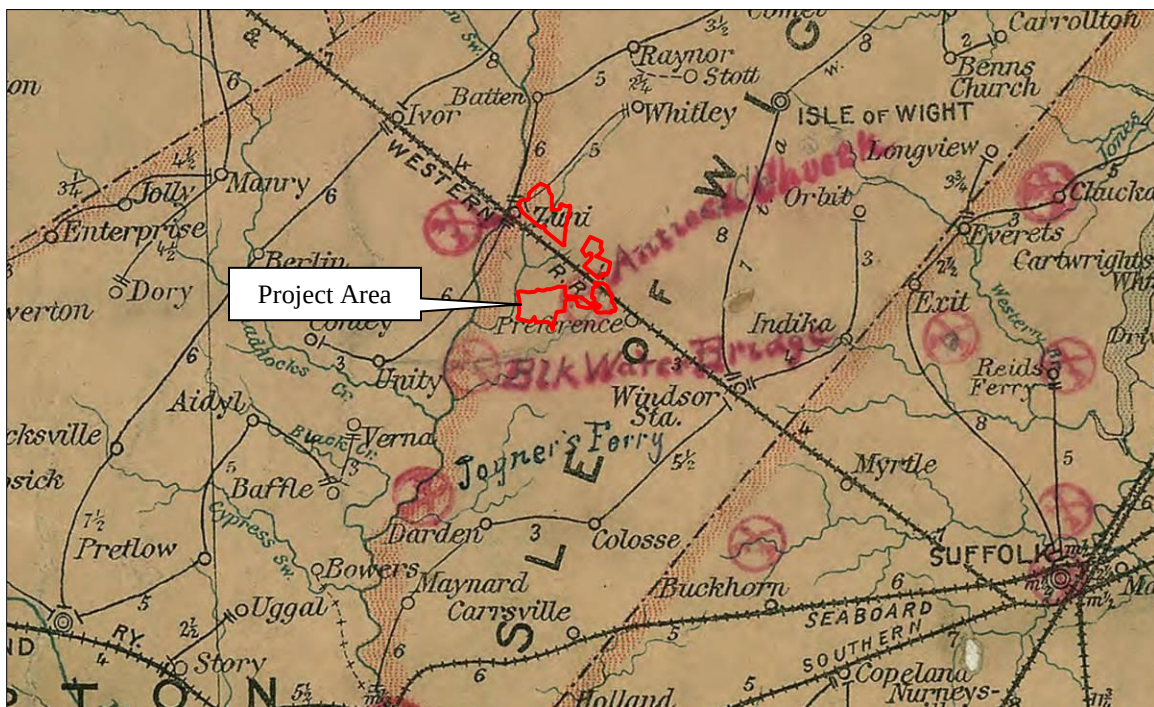


Figure 5-6: Detail of Post route map of the states of Virginia and West Virginia., 1906, depicting the project area and the marked skirmishes. Source: Library of Congress

RECONSTRUCTION AND GROWTH (1865 – 1917)

The economy of Isle of Wight County, like the rest of Virginia, was devastated by the War Between the States. The land had been ransacked by occupying armies leaving farms and properties destroyed. There was an immense loss of draft animals and severe damage to farms,

mills, and manufacturing establishments. Mill-dams were cut, ponds drained, and railroad depots, bridges, and trestles burned. Farm animals in the track of armies had been seized or killed and other food products taken (Head 1908). Land was nearly worthless and many of the owners no longer had capital, farm animals, or farming tools. As white local farmers coped with labor shortages from the emancipation of their labor force and lack of funds to buy necessary materials, many fell into debt and were forced to forfeit their real and personal property or declare bankruptcy (McCartney 2009).

The biggest change in the south was the new freedom of thousands of enslaved persons. Many newly freed slaves stayed in the county as sharecroppers or tenant farmers and later as land owners. Sharecropping and tenancy became a way of life for much of rural Virginia. As these Americans began to put their lives back together, churches and schools began to be organized. South of the project area, local African Americans organized Morning Star Church in 1886 on land donated for this use (King 1993:320).

With its recovery, Virginia adopted a new constitution which provided for public schools. By 1871, Isle of Wight had 25 schools: 20 white and 5 “colored” (*The Teachers Guide* n.d.). Outside of the project area, the Faulk House, which had been constructed circa 1900 on Blackwater Road, became the Gay School and initially educated white children in the area. Sometime before 1940, this changed and the school was used for the education of African American children (V-CRIS #046-5029).

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, the county produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Farmers were able to get goods to market on the newly repaired rail line. Following the war, the Norfolk and Petersburg Railroad was rebuilt and its stations repaired; the line was also extended west to the Mississippi Valley. The Atlantic, Mississippi and Ohio Railroad Company was formed from a merger between the Norfolk and Petersburg and other railroads in 1872. From this, the Norfolk and Western was organized in 1881 (Bamann and Hall 2006:3/14).

Timbering also prospered during this period with the creation of Camp Manufacturing Company at the south end of the County, opposite Franklin. Other lumber companies included 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 Isle of Wight County improved at the closing of the nineteenth century and population between 1890 and 1900 increased 16 percent to 13,102 residents (USCB).

As the area recovered, by the turn of the century residents of Windsor felt that it should officially be a town. It was chartered in 1902 and Windsor Station became the Town of Windsor (History of Windsor n.d.) (Figure 5-7). With all of the early improvements made to the town, it was flourishing by 1907:

It has a large, flourishing trade, many thousands bushels of peanuts and other farm products being annually shipped, and its people are well known for their hospitality.

...It has four general stores, two groceries, two barber shops, one shoemaker, one millinery, three churches (Methodist, Baptist, and Christian), one high school, one peanut factory, one planning mill, two eating houses, one blacksmith shop, one bank, two telephone offices, one telegraph office (Western Union), two undertaking establishments, one livery stable, one furniture shop and one hotel.

Its population is over four hundred and the value of its real and personal property is \$800,000 and the aggregate amount of its annual business \$250,000 (quoted in King 1993:126).



Figure 5-7: Detail of Preliminary map of a part of the south side of James River, Va., 1891, depicting the project area. Source: Library of Congress

WORLD WAR I TO WORLD WAR II (1917 – 1945)

As the twentieth century continued, the number of farms in the Isle of Wight County steadily increased. 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).

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). As technological and transportation innovations were made, changes were brought to Windsor. Electricity came into the Town of Windsor in 1923 as did telephone service; a transmission line crosses the project area. The first gas station in Windsor was erected in 1924 (King 1993:127).

While the Great Depression affected urban areas by devastating businesses, the agricultural production of rural counties was not subjected to the same issues. The number of farms actually increased by six percent between 1930 and 1935. Agriculture remained the economic mainstay of Isle of Wight County and its commercial centers provided processing facilities for the products and access to export goods (David 2007:18).

A number of important transportation improvements happened during this period. In 1927, the James River Bridge was completed connecting Isle of Wight County with Newport News and Hampton. To ease travel as automobiles became more popular, roads were paved, beginning with Routes 665 and 667 in 1932 and 1933. The Commonwealth of Virginia would also build Highway 460, or Windsor Boulevard, which connects Suffolk, Windsor, and Petersburg (Monroe et al. 2005:51). At the new road, Lewis C. Johnson built a general store and three tourist cabins within the project area for travelers (V-CRIS #046-5101).

During World War II, with the proximity of Isle of Wight County to the military bases in southeast Virginia citizens were subjected to air raid warnings. An anti-aircraft gun site was set up at the northern end of King's Highway Bridge and the rail sidings near Windsor were used as a staging ground for munitions (Bradshaw n.d.; Monroe et al. 2005:51).

Topographic maps from this period illustrate the project area which remained a mix of forested land and fields that were crossed by minor drives (Figures 5-8 and 5-9). Buildings lined the major roadways in and out of the project area. During this period there were buildings in all sections of the project area. By 1945, a transmission line crossed the project area.

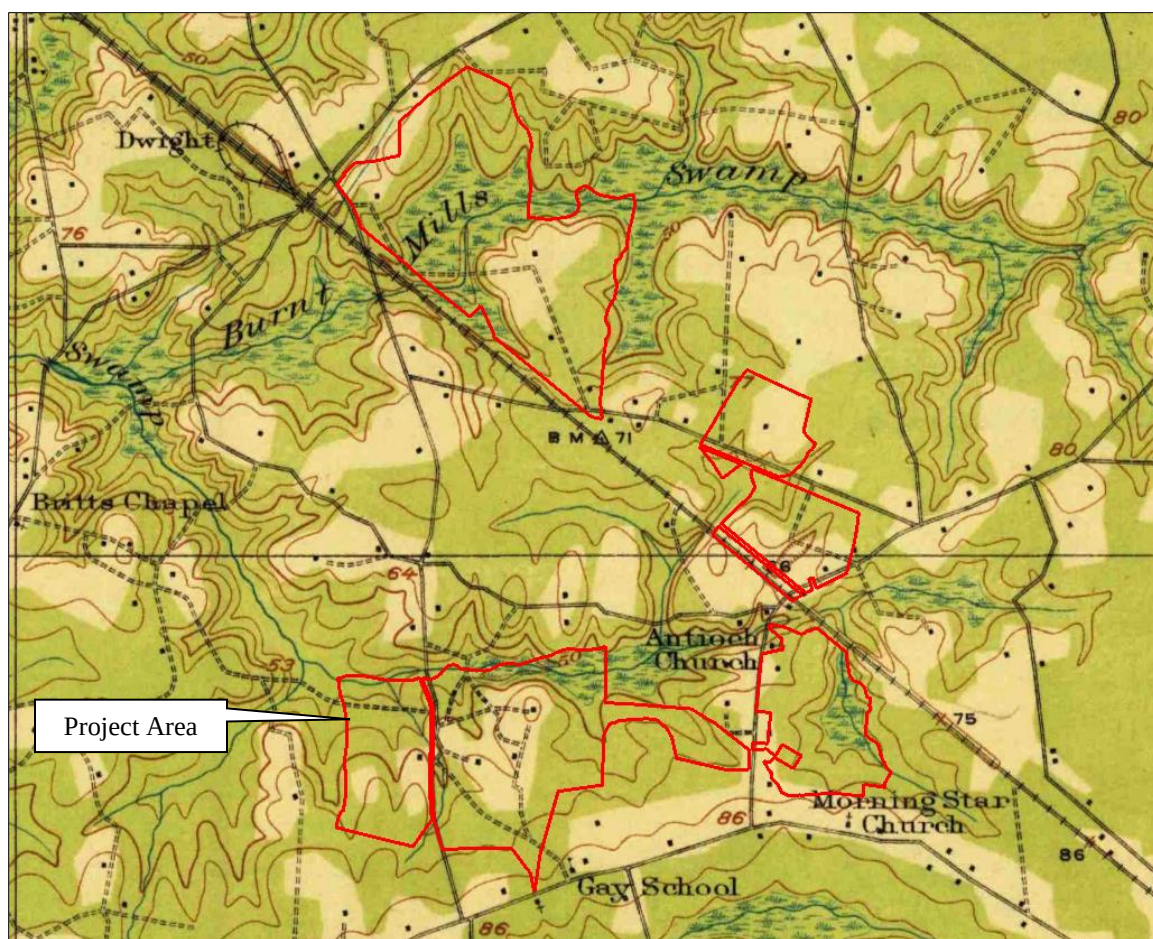


Figure 5-8: Detail of 1920 Ivor Quadrangle, depicting the project area. Source: USGS

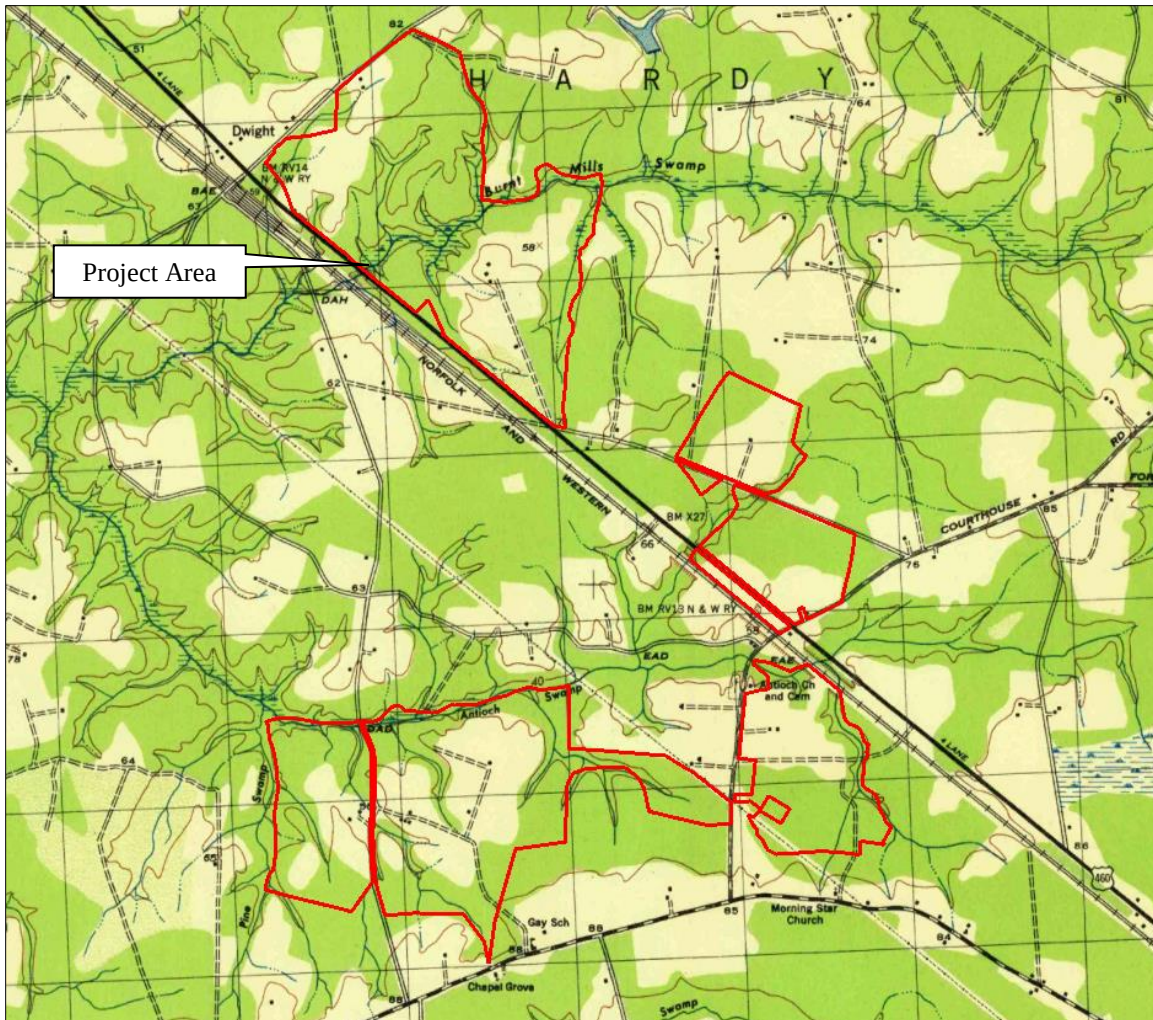


Figure 5-9: Detail of 1944 Zuni Quadrangle, depicting the project area. Source: USGS

NEW DOMINION (1945 – PRESENT)

The end of World War II brought with it a building boom that would begin to change the character of the earlier farmsteads within Isle of Wight County. Smithfield to the north became a bedroom community for the now burgeoning Newport News, Portsmouth, and Norfolk and developmental pressure was placed on farmsteads (David 2007:19). In the second half of the twentieth century, the Town of Windsor was improved and expanded as it annexed 2.82 square miles of surrounding land (History of Windsor n.d.). When schools around Windsor were consolidated, the Gay School was abandoned (Lowe 2003; V-CRIS #046-5029).

The face of agriculture also began to change. By the end of World War II, Virginia was no longer the leading producer of peanuts, a situation that would continue into the twenty-first century. 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 (Beainger n.d.).

Conversely, the meat packing and timbering industries in Isle of Wight County would continue to grow and the county would become home to two Fortune 500 companies: Smithfield Foods and International Paper Company. Despite all of the changes, agriculture continues to be an economic mainstay in Isle of Wight County with important crops being cotton, soy, and of course peanuts (Morrison and Gwaltney 2006). In the second half of the twentieth century and beyond, the project area remained relatively unchanged though there is evidence of logging in some portions (Figures 5-10 through 5-12).

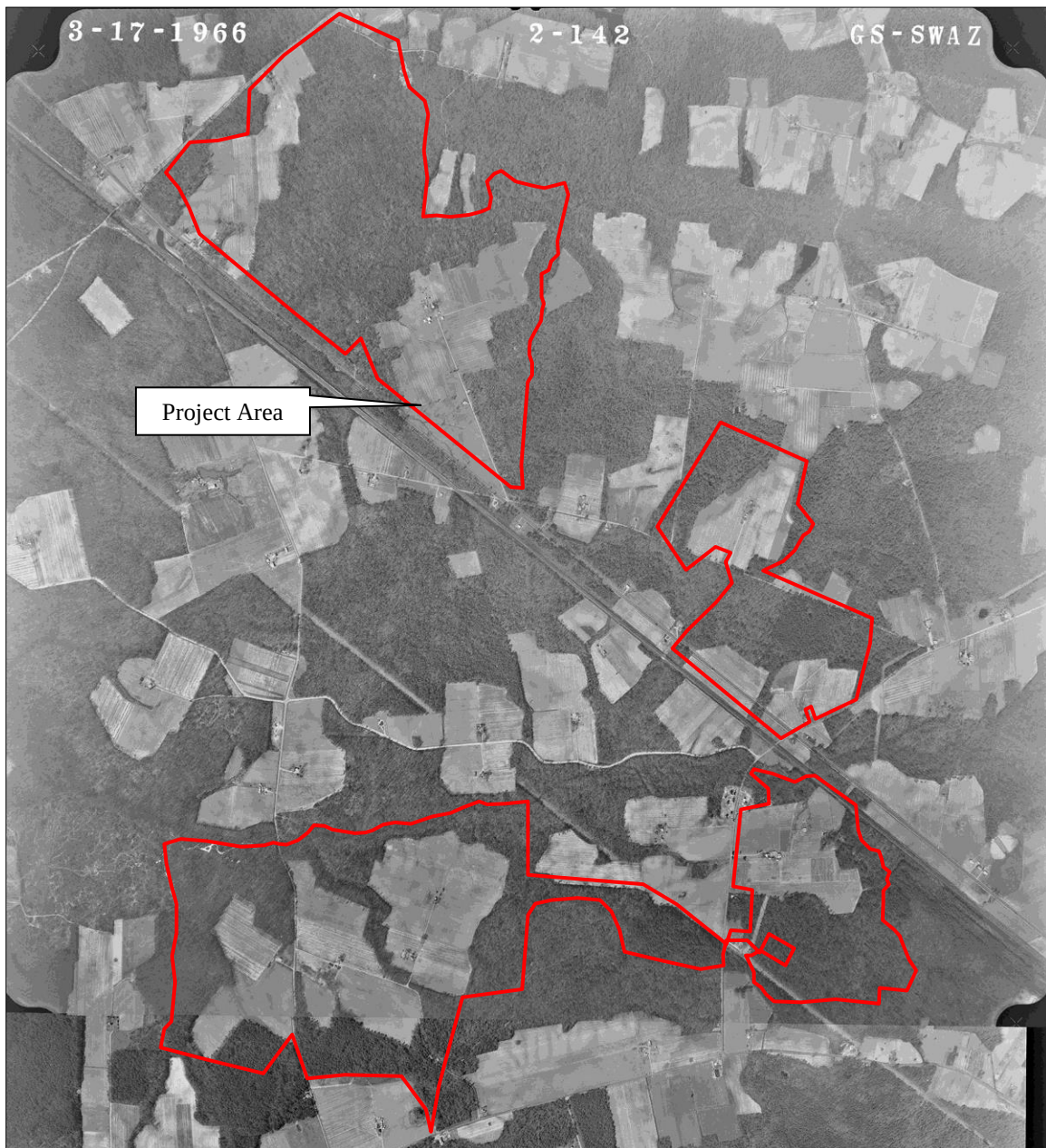


Figure 5-10: Detail of a 1966 aerial depicting the project area. Source: USGS

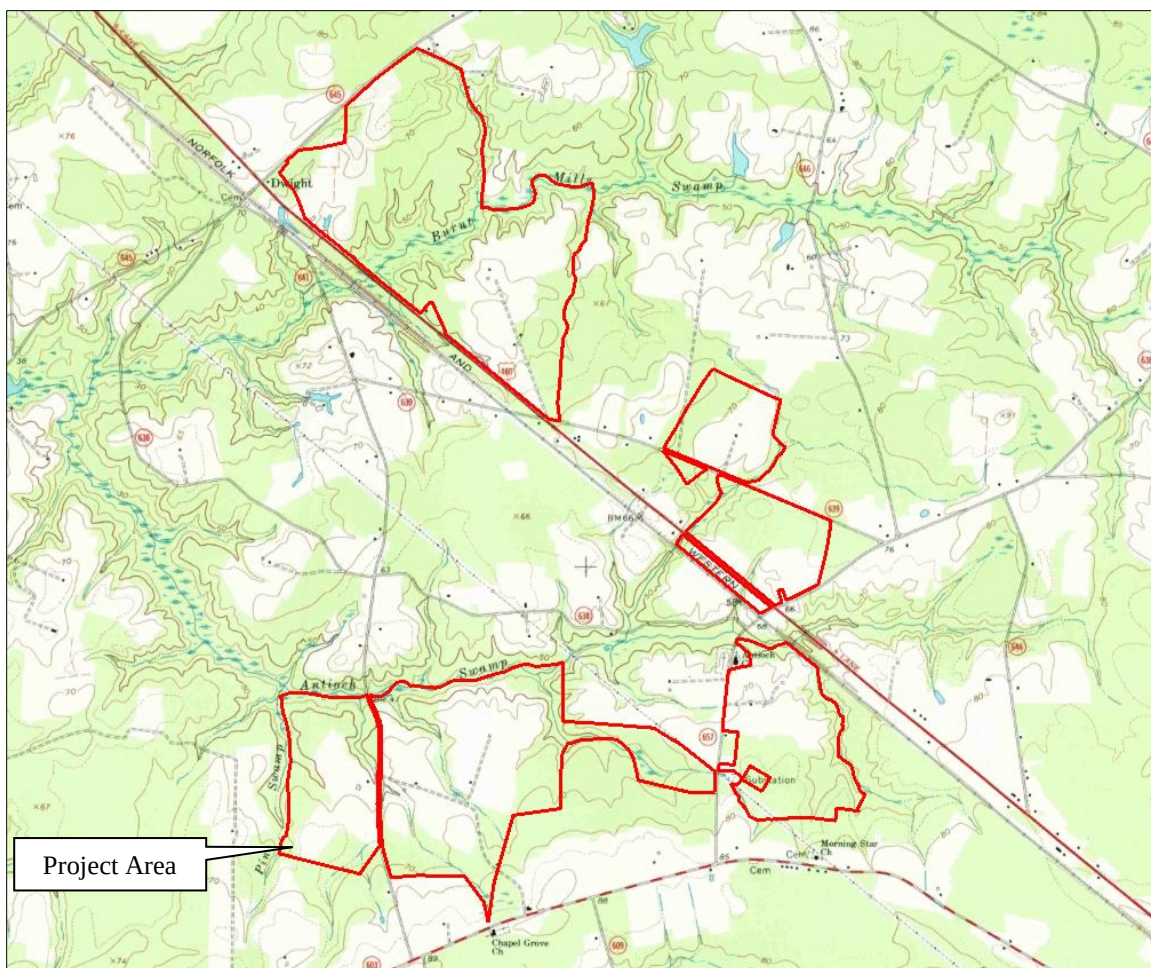


Figure 5-11: Detail of the 1984 Zuni Quadrangle depicting the project area. Source: USGS

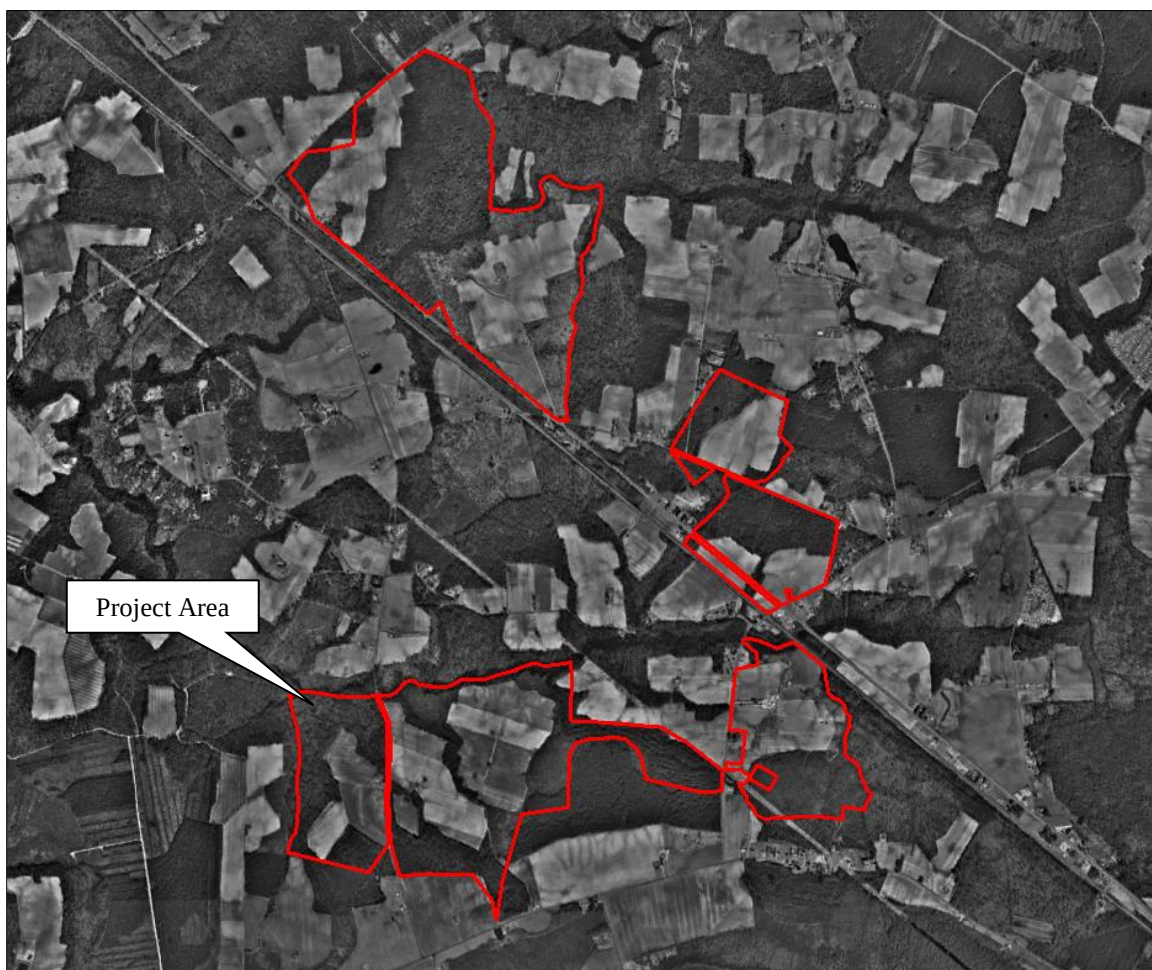


Figure 5-12: Detail of a 1994 aerial depicting the project area. Source: Google Earth

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6. ARCHAEOLOGICAL SURVEY RESULTS

From March 23 through June 3, 2022, D+A conducted archaeological fieldwork in the Carver Solar project area. This effort was conducted in accordance with a stratified sampling methodology that received prior approval from Virginia DEQ and VDHR. This strategy involved 100% systematic survey of the areas of high archaeological potential, 25% sampling of the moderate potential areas, and 10% sampling of the low potential areas, with walkover survey where possible of the areas that did not undergo systematic testing.

The survey area was divided into six different areas, labeled A through F based on location, where a total of fourteen previously unidentified archaeological sites were observed (Figure 6-1; 6-2).

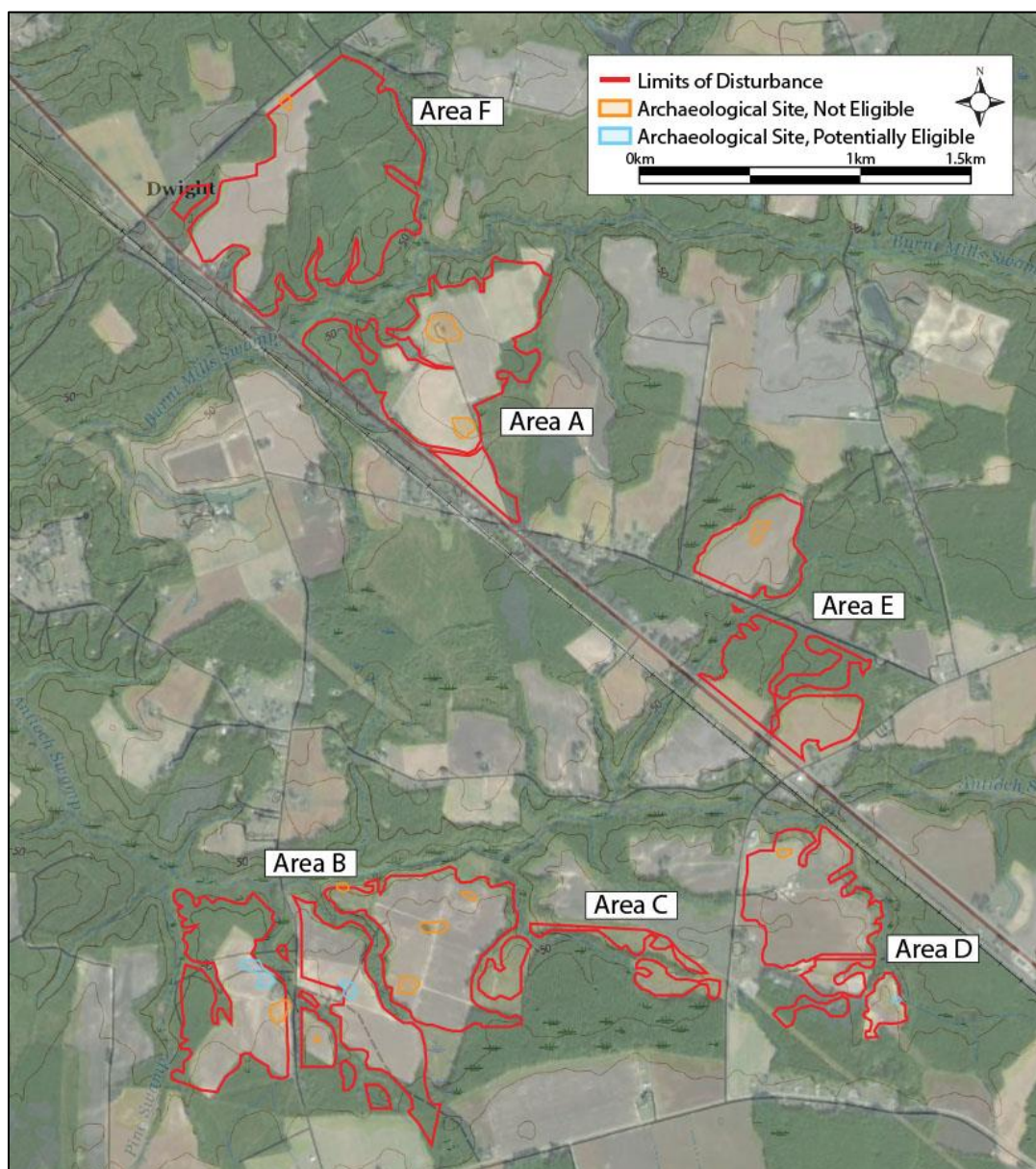


Figure 6-1: Aerial view of project area showing areas. Source: Google Earth 2019.

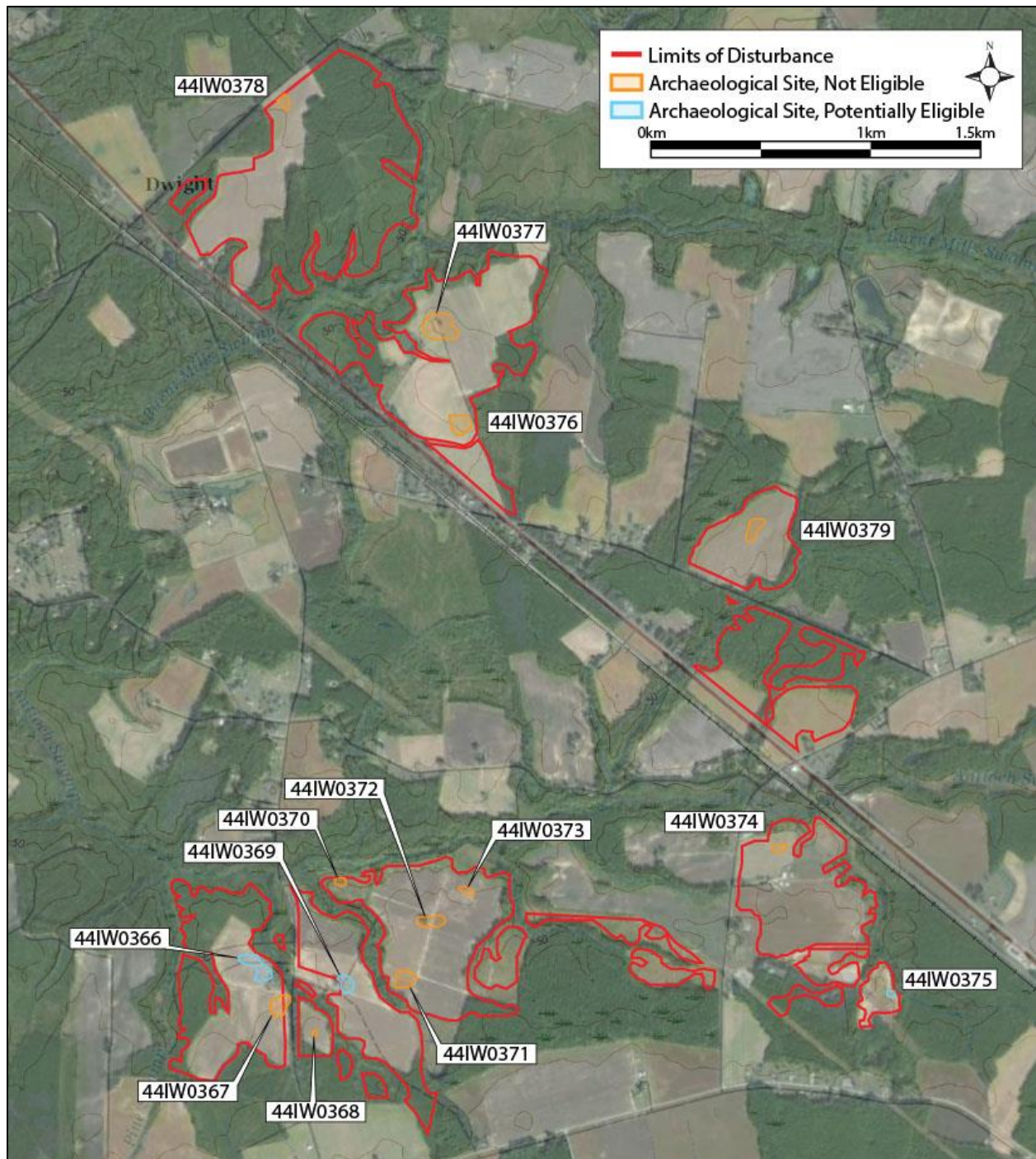


Figure 6-2: Aerial view of project area showing archaeological site locations. Google Earth 2019.

AREA A

This area consists of two tracts separated by US-460 (Figure 6-3). The larger parcel is roughly triangular in shape and is bounded to the south by US-460, to the west by Burnt Mills Swamp, and to the east by a parcel line that partially follows a small drainage.

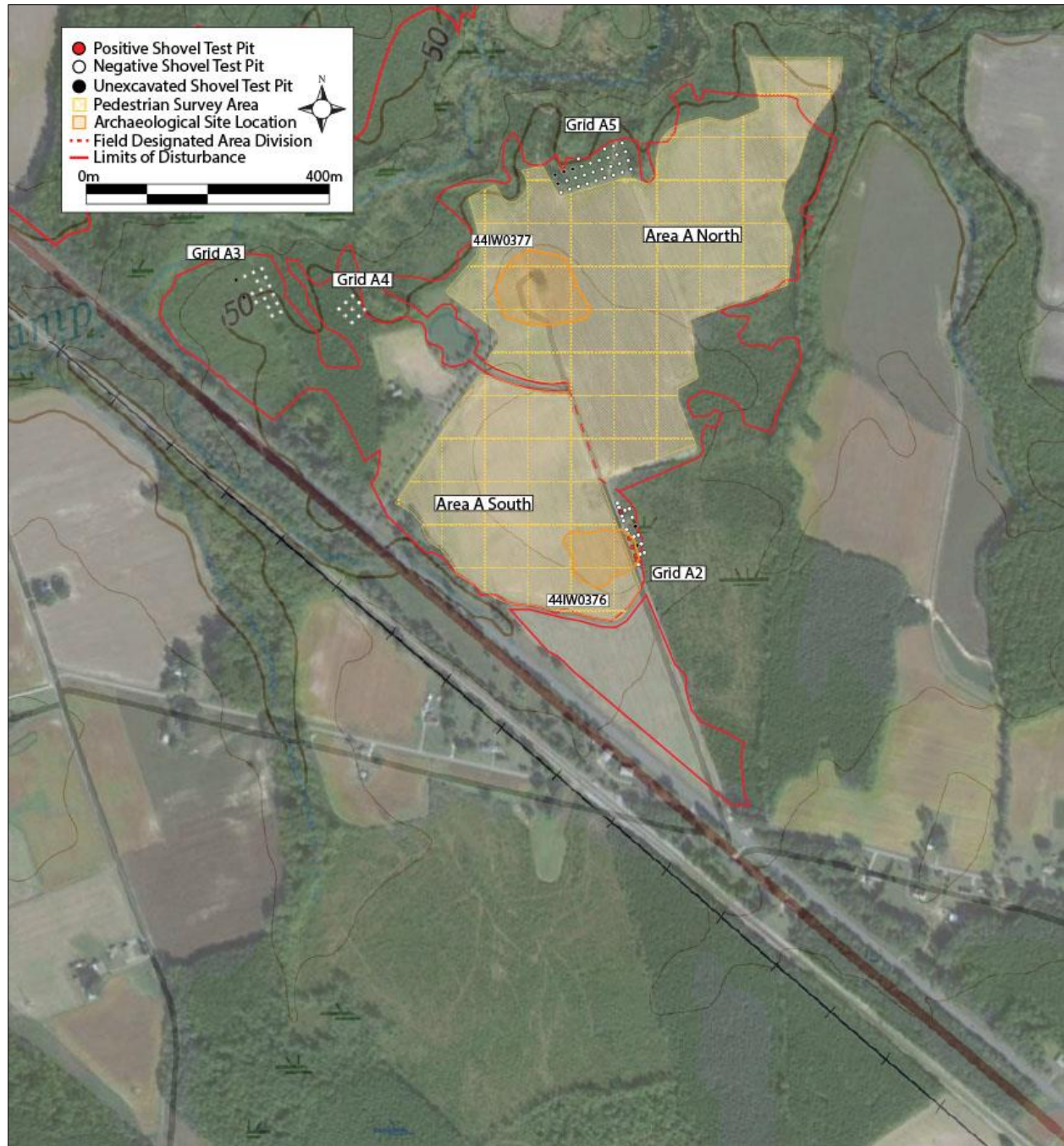


Figure 6-3: Area A pedestrian surveys, shovel test grids, and field sites.

A driveway leading to architectural resource # 046-5102 provides access to the center of the tract, and rough farm tracks provide access around the rest of the property. The southern parcel is set back from Ecella Road to the north and is bounded on the remaining sides by lot lines. In both tracts, testing was only conducted within the limits of disturbance, which avoided wetlands and was set back from roads and parcel boundaries.

Terrain consists of a broad, low upland terminating in a series of low finger ridges overlooking Burnt Mills Swamp and its tributaries to the northwest in both tracts. An artificial pond is located

just north of the house. Vegetation in the northern tract at the time of survey consisted of three fallow agricultural fields in the well-drained center of the property, and new growth pine around the poorly drained periphery. Sparse low weeds and grasses were growing in the agricultural fields, and ground surface visibility was good enough for systematic pedestrian survey. A stand of mature hardwoods is located in the southwest corner of the tract on a well-drained finger ridge overlooking the swamp. The southern tract was clearcut in 2019, and the entirety of the tract was covered in impenetrable new growth (Figures 6-4). Four grids were placed in the dense vegetation outside of the agricultural fields, discussed below.



Figure 6-4: Northeast corner of Area A, looking northwest into wetlands.

AREA A PEDESTRIAN SURVEY

At the time of survey there was over 70% surface visibility in agricultural fields, which make up most of Area A (Figures 6-5, 6-6). These agricultural fields were systematically pedestrian surveyed at no greater than 15-meter (50-foot) intervals; the fields were split into Area A North and Area A South. Two sites, Field Sites 11 and 12, were identified during pedestrian survey and are discussed in greater detail at the end of this section.



Figure 6-5: Vegetation and terrain in west-central portion of northeastern field in Area A, facing southwest.



Figure 6-6: Ground surface visibility in Area A.

GRID A2

This grid was placed along the edge of agricultural fields and Area A South (grid numbering began with A2, and no Grid A1 was designated). Vegetation in this area consists of dense briar thickets and mature pine trees (Figure 6-7). Disturbance from the nearby road and from logging activities was severe.



Figure 6-7: Dense vegetation in Grid A2, facing south.

A grid of 22 shovel test pits was laid out at 15-meter (50-foot) intervals in seven transects labeled (-A) through G (Figure 6-8). Two of these were unable to be excavated due to surface disturbance and impenetrable vegetation, and five shovel test pits were positive for cultural material. All positive shovel test pits were located at the side of the road that separates the agricultural fields from the wooded area and were included as a part of Site 44IW0376 which is discussed in greater detail below.

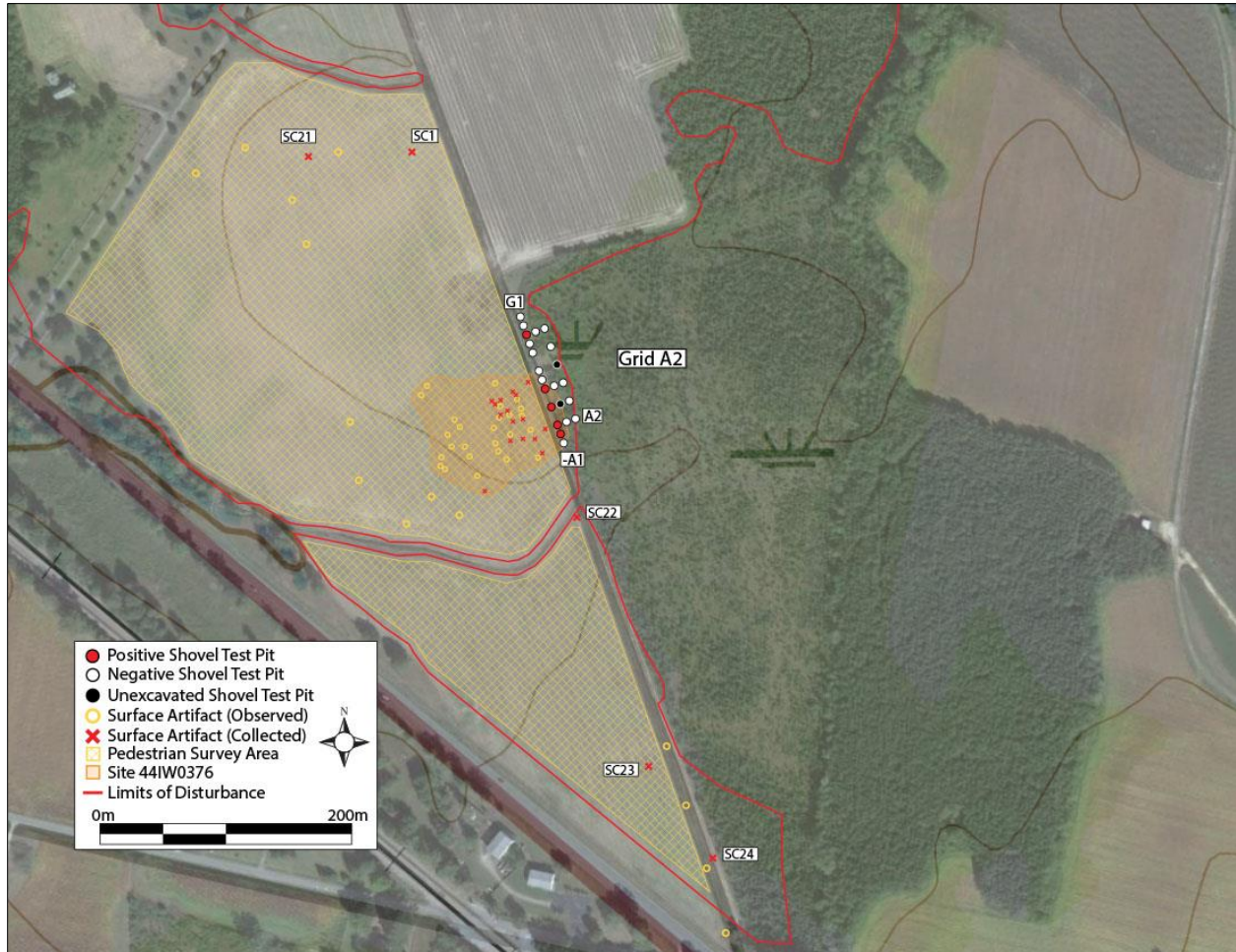


Figure 6-8: Aerial View of the Area A South pedestrian survey and shovel test Grid A2. Google Earth 2019.

Soils in this area are the same as those found in Area A4, discussed below.

GRID A3

This grid was placed in a wooded part of Area A, near the northern part of the overall project area and bordering Route 460 (Figure 6-9). Vegetation in this area consists of dense, often impenetrable briar thickets and mature pine trees.

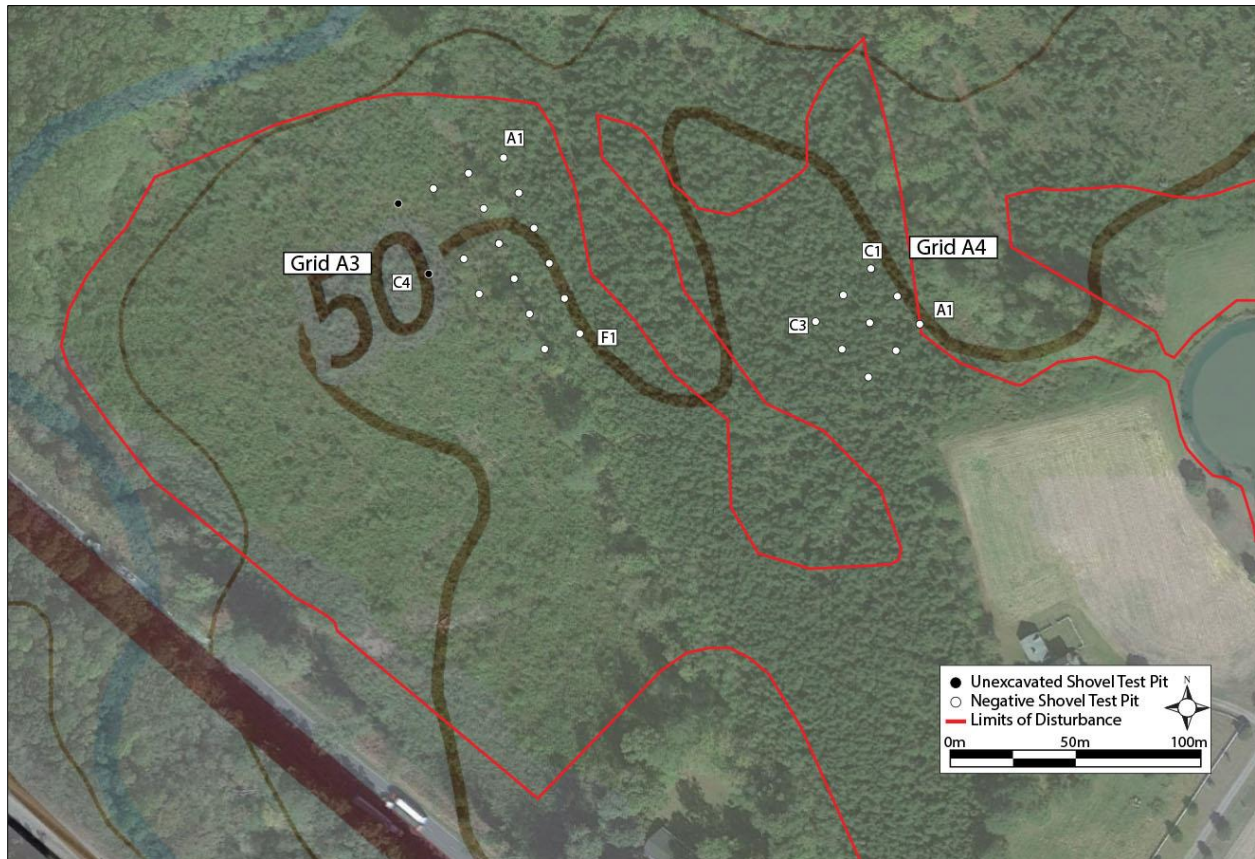


Figure 6-9: Aerial View of the Grid A3 and Grid A4 shovel test grids. Google Earth 2019.

A grid of seventeen shovel test pits was laid out at 15-meter (50-foot) intervals in six transects labeled A through F. Two of these were unable to be excavated due to surface disturbance and impenetrable vegetation. No historical surface features were observed, and no cultural material was found.

Disturbance from logging activities was severe. Soils in this area are the same as those found in Area A4, discussed below.

GRID A4

This grid was placed in a wooded part of Area A, near the northern part of the overall project area and bordering Route 460, just east of the Area A3 grid (see above). Vegetation in this area consists of dense, often impenetrable briar thickets and mature pine trees (Figures 6-10, 6-11). A grid of nine shovel test pits was laid out at 15-meter (50-foot) intervals in three transects labeled A through C. No historical surface features were observed, and no cultural material was found.



Figure 6-10: Dense vegetation in Grid A4, facing north.



Figure 6-11: South from B1, Grid A4.

Disturbance from logging activities was severe. Typical stratigraphy consisted of 10YR 3/1 very dark gray sand topsoil (A horizon) over 10YR 6/3 pale brown sandy clay subsoil (B horizon) (Figure 6-12).

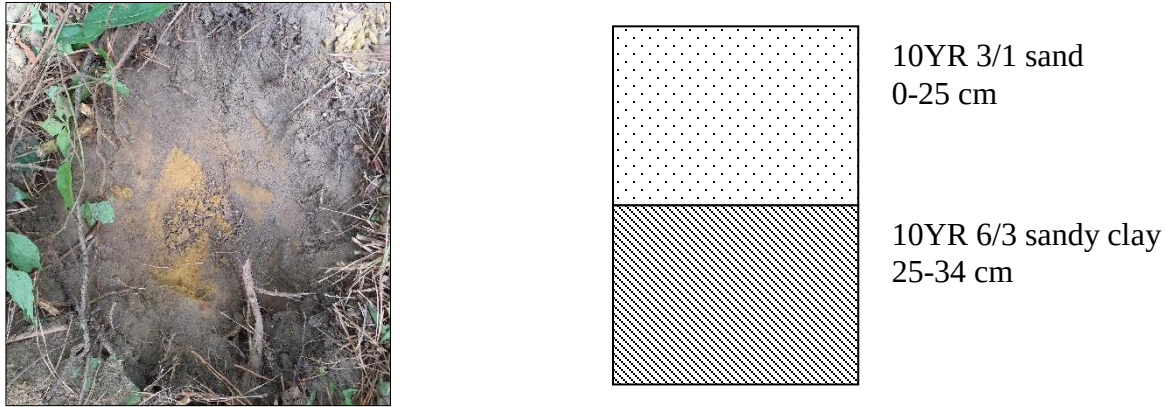


Figure 6-12: Soil profile of Shovel Test Pit B1 in Grid A4.

GRID A5

This area was placed in a wooded part of Area A, near the northern part of the overall project area, east of Area A4 and bordering the plowed field (Figure 6-13). Vegetation in this area consists of dense, often impenetrable briar thickets and mature pine trees (Figure 6-14). Disturbance from logging activities was severe.

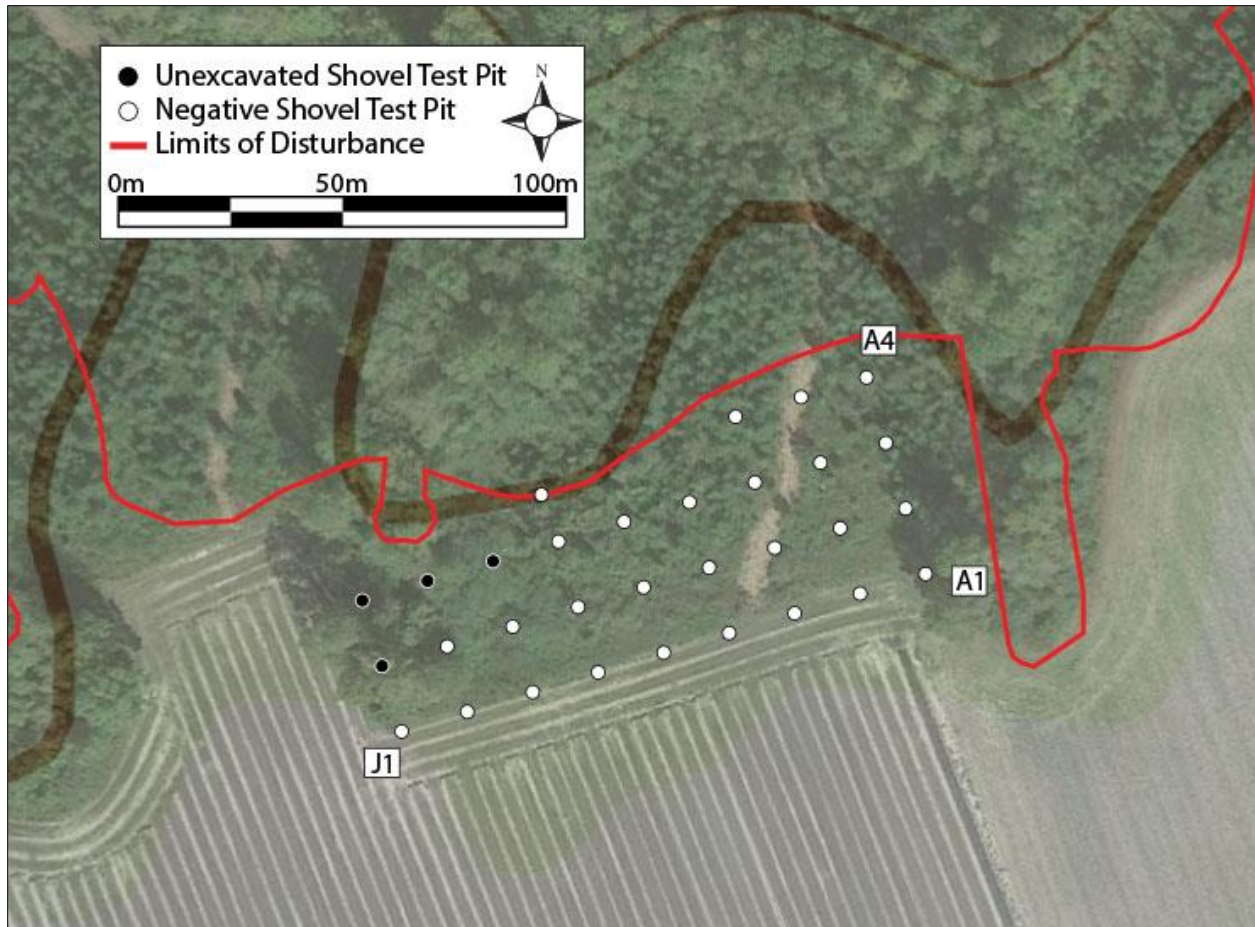


Figure 6-13: Aerial View of the Grid A5 shovel test grid. Google Earth 2019.

A grid of 31 shovel test pits was laid out at 15-meter (50-foot) intervals in seven transects labeled A through H. Four of these could not be excavated due to surface disturbance and impenetrable vegetation. No historical surface features were observed, and no cultural material was found.



Figure 6-14: Dense vegetation in Grid A5, facing east.

Soils in this area were the same as those found in Area A4.

SITE 44IW0376

This site was identified through systematic pedestrian survey in Area A South and shovel testing in Grid A2 (Figure 6-15). It consists of a scatter of early-twentieth century material measuring about 2.25 hectares (5.5 acres). Artifacts included whiteware, milk glass, colorless glass, screw top bottles, wire nails, and brick (Figure 6-16). Aerial imagery shows a building in this location until 2002.

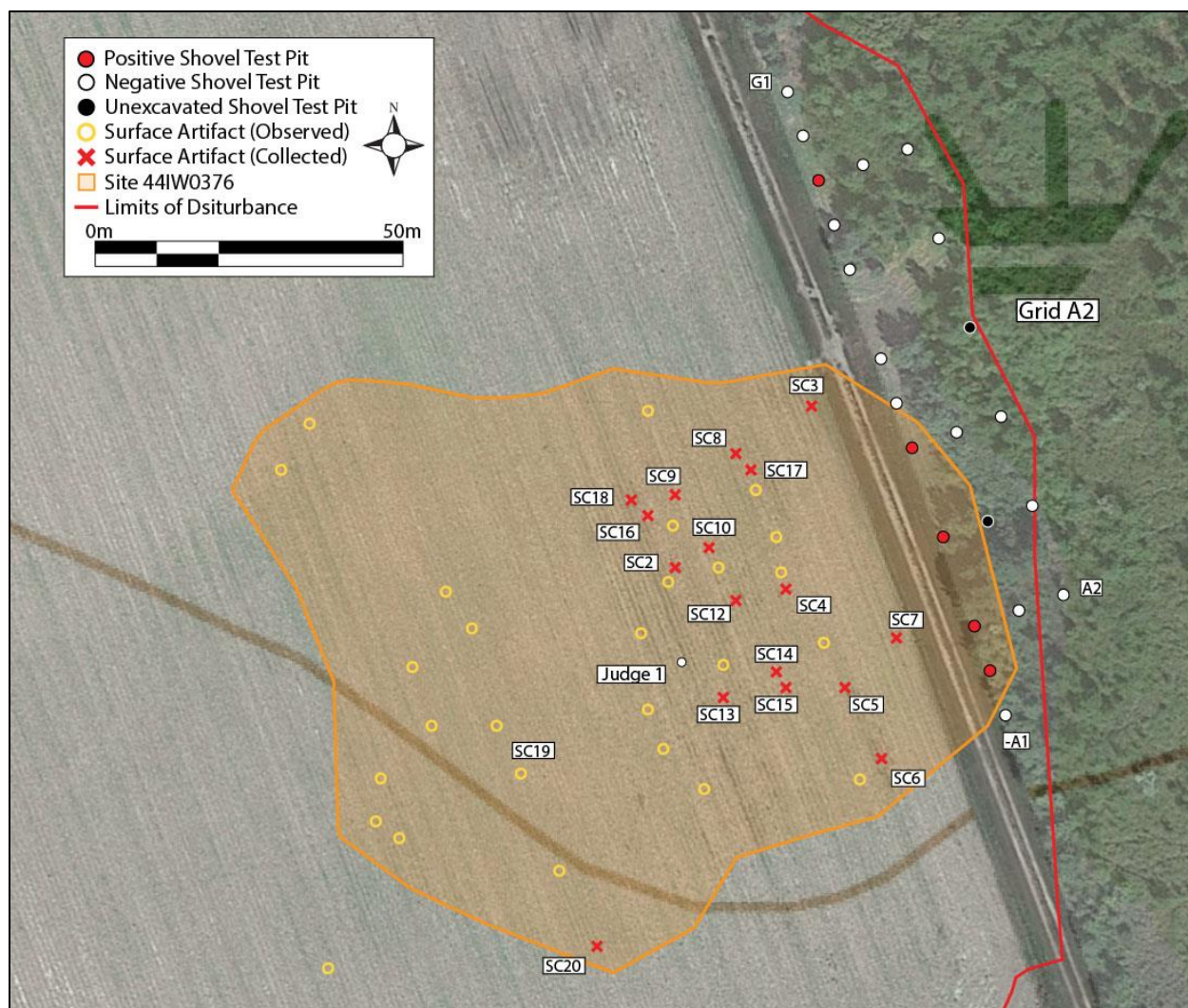
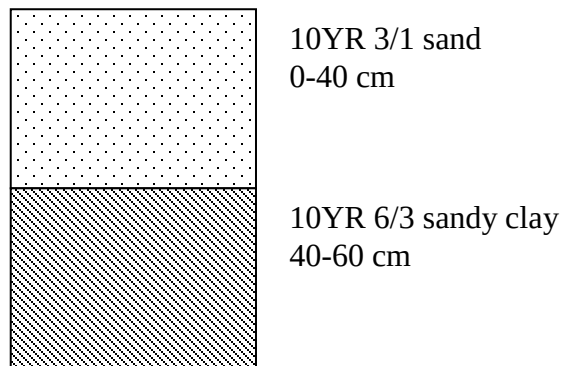


Figure 6-15: Aerial view of Site 44IW0376. Google Earth 2019.

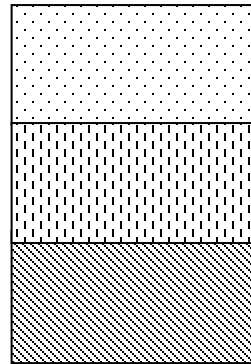


approximately 2.5 hectares (6.25 acres). Artifacts included pearlware, whiteware, cobalt glass, milk glass window glass, and brick and mortar (Figure 6-18). A building is depicted in this location on the 1864 map as associated with the Stevens family. Aerial imagery shows that a large farmstead with multiple outbuildings was present in this location in 1966, and although the main dwelling appears to have been demolished in the 1990s, the outbuildings stood until the early-2000s. Aerial images show large pushpiles of demolition debris, suggesting that little subsurface integrity remains.



Figure 6-18: Artifacts found in Site 44IW0377.

Soils in the plowed area appeared disturbed, exhibiting a potential buried A horizon. Typical stratigraphy consisted of 10YR 4/4 dark yellowish brown mottled with 10YR 5/8 yellowish brown sandy clay plowzone (Ap horizon) over 10YR 4/1 dark gray sandy clay over 10YR 5/3 brown sand subsoil (B horizon) (Figure 6-19).



10YR 4/4 mottled with
10YR 5/8 sandy clay
0-24 cm

10YR 4/1 sandy clay
24-44 cm

10YR 5/3 sandy
44-53 cm

Figure 6-19: Soil profile of Judgmental Shovel Test 1 in Site 44IW0377.

Due to the common nature of this site type and the level of subsurface disturbance, this site offers little research potential and is recommended not eligible for inclusion in the NRHP. No further work is recommended.

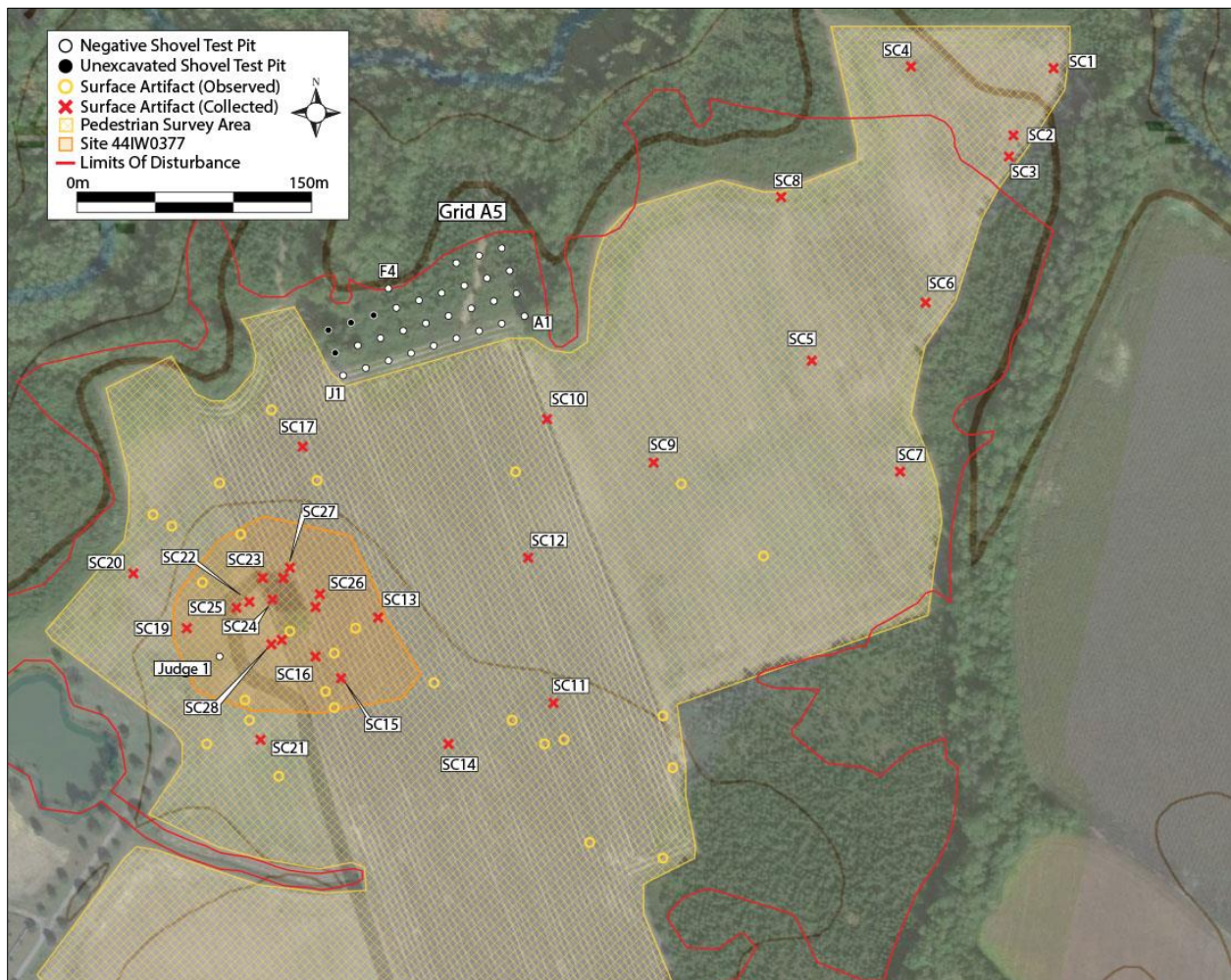


Figure 6-20: Site 44IW0377 in Area A North.

AREA B

This area consists of two tracts located to the east and west of Barrett Town Road (CR-641) (Figure 6-21). Both tracts are bounded to the north by Antioch Swamp. The western tract is bounded to the west by Pine Swamp, the south by a lot line, and the east by Barrett Town Road. The eastern tract is bounded to the west by the road, the east by a tributary of Antioch Swamp, and the south by a lot line. The limits of disturbance are set back from lot lines and wetlands. Farm roads provide access through both tracts. A historic house (Resource # 046-5089) is located on the front side of the eastern tract (Figure 6-22).

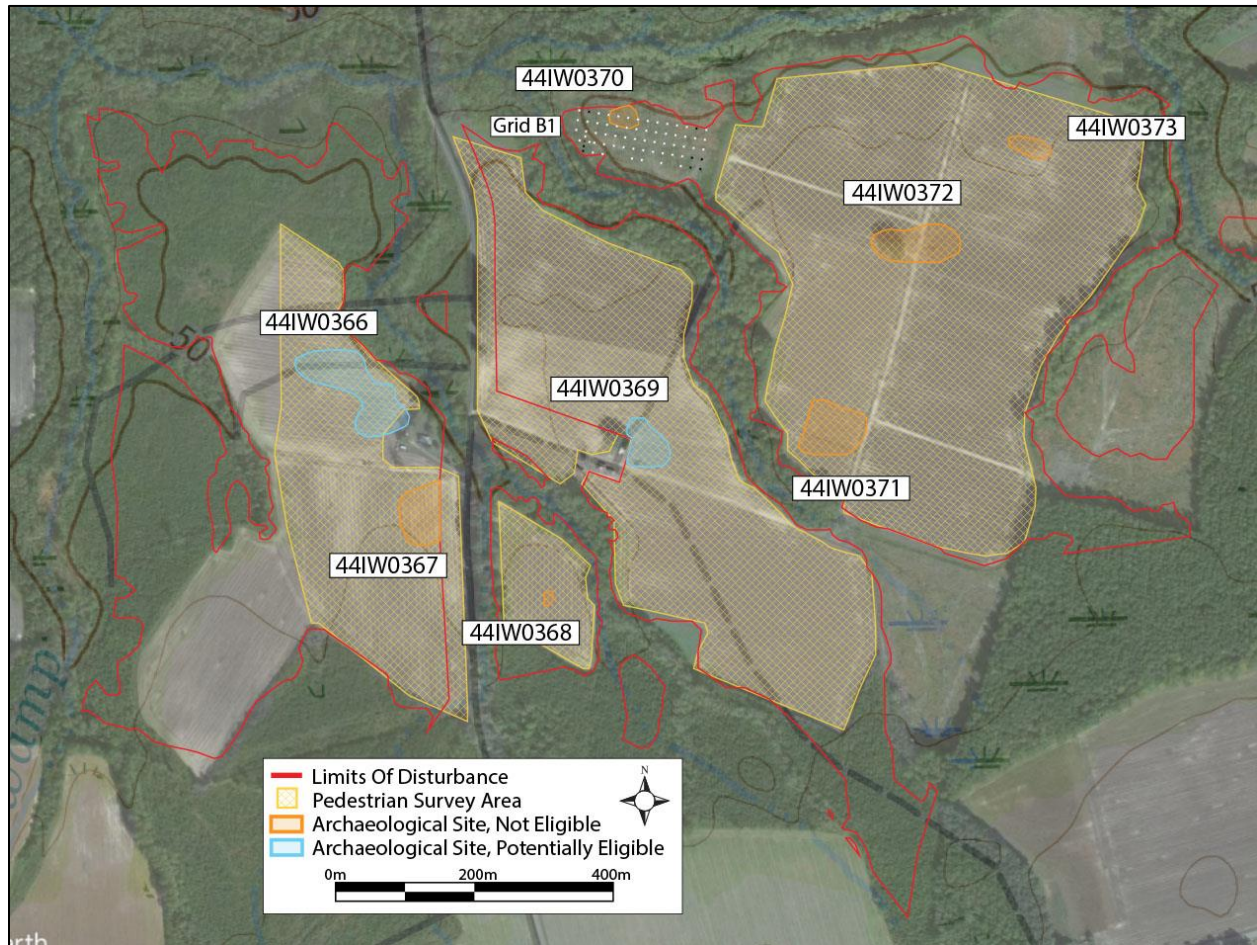


Figure 6-21: Aerial view of Area B pedestrian survey, shovel test grid, and field sites. Google Earth 2019.

Terrain consists of a series broad, low ridges overlooking Antioch Swamp and divided by tributaries of the swamp. The well-drained, level terrain of each ridge is used as an agricultural field. The northern ends of the ridges on the western tract and the southern base of the ridges on the eastern tract were formerly wooded and were clearcut in 2017. One short, wide ridge on the eastern edge of the eastern tract was clearcut in 2021. The drainages and wetlands are lined with mature hardwoods.



Figure 6-22: View southwest of Resource 046-5089 in eastern side of Area B.

AREA B PEDESTRIAN SURVEY

Ground surface visibility was excellent in the agricultural fields where planted crops had not yet sprouted, so systematic pedestrian survey was utilized across the fields (Figures 6-23, 6-24). Pedestrian survey was conducted in transects spaced no greater than 15 meter (50 feet) apart, with more intensive inspection being conducted around any observed cultural material. Eight sites were identified through systematic pedestrian survey: they are described below.



Figure 6-23: View west towards drainage in west side of Area B.



Figure 6-24: Vegetation and terrain on west side of Area B, facing south in center of southern field.

GRID B1

One high potential landform in Area B could not be pedestrian surveyed. This area was considered high probability for cultural activity due to its location on a broad, flat finger ridge overlooking the confluence of Antioch Swamp and one of its tributaries (Figure 6-25). Vegetation and surface disturbance in this area are both consistent with recent logging activities: the landform is covered by young tulip poplar saplings and tall grasses. (Figure 6-26).

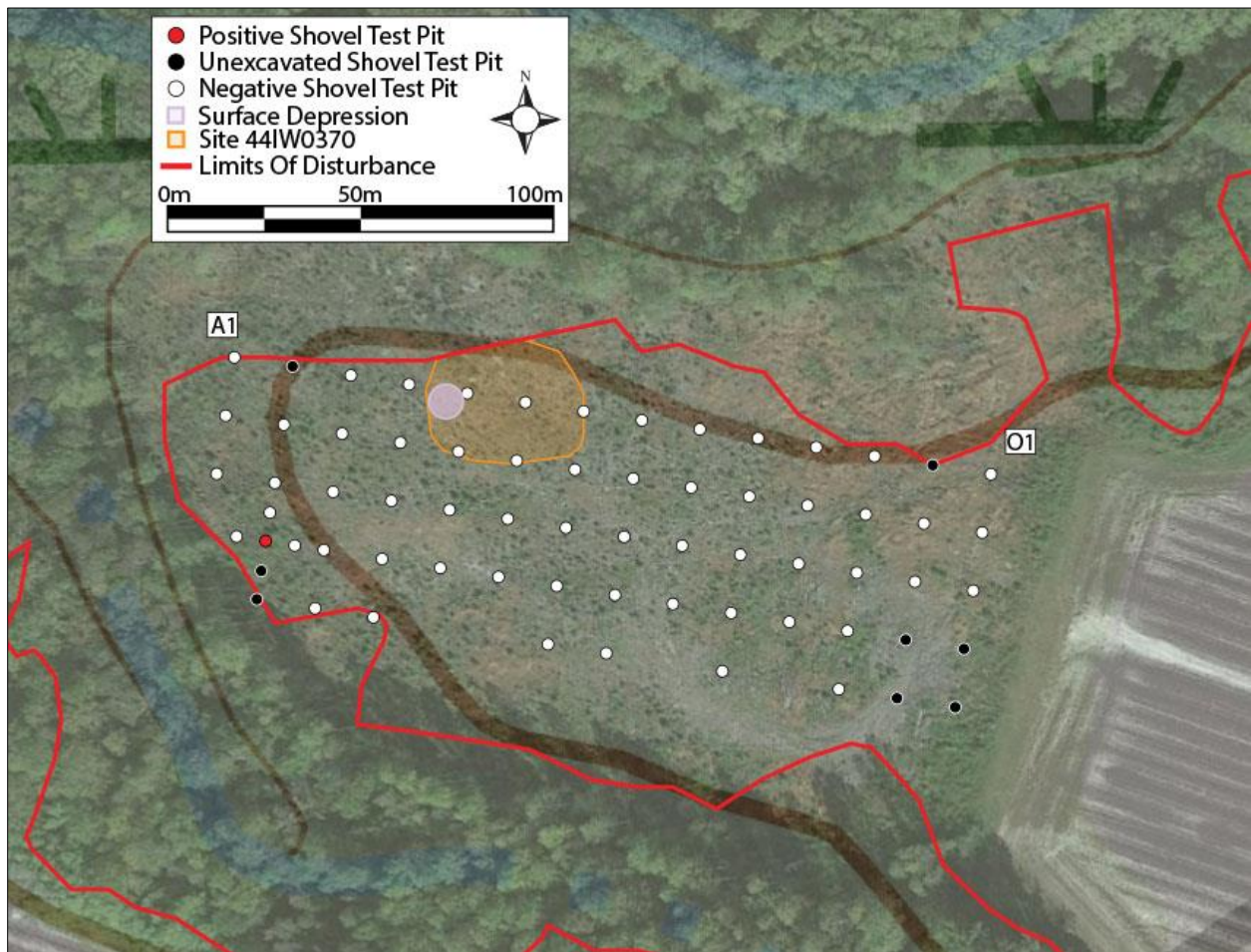


Figure 6-25: Aerial view of Grid B1 shovel test grid and Site 44IW0370. Google Earth 2019.



Figure 6-26: Clearcut finger ridge on eastern tract, facing east from Shovel Test J1.

A grid of 68 shovel test pits was laid out at 15-meter (50-foot) intervals in fourteen transects labeled A through O (excluding I). Eight of these could not be excavated due to slope and surface disturbance, and one shovel test pit was positive for cultural material. The artifact found in this shovel test pit was identified as fire cracked rock and was located outside of the boundary of Field Site 44IW0370. Radials were excavated around this positive shovel test pit, though no further cultural material was found in the soils.

Site 44IW0370 was identified during the excavation of this area. Only surface features, including a deep circular depression and a road cut, and a small cluster of early-twentieth century artifacts on the surface mark the site, as no shovel test pits revealed any subsurface cultural material within this site. These features and artifacts are discussed in depth below.

Soils are disturbed by erosion and tree removal and generally exhibited a two stratum profile of topsoil over subsoil. Typical stratigraphy consisted of a thin layer of 10YR 4/3 sandy loam topsoil (A horizon) over 10YR 6/4 yellowish brown clay sand (B horizon) (Figure 6-27).

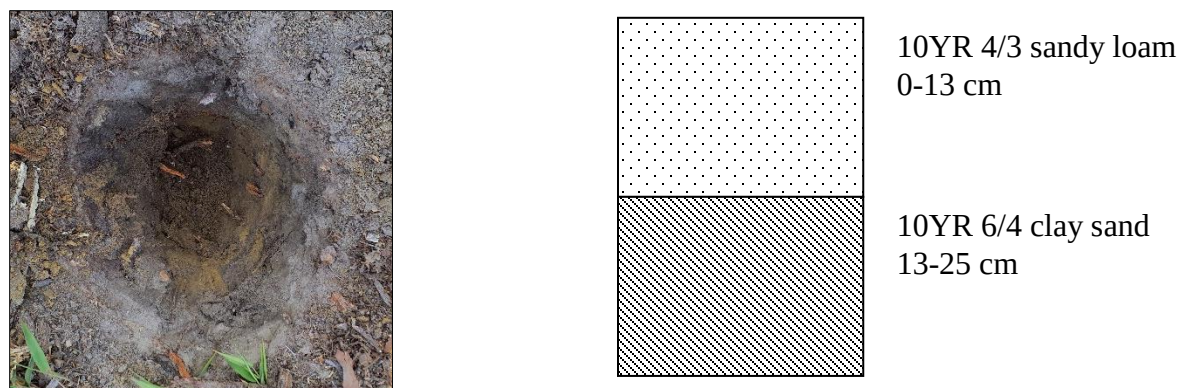


Figure 6-27: Soil profile of Shovel Test Pit J3 in Area B1 and Site 44IW0370.

SITE 44IW0366

This site is located on the western side of Area B behind Resource # 046-5277 (Figure 6-28). It covers approximately 0.89 hectares (2.21 acres) and was identified during pedestrian survey.

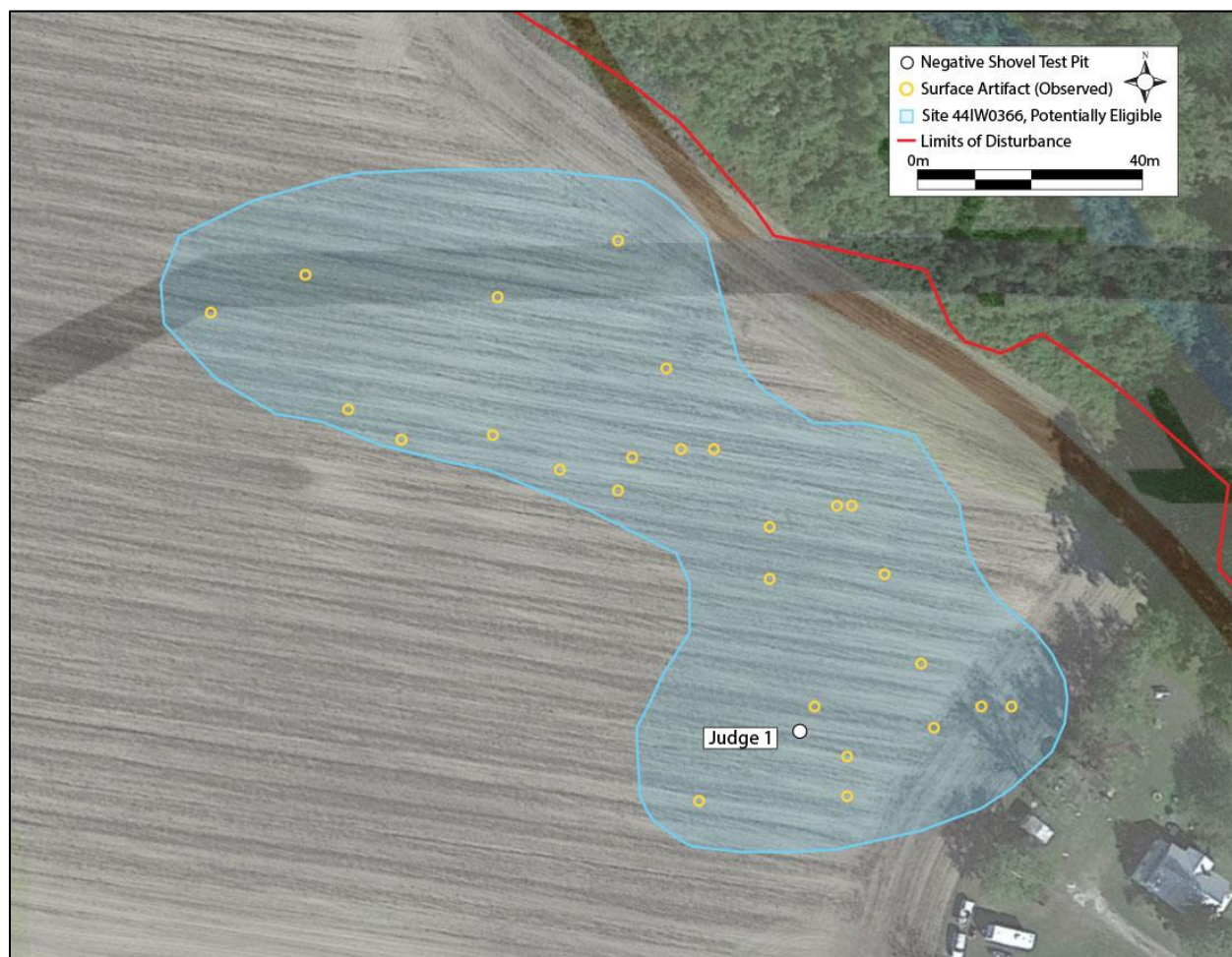


Figure 6-28: Aerial view of Site 44IW0366. Google Earth 2019.

Artifacts observed date from the mid-eighteenth to the early-twentieth century. These materials included coarse red earthenware, white clay pipe stems, Westerwald stoneware, cut nails, whiteware, milk glass, and solarized glass (Figure 6-29).



Figure 6-29: Artifacts found in Site 44IW0366.

Due to its large size and the presence of eighteenth-century artifacts, this site has the potential to provide important data pertaining to the eighteenth century in the region, and it is recommended potentially eligible for inclusion in the NRHP. Avoidance or further study is recommended.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sandy clay subsoil (B horizon) (Figure 6-30).

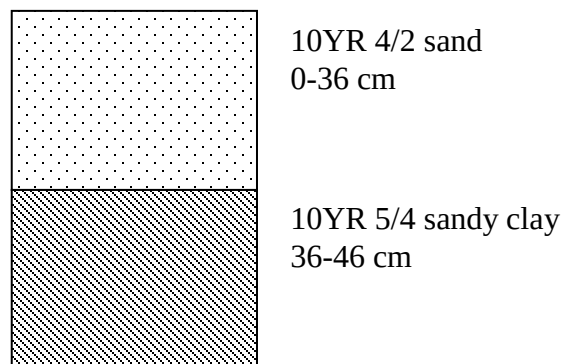


Figure 6-30: Soil profile of Judgmental Shovel Test 1 in Site 44IW0366.

SITE 44IW0367

This site is a small, diffuse scatter of late-nineteenth through early-twentieth century artifacts located in an agricultural field just south of Resource # 046-5277 (Figure 6-31). Artifacts included whiteware, porcelaneous, brick, and colorless glass. This site is likely associated with the nearby twentieth century dwelling. Due to its small size and recent date, this site is unlikely to yield new or important data, and it is recommended not eligible for inclusion in the NRHIP. No further work is recommended.



Figure 6-31: Aerial view of Site 44IW0367. Google Earth 2019.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown sand plowzone (Ap horizon) over 10YR 5/4 yellowish brown sandy clay subsoil (B horizon) (Figure 6-32).

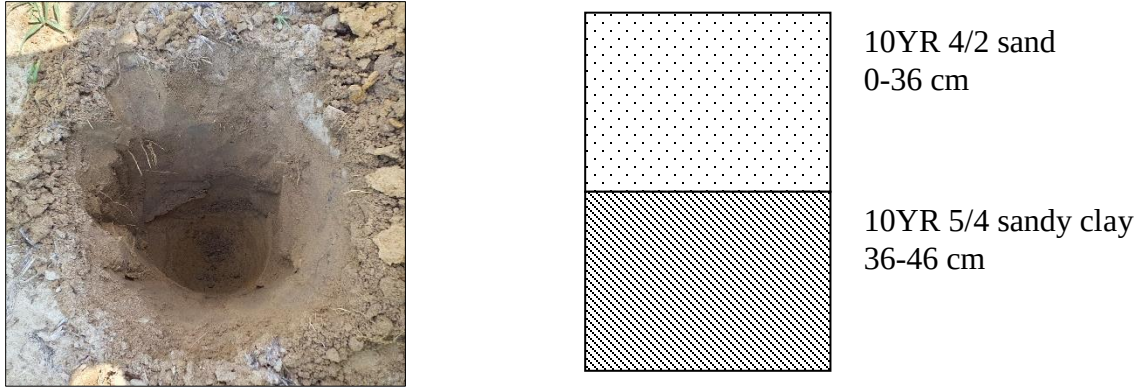


Figure 6-32: Soil profile of Judgmental Shovel Test 1 in Site 44IW0367.

SITE 44IW0368

This site was observed in a small field to the south of Resource #046-5277, on the other side of a drainage (Figure 6-33). This site is a small cluster of late-nineteenth through early-twentieth century artifacts, including whiteware, brick fragments, and solarized glass. One jasper tertiary flake was also observed in this area (Figure 6-34). Due to its small size and recent date, this site is unlikely to yield new or important data, and it is recommended not eligible for inclusion in the NRHIP. No further work is recommended.

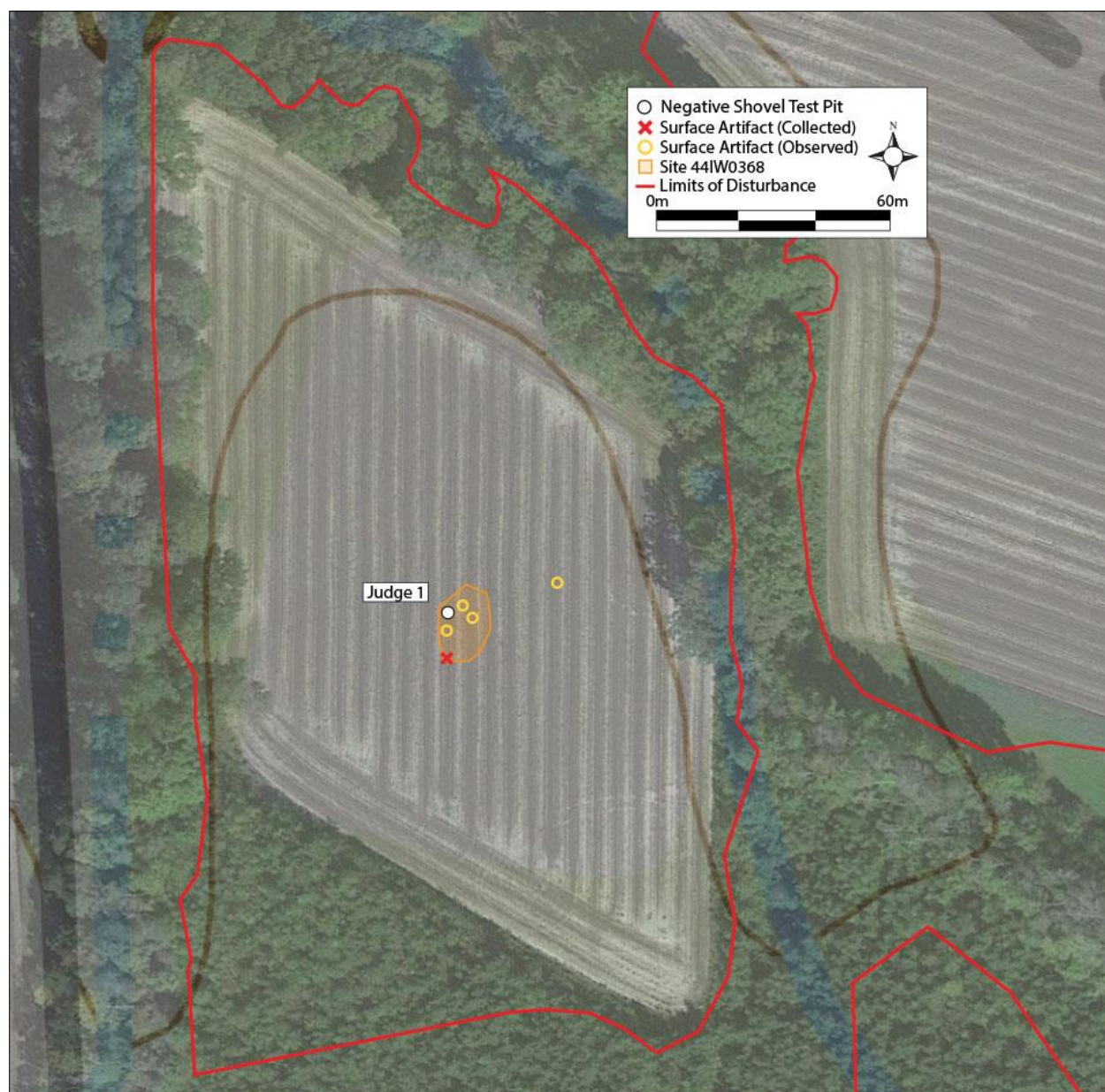


Figure 6-33: Aerial view of Site 44IW0368. Google Earth 2019.



Figure 6-34: Artifact found in Site 44IW0368.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 yellowish brown sandy clay subsoil (B horizon) (Figure 6-35).

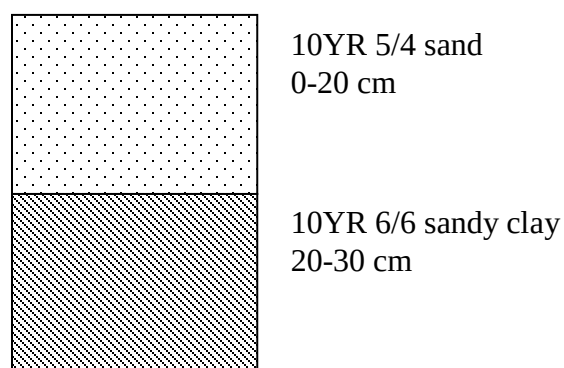


Figure 6-35: Soil profile of Judgmental Shovel Test 1 in Site 44IW0368.

SITE 44IW0369

This site is associated with Resource # 046-5089, and it consists of a scatter of domestic material located in front of the dwelling (Figure 6-36).

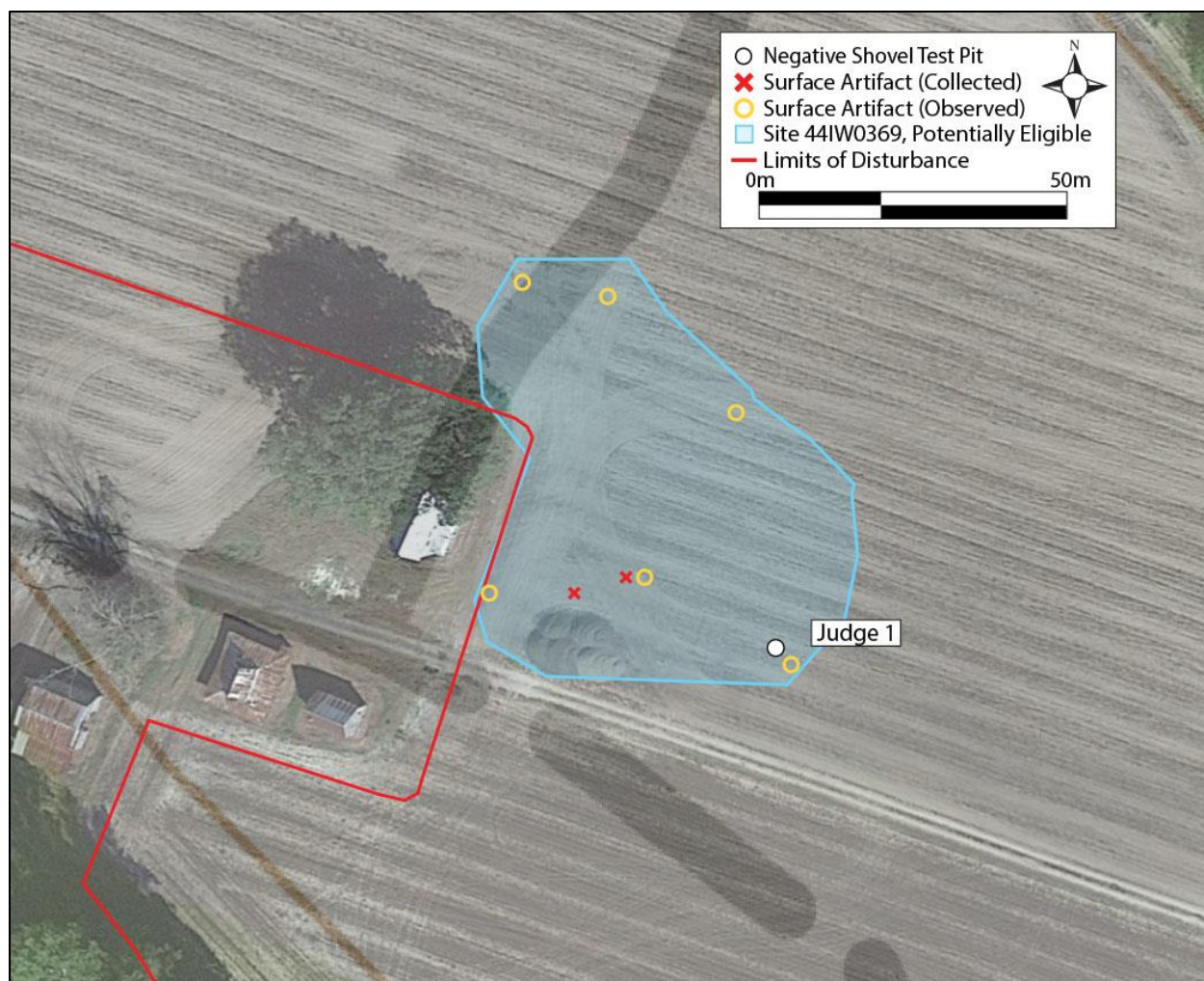


Figure 6-36: Aerial view of Site 44IW0369. Google Earth 2019.

As in Site 44IW0366, artifacts consist of a mixture of eighteenth and early-twentieth century material, including white salt-glazed stoneware and shell-edged pearlware (Figure 6-37). Due to its association with a potentially early-dating farm complex and the presence of eighteenth-century artifacts, this site has the potential to provide important data pertaining to the eighteenth century in the region, and it is recommended potentially eligible for inclusion in the NRHP. Avoidance or further study is recommended.



Figure 6-37: Artifacts found in Site 44IW0369.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown sand (Ap horizon) over 10YR 5/4 yellowish brown sandy clay (B horizon) (Figure 6-38).

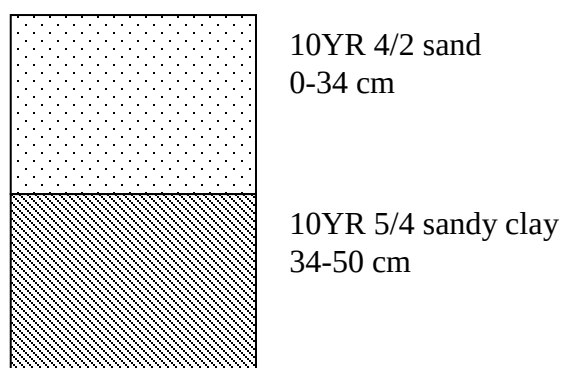


Figure 6-38: Soil profile of Judgmental Shovel Test 1 in Site 44IW0369.

SITE 44IW0370

This site is located immediately south of Antioch Swamp and east of Barrett Town Road, on a narrow, flat landform, and covers approximately 0.1 hectare (0.2 acre) (Figure 6-39).

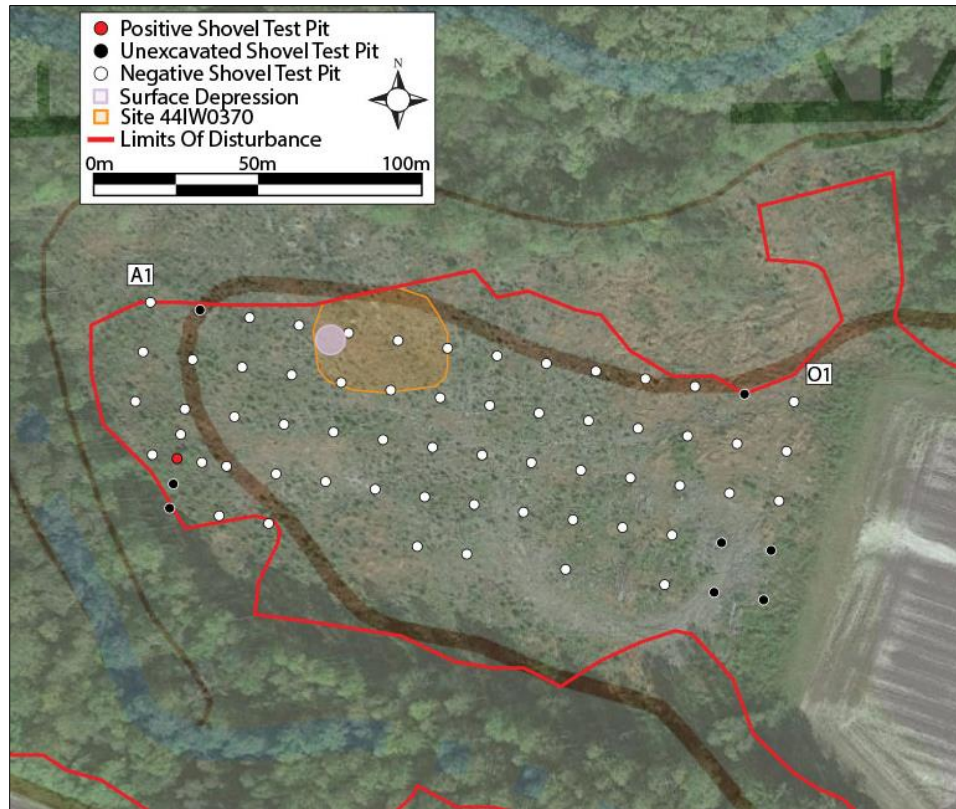


Figure 6-39: Aerial view with topographic overlay of Site 44IW0370.

The site was identified by the two main surface features that mark the site, a deep pit and a road cut (Figure 6-40). Both are located on the northern edge of the landform, overlooking the swamp. The road cut is deep and runs southeast to northwest to the swamp from the top of the landform, passing close to the pit. The pit is approximately ten feet in diameter with artifacts scattered on the edge (Figure 6-41). Artifacts found on the surface are primarily from the first quarter of the twentieth century, though no subsurface artifacts were found. No known historic maps indicate a structure in this location, though one topographic map from 1920 shows a road running through this area. Due to its recent date and the lack of subsurface integrity, this site does not offer significant research potential. Therefore, it is recommended not eligible for inclusion in the NRHP, and no further work is recommended.



Figure 6-40: Road cut leading towards Antioch Swamp, with Field Technicians to show depth, facing north.



Figure 6-41: Artifact scatter next to pit and road cut.

SITE 44IW0371

This site is in the projected location of a building depicted on a 1920 topographic map. It was found through systematic pedestrian survey, and it consisted of an approximately 0.6 hectare (1.5 acre) scatter of early-twentieth century artifacts, including whiteware, cobalt blue vessel glass, window glass, and canning jar lid liners (Figures 6-42, 6-43). This site is visible on a 1966 aerial image as a small farmstead with a dwelling and a cluster of outbuildings. By 1983 it appears to have been demolished. Early-twentieth century farmsteads are well-represented in this region, and this site does not offer significant research potential. Therefore, it is recommended not eligible for inclusion in the NRHP, and no further work is recommended.

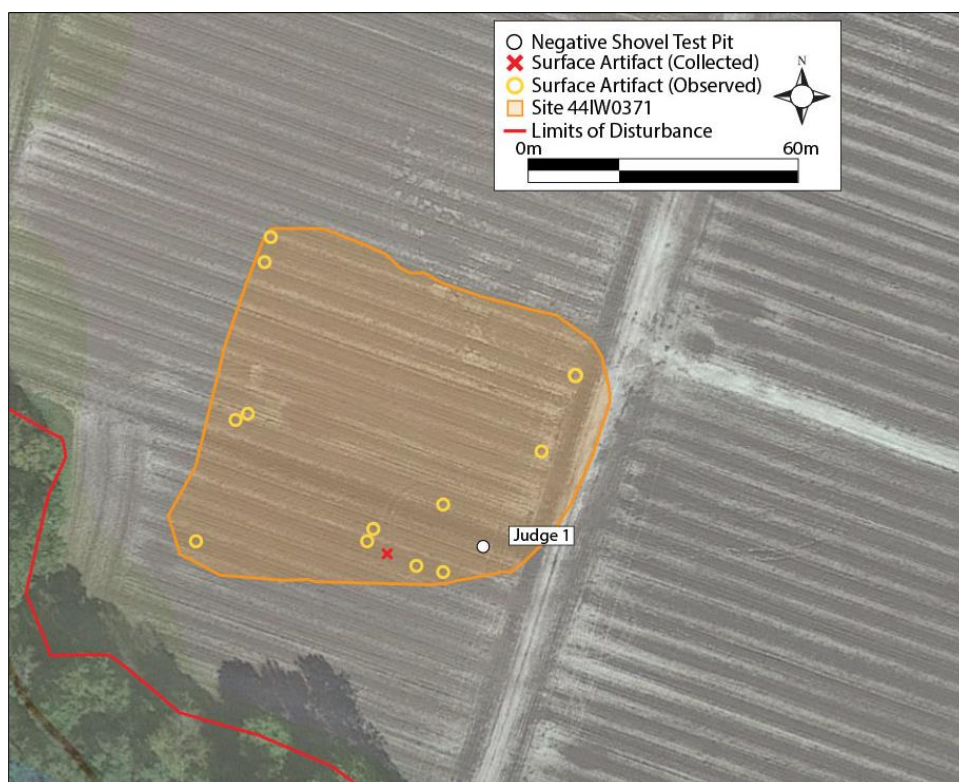


Figure 6-42: Aerial view of Site 44IW0371. Google Earth 2019.



Figure 6-43: Artifacts found in Site 44IW0371.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown sand (Ap horizon) over 10YR 5/4 yellowish brown sandy clay (B horizon) (Figure 6-44).

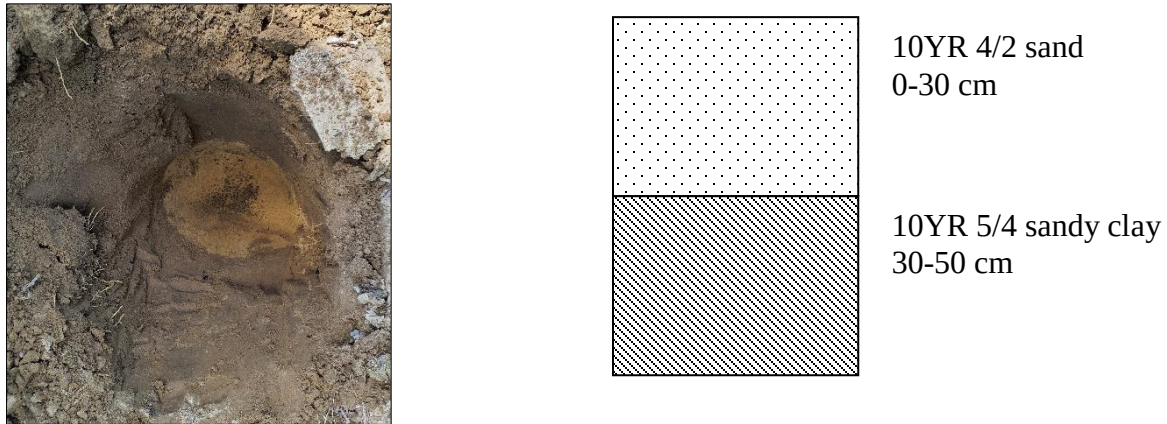


Figure 6-44: Soil profile of Judgmental Shovel Test 1 in Site 44IW0371.

SITE 44IW0372

This site is in the projected location of a building depicted on a 1920 topographic map. It was found through systematic pedestrian survey, and it consisted of an approximately 0.4 hectare (one acre) scatter of early-twentieth century artifacts located to the east and west of the farm road and including a mature hardwood and some associated rubble (Figure 6-45). Artifacts included whiteware, an aqua medicine bottle, canning jar lid liners, brick fragments, and plastic. This site is visible on a 1966 aerial image as a small farmstead with a dwelling and a cluster of outbuildings. By 1994 it appears to have been demolished. Early-twentieth century farmsteads are well-represented in this region, and this site does not offer significant research potential. Therefore, it is recommended not eligible for inclusion in the NRHP, and no further work is recommended.

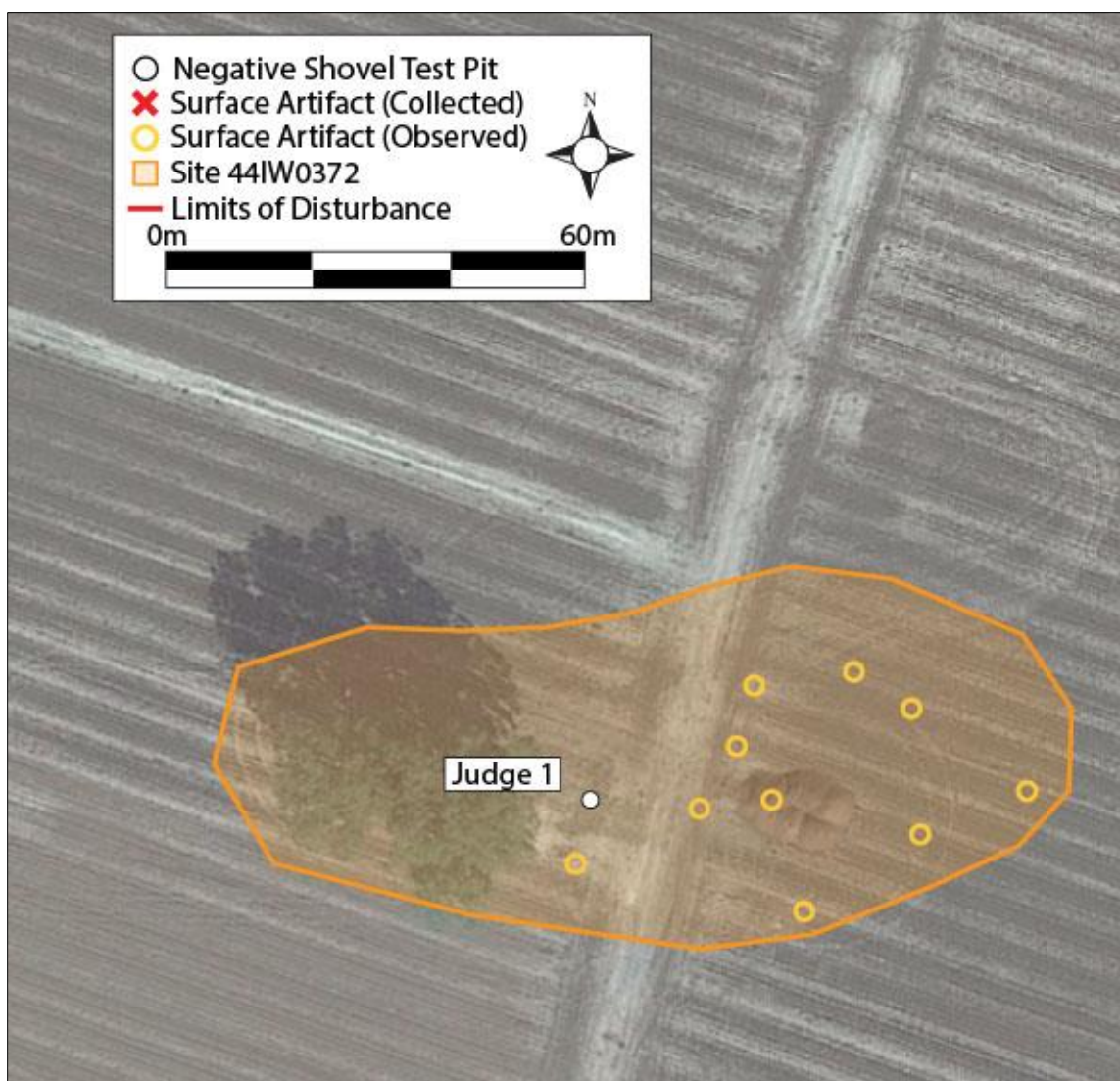


Figure 6-45: Aerial view of Site 44IW0372. Google Earth 2019.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 yellowish brown sandy clay subsoil (B horizon) (Figure 6-46).

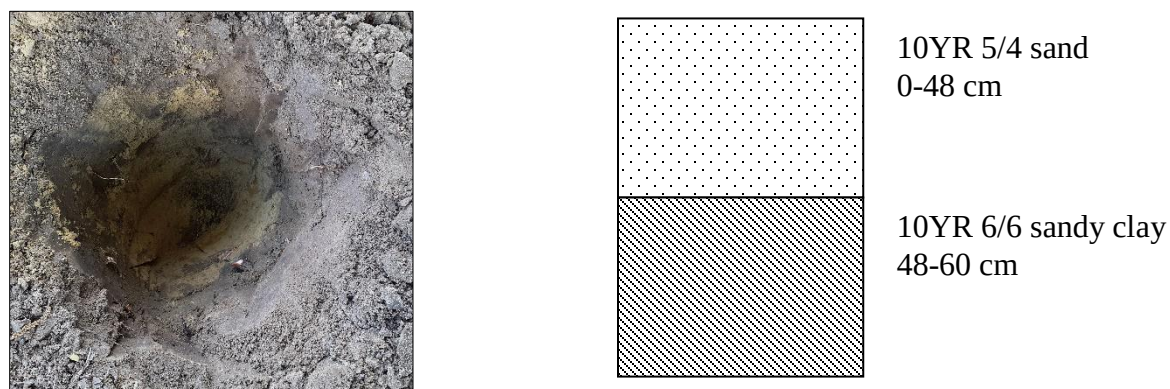


Figure 6-46: Soil profile of Judgmental Shovel Test 1 in Site 44IW0372.

SITE 44IW0373

This site is a small cluster of historic artifacts identified through systematic pedestrian survey. Artifacts included whiteware, ironstone, milk glass, and porcelainous: the same type of material recovered from Site 44IW0372 (Figures 6-47, 6-48). A sherd of tin-glazed earthenware was also collected. No structures are depicted in this area on historic maps and aerials, but the turn-of-the-twentieth century artifacts are likely related to the occupation of the house associated with 44IW0372. A previously recorded site, 44IW0248 is located a short distance east of this site. It consisted of a scatter of eighteenth-century material, including tin-glazed earthenware. This site was evaluated by Louis Berger in 2007 and determined not eligible for inclusion in the NRHP, and VDHR concurred with this recommendation. The tin-glazed earthenware was the only temporally associated artifact that was identified during the current survey. Because the two sites appeared to date to different time periods, the twentieth-century concentration was given a distinct site number.

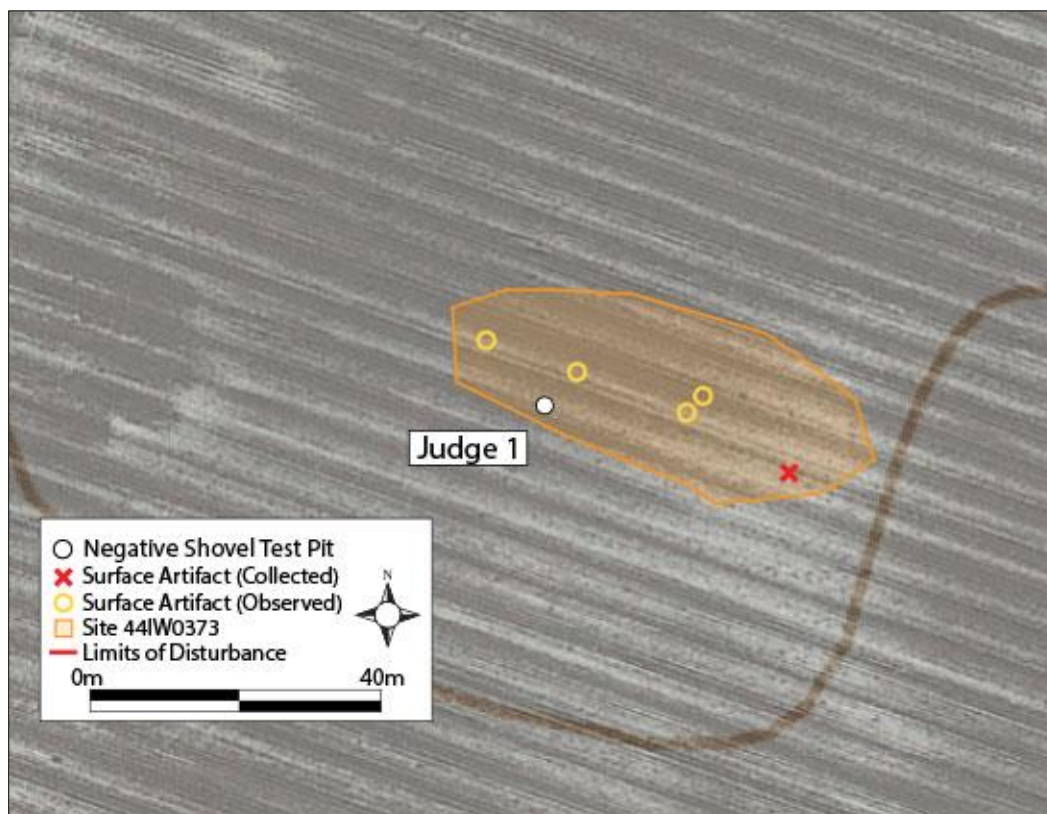


Figure 6-47: Aerial view of Site 44IW0373. Google Earth 2019.



Figure 6-48: Artifact found in Site 44IW0373.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 yellowish brown sandy clay subsoil (B horizon) (Figure 6-49).

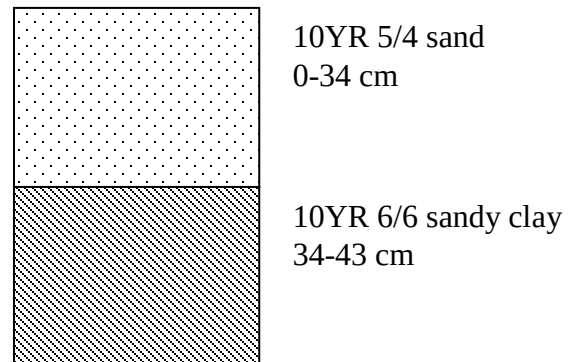


Figure 6-49: Soil profile of Judgmental Shovel Test 1 in Site 44IW0373.

AREA C

This is a narrow section connecting Areas B and D. It roughly follows a tributary of Antioch Swamp. The tract abuts Antioch Road (CR-657) to the east. The well-drained portion of this area consists of a terrace overlooking the swamp (Figure 6-50).

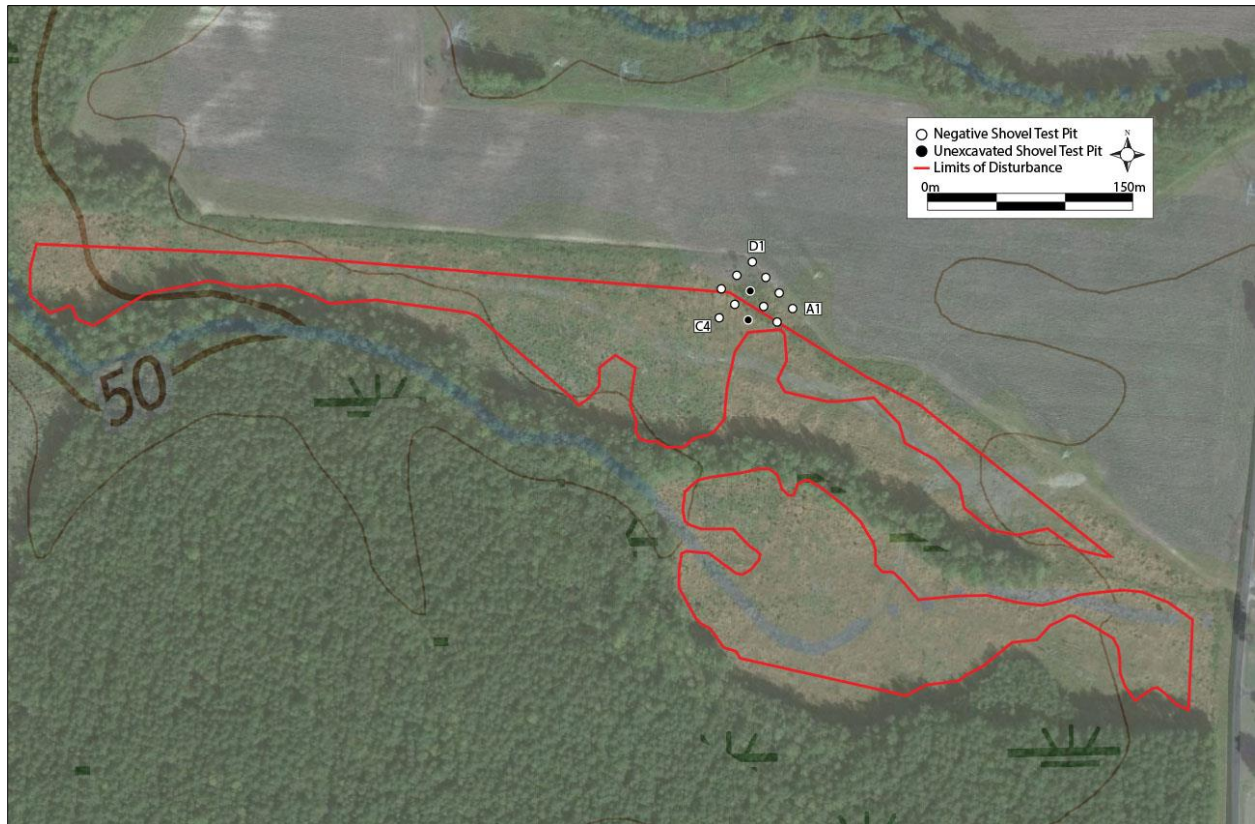


Figure 6-50: Aerial view of Area C shovel test grid. Google Earth 2019.

This area has been clearcut multiple times in the past twenty years, with the most recent episode occurring in 2021. Vegetation is primarily densely growing vines, saplings, and brambles (Figure 6-51). Disturbance in this area was severe, with large pushpiles throughout.



Figure 6-51: Vegetation and disturbance in Area C, facing southwest.

This area was considered high probability for presence of cultural material due to its position at the edge of agricultural fields and overlooking a tributary of Antioch to the south. Due to the disturbance, the grid was extended slightly outside of the limits of disturbance, but still within the lease area. A grid of twelve shovel test pits was laid out at 15-meter (50-foot) intervals in four transects labeled A through D. Two of these could not be excavated due to disturbance and impenetrable vegetation. Subsurface testing confirmed expected levels of disturbance. No historic surface features were observed, and no cultural material was recovered.

Disturbance in this area is severe, with towering pushpiles and uneven surfaces throughout. Soils in this site generally exhibited a two stratum profile of topsoil over subsoil. Typical stratigraphy consisted of 2.5Y 5/2 grayish brown sandy loam topsoil (A horizon) over 2.5Y 6/4 light yellowish brown sand subsoil (B horizon) (Figure 6-52).

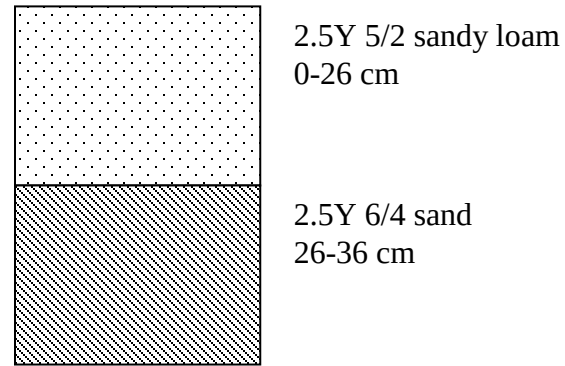


Figure 6-52: Soil profile of Shovel Test Pit C3 in Area C.

AREA D

This area consists of several contiguous parcels located to the east of Antioch Road (Figure 6-53). It is bounded to the west by the road, to the north and east by tributaries of Antioch Swamp, and to the south by parcel lines.

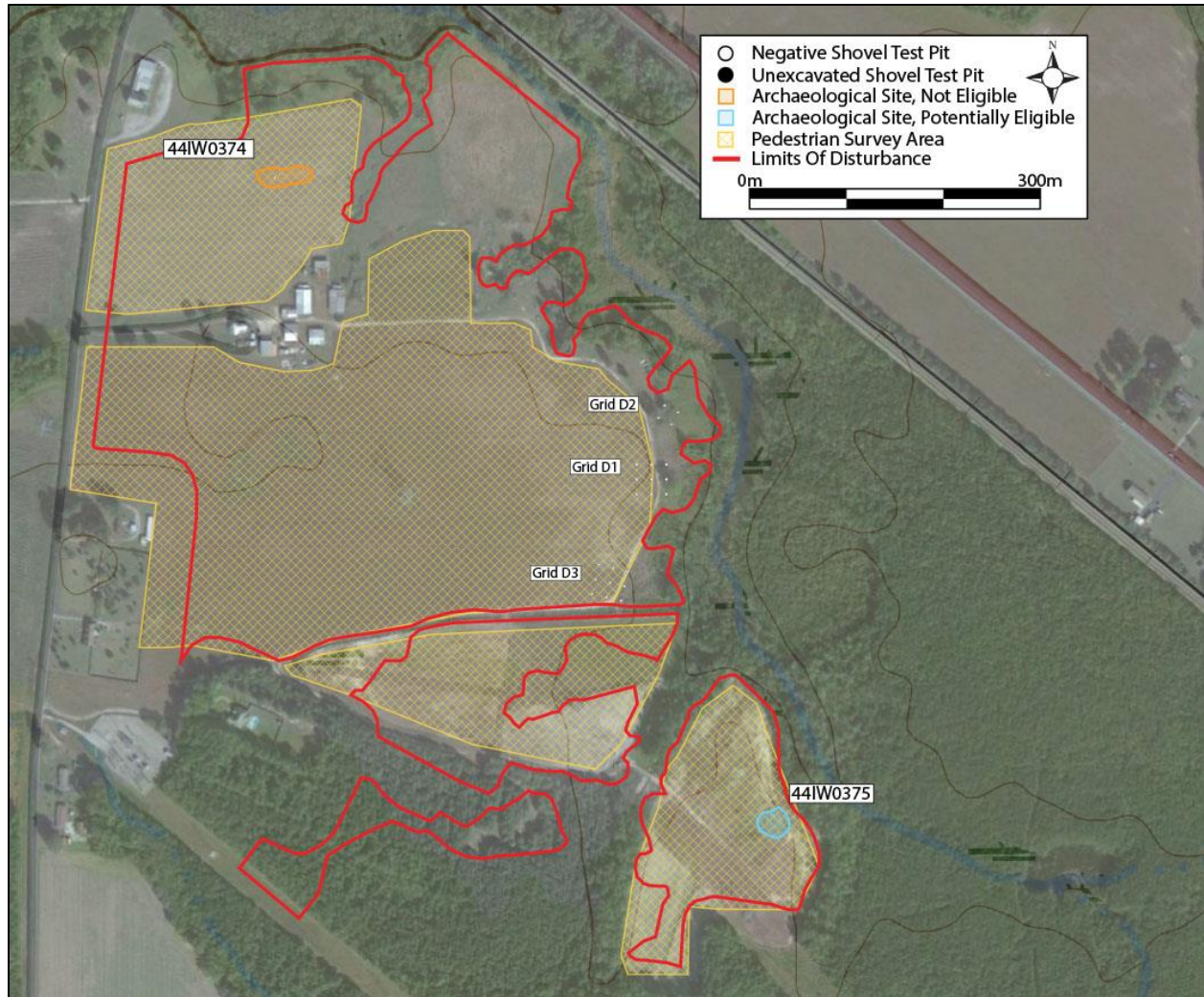


Figure 6-53: Aerial view of Area D pedestrian survey, shovel test grids, and field sites. Google Earth 2019.

A large farm complex (Resource # 046-5112) is located within the northern parcel, a historic church (Resource # 046-5154) is located to the north of the tract, and a modern dwelling is cut out of the southern parcel (Figures 6-54 through 6-56). Driveways and farm roads provide access throughout. A transmission line right-of-way extends east-to-west across the center of the southern field, then turns and continues southeast across the two smaller fields.



Figure 6-54: View north toward historic church, Resource #046-5154.



Figure 6-55: Overview of farm complex, Resource #046-5112, facing south.



Figure 6-56: View northwest of transmission line.

Terrain consists of a broad, level upland with low terraces overlooking the swamp to the north and east. Several draws drain north into the swamp. Vegetation at the time of survey consisted of a series of agricultural fields separated by the drainages. The fields on the south side of the tract were clearcut and converted from forest in 2019. Aerial imagery from that year shows drainage ditches being constructed and pushpiles scattered across the area. The fields had been recently disked and planted in corn, which was so young at the time of survey that ground surface visibility was around 90% (Figure 6-57).



Figure 6-57: Overview of vegetation and terrain in southeastern field, which was recently converted from forest.

AREA D PEDESTRIAN SURVEY

Ground surface visibility in all agricultural fields in Area D was approximately 90%, and systematic pedestrian survey was conducted at no greater than 15-meter (50-foot) intervals (Figure 6-58). Two archaeological sites were identified during this survey, Sites 44IW0374 and 44IW0375, discussed in detail below.



Figure 6-58: Typical ground surface visibility in Area D.

GRID D1

This area was considered high probability for presence of cultural material due to its position at the edge of agricultural fields and overlooking a tributary of Antioch Swamp (Figure 6-59).

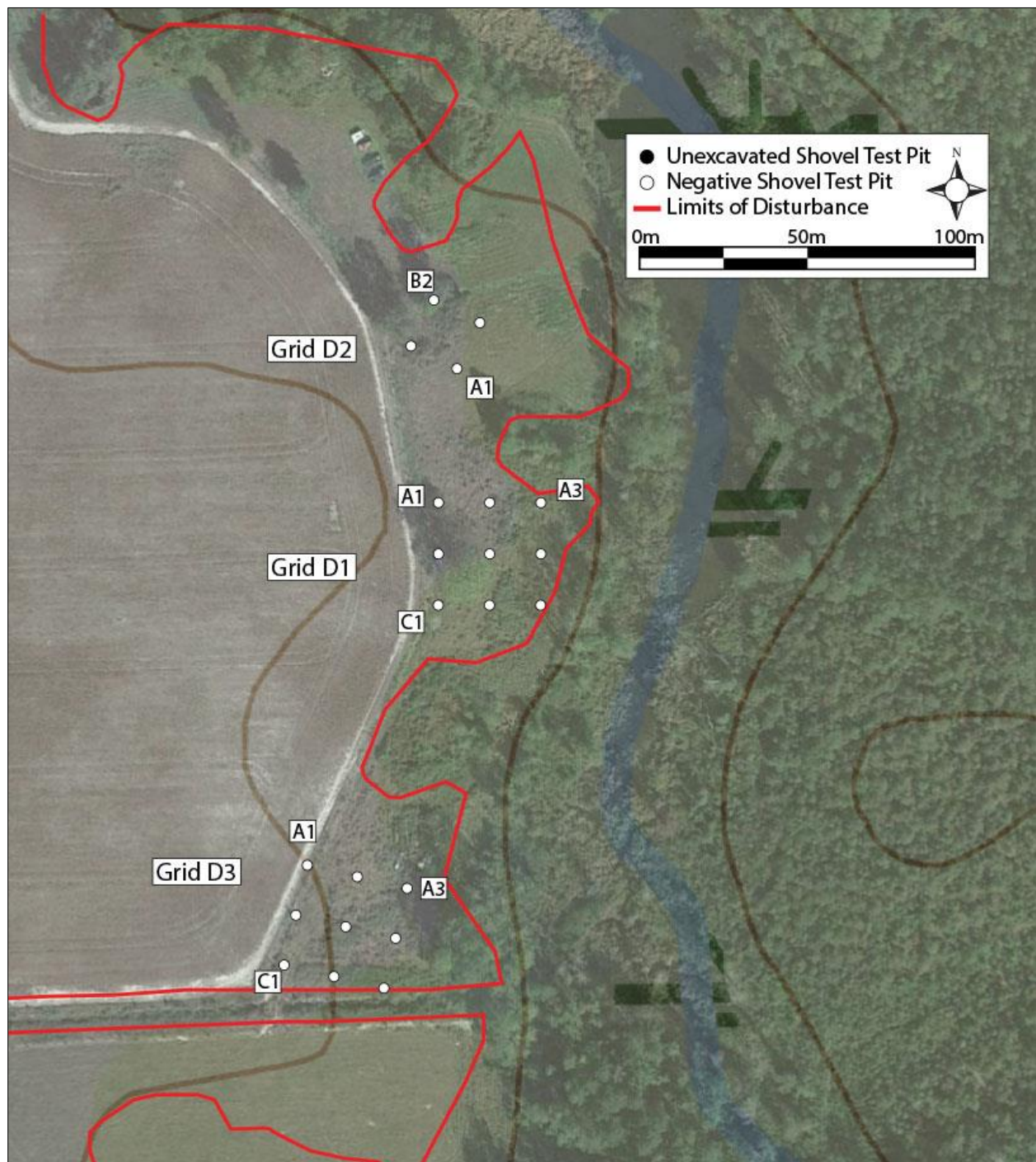


Figure 6-59: Aerial view of Area D1, D2, and D3 shovel test grids. Google Earth 2019.

Vegetation in this area primarily consisted of tall grasses, with some erosion disturbance (Figure 6-60). A grid of nine shovel test pits was laid out at 15-meter (50-foot) intervals in three transects labeled A through C. No historic surface features were observed and no cultural material was collected.



Figure 6-60: Vegetation in Area D1, facing east.

Soils consisted of a shallow, disturbed topsoil over subsoil. A typical profile consisted of 2.5Y 5/2 grayish brown sand topsoil (A horizon) over 2.5Y 6/3 light yellowish brown sandy clay subsoil (B horizon) (Figure 6-61).

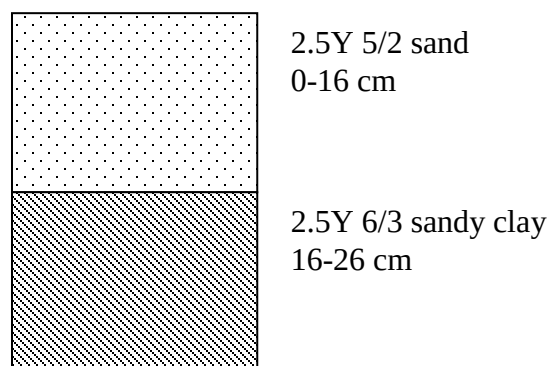


Figure 6-61: Soil profile of Shovel Test Pit B2 in Area D1.

GRID D2

This area was considered high probability for presence of cultural material due to its position at the edge of agricultural fields and overlooking a tributary of Antioch Swamp. A grid of four shovel test pits was laid out at 15-meter (50-foot) intervals in two transects labeled A and B.

Vegetation in this area primarily consisted of tall grasses, with some erosion disturbance (Figure 6-62). Soils in this area were the same as those found in Area D1. No cultural material was recovered, and no historic surface features were observed.



Figure 6-62: View northeast of swamp at the end of Grid D2.

GRID D3

This area was considered high probability for presence of cultural material due to its position at the edge of agricultural fields and overlooking a tributary of Antioch Swamp. A grid of nine shovel test pits was laid out at 15-meter (50-foot) intervals in three transects labeled A through C. No historic surface features were observed, and no cultural material was recovered.

Vegetation in this area primarily consisted of tall grasses and briars, with some erosion disturbance throughout and deep drainage cuts running along the southern part of the grid (Figure 6-63). Soils in this area were the same as those found in Area D1.



Figure 6-63: View north of vegetation and terrain at Shovel Test B3 in Grid D3.

SITE 44IW0374

This site consists of a small scatter of historic artifacts identified during pedestrian survey of the agricultural fields south of the historic Antioch Church (Figure 6-64). Artifacts found include a fragment of shell-edged whiteware, brick, and gray stoneware, which suggest mid-nineteenth century activity. The scatter covers approximately 0.1 hectare (0.2 acres). Because of its small size and the relatively low number of artifacts observed, this site is recommended not eligible for inclusion in the NRHP, and no further work is recommended

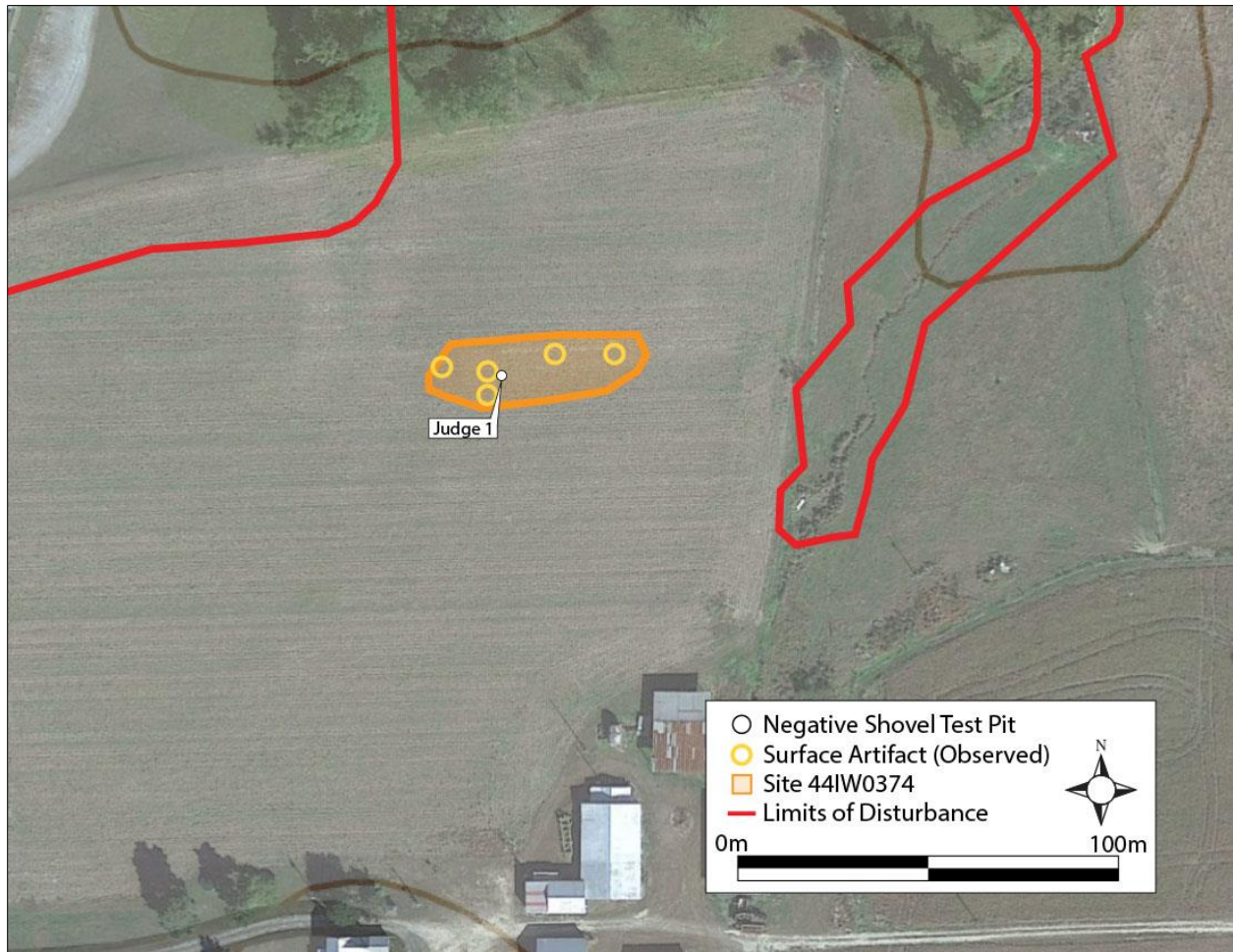


Figure 6-64: Aerial view of northern half of Area D, showing Site 44IW0374 detail. Google Earth 2019.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown sand (Ap horizon) over 10YR 5/4 yellowish brown sandy clay (B horizon) (Figure 6-65).

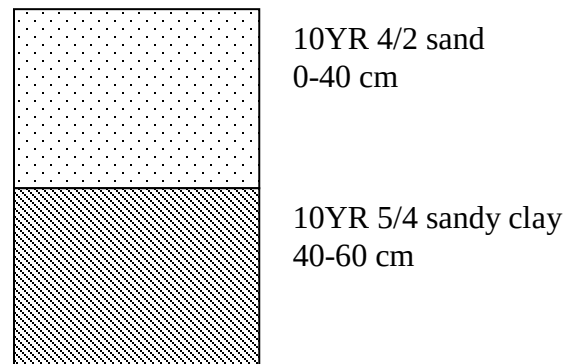


Figure 6-65: Soil profile of Judgmental Shovel Test 1 in Site 44IW0374.

SITE 44IW0375

This site consists of a small scatter of historic artifacts in the southeastern part of Area D (Figure 6-66). The scatter covers approximately 0.1 hectare (0.2 acre). It was identified during pedestrian survey. Artifacts observed include yellowware, white salt glazed stoneware, redware, and wine bottle fragments, as well as a fragment of a pipe stem. These artifacts are indicative of eighteenth century activity. Due to this early date, this site has the potential to provide new information about this time period, and it is thus recommended potentially eligible for inclusion in the NRHP. Avoidance is recommended. Solar arrays will not be placed in any part of this area, so this site will not be impacted by the proposed development.

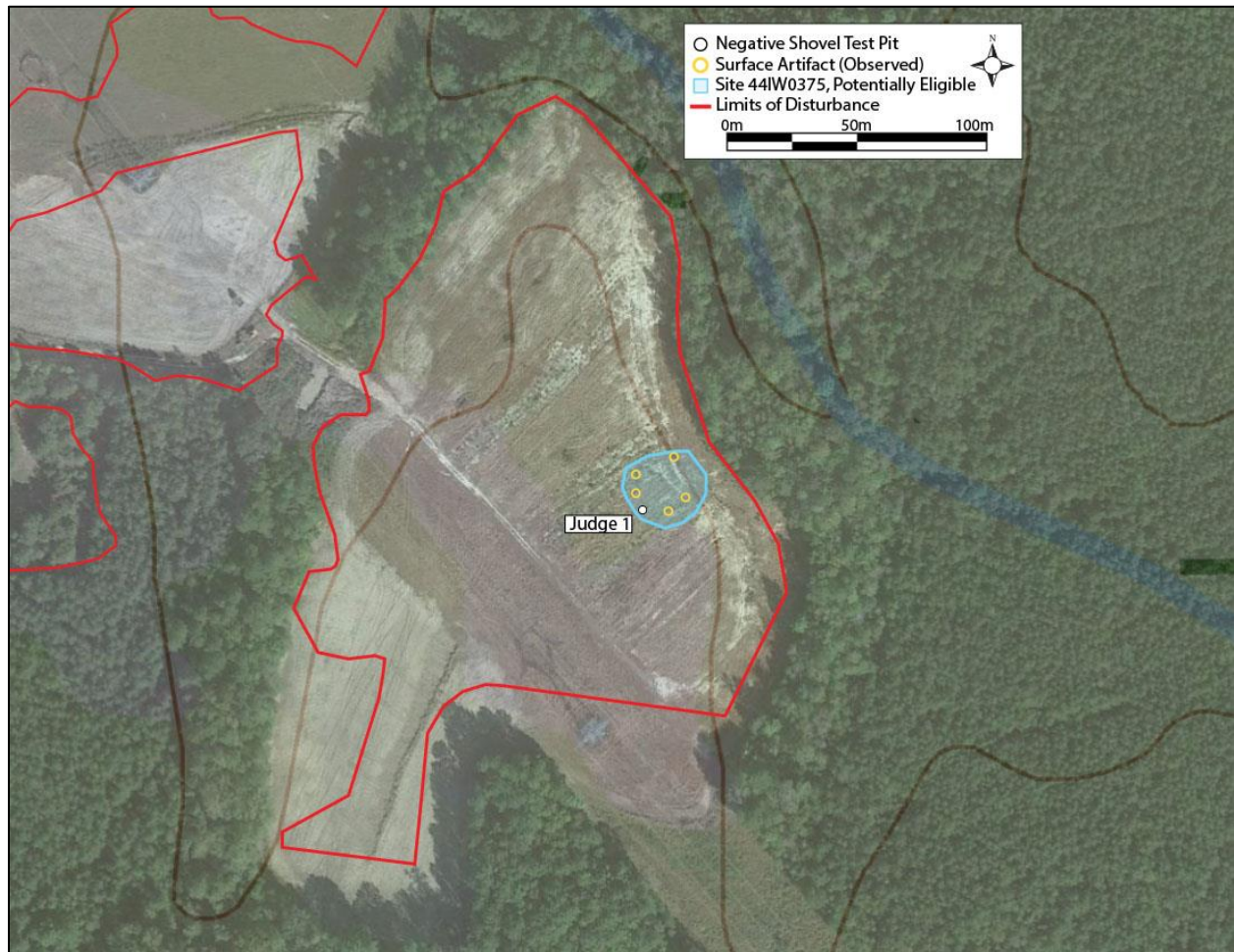


Figure 6-66: Aerial view of southern half of Area D, showing Site 44IW0375 detail. Google Earth 2019.

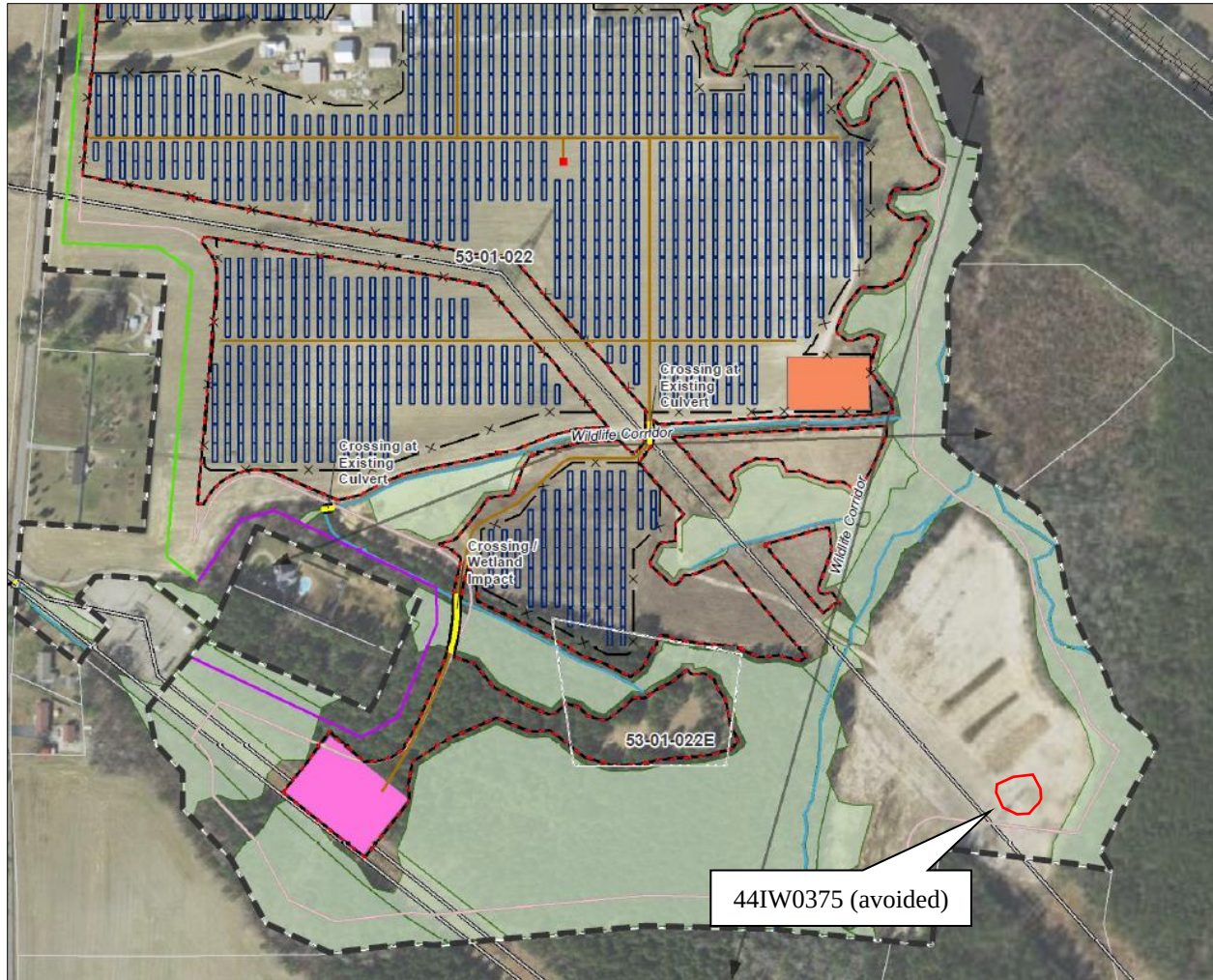
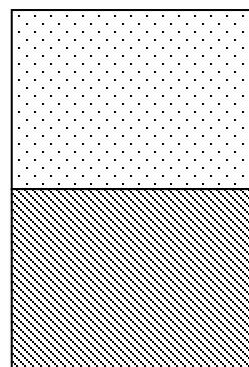


Figure 6-67: Detail of site plan with location of Site 44IW0375.

Soils in this site generally exhibited a two stratum profile of plowzone over subsoil. Typical stratigraphy consisted of 10YR 5/4 yellowish brown sand plowzone (Ap horizon) over 10YR 6/6 yellowish brown sandy clay subsoil (B horizon) (Figure 6-68).



10YR 5/4 sand
0-20 cm

10YR 6/6 sandy clay
20-30 cm

Figure 6-68: Soil profile of Judgmental Shovel Test 1 in Site 44IW0375.

AREA E

This area is situated on the north side of US-460, northwest of Area D (Figure 6-69). It consists of two parcels separated by Winston Drive (CR-639). Antioch Road (CR-638) bounds the east side of the southern parcel, and Winston Drive bounds the north side of the southern parcel and the south side of the northern parcel. A tributary of Antioch Swamp forms the eastern border of the northern parcel and the western border of the southern parcel. The southern parcel also borders US-460. Parcel boundaries make up the remaining sides of the parcels. Access is provided by these roads and by Leander Lane, which cuts diagonally across the southwestern side of the northern parcel.

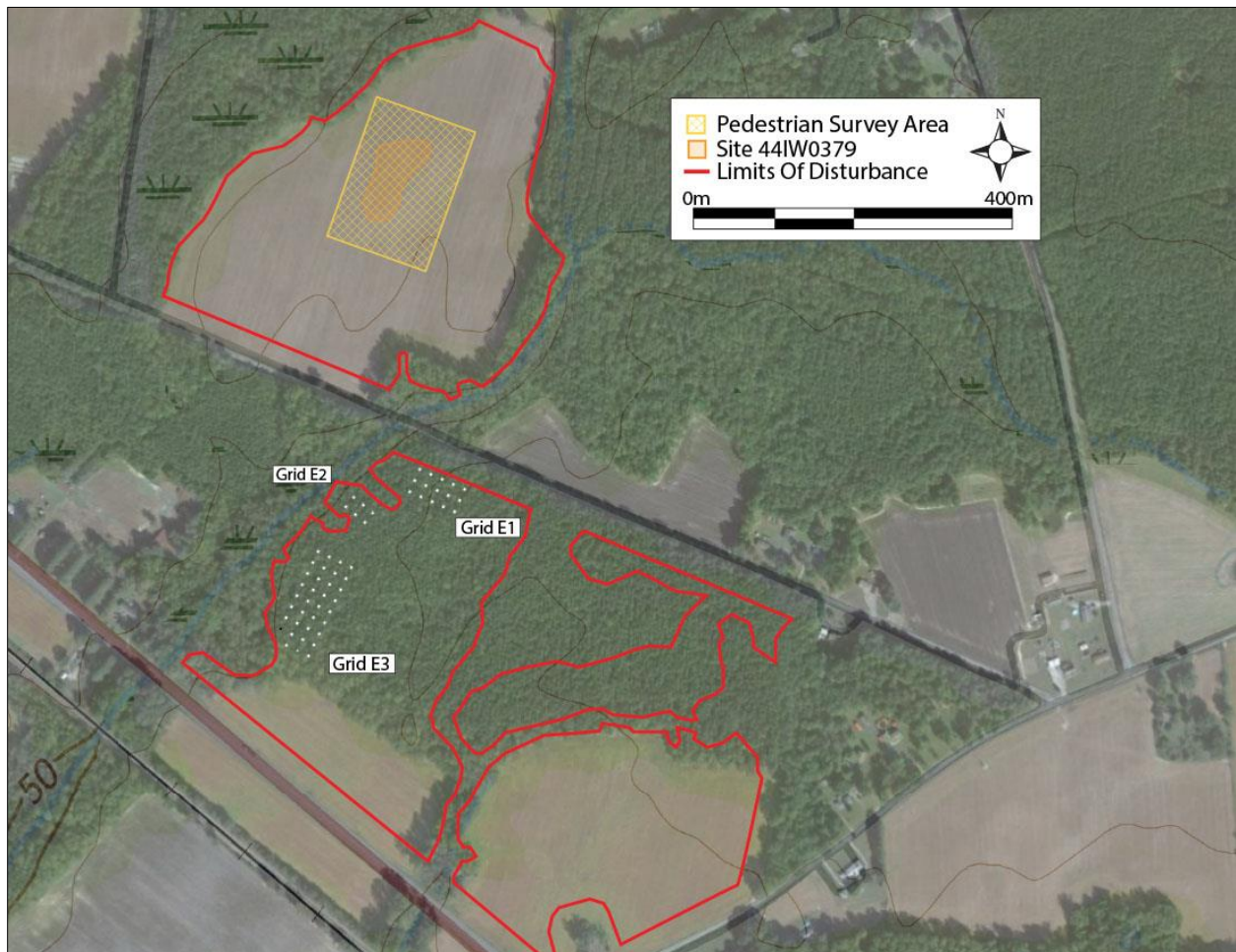


Figure 6-69: Aerial view of Area E pedestrian survey, shovel test grids, and Site 44IW0379. Google Earth 2019.

Terrain consists of two broad, low uplands divided by the tributary of Antioch Swamp. Another small drainage runs south in the center of the southern parcel. Vegetation at the time of survey consisted of recently planted agricultural fields on the well-drained portions of the parcels, and of mixed evergreen and deciduous forest in the poorly drained areas (Figure 6-70).



Figure 6-70: Drainage of Antioch Swamp in northern portion of Area E, outside of limits of disturbance.

AREA E PEDESTRIAN SURVEY

Vegetation in the northern agricultural field in Area E was cotton planted in widely spaced rows. Ground surface visibility between the rows was good (Figure 6-71; 6-72). A low landform near the center of this field was designated high probability for cultural resources due to a map projection from the early-twentieth century, and a block within this field was systematically surveyed. Pedestrian survey was conducted in transects spaced no greater than 15 meter (50 feet) apart, with more intensive inspection being conducted around any observed cultural material. Field Site 44IW0379 was delineated on top of this landform and is discussed in detail below.



Figure 6-71: View north across pedestrian survey area in northern field.



Figure 6-72: Ground surface visibility with artifacts on surface.

GRID E1

This area was considered high probability for presence of cultural material due to its position on a low, flat landform overlooking a tributary of Antioch Swamp (Figure 6-73). A grid of fifteen shovel test pits was laid out at 15-meter (50-foot) intervals in five transects labeled A through E. No historic surface features were observed and no cultural material was collected.

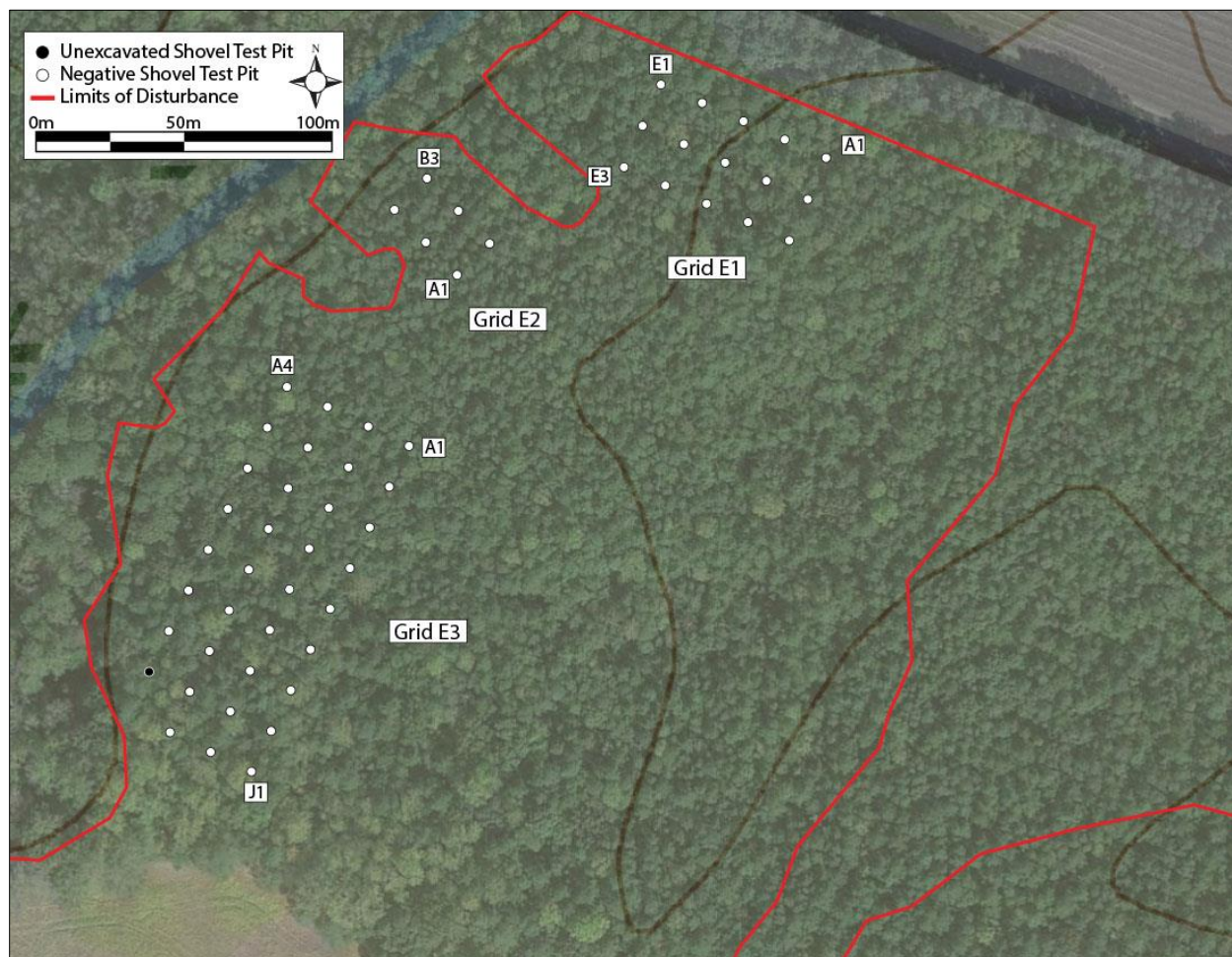


Figure 6-73: Aerial view of Area E1, E2, and E3 shovel test grids. Google Earth 2019.

Vegetation in this area consisted of mature planted pine, with few deciduous saplings throughout and moderate surface disturbance consistent with logging activity (Figure 6-74).



Figure 6-74: Vegetation and Terrain near Grid E1, typical of wooded finger ridges overlooking the swamp.

Soils in this site generally exhibited a two stratum profile of topsoil over subsoil. Typical stratigraphy consisted of 2.5Y 5/2 grayish brown sand topsoil (A horizon) over 2.5Y 6/3 light yellowish brown sand subsoil (B horizon) (Figure 6-75).

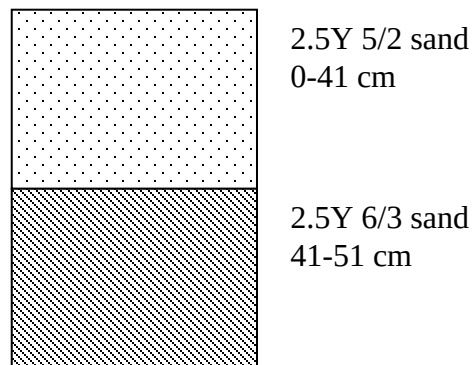


Figure 6-75: Soil profile of Shovel Test Pit C3 in Area E1.

GRID E2

This area was considered high probability for presence of cultural material due to its position on a low, flat landform overlooking a tributary of Antioch Swamp. A grid of six shovel test pits was laid out at 15-meter (50-foot) intervals in two transects labeled A and B. No historic surface features were observed, and no cultural material was collected.

Vegetation in this area consisted of mature planted pine, with few deciduous saplings throughout and moderate surface disturbance consistent with logging activity (Figure 6-76). Soils in this area were the same as those found in Area E1.



Figure 6-76: Vegetation in Grid E2, facing north.

GRID E3

This area was considered high probability for presence of cultural material due to its position on a low, flat landform overlooking a tributary of Antioch Swamp. A grid of 34 shovel test pits was laid out at 15-meter (50-foot) intervals in nine transects labeled A through J (excluding I). One of these was left unexcavated due to proximity to the project boundary. No historic surface features were observed, and no cultural material was collected.

Vegetation in this area consisted of mature planted pine, with few deciduous saplings throughout and moderate surface disturbance consistent with logging activity (Figure 6-77). Soils in this area were the same as those found in Area E1.



Figure 6-77: Vegetation in Grid E3, facing south.

SITE 44IW0379

This site sits on a low rise overlooking the field that makes up the northmost section of the E areas and consists of a cluster of early to mid-twentieth century artifacts measuring approximately 0.4 hectare (1 acre) (Figure 6-78). This site was identified by pedestrian survey executed in transects at intervals of no more than 15-meters (50-feet).

Aerial imagery from 1966 shows a farmstead with four buildings at this site. By 1982, the buildings had been demolished but not plowed under. The 1994 aerial shows that the site had been plowed and converted to agriculture by this point.

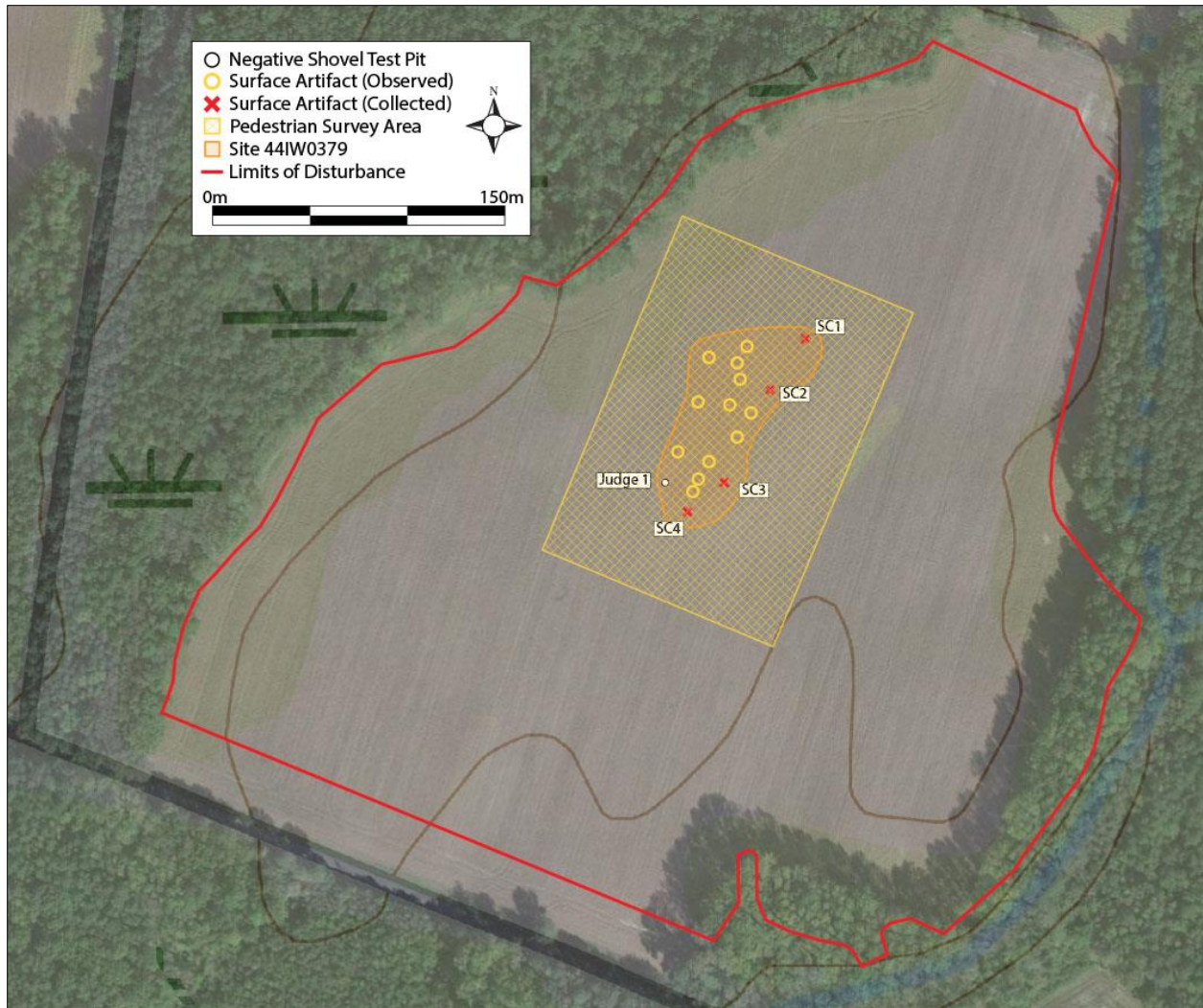


Figure 6-78: Aerial view of Site 44IW0379 and pedestrian survey.

Many surface artifacts were observed, however only diagnostic or otherwise notable artifacts were collected or photographed. Artifacts recovered at this site include whole bricks, a glass marble, and colorless vessel glass (Figure 6-79). Farmstead sites are well-represented in the region; therefore, this site is not eligible for inclusion in the NRHP, and no further work is recommended.



Figure 6-79: Artifacts found in Site 44IW0379.

Soils in the plowed area generally exhibited a three stratum profile of plowzone over a disturbed layer, over subsoil. Typical stratigraphy consisted of 10YR 4/2 dark grayish brown loamy sand plowzone (Ap horizon) and 10YR 5/4 yellowish brown sandy clay loam disturbance over 10YR 5/8 yellowish brown sandy clay subsoil (B horizon) (Figure 6-80). The disturbance layer is likely the result of the demolition of the farmstead.

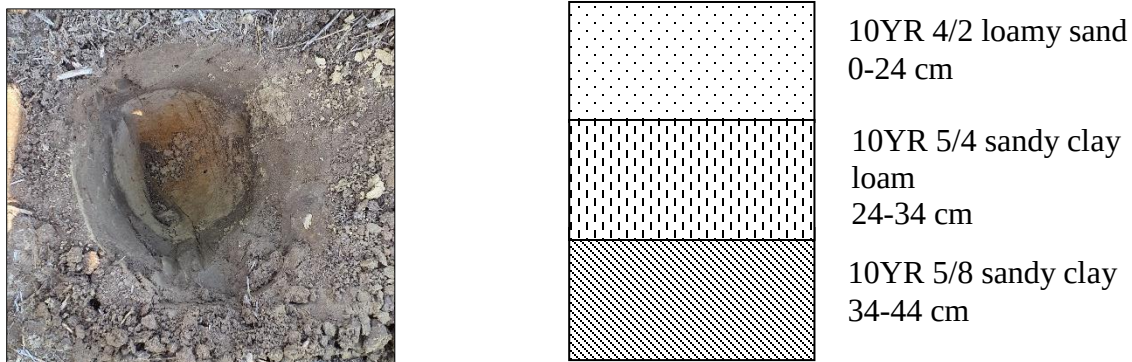


Figure 6-80: Soil profile of Judgmental Shovel Test 1 in Site 44IW0379.

AREA F

This is the most northwestern tract in the survey area (Figure 6-81). It is situated north of US-460 and east of Yellow Hammer Road (CR-645). The tract is separated from Area A by Burnt Mills Swamp. A tributary of the swamp and a portion of Deerfield Drive form the eastern and northern boundaries. Farm roads and logging roads provide access into this tract.

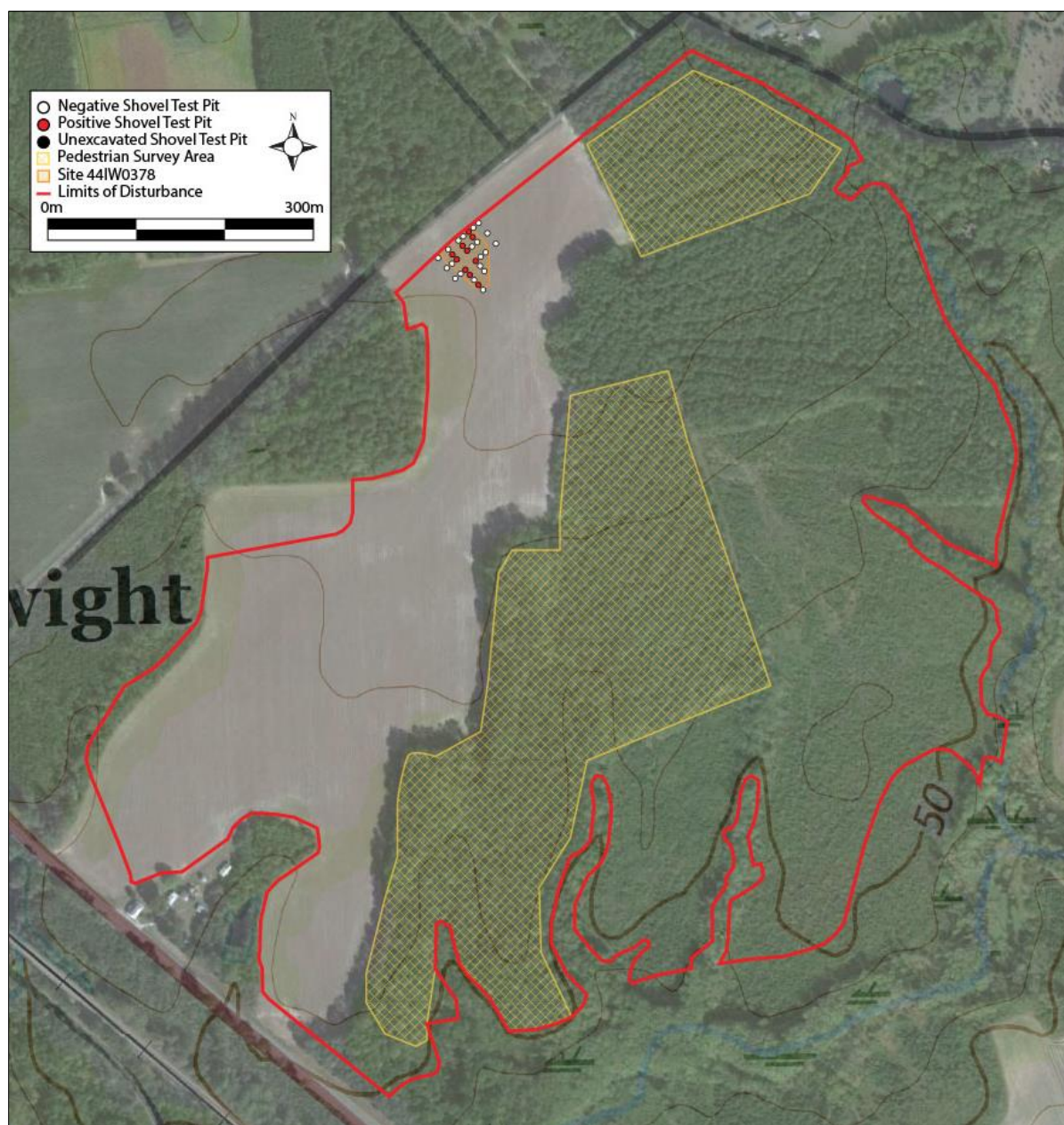


Figure 6-81: Aerial view of Area F pedestrian survey, shovel test grid, and Site 44IW0378. Google Earth 2019.

Terrain consists of a broad upland that terminates to the southeast in a series of wide, level finger ridges overlooking Burnt Mills Swamp. Vegetation at the time of survey consisted of an agricultural field on the west side of the tract and pines of the eastern side of the tract (Figures 6-, 6-82; 6-83). The fields had been planted in winter wheat that was just harvested at the time of survey, and surface visibility was lower than 50%. The stands of trees were being actively harvested at the time of survey (Figure 6-84).



Figure 6-82: Location of Area F1 grid, which was placed on a slight hummock in the field.



Figure 6-83: Logging equipment harvesting trees on finger ridges.



Figure 6-84: Recent logging on northernmost finger ridge, facing south.

GRID F1

This area was tested to investigate the location of a potential house marked on two topographical maps from 1920 and 1945 (Figures 6-85). A grid of 30 shovel tests was laid in at 15-meter (50-foot) intervals in five transects labeled A through E on the highest part of the field, near where the house is indicated on the topographical maps. Seven shovel tests were positive for cultural material, including nails, brick, and glass fragments. These artifacts and Site 44IW0378 are discussed below.

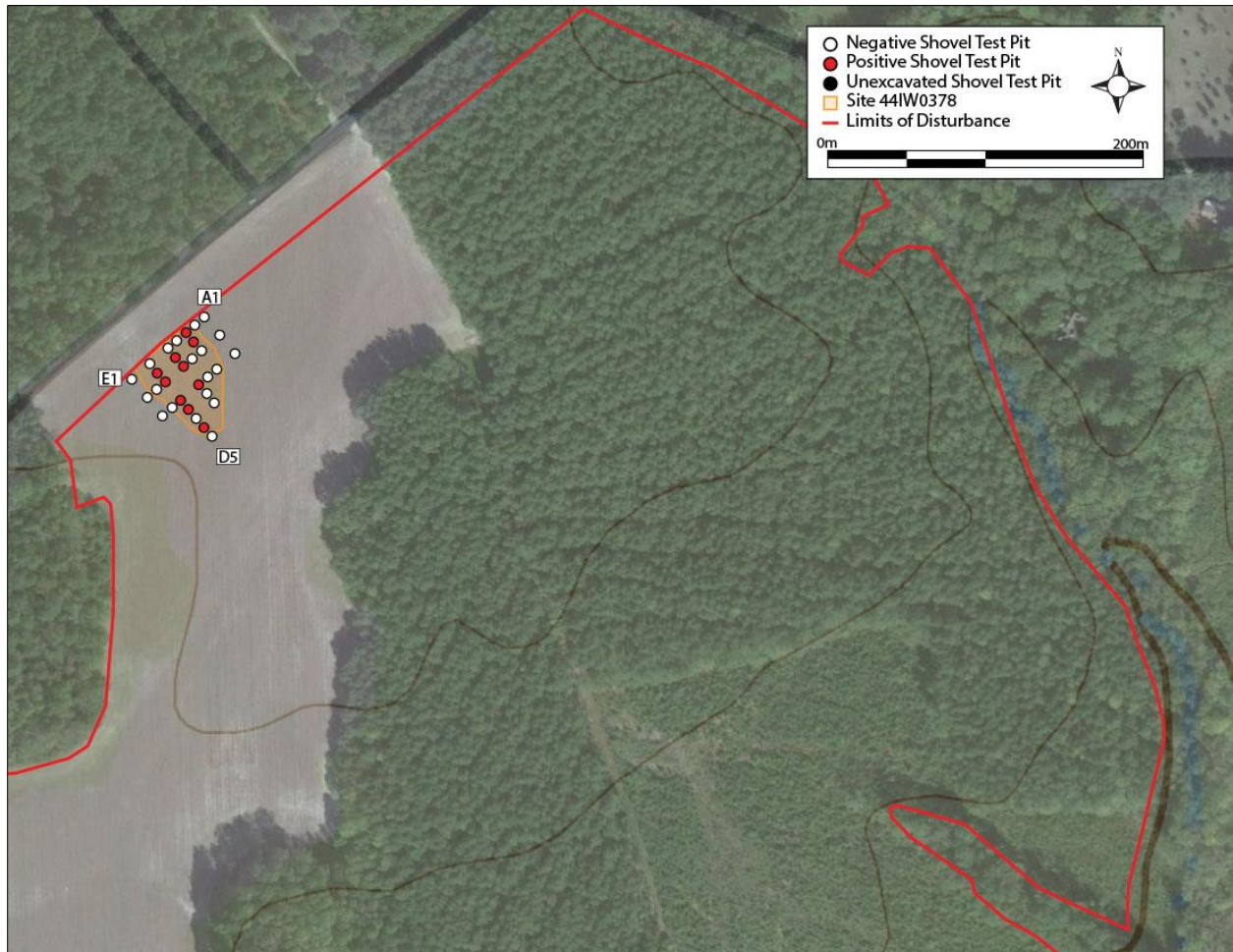


Figure 6-85: Aerial view of Area F1 shovel test grid and Site 44IW0378. Google Earth 2019.

Soils in this area generally exhibited a two stratum profile of plowzone over subsoil. A typical soil profile consisted of a 7.5YR 6/1 gray sandy loam plowzone (Ap horizon) over a 7.5YR 6/3 light brown sandy clay subsoil (B horizon). These strata are consistent with those usually seen in historically plowed fields (Figure 6-86).

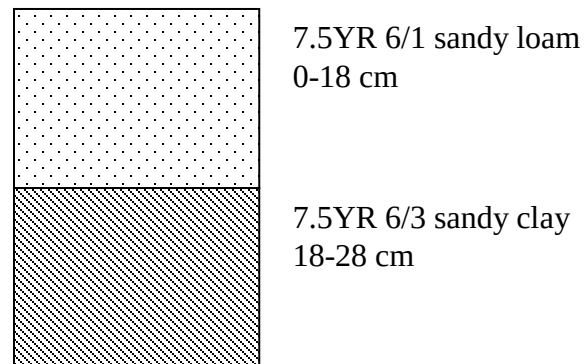


Figure 6-86: Soil profile of Shovel Test Pit A2 in Site 44IW0378.

SITE 44IW0378

This site was identified in the Area F1 grid, discussed above. No surface features remain of the structure, though some artifacts were found. The site covers approximately 0.15 hectare (0.3 acre). Artifacts found include unidentifiable nails, brick fragments, colorless vessel glass fragments, and a fragment of an aqua pharmaceutical vessel. These artifacts suggest mid-twentieth century activity, which is consistent with the evidence provided by known maps. Resources from this time period are well represented, and therefore this site is not recommended for inclusion in the NRHP and no further work is recommended.

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7. CONCLUSIONS AND RECOMMENDATIONS

From March 23 through June 3, 2022, D+A completed Phase I archaeological survey of the proposed ± 309.5 -hectare (± 765 -acre) Carver Solar project area. The archaeological survey specifically covered the ± 241 -hectare (± 596.1 -acre) fenced area of the proposed facility, which is where ground disturbance is planned for solar array installation. Survey consisted of systematic pedestrian survey and subsurface testing of areas deemed to have potential for the presence of archaeological deposits. The survey was also guided in part by the Phase IA archaeological assessment titled, *Phase IA Cultural Resource Assessment of the ± 379.3 Hectares (± 937.3 Acre) Carver Solar Project Area* (2021), which was prepared for the original proposed project area.

The project area is comprised of pine forests, poorly drained lowlands, and agricultural fields. Antioch Swamp runs east-west between the discontinuous parcels which comprised the project area. Likewise, Windsor Boulevard (Route 460) runs northwest-southeast through the parcels and Winston Drive runs southeast-northwest through two parcels in the eastern portion of the project area. Burnt Mill Swamp is north of the project area, and Blackwater Road is south of the project area. At the time of the survey, a large number of the project area parcels located south of Route 460 had recently been plowed and surface visibility was excellent. Some project area parcels were in pasture or winter wheat, with woodlands typically lining streams and wetlands. For most larger forested areas, timber harvesting had occurred within the last decade and in many areas visible evidence of soil disturbance such as push piles, slash, and exposed soils were still evident.

Archaeological field survey consisted of a combination of systematic pedestrian survey and subsurface shovel testing. Pedestrian survey was conducted when agricultural fields were plowed and surface visibility was greater than 50% per the Virginia Department of Historic Resources (VDHR) survey guidelines. Pedestrian survey was conducted along transects varying between 7.5 meters (25 feet) and 15 meters (50 feet) apart. For areas where surface visibility was less than 50% and where the potential for archaeological deposits was present, systematic shovel testing was conducted. A total of 261 shovel test pits were excavated.

A total of fourteen archaeological sites were identified during the survey. Four sites were identified on project area parcels north of Route 460 and the remaining ten sites on parcels south of Route 460. All identified sites date to the historic period, although some prehistoric lithic material was recovered in isolated locations in too few numbers to be classified as archaeological sites. Of the newly identified sites, the majority represent late nineteenth to mid twentieth century domestic sites with a wide date range of artifacts and no remaining structural components (Sites 44IW0367, 44IW0368, 44IW0370, 44IW0371, 44IW0372, 44IW0373, 44IW0374, 44IW0376, 44IW0377, 44IW0378, and 44IW0379). Several of these sites are illustrated on historic mapping and aerial imagery of the project area and represent common site types in the area and throughout the region. As such, these sites offer limited research value and are ***recommended as not eligible for listing in the NRHP***.

Previously identified site 44IW0248, a light scatter of eighteenth-century artifacts, was determined by VDHR to not be eligible for listing in the NRHP. A sherd of tin-glazed earthenware was the only related artifact that was recovered during the current effort. Previously recorded site 44IW0286 was not reidentified and is presumed to be located outside of the current proposed

project's limits of disturbance. This site was also previously determined by the VDHR to not be eligible for listing in the NRHP.

Sites 44IW0366, 44IW0369, and 44IW0375 contained pre-Civil War archaeological material and represent antebellum settlement and occupation in the area. Site 44IW0366 contains eighteenth and early nineteenth century domestic artifacts and represents early settlement and occupation of the area. Sites 44IW0369 and 44IW0375 both represent early nineteenth century domestic sites. Both sites are associated with early documented structures with supporting oral history. ***Based on the dates and types of material observed, D+A recommends Field Sites 44IW0366, 44IW0369 and 44IW0375 potentially eligible for listing in the NRHP.*** Avoidance or further study is recommended. No ground disturbance will take place in the location of Site 44IW0375, so this site will be avoided.

A summary of all identified sites and their potential NRHP status is provided in the table below.

Table 7-1: All identified sites and their NRHP recommendation.

Temporary Site #	Temporal Affiliation	NRHP Recommendation	Treatment
44IW0366	Mid-18 th – 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0367	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0368	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0369	Late-18 th – 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0370	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0371	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0372	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0373	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0374	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0375	Early 19 th century domestic	Potentially eligible	Avoidance or Phase II Evaluation
44IW0376	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0377	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0378	Late 19 th – 20 th century domestic	Not eligible	No further work
44IW0379	Late 19 th – 20 th century domestic	Not eligible	No further work

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APPENDIX A: RESUMES

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Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

J. HOPE SMITH
Principal Investigator



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.



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 III Data Recoveries

44LD1244, Loudoun Co
44CC0448, Charles City Co
44LD1359, Loudoun Co

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

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)

Phase II Evaluations

44LD1819, Loudoun Co
44GE0373, Greensville Co
44MC0970, Mecklenburg Co

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.



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.

APPENDIX B: ARTIFACT INVENTORY

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Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Area A North (Designated in Field as Area A1)						
Surface Collection 1	Surface	Quartzite, Flake, tertiary	1	Flake		
Surface Collection 1	Surface	Quartzite, Fire cracked rock	1	Fragment		
Surface Collection 2	Surface	Quartz, Flake, tertiary	1	Flake		
Surface Collection 3	Surface	Glass, Fragment	1	Fragment	Brown	
Surface Collection 3	Surface	Quartzite, Culturally modified stone	1	Fragment		Unclear use
Surface Collection 3	Surface	Quartzite, Flake, tertiary	2	Flake		
Surface Collection 3	Surface	Rhyolite, Flake, tertiary	1	Flake		
Surface Collection 4	Surface	Quartzite, Flake, tertiary	1	Flake		
Surface Collection 5	Surface	Quartz, Flake, tertiary	1	Flake		
Surface Collection 6	Surface	Quartz, Flake, tertiary	1	Flake		
Surface Collection 7	Surface	Quartz, Flake, tertiary	1	Flake		
Surface Collection 8	Surface	Quartzite, Flake, tertiary	1	Flake		
Surface Collection 9	Surface	Quartzite, Fire cracked rock	1	Fragment		
Surface Collection 10	Surface	Composite, Pressed stone composite, molded	2	Fragment		Unclear use
Surface Collection 11	Surface	Lime, Fragment	1	Fragment		

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 12	Surface	Quartz, Flake, tertiary	1	Flake		
Surface Collection 14	Surface	Refined Earthenware, Pearlware	1	Body		
Surface Collection 17	Surface	Refined Earthenware, Whiteware, handpainted	1	Rim	Red, black, green	Chrome colors
Surface Collection 20	Surface	Refined Earthenware, Dipped ware, Banded	1	Body	Blue, brown	
Surface Collection 21	Surface	Refined earthenware, Whiteware, shell edge with embossed rim	1	Rim	Blue	Embossed decoration
Surface Collection 21	Surface	Porcelain, Hard Paste	1	Body		Flat, likely plate or saucer
Area A North / 44IW0377						
Surface Collection 13	Surface	Refined Earthenware, Pearlware, shell edge, embossed	1	Rim	Blue	Embossed rim
Surface Collection 15	Surface	Porcelain, Hard Paste	1	Rim		Highly vitrified paste
Surface Collection 16	Surface	Stoneware, Gray salt glaze	1	Body	Gray	Black lined interior, spalling
Surface Collection 16	Surface	Glass, Bottle	1	Base	Green	Embossed "..TS.."
Surface Collection 16	Surface	Iron, Rod fragment	1	Fragment		
Surface Collection 16	Surface	Shell, Oyster	1	Fragment		
Surface Collection 16	Surface	Brick, Fragment	1	Fragment		
Surface Collection 18	Surface	Glass, Milk glass	1	Fragment	White	

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 18	Surface	Refined earthenware, Creamware	1	Base		
Surface Collection 18	Surface	Refined Earthenware, Whiteware	1	Body		
Surface Collection 18	Surface	Synthetic, Shooting disc	1	Fragment	Black, Yellow	
Surface Collection 19	Surface	Refined Earthenware, Whiteware, decal decorated	1	Body		Molded dot decoration, floral decal overglaze decoration partially missing.
Surface Collection 22	Surface	Coarse Earthenware, Drain pipe	1	Fragment	Black	14.8mm thick.
Surface Collection 23	Surface	Glass, Vessel	1	Fragment	Brown	Impressed groove in one side,
Surface Collection 23	Surface	Glass, Melted	1	Fragment	Brown	Melted brown glass mass.
Surface Collection 23	Surface	Terracotta, Fragment	1	Fragment		Partially burned
Surface Collection 24	Surface	Refined Earthenware, Blue glazed	1	Body	Blue	Likely whiteware
Surface Collection 24	Surface	Refined Earthenware, Whiteware	1	Base		Shallow basering
Surface Collection 24	Surface	Mortar, Fragment	1	Fragment		
Surface Collection 25 / Quadrant W	Surface	Refined Earthenware, Unidentifiable	1	Body	Blue	Majority of glaze missing, blue and white stripes remain
Surface Collection 25 / Quadrant W	Surface	Glass, Jar	1	Body	Aqua	Ball Jar, partial embossing.
Surface Collection 25 / Quadrant W	Surface	Glass, Vessel	1	Base	Solarized	14.3mm thick

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 25 / Quadrant W	Surface	Glass, Vessel	1	Body	Colorless	
Surface Collection 25 / Quadrant W	Surface	Synthetic, Plastic	1	Fragment	White	
Surface Collection 26 / Quadrant E	Surface	Refined Earthenware, Whiteware, decal decorated	1	Rim		Molded dot decoration along rim, floral decal overglaze decoration ghost
Surface Collection 26 / Quadrant E	Surface	Iron, Nail, unidentifiable	2	Whole		Heavily corroded.
Surface Collection 27 / Quadrant N	Surface	Refined Earthenware, Ironstone	1	Rim		Chamber pot rim
Surface Collection 27 / Quadrant N	Surface	Refined Earthenware, Ironstone	1	Footring		Plate or shallow bowl base, footring
Surface Collection 27 / Quadrant N	Surface	Refined Earthenware, Pearlware, shell edge impressed lines, brush strokes	1	Rim	Blue	
Surface Collection 27 / Quadrant N	Surface	Refined Earthenware, Pearlware	1	Base		
Surface Collection 27 / Quadrant N	Surface	Refined Earthenware, Whiteware	1	Rim		
Surface Collection 27 /	Surface	Refined Earthenware, Pink glaze	1	Body		Possibly Fiesta ware

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Quadrant N						
Surface Collection 27 / Quadrant N	Surface	Stoneware, Bristol Glazed	1	Rim		
Surface Collection 27 / Quadrant N	Surface	Stoneware, Salt glazed	1	Base		
Surface Collection 27 / Quadrant N	Surface	Glass, Milk glass, vessel	1	Base, body	White	Pond's Cream, Battleship shape
Surface Collection 27 / Quadrant N	Surface	Glass, Vessel	1	Rim	Colorless	Machine-made jar rim
Surface Collection 27 / Quadrant N	Surface	Glass, Vessel	1	Body	Aqua	
Surface Collection 27 / Quadrant N	Surface	Glass, Vessel	1	Body	Dark Aqua	
Surface Collection 27 / Quadrant N	Surface	Glass, Vessel	1	Whole		
Surface Collection 27 / Quadrant N	Surface	Iron, Nail, unidentifiable	1	Whole		
Surface Collection 28 / Quadrant S	Surface	Brick, Whole	1	Body	Colorless	Paneled corned

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 28 / Quadrant S	Surface	Glass, Vessel	3	Body		
Surface Collection 28 / Quadrant S	Surface	Refined Earthenware, Whiteware	1	Fragment	White	
Surface Collection 28 / Quadrant S	Surface	Plastic, Fragment	1	Fragment		Unknown form and use
Area A South (Designated in Field as Area A2)						
Surface Collection 1	Surface	Stoneware, Black glazed	1	Body	Black	Heat exposed
Surface Collection 21	Surface	Refined Earthenware, Whiteware, shell edge	1	Rim	Blue	Unscaloped rim with impressed lines
Surface Collection 22	Surface	Refined Earthenware, Yellowware	1	Body	Blue, White	Banded
Surface Collection 22	Surface	Refined Earthenware, Yellowware	1	Rim	Blue, White	Banded
Surface Collection 23	Surface	Glass, Milk glass, vessel	1	Base	White	"Resinol" cream, Embossed "...O' MD Chemical Co"
Surface Collection 24	Surface	Stoneware, Bristol glaze, albany slip	1	Body		
F1	I	Glass, Window	5	Pane	Aqua	
F1	I	Glass, Window	2	Pane	Colorless	
F1	I	Iron, Nail, unidentifiable	1	Shank		
F1	I	Iron, Fragment	2	Fragment		
Area A South / 44IW0376						
Surface Collection 2	Surface	Glass, Marble	1	Whole	Blue, White	Opaque, 16.4mm diameter
Surface Collection 3	Surface	Refined Earthenware,	1	Body	Blue, White	Banded

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
		Dipped ware, banded				
Surface Collection 3	Surface	Glass, Milk glass, vessel	1	Base	White	Pond's Cream, Battleship shape.
Surface Collection 4	Surface	Glass, Milk glass, vessel	1	Base, body	White	Reeded rectangular bottle, no markings.
Surface Collection 4	Surface	Glass, Bottle	2	Body	Brown	Beer bottle
Surface Collection 4	Surface	Glass, Bottle	1	Body	Light green	Ridged exterior.
Surface Collection 4	Surface	Glass, Vessel	1	Body	Green	
Surface Collection 4	Surface	Glass, Fragment	1	Fragment	Solariz ed	
Surface Collection 4	Surface	Glass, Vessel	1	Finish	Colorle ss	Wide mouth, threaded
Surface Collection 4	Surface	Glass, Bottle	1	Finish	Colorle ss	Crown cap
Surface Collection 4	Surface	Glass, Vessel	1	Base	Colorle ss	
Surface Collection 4	Surface	Brick, Fragment	1	Fragment		
Surface Collection 4	Surface	Iron, Nail, unidentifiable	1	Shank		
Surface Collection 4	Surface	Composite, Ceramic fuse	1	Whole		
Surface Collection 5	Surface	Refined Earthenware, Whiteware, decal decorated	1	Rim	Green	Molded dot decoration along rim, floral decal overglaze decoration
Surface Collection 5	Surface	Refined Earthenware, Whiteware, decal decorated	1	Body		Ghost of overglaze leaf decoration.
Surface Collection 5	Surface	Stoneware, Bristol glaze	1	Body		Greyish cast, smooth glaze on interior and exterior.

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 5	Surface	Glass, Milk glass, molded	1	Rim	White	Molded paned on face with stippled texture on reverse
Surface Collection 5	Surface	Glass, Bottle	1	Body	Light green	
Surface Collection 5	Surface	Glass, Milk glass, molded vessel	1	Lid	White	Paneled edges, threaded lid
Surface Collection 5	Surface	Glass, Window	1	Pane	Aqua	
Surface Collection 5	Surface	Glass, Melted	1	Fragment	Colorless	
Surface Collection 5	Surface	Synthetic, Plastic	1	Fragment	Black	
Surface Collection 6	Surface	Glass, Bead	1	Whole	Blue	10.3mm diameter
Surface Collection 7	Surface	Stoneware, Bristol glaze	1	Body		Glaze on both sides
Surface Collection 7	Surface	Glass, Pressed disc	1	Fragment	Red	Red glass disc with pressed diamond pattern, unclear use.
Surface Collection 7	Surface	Brick, Fragment	1	Fragment		
Surface Collection 7	Surface	Iron, Nail, unidentifiable	1	Fragment		Heavily corroded
Surface Collection 8	Surface	Glass, Bottle	1	Finish	Light blue	Flat tooled finish
Surface Collection 8	Surface	Glass, Milk glass, vessel	1	Base	White	Battleship shape, embossed "POND'S"
Surface Collection 8	Surface	Iron, Nail, unidentifiable	1	Whole		Possibly wire, heavily corroded.
Surface Collection 9	Surface	Glass, Milk glass, vessel	1	Base	White	Possibly Vaseline.
Surface Collection 9	Surface	Refined Earthenware, Teal glazed, white banded	1	Base	Light Blue	Possibly mixing bowl, likely early 20th century.

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 10	Surface	Porcelain, Hard paste	1	Fragment		Unclear use
Surface Collection 10	Surface	Stoneware, Bristol glaze, albany slip	1	Base		
Surface Collection 10	Surface	Glass, Vessel	1	Body	Colorless	
Surface Collection 10	Surface	Synthetic, Plastic	1	Fragment	Tan	Rounded edge, no identifiable markings
Surface Collection 10	Surface	Iron, Nail, unidentifiable	1	Whole		
Surface Collection 12	Surface	Glass, Milk glass, molded	1	Lid	White	Fluted Milk glass jar lid, threaded.
Surface Collection 12	Surface	Coarse Earthenware, Drain pipe	1	Fragment	Red	
Surface Collection 12	Surface	Glass, Melted	1	Fragment	Brown	Melted brown glass mass
Surface Collection 12	Surface	Porcellaneous, Fragment	1	Fragment	Black	Black rim, possibly ceramic conductor or electrical fragment
Surface Collection 13	Surface	Glass, Marble	1	Whole	Yellow, white, green	Translucent, 20.8mm diameter.
Surface Collection 13	Surface	Refined Earthenware, Whiteware	1	Body		No crazing.
Surface Collection 13	Surface	Glass, Milk glass, molded	1	Rim	White	Molded paned on face with stippled texture on reverse
Surface Collection 13	Surface	Glass, Opalescent glass, vessel	1	Rim		Ornately decorated beaded rim and dot design on exterior.
Surface Collection 13	Surface	Glass, Vessel	1	Rim	Pink	Rose colored. Triangular reeding on exterior.
Surface Collection 13	Surface	Glass, Vessel	1	Body	Blue	Cobalt blue
Surface Collection 13	Surface	Glass, Vessel	1	Body	Black	Unclear use

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 13	Surface	Glass, Vessel	1	Base	Light Green	Likely ashtray or dish, Fluted molding on base.
Surface Collection 13	Surface	Glass, Vessel	1	Lid	Colorless	Decorative candy dish lid, molded design.
Surface Collection 14	Surface	Synthetic, Bead	1	Fragment	Blue, white	Six ridged star bead, blue and white marbled color
Surface Collection 14	Surface	Refined Earthenware, Whiteware, decal decorated	1	Body	Blue	Blue floral decal overglaze.
Surface Collection 14	Surface	Refined Earthenware, Whiteware	1	Body		Undecorated, no crazing
Surface Collection 14	Surface	Glass, Vessel	1	Body	Light green	Fluted exterior
Surface Collection 14	Surface	Glass, Bottle	1	Body	Green	Soft drink or beer bottle
Surface Collection 14	Surface	Glass, Safety	1	Fragment	Colorless	
Surface Collection 15	Surface	Stoneware, Albany slip	1	Body	Brown	
Surface Collection 15	Surface	Glass, Vessel	1	Body	Blue	
Surface Collection 15	Surface	Glass, Bottle, square cosmetic	1	Base, body	Colorless	"DES PAT. APPL'D FOR"
Surface Collection 15	Surface	Refined Earthenware, Whiteware, fluted molded rim, green strip, hand-painted green leaf	1	Rim	Green	
Surface Collection 15	Surface	Glass, Bottle, soft drink, screw top	1	Neck, rim	Colorless	Screw top soft drink bottle, plastic cap
Surface Collection 16	Surface	Glass, Milk glass	1	Body	White	Embossed scalloped line detail.

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 5	Surface	Quartzite, Projectile point, Morrow Mountain Type II	1	Whole		66mm long, 28.2mm wide, 11.0mm thick, 15.4mm stem length, 13mm stem width.
Surface Collection 6	Surface	Quartz, Projectile point, Morrow Mountain Type II	1	Whole		38mm long, 22mm wide, 7.3mm thick
Area B2 / 44IW0366						
Surface Sample	Surface	Stoneware, Westerwald	1	Body	Purple	Incised decoration, unidentifiable
Surface Sample	Surface	Coarse Earthenware, Redware, brown lead glaze	1	Body		Unglazed exterior, possibly manganese mottled.
Surface Sample	Surface	Refined Earthenware, Staffordshire slip	1	Body		
Surface Sample	Surface	Stoneware, Gray Salt Glazed	1	Body		Unglazed interior, wheel thrown.
Surface Sample	Surface	Stoneware, Gray Salt Glazed	1	Body		Broken interior missing.
Surface Sample	Surface	Stoneware, Gray Salt Glazed	2	Body		Albany slip or similar interior finish.
Surface Sample	Surface	Clay, Pipe Bowl	2	Fragment		One burned
Surface Sample	Surface	Tooth, Mammal	1	Fragment		
Area B2 / 44IW0369						
Surface Collection 1	Surface	Refined earthenware, Pearlware, shell edge with embossed edge	1	Rim	Green	
Surface Collection 1	Surface	Stoneware, Scratch blue	1	Body	Blue	Incised decoration, unidentifiable
Surface Collection 2	Surface	Glass, Milk glass lid liner	1	Fragment	White	
Area B2 / 44IW0371						
Surface Collection 3	Surface	Porcelain, Hard paste	1	Rim		No decoration

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
Surface Collection 3	Surface	Refined Earthenware, Unidentifiable, green glaze	1	Rim	Green	White detail along rim
Surface Collection 3	Surface	Glass, Lid or vessel	1	Fragment	Solarized	Large molded beads on one side. Possibly candy dish.
Area B2 / 44IW0373						
Surface Collection 4	Surface	Refined Earthenware, Tin glaze	1	Body	Blue, purple	Powdered with partial stencil decoration
Area B2 / 44IW0368						
Surface Collection 7	Surface	Jasper, Flake, tertiary	1	Flake		
Area E / 44IW0379						
Surface Collection 1	Surface	Stoneware, Brown salt glazed	1	Body	Brown	Wheel thrown
Surface Collection 2	Surface	Glass, Solarized stemware	1	Base		Fluted exterior
Surface Collection 3	Surface	Glass, Marble	1	Whole	Blue	15.5mm diameter, pitted exterior.
Surface Collection 4	Surface	Glass, Light green vessel	2	Fragment	Green	
Area F1						
B1	I	Glass, Bottle	1	Body	Brown	Likely beer bottle, molded.
B1	I	Iron, Nail, unidentifiable	2	Fragment		
B1.5	I	Glass, Bottle	1	Body	Light green	Likely Coca Cola bottle
B1.5	I	Glass, Vessel	1	Body	Light blue	
C1.5	I	Brick, Fragment	N/A	Fragment		Not Collected
C2	I	Brick, Fragment	N/A	Fragment		Not Collected
C3	I	Glass, Pharmaceutical bottle	1	Base	Aqua	Embossed "N5"
C3	I	Glass, Fragment	2	Fragment	Colorless	
D1.5	I	Brick, Fragment	N/A	Fragment		Not Collected
D2	I	Brick, Fragment	1	Fragment		
D3	I	Glass, Vessel	1	Body	Colorless	

Prov.	Strat.	Artifact	Qty.	Part	Color	Notes
D3	I	Glass, Vessel	1	Body	Light green	Soft drink or beer bottle
D3	I	Synthetic, Shooting disc	1	Fragment	Black	
D3.5	I	Glass, Vessel	1	Base	Colorless	Embossed "...-9" and "...-1673"
D3.5	I	Iron, Nail, unidentifiable	1	Fragment		
D3.5	I	Brick, Fragment	1	Fragment		
D4.5	I	Glass, Vessel	1	Body	Light green	

APPENDIX C: VCRIS FORMS

Forms to be added in final

REPORT >

Phase I Architectural Resource Survey of the Carver Solar Project Area

LOCATION > Isle of Wight County, Virginia

DATE > May 2022

PREPARED FOR >
Carver Solar I, LLC



PREPARED BY >
Dutton + Associates, LLC

VDHR FILE NO. >
2022-3225

Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

**PHASE I ARCHITECTURAL RESOURCE SURVEY OF THE
CARVER SOLAR PROJECT AREA
ISLE OF WIGHT COUNTY, VIRGINIA**

PREPARED FOR:
CARVER SOLAR I, LLC

PREPARED BY:
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APRIL 2022

ABSTRACT

In April 2022, Dutton +Associates, LLC (D+A) completed a Phase I architectural resource survey (Phase I) of the Carver Solar Project Area in Isle of Wight County, Virginia. The effort was intended to provide documentation and assessment of architectural resources within the project area to make recommendations as to whether they may be potentially eligible for listing in the National Register of Historic Places (NRHP) and assess those that are considered NRHP-eligible for project impacts. The effort was conducted in support of an application to Isle of Wight County for a Conditional Use Permit (CUP) and application to the Department of Environmental Quality (DEQ) for a Permit By Rule (PBR). Although the project will require archaeological investigations as well, that study will be conducted as part of a separate effort and reported in a separate document.

The project involves the development of a solar energy production facility in the Windsor vicinity of southeastern Isle of Wight County. The project area is spread across several tracts of land to the west of Windsor along U.S. 460, bound generally by Yellow Hammer Road to the west, Deerfield Drive to the north, Antioch Road to the east, and Blackwater Road to the south. The project tracts are currently a mix of agricultural field and woodland (both native and planted timber). Several have homes and/or agricultural complexes that will be excluded from the proposed development. As part of the project, a series of solar arrays will be built throughout the project area and will tie into the power grid through connection to an existing transmission line on the east side of Antioch Road.

The architectural resources survey for the Carver Solar project resulted in the identification of a total of eighty-two (82) architectural resources greater than 50 years of age (constructed in 1972 or earlier) located within the survey area. Of the surveyed resources, fifty-four (54) were previously recorded (VDHR# 046-0034, 046-5057, 046-5086, 046-5088, 046-5089, 046-5099/5105, 046-5107/5111, 046-5113, 046-5114, 046-5277, 046-5293, 046-5294, 046-5307, 046-5501, and 091-5098) and twenty-eight (28) were newly recorded during this Phase I Survey (VDHR# 046-5664, 046-5668/5694). Twenty-nine (29) of the previously recorded resources were evaluated and determined not eligible for listing in the NRHP by the SHPO in 2020 and were therefore not subject to resurvey or evaluation as part of this effort (VDHR# 046-0116/0121, 046-0132, 046-5026/5029, 046-5055, 046-5056, 046-5087, 046-5112, 046-5154, 046-5295, 046-5296, 046-5298, 046-5569/5574/5577). An additional two (2) of the previously recorded resources (VDHR# 046-0034 and 046-5057) were revealed to have been demolished. The resources surveyed as part of this effort primarily include domestic and agricultural buildings from the mid-nineteenth to late-twentieth century, as well as a nineteenth century family cemetery, a railroad corridor, and several twentieth century commercial buildings.

A total of four resources identified within the survey area are considered eligible or potentially eligible for listing in the NRHP including two homes, a commercial building, and a railroad corridor. Of the two homes, the farm at 23255 Barrett Town Road (VDHR# 046-5089) has previously been determined potentially eligible as a good example of a mid-nineteenth century plantation home in the area with a relatively intact property and several potentially nineteenth century outbuildings. The second home, a farm located at 7431 Deerfield Drive (VDHR# 046-5671) is believed to have been built circa 1894, but replaced an eighteenth-century dwelling, and retains several nineteenth century outbuildings as well as family cemetery. The commercial

building is the 1930s roadside “Hobb’s Store” (VDHR# 046-5101) that has been determined eligible for its association to the development of U.S. 460 and a unique example of a service station with a complex of motor lodge cabins. The Norfolk and Western Railroad (VDHR# 091-5098) has also been determined potentially eligible for its association to the growth and development of commerce in the region from the nineteenth century through the present-day.

Each of the four NRHP-eligible resources within the survey area were subject to an assessment of impacts according to VDHR’s impact characterization scale. Two of the resources are located on tracts included in the project, but the building complexes themselves are outside of the project area (Farm at 23255 Barrett Town Road – VDHR# 046-5089 and Hobb’s Store – VDHR# 046-5101). As such, solar arrays, infrastructure, and other improvements will be made within and around the boundaries of these two properties. The buildings themselves and adjacent yardscapes will be excluded from the development footprint and access will be maintained with existing driveways. The avoidance areas will extend from the buildings to the road and will tie into setback of project improvements from the roads to maintain visibility of the resources from public ROW. Existing vegetation in the vicinity of the building complexes will also be maintained and where no vegetation currently exists, a robust supplemental landscape buffer of evergreen trees will be planted to screen improvements from the roads and building complexes. As such, the project will result in direct impacts, as well as a change of setting and viewshed for both resources, however, with regards to the farm at 23255 Barrett Town Road, the impacts to the property will be more substantial as its associated property, field/woodland patterns, and landscape are contributing to its character as a farm and **therefore it is D+A’s opinion that the project will result in a moderate impact to the farm at 23255 Barrett Town Road (VDHR# 046-5089)**. With regards to the Hobb’s Store, however, the impacts will not substantially compromise the qualities and characteristics that make it significant or eligible for listing in the NRHP. As a roadside commercial building and tourist motel, its architecture and connectivity to the highway are considered key contributing aspects of its setting and will be preserved, while the farm fields and woodland to the rear where improvements are to be located are not as character-defining. **Therefore, it is D+A’s opinion that the project will have no more than a minimal impact to the Hobb’s Store (VDHR# 046-5101).**

For the other two properties located within the survey area but not within the project area, analysis found that the Farm at 7431 Deerfield Drive is located just north of the project area. Although the property parcel on which it is set immediately abuts the edge of the project area, the home and associated building complex are set centrally within the large property and a greater distance from the project. Existing vegetation on the property, including a thick timber stand, as well as a native wooded area bordering the swamp that extends along the perimeter of the property completely screens the project area from view and is anticipated to inhibit visibility of any project improvements. The Norfolk and Western Railroad corridor extends through the project tracts, although does not directly cross any of them. This corridor is lined by treelines and wooded areas for much of its length through the vicinity which buffer it from the project area. Inspection from the three road crossings in the vicinity reveal that in general this vegetation and other development bordering the roads and corridor screen wide views of the project area and will minimize visibility of project improvements. Therefore the project may introduce a slight change in the setting and viewshed of the landscape within and immediately surrounding the portion of the corridor in the vicinity of the project, although the project is not anticipated to alter the overall alignment of the existing corridor, nor introduce any features that are substantially different or incompatible from its constantly evolving setting. **Therefore, it is D+A’s opinion that the project will result in no**

more than a minimal impact to these resources. Below is a summary of NRHP-eligible resources and recommendations of impacts.

NRHP-eligible architectural resources with recommendations of project impacts

VDHR #	Resource Name/Address	Year Built	NRHP Eligibility	Project Impacts
046-5089	Farm, 23255 Barrett Town Road	c.1850	Potentially NRHP-Eligible	Moderate Impact
046-5101	Hobb's Store, 6635 Windsor Boulevard	c.1933	NRHP-Eligible	Minimal Impact
046-5671	Farm, 7431 Deerfield Drive	c.1894	Potentially NRHP-Eligible	Minimal Impact
091-5098	Norfolk and Western Railroad	c.1858	NRHP-Eligible	Minimal Impact

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1. INTRODUCTION

In April 2022, Dutton +Associates, LLC (D+A) completed a Phase I architectural resource survey (Phase I) of the Carver Solar Project Area in Isle of Wight County, Virginia. The effort was intended to provide documentation and assessment of architectural resources within the project area to make recommendations as to whether they may be potentially eligible for listing in the National Register of Historic Places (NRHP) and assess those that are considered NRHP-eligible for project impacts. The effort was conducted in support of an application to Isle of Wight County for a Conditional Use Permit (CUP) and application to the Department of Environmental Quality (DEQ) for a Permit By Rule (PBR). Although the project will require archaeological investigations as well, that study will be conducted as part of a separate effort and reported in a separate document.

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 authored 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 in the Windsor vicinity of southeastern Isle of Wight County. The project area includes several tracts of land to the west of Windsor along U.S. 460, bound generally by Yellow Hammer Road to the west, Deerfield Drive to the north, Antioch Road to the east, and Blackwater Road to the south. The project tracts are currently a mix of agricultural field and woodland (both native and planted timber). Several have homes and/or agricultural complexes that will be excluded from the proposed development (Figures 1-1 and 1-2).

As part of the project, a series of solar arrays will be built throughout the project area and will tie into the power grid through connection to an existing transmission line on the east side of Antioch Road.

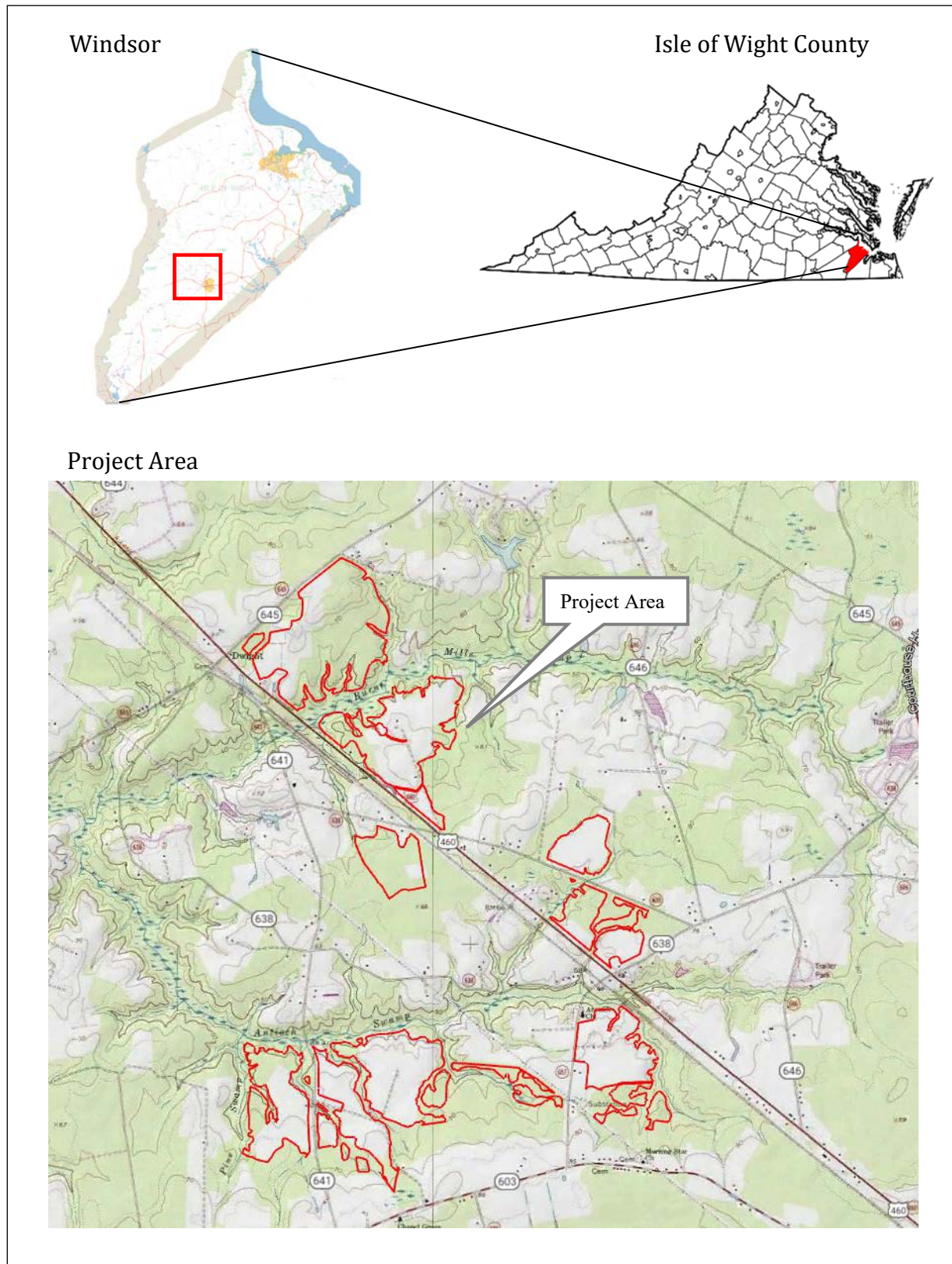


Figure 1-1: General location of the project area.



Figure 1-2: Aerial view of project area.

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2. SURVEY AREA

For the purposes of this project, the survey area was established to define the area in which the project may result in impacts to NRHP-eligible cultural resources. Impacts considered include “direct”, in which project construction, components, or other aspects may physically alter a cultural resource. “Indirect” impacts are those which may introduce features, qualities, or other characteristics into the setting of a cultural resource. In the case of solar projects, direct impacts are typically introduced by the location of proposed arrays, access roads, fence lines, and utility easements. Indirect impacts are typically limited to the introduction of visual features.

As such, the architectural survey area for this effort includes the project area property, as well as the geographic area around the project within which the associated project components may be seen. The default viewshed survey area for solar project according to the VDHR and SCC 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 Carver Solar Project, the default one-half mile buffer was deemed appropriate and utilized for the architectural survey. A map of the defined survey area is illustrated in Figure 2-1.

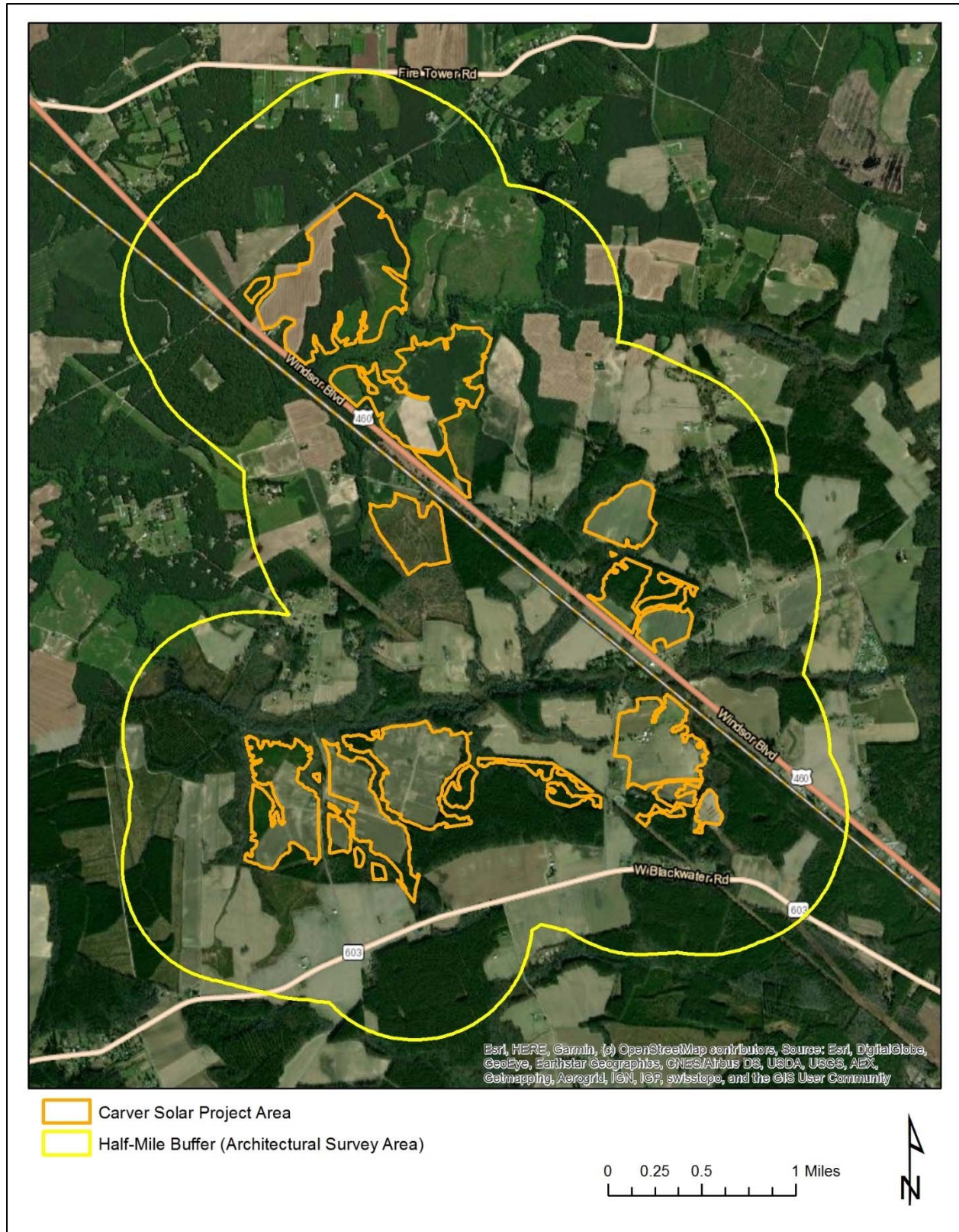


Figure 2-1: Carver Solar Project Area with half-mile architectural survey area.

3. RESEARCH DESIGN

The Phase I architectural resource survey of the Carver Solar Project was undertaken in order to confirm the existing conditions of known cultural activity and resources within the project area, identify new or unrecorded architectural resources within the survey area, evaluate those resources for NRHP eligibility, and assess potential project impacts to NRHP-eligible resources. The Phase I survey methodology is summarized below.

ARCHIVAL RESEARCH

In May 2021, D+A conducted background research as part of the *Phase IA Cultural Resources Assessment of the ±379.3-Hectare (±937.3-Acre) Carver Solar Project Area* 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), the archives search was verified and updated at the time of this Phase I survey. 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 Isle of Wight County was prepared summarizing general historical trends, settlement patterns, and development with a focus on the vicinity of the project area. Further analysis and context development were undertaken for the defined survey area so that newly recorded resources could be effectively evaluated.

FIELD SURVEY

The background research conducted in support of the Phase I reconnaissance survey was designed to identify properties greater than 50 years of age located within the survey area. A reconnaissance field survey was undertaken to identify and document all buildings, objects, structures, sites, and districts within the survey area that were constructed in 1972 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).

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4. ARCHIVES SEARCH

This section includes a summary of all the cultural resource management events that have taken place within the project area registered at VDHR through March 2022. It also lists all previously identified architectural resources and archaeological sites located within the project area, as well as within one mile of the project area.

PREVIOUS SURVEYS RELEVANT TO THE SITE

Research at VDHR reveals that eight surveys have been conducted within one mile of the project area, six of which directly included portions of the project area (Figure 4-1; Table 4-1). These surveys were conducted between 1996 and 2020 and primarily included archaeological survey, however, some included architectural resources as well. The six surveys that included portions of the project area were conducted as part of transportation and utility projects, and therefore were primarily linear in nature, although a recent survey conducted as part of a nearby solar project included a larger architectural survey area that overlaps with portions of the project area.

Table 4-1: Previous Phase I archaeological surveys that cross into the project area. Orange highlight indicates survey included portions of the project area.

VDHR Report #	Title	Author	Year
PG-158	Results of the Archaeological Identification Survey of Approximately 3.18 Miles of the Proposed Route 460 PPTA Project in Isle of Wight and Southampton Counties and Supplemental Evaluation Testing at Site 44PG0504 in Prince George County, Virginia	Gray and Pape, Inc.	2009
SK-107	A Phase I Cultural Resources Survey of the Proposed Approximately 60-Mile Dominion Virginia Power Carson-Suffolk 500 kV Transmission Line in Dinwiddie, Prince George, Sussex, Southampton, and Isle of Wight Counties, and the City of Suffolk, Virginia	Cultural Resources, Inc.	2009
IW-022	Phase I Cultural Resources Survey of Proposed Improvements to Route 603, in Isle of Wight County, Virginia	Virginia Commonwealth University Archaeology Research Center	1996
IW-038	Archaeological Survey of Two Proposed Temporary Sediment Basins Associated With the Route 603 Widening Project	Virginia Department of Transportation (Highways and Transportation)	2004
IW-052	Final Letter Report: Results of the Archaeological Identification Survey of Approximately 6.06 Miles of the Proposed Route 460 PPTA Project, Isle of Wight and Southampton Counties, Virginia	Gray and Pape, Inc.	2008
SK-108	Additional Phase I Archaeological Survey Addendum to: A Phase I Cultural Resources Survey of the Proposed Approximately 60-Mile Dominion Virginia Power Carson-Suffolk 500 kV Transmission Line in Dinwiddie ... City of Suffolk, Virginia	Cultural Resources, Inc.	2009
SX-031	Archaeological Survey Route 460 Location Study, Sussex, Southampton, Isle of Wight Counties and City of Suffolk, Virginia	Gray and Pape, Inc.	2006

VDHR Report #	Title	Author	Year
IW-094	Phase I Cultural Resources Survey of the ±121.4-Hectare (±300-Acre) Windsor Solar Project Area, Isle of Wight County, Virginia	Dutton & Associates	2020

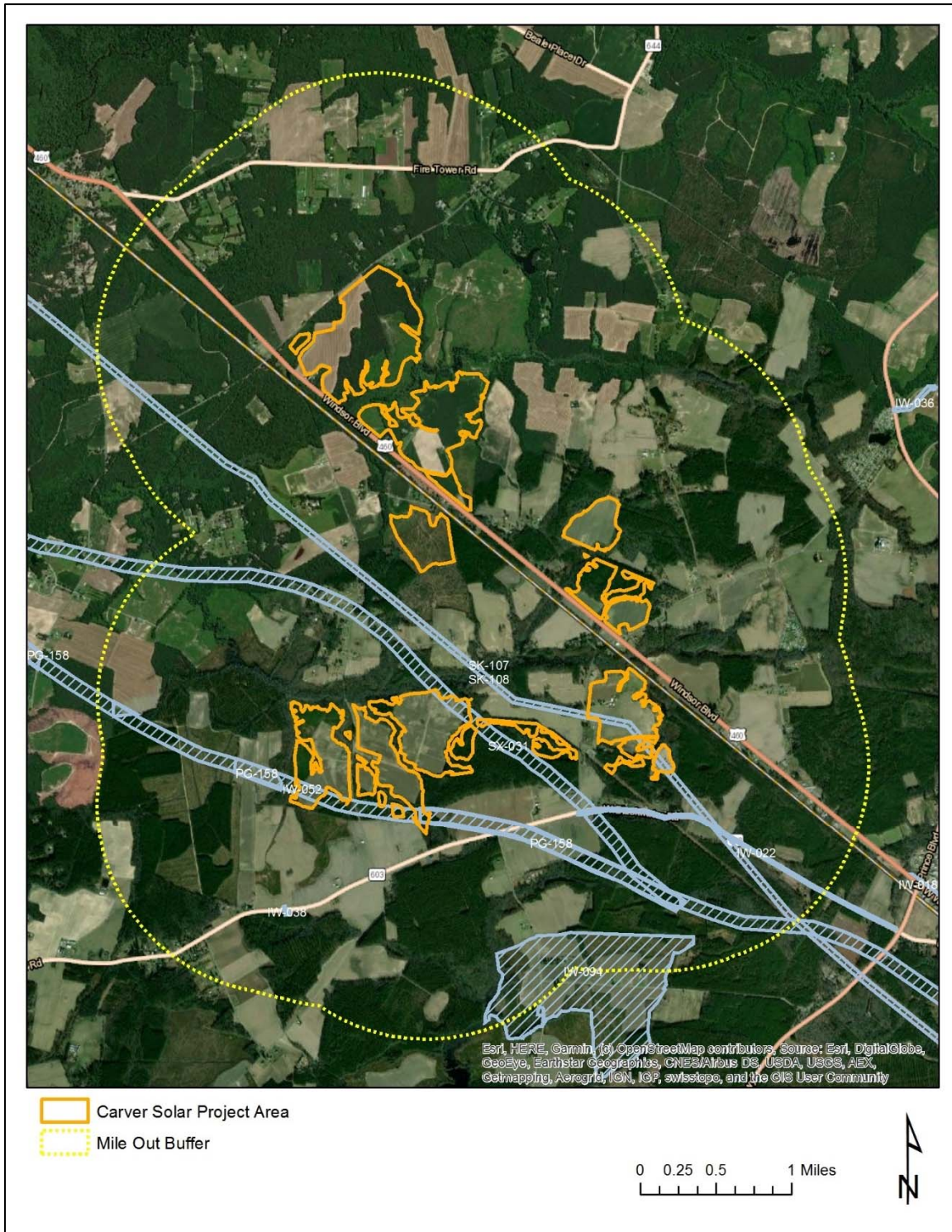


Figure 4-1: Previous surveys conducted within 1.0 mile of the project area. Source: V-CRIS

PREVIOUSLY IDENTIFIED ARCHITECTURAL RESOURCES WITHIN ONE MILE

Review of VDHR records identifies 73 previously recorded architectural resources located within one mile of the project area, seven of which are located directly within the project area (Table 4-2 and Figure 4-2). The resources consist of dwellings and farmsteads from the nineteenth and twentieth century, nineteenth and twentieth century churches, church and family cemeteries, twentieth century commercial buildings, a twentieth century granary complex, and a nineteenth century railroad corridor. Of these resources, three (3) have been determined eligible or potentially eligible for listing in the NRHP by the VDHR, including a mid-nineteenth century farmstead (VDHR# 046-5089), a late-nineteenth century railroad corridor (VDHR# 091-5098), and an early-twentieth century roadside store (VDHR# 046-5101). Of the other resources, sixty-four (64) have been determined not eligible for listing in the NRHP by the VDHR and the remaining six (6) have not been formally evaluated.

Table 4-2: Previously identified architectural resources located within 1.0 mile of the project area. Those resources in bold font have been determined eligible or potentially eligible for listing in the NRHP. Orange highlight indicates resource is located directly within the project area

VDHR#	Property Names	Evaluation Status
046-0034	Mumford House (Historic)	N/A
046-0036	Hearn House (Historic), House, 6122 Fire Tower Road (Function/Location)	DHR Staff: Not Eligible
046-0083	Carr House (Historic), Elem (Historic/Current)	N/A
046-0116	Farm, 8151 Blackwater Road (Function/Location), James R. Cobb Farm (Historic), Roberts Farm (Historic), Rocking Horse Stables (Historic)	DHR Staff: Not Eligible
046-0117	Heywood Bostic House (Current), House, 8299 Blackwater Road (Function/Location), William Bostic House (Historic)	DHR Staff: Not Eligible
046-0118	Bostic Family Cemetery (Historic/Current), Cemetery, Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-0119	Church, 8445 Blackwater Road (Function/Location), Morning Star Baptist Church (Historic/Current)	DHR Staff: Not Eligible
046-0120	Anthony G. Booker House (Current), House, 8503 Blackwater Road (Function/Location), Samuel Johnson House (Historic)	DHR Staff: Not Eligible
046-0121	House, 9177 Blackwater Road (Function/Location), Stokes Tenant House (Current)	DHR Staff: Not Eligible
046-0122	House, 9341 Blackwater Road (Function/Location), Wm. H. Goodman Estate House (Current)	DHR Staff: Not Eligible
046-0123	Robert Lee Gwaltney House (Current)	DHR Staff: Not Eligible
046-0124	House, 9341 Blackwater Road (Function/Location), Martha Council Estate Tenant House (Current)	DHR Staff: Not Eligible
046-0125	Mason Barn (Current)	DHR Staff: Not Eligible
046-0132	Cemetery, 8445 Blackwater Road (Function/Location), Morning Star Baptist Church Cemetery (Historic/Current)	DHR Staff: Not Eligible
046-5026	Austin Farm, 7095 W. Blackwater Rd (Historic/Location), House, 7095 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5027	Austin Farm #2 (Current), House, 7289 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5028	Chapel Grove Congregational Christian Church (Current Name), Chapel Grove United Church of Christ Cemetery (Current), Church, 7366 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5029	Faulk House (Current), Gay School (Historic), House, 7443 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5055	House, 7058 West Blackwater Road (Function/Location), Julia A. Butler House (Historic)	DHR Staff: Not Eligible

VDHR#	Property Names	Evaluation Status
046-5056	House, 6483 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5057	Barn off Route 603 (Descriptive)	DHR Staff: Not Eligible
046-5074	House, 9430 Cut Thru Road (Function/Location)	DHR Staff: Not Eligible
046-5081	Britt Farm & Cemetery (Current Name), Farm, 22319 Thomas Woods Trail (Function/Location)	DHR Staff: Not Eligible
046-5086	Hedgepeth House (Current)	DHR Staff: Not Eligible
046-5087	Cobb House (Current), House, 7683 Mill Creek Drive (Function/Location)	DHR Staff: Not Eligible
046-5088	Council House (Current)	DHR Staff: Not Eligible
046-5089	Farm, 23255 Barrett Town Road (Function/Location), Walters Hunt Club (Historic/Current)	DHR Staff: Potentially Eligible
046-5098	William and Sarah Johnson House (Current), House, 6086 Fire Tower Road (Function/Location)	DHR Staff: Not Eligible
046-5099	Ralph and Nannie Leonard House (Current)	DHR Staff: Not Eligible
046-5100	Charles and Kimberly Daniels House (Current)	DHR Staff: Not Eligible
046-5101	Hall Place (Historic), Helen Johnson Hobbs Store & Motel (Current), Hobbs Property, 6635 Windsor Boulevard (Rt.460) (Function/Location), Johnson Farm (Historic)	DHR Staff: Eligible
046-5102	Dale and Helen Kelley House (Current)	DHR Staff: Not Eligible
046-5103	House , 7416 Windsor Boulevard (Current)	DHR Staff: Not Eligible
046-5104	Thomas and Clarence Lewis House 1 (Current)	DHR Staff: Not Eligible
046-5105	Abandoned Commercial Building, Windsor Blvd. (Current)	DHR Staff: Not Eligible
046-5106	Samuel and Susan New House (Current)	DHR Staff: Not Eligible
046-5107	Munford Family Cemetery (Current)	DHR Staff: Not Eligible
046-5108	Thomas and Clarence Lewis House 2 (Current)	DHR Staff: Not Eligible
046-5109	M. E. Hobbs House (Current)	DHR Staff: Not Eligible
046-5110	Carter Clements House (Current)	DHR Staff: Not Eligible
046-5111	Leland Duck House (Current)	DHR Staff: Not Eligible
046-5112	Clements Farm (Current), Farm, 23093 Antioch Road (Function/Location)	DHR Staff: Not Eligible
046-5113	Darrel and Dail Wigger House (Current)	DHR Staff: Not Eligible
046-5114	Cobbs House (Current)	DHR Staff: Not Eligible
046-5115	House, Windsor Boulevard (Current)	DHR Staff: Not Eligible
046-5116	Foster Freeman II House (Current)	DHR Staff: Not Eligible
046-5118	Farmhouse, 21323 Thomas Woods Trail (Function/Location)	DHR Staff: Not Eligible
046-5154	Antioch Independent Church (Historic/Current), Church, 23011 Antioch Road (Function/Location)	DHR Staff: Not Eligible
046-5277	House, 23258 Barrett Town Road (Function/Location)	DHR Staff: Not Eligible
046-5287	Farm, Thomas Woods Trail (Function/Location)	DHR Staff: Not Eligible
046-5293	House, 21512 Barrett Town Road (Function/Location)	DHR Staff: Not Eligible
046-5294	House, 7132 Ecella Road (Function/Location)	DHR Staff: Not Eligible
046-5295	House, 8021 Antioch Road (Function/Location)	DHR Staff: Not Eligible
046-5296	House, 23050 Antioch Road (Function/Location)	DHR Staff: Not Eligible
046-5298	House, 8464 West Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5307	Commercial Granary, 22000 Barrett Town Road (Function/Location)	DHR Staff: Not Eligible
046-5501	House, 9108 Cut Thru Road (Function/Location)	DHR Staff: Not Eligible

VDHR#	Property Names	Evaluation Status
046-5569	House, 8430 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5570	House, 8412 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5571	House, 8404 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5572	House, 8394 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5573	House, 8384 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5574	House, 8376 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5575	Antioch Church Cemetery (Current Name), Cemetery, Antioch Road (Function/Location)	DHR Staff: Not Eligible
046-5576	House, 7076 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5577	House, 7524 Blackwater Road (Function/Location)	DHR Staff: Not Eligible
046-5578	Farm, 24345 Knoxville Road (Function/Location)	DHR Staff: Not Eligible
046-5585	Cemetery, Knoxville Road (Function/Location)	DHR Staff: Not Eligible
046-5598	Diggs Cemetery (Current). Cemetery, Yellow Hammer Road (Function/Location)	N/A
046-5631	Beaton Cemetery (Current Name), Cemetery, Mill Creek Road (Function/Location)	N/A
046-5632	Cemetery, Thomas Woods Trail (Function/Location), Stringfield Cemetery (Current Name)	N/A
046-5634	Cemetery, Knoxville Road (Function/Location), Roberts Cemetery (Current Name)	N/A
091-5098	AM&O Railroad (Historic), Norfolk & Petersburg Railroad (Historic), Norfolk & Western Railway (Historic), Norfolk Southern Railway (Current)	DHR Staff: Eligible

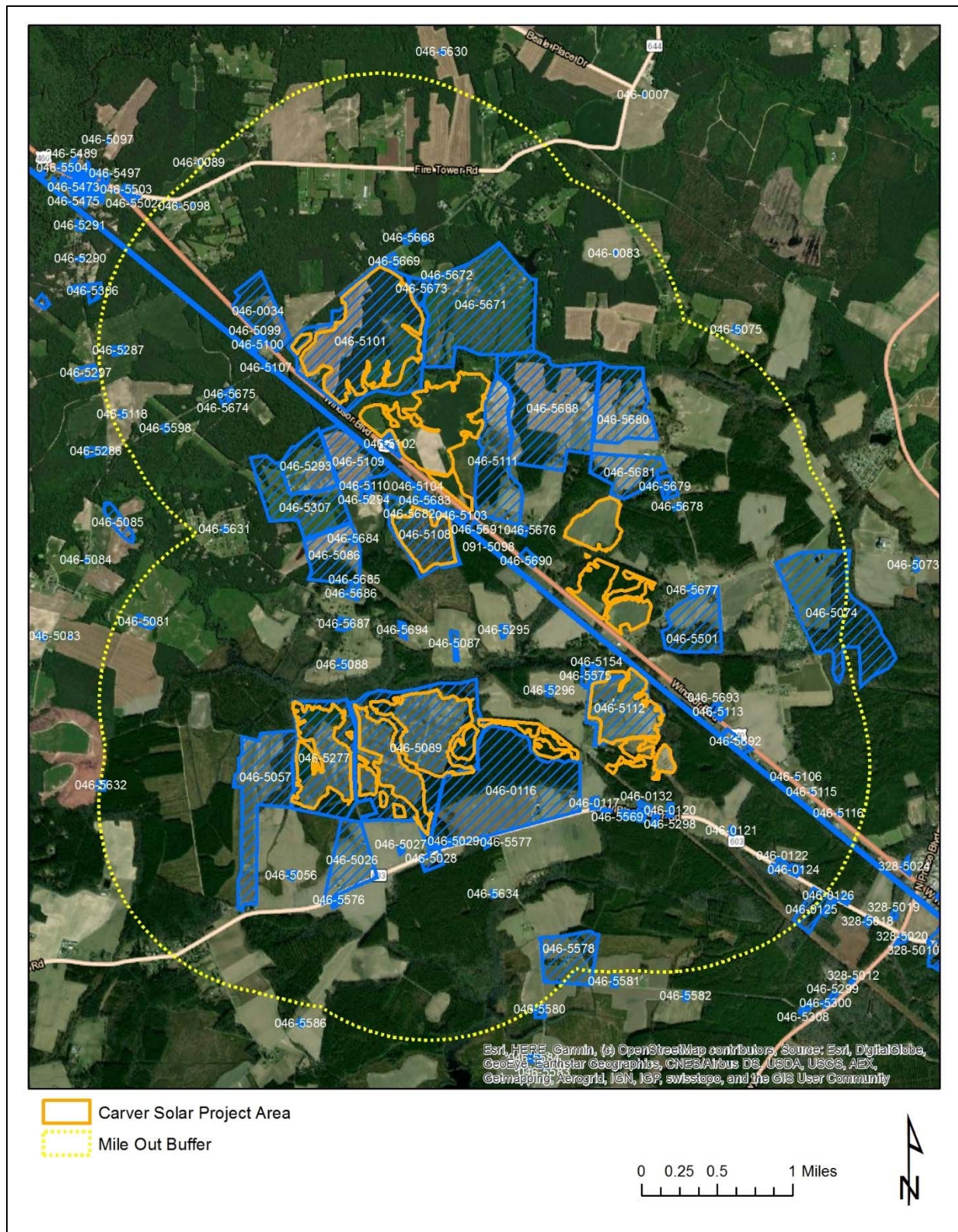


Figure 4-2: Map detailing all architectural resources within 1.0 mile of the project area. Source: V-CRIS

5. HISTORIC CONTEXT

The following section provides a brief summary of the general overarching regional historic themes relevant to Virginia and Isle of Wight County. The primary emphasis of this context focuses on the history, development, and occupation of the area, and describes how people throughout time could have left their mark on the landscape of the project area specifically. Historic occupation statistics and trends were analyzed, as were historic maps and available first-hand accounts which aided in establishing the appropriate historical 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).

SETTLEMENT TO SOCIETY (1607 – 1750)

Upon the arrival of Europeans to Virginia, American Indian towns and villages lined the James River (Figure 5-1). The vicinity of present-day Isle of Wight County was occupied by 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). They lived under the wider rule of Wahunsunacock, commonly known to the English as Chief Powhatan.

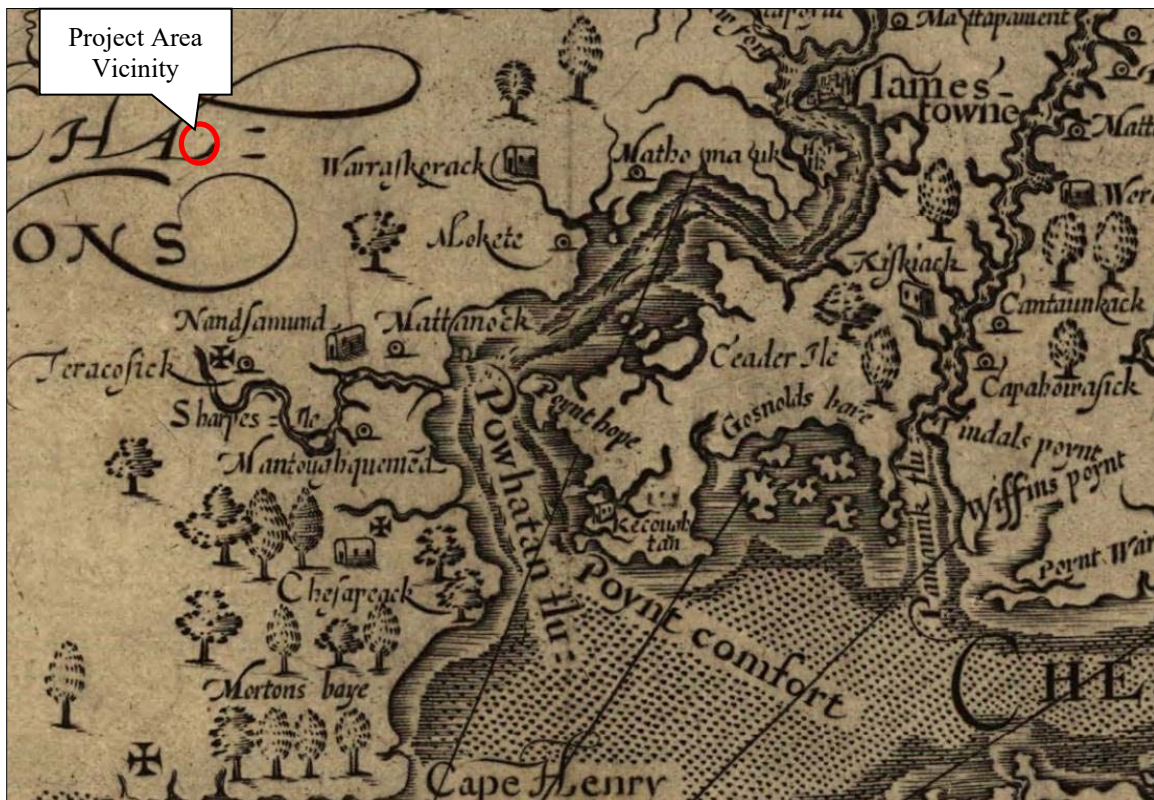


Figure 5-1: Detail of *Virginia*, by John Smith, depicting the general vicinity of the project area.
Source: Library of Congress

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. 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 natives 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, years later 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; 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.

Within a few decades, additional settlers arrived and conditions in Virginia became more favorable. Settlement spread out through the area with homes and plantations clustered along the banks of rivers and other navigable streams (Turner 1984:101-115). The first English settlement in the future Isle of Wight County was initiated by Capt. Christopher Lawne and Sir Richard Worsely in 1619. They settled on the south side of the James River at Lawne's Creek, now the dividing line of Isle of Wight and Surry counties. Initially known as Lawne's Plantation, the London Company changed the name of the area to Isle of Wight Plantation in 1625. Throughout the early 1620s, settlements ranged along the south side of the James River such as Warrsquoyacke (also known as Edward Bennett's Plantation) and Basse's Choice on the Pagan River (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 area a bit less desirable (Rouse 1968:17). The project area would have remained the frontier.

The continued spreading of European settlement increasingly stressed relations between them and American Indians. Wahunsunacock 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 Nemattanew in early March 1622 provided pretext for a mass attack. On the morning of March 22, members of the Powhatan Confederacy and the Chickahominy Tribe killed English colonists along a 70-mile stretch on both sides of the James River. The result was a loss of more than a quarter of the total European population. By this time there had been 1,240 new residents of Virginia, so the massacre resulted in a loss of approximately 348 people; 53 of those killed lived in Isle of Wight County. 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.

Despite this setback, the colonists persevered and completed expeditions against the American Indians taking all land and resources they were able. 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 early 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 (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 or counties. One of these counties was Warroaquyoake, now Isle of Wight. To the east was Nansemond County. The boundary between the two counties was disputed until 1674 when the Virginia House of Burgesses established “a southwest by south line be designed, runned and plainly marked from the river side of the plantation of Hayes, extending to the creek at or near the plantation called Nevill Oyster Bank; thence a line or lines up Col Pitt’s creek to the head of his lands; thence in a southwest half a point westerly line” (quoted in Morrison and Gwaltney 2006). To the west was James City County, which spanned the James River. This became Surry County in 1652.

The region of the project area is also home to a change in drainage to the James River and to the Blackwater River. Waterways draining into the Blackwater River drained into the Albemarle Sound in North Carolina. The Sound, unlike the Chesapeake Bay, had no ports which placed a constraint on settlement and early planters trying to get products to markets. It is likely for this reason that the land was worth less than that closer to the James River. In the 1690s, the average land values were 51.1 pounds of tobacco per acre along the James and only 16.9 pounds around the Blackwater (Atkins 2008). Land was first settled along the James River and its tributaries after which colonists were forced to move farther inland (Figure 5-2).

The colony and county continued to grow in population. This growth 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).

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).

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. A later owner of a portion of the project area would participate in the Rebellion. William West was "a rebel absconding, who took up arms against the Indians by whom his father had been most barbarously murdered" (Boddie 1938:162). 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 enslaved Africans and American Indians (Holloway n.d.).

However, despite unrest between European settlers and American Indians, land continued to be granted and the first grants in the general vicinity of the project area occurred in the late seventeenth century. It appears that the project area was part of land granted to several individuals. This includes Robert Ruffin and William Oldis with their 2,050 acres patented in 1669 and again in 1674; Col. Robert Pitt, Capt. Joseph Bridger, and William Burgh with their combined 3,000 acres of land patents in 1664; and George Peirce with his 2,500 acres patented in 1681 (Figure 5-3). Later, William West and Capt. Henry Applewhaite would purchase portions of these patents (*The Southern Roots* 2015).

The growth of population in the area is evidenced by the opening of an Episcopal church circa 1700. This early church, known as Isle of Wight Chapel, operated until the American Revolution and was eventually replaced by Antioch Congregational Christian Church (King 1993:317). With increased population throughout the region, new counties were established. Southampton County formed from Isle of Wight in 1749 with the Blackwater River serving as its boundary.



Figure 5-2: 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

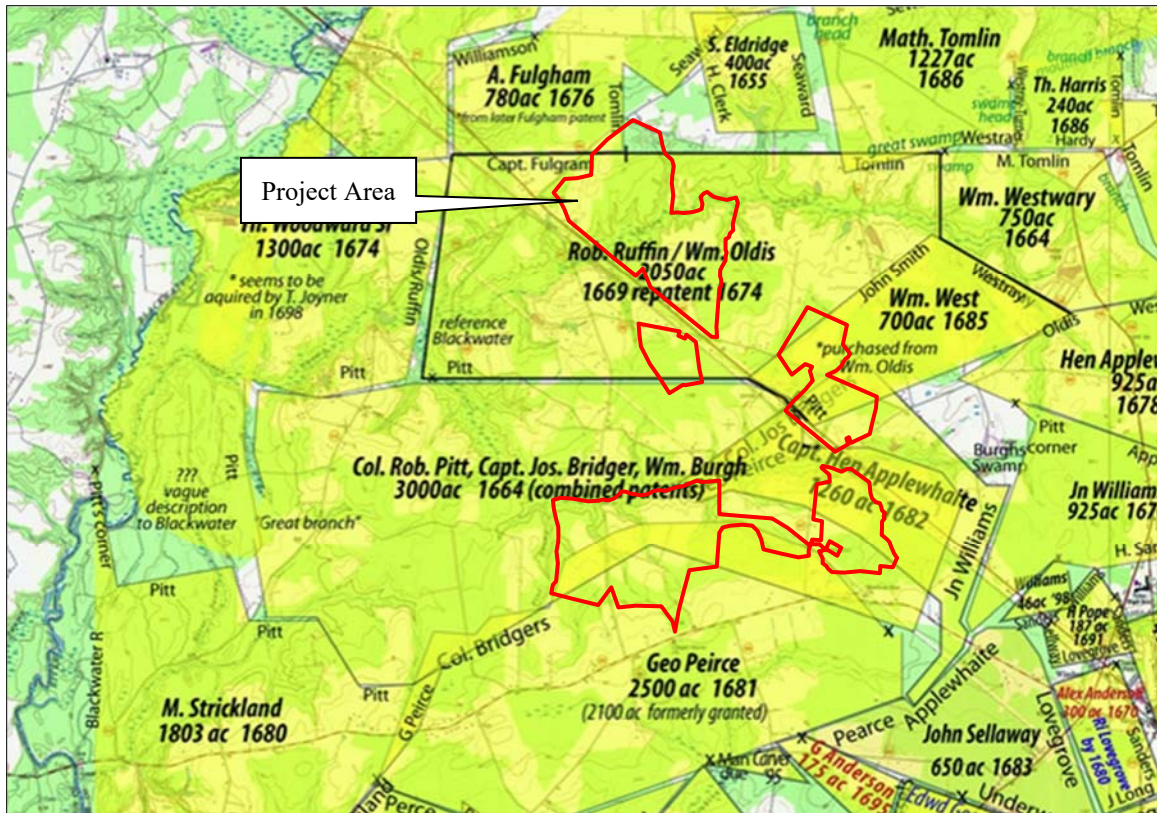


Figure 5-3: Map of early land grants in Isle of Wight County depicting the project area. Source: *The Southern Roots*

COLONY TO NATION (1750 – 1789)

By the mid-eighteenth century, the population continued to increase and colonists moved inland more. Smithfield, a settlement since circa 1740, officially became a town in 1752 and the main stage road from Norfolk to Richmond passed through it (Morrison and Gwaltney 2006).

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 county that were not conducive for growing tobacco, coupled with the collapse of the European tobacco market precipitated a shift in the economy. Farmers began to focus more on corn, grains, and orchards for the production of liquors such as apple and peach brandy. The farms in Isle of Wight County were typically between 500 to 1,700 acres (David 2007:9). According to V-CRIS records, there was possibly an eighteenth century farm within the project area, however it now remains solely as an archaeological site (VDHR #44IW0248). Additionally, a Works Progress Administration survey of historic properties indicate that Hall Home was constructed circa 1786 within or near the project area. This records also makes note of an old burying ground that had no markers and was under cultivation at the time of the survey (Jordan 1937).

To get their goods to market, in addition to waterways there were two early major routes within the County. Courthouse Highway (Route 258) connected Smithfield to the south end of the County

along its approximate midpoint. The Old Stage Road (Route 10) connected Smithfield to Surry County (David 2007:9).

While the market for crops grown in Virginia and throughout America was in high demand in European markets, tensions between the colonies and England began to put a strain on trade. At the end of the Seven Years' War (or the French and Indian War in North America) in 1763, the British government had an immense amount of debt. To pay it, Parliament imposed heavy taxes on its subjects and tightened the administration of trade and navigation acts (Salmon 1983:22). These actions sparked a strong response from the colonies. In 1774, the Virginia Convention adopted resolves against the importation of British goods and the importation of slaves. It also required each county to form a volunteer company of cavalry or infantry to prepare for an armed conflict.

Once the American Revolution was underway, it did not impact Isle of Wight County as it did nearby port towns, like Norfolk and Portsmouth. In addition to the "725 men of military age" who joined the fight, residents of the 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 county twice under British Cavalry Colonel Tarleton. He and his men made a raid on Smithfield with the intent to destroy the records; the records were previously removed. The British left a wake of destruction wherever they went (Morrison and Gwaltney 2006).

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).

In addition to diversification, a more scientific method of farming was adopted to help restore the soil's nutritive qualities. In his 1817 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, Edmund Ruffin, of Prince George, Hanover, and Amelia counties, experimented with crop rotation, fertilizers, and farm machinery. In the early 1820s, he publicized the effectiveness of marl in reducing soil acidity, a technique that could triple the productivity of Tidewater soils. Plantations began to be replaced by smaller-scale farmsteads that were increasingly situated along the system of interior roads in the county. These changes would strengthen central Virginia's economy (McCartney 2009). The value of farmland in the region increased dramatically in the early nineteenth century. In the Antebellum Period, these practices had become accepted and widely used and by 1860 Virginia was in the best condition agriculturally of her history according to historian Avery O. Craven (Agee 1969:3).

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, Isle of Wight County had 9,028 residents. During this period the population rose slightly to 10,517, approximately 42 percent of whom were enslaved. There was also a growing free black population in the county (USCB). Throughout the nation, “Black labor became the foundation stone not only of the Southern social structure, but of Northern manufacture and commerce, of the English factory system, of European commerce, of buying and selling on a worldwide scale” (DuBois 2007).

By 1818, there was a post office in the present-day town of Windsor, east of the project area. According to V-CRIS records, Clements Farm was constructed within a portion of the project area circa 1820 (VDHR #046-5112). Adjacent to the project area, Antioch Congregational Christian Church (VDHR #046-5154), on Antioch Road, opened in 1828. Antioch Church would be the mother church for multiple churches in the county (King 1993:317, 432). With this shifting population, the distance to the courthouse in Smithfield proved to be too great and the courthouse was moved to a more central location in 1800. The new town, Isle of Wight, was located along Courthouse Highway, approximately six miles northeast of the project area (Figure 5-4) (David 2007:9-10).

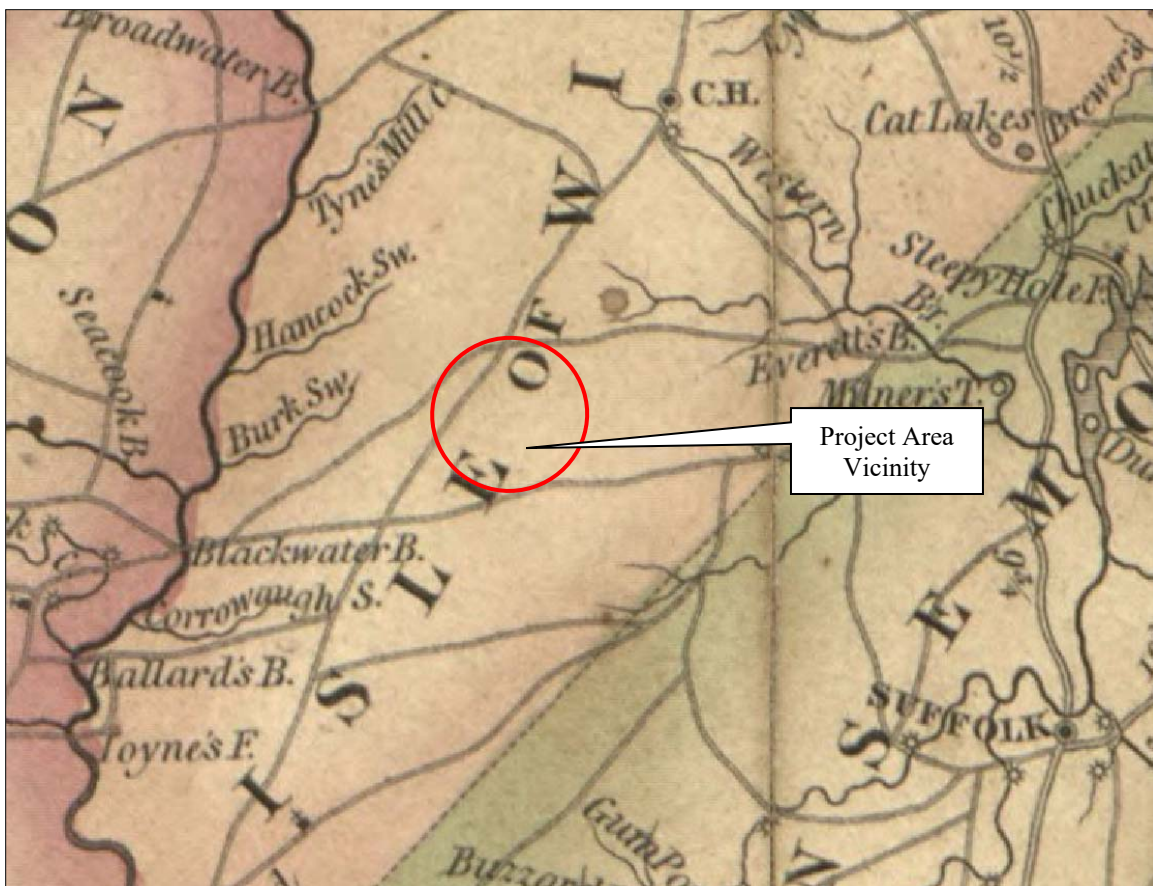


Figure 5-4: Detail of A map of the state of Virginia, 1827, depicting the vicinity of the project area.
Source: Library of Congress

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 (USCB). Despite the drop in population, the enslaved and free black population remained about 50 percent of the total population. The high slave population led to unease and in 1831 there was an insurrection in nearby Southampton County 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 African Americans and free blacks (Atkins 2008).

Approximately 90 percent of the 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 its place of tobacco in southeast Virginia included cotton, corn, and peanuts. Grains and corn grown in the region were processed at mills. Before the Civil War, peanuts, also known as "goober peas" or "ground peas" were little known outside of the southern states (Morrison and Gwaltney 2006). Isle of Wight's first peanut export was in 1849; the county would eventually become the center of the peanut belt (David 2007:10). Additionally, the ham and bacon industry continued growing. Before the coming of the railroad, the bacon trade reached out 30 to 40 miles into surrounding counties and hogs were driven in by foot from as far away as Kentucky, Tennessee, and North Carolina (Morrison and Gwaltney 2006). The railroad would create a bigger market.

In 1833, the Portsmouth and Weldon Railroad was organized; it ran in the southern portion of the county. The Norfolk and Petersburg Railroad was chartered in 1851 and was completed in 1858. Land for this line was purchased in 1854. When it became apparent that a station would be erected in Corrowaugh, a couple of local residents purchased the surrounding land for the establishment of a town and Windsor became a railroad stop. With the railroad crops could be sent out to markets much quicker than by water and large quantities of lumber, bacon, and peanuts were sent to market (King 1993).

Forests in Isle of Wight County were rich with tall cedar, cypress, pine, oak, and other hardwoods. Lumbering prospered in the region and forests could be quickly cleared with products transferred to the large market in Norfolk. Homes were built, and families began to establish themselves in the growing community of Windsor (King 1993:122). The town of Zuni also grew around a passenger depot for the Norfolk and Western Railroad northwest of the project area (Monroe et al. 2005:48).

A Civil War era map depicts a project area that consisted of a mixture of forested land and cleared fields (Figure 5-5). The waterways of Burnt Mills Swamp and Antioch Swamp crossed or formed borders to the project area. Though early historical mapping can prove difficult in overlaying with modern maps due to artistic license and changes in road and waterway alignments, this 1864 map depicts buildings within and near the project area. Several homes were constructed during this period within and outside of the project area. This includes a dwelling at 23255 Barrett Town Road

(VDHR #046-5089) constructed circa 1850, which roughly corresponds with a building illustrated near the southern portion of the project area, and the James R. Cobb Farm (VDHR #046-0116) constructed circa 1830, which corresponds to the Roberts house near the southern portion of the project area. In the northern portion of the project area were two dwellings, one of which was identified as associated with the Stevens family. There is also a building within or near the center portion of the project area.

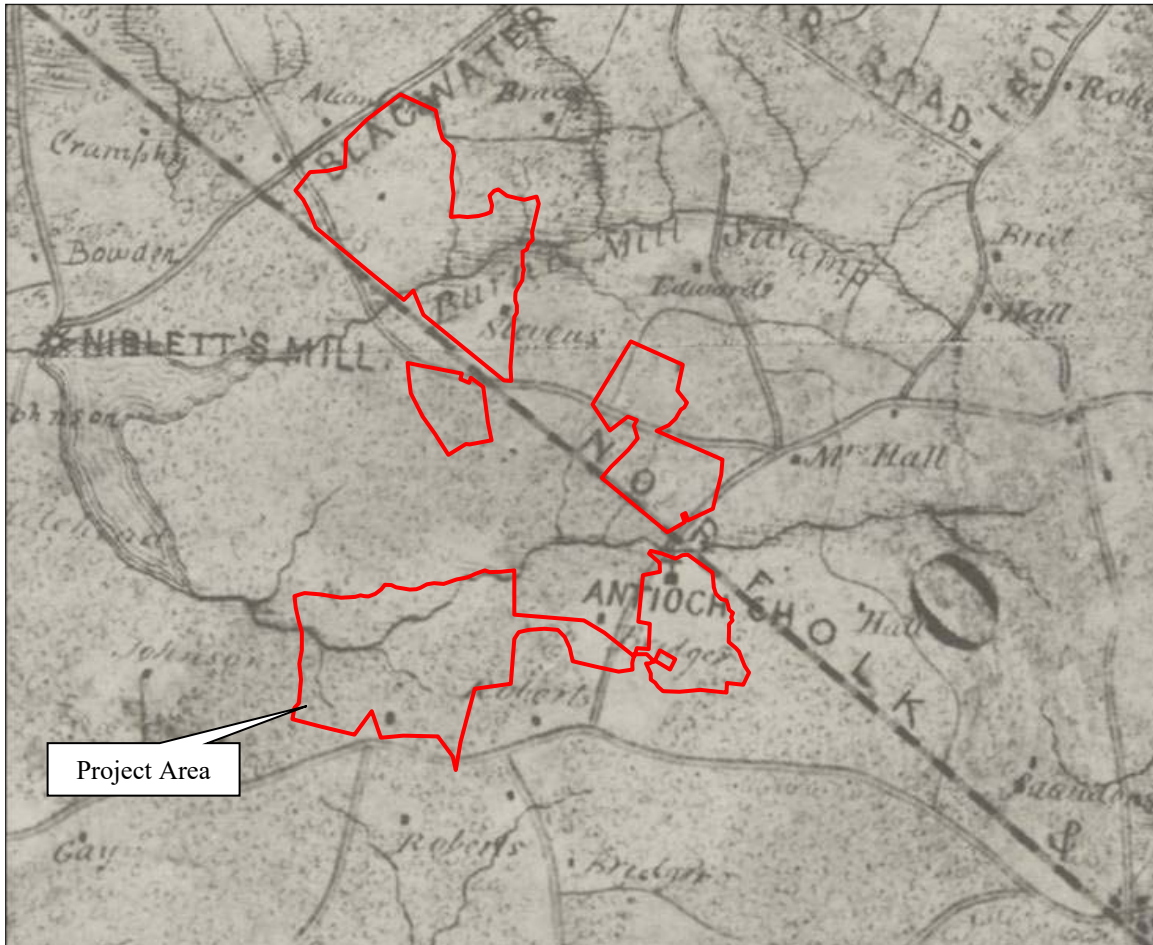


Figure 5-5: Detail of Map of Isle of Wight and part of Nansemond, 1864, depicting the project area.
Source: Library of Congress

CIVIL WAR (1861 – 1865)

Prior to the Civil War, Isle of Wight County had the eighth largest number of free blacks of the 148 counties in the state of Virginia. It ranked 52nd among the number of slaves. When the vote for secession came to the county, it was unanimously approved (Morrison and Gwaltney 2006). On the shoreline of Isle of Wight County, two forts were constructed or reinstituted during the war, Fort Huger and Fort Boykin. Men of Isle of Wight County fought for the Confederacy and the Isle of Wight Grays formed under the command of Captain Watkins (King 1993:122).

No major battles took place in the county, although skirmishes did occur. As depicted on a 1906 map, there were a few skirmishes in the vicinity of the project area (Figure 5-6). In spring 1863,

the New York 99th Infantry took an active role in the defense of Suffolk and in May of that year there was a skirmish at Antioch Church (NYSDMNA n.d.). Throughout the war, Confederates defended the Blackwater River and there were two skirmishes at the bridge of Blackwater Road over the river in 1862 and 1863. In both cases, Federals drove Confederates away but did not destroy the bridge (VDHR 2000).

Additionally, Union forces occupied many areas of the state including in Isle of Wight County and, at times, Windsor:

The Northern occupiers claimed this territory as their own, and so it was, in a strictly military sense: Union forces regularly patrolled it, could project their power at will anywhere within it, and were able to exclude Confederate power and authority from it (aside from the occasional Rebel cavalry). By that reckoning, the citizen there were – and they considered themselves to be – in enemy hands (quoted in Wills 2001:204).

According to one Union soldier “We’ve burned their fences, destroyed their railroad and thus lessened the value of their property” (quoted in Wills 2001:118). The time Federals spent in the area created a lasting impression on residents.

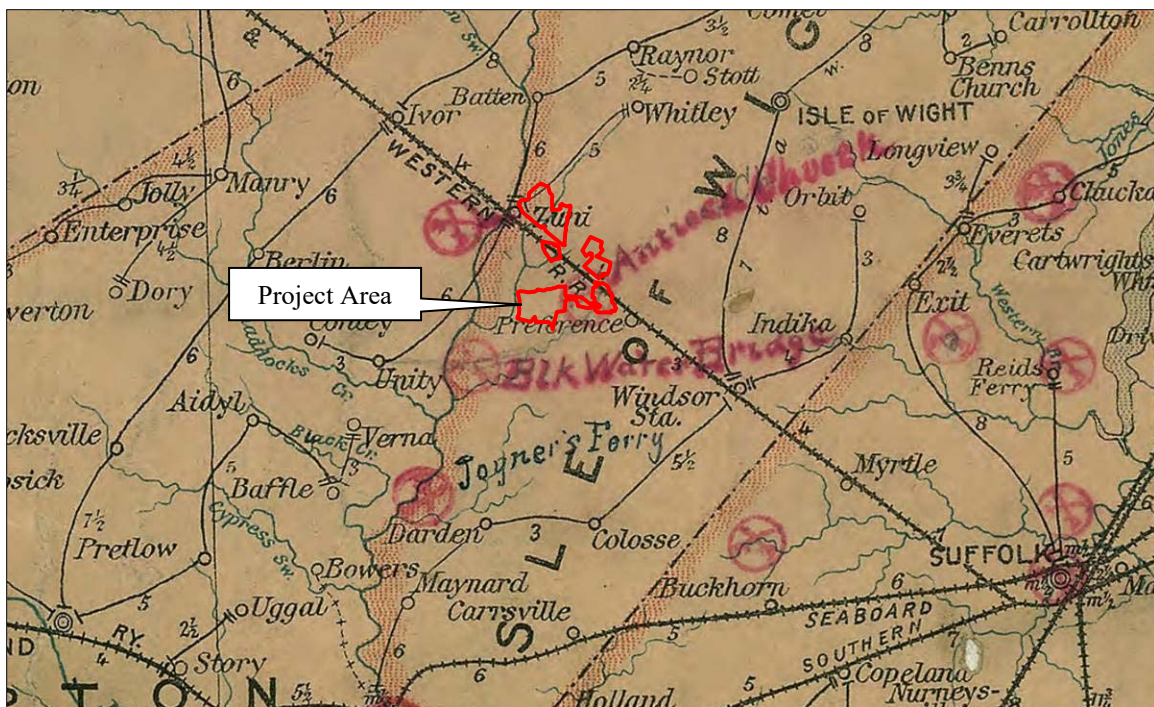


Figure 5-6: Detail of Post route map of the states of Virginia and West Virginia., 1906, depicting the project area and the marked skirmishes. Source: Library of Congress

RECONSTRUCTION AND GROWTH (1865 – 1917)

The economy of Isle of Wight County, like the rest of Virginia, was devastated by the War Between the States. The land had been ransacked by occupying armies leaving farms and properties destroyed. There was an immense loss of draft animals and severe damage to farms,

mills, and manufacturing establishments. Mill-dams were cut, ponds drained, and railroad depots, bridges, and trestles burned. Farm animals in the track of armies had been seized or killed and other food products taken (Head 1908). Land was nearly worthless and many of the owners no longer had capital, farm animals, or farming tools. As white local farmers coped with labor shortages from the emancipation of their labor force and lack of funds to buy necessary materials, many fell into debt and were forced to forfeit their real and personal property or declare bankruptcy (McCartney 2009).

The biggest change in the south was the new freedom of thousands of enslaved persons. Many newly freed slaves stayed in the county as sharecroppers or tenant farmers and later as land owners. Sharecropping and tenancy became a way of life for much of rural Virginia. As these Americans began to put their lives back together, churches and schools began to be organized. South of the project area, local African Americans organized Morning Star Church in 1886 on land donated for this use (King 1993:320).

With its recovery, Virginia adopted a new constitution which provided for public schools. By 1871, Isle of Wight had 25 schools: 20 white and 5 “colored” (*The Teachers Guide* n.d.). Outside of the project area, the Faulk House, which had been constructed circa 1900 on Blackwater Road, became the Gay School and initially educated white children in the area. Sometime before 1940, this changed and the school was used for the education of African American children (V-CRIS #046-5029).

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, the county produced oats, potatoes, fruits, vegetables, and oysters (Morrison and Gwaltney 2006). Farmers were able to get goods to market on the newly repaired rail line. Following the war, the Norfolk and Petersburg Railroad was rebuilt and its stations repaired; the line was also extended west to the Mississippi Valley. The Atlantic, Mississippi and Ohio Railroad Company was formed from a merger between the Norfolk and Petersburg and other railroads in 1872. From this, the Norfolk and Western was organized in 1881 (Bamann and Hall 2006:3/14).

Timbering also prospered during this period with the creation of Camp Manufacturing Company at the south end of the County, opposite Franklin. Other lumber companies included 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 Isle of Wight County improved at the closing of the nineteenth century and population between 1890 and 1900 increased 16 percent to 13,102 residents (USCB).

As the area recovered, by the turn of the century residents of Windsor felt that it should officially be a town. It was chartered in 1902 and Windsor Station became the Town of Windsor (History of Windsor n.d.) (Figure 5-7). With all of the early improvements made to the town, it was flourishing by 1907:

It has a large, flourishing trade, many thousands bushels of peanuts and other farm products being annually shipped, and its people are well known for their hospitality.

...It has four general stores, two groceries, two barber shops, one shoemaker, one millinery, three churches (Methodist, Baptist, and Christian), one high school, one peanut factory, one planning mill, two eating houses, one blacksmith shop, one bank, two telephone offices, one telegraph office (Western Union), two undertaking establishments, one livery stable, one furniture shop and one hotel.

Its population is over four hundred and the value of its real and personal property is \$800,000 and the aggregate amount of its annual business \$250,000 (quoted in King 1993:126).

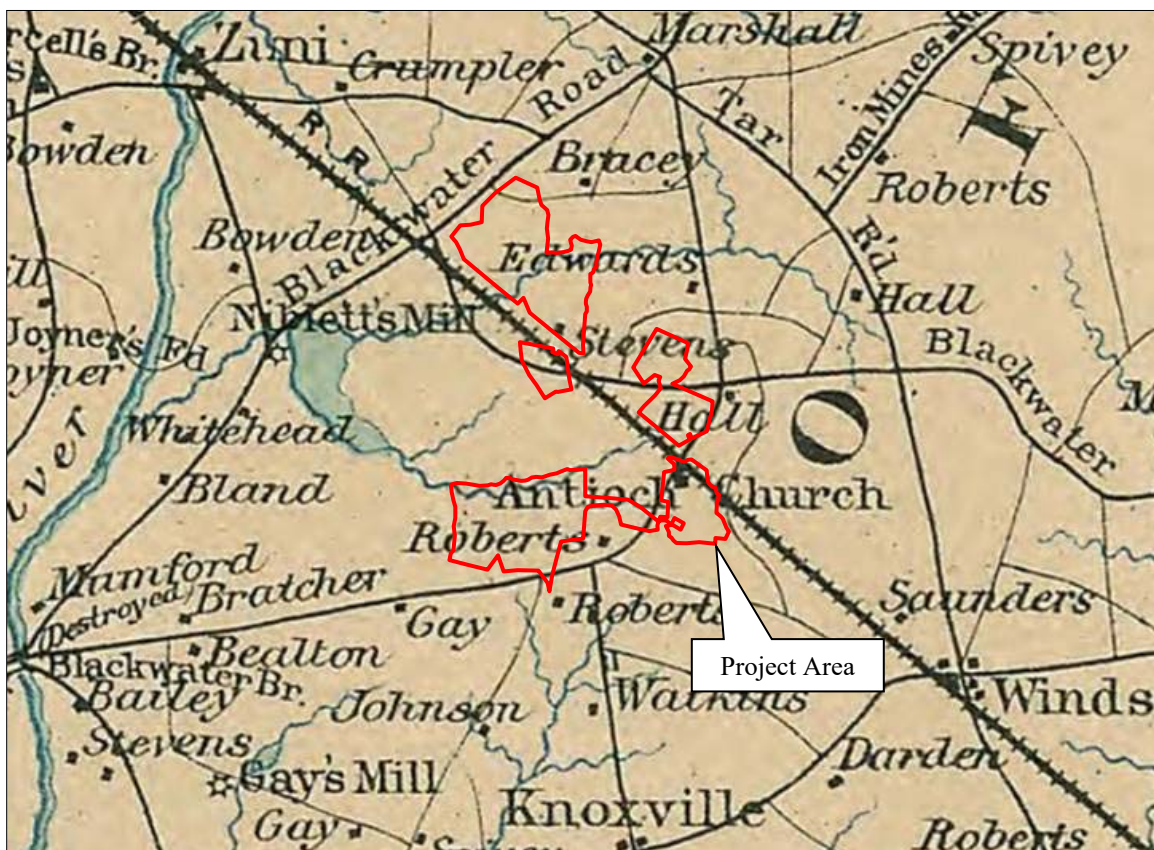


Figure 5-7: Detail of Preliminary map of a part of the south side of James River, Va., 1891, depicting the project area. Source: Library of Congress

WORLD WAR I TO WORLD WAR II (1917 – 1945)

As the twentieth century continued, the number of farms in the Isle of Wight County steadily increased. 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).

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). As technological and transportation innovations were made, changes were brought to Windsor. Electricity came into the Town of Windsor in 1923 as did telephone service; a transmission line crosses the project area. The first gas station in Windsor was erected in 1924 (King 1993:127).

While the Great Depression affected urban areas by devastating businesses, the agricultural production of rural counties was not subjected to the same issues. The number of farms actually increased by six percent between 1930 and 1935. Agriculture remained the economic mainstay of Isle of Wight County and its commercial centers provided processing facilities for the products and access to export goods (David 2007:18).

A number of important transportation improvements happened during this period. In 1927, the James River Bridge was completed connecting Isle of Wight County with Newport News and Hampton. To ease travel as automobiles became more popular, roads were paved, beginning with Routes 665 and 667 in 1932 and 1933. The Commonwealth of Virginia would also build Highway 460, or Windsor Boulevard, which connects Suffolk, Windsor, and Petersburg (Monroe et al. 2005:51). At the new road, Lewis C. Johnson built a general store and three tourist cabins within the project area for travelers (V-CRIS #046-5101).

During World War II, with the proximity of Isle of Wight County to the military bases in southeast Virginia citizens were subjected to air raid warnings. An anti-aircraft gun site was set up at the northern end of King's Highway Bridge and the rail sidings near Windsor were used as a staging ground for munitions (Bradshaw n.d.; Monroe et al. 2005:51).

Topographic maps from this period illustrate the project area which remained a mix of forested land and fields that were crossed by minor drives (Figures 5-8 and 5-9). Buildings lined the major roadways in and out of the project area. During this period there were buildings in all sections of the project area. By 1945, a transmission line crossed the project area.

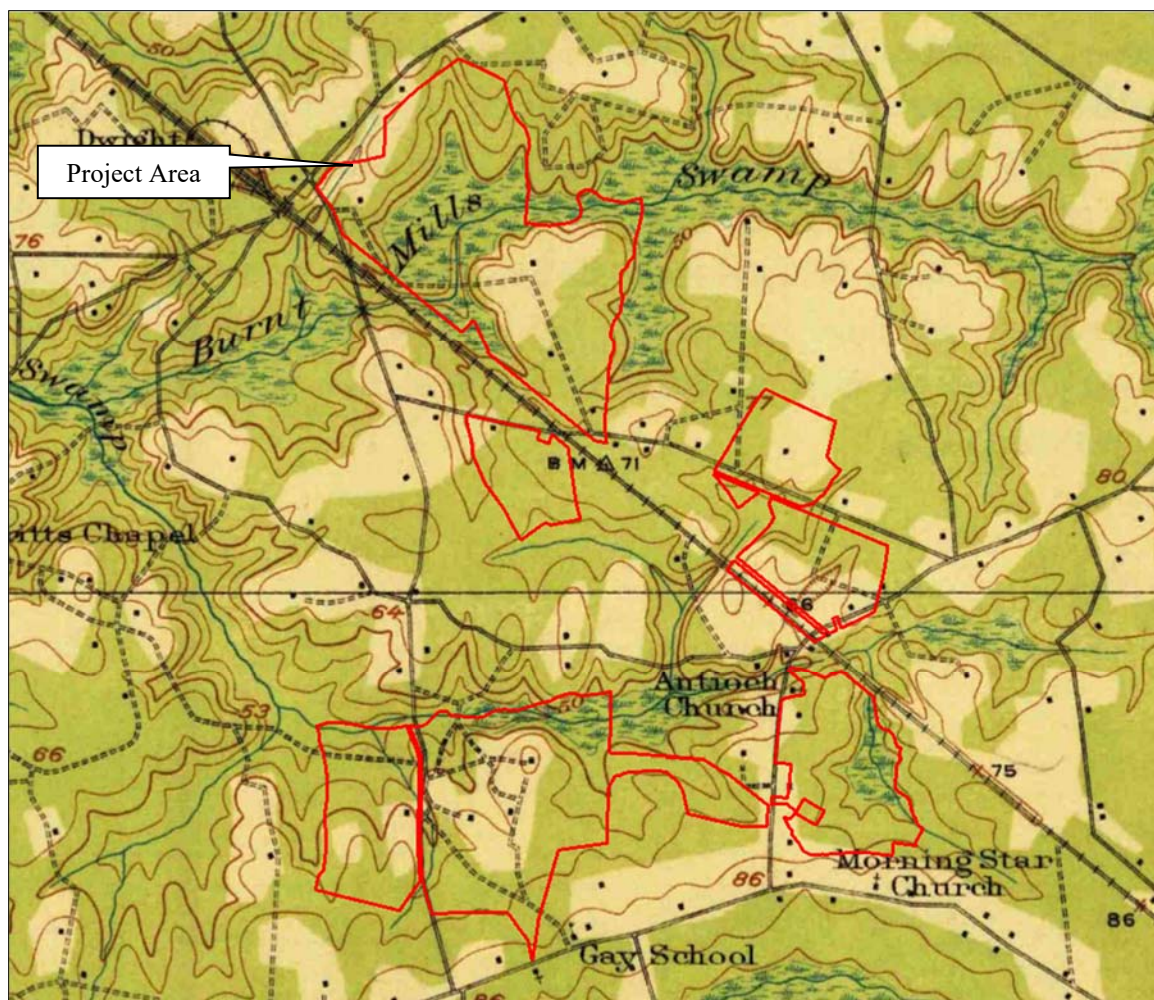


Figure 5-8: Detail of 1920 Ivor Quadrangle, depicting the project area. Source: USGS

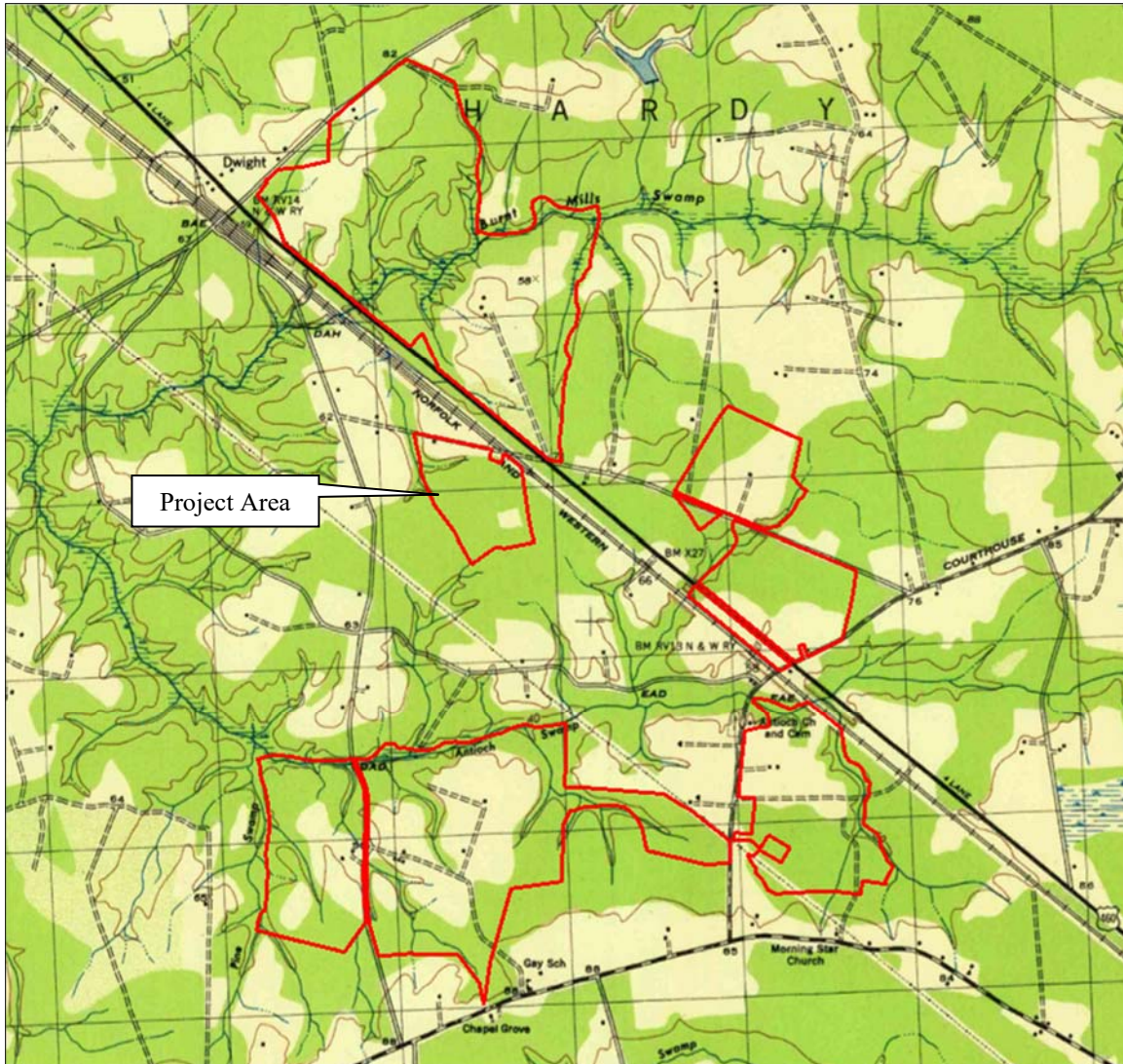


Figure 5-9: Detail of 1944 Zuni Quadrangle, depicting the project area. Source: USGS

NEW DOMINION (1945 – PRESENT)

The end of World War II brought with it a building boom that would begin to change the character of the earlier farmsteads within Isle of Wight County. Smithfield to the north became a bedroom community for the now burgeoning Newport News, Portsmouth, and Norfolk and developmental pressure was placed on farmsteads (David 2007:19). In the second half of the twentieth century, the Town of Windsor was improved and expanded as it annexed 2.82 square miles of surrounding land (History of Windsor n.d.). When schools around Windsor were consolidated, the Gay School was abandoned (Lowe 2003; V-CRIS #046-5029).

The face of agriculture also began to change. By the end of World War II, Virginia was no longer the leading producer of peanuts, a situation that would continue into the twenty-first century. 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.).

Conversely, the meat packing and timbering industries in Isle of Wight County would continue to grow and the county would become home to two Fortune 500 companies: Smithfield Foods and International Paper Company. Despite all of the changes, agriculture continues to be an economic mainstay in Isle of Wight County with important crops being cotton, soy, and of course peanuts (Morrison and Gwaltney 2006). In the second half of the twentieth century and beyond, the project area remained relatively unchanged though there is evidence of logging in some portions (Figures 5-10 through 5-12).



Figure 5-10: Detail of a 1966 aerial depicting the project area. Source: USGS

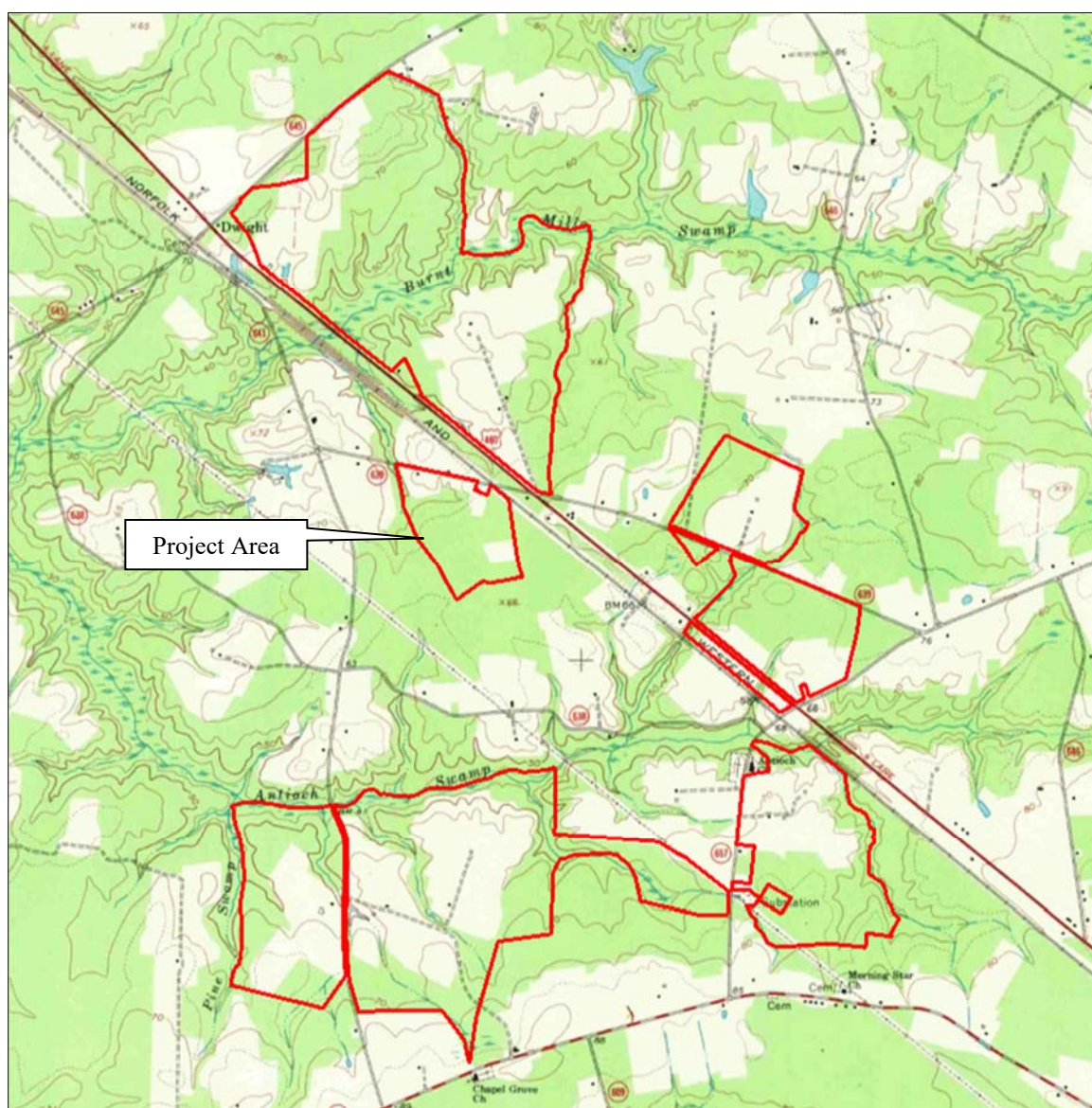


Figure 5-11: Detail of the 1984 Zuni Quadrangle depicting the project area. Source: USGS



Figure 5-12: Detail of a 1994 aerial depicting the project area. Source: Google Earth

6. FIELD SURVEY RESULTS

In March 2022, D+A conducted a Phase I architectural resource survey of the Carver Solar Project Area in Fauquier County, Virginia. The field effort consisted of survey and evaluation of all architectural resources aged fifty years of age or older located within one-half mile of the project area. The results of the survey are summarized below.

ARCHITECTURAL FIELD RESULTS

The architectural resources survey for the Carver Solar project resulted in the identification of a total of eighty-two (82) architectural resources greater than 50 years of age (constructed in 1972 or earlier) located within the survey area. Of the surveyed resources, fifty-four (54) were previously recorded (VDHR# 046-0034, 046-5057, 046-5086, 046-5088, 046-5089, 046-5099/5105, 046-5107/5111, 046-5113, 046-5114, 046-5277, 046-5293, 046-5294, 046-5307, 046-5501, and 091-5098) and twenty-eight (28) were newly recorded during this Phase I Survey (VDHR# 046-5664, 046-5668/5694). Twenty-nine (29) of the previously recorded resources were evaluated and determined not eligible for listing in the NRHP by the SHPO in 2020 and were therefore not subject to resurvey or evaluation as part of this effort (VDHR# 046-0116/0121, 046-0132, 046-5026/5029, 046-5055, 046-5056, 046-5087, 046-5112, 046-5154, 046-5295, 046-5296, 046-5298, 046-5569/5574/5577). An additional two (2) of the previously recorded resources (VDHR# 046-0034 and 046-5057) were revealed to have been demolished. V-CRIS site file forms were prepared or updated for each of resources subject to survey as part of this effort.

The resources surveyed as part of this effort primarily include domestic and agricultural buildings from the mid-nineteenth to late-twentieth century, as well as a nineteenth century family cemetery, a railroad corridor, and several twentieth century commercial buildings.

The survey area includes an area of predominantly rural land in central Isle of Wight County just to the west of the Town of Windsor. Windsor Boulevard (U.S.-460) and the Norfolk and Southern Railroad extend centrally through the survey area, paralleling each other and running east-west. A number of smaller secondary and tertiary roads also extend through the survey area.

Overall, the landscape of the survey area is characterized by generally flat land dissected by a network of creeks, swamps and drainages, the largest of which is Antioch Swamp that flows centrally through the survey area. The landscape is a patchwork of relatively large agricultural fields interspersed by pockets of woods and timber. The survey area is lightly developed with most homes and farms surrounded by large properties. The earliest development in the survey area, consisting generally of farms and plantation homes from the nineteenth century, are set back from the road with complexes of generally later barns and outbuildings. Twentieth century development tends to be set closer to the road on smaller lots that were likely carved off larger properties. Several pockets of denser mid-twentieth century homes set on small suburban style lots are situated along intersections of several of the secondary roads.

Most of the surveyed resources included modest frame or brick dwellings reflecting national trends in building styles of the late-nineteenth to mid-twentieth century, with Craftsman, Minimal

Traditional, and Ranch the most prevalent. Earlier dwellings include more vernacular forms such as bungalows and I-Houses.

As noted above, many of the architectural resources within the survey area have recently been determined not eligible for listing in the NRHP by the VDHR as common examples of typical rural development patterns. The majority of the resources evaluated as part of this effort are similar in age, form, and character and are thus recommended not eligible. Four resources, however, are considered eligible or potentially eligible including two homes, a commercial building, and the railroad. Of the two homes, the farm at 23255 Barrett Town Road (VDHR# 046-5089) has previously been determined potentially eligible as a good example of a mid-nineteenth century plantation home in the area with a relatively intact property and several potentially nineteenth century outbuildings. The second home, a farm located at 7431 Deerfield Drive (VDHR# 046-5671) is believed to have been built circa 1894, but replaced an eighteenth-century dwelling, and retains several nineteenth century outbuildings as well as family cemetery. The commercial building is the 1930s roadside “Hobb’s Store” (VDHR# 046-5101) that has been determined eligible for its association to the development of U.S. 460 and a unique example of a service station with a complex of motor lodge cabins. The Norfolk and Western Railroad (VDHR# 091-5098) has also been determined potentially eligible for its association to the growth and development of commerce in the region from the nineteenth century through the present-day.

Provided in the following pages are a table of all surveyed resources (Table 6-1), a map with the location of each resource surveyed (Figure 6-1 and 6-2), and descriptive narratives and photographs of each of the identified historic resource. Resource narratives include a physical description, discussion of history, integrity, and NRHP-eligibility, as well as assessment of project impacts for those resources considered eligible for listing in the NRHP.

Table 6-1: Architectural Resources within the survey area. Bold font denotes NRHP-Eligible. Orange Highlight indicates resource is located directly within the project area

VDHR #	Property Name / Address	Year Built	NRHP Status
046-0034	Mumford House, Windsor Boulevard	c.1836	D+A: Demolished
046-5057	Barn, West Blackwater Road	c.1850	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5086	Hedgepeth House, 22156 Barrett Town Road	1927	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5088	House, 23000 Barrett Town Road	1948	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5089	Farm, 23255 Barrett Town Road	c.1850	VDHR: Potentially Eligible/ D+A: Potentially Eligible
046-5099	House, 6456 Windsor Boulevard	1919	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5100	House, 6470 Windsor Boulevard	1919	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5101	Hobbs Store, 6635 Windsor Boulevard	c.1933	VDHR: Eligible/ D+A: Potentially Eligible
046-5102	House, 7229 Windsor Boulevard	1954	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5103	House, 7416 Ecella Road	1935	VDHR: Not Eligible (2004)/ D+A: Not Eligible

VDHR #	Property Name / Address	Year Built	NRHP Status
046-5104	House, 7279 Ecella Road	1940	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5105	Commercial Building, 8189 Windsor Boulevard	1900	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5107	Mumford Family Cemetery, Yellow Hammer Road	c.1866	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5108	House, 7230 Ecella Road	1921	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5109	House, 21539 Barrett Town Road	1918	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5110	House, 7121 Ecella Road	1950	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5111	House, 8027 Winston Drive	1931	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5113	House, 9155 Windsor Boulevard	1955	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5114	House, 9169 Windsor Boulevard	1966	VDHR: Not Eligible (2004)/ D+A: Not Eligible
046-5277	House, 23258 Barrett Town Road	1900	VDHR: Not Eligible (2007)/ D+A: Not Eligible
046-5293	House, 21512 Barrett Town Road	1927	VDHR: Not Eligible (2009)/ D+A: Not Eligible
046-5294	House, 7132 Ecella Road	1944	VDHR: Not Eligible (2009)/ D+A: Not Eligible
046-5307	Commercial Granary, 22000 Barrett Town Road	1938	VDHR: Not Eligible (2009)/ D+A: Not Eligible
046-5501	House, 9108 Cut Thru Road	1942	VDHR: Not Eligible (2014)/ D+A: Not Eligible
046-5664	House, 7346 Yellow Hammer Road	1952	D+A: Not Eligible
046-5668	House, 7297 Yellow Hammer Road	1925	D+A: Not Eligible
046-5669	House, 7246 Yellow Hammer Road	1958	D+A: Not Eligible
046-5670	House, 7230 Yellow Hammer Road	1959	D+A: Not Eligible
046-5671	Farm, 7431 Deerfield Drive	1894	D+A: Potentially Eligible
046-5672	House, 7296 Deerfield Drive	1939	D+A: Not Eligible
046-5673	House, 7268 Deerfield Drive	1962	D+A: Not Eligible
046-5674	House, 6250 Yellow Hammer Road	1958	D+A: Not Eligible
046-5675	House, 6278 Yellow Hammer Road	1958	D+A: Not Eligible
046-5676	House, 8072 Winston Drive	1962	D+A: Not Eligible
046-5677	House, 9071 Cut Thru Road	1969	D+A: Not Eligible
046-5678	House, 22038 Garrison Drive	1969	D+A: Not Eligible
046-5679	House, 22004 Garrison Drive	1970	D+A: Not Eligible
046-5680	House, 21296 Garrison Drive	1962	D+A: Not Eligible
046-5681	House, 21416 Garrison Drive	1908	D+A: Not Eligible
046-5682	House, 7334 Ecella Road	1966	D+A: Not Eligible
046-5683	House, 7295 Ecella Road	1969	D+A: Not Eligible
046-5684	House, 22150 Barrett Town Road	1962	D+A: Not Eligible

VDHR #	Property Name / Address	Year Built	NRHP Status
046-5685	House, 22288 Barrett Town Road	1967	D+A: Not Eligible
046-5686	House, 22310 Barrett Town Road	1942	D+A: Not Eligible
046-5687	House, 22392 Barrett Town Road	1967	D+A: Not Eligible
046-5688	House, 21260 Leander Lane	c.1900	D+A: Not Eligible
046-5689	House, 8115 Windsor Boulevard	1963	D+A: Not Eligible
046-5690	House, 8089 Windsor Boulevard	1969	D+A: Not Eligible
046-5691	House, 7570 Windsor Boulevard	1962	D+A: Not Eligible
046-5692	Southern States, 9242 Windsor Boulevard	1971	D+A: Not Eligible
046-5693	House, 9141 Windsor Boulevard	1968	D+A: Not Eligible
046-5694	House, 7523 Mill Creek Drive	1947	D+A: Not Eligible
091-5098	Norfolk & Western Railway	1858	VDHR: Eligible/ D+A: Potentially Eligible
Resources Determined Eligible in 2020 (Not Subject to Survey or Evaluation as Part of this Effort)			
046-0116	Farm, 8151 Blackwater Road	c.1850	VDHR: Not Eligible (2020)
046-0117	House, 8299 Blackwater Road	1969	VDHR: Not Eligible (2020)
046-0118	Bostick Cemetery	1917	VDHR: Not Eligible (2020)
046-0119	Morning Star Baptist Church, 8445 Blackwater Road	1886	VDHR: Not Eligible (2020)
046-0120	House, 8503 Blackwater Road	1954	VDHR: Not Eligible (2020)
046-0121	House, 9177 Blackwater Road	c.1920	VDHR: Not Eligible (2020)
046-0132	Morning Star Baptist Cemetery, 8445 Blackwater Road	c.1950	VDHR: Not Eligible (2020)
046-5026	Farm, 7095 Blackwater Road	1900	VDHR: Not Eligible (2020)
046-5027	House, 7289 Blackwater Road	1946	VDHR: Not Eligible (2020)
046-5028	Chapel Grove Congregational Christian Church, 7366 Blackwater Road	1972	VDHR: Not Eligible (2020)
046-5029	House, 7443 Blackwater Road	1900	VDHR: Not Eligible (2020)
046-5055	House, 7058 Blackwater Road	c.1900	VDHR: Not Eligible (2020)
046-5056	House, 6483 Blackwater Road	1850	VDHR: Not Eligible (2020)
046-5087	House, 7683 Mill Creek Drive	1932	VDHR: Not Eligible (2020)
046-5112	Farm, 23093 Antioch Road	c.1820	VDHR: Not Eligible (2020)
046-5154	Antioch Christian Church, 23011 Antioch Road	1850	VDHR: Not Eligible (2020)
046-5295	House, 8021 Mill Creek Drive	1937	VDHR: Not Eligible (2020)
046-5296	House, 23050 Antioch Road	c.1850	VDHR: Not Eligible (2020)
046-5298	House, 8464 Blackwater Road	1963	VDHR: Not Eligible (2020)
046-5569	House, 8430 Blackwater Road	1969	VDHR: Not Eligible (2020)
046-5570	House, 8412 Blackwater Road	1968	VDHR: Not Eligible (2020)
046-5571	House, 8404 Blackwater Road	1967	VDHR: Not Eligible (2020)
046-5572	House, 8394 Blackwater Road	1969	VDHR: Not Eligible (2020)
046-5573	House, 8384 Blackwater Road	1969	VDHR: Not Eligible (2020)

VDHR #	Property Name / Address	Year Built	NRHP Status
046-5574	House, 8376 Blackwater Road	1969	VDHR: Not Eligible (2020)
046-5575	Antioch Christian Cemetery, Antioch Road	c.1850	VDHR: Not Eligible (2020)
046-5576	House, 7076 Blackwater Road	1960	VDHR: Not Eligible (2020)
046-5577	House, 7524 Blackwater Road	1969	VDHR: Not Eligible (2020)

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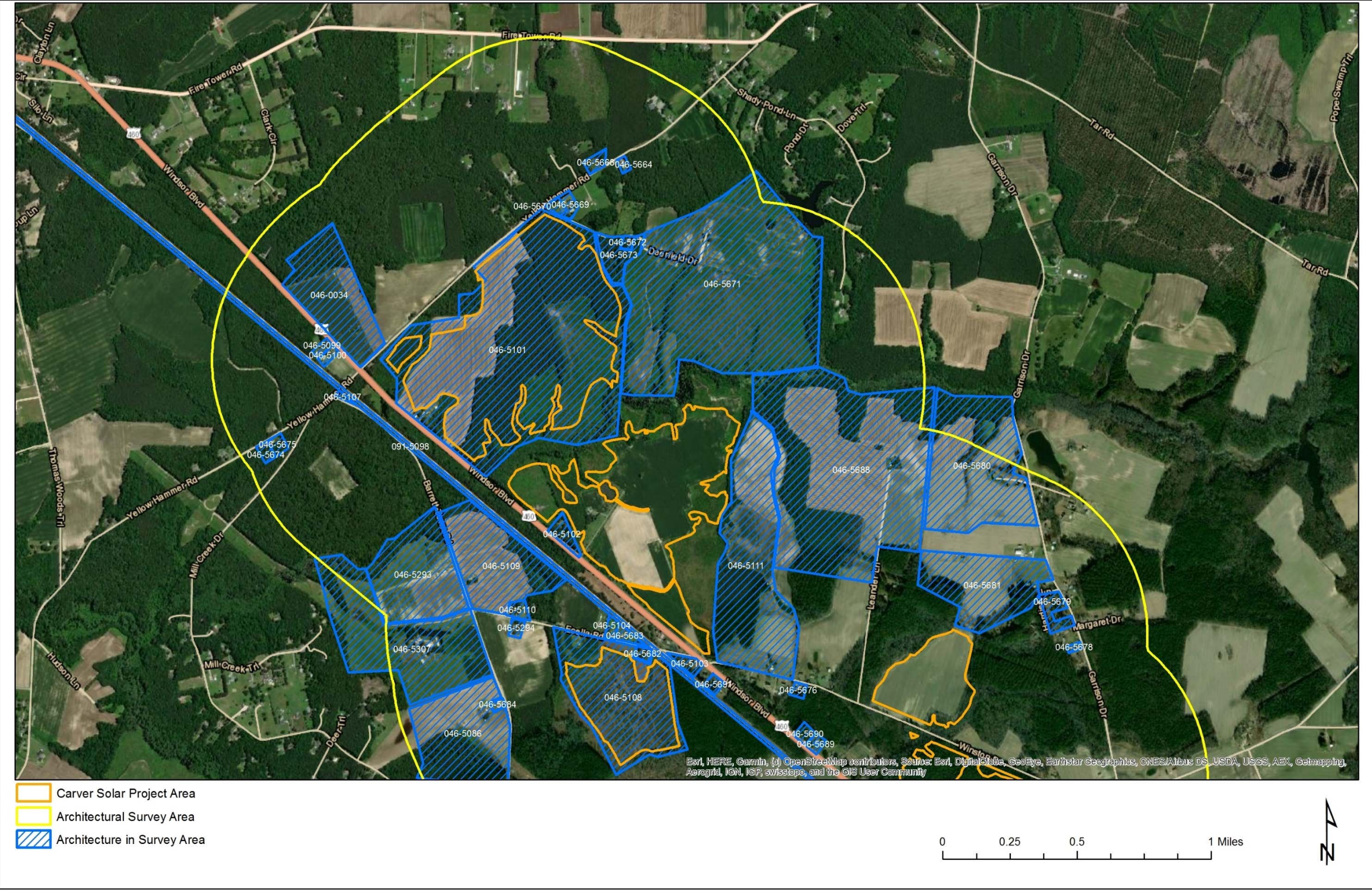


Figure 6-1: Location of surveyed architectural resources in relation to the project area.

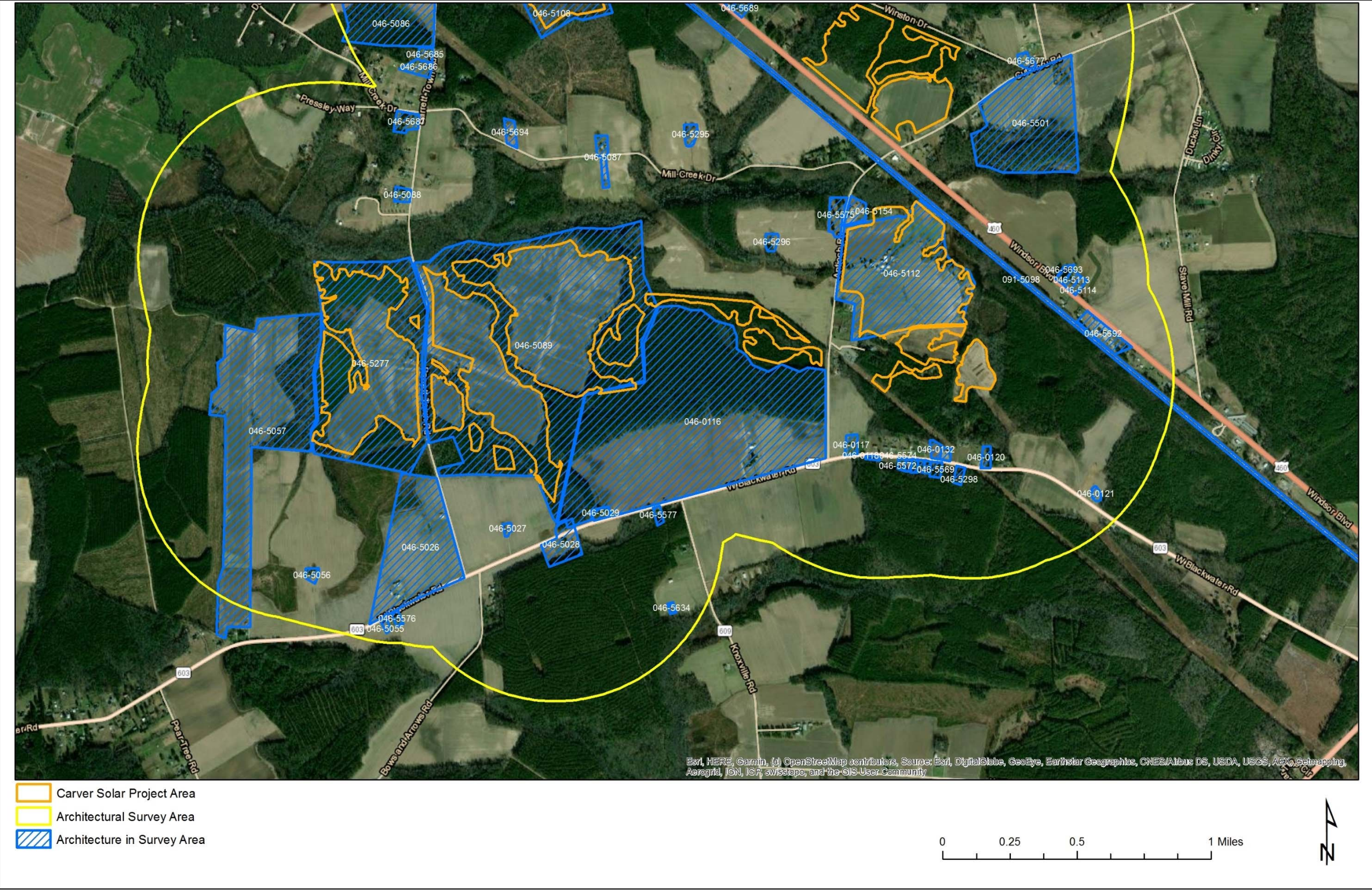


Figure 6-2: Location of surveyed architectural resources in relation to the project area.

RESOURCE NARRATIVES

VDHR# 046-0034

Mumford House, Windsor Boulevard



This house, located along Windsor Boulevard, was constructed circa 1836, according to a previous study. The building was previously described as a one-and-a-half-story, timber frame dwelling that rested atop a continuous, brick foundation. The house had exterior-end, brick chimneys and a one-bay front porch. When last surveyed in 2005, the house was in ruinous condition. Inspection as a part of this survey confirmed that the building is no longer extant and has been cleared from the site.

The house was located on the east side of Windsor Boulevard. It was set back roughly fifty feet from the road. According to a previous study, the house was accompanied by two ruinous outbuildings. Today, the site of the house is located in the center of an open field. Two trees stand behind the site to the east. No remnants of the house or outbuildings were observed.

According to a 1938 survey conducted by the Works Progress Administration, the home was built by C.F. Mumford circa 1836. Mumford lived in the house until 1879. The house then passed to Mumford's son, C.F. Mumford, Jr. Since the resource is no longer extant, and all evidence of the building has been cleared from the site, the resource is considered ***not eligible*** for listing in the NRHP as an architectural resource.

VDHR# 046-5057

Barn, West Blackwater Road



This barn, located along Windsor Boulevard, was constructed circa 1850, according to a previous study. The building was previously described as a one-and-a-half-story, frame barn with a front-gable roof and two shed-roofed wings. Inspection as a part of this survey confirmed that the building is no longer extant and has been cleared from the site.

The barn was located on the north side of West Blackwater Road. was set back roughly three hundred feet from the road. Today, the site is surrounded by an open field on all sides. A dirt driveway leads from the road and continues past the building site to the north. Two storage containers stand within the vicinity of the barn site. No remnants of the barn were observed.

According to a previous study, this barn was an example of a typical mid-nineteenth century, barn located within a rural setting in the region. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. Since this resource is no longer extant, and all evidence of the building has been cleared from the site, the resource is considered ***not eligible*** for listing in the NRHP as an architectural resource.

VDHR# 046-5086

Hedgepeth House, 22156 Barrett Town Road



This single-family dwelling, located at 22156 Barrett Town Road, was constructed in 1927, according to local land records. The building is a two-story, three-bay, Vernacular-style farmhouse with an I-house form. Its structural framework is wood frame, clad in aluminum siding, and it rests atop a continuous foundation. The roof is side-gabled and is covered with asphalt shingles. On the primary façade (east elevation), the main entrance consists of a central door sheltered by a partial-width porch. The hipped porch roof is covered with standing-seam metal and is supported by turned wood posts that rest atop a concrete deck. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house has gable returns along the front-gable ends.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly one hundred feet from the road and sits in the center of a grassy yard. Shade trees and bushes grow around the house in the surrounding yard. The yard is surrounded by an agricultural field to the north, south, and west. A residential property fronts the yard to the east. A gravel driveway leads from the road and terminates behind the house to the southwest. An outbuilding of unknown function, a garage, and a barn stand behind the house to the west. In the side yard, a small outbuilding stands beside the house to the south.

This property is an example of a typical early-twentieth century, Vernacular-style I-house dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5088

House, 23000 Barrett Town Road



This single-family dwelling, located at 23000 Barrett Town Road, was constructed in 1948, according to local land records. The building is a one-story, four-bay, Vernacular-style house with a Bungalow form and a later wing addition. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete block foundation. The roof is cross-gabled and is covered with asphalt shingles. On the primary façade (east elevation), the main entrance consists of an off-centered door sheltered by a partial-width porch. The hipped porch roof is covered with standing-seam metal and is supported by wooden posts that rest atop a wooden deck. Fenestration consists of one-over-one and six-over-six, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates in front of the house to the east. A shed stands in the backyard to the southwest of the house. The property is bordered by residential properties along Barrett Town Road and by woods to the west.

This property is an example of a typical mid-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5089**Farm, 23255 Barrett Town Road**

This single-family dwelling, located at 23255 Barrett Town Road, was constructed circa 1850, according to a previous study. The building is a two-story, three-bay, Vernacular-style farmhouse with an I-house form. The house includes elements of the Folk Victorian style, which were added to the house after its initial construction. Its structural framework is wood frame, clad in wood siding, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with standing-seam metal. An exterior-end, brick chimney pierces the roof peak on each side of the house. On the primary façade (east elevation), the main entrance consists of a central door sheltered by a partial-width porch. The hipped porch roof is supported by turned wood posts that rest atop a wood deck. Fenestration consists of original, six-over-six, double-hung sash windows. In terms of ornamentation, the house has decorative, Victorian-style bargeboard attached to the tops of each porch post. The house is currently vacant.

The house is located in a rural area on the east side of Barrett Town Road. The house faces to the east rather than to the west. It is set back roughly two hundred feet from the road and sits in the center of a small, grassy yard. Two shade trees grow in the surrounding yard. A gravel driveway leads from the road, passes alongside the house to the south, and continues through the property. An agricultural field surrounds the yard on all sides. The field is interspersed with patches of woods. A tree line runs along the outer edge of the field on all sides. Within the immediate vicinity of the house, a domestic outbuilding and woodshed stand behind the house to the northwest. On the opposite side of the driveway, two barns and a quarter stand behind the house to the southwest. The farm is bordered by woods and open fields, as well as a tenant house on the west side of Barrett Town Road.

This property is a good example of a typical, moderately-embellished, mid-nineteenth century house and plantation in the region. The home reflects a transitional Federal to Greek Revival style as applied to a Vernacular I-house form, with a later Folk Victorian porch. It retains integrity of exterior finishes and materials. The house also remains at the center of a larger agricultural

property with a small collection of barns and outbuildings. Most are believed to date from the twentieth century, but several could possibly be older. Previous survey and evaluation by the VDHR found the resource to be potentially eligible for listing in the NRHP for its distinctive architecture, including most recently in 2020. At the time of this effort, the resource appears to retain similar integrity and qualities as when previously evaluated and therefore, no change is recommended. It continues to be 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 and a part of 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 farm at 23255 Barrett Town Road is situated centrally within a large rural tract on the east side of the road. The entire property parcel is included within the project lease area, and an additional tract of the project is set across the road to the west. As such, solar arrays, infrastructure, and other improvements will be made within and around the resource boundary, although the home and surrounding building complex will be excluded from the development footprint. The majority of improvements will be made within portions of the property that are currently open, agricultural field while avoiding wooded areas and wetlands, although several small patches of woodland near the edges of fields may be cleared and developed. As such, there will be a direct impact to the landscape and setting of the property, although not to the home or any other buildings. The existing field/vegetation patterns will also generally be maintained, as will the existing topography with no substantial cut, fill, or grading of the property proposed.

As project improvements will be spread through the property and in the vicinity of the building complex, the project also has the potential for indirect, or visual impacts to the resource. To reduce impacts, a variety of measures have been incorporated into the conceptual site plan. In addition to avoidance of the building complex, a swath of landscape to the front, between it and the road, will also be excluded from the development footprint. This avoidance area will maintain access to the resource with the existing farm lane, and preserve visibility of the building complex from public ROW. Improvements will be setback in all directions from the avoidance area, as well as along the road. Existing vegetation to the front and side of the building complex will be maintained. Where vegetation does not currently exist along the edge of the field to the front of the property, a robust supplemental buffer of evergreen trees will be planted to screen improvements. This buffer will be extended around the perimeter of the avoidance area to screen improvements in the background as well.

With these measures, the project will result in direct and indirect impacts to the resource through a change in setting and viewshed. However, key contributing aspects of the resource, including the home and associated outbuildings, and visibility of the building complex from the road will be preserved. The existing field/vegetation patterns of the property will also generally be maintained such that it may be returned to its current conditions at the conclusion of the project lease period. Therefore, it is D+A's opinion that the project will result in no more than a ***moderate impact*** to the farm at 23255 Barrett Town Road per VDHR's impact characterization.

Figure 6-3 illustrates the location of the farm at 23255 Barret Town Road in relation to the project area, with the location and direction of representative photographs. Figures 6-4 through 6-7 provide representative photographs of and from the resource towards the project area. Figure 6-8 and 6-9 provide a detail of the project conceptual site plan in relation to the property and building complex.

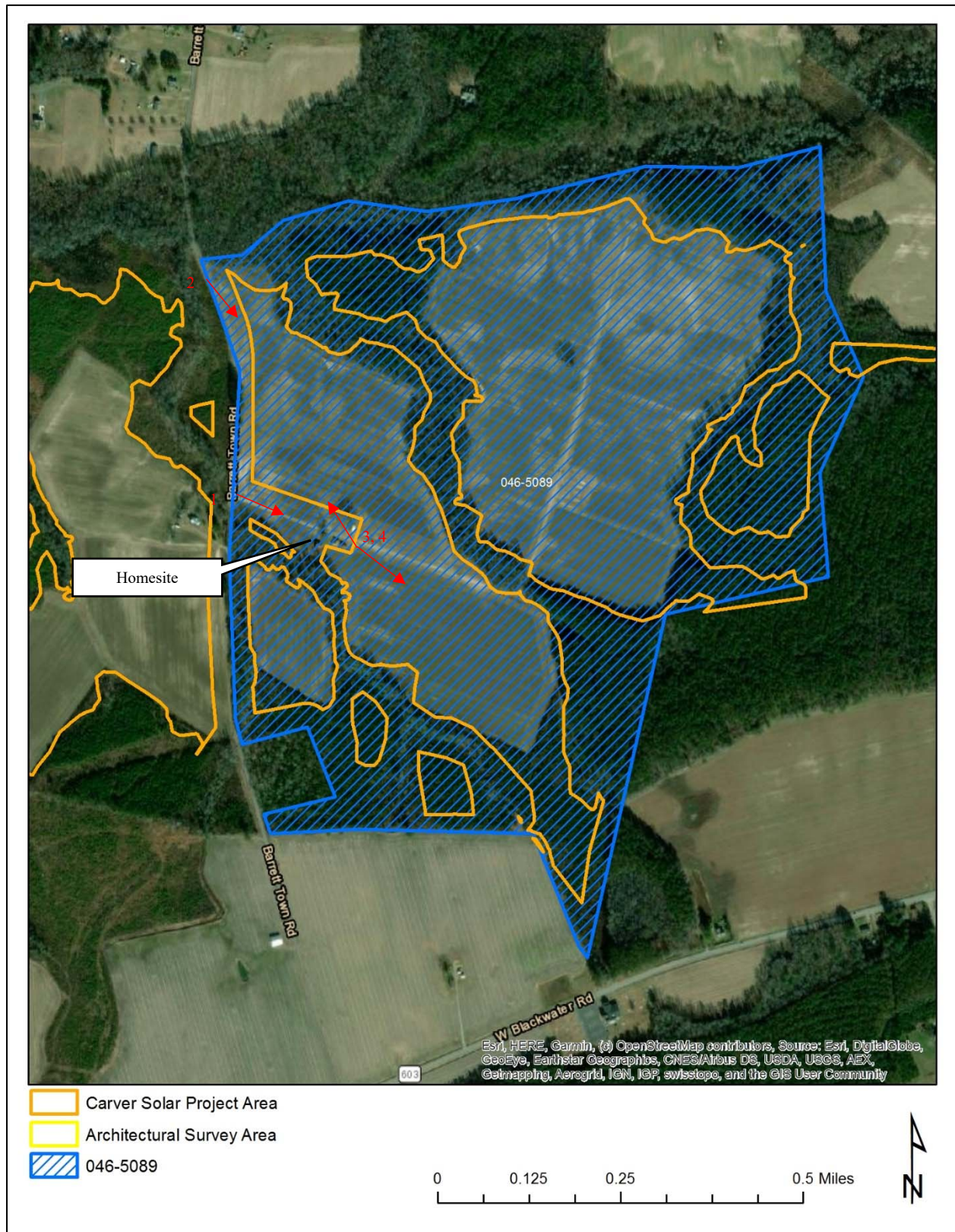


Figure 6-3: Farm at 23255 Barrett Town Road in relation to the project area with locations and directions of representative photographs.



Figure 6-4: View 1 - Farm at 23255 Barrett Town setting as seen from Barrett Town Road at property driveway, facing east.



Figure 6-5: View 2 - Farm at 23255 Barrett Town setting as seen from Barrett Town Road at Antioch Swamp, facing southeast.



Figure 6-6: View 3 – View of Farm at 23255 Barrett Town looking towards front field, facing northwest.



Figure 6-7: View 4 – View from Farm at 23255 Barrett Town towards rear field, facing east.

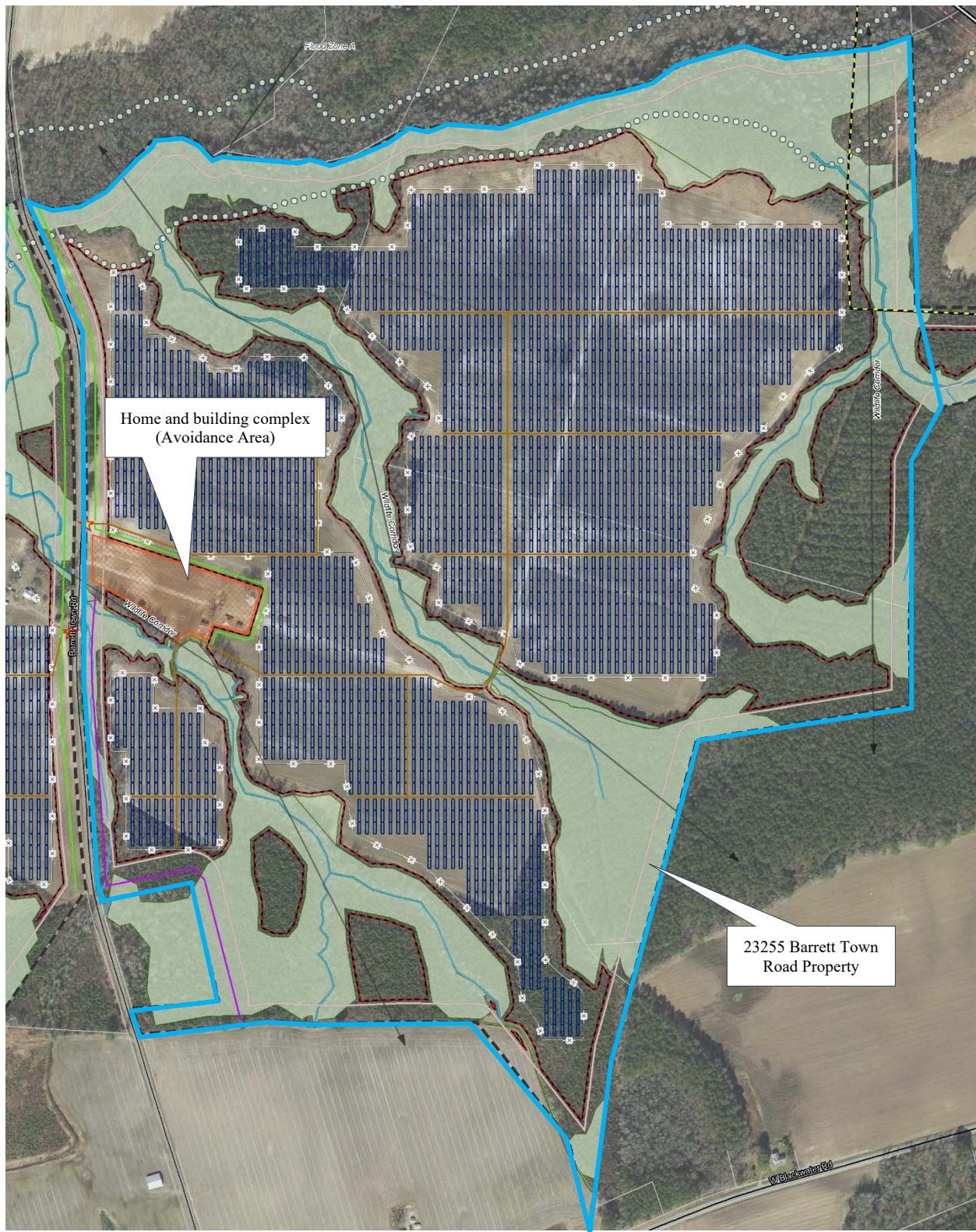


Figure 6-8: Carver Solar Conceptual Site Plan in relation to the 23255 Barrett Town Road property. Source: Timmons Group.

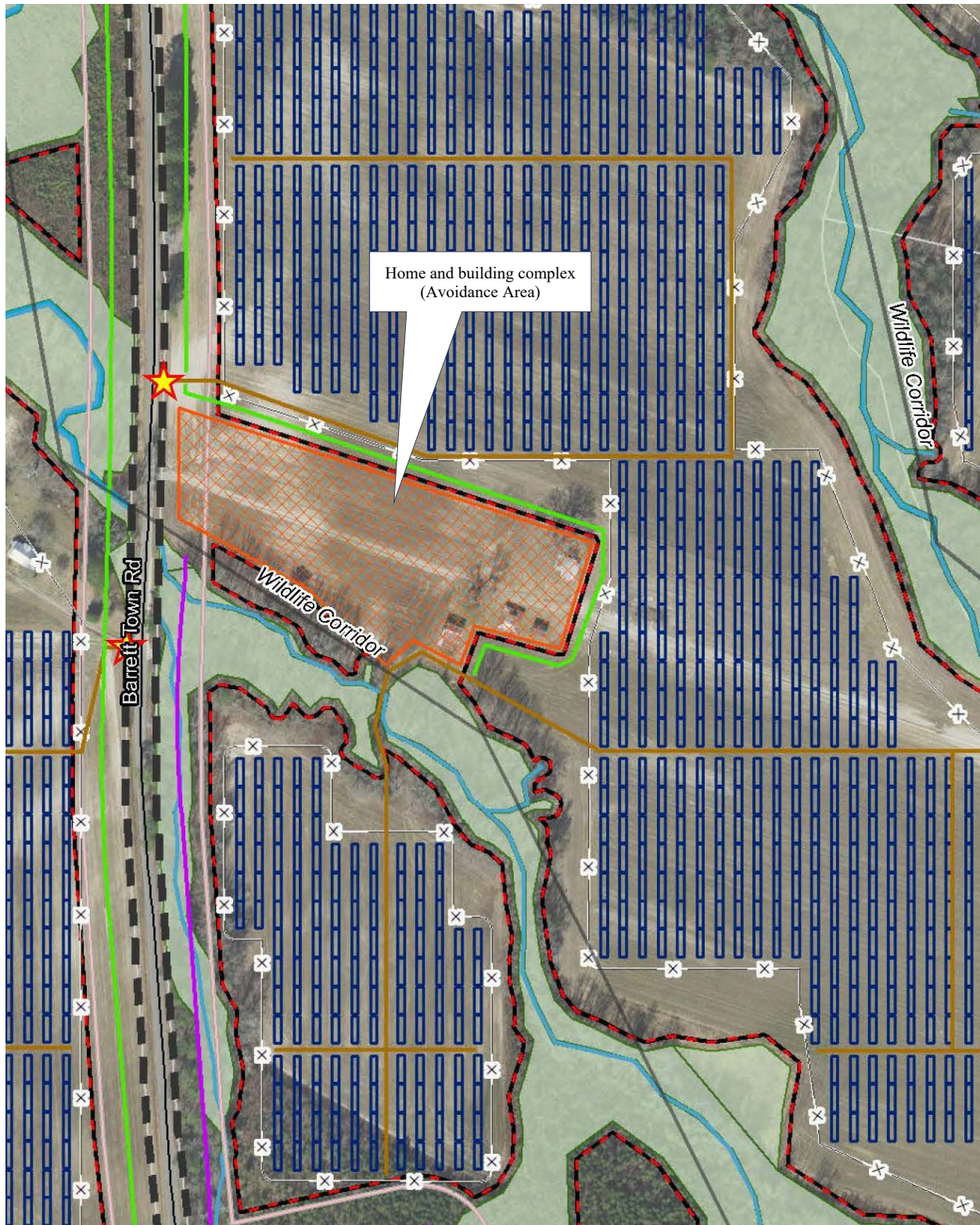


Figure 6-9: Carver Solar Conceptual Site Plan in relation to the 23255 Barrett Town Road building complex. Source: Timmons Group.

VDHR# 046-5099

House, 6456 Windsor Boulevard



This single-family dwelling, located at 6456 Windsor Boulevard, was constructed in 1919, according to local land records. The house is a one-story, Vernacular-style house with an L-shaped form. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop brick piers; the space between each pier has been filled in with concrete. The roof is cross-gabled and is covered with standing-seam metal. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial-width porch. Fenestration consists of six-over-six, double-hung sash windows and six-light, single-hung windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the southwest side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. Shade trees grow around the house in the surrounding yard and along the edge of the road. An asphalt driveway leads from the road and terminates beside the house to the north. A carport stands at the end of the driveway. To the northwest of the house is a well. In the backyard, two sheds and a carport stand to the west. The property is bordered by a residential property to the south and by woods to the north and west.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5100

House, 6470 Windsor Boulevard



This single-family dwelling, located at 6470 Windsor Boulevard, was constructed in 1919, according to local land records. The house is a one-story, six-bay, Vernacular-style house with an L-shaped form. While the original portion of the house consists of an L-shaped block, the house has undergone extensive renovation over time. A two-bay wing connects the house to a one-and-a-half-story garage along the north elevation. The structural system of the original house is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The roof is side-gabled and is covered with asphalt shingles. Two interior-central, corbeled, brick chimneys pierce the original portion of the roof. On the primary façade (north elevation), two off-centered doors lead into the original portion of the house. The current main entrance is located along the east elevation. The doors are sheltered by an engaged porch, supported by wood posts. Fenestration consists of one-over-one, double-hung sash windows. The house has no additional ornamentation.

The house is located in a rural area on the southwest side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates in front of the house. Four sheds and a large outbuilding stand behind the house to the southwest. A well house is located beside the house to the north. The property is bordered by a residential property to the north and by an open field to the south. A tree line separates the lot from a railroad corridor to the west.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. Due to extensive renovation, the house has poor historical integrity. As a result, the resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5101**Hobbs Store, 6635 Windsor Boulevard**

This commercial building, located at 6635 Windsor Boulevard, was constructed circa 1933, according to a previous study. The building is a one-and-a-half-story, four-bay, Craftsman-style roadside store with a rectangular form. The store also functioned as a dwelling. The building rests atop a continuous, poured concrete foundation. Its structural framework is wood frame, clad in cast concrete blocks on the first level and in vinyl weatherboards on the upper half story. The roof is hipped and is covered with standing-seam metal. An interior-end, brick chimney pierces the roof slope. On the primary façade (south elevation), the main entrance consists of an off-centered door, sheltered by a porte cochere that spans the full width of the building. The porte cochere is supported by battered posts that rest atop concrete piers. Fenestration consists of two-over-two, double-hung sash windows and replacement, six-over-six, double-hung sash windows. In terms of ornamentation, the building has exposed rafters and battered porch posts. The store is vacant.

The store building is located in a rural area on the north side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits within a small, grassy yard. Shade trees and shrubs grow in the surrounding yard. A gravel pull-off fronts the building to the south. The area underneath the front carport is paved with concrete. The backyard is enclosed by a wooden fence, with a well located inside of the fence line. To the east of the store, a gravel driveway leads from the road and terminates behind the store to the north at the back of the yard. Located along the driveway to the northeast of the store are two vehicle sheds, a barn, three silos, and three outbuildings of unknown function. To the east of the store in a small clearing are three small cabins. The yard is backed by an agricultural field to the north, which is bordered by woods to the east and west. The property is vacant.

According to a previous study, the property on which the store building now stands was once part of a farm owned by J.W. Hall. In 1916, farmer J.T. Johnson purchased two tracts from the Hall estate, which consisted of a 106-acre tract and a 31.39-acre tract. Johnson willed the property to his son, Lewis Johnson, in 1920. He continued operating the property as a farm. Then in 1930,

Route 460 was constructed along the edge of Johnson's property. At this time, Johnson constructed a store, gas pumps, and three tourist cabins along the road to accommodate travelers. The Johnson family lived in the rear portion of the store building and relied on their new business for income during the Great Depression. The cabins were used frequently by travelers during the early twentieth century, as they were one of few lodging options along Route 460 between Suffolk and Petersburg at the time. Following the death of Lewis Johnson in 1965, the store and cabins were closed. Lewis' widow, Eva, lived on the property until 1992. Eva Johnson then willed the property to her children, Helen Johnson Hobbs and Lewis Johnson. After the death of her brother, Helen became the sole owner. Helen Hobbs maintained the property and allowed a church congregation to meet in the store building until 2004. Today, the property is vacant.

The property was previously determined eligible for listing in the NRHP by the VDHR in 2004. It is eligible under Criterion A due to its association with roadside tourist cabins of the early twentieth century. The rise of the automobile and major road improvements during the time led to the construction of similar roadside stops and attractions. Located on the Hobbs property today are the only remaining example of tourist cabins found along Route 460. Further, the property is eligible under Criterion C, as the property is representative of roadside architecture during the 1930s. Despite the property's current vacant status, the historic store and cabins retain a high degree of historical integrity. At this time, D+A recommends that the resource continue to be considered **eligible** for listing in the NRHP.

As an 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 and a part of 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 Hobb's Store is situated centrally within a large rural tract on the north side of the Windsor Boulevard. The entire property parcel is included within the project lease area. As such, solar arrays, infrastructure, and other improvements will be made within and around the resource boundary, although the primary commercial building and surrounding building complex will be excluded from the development footprint. Improvements will be made throughout the majority of the property, including areas currently cleared for agricultural as well as currently wooded areas, although wetlands along the eastern edge of the property will be avoided and left vegetated. As such, there will be a direct impact to the landscape and setting of the overall property, although not to any of the buildings or surrounding yardspace. Although the existing field/vegetation patterns will also be altered, the existing topography will be maintained with no substantial cut, fill, or grading of the property proposed.

As project improvements will be spread through the property and in the vicinity of the building complex, the project also has the potential for indirect, or visual impacts to the resource. To reduce impacts, a variety of measures have been incorporated into the conceptual site plan. As a part of the avoidance of the building complex, the surrounding yard space area, as well as an adjacent woodland area will also be excluded from the development footprint. This avoidance area will maintain access to the resource with the existing driveway, and preserve visibility of the building complex from public ROW. Improvements will be setback in all directions from the avoidance area, as well as along the road to maintain sight lines of the building complex from public ROW

in each direction. Existing vegetation throughout the building complex and to the east side will be maintained and where vegetation does not currently exist along the front of the field to the west of the property, a robust supplemental buffer of evergreen trees will be planted to screen improvements. This buffer will be extended around the perimeter of the avoidance area to screen improvements in the background as well.

With these measures, the project will result in direct and indirect impacts to the resource through a change in setting and viewshed. However, key contributing aspects of the resource, including the home and associated outbuildings, and visibility of the building complex from the road will be preserved. It is also noted that as a roadside commercial building and motel complex, the character-defining aspect of its setting is the immediate yard and the connectivity to the road, both of which will remain intact and preserved as part of the avoidance area. The agricultural fields and wooded areas to the rear are a component of the resource's larger setting, however, do not substantially contribute to its significance in the area of commerce as a roadside commercial building, or in the area of architecture for its intact representation of roadside tourist cabins. Therefore, it is D+A's opinion that the project will result in no more than a ***minimal impact*** to the Hobb's Store per VDHR's impact characterization.

Figure 6-10 illustrates the location of the Hobbs Store in relation to the project area, with the location and direction of representative photographs. Figures 6-11 through 6-16 provide representative photographs of and from the resource towards the project area. Figures 6-17 and 6-18 provide a detail of the conceptual site plan in relation to the resource.

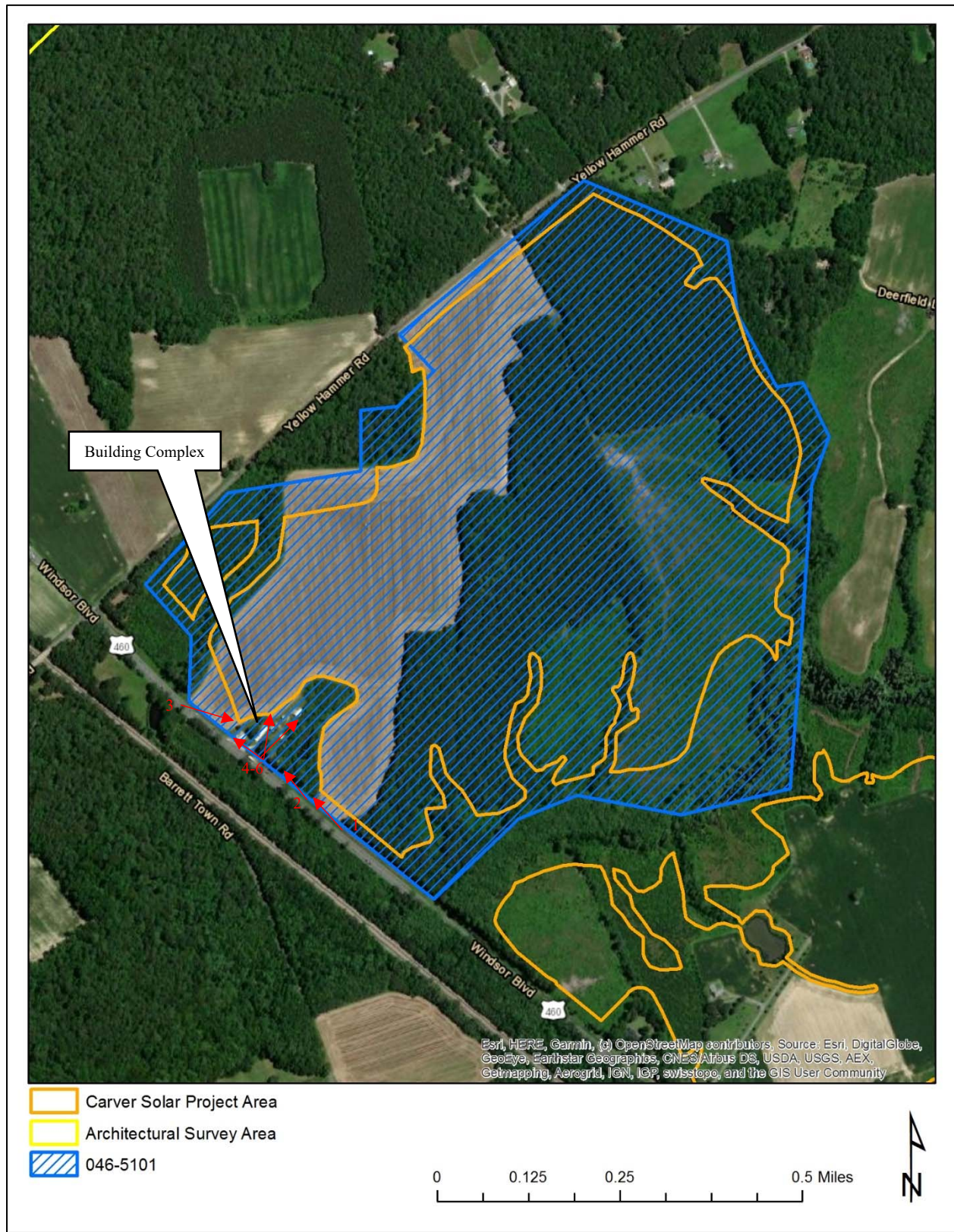


Figure 6-10: Hobb's Store in relation to the project area with locations and directions of representative photographs.



Figure 6-11: View 1 – View from U.S. 460 east of Hobb's Store property, facing northwest.



Figure 6-12: View 2 – View from U.S. 460 in front of Hobb's Store property, facing northwest.



Figure 6-13: View 3 – View from U.S. 460 west of Hobb's Store property, facing southeast.



Figure 6-14: View 4 – View from Hobb's Store driveway, facing northwest.



Figure 6-15: View 5 – View from Hobb's Store driveway, facing north.



Figure 6-16: View 6 – View from Hobb's Store driveway, facing northeast.



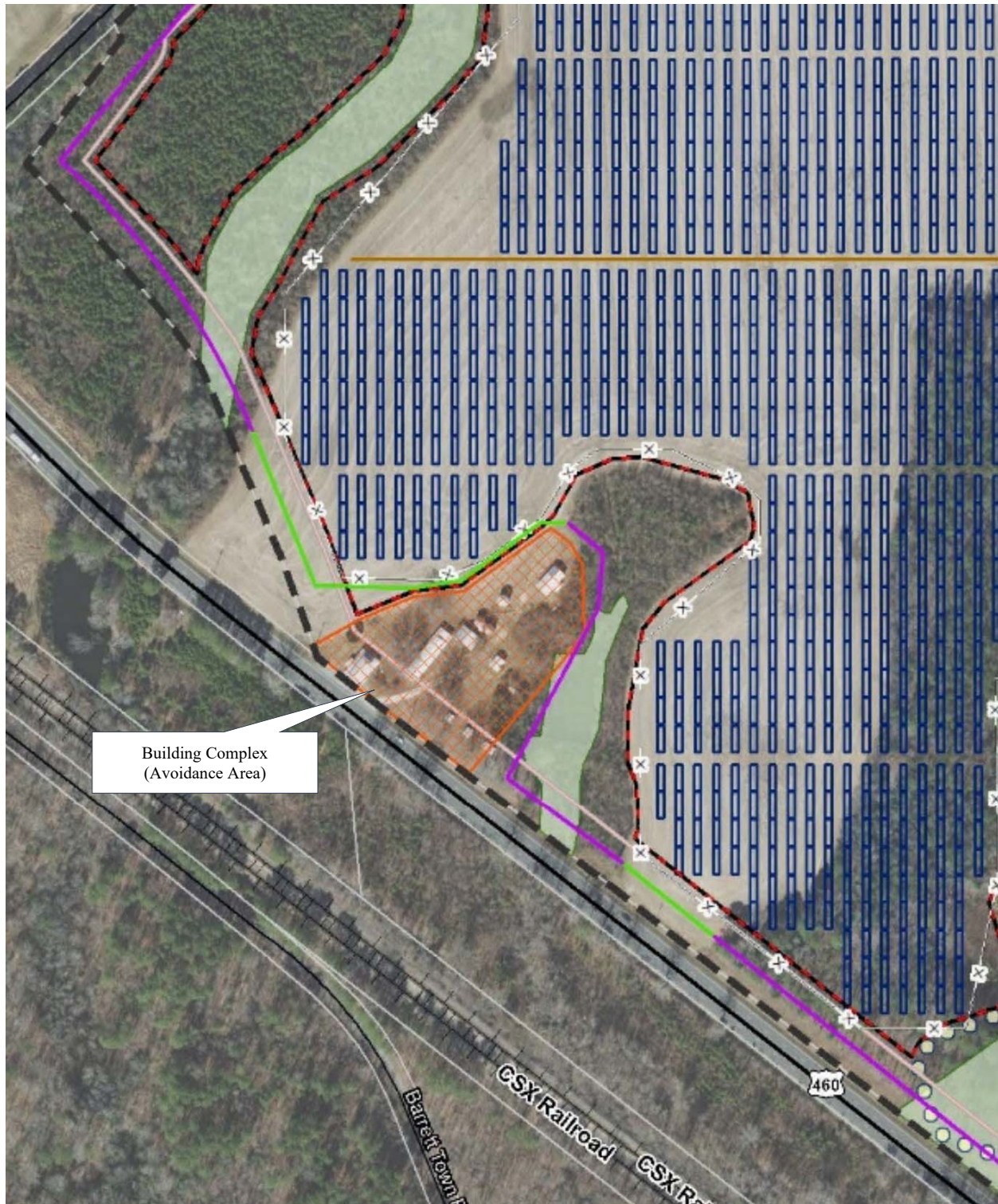


Figure 6-18: Carver Solar Conceptual Site Plan in relation to the Hobb's Store building complex. Source: Timmons Group.

VDHR# 046-5102

House, 7229 Windsor Boulevard



This single-family dwelling, located at 7229 Windsor Boulevard, was constructed in 1954, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (west elevation), the main entrance consists of an off-centered door, sheltered by a slight roof overhang and accessed by a brick stoop. Fenestration consists of six-over-six, double-hung sash windows, which are accompanied by faux shutters. The house has an attached sunroom along the south elevation. In terms of ornamentation, the front door has a decorative, molded door surround. Additionally, a large picture window is located on the front elevation.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. A large number of trees grow around the house in the surrounding yard. The house is accessed by a gravel driveway, which leads from the road and terminates beside the house to the east. Two outbuildings stand along the driveway to the southeast. The property is bordered by woods and open fields.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5103

House, 7416 Ecella Road



This single-family dwelling, located at 7416 Ecella Road, was constructed in 1935, according to local land records. The building is a one-story, three-bay, Vernacular-style house with a rectangular form. The house consists of a two-bay main block with a one-bay wing along the east elevation. The structural framework of the house is wood frame, clad in aluminum siding, and it rests atop a continuous, poured concrete foundation. The roof is cross-gabled, with a deep overhang, and is covered with asphalt shingles. On the primary façade (north elevation), the main entrance consists of an off-centered door, accessed by a concrete stoop. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux, vinyl shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the south side of Ecella Road at its intersection with Windsor Boulevard. The house is set back roughly thirty feet from the road and sits in the center of a grassy yard. Shade trees grow around the house in the surrounding yard and along the road. A gravel driveway leads from the road and terminates beside the house to the northwest. A shed stands behind the house to the south. The property is bordered by residential properties to the east and west.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5104
House, 7279 Ecella Road



This single-family dwelling, located at 7279 Ecella Road, was constructed in 1940, according to local land records. The building is a one-story, three-bay, Vernacular-style house with an L-shaped form. The house has two large, rear additions along the north elevation. The structural framework of the house is wood frame, clad in green, vinyl weatherboards, and it rests atop a continuous, poured concrete foundation. The roof is side-gabled and is covered with asphalt shingles. On the primary façade (south elevation), the main entrance consists of an off-centered door, sheltered by a metal awning and accessed by a wooden deck. Fenestration consists of one-over-one, double-hung sash windows. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the north side of Ecella Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates beside the house to the west. In the backyard, a shed stands behind the house to the northeast. The property is bordered by residential properties along Ecella Road.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5105**Commercial Building, 8189 Windsor Boulevard**

This commercial building, located at 8189 Windsor Boulevard, was constructed in 1900, according to local land records. The building is a one-story, five-bay commercial building with a rectangular form and no discernible style. The building consists of a three-bay, main block with a two-bay addition along the east elevation. Its structural system is wood frame, clad in asbestos shingles, and it rests atop a continuous foundation. The roof is front-gabled and is covered with asphalt shingles. An interior-central, concrete block chimney pierces the roof peak. On the primary façade (south elevation), the main entrance consists of a central door. Fenestration consists of sash windows and fixed, commercial windows, although no window fixtures remain in place. In terms of ornamentation, the front elevation of the building has a parapeted wall. The building is vacant and in poor condition.

The store is located in a rural area on the north side of Windsor Boulevard. It is set back roughly fifty feet from the road and sits at the edge of an overgrown tree line. The yard fronting the store to the south is full of tall vegetation. Behind the building to the north is an open field, bordered by woods on all sides. Along the eastern and western edges of the field are five outbuildings of unknown function. The property is bordered by residential properties to the west and by woods to the east.

This property is an example of a typical early-twentieth century commercial building located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. Further, the building remains in poor condition with compromised historical integrity. As a result, it was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5107**Mumford Family Cemetery, Yellow Hammer Road**

This cemetery, located along Yellow Hammer Road, was established circa 1866, according to written data. The cemetery includes three regularly-spaced headstones, one of which marks the spot of two burials. The graves face southward. Two of observed headstones are granite tablets with textual inscriptions about the interred, while the remaining headstone is made of carved granite. This third grave marker features an arch that rests atop two columns (one for each person buried there); a granite urn rests atop the arch. The two granite tablets feature simple carvings along the front sides. The headstones are in fair condition.

The cemetery is located on the east side of Yellow Hammer Road at its intersection with Barrett Town Road. It is located at the northern edge of the parcel and is set back roughly fifty feet from Barrett Town Road. The area immediately surrounding the grave markers is open and covered with brush. A tree line borders the small clearing on all sides. There is no evidence of a fence or other enclosure. To the north of the cemetery is a railroad bed. The parcel is bordered by woods to the east and by Yellow Hammer Road to the west.

The Mumford Family Cemetery was once located on the Mumford farm and remained in use from the mid-nineteenth century through the early twentieth century. It is associated with the Mumford House (VDHR# 046-0034), which was constructed circa 1836 by C.F. Mumford. The house once stood less than half of a mile north of the cemetery and continued to pass through the Mumford family through the early twentieth century. The interred individuals represent members of a single household that once resided in the Mumford house; they were descendants of C.F. Mumford. The cemetery includes the following burials: Virginia Mumford (1826-1866), Nathan Mumford (1809-1877), Alonzo H. Mumford (1851-1886), and N.E.H. Mumford (1856-1921). The cemetery is an undistinguishable example of a typical mid-nineteenth century, rural family cemetery and does not embody distinctive characteristics or possess significant or unique architectural or design features. There is no dwelling or any other associated improvements extant on the property. The cemetery therefore does not meet NRHP Criterion Consideration D and was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered **not eligible** for listing in the NRHP.

VDHR# 046-5108
House, 7230 Ecella Road



This single-family dwelling, located at 7230 Ecella Road, was constructed in 1921, according to local land records. The building is a one-story, three-bay, Craftsman-style house with a rectangular form. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. An exterior-end, brick chimney pierces the roof peak. On the primary façade (north elevation), the main entrance consists of a central door, sheltered by a three-bay porch. The front-gable porch roof is supported by four battered posts that rest atop brick piers. Fenestration consists of one-over-one, double-hung sash windows. In terms of ornamentation, the house has gable returns on the front-gable ends of the house and on the front porch.

The house is located in a rural area on the south side of Ecella Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. The yard is surrounded by an agricultural field on all sides. A gravel driveway leads from the road and terminates beside the house to the east. In the backyard, a garage, vehicle shed, and animal shelter stand behind the house to the south and southeast. The property is bordered by other residential properties and farms along Ecella Road.

This property is an example of a typical early-twentieth century, Craftsman-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5109

House, 21539 Barrett Town Road



This single-family dwelling, located at 21539 Barrett Town Road, was constructed in 1918, according to local land records. The building is a one-and-a-half-story, four-bay, Vernacular-style house with later additions to the side and rear. The house consists of a one-and-a-half-story, three-bay, original block with a one-bay, side wing along the north elevation. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The side-gabled roof has a central cross-gable and is covered with standing-seam metal. An interior-end, brick chimney pierces the roof peak. On the primary façade (west elevation), the main entrance consists of a central door, sheltered by a one-bay entry porch. The gable porch roof is supported by wood posts. Fenestration consists of one-over-one, four-over-four, and six-over-six, double-hung sash windows. In terms of ornamentation, the house has a picture window and front-facing, central gable on the front elevation.

The house is located in a rural area on the east side of Barrett Town Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. Shade trees and foundation plantings grow around the house in the surrounding yard. The yard is surrounded by a cultivated field on three sides. A gravel driveway leads from the road and terminates behind the house to the east in front of a garage. To the immediate west of the garage is a small well. The property is bordered by woods to the north and east, and by Ecella Road to the south. What was once likely a tenant house or secondary dwelling (VDHR# 046-5110) is located on the same parcel but is situated along Ecella Road to the southeast.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5110
House, 7121 Ecella Road



This single-family dwelling, located at 7121 Ecella Road, was constructed in 1950, according to local land records. The building is a one-story, three-bay, Minimal Traditional-style house with a rectangular form. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete block foundation. The roof is cross-gabled and is covered with standing-seam metal. On the primary façade (south elevation), the main entrance consists of an off-centered door, sheltered by a partial width porch. The shed porch roof is supported by wooden posts that rest atop a concrete block base. Fenestration consists of six-over-six, double-hung sash windows. In terms of ornamentation, the house is simple in design and has no additional ornamentation.

The house is located in a rural area on the north side of Ecella Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A large number of shade trees grow around the house in the surrounding yard. A gravel driveway leads from the road and terminates beside the house to the east in front of a carport. The property is bordered by an open field to the west and by residential properties to the east. While a separate property, the house likely served as a tenant house or secondary dwelling for a neighboring farm (VDHR# 046-5109) along Barrett Town Road; both houses are located on the same parcel.

This property is an example of a typical mid-twentieth century, Minimal Traditional-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5111

House, 8027 Winston Drive



This single-family dwelling, located at 8027 Winston Drive, was constructed in 1931, according to local land records. The building is a one-and-a-half-story, three-bay, Craftsman-style house with a Bungalow form. Its structural framework is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, brick foundation. The roof is side-gabled, with a steep pitch, and is covered with standing-seam metal. Two interior-central, brick chimneys pierce the roof peak. Additionally, a large, gable dormer pierces the front roof slope. On the primary façade (south elevation), the main entrance consists of a central door, sheltered by an engaged, full-width porch. The porch roof is supported by four battered posts that rest atop brick piers. Fenestration consists of two-over-two, double-hung sash windows and four-light, single-hung sash windows. In terms of ornamentation, the door and windowsills, as well as the porch deck, are painted pastel green and the siding is painted pastel yellow. Three painted brackets are located at the roof eaves and roof peak on the dormer.

The house is located in a rural area on the north side of Winston Drive. It is set back roughly fifty feet from the road and is situated in the center of a grassy yard. The yard is bordered by agricultural fields, interspersed with a large patch of woods, to the north. Shade trees grow around the house in the surrounding yard. A gravel driveway leads from the road and terminates behind the house to the northeast in front of a large shed. Set to the northwest of the house in the back field is an outbuilding of unknown function. The property is bordered by woods to the west and by residential properties to the west.

This property is an example of a typical early-twentieth century, Craftsman-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5113

House, 9155 Windsor Boulevard



This single-family dwelling, located at 9155 Windsor Boulevard, was constructed in 1955, according to local land records. The building is a one-story, six-bay, Ranch-style house with a rectangular form. The house consists of a three-bay, central block with a one-bay, brick wing along the west elevation and a one-bay, frame wing along the east elevation. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is side-gabled, with a central, front-facing gable, and is covered with asphalt shingles. An exterior, brick chimney pierces the roof on the front elevation of the house. On the primary façade (south elevation), the main entrance consists of a central door sheltered by a metal awning, supported by metal posts. Fenestration consists of one-over-one, double-hung sash windows. In terms of ornamentation, a fanlight is located above the front door. Additionally, the door is surrounded by a molded door frame topped by a triangular pediment.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. Small trees grow in front of the house. A gravel driveway leads from the road and terminates behind the house to the north in front of a garage. A concrete sidewalk leads from the driveway to the front door. The property is bordered by residential properties to the east and west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5114

House, 9169 Windsor Boulevard



This single-family dwelling, located at 9169 Windsor Boulevard, was constructed in 1966, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. An interior-end, brick chimney pierces the roof peak. On the primary façade (south elevation), the main entrance consists of a central door sheltered by a one-bay, entry porch. The porch roof is supported by vinyl posts that rest atop a brick base. Fenestration consists of six-over-six, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house has a picture window on the front elevation.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates behind the house to the northeast in front of a garage. The property is bordered by residential properties to the west and by an open field to the east.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2004. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5277

House, 23258 Barrett Town Road



This single-family dwelling, located at 23258 Barrett Town Road, was constructed in 1900, according to local land records. The building is a one-story, three-bay, Vernacular-style house with a Bungalow form. Its structural system is wood frame, clad in wood weatherboards, and it rests atop a continuous, brick foundation. The roof is front-gabled and is covered with standing-seam metal. Two interior-slope, brick chimneys and one interior-central, brick chimney pierce the roof. On the primary façade (east elevation), the main entrance consists of a slightly off-centered door, sheltered by a partial-width porch. The hipped porch roof is supported by wood posts that rest atop brick piers. Fenestration consists of six-over-six, double-hung sash windows. In terms of ornamentation, the house has exposed rafters.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates beside the house to the south. A shed, domestic outbuilding, and garage stand behind the house to the west. The yard is surrounded by an agricultural field to the west and south, and by woods to the north. The back field is bordered by woods on all sides.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2007. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5293

House, 21512 Barrett Town Road



This single-family dwelling, located at 21512 Barrett Town Road, was constructed in 1927, according to local land records. The building is a one-and-a-half-story, three-bay, Vernacular-style house with a Bungalow form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The roof is side-gabled and is covered with standing-seam metal. A shed dormer pierces the front roof slope. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a metal awning. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. The yard is surrounded by agricultural fields on all sides. A gravel driveway leads from the road and loops around the house. Behind the house to the west is a carport and garage. The property is bordered by woods to the north and by a farm to the south.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2009. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5294

House, 7132 Ecella Road



This single-family dwelling, located at 7132 Ecella Road, was constructed in 1944, according to local land records. The building is a one-story, three-bay, Vernacular-style house with a rectangular form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous foundation. The roof is cross-gabled and is covered with standing-seam metal. An interior-central, brick chimney and exterior-end, brick chimney pierce the roof peak. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial-width porch. The hipped porch roof is supported by wood posts. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house has gable returns on the front-gable ends.

The house is located in a rural area on the south side of Ecella Road. It is set back roughly fifty feet from the road and is situated in the center of a grassy yard. Shade trees grow around the house in the surrounding yard. A gravel driveway leads from the road and terminates behind the house in front of a garage, which stands to the southwest. To the immediate east of the garage is a small, log outbuilding. In the backyard, a trailer stands behind the house to the southeast. The property is bordered by an agricultural field on three sides.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2009. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5307

Commercial Granary, 22000 Barrett Town Road



This office building, located at 22000 Barrett Town Road, was constructed in 1938, according to local land records. The building is a one-story, three-bay, Vernacular-style office with a rectangular form. A one-bay addition is located along the south elevation. Its structural framework is wood frame, clad in board and batten siding, and it rests atop a continuous foundation. The front-gable roof is covered with standing-seam metal and has exposed rafters. The main entrance was not visible from the public right-of-way. Fenestration consists of two-over-two, double-hung sash windows. A side entrance is located along the east elevation of the addition.

The office building is located in a rural area on the west side of Barrett Town Road. It is set back roughly one hundred feet from the road and sits at the eastern edge of a farm complex. The complex consists of an office and eighteen agricultural outbuildings situated in a grassy yard. A gravel driveway leads from the road and passes through the work yard. The yard is bordered by agricultural fields on all sides. A small pond is situated beside the office to the east. The property is bordered by other farms to the north and south.

This property is an example of a typical mid-twentieth century agricultural complex located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2009. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5501**House, 9108 Cut Thru Road**

This single-family dwelling, located at 9108 Cut Thru Road, was constructed in 1942, according to local land records. The building is a one-story, three-bay, Vernacular-style house with a rectangular form. Its structural system is wood frame, clad in asbestos shingles, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-central, brick chimney pierces the roof. On the primary façade (north elevation), the main entrance was not visible due to tall vegetation. Fenestration consists of two-over-two, double-hung sash windows. The house is vacant and in poor condition.

The house is located in a rural area on the south side of Cut Thru Road. It is set back roughly fifty feet from the road. The house is surrounded by trees and tall vegetation on all sides. A gravel driveway leads from the road and terminates beside the house to the east. The yard is bordered by an agricultural field to the south and west. To the west of the house in the side yard is a small privy. A barn stands behind the house to the south. The property is bordered by an open field to the east and by residential properties to the west.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. The resource was previously determined not eligible for listing in the NRHP by the VDHR in 2014. At this time, D+A recommends that the resource continue to be considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5664

House, 7346 Yellow Hammer Road



This single-family dwelling, located at 7346 Yellow Hammer Road, was constructed in 1952, according to local land records. The building is a one-and-a-half-story, four-bay, Minimal Traditional-style house with a rectangular form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete block foundation. The roof is cross-gabled and is covered with asphalt shingles. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial-width porch. The shed porch roof is supported by wooden posts that rest atop a wooden deck. Fenestration consists of six-over-six, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the shutters, window and door frames, porch, foundation, and roof eaves are painted brown.

The house is located in a rural area on the south side of Yellow Hammer Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard, which is bordered by woods on all sides. A gravel driveway leads from the road, branches off in front of the house, and terminates on each side of the house to the east and west. A carport stands beside the house to the west. In the backyard, a gazebo stands behind the house to the south.

This property is an example of a typical mid-twentieth century, Minimal Traditional-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5668

House, 7297 Yellow Hammer Road



This single-family dwelling, located at 7297 Yellow Hammer Road, was constructed in 1925, according to local land records. The building is a one-story, three-bay, Vernacular-style house with a rectangular form. Its structural system is wood frame, clad in wooden, board and batten siding, and it rests atop concrete piers. The roof is side-gabled and is covered with standing-seam metal. An interior-end, concrete chimney flue pierces the roof peak. On the primary façade (south elevation), the main entrance consists of a central door, sheltered by a slight roof overhang and accessed by a single, concrete step. Fenestration consists of six-over-six, double-hung sash windows. The house is simple in design and has no additional ornamentation. It appears to be vacant.

The house is located in a rural area on the north side of Yellow Hammer Road. It is set back roughly thirty feet from the road and sits at the western end of a grassy clearing. The clearing is surrounded by woods on three sides. Trees grow around the house in the surrounding yard. A well stands in front of the house to the southeast. The property appears to be vacant, although at the time of the survey the house was in fair condition and the surrounding yard was well-maintained.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5669

House, 7246 Yellow Hammer Road



This single-family dwelling, located at 7246 Yellow Hammer Road, was constructed in 1958, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The roof is cross-gabled and is covered with asphalt shingles. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial-width porch. The shed porch roof is supported by wooden posts that rest atop a wooden deck. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the south side of Yellow Hammer Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. Shrubs grow around the house in the surrounding yard. A gravel driveway leads from the road and terminates beside the house to the west; the driveway also provides access to the neighboring property. A barn stands behind the house to the south. A fenced-in pasture stands directly behind the barn. The property is bordered by residential properties to the east and west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5670

House, 7230 Yellow Hammer Road



This single-family dwelling, located at 7230 Yellow Hammer Road, was constructed in 1959, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. Its structural system is wood frame, clad in composite siding, and it rests atop a continuous, concrete foundation. The roof is hipped and is covered with asphalt shingles. An interior-central, brick chimney pierces the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial roof overhang and accessed by a wooden stoop. Fenestration consists of two-over-two, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house has two picture windows on the front elevation and a typical, Mid-Century front door.

The house is located in a rural area on the south side of Yellow Hammer Road. It is set back roughly fifty feet from the road and sits in the center of a grassy yard. Small trees and foundation plantings grow around the house in the surrounding yard. A shared, gravel driveway leads from the road and terminates beside the house to the east; the driveway also provides access to the neighboring house. Two sheds stand behind the house to the southeast. The property is bordered by a residential property to the east and by Deerfield Drive to the west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5671**Farm, 7431 Deerfield Drive**

This house, located at 7431 Deerfield Drive, was constructed circa 1850, according to site inspection. The building is a two-story, three-bay, Vernacular-style farmhouse with an I-house form. The structural framework is wood frame, clad in weatherboards, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with standing-seam metal. An exterior-end, brick chimney pierces the roof peak on each side of the house. On the primary façade (south elevation), the main entrance consists of a central door, sheltered by a partial-width, screened-in porch. The porch has a hipped roof, covered with asphalt shingles, and a central, screen door provides access to the interior space. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area at the end of Deerfield Drive. A long, gravel driveway leads from the road in an east-west direction and continues for roughly one quarter of a mile, at which point it bends to the north. From there, the driveway continues northward for roughly four hundred feet before terminating in front of the house, which faces to the south. The house sits in the center of a grassy yard, which is surrounded by agricultural fields on all sides. Eight domestic and agricultural outbuildings are situated along the driveway to the south of the house. Closer to Deerfield Drive, a quarter and large outbuilding stand along the driveway to the south, roughly six hundred feet from the entrance to the property. The fields are bordered by a tree line on all sides. To the north of the property on the opposite side of the tree line is a group of residential properties as well as woods. To the south, east, and west of the property are additional patches of woods and fields.

According to a survey conducted by the Works Progress Administration in 1937, the present house was constructed in 1894 by Civil War veteran Mills Valentine Bracey. The house is located on the site of an earlier, brick dwelling, constructed in 1787 by Edwin Grey. During the early nineteenth century, Grey sold his home and farm to Exum Bracey. Bracey lived in the house with his wife,

Dowdy, and their son, Mills Valentine Bracey through the mid-nineteenth century. The Bracey home appeared on Civil War-era maps of Isle of Wight. During Exum Bracey's ownership of the property, enslaved workers cultivated the surrounding farmland. A kitchen-quarter remains standing on the property today, as well as other historic outbuildings from the nineteenth century.

When war broke out in 1861, Mills Bracey, who was seventeen at the time, joined Company D of the 16th Virginia Infantry Regiment. He was wounded at the Battle of the Wilderness in May of 1864 and was transported to Chimborazo Hospital in Richmond, the largest Confederate hospital during the war. After he was released from the hospital a month later, he continued to fight in the Confederate Army until the end of the war in April of 1865. At that time, he returned to his family's home in Isle of Wight. Sometime during the 1860s, the property passed to Mills following his father's death, although the specific date is unknown. In 1894, Mills tore down the original house and constructed the present house on its site. He lived in the house until his death in 1922, at which time the property passed to his son, Robert Bracey. At the time of the 1937 survey, Robert's daughter, Ora Bracey Parr, owned the property.

This property represents a typical, late-nineteenth century, Vernacular-style, I-house within the region. The property and possibly several outbuildings and other features, however, may be remnants of the earlier development of the property that can be documented as early as 1787. While the property and resources present warrant further study and evaluation to determine historical associations and significance, it will be treated as ***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. While project details including site plan, array layout, and vegetative screening are still under development, this resource is not located directly within the project area and therefore an assessment of potential visual impacts was conducted at this time.

To assess whether the project may pose a visual impact to the resource, a viewshed assessment was conducted from public ROW in the vicinity of the property. Inspection was performed and photographs towards the project area taken to document existing visibility and surrounding setting.

Improvements related to the Carver Solar project are proposed to take place within the landscape to the south (front/side) of the 7431 Deerfield Drive property. Although the project area property immediately abuts the edge of the property, the house sits far back from that edge of the large parcel, approximately 0.31 mile away at its nearest point. The landscape between the house and the project area is a mix of agricultural field, timber stand, and native woodland. The home itself is surrounded by agricultural field that extends roughly 0.1 mile to the front of the house and ends at the driveway. Across the driveway, occupying the remaining 0.3 mile between the it and the project area is a large pine timber stand. According to review of aerial photography, this stand was last harvested in 2019 and has now regrown with a mix of young pine and brush. Along the edge of the property that is shared with the project area is a narrow strip of native woodland and vegetation bordering Burnt Mills Swamp and a tributary creek.

Inspection from the road leading into the property found that the existing vegetation within the timber stand and bordering Burnt Mill Swamp completely screens views in the direction of the project area and will inhibit visibility of the project improvements. Although much of landscape

of the property between the house and the project area is planted timber, and it is acknowledged that it may periodically be harvested, the wide wooded area bordering the swamp is not suitable for agriculture or timber, and where therefore likely remain in place as screening. Regardless of vegetation patterns on this property, the swamp and surrounding woodland also extend well into the project area and will be avoided and not cleared as part of the project. As such, it is anticipated that the project area and associated improvements will continue to be screened from the property and the project is therefore not anticipated to introduce any noticeable change in the setting or viewshed of or from the property. For these reasons, it is D+A's recommendation that the Carver Solar Project will pose no more than a ***minimal impact*** to the farm at 7431 Deerfield Drive.

Figure 6-19 illustrates the location of the project area in relation to the farm at 7431 Deerfield Drive, along with the location and direction of representative photography. Figures 6-20 through 6-22 provide representative photography of and from the property towards the project area. Figure 6-23 provides a detail of the conceptual site plan in the vicinity of the resource.

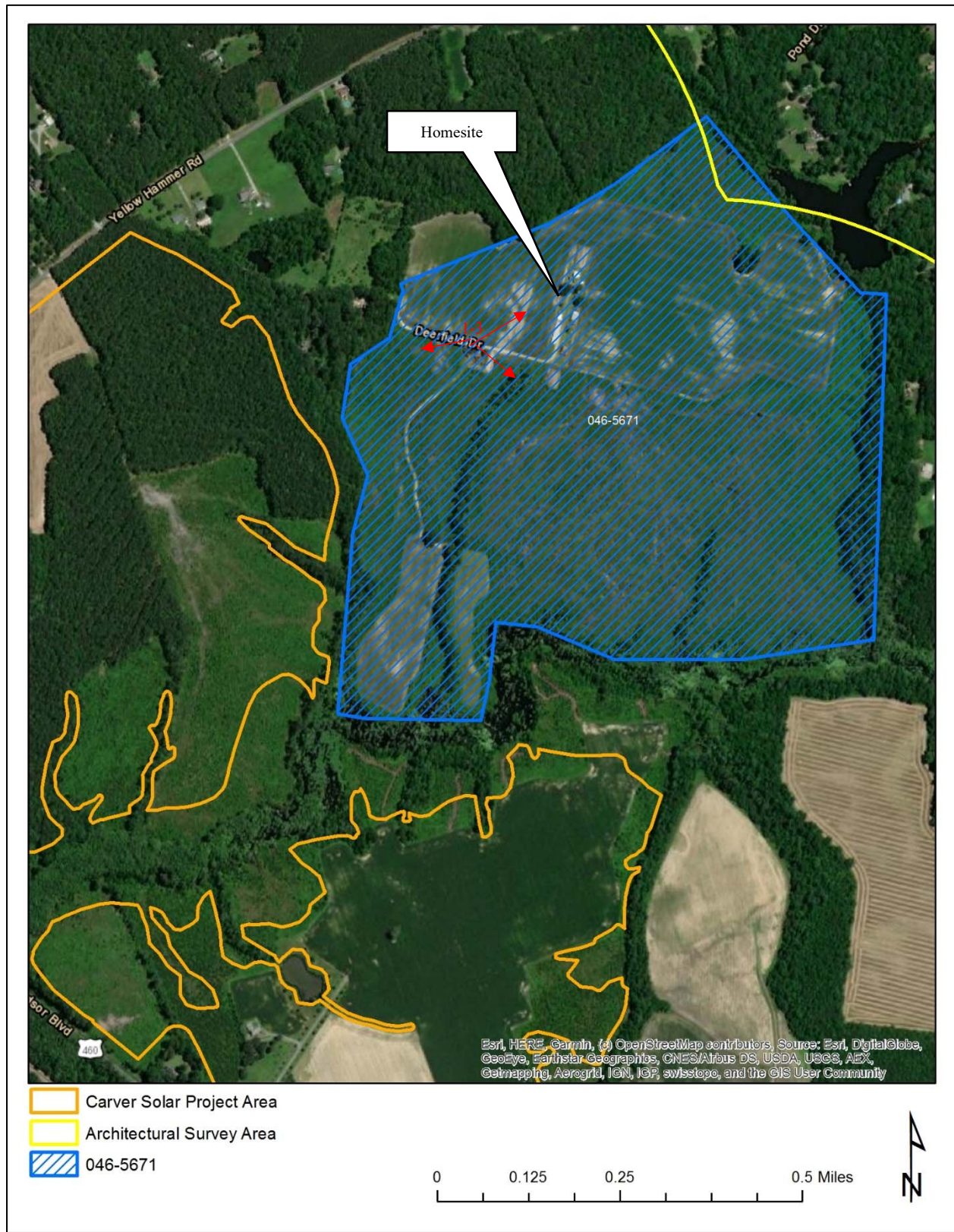


Figure 6-19: Farm at 7431 Deerfield Drive in relation to the project area with locations and directions of representative photographs.



Figure 6-20: View 1 - Farm at 7431 Deerfield Drive setting as viewed from Deerfield Drive, facing northeast.



Figure 6-21: View 2 - View from Deerfield Drive within the resource property towards the project area (not visible - screened by vegetation), facing southeast.



Figure 6-22: View 3 – View from Deerfield Drive within the resource property towards the project area (not visible – screened by vegetation), facing southeast.

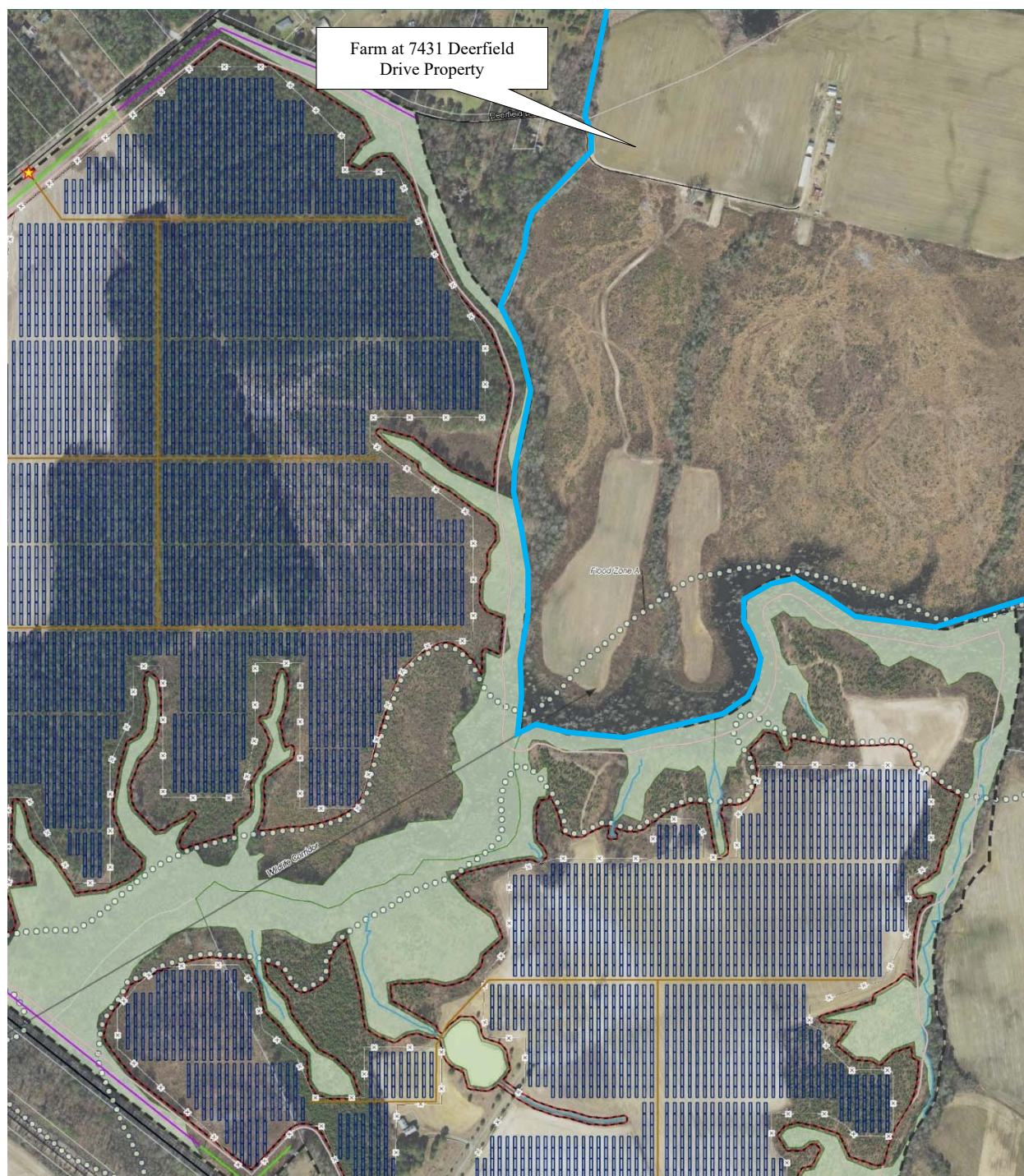


Figure 6-23: Conceptual site plan in the vicinity of the farm at 7431 Deerfield Drive. Source: Timmons Group

VDHR# 046-5672

House, 7296 Deerfield Drive



This single-family dwelling, located at 7296 Deerfield Drive, was constructed in 1939, according to local land records. The building is a one-story, four-bay, Vernacular-style house with a rectangular form. Its structural system is concrete block, and it rests atop a continuous, concrete block foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-central, metal chimney flue pierces the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a full-width porch. The porch roof is supported by metal posts. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the south side of Deerfield Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. Two trees grow in the front yard, which is enclosed by a wooden fence. A gravel driveway leads from the road and terminates beside the house to the east in front of a garage. The property is surrounded by woods on three sides.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5673

House, 7268 Deerfield Drive



This single-family dwelling, located at 7268 Deerfield Drive, was constructed in 1962, according to local land records. The building is a one-story, small house with a rectangular form and no discernible style. Its structural system is wood frame, clad in wood weatherboards. The roof is side-gabled and is covered with standing-seam metal. Along the west elevation, the main entrance consists of a central doorway with a recessed bay. The windows are covered with wood shutters. The house is simple in design and unornamented.

The property is situated on the south side of Deerfield Drive and is primarily wooded. The home is set near the road along the side of a dirt driveway. A variety of ornamental landscaping is mixed into the native woodland around the building. The driveway continues into the property and leads to a larger, modern dwelling. Further beyond the modern dwelling is a large, historic barn.

This resource is an example of a typical, late-twentieth century dwelling with no discernible style located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5674

House, 6250 Yellow Hammer Road



This single-family dwelling, located at 6250 Yellow Hammer Road, was constructed in 1958, according to local land records. The building is a one-story, four-bay, Ranch-style house with an L-shaped form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. Two interior-central, metal chimney flues pierce the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a slight roof overhang and accessed by a brick stoop. Fenestration consists of two-over-two, double-hung sash windows, which are accompanied by faux shutters. In terms of ornamentation, the house has a picture window along the front elevation.

The house is located in a rural area on the south side of Yellow Hammer Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. An asphalt driveway leads from the road and loops in front of the house to the north. No outbuildings were observed. The property is bordered by a residential property to the east and by woods to the west and south.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5675

House, 6278 Yellow Hammer Road



This single-family dwelling, located at 6278 Yellow Hammer Road, was constructed in 1958, according to local land records. The building is a one-story, four-bay, Vernacular-style house with a rectangular form. The house consists of a three-bay, main block with a one-bay wing along the east elevation. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, poured concrete foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-central, concrete chimney flue pierces the roof. Additionally, an exterior-end, concrete block chimney pierces the roof peak along the eastern elevation of the wing. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a partial-width, screened-in porch. Fenestration consists of one-over-one, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the south side of Yellow Hammer Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. The front yard is enclosed by a wire fence. A gravel driveway leads from the road and terminates beside the house to the west. Three sheds stand behind the house to the south. In the side yard, a trailer is located beside the house to the west. The property is bordered by a residential property to the west and by woods to the east and south.

This property is an example of a typical mid-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5676

House, 8072 Winston Drive



This single-family dwelling, located at 8072 Winston Drive, was constructed in 1962, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. The house consists of a three-bay, main block with a one-bay wing along the west elevation and a one-bay sunroom along the east elevation. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, poured concrete foundation. The roof is hipped and is covered with asphalt shingles. Two interior-slope, brick chimneys pierce the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a slight roof overhang and accessed by concrete steps. Fenestration consists of two-over-two, double-hung sash windows. In terms of ornamentation, the house has a picture window along the front elevation. Additionally, the siding is painted yellow.

The house is located in a rural area on the south side of Winston Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A large tree grows in front of the house to the north. A gravel driveway leads from the road and terminates beside the house to the east in front of a garage. A shed stands behind the garage to the south. In the front yard, a well stands beside the house to the northeast. The property is bordered by residential properties to the west and by woods to the east and south.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5677

House, 9071 Cut Thru Road



This single-family dwelling, located at 9071 Cut Thru Road, was constructed in 1969, according to local land records. The building is a one-story, three-bay, Minimal Traditional-style house with a rectangular form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is cross-gabled and is covered with asphalt shingles. An interior-central, brick chimney pierces the roof peak. On the primary façade (south elevation), the main entrance consists of an off-centered door that is inset slightly into the front wall and accessed by brick steps. Fenestration consists of six-over-six and four-over-four, double-hung sash windows. In terms of ornamentation, the house has two picture windows on the front elevation. Additionally, the walls flanking the inset front door are clad in vinyl weatherboards. The door surround is topped by a brick arch.

The house is located in a rural area on the north side of Cut Thru Road at its intersection with Winston Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates beside the house to the west in front of a garage. In the backyard to the north, a carport and two sheds stand behind the house. The property is bordered by a residential property to the east and by Winston Drive to the west.

This property is an example of a typical mid-twentieth century, Minimal Traditional-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5678

House, 22038 Garrison Drive



This single-family dwelling, located at 22038 Garrison Drive, was constructed in 1969, according to local land records. The building is a one-story, three-bay, Ranch-style house with a rectangular form. The house has a one-bay, attached garage along the north elevation. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-end, brick chimney pierces the roof peak. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a partial-width, engaged porch. The overhang is supported by two vinyl posts. Fenestration consists of eight-over-eight, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Garrison Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates in front of the garage to the east. Foundation plantings grow along the front of the house. No outbuildings were observed. The property is bordered by residential properties to the north and south.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5679

House, 22004 Garrison Drive



This single-family dwelling, located at 22004 Garrison Drive, was constructed in 1970, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. The original portion of the house has a large, two-story addition leading from the west elevation of the house. The structural system of the house is wood frame, clad in vertical wood boards, and it rests atop a continuous foundation. The roof of the original portion of the house is hipped and the roof of the addition is front-gabled; both roofs are covered with asphalt shingles. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a one-bay, roof overhang. The overhang is supported by what appears to be wooden posts that rest atop a wooden deck. Fenestration consists of six-over-six, double-hung sash windows, which are accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Garrison Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A large number of trees grow around the house on all sides. A gravel driveway leads from the house and terminates beside the house to the north. A large outbuilding stands behind the house to the west. The property is bordered by residential properties to the north and south.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5680

House, 21296 Garrison Drive



This single-family dwelling, located at 21296 Garrison Drive, was constructed in 1962, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. The southernmost bay of the house consists of an enclosed sunroom. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (east elevation), the main entrance consists of a central door, sheltered by a slight roof overhang and accessed by concrete stairs. Fenestration consists of two-over-two, double-hung sash windows. In terms of ornamentation, the house has a large picture window along the front elevation.

The house is located in a rural area on the west side of Garrison Drive. It is set back roughly seventy feet from the road and sits in the center of a grassy yard, which is bordered by a thin tree line on three sides. A gravel driveway leads from the road and terminates in front of the house to the east. The yard is bordered by agricultural fields to the north, west, and south. An outbuilding is located in the backyard to the west. Additionally, three outbuildings are located in the surrounding tree line to the north and southeast. The property is bordered by two residential properties to the south and west, and by woods to the north.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5681

House, 21416 Garrison Drive



This single-family dwelling, located at 21416 Garrison Drive, was constructed in 1908, according to local land records. The building is a two-story, three-bay, Vernacular-style house with an I-house form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The roof is side-gabled and is covered with standing-seam metal. An exterior-end, brick chimney pierces the roof peak. On the primary façade (east elevation), the main entrance consists of a central door, sheltered by a partial-width porch. The hipped porch roof is supported by what appears to be wood posts that rest atop a wood deck. Fenestration consists of six-over-six, double-hung sash windows, accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Garrison Drive. It is set back roughly two hundred feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and terminates beside the house to the north. The yard is bordered by agricultural fields on all sides. Behind the house to the west, a garage, well house, gazebo, and shed stand in the back yard. Further to the east, a carport stands in the front field. The property is bordered by residential properties to the north and south.

This property is an example of a typical early-twentieth century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5682

House, 7334 Ecella Road



This single-family dwelling, located at 7334 Ecella Road, was constructed in 1966, according to local land records. The building is a one-story, three-bay, Ranch-style house with a rectangular form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete block foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door, sheltered by a slight roof overhang and accessed by a concrete block stoop. Fenestration consists of two-over-two, double-hung sash windows, which are accompanied by faux shutters on the front elevation. In terms of ornamentation, the house has a large picture window along the front elevation.

The house is located in a rural area on the south side of Ecella Road. It is set back roughly thirty feet from the road and is situated in the center of a grassy yard. Mature shade trees grow around the house in the surrounding yard. No outbuildings were observed. The property is bordered by woods and open fields on three sides. The house is located at the eastern end of Ecella Road at its intersection with the Norfolk Southern Railroad.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5683

House, 7295 Ecella Road



This single-family dwelling, located at 7295 Ecella Road, was constructed in 1969, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. Numerous additions have been made to the house over time. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete foundation. The original portion of the roof is hipped and is covered with asphalt shingles. An interior-slope, metal chimney flue pierces the roof. On the primary façade (south elevation), the main entrance consists of an off-centered door that is inset into the front wall and accessed by concrete stairs. Fenestration consists of one-over-one, double-hung sash windows. In terms of ornamentation, the house has a large, bay window along the front elevation.

The house is located in a rural area on the north side of Ecella Road. It is set back roughly thirty feet from the road and is situated in the center of a grassy yard. A gravel driveway leads from the road and terminates beside the house to the east. A large shed stands behind the house to the north. The property is bordered by residential properties to the west and by the Norfolk Southern Railroad to the east.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5684

House, 22150 Barrett Town Road



This single-family dwelling, located at 22150 Barrett Town Road, was constructed in 1962, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. The northernmost bay consists of a one-bay, attached garage. Its structural system is brick, laid in a running bond, it rests atop a continuous, brick foundation. The roof is cross-gabled and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (east elevation), the main entrance consists of an off-centered door that is inset into the front wall and accessed by brick stairs. Fenestration consists of one-over-one, double-hung sash windows, accompanied by faux shutters on the front elevation. In terms of ornamentation, the house has a large picture window.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road and each side of the house and terminates along the north and south elevations. A large outbuilding and shed stand behind the house to the west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5685

House, 22288 Barrett Town Road



This single-family dwelling, located at 22288 Barrett Town Road, was constructed in 1967, according to local land records. The building is a one-story, four-bay, Ranch-style house with a rectangular form. A two-bay attached carport with located along the south elevation. Its structural system is brick, laid in a running bond, it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a partial-width porch. The porch roof is supported by turned wood posts. Fenestration consists of six-over-six, double-hung sash windows, accompanied by faux shutters. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. Foundation plantings grow along the front of the house. An asphalt driveway leads from the road and terminates in front of the carport to the east. The space underneath the carport is paved with concrete. A shed stands behind the house to the west. The property is bordered by a residential property to the south and by woods to the west and north.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5686

House, 22310 Barrett Town Road



This single-family dwelling, located at 22310 Barrett Town Road, was constructed in 1942, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. Its structural system is wood frame, clad in vinyl weatherboards, and it rests atop a continuous, concrete block foundation. The roof is side-gabled and is covered with standing-seam metal. An exterior-end, concrete block chimney pierces the roof. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a slight roof overhang and accessed by concrete steps. Fenestration consists of one-over-one, double-hung sash windows, sheltered by metal awnings. The house is simple in design and has no additional ornamentation.

The house is located in a rural area on the west side of Barrett Town Road. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A dirt driveway leads from the road and loops around the house to the west. In the backyard, two shed and a well house stand to the west of the house. The property is bordered by residential properties to the north and south.

This property is an example of a typical early-to-mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5687

House, 22392 Barrett Town Road



This single-family dwelling, located at 22392 Barrett Town Road, was constructed in 1967, according to local land records. The building is a one-story, seven-bay, Ranch-style house with a rectangular form. The house consists of a four-bay main block with a three-bay, addition along the south elevation of the original block and a one-bay, attached carport along the south elevation of the addition. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is cross-gabled and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (east elevation), the main entrance consists of an off-centered door, sheltered by a one-bay, entry porch and accessed by a brick stoop. A secondary entrance is centered along the side addition. Fenestration consists of six-over-six, double-hung sash windows, accompanied by faux shutters. In terms of ornamentation, the house has a large picture window along the front elevation.

The house is located in a rural area on the west side of Barrett Town Road at its intersection with Mill Creek Drive. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. A gravel driveway leads from the road, loops behind the house to the west, and intersects with Mill Creek Drive to the north. Two sheds, an outbuilding, and a carport stand behind the house to the southwest. The property is bordered by residential properties to the south and by Mill Creek Drive to the north.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5688**House, 21260 Leander Lane**

This single-family dwelling, located at 21260 Leander Lane, was constructed circa 1900, according to site inspection. The building is a two-story, three-bay, Vernacular-style farmhouse with an I-house form and subtle Folk Victorian influences. Its structural system is wood frame, clad in composite siding, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with standing-seam metal. An exterior-end, brick chimney pierces the roof peak. On the primary façade (south elevation), the main entrance consists of a central door, sheltered by a partial-width porch. The hipped porch roof is supported by turned wood posts that rest atop a wood deck. Fenestration consists of six-over-six and two-over-two, double-hung sash windows. In terms of ornamentation, the porch features subtle Folk Victorian stylistic details such as decorative bargeboard and turned wood posts.

The house is located in a rural area at the end of Leander Lane, which intersects with Winston Drive to the south. It is set back roughly one-half mile from the road and sits in the center of a grassy yard. Shade trees grow around the house in the surrounding yard. The yard is surrounded by agricultural fields on all sides, which are bordered by thick woods to the north, west, and south. A long, gravel driveway leads from Winston Drive and terminates in front of the house to the south. The house is accompanied by a well, three silos, and a large outbuilding, which stand behind the house to the north. Additionally, a shed and outbuilding stand beside the house to the east. The property is bordered by woods and open fields to the north, east, and west, and by residential properties along Winston Drive to the south.

This property is an example of a typical turn-of-the-century, Vernacular-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5689

House, 8115 Windsor Boulevard



This single-family dwelling, located at 8115 Windsor Boulevard, was constructed in 1963, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. The house consists of a five-bay block with a one-bay, attached carport. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. On the primary façade (south elevation), the main entrance consists of a central door that is slightly inset into the wall and accessed by a brick stoop. A garage door flanks the front door to the right. Fenestration consists of two-over-two, double-hung sash windows, accompanied by faux shutters. In terms of ornamentation, the house has a large picture window on the front elevation.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. The yard is bordered by woods to the north and west. A residential property borders the house to the east. A concrete driveway leads from the road and terminates underneath the attached carport. Foundation plantings and shrubs grow around the house. A shed stands behind the house to the north.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5690

House, 8089 Windsor Boulevard



This single-family dwelling, located at 8089 Windsor Boulevard, was constructed in 1969, according to local land records. The building is a one-story, five-bay, Ranch-style house with a rectangular form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. On the primary façade (south elevation), the main entrance consists of an off-centered door that is slightly inset into the wall and accessed by a brick stoop. Fenestration consists of one-over-one, double-hung sash windows, accompanied by faux shutters. In terms of ornamentation, the house has three converging rooflines.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. Trees grow around the house on all sides. Additionally, foundation plantings front the house to the south. A gravel driveway leads from the road and loops behind the house to the north. No outbuildings were observed. The property is bordered by a residential property to the east and by woods to the north and west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5691

House, 7570 Windsor Boulevard



This single-family dwelling, located at 7570 Windsor Boulevard, was constructed in 1962, according to local land records. The building is a one-story, six-bay, Ranch-style house with a rectangular form. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is hipped and is covered with asphalt shingles. An exterior-central and interior-slope brick chimneys pierce the roof. On the primary façade (north elevation), the main entrance consists of an off-centered door that is sheltered by a one-bay, entry porch. The hipped porch roof is supported by vinyl posts. Fenestration consists of one-over-one, double-hung sash windows, accompanied by faux shutters. In terms of ornamentation, the house has a picture window along the front elevation.

The house is located in a rural area on the south side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard. Shade trees grow around the house in the surrounding yard. An asphalt driveway leads from the road and terminates beside the house to the west. The backyard is enclosed with a wooden fence. No outbuildings were observed. The property is bordered by residential properties to the east and west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 046-5692**Southern States, 9242 Windsor Boulevard**

This service station, located at 9242 Windsor Boulevard, was constructed in 1971, according to local land records. The building is a one-story, five-bay, commercial building with a rectangular form and no discernible style. The structural system of the building is concrete block, clad in brick on the front elevation, and it rests atop a continuous, concrete block foundation. The roof is flat and is covered with asphalt roofing. On the primary façade (north elevation), the main entrance consists of an off-centered, glass door sheltered by a metal awning. Fenestration consists of single-light, fixed commercial windows. In terms of ornamentation, a portion of the front façade is clad in vertical boards while the remainder of the wall is clad in brick veneer. Additionally, the front door is flanked by a large sidelight and topped by a transom. The building also has two large signs that include the name of the store.

The store is located in a rural area on the south side of Windsor Boulevard. It is set back roughly fifty feet from the road and sits in the center of a small, grassy yard. An asphalt parking lot and staging area surround the building on all sides. Additionally, an asphalt driveway leads from the road into the parking area. To the east of the building are two gas pumps and a system of pipes, each of which are covered by a shelter. Two additional gas pumps front the building to the north but are not covered by a shelter. To the south of the shelters is a shed. On the opposite side of the store to the west is a carport that provides shelter over a propane tank. The store is bordered by residential properties to the east and west and by the Norfolk Southern Railroad to the south.

This property is an example of a typical mid-twentieth century roadside service station located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5693

House, 9141 Windsor Boulevard



This single-family dwelling, located at 9141 Windsor Boulevard, was constructed in 1968, according to local land records. The building is a one-story, eight-bay, Ranch-style house with a rectangular form. The easternmost bay of the house consists of an attached garage. Its structural system is brick, laid in a running bond, and it rests atop a continuous, brick foundation. The roof is side-gabled and is covered with asphalt shingles. An interior-slope, brick chimney pierces the roof. Additionally, an interior-central, frame cupola pierces the roof peak. On the primary façade (south elevation), the main entrance consists of a central door, sheltered by a partial-width porch. The porch overhang is supported by wood posts that rest atop a brick base. Fenestration consists of eight-over-twelve- double-hung sash windows. In terms of ornamentation, the front door is accompanied by a molder door surround topped by a broken ogee pediment. Additionally, two of the windows on opposite sides of the door are topped by arched pediments.

The house is located in a rural area on the north side of Windsor Boulevard. It is set back roughly thirty feet from the road and sits in the center of a grassy yard, which is enclosed by a chain link fence. Shade trees grow around the house to the east and west. A gravel driveway leads from the road and terminates in front of the attached garage. A shed stands beside the house to the east. In the front yard along the driveway, a well is situated to the southeast of the house. The property is bordered by residential properties to the east and west.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered **not eligible** for listing in the NRHP.

VDHR# 046-5694

House, 7523 Mill Creek Drive



This single-family dwelling, located at 7523 Mill Creek Drive, was constructed in 1947, according to local land records. The house is a one-story, four-bay, Ranch-style house with a rectangular form. Its structural framework is wood frame, clad in composite siding, and it rests atop a continuous, brick foundation. The roof is cross-gabled and is covered with asphalt shingles. On the primary façade (south elevation), the main entrance was not observed during the survey due to a partial-width, enclosed porch that shelters the door. A central, screen door leads into the porch; the door is sheltered by a metal awning that spans the entire width of the porch. The porch has a front-gable roof. Fenestration consists of six-over-six, two-over-two, and one-over-one, double-hung sash windows, some of which are accompanied by faux shutters. The house has no additional ornamentation.

The house is located in a rural area on the north side of Mill Creek Drive. It is set back roughly fifty feet and sits in the center of a grassy yard. Two large trees grow in front of the house to the south. A gravel driveway leads from the road and terminates behind the house to the north. Various additions on the north elevation of the house connect with a large outbuilding, which stands to the northwest. At the edge of the woods to the north, a shed and garage are located behind the house. The property is bordered by a residential property to the west and by an open field to the east.

This property is an example of a typical mid-twentieth century, Ranch-style dwelling located within a rural setting in the region. It does not possess significant architectural features or characteristics and reconnaissance-level research did not identify any significant historical associations. As a result, it is considered ***not eligible*** for listing in the NRHP.

VDHR# 091-5098**Norfolk & Western Railway**

The Norfolk & Western Railway was constructed in 1858, according to written data. Now operated as the Norfolk Southern Railroad, many historic elements of the original railroad remain in place. All of the former stations in the area have been demolished. The roughly four-mile portion of the railroad surveyed consists of two lines of timber ties on metal tracks with a gravel base underneath.

A roughly four-mile portion of the railroad between the towns of Zuni and Windsor was surveyed as a part of this effort. Within this area, the railroad runs in an east-west direction and parallels Route 460, which is located to the north. A small strip of properties is located between the railroad and Route 460 within the survey area. Most of the railroad is lined with thick vegetation, although some sort sections have been cleared in areas adjacent to development. Three roads cross over the railroad within the survey area. Crossing points are located at the points where Routes 638 and 639 intersect with the railroad. Additionally, a bridge crosses over the railroad at the point where Route 645 intersects with the railroad.

During the mid-nineteenth century, a number of businessmen in Norfolk sought out a new rail line that would connect the city with Petersburg. In 1851, the Norfolk and Petersburg Railroad Company was established and began making plans for the new line. Civil engineer William Mahone became the project's chief engineer in 1853. Due to various setbacks, the railroad was not completed until 1858. Shortly after its completion, the railroad company was faced with new challenges when civil war broke out in 1861. Between 1862 and 1865, both Union and Confederate forces removed portions of the track in an effort to keep the opposing side from making use of the railroad. During the siege of Petersburg from 1864 to 1865, soldiers on both sides of the conflict dismantled portions of the line and used the materials in their defenses.

After the war, Mahone continued to serve as an executive and worked to repair the railroad. As president of various railroad companies, he established the Atlantic, Mississippi and Ohio Railroad Company in 1870, which connected Norfolk to the Mississippi Valley. The Norfolk & Petersburg

Railroad was added to the AM&O at this time. In 1881, the company fell under new ownership due to financial issues that forced Mahone to sell his interests. The new owner renamed the AM&O the Norfolk & Western Railway at this time. During the early twentieth century, several improvements, such as double tracking, were made to the line in order to keep up with demands for increased tonnage. As a result, no vestiges of the railroad that were built under Mahone's leadership remain in place today. During both World War I and World War II, the railroad was used to transport troops and equipment to Norfolk. In 1982, the Norfolk & Western merged with the Southern Railway to form the Norfolk Southern Corporation, which owns the railroad today.

Although only a small portion of the corridor was subject to this survey, and a full evaluation of the Norfolk and Southern Railroad is beyond the scope of this effort, it is acknowledged that the railroad is a significant aspect of regional and state history. While the portion of the line within the survey area has been altered, the corridor continues to convey its association with transportation development in Southside Virginia during the nineteenth and twentieth centuries. As such, it was previously determined eligible for listing in the NRHP by the VDHR in 2004, and most recently in 2020. It is D+A's opinion that the portion of the resource within the survey area still be 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. While project details including site plan, array layout, and vegetative screening are still under development, this resource is not located directly within the project area and therefore an assessment of potential visual impacts was conducted at this time.

To assess whether the project may pose a visual impact to the resource, a viewshed assessment was conducted from select vantage points along the corridor towards the project area. Inspection was performed and photographs towards the project area taken to document existing visibility and surrounding setting. This effort found that the railroad corridor extends through the project area, abutting the perimeter of several of the project tracts and within one-half mile of several others. The vast majority of the railroad corridor in the vicinity of the project area is lined by vegetation, varying from narrow treelines immediately along the corridor to thicker wooded areas that extend further out. The corridor crosses two roadways within the survey area, including Antioch Road and Ecella Road. While much of the corridor is bordered by undeveloped land through the survey, there are some buildings that border the corridor in the vicinity of the road crossings.

Inspection was only possible from the public road crossings which found that discrete tracts of the project area and associated improvements may be visible from these locations, however would be amongst other development lining the roads, much of which is nonhistoric. Much of the existing vegetation that lines the railroad corridor is within the railroad ROW and would therefore not be cleared as part of this project and will continue to provide screening to prevent wide and/or uninterrupted views of the project.

Therefore, the project may introduce a change in the setting and viewshed of the landscape within and immediately surrounding the portion of the corridor in the vicinity of the project. However, despite the likely visibility of project improvements from vantage points along the corridor in the vicinity of the project area, the proposed project is not anticipated to alter the overall alignment of the existing corridor, nor introduce any features that are substantially different or incompatible from its constantly evolving setting. It is therefore D+A's opinion that the proposed project will

have no more than a ***minimal impact*** overall on the Norfolk and Western Railroad corridor per VDHR's impact characterization.

Figure 6-24 illustrates the location of the Norfolk and Western Railroad corridor in relation to the project area, with the location and direction of representative photographs. Figures 6-25 through 6-31 provide representative photographs of and from the corridor towards the project area.

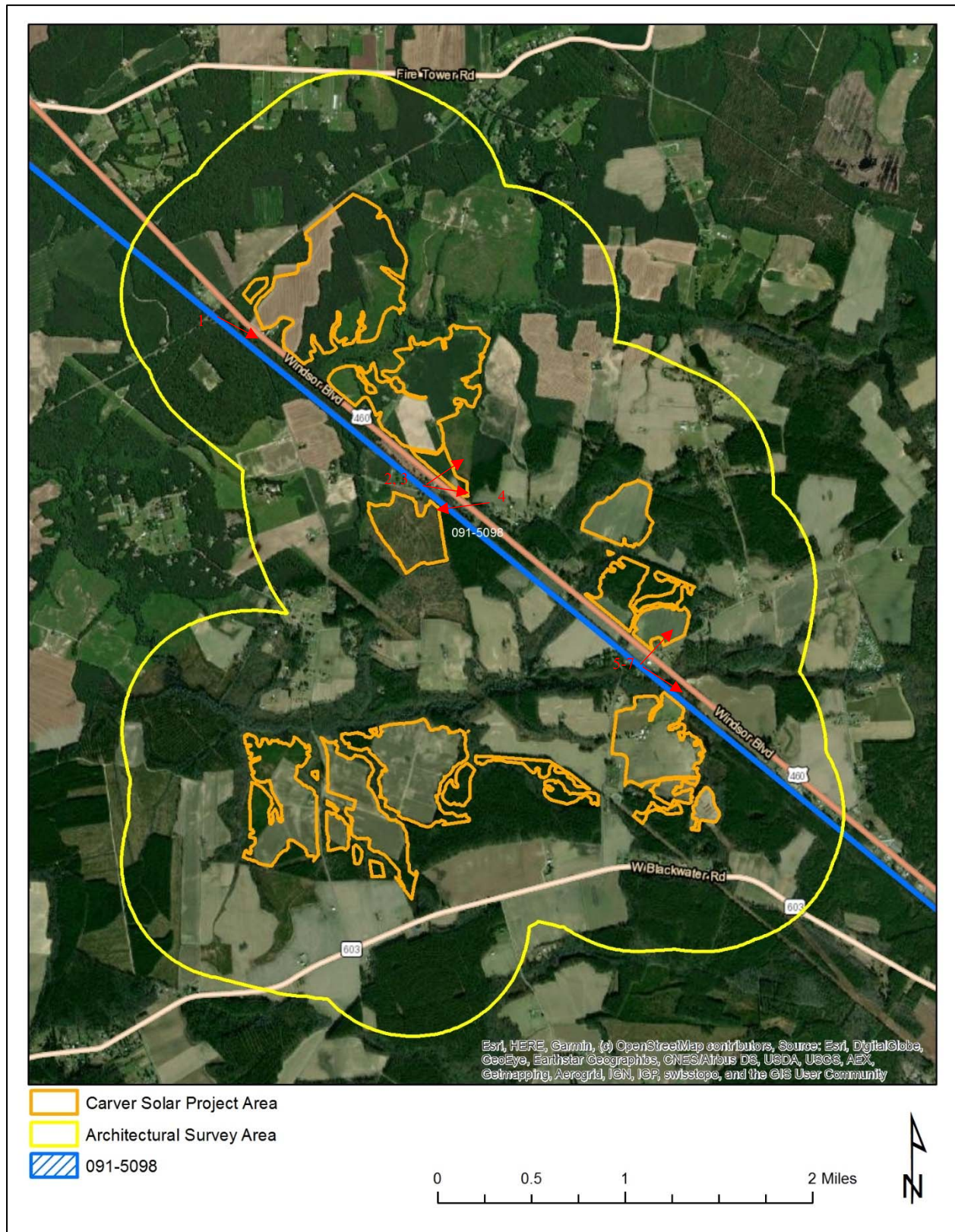


Figure 6-24: Norfolk and Western Railroad in relation to the project and survey areas with locations and directions of representative photos.



Figure 6-25: View 1- Norfolk Western Railroad corridor at Yellow Hammer Road, facing southeast (project not visible – screened by vegetation).



Figure 6-26: View 2- Norfolk Western Railroad corridor at Ecella Road crossing, facing east (project area visible in field immediately to the east, but screened on opposite side of railroad by raised berm and existing development).



Figure 6-27: View 3- Norfolk Western Railroad corridor at Ecella Road crossing, facing north (project area not visible – screened by raised berm and existing development).



Figure 6-28: View 4 - Norfolk Western Railroad corridor at Ecella Road crossing, facing west (project area not visible - screened on opposite side of corridor by existing vegetation).



Figure 6-29: View 5- Norfolk Western Railroad corridor at Antioch Road, facing north (project area is visible in fields on opposite side of railroad corridor and US-460).



Figure 6-30: View 6- Norfolk Southern Railroad corridor at Antioch Road (project area not visible – screened by raised berm).

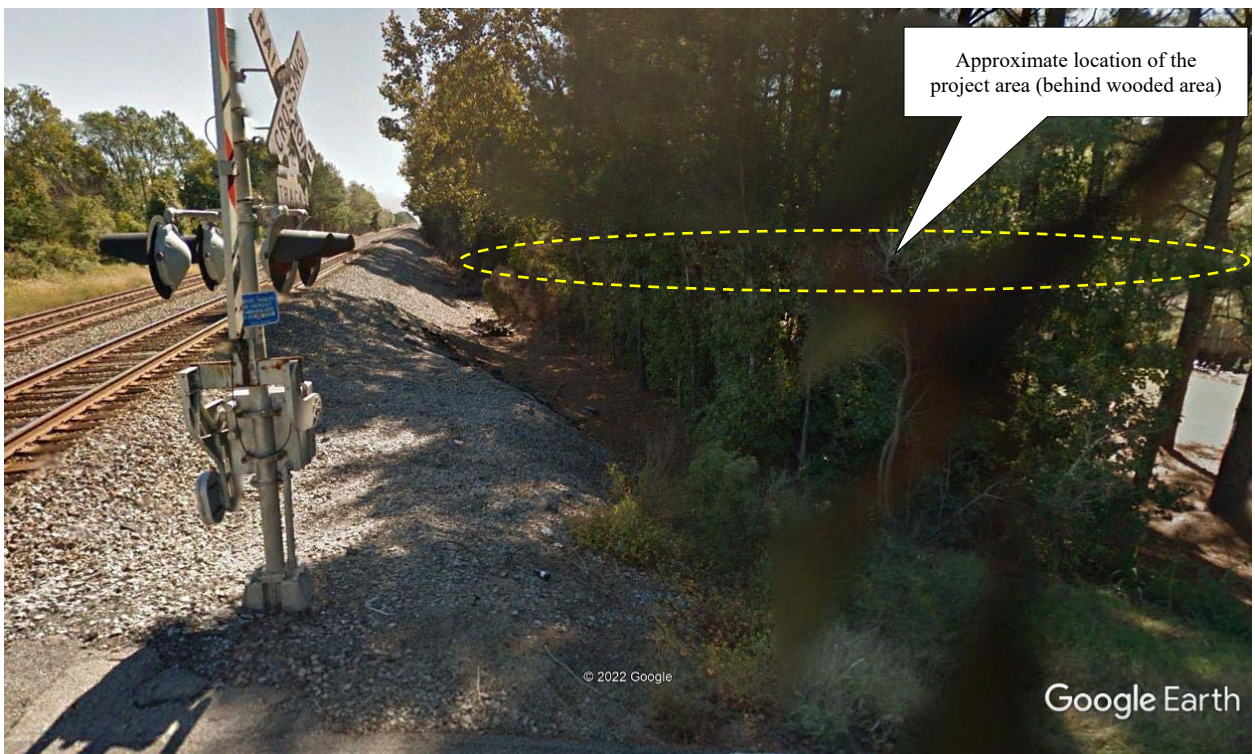


Figure 6-31: View 7- Norfolk Western Railroad corridor at Antioch Road, facing southeast (project area not visible – screened by existing vegetation).

7. CONCLUSIONS AND RECOMMENDATIONS

In April 2022, Dutton +Associates, LLC (D+A) completed a Phase I architectural resource survey (Phase I) of the Carver Solar Project Area in Isle of Wight County, Virginia. The effort was intended to provide documentation and assessment of architectural resources within the project area to make recommendations as to whether they may be potentially eligible for listing in the National Register of Historic Places (NRHP) and assess those that are considered NRHP-eligible for project impacts. The effort was conducted in support of an application to Isle of Wight County for a Conditional Use Permit (CUP) and application to the Department of Environmental Quality (DEQ) for a Permit By Rule (PBR). Although the project will require archaeological investigations as well, that study will be conducted as part of a separate effort and reported in a separate document.

The project involves the development of a solar energy production facility in the Windsor vicinity of southeastern Isle of Wight County. The project area is spread across several tracts of land to the west of Windsor along U.S. 460, bound generally by Yellow Hammer Road to the west, Deerfield Drive to the north, Antioch Road to the east, and Blackwater Road to the south. The project tracts are currently a mix of agricultural field and woodland (both native and planted timber). Several have homes and/or agricultural complexes that will be excluded from the proposed development. As part of the project, a series of solar arrays will be built throughout the project area and will tie into the power grid through connection to an existing transmission line on the east side of Antioch Road.

The architectural resources survey for the Carver Solar project resulted in the identification of a total of eighty-two (82) architectural resources greater than 50 years of age (constructed in 1972 or earlier) located within the survey area. Of the surveyed resources, fifty-four (54) were previously recorded (VDHR# 046-0034, 046-5057, 046-5086, 046-5088, 046-5089, 046-5099/5105, 046-5107/5111, 046-5113, 046-5114, 046-5277, 046-5293, 046-5294, 046-5307, 046-5501, and 091-5098) and twenty-eight (28) were newly recorded during this Phase I Survey (VDHR# 046-5664, 046-5668/5694). Twenty-nine (29) of the previously recorded resources were evaluated and determined not eligible for listing in the NRHP by the SHPO in 2020 and were therefore not subject to resurvey or evaluation as part of this effort (VDHR# 046-0116/0121, 046-0132, 046-5026/5029, 046-5055, 046-5056, 046-5087, 046-5112, 046-5154, 046-5295, 046-5296, 046-5298, 046-5569/5574/5577). An additional two (2) of the previously recorded resources (VDHR# 046-0034 and 046-5057) were revealed to have been demolished. The resources surveyed as part of this effort primarily include domestic and agricultural buildings from the mid-nineteenth to late-twentieth century, as well as a nineteenth century family cemetery, a railroad corridor, and several twentieth century commercial buildings.

A total of four resources identified within the survey area are considered eligible or potentially eligible for listing in the NRHP including two homes, a commercial building, and a railroad corridor. Of the two homes, the farm at 23255 Barrett Town Road (VDHR# 046-5089) has previously been determined potentially eligible as a good example of a mid-nineteenth century plantation home in the area with a relatively intact property and several potentially nineteenth century outbuildings. The second home, a farm located at 7431 Deerfield Drive (VDHR# 046-5671) is believed to have been built circa 1894, but replaced an eighteenth-century dwelling, and

retains several nineteenth century outbuildings as well as family cemetery. The commercial building is the 1930s roadside “Hobb’s Store” (VDHR# 046-5101) that has been determined eligible for its association to the development of U.S. 460 and a unique example of a service station with a complex of motor lodge cabins. The Norfolk and Western Railroad (VDHR# 091-5098) has also been determined potentially eligible for its association to the growth and development of commerce in the region from the nineteenth century through the present-day.

Each of the four NRHP-eligible resources within the survey area were subject to an assessment of impacts according to VDHR’s impact characterization scale. Two of the resources are located on tracts included in the project, but the building complexes themselves are outside of the project area (Farm at 23255 Barrett Town Road – VDHR# 046-5089 and Hobb’s Store – VDHR# 046-5101). As such, solar arrays, infrastructure, and other improvements will be made within and around the boundaries of these two properties. The buildings themselves and adjacent yardscapes will be excluded from the development footprint and access will be maintained with existing driveways. The avoidance areas will extend from the buildings to the road and will tie into setback of project improvements from the roads to maintain visibility of the resources from public ROW. Existing vegetation in the vicinity of the building complexes will also be maintained and where no vegetation currently exists, a robust supplemental landscape buffer of evergreen trees will be planted to screen improvements from the roads and building complexes. As such, the project will result in direct impacts, as well as a change of setting and viewshed for both resources, however, with regards to the farm at 23255 Barrett Town Road, the impacts to the property will be more substantial as its associated property, field/woodland patterns, and landscape are contributing to its character as a farm and **therefore it is D+A’s opinion that the project will result in a moderate impact to the farm at 23255 Barrett Town Road (VDHR# 046-5089)**. With regards to the Hobb’s Store, however, the impacts will not substantially compromise the qualities and characteristics that make it significant or eligible for listing in the NRHP. As a roadside commercial building and tourist motel, its architecture and connectivity to the highway are considered key contributing aspects of its setting and will be preserved, while the farm fields and woodland to the rear where improvements are to be located are not as character-defining. **Therefore, it is D+A’s opinion that the project will have no more than a minimal impact to the Hobb’s Store (VDHR# 046-5101).**

For the other two properties located within the survey area but not within the project area, analysis found that the Farm at 7431 Deerfield Drive is located just north of the project area. Although the property parcel on which it is set immediately abuts the edge of the project area, the home and associated building complex are set centrally within the large property and a greater distance from the project. Existing vegetation on the property, including a thick timber stand, as well as a native wooded area bordering the swamp that extends along the perimeter of the property completely screens the project area from view and is anticipated to inhibit visibility of any project improvements. The Norfolk and Western Railroad corridor extends through the project tracts, although does not directly cross any of them. This corridor is lined by treelines and wooded areas for much of its length through the vicinity which buffer it from the project area. Inspection from the three road crossings in the vicinity reveal that in general this vegetation and other development bordering the roads and corridor screen wide views of the project area and will minimize visibility of project improvements. Therefore the project may introduce a slight change in the setting and viewshed of the landscape within and immediately surrounding the portion of the corridor in the vicinity of the project, although the project is not anticipated to alter the overall alignment of the

existing corridor, nor introduce any features that are substantially different or incompatible from its constantly evolving setting. **Therefore, it is D+A's opinion that the project will result in no more than a minimal impact to these resources.** Below is a summary of NRHP-eligible resources and recommendations of impacts.

Table 7-1: NRHP-eligible architectural resources with recommendations of project impacts

VDHR#	Resource Name/Address	Year Built	NRHP Eligibility	Project Impacts
046-5089	Farm, 23255 Barrett Town Road	c.1850	Potentially NRHP-Eligible	Moderate Impact
046-5101	Hobb's Store, 6635 Windsor Boulevard	c.1933	NRHP-Eligible	Minimal Impact
046-5671	Farm, 7431 Deerfield Drive	c.1894	Potentially NRHP-Eligible	Minimal Impact
091-5098	Norfolk and Western Railroad	c.1858	NRHP-Eligible	Minimal Impact

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APPENDIX A: RESUMES

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ROBERT J. TAYLOR, JR
Senior Architectural Historian



Dutton + Associates
CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT



Education

Master of Arts, 2009
Historic Preservation
Savannah College of Art and
Design
Savannah, Georgia

Bachelor of Arts, 2005
Historic Preservation
University of Mary Washington
Fredericksburg, Virginia

Awards

Eagle Scout, 2001

Mr. Taylor holds a B.A. in Historic Preservation from University of Mary Washington and a M.A. in Historic Preservation from Savannah College of Art and Design. He has over 10 years of Cultural Resource Management Experience and has taken part in projects in Virginia, North Carolina, Maryland, Delaware, New Jersey, Rhode Island, Pennsylvania, Ohio, Florida, and California.

His experience in Cultural Resource Management includes working on both Architectural and Archaeological projects while participating in all phases of compliance from project initiation and development to completion. His work includes conducting field surveys, researching and documenting historic resources, completing site file forms, writing reports, preparing *NRHP* evaluations and documentation for individual resources and historic districts, compiling HABS/HAER documentation packages, preparing Cell Tower compliance packages, and conducting archaeological testing. He has a thorough understanding of the laws and regulations that govern cultural resources and has assisted with a number of Cultural Resource Management Plans, Programmatic Agreements, and Memorandum of Agreements. Outside of CRM, he has worked for the Thomas Jefferson's Monticello Foundation where he was a field archaeologist and assisted with the long-term, Plantation Survey Project on Monticello Mountain. Mr. Taylor's primary interests lie in Architectural Forensics and the study of building evolution.

As Senior Architectural Historian for Dutton + Associates, Mr. Taylor manages and conducts all aspects of historic and architectural resource projects and studies.

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ROBERT J. TAYLOR, JR
Senior Architectural Historian

Professional Experience

Dutton + Associates, LLC, Architectural Historian, Richmond, Virginia, March 2009-present.

Manages architectural history studies, provides regulatory and compliance consultation, conducts Historic Resources Surveys, prepares NRHP nominations, HABS/HAER packages, site forms, and other documentation packages; performs research and context development, and authors project reports.

Thomas Jefferson Monticello Foundation, Field Archaeologist, Charlottesville, Virginia, Winter 2008- 2009. Conducted archaeological testing, assisted with site research, performed lab work

Janus Research, Inc., Architectural Historian, Tampa, Florida, August 2005- May 2008.

Conducted field surveys, Prepared NRHP and HABS/HAER documentation packages, authored Cultural Resource Assessment Survey Reports

Example Projects and Publications

Transmission Line Projects

Phase I Cultural Resources Survey of the Cunningham to Elmont 500 kV Transmission Line, Multiple Counties
Phase I Cultural Resources Survey of the TL47 230kV Transmission Line Rebuild, Multiple Counties
SCC Pre-Application Study for the Gainesville-Haymarket Substation and Transmission Line, Prince William Co
Cultural Resources Survey of the Bearwallow-Faraday Transmission Line Rebuild Project, Tazewell County
Phase I Cultural Resources Survey of the Dominion Line 567 Wilcox Wharf to Windmill Point Rebuild Project, Charles City and Prince George County
Phase I Survey of the Chase City-Kerr Dam, Line 137 and 138, Mecklenburg County
SCC Pre-Application Study of the Mount Storm-Valley Rebuild Project, Rockingham County
Phase I Survey of the Hayes-Yorktown 230kV Transmission Line, Gloucester County

Substation Projects

SCC Pre-Application Study of the Ellick Substation Expansion, Fairfax Co
SCC Pre-Application Study of the Roundtable Substation, Fairfax County
Phase I Survey of the Possum Point Project, Prince William County

Wind Power Projects

Phase I Cultural Resources Survey of the Rocky Forge Wind Project, Botetourt County

Solar Projects

Phase I Survey of the Briel Solar Farm, Henrico Co
Phase I Survey of the Puller Solar Project, Middlesex County
Phase I Survey of the Whitehouse Solar Project, Louisa County
Phase I Survey of the Hosier Road Solar Project, Suffolk County
Phase I Survey of the Twitty Creek Solar Project, Charlotte County

Other

Phase III Investigations of the Spring Hill Plantation Site for the Dominion Reymet Road Expansion Project, Chesterfield County
HALS Photography for the Skiffe's Creek 500kV Transmission Line Project, Charles City County

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.



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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COMMONWEALTH of VIRGINIA

Travis A. Voyles
Acting Secretary of Natural
and Historic Resources

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July 26, 2022

Robert J. Taylor, Jr., M.A.
Dutton + Associates, LLC
1115 Crowder Dr.
Midlothian, VA 23113

RE: Carver Solar Project Phase I Architectural Resource Survey
Lancaster County, Virginia
DHR File No. 2022-3225

Dear Mr. Taylor:

We have received for review the *Phase I Architectural Resource Survey of the Carver Solar Project Area* prepared by Dutton + Associated (D+A) on behalf of Carver Solar I, LLC. We provide the following comments in support of an application to the Department of Environmental Quality (DEQ) for a Permit-by-Rule to construct and operate a small solar project Lancaster County, Virginia. Please note that these comments are regarding the impacts to architectural resources within or near the project area. To date, the archaeological survey of the project area has not been received, and DHR cannot provide comments on the overall impacts of the project at this time.

The architectural report identified eighty-two (82) resources; which includes fifty-four (54) previously recorded resources and twenty-eight (28) newly identified resources within the 0.5-mile study area. Two (2) previously recorded have been demolished. Of the surveyed resources, four (4) resources are eligible, potentially eligible or considered eligible for listing in the Virginia Landmarks Register (VLR) and National Register of Historic Places (NRHP).

D+A recommends a moderate impact to the potentially VLR/NRHP-eligible Farm (DHR ID #046-5089). The resource is within the project lease area and the historic integrity of setting and will be diminished by the project. The conceptual site plan includes minimization efforts such as excluding a portion of the landscape to the front (between it and the road) from the development footprint; setting back improvement areas in all directions from the avoidance areas; installing of a supplemental buffer of evergreen trees where vegetation does not currently exist; and extending the buffer around the perimeter of the avoidance area to screen improvements in the background as well. D+A included the conceptual site plan in the report. *DHR conditionally concurs* that there will be a moderate adverse impact to #046-5089 warranting mitigation. We will need to see a detailed planting plan as the condition to our concurrence. This planting plan should include renderings with mature growth superimposed onto key viewshed photos to and from #046-5089.

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The entire potentially VLR-NRHP-eligible Hobbs Store (DHR ID #046-5101) parcel is included within the project lease area. Solar arrays, infrastructure, and other improvements will be made within and around the resource boundary and the primary commercial building and surrounding building complex will be excluded from the development footprint. The conceptual site plan includes minimization efforts such as setting back improvements in all directions from the avoidance area; maintaining sight lines of the building complex from public ROW in each direction; maintaining existing vegetation throughout the building complex and to the east side; installing a supplemental buffer of evergreen trees where vegetation does not currently exist along the front of the field to the west of the property; and extending around the perimeter of the avoidance area to screen improvements in the background as well. D+A recommends a minimal impact and DHR does not concur. It is DHR's opinion that this will be a moderate adverse impact warranting mitigation. A majority of the resource boundary will be filled with arrays. If the opinion is that the current boundary for #046-5101 needs to be reassessed, which currently includes the fields and wooded property to the rear of the primary resource, then additional survey work will be needed to justify the redrawing of the boundary and submitted to DHR for review and comment. If at that time DHR concurs that the boundary redrawing is justified, we will reassess our opinion on impacts. We will need to see a detailed planting plan on #046-5101 to include renderings with mature growth superimposed onto key viewshed photos to and from #046-5101.

DHR concurs with D+A's recommendation that the Farm (DHR ID #046-5671) is potentially VLR/NRHP eligible. This resource is not located directly within the project area and a swamp and surrounding woodland extending into the project area and will be avoided and not cleared as part of the project. Therefore D+A recommends a minimal impact to #046-5671 and DHR concurs.

In sum, there will be moderate adverse impacts to the Farm (DHR ID #046-5089) and Hobbs Store (DHR ID #046-5101), which both warrant mitigation. Mitigation options should be discussed in consultation with DHR. Additionally, we need to see a detailed planting plans for both resources to include renderings with mature growth superimposed onto key viewshed photos to the resource from the project area and from the project area to the resource.

Please see the attached, updated table for impact and eligibility recommendations.

If you have any questions regarding these comments, please contact me at 804-482-8091 or via email, jennifer.bellville-marrion@dhr.virginia.gov.

Sincerely,



Jenny Bellville-Marrion, Project Review Archaeologist
Review and Compliance Division

c. David Dutton, D+A
Chris Egghart, DEQ

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Architecture Eligibility and Impact Recommendations

TABLE KEY:	Warrants Mitigation	Needs Attention	DHR does not concur	Not Surveyed due to 2020 Survey
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DHR #	Property Name / Address	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
046-0034	Mumford House, Windsor Boulevard	D+A: Demolished	Demolished	N/A	N/A
046-5057	Barn, West Blackwater Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5086	Hedgepeth House, 22156 Barrett Town Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5088	House, 23000 Barrett Town Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5089	Farm, 23255 Barrett Town Road	VDHR: Potentially Eligible/ D+A: Potentially Eligible	Potentially Eligible	Moderate	Moderate with the Condition of DHR-approved Planting Plan
046-5099	House, 6456 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5100	House, 6470 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5101	Hobbs Store, 6635 Windsor Boulevard	VDHR: Eligible/ D+A: Potentially Eligible	Potentially Eligible	Minimal	Moderate
046-5102	House, 7229 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5103	House, 7416 Ecella Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5104	House, 7279 Ecella Road	VDHR: Not Eligible (2004)/	Not Eligible	N/A	N/A

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DHR #	Property Name / Address	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
		D+A: Not Eligible			
046-5105	Commercial Building, 8189 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5107	Mumford Family Cemetery, Yellow Hammer Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5108	House, 7230 Ecella Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5109	House, 21539 Barrett Town Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5110	House, 7121 Ecella Road	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5111	House, 8027 Winston Drive	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5113	House, 9155 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5114	House, 9169 Windsor Boulevard	VDHR: Not Eligible (2004)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5277	House, 23258 Barrett Town Road	VDHR: Not Eligible (2007)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5293	House, 21512 Barrett Town Road	VDHR: Not Eligible (2009)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5294	House, 7132 Ecella Road	VDHR: Not Eligible (2009)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5307	Commercial Granary, 22000 Barrett Town Road	VDHR: Not Eligible (2009)/	Not Eligible	N/A	N/A

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DHR #	Property Name / Address	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
		D+A: Not Eligible			
046-5501	House, 9108 Cut Thru Road	VDHR: Not Eligible (2014)/ D+A: Not Eligible	Not Eligible	N/A	N/A
046-5664	House, 7346 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5668	House, 7297 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5669	House, 7246 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5670	House, 7230 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5671	Farm, 7431 Deerfield Drive	D+A: Potentially Eligible	Potentially Eligible	Minimal	Minimal
046-5672	House, 7296 Deerfield Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5673	House, 7268 Deerfield Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5674	House, 6250 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5675	House, 6278 Yellow Hammer Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5676	House, 8072 Winston Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5677	House, 9071 Cut Thru Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5678	House, 22038 Garrison Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5679	House, 22004 Garrison Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5680	House, 21296 Garrison Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5681	House, 21416 Garrison Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5682	House, 7334 Ecella Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5683	House, 7295 Ecella Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5684	House, 22150 Barrett Town Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5685	House, 22288 Barrett Town Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5686	House, 22310 Barrett Town Road	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5687	House, 22392 Barrett Town Road	D+A: Not Eligible	Not Eligible	N/A	N/A

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DHR #	Property Name / Address	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
046-5688	House, 21260 Leander Lane	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5689	House, 8115 Windsor Boulevard	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5690	House, 8089 Windsor Boulevard	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5691	House, 7570 Windsor Boulevard	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5692	Southern States, 9242 Windsor Boulevard	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5693	House, 9141 Windsor Boulevard	D+A: Not Eligible	Not Eligible	N/A	N/A
046-5694	House, 7523 Mill Creek Drive	D+A: Not Eligible	Not Eligible	N/A	N/A
091-5098	Norfolk & Western Railway	VDHR: Eligible/ D+A: Potentially Eligible	Eligible	Minimal	Minimal
046-0116	Farm, 8151 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0117	House, 8299 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0118	Bostick Cemetery	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0119	Morning Star Baptist Church, 8445 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0120	House, 8503 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0121	House, 9177 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-0132	Morning Star Baptist Cemetery, 8445 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5026	Farm, 7095 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5027	House, 7289 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5028	Chapel Grove Congregational Christian Church, 7366 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5029	House, 7443 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5055	House, 7058 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5056	House, 6483 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A

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Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

DHR #	Property Name / Address	D+A Eligibility	DHR Eligibility	D+A Impact	DHR Impact
046-5087	House, 7683 Mill Creek Drive	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5112	Farm, 23093 Antioch Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5154	Antioch Christian Church, 23011 Antioch Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5295	House, 8021 Mill Creek Drive	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5296	House, 23050 Antioch Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5298	House, 8464 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5569	House, 8430 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5570	House, 8412 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5571	House, 8404 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5572	House, 8394 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5573	House, 8384 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5574	House, 8376 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5575	Antioch Christian Cemetery, Antioch Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5576	House, 7076 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A
046-5577	House, 7524 Blackwater Road	VDHR: Not Eligible (2020)	VDHR: Not Eligible (2020)	N/A	N/A

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CARVER SOLAR - 71 MW

ECONOMIC & FISCAL CONTRIBUTION TO ISLE OF WIGHT COUNTY, VIRGINIA



Prepared for



OPEN ROAD
RENEWABLES



4201 DOMINION BOULEVARD, SUITE 114
GLEN ALLEN, VIRGINIA 23060
804-346-8446

APRIL 2022

MANGUMECONOMICS.COM

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 the data center industry in Virginia, home to the largest concentration of data centers in the world, and in five other states.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 15 GW of proposed solar, wind, battery storage, and hydro projects spanning Virginia and eleven other 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.
- **Education and Workforce:** The Mangum Team has worked with multiple post-secondary and secondary education institutions to quantify their economic contribution to their host communities as well as their impact on regional and statewide workforce needs.

The Project Team

Martina Arel, M.B.A.

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Carver Solar project would make to Isle of Wight County, Virginia. The primary findings from that assessment are as follows:

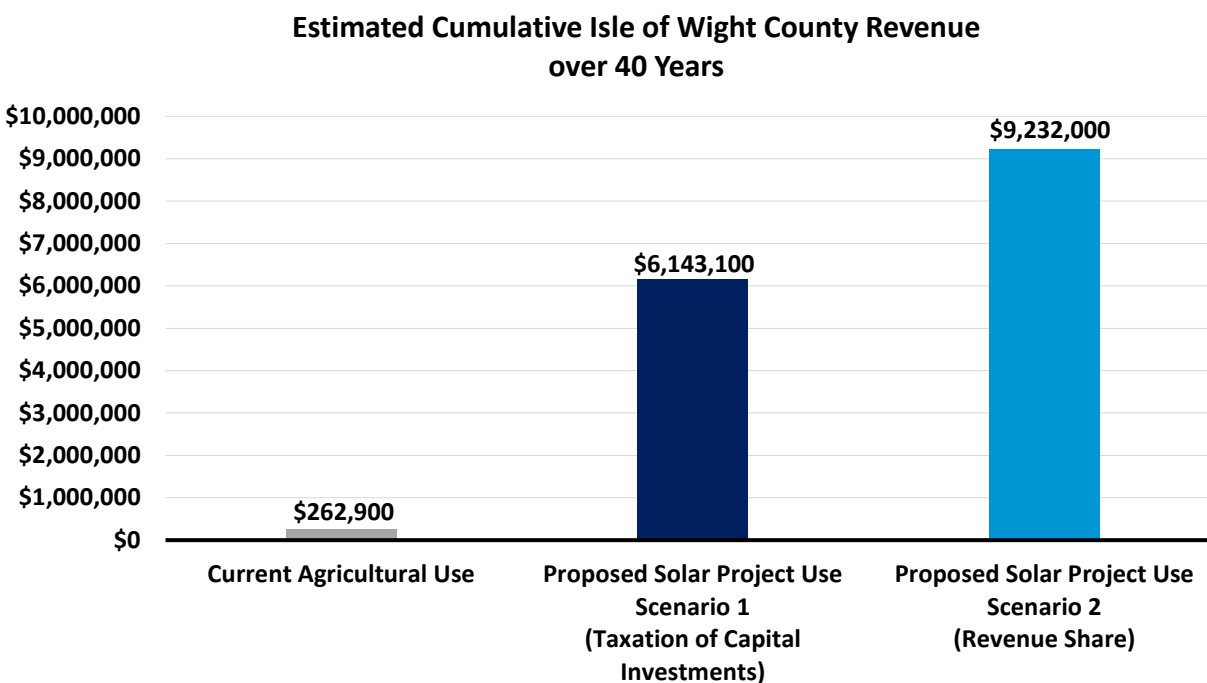
- 1) Carver Solar is a proposed 71-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located on both sides of Route 460 approximately 2 miles northwest of the Town of Windsor in Isle of Wight County, Virginia. The estimated actively used, fenced-in solar site would be approximately 596 acres of agricultural land and timberland.**
- 2) The proposed Carver Solar project would make a significant economic contribution to Isle of Wight County:**
 - The proposed Carver Solar project would provide an estimated one-time pulse of economic activity to Isle of Wight County during its construction phase supporting approximately:
 - 56 direct, indirect, and induced jobs.
 - \$2.6 million in associated labor income.
 - \$7.5 million in economic output.
 - The proposed Carver Solar project would provide an estimated annual economic impact to Isle of Wight County during its ongoing operational phase supporting approximately:
 - 2 direct, indirect, and induced jobs.
 - \$68,900 in associated labor income.
 - \$210,600 in economic output.
- 3) The proposed Carver Solar project would also make a significant fiscal contribution to Isle of Wight County. The proposed project would generate approximately:¹**
 - \$207,600 in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.
 - \$6.1 million in cumulative county revenue over the facility's anticipated 40-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
 - \$9.2 million in cumulative county revenue over the facility's anticipated 40-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with locally adopted revenue share ordinance that

¹ Estimated revenue does not include voluntary payments associated with a siting agreement, which is subject to negotiation between Open Road Renewables and Isle of Wight County.

are based on the project's generation capacity and include a 10 percent escalator every five years (Scenario 2).

4) The proposed Carver Solar project would have a significantly greater fiscal impact on Isle of Wight County than the property generates in its current agricultural use:

- The proposed Carver Solar project would generate approximately \$6.1 million (from taxation on capital equipment) or \$9.2 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 40-year operational life, as compared to approximately \$262,900 in cumulative county revenue in the property's current agricultural use – a difference of approximately \$5.9 million and \$9.0 million.



5) The proposed Carver Solar project would provide a boost to Isle of Wight County's construction sector:

- At 461 jobs, construction is Isle of Wight's sixth largest major industry sector.²
- Additionally, the construction sector posted the second largest job gain of any major industry sector in the county between the first quarter of 2020 and the first quarter of 2021 (a gain of 28 jobs).
- The proposed Carver Solar project could directly support approximately 47 jobs and \$2.2 million in labor income in Isle of Wight County's construction sector.

² Data Source: Bureau of Labor Statistics.

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The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

Introduction

This report assesses the economic and fiscal contribution that the proposed Carver Solar project would make to Isle of Wight County, Virginia. This report was commissioned by Open Road Renewables and produced by Mangum Economics.

The Project

Carver Solar is a proposed 71-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located on both sides of Route 460 approximately 2 miles northwest of the Town of Windsor in Isle of Wight County, Virginia. The estimated actively used, fenced-in solar site would be approximately 596 acres of agricultural land and timberland.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Carver Solar 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 Carver Solar project, the analysis employs a regional economic impact model called IMPLAN.³ 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 Carver 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

³ IMPLAN is produced by IMPLAN Group, LLC.

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 Carver Solar project). Second round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. Total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), and economic output (the total amount of economic activity that is created in the economy).

Construction Phase

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Carver Solar project would have on Isle of Wight County.

Assumptions

The analysis is based on the following assumptions:

- Total investment in the Carver Solar project is estimated to be approximately \$85.2 million.⁴
- Of that total:
 - Architecture, engineering, site preparation, and other construction and development costs are estimated to be approximately \$32.1 million.⁵
 - Capital equipment costs are estimated to be approximately \$53.1 million.⁶ It is anticipated that no capital equipment would be purchased from vendors in Isle of Wight County.⁷
- For ease of analysis, all construction expenditures are assumed to take place in a single year.

⁴ Data Source: Open Road Renewables.

⁵ Data Source: Open Road Renewables.

⁶ Data Source: Open Road Renewables.

⁷ Data Source: IMPLAN Group LLC.

Results

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 Carver Solar project would directly provide a one-time pulse supporting approximately: 1) 47 jobs, 2) \$2.2 million in labor income, and 3) \$6.2 million in economic output to Isle of Wight County.⁸

Taking into account the economic ripple effects that direct investment would generate, the total estimated one-time impact on Isle of Wight County would support approximately: 1) 56 jobs, 2) \$2.6 million in labor income, 3) \$7.5 million in economic output, and 4) \$207,600 in state and local tax revenue.

Table 1: Estimated One-Time Economic and Fiscal Impact on Isle of Wight County from Construction of the Carver Solar Project⁹

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	47	\$2,249,700	\$6,168,600
2nd Round Indirect and Induced Economic Activity	9	\$356,400	\$1,340,600
Total Economic Activity	56	\$2,606,100	\$7,509,200
Fiscal Impact			
State and Local Tax Revenue			\$207,600

**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 Carver Solar project would have on Isle of Wight County during its anticipated 40-year operational phase.

Assumptions

The analysis is based on the following assumptions:

- The Carver Solar project would spend approximately \$170,800 each year for maintenance and repair, vegetative control, and other operational expenditures.¹⁰
- The Carver Solar project would involve an investment of approximately \$85.2 million in capital equipment and improvements to the existing property.¹¹

⁸ 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.

⁹ 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.

¹⁰ Data Source: Open Road Renewables.

¹¹ Data Source: Open Road Renewables.

- The Carver Solar project would be situated on approximately 596 acres of fenced-in, leased and purchased land.¹²
- Only the actively used, fenced-in acreage would be removed from the land use program.
- The fenced-in acreage would be reappraised at \$15,000 per acre.¹³
- The initial interconnection request for Carver Solar was filed in the 1st Quarter of 2018.¹⁴
- The Carver Solar project's total generation capacity would be 71 MW AC.¹⁵
- The Carver Solar project would become operational in the third quarter of 2024.¹⁶

Results – 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 Carver Solar project would directly support approximately: 1) 1 job, 2) \$49,500 in labor income, and 3) \$125,600 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) 2 jobs, 2) \$68,900 in labor income, and 3) \$210,600 in economic output.

Table 2: Estimated Annual Economic Impact on Isle of Wight County from the Ongoing Operation of the Carver Solar Project

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	1	\$49,500	\$125,600
2nd Round Indirect and Induced Economic Activity	1	\$19,400	\$85,000
Total Economic Activity	2	\$68,900	\$210,600

**Totals may not sum due to rounding.*

Results – Fiscal Impact

This portion of the section quantifies the direct fiscal contribution that the proposed Carver Solar project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Carver Solar project would generate for Isle of Wight County over a 40-year period from the increased property assessments associated with reassessing the site as solar use

¹² Data Source: Open Road Renewables.

¹³ Data Source: Isle of Wight County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.

¹⁴ Data Source: Open Road Renewables.

¹⁵ Data Source: Open Road Renewables.

¹⁶ Data Source: Open Road Renewables.

property. Scenario 1 then describes the additional revenue Carver 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 3 details the increased property assessments associated with removing the affected acreage from the land use program and reassessing the 596-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately \$75,990 per year, for a cumulative total of approximately \$3.0 million over the project's anticipated 40-year operational life expectancy.¹⁷ Adding one-time rollback taxes of approximately \$54,052 increases that cumulative total to approximately \$3.1 million. In contrast, the property currently generates approximately \$6,573 per year in real estate tax revenue for the county, for a cumulative total of approximately \$262,931 over 40 years.¹⁸

Table 3: Estimated County Revenue Generated by the Proposed Carver Solar Project over 40 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use ¹⁹	\$8,940,000
Isle of Wight County Real Estate Tax Rate	0.0085
Annual County Real Estate Tax – Solar Use	\$75,990
Cumulative Revenue over 40 Years	\$3,039,600
One-time Rollback Taxes²⁰	\$54,052
Cumulative Revenue over 40 Years	\$3,093,652

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment

Table 4 separately details the additional annual revenue that the proposed Carver Solar project would generate for Isle of Wight County over a 40-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 §58.1-3660²¹, 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

¹⁷ Assumes property will be reassessed at \$15,000 per acre once it is under solar use.

¹⁸ Derived from Isle of Wight County's Real Estate Assessment database. Excludes value of existing structures.

¹⁹ Calculated as 596 acres times \$15,000.

²⁰ 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 10 percent simple interest. Does not account for changes in assessment values.

²¹ 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) Isle of Wight County's real property tax rate of \$0.85 per \$100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Carver Solar project would be approximately \$120,501 in the project's first year of operation, with that figure projected to decline to approximately \$13,389 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 \$3.0 million.

Table 4: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years

Year	Total Capital Investment Subject to Exemption ²²	Less Exemption ²³	Capital Investment Less Exemption ²⁴	Depreciation ²⁵	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment ²⁶
1	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
2	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
3	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
4	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
5	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
6	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
7	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
8	\$85,200,000	80%	\$15,751,776	90.0%	\$14,176,598	\$120,501
9	\$85,200,000	80%	\$15,751,776	89.7%	\$14,127,768	\$120,086
10	\$85,200,000	80%	\$15,751,776	88.2%	\$13,888,341	\$118,051
11	\$85,200,000	80%	\$15,751,776	86.6%	\$13,634,737	\$115,895
12	\$85,200,000	80%	\$15,751,776	84.9%	\$13,366,957	\$113,619
13	\$85,200,000	80%	\$15,751,776	83.1%	\$13,083,425	\$111,209
14	\$85,200,000	80%	\$15,751,776	81.1%	\$12,780,991	\$108,638
15	\$85,200,000	80%	\$15,751,776	79.1%	\$12,461,230	\$105,920
16	\$85,200,000	80%	\$15,751,776	77.0%	\$12,122,567	\$103,042
17	\$85,200,000	80%	\$15,751,776	74.7%	\$11,763,426	\$99,989
18	\$85,200,000	80%	\$15,751,776	72.3%	\$11,383,809	\$96,762
19	\$85,200,000	80%	\$15,751,776	69.7%	\$10,978,988	\$93,321
20	\$85,200,000	80%	\$15,751,776	67.0%	\$10,552,115	\$89,693

²² Data Source: Open Road Renewables

²³ Pursuant to Virginia Code §58.1-3660, solar facilities over 20MW are subject to an 80 percent exemption from local property taxes if the interconnection request was filed between January 1, 2015 and June 30, 2018.

²⁴ Accounts for the State Corporation Commission's utility assessment ratio for taxation of public utilities in Isle of Wight County.

²⁵ Data Source: State Corporation Commission guidelines.

²⁶ Calculated pursuant to Virginia Code §58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Isle of Wight County's real property tax rate of \$0.85 per \$100 of assessed value.

Table 4: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years

Year	Total Capital Investment Subject to Exemption ²²	Less Exemption ²³	Capital Investment Less Exemption ²⁴	Depreciation ²⁵	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment ²⁶
21	\$85,200,000	80%	\$15,751,776	64.1%	\$10,098,464	\$85,837
22	\$85,200,000	80%	\$15,751,776	61.1%	\$9,618,034	\$81,753
23	\$85,200,000	80%	\$15,751,776	57.8%	\$9,109,252	\$77,429
24	\$85,200,000	80%	\$15,751,776	54.4%	\$8,568,966	\$72,836
25	\$85,200,000	80%	\$15,751,776	50.8%	\$7,997,177	\$67,976
26	\$85,200,000	80%	\$15,751,776	46.9%	\$7,389,158	\$62,808
27	\$85,200,000	80%	\$15,751,776	42.8%	\$6,746,486	\$57,345
28	\$85,200,000	80%	\$15,751,776	38.5%	\$6,064,434	\$51,548
29	\$85,200,000	80%	\$15,751,776	33.9%	\$5,343,002	\$45,416
30	\$85,200,000	80%	\$15,751,776	29.1%	\$4,575,891	\$38,895
31	\$85,200,000	80%	\$15,751,776	23.9%	\$3,764,674	\$32,000
32	\$85,200,000	80%	\$15,751,776	18.4%	\$2,904,627	\$24,689
33	\$85,200,000	80%	\$15,751,776	12.7%	\$1,992,600	\$16,937
34	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
35	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
36	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
37	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
38	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
39	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
40	\$85,200,000	80%	\$15,751,776	10.0%	\$1,575,178	\$13,389
CUMULATIVE TOTAL						\$3,049,427

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 Carver Solar project would make to Isle of Wight County over its 40-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately \$6.1 million.

Table 5: Estimated Cumulative County Revenue from the Proposed Carver Solar Project over 40 Years under Scenario 1

County Real Estate Tax	\$3,093,652
County Revenue from Taxation of Capital Investments	\$3,049,427
TOTAL Cumulative Revenue over 40 Years²⁷	\$6,143,079

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Carver Solar 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 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 between Carver Solar and Isle of Wight County including the 10 percent escalator. Based on a total generation capacity of 71 MW AC and an assumed commissioning date in the third quarter of 2024, a revenue share ordinance would generate approximately \$6.1 million over the anticipated 40-year operational life of the project.

Table 6: Estimated County Revenue Generated from a Revenue Share Ordinance over 40 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	71	\$1,400	\$99,400
2	71	\$1,540	\$109,340
3	71	\$1,540	\$109,340
4	71	\$1,540	\$109,340
5	71	\$1,540	\$109,340
6	71	\$1,540	\$109,340
7	71	\$1,694	\$120,274

²⁷ Estimated revenue does not include voluntary payments associated with a siting agreement, which is subject to negotiation between Open Road Renewables and Isle of Wight County.

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
8	71	\$1,694	\$120,274
9	71	\$1,694	\$120,274
10	71	\$1,694	\$120,274
11	71	\$1,694	\$120,274
12	71	\$1,863	\$132,301
13	71	\$1,863	\$132,301
14	71	\$1,863	\$132,301
15	71	\$1,863	\$132,301
16	71	\$1,863	\$132,301
17	71	\$2,050	\$145,532
18	71	\$2,050	\$145,532
19	71	\$2,050	\$145,532
20	71	\$2,050	\$145,532
21	71	\$2,050	\$145,532
22	71	\$2,255	\$160,085
23	71	\$2,255	\$160,085
24	71	\$2,255	\$160,085
25	71	\$2,255	\$160,085
26	71	\$2,255	\$160,085
27	71	\$2,480	\$176,093
28	71	\$2,480	\$176,093
29	71	\$2,480	\$176,093
30	71	\$2,480	\$176,093
31	71	\$2,480	\$176,093
32	71	\$2,728	\$193,702
33	71	\$2,728	\$193,702
34	71	\$2,728	\$193,702
35	71	\$2,728	\$193,702
36	71	\$2,728	\$193,702
37	71	\$3,001	\$213,073
38	71	\$3,001	\$213,073
39	71	\$3,001	\$213,073
40	71	\$3,001	\$213,073
Cumulative Total			\$6,138,327

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 Carver Solar project would make to Isle of Wight County over its 40-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately \$9.2 million.

Table 7: Estimated Cumulative County Revenue from the Proposed Carver Solar Project over 40 Years under Scenario 2

County Real Estate Tax	\$3,093,652
County Revenue from Revenue Share Ordinance	\$6,138,327
TOTAL Cumulative Revenue over 40 Years²⁸	\$9,231,979

Current Agricultural Use

This section provides a benchmark for the previous estimates of the economic contribution that the proposed Carver Solar project would make to Isle of Wight County by estimating the economic and fiscal contribution that the site makes to the county in its current agricultural use.

Assumptions

The analysis is based on the following assumptions:

- The proposed Carver Solar project would be situated on an approximately 596-acre tract of land, of which about half is timberland and the other half is used for the agricultural production of corn, soybeans, cotton, and peanuts.²⁹
- The current assessment value of the affected acreage is approximately \$773,325.³⁰

Results – Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 8, in an agricultural and timber production use, the proposed Carver Solar project site directly supports approximately: 1) 2 jobs, 2) \$30,400 in labor income, and 3) \$167,600 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) 3 jobs, 2) \$58,400 in labor income, and 3) \$236,600 in economic output.

²⁸ Estimated revenue does not include voluntary payments associated with a siting agreement, which is subject to negotiation between Open Road Renewables and Isle of Wight County.

²⁹ Data Source: Open Road Renewables.

³⁰ Data Source: Derived from Isle of Wight County's Real Estate Assessment database. Excludes value of existing structures as they are assumed to be outside of the project footprint.

Table 8: Total Estimated Annual Economic Impact of the Carver Solar Project Site on Isle of Wight County – Current Agricultural Use

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	2	\$30,400	\$167,600
2nd Round Indirect and Induced Economic Activity	1	\$28,000	\$69,000
Total Economic Activity	3	\$58,400	\$236,600

Results – Fiscal Impact

Table 9 details the estimated tax revenue that the proposed Carver Solar 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 \$6,573 per year, for a cumulative total of approximately \$262,931 over 40 years.

Table 9: Estimated County Revenue Generated by the Proposed Carver Solar Project Site over 40 Years from Real Estate Taxes – Current Agricultural Use

Estimated Assessed Value of Property – Agricultural Use ³¹	\$773,325
Isle of Wight County Current Real Estate Tax Rate	0.0085
Estimated Annual County Real Estate Tax – Agricultural Use	\$6,573
Total Cumulative Revenue over 40 years	\$262,931

**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.

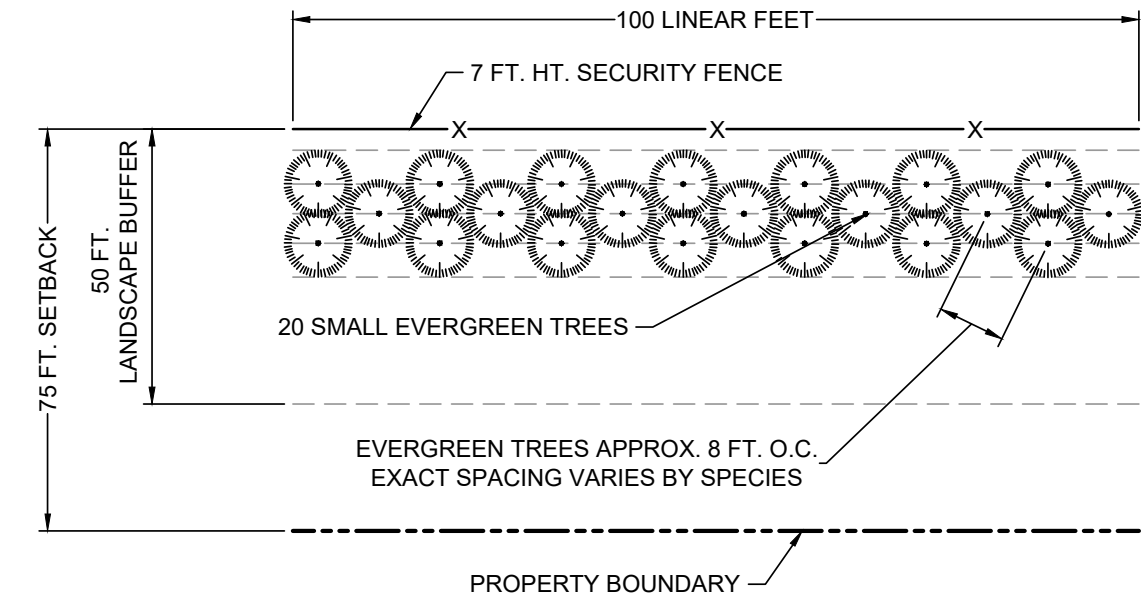
³¹ Data Source: Derived from Isle of Wight County's Real Estate Assessment database. Excludes value of existing structures as they are assumed to be outside of the project footprint.

PROJECT	ACRES IN PANELS	LOCATION	% OF TOTAL FARMLAND	TOTAL MW	APPROVAL DATE
Woodland	180 +/-	Longview	0.2%	20	2015
Solidago	170 +/-	Redhouse	0.2%	20	2018
Ho-Fel	330 +/-	Lees Mill	0.4%	55	2019
Windsor PV1	630 +/-	Windsor	0.8%	85	2019; amended in 2021
Cavalier	450	Hardy	0.6%	240	2021
Nuby Run	20	Orbit	0.02%	2	2022
Carver (Proposed)	637	Windsor	0.8%	71	In Review
TOTAL	2,417 +/-		3.02%	493	

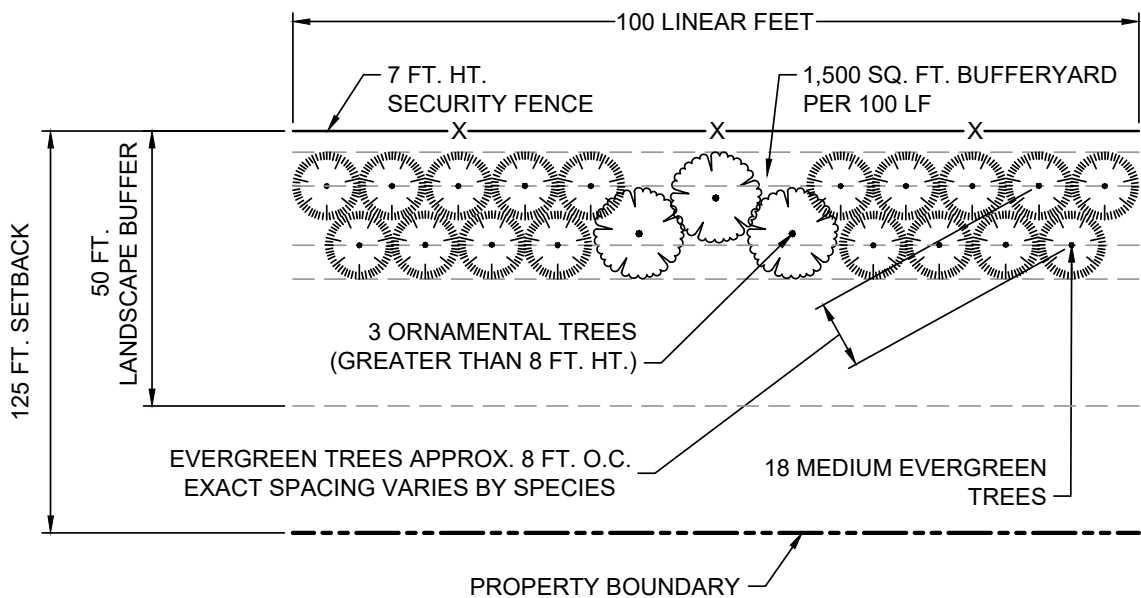
CARVER SOLAR FACILITY LANDSCAPING

FRONTAGE ZONE LANDSCAPING

APPLY TO PUBLIC ROADWAYS WITH ROW GREATER OR LESSER THAN 50 FEET



BUFFER ZONE LANDSCAPING - ABUTTING RESIDENTIAL PARCELS



LANDSCAPE POINTS BY BUFFER TYPE

FRONTAGE ZONE

LANDSCAPE POINTS PER 100 LINEAR FEET

REQUIRED: 75

PROVIDED: 101

7 PTS. PER ORNAMENTAL TREE (<8 FT. HT.) × 3 = 21

10 PTS. PER SMALL EVERGREEN TREES (<7 FT. HT.) × 8 = 80

ABUTTING RESIDENTIAL PARCELS

LANDSCAPE POINTS PER 500 SQUARE FEET

REQUIRED: 120

PROVIDED: 132 (396 PER 100 LF OR 1,500 SF)

12 PTS. PER ORNAMENTAL TREE (>8 FT. HT.) × 3 = 36

20 PTS. PER MEDIUM EVERGREEN TREES (7-10 FT. HT.) × 18 = 360

CONCEPT PLANT LIST: FRONTAGE ZONE

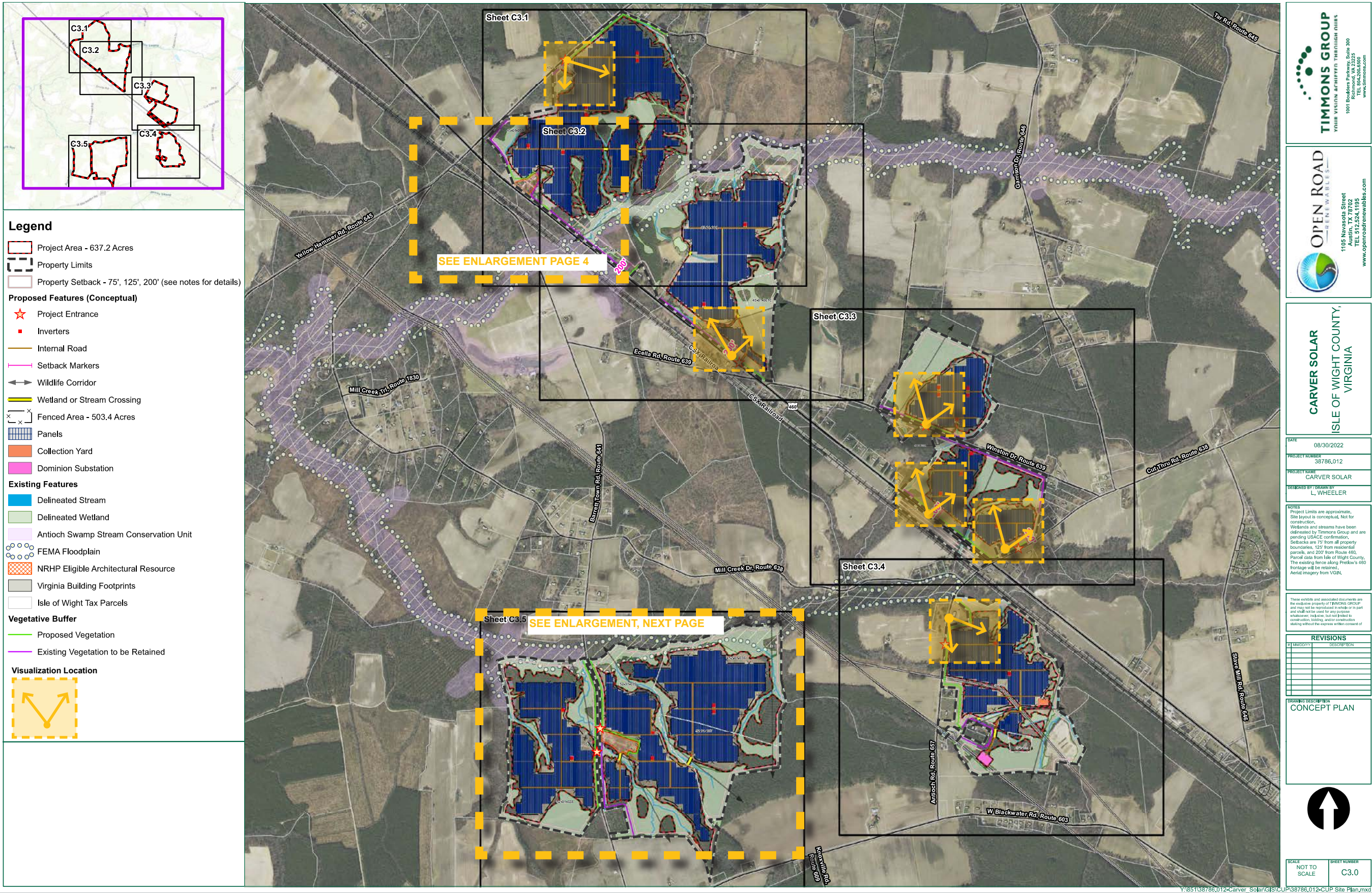
BOTANICAL NAME	COMMON NAME	MINIMUM HEIGHT AT PLANTING	TYPICAL HEIGHT AT MATURITY
EVERGREEN TREES			
ILEX X 'CONAF' OAKLEAF	RED HOLLY/OAKLEAF HOLLY	4 FT.	12-15 FT.
ILEX X MARY NELL	MARY NELL HOLLY	4 FT.	12-15 FT.
JUNIPERUS VIRGINIANA 'BRODIE'	EASTERN RED CEDAR	4 FT.	10-15 FT.
MYRICA CERIFERA	SOUTHERN WAX MRYTLE	4 FT.	10-15 FT.
THUJA OCCIDENTALIS 'TECHNY'	EASTERN ARBORVITAE	4 FT.	10-15 FT.

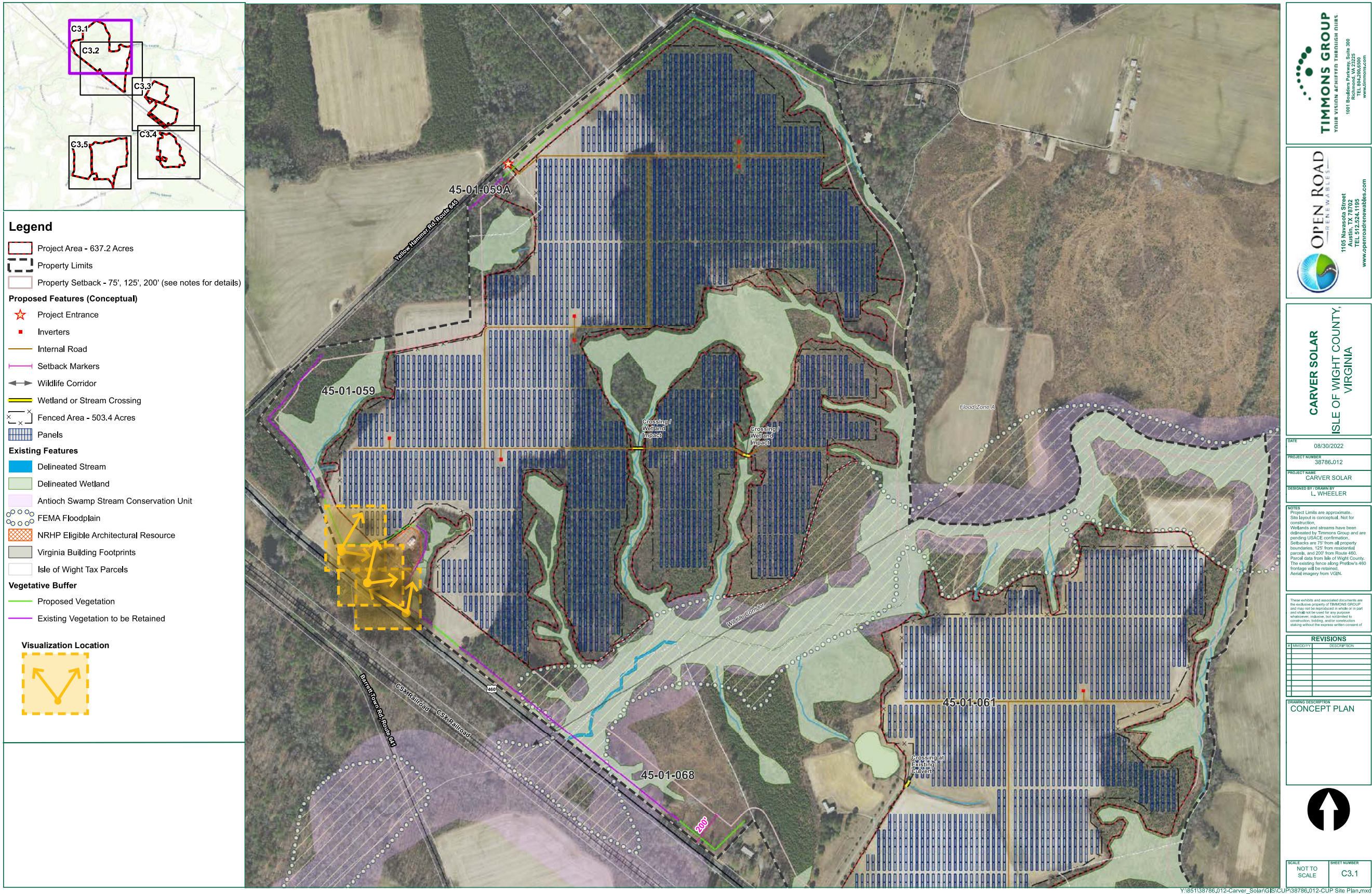
CONCEPT PLANT LIST: BUFFER ZONE

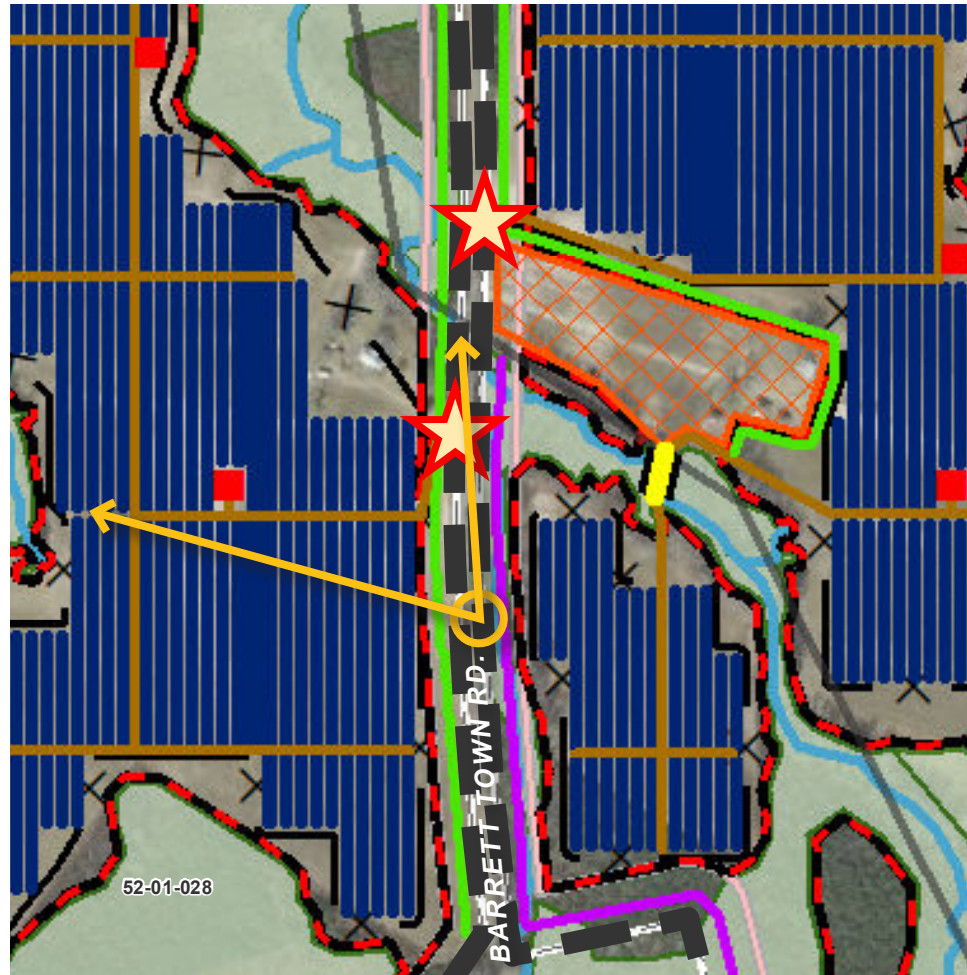
BOTANICAL NAME	COMMON NAME	MINIMUM HEIGHT AT PLANTING	TYPICAL HEIGHT AT MATURITY
EVERGREEN TREES			
ILEX X 'CONAF' OAKLEAF	RED HOLLY/OAKLEAF HOLLY	4 FT.	12-15 FT.
ILEX X MARY NELL	MARY NELL HOLLY	4 FT.	12-15 FT.
JUNIPERUS VIRGINIANA 'BRODIE'	EASTERN RED CEDAR	4 FT.	10-15 FT.
MYRICA CERIFERA	SOUTHERN WAX MRYTLE	4 FT.	10-15 FT.
THUJA OCCIDENTALIS 'TECHNY'	EASTERN ARBORVITAE	4 FT.	10-15 FT.
ORNAMENTAL TREES			
AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	4 FT.	15-20 FT.
CHIONANTHUS VIRGINICA	FRINGETREE	4 FT.	12-20 FT.
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	4 FT.	15-20 FT.

CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – PLANTING SCHEMATICS AND CONCEPT PLANT LIST

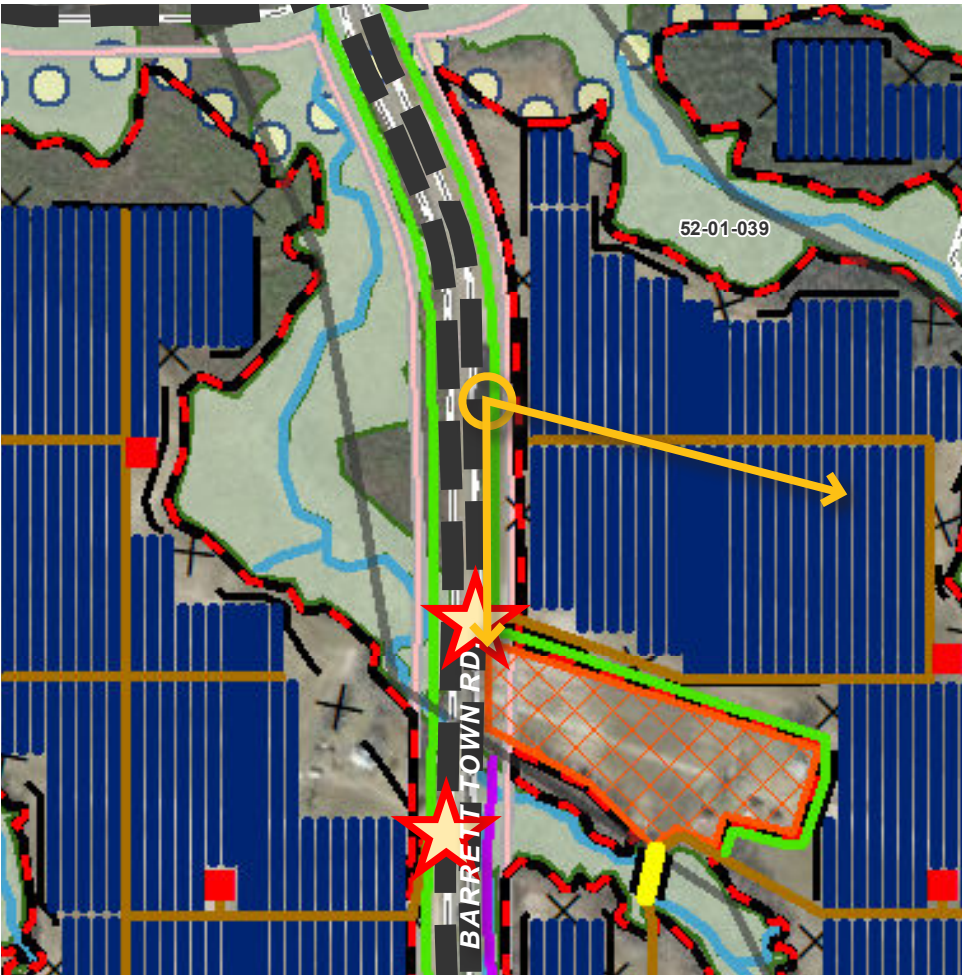






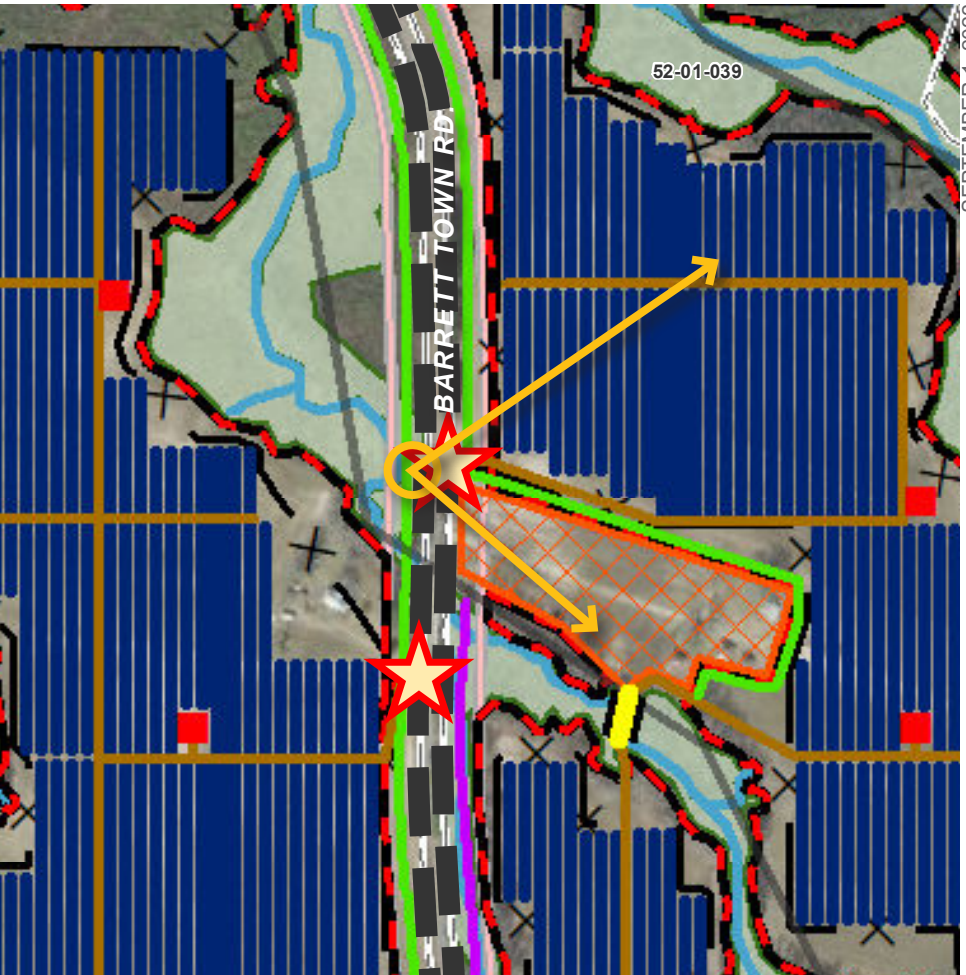
BARRET TOWN RD.
VIEW A

BUFFER ZONE
LANDSCAPING:
ABUTTING
RESIDENTIAL
PARCELS



BARRET TOWN RD.
VIEW B

BUFFER ZONE
LANDSCAPING:
ABUTTING
RESIDENTIAL
PARCELS



BARRET TOWN RD.
VIEW C

BUFFER ZONE
LANDSCAPING:
ABUTTING
RESIDENTIAL
PARCELS



PHOTO LOCATION
& VIEWSHED

Legend

- Project Study Limits - 937.3 Acres
- Property Setback - 75' & 125' from Residential Parcels
- Project Entrance
- Existing Substation
- Existing Transmission Line
- Transmission Line Easement
- Fence
- Panels
- Stream

- Wetland
- FEMA Floodplain
- Isle of Wight Tax Parcels

Vegetative Buffer

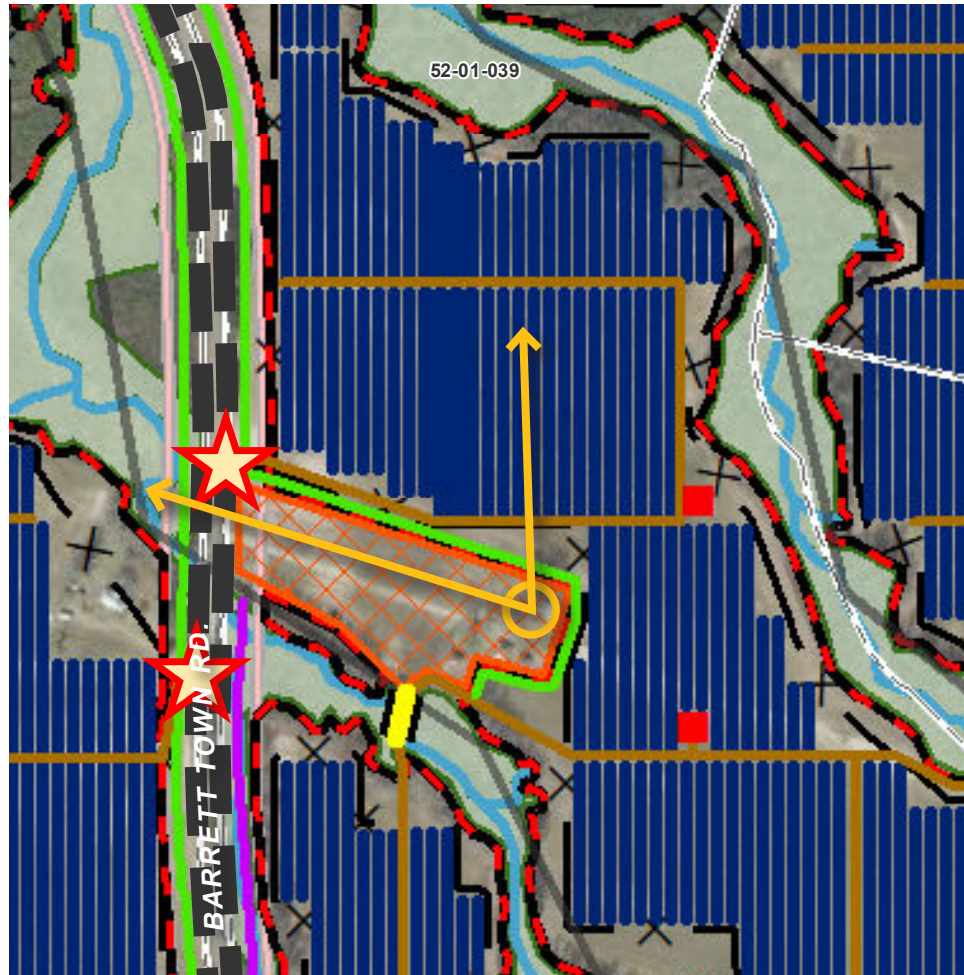
- Proposed Vegetation
- Existing Vegetation to be Retained

5' Topographic Contours

- Major
- Minor

CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – PHOTO LOCATIONS AND VIEWSHEDS



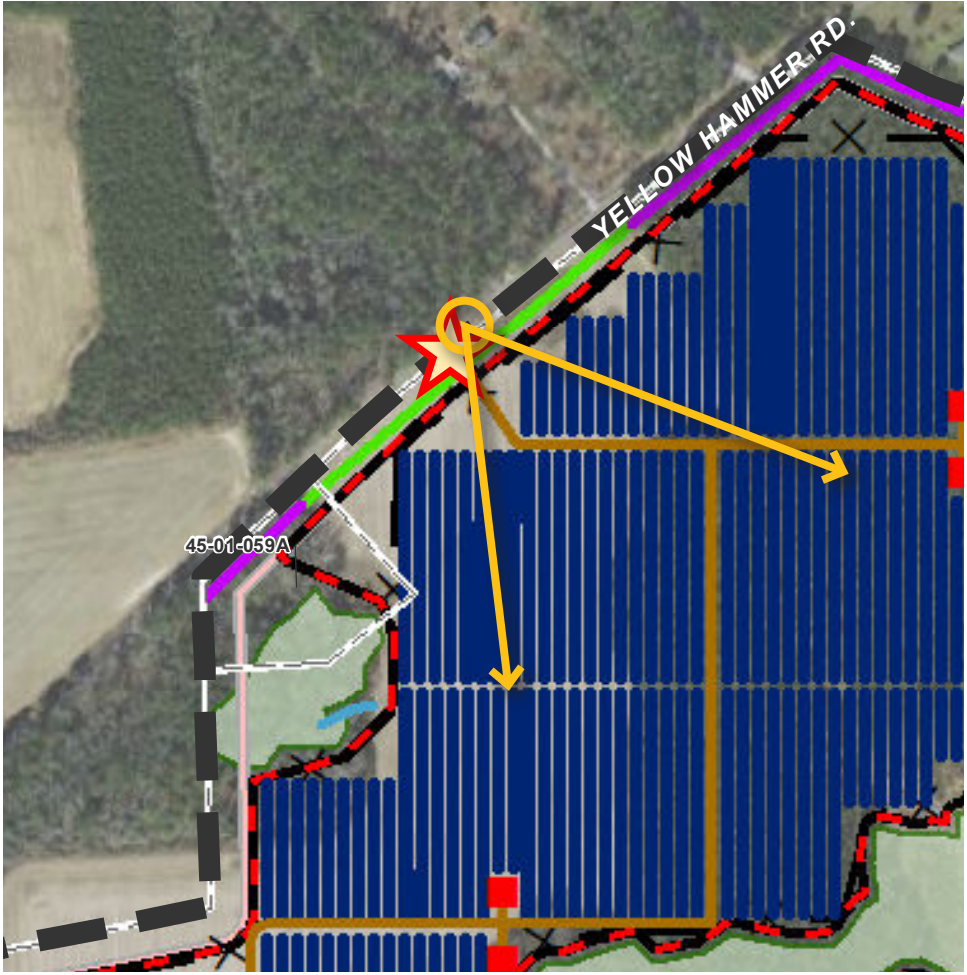
**BARRET TOWN RD.
VIEW D**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



ANTIOCH RD.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



YELLOW HAMMER RD.

BUFFER ZONE
LANDSCAPING: *ABUTTING
RESIDENTIAL
PARCELS*



PHOTO LOCATION
& VIEWSHED

Legend

- Project Study Limits - 937.3 Acres
- Property Setback - 75' & 125' from Residential Parcels
- Project Entrance
- Existing Substation
- Existing Transmission Line
- Transmission Line Easement
- Fence
- Panels
- Stream

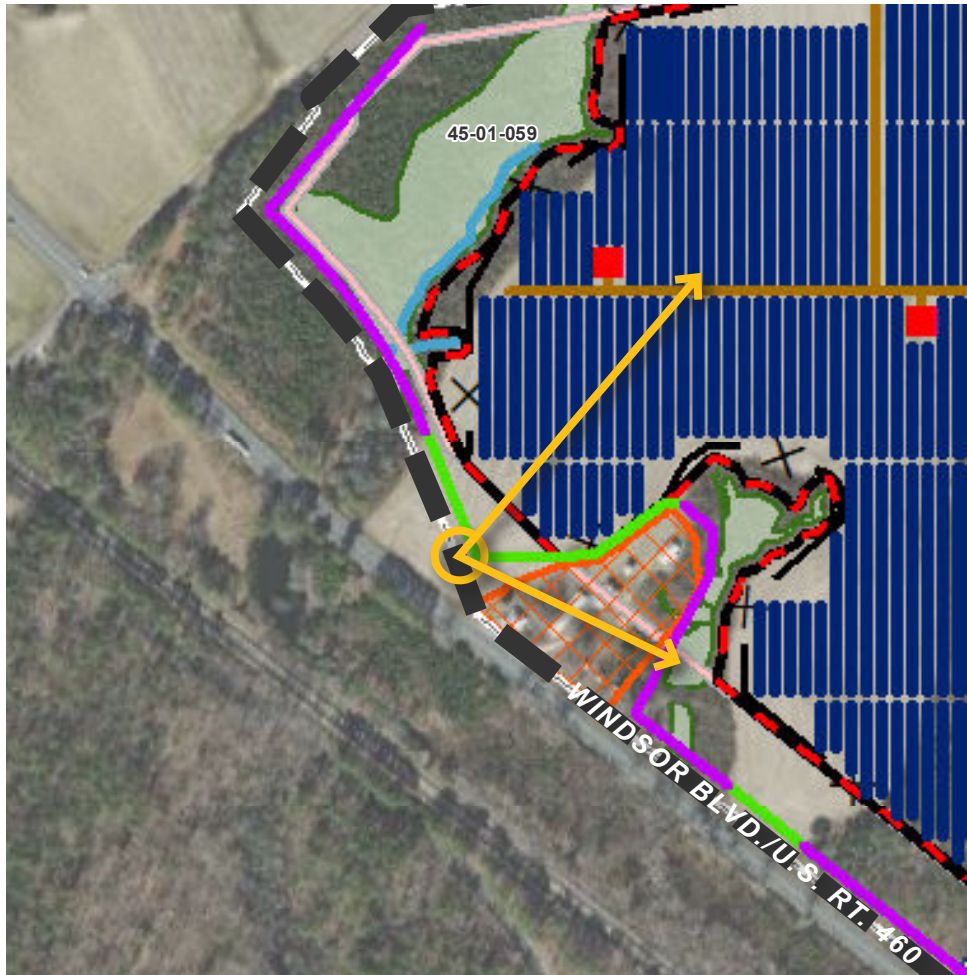
- Wetland
- FEMA Floodplain
- Isle of Wight Tax Parcels

Vegetative Buffer

- Proposed Vegetation
- Existing Vegetation to be Retained

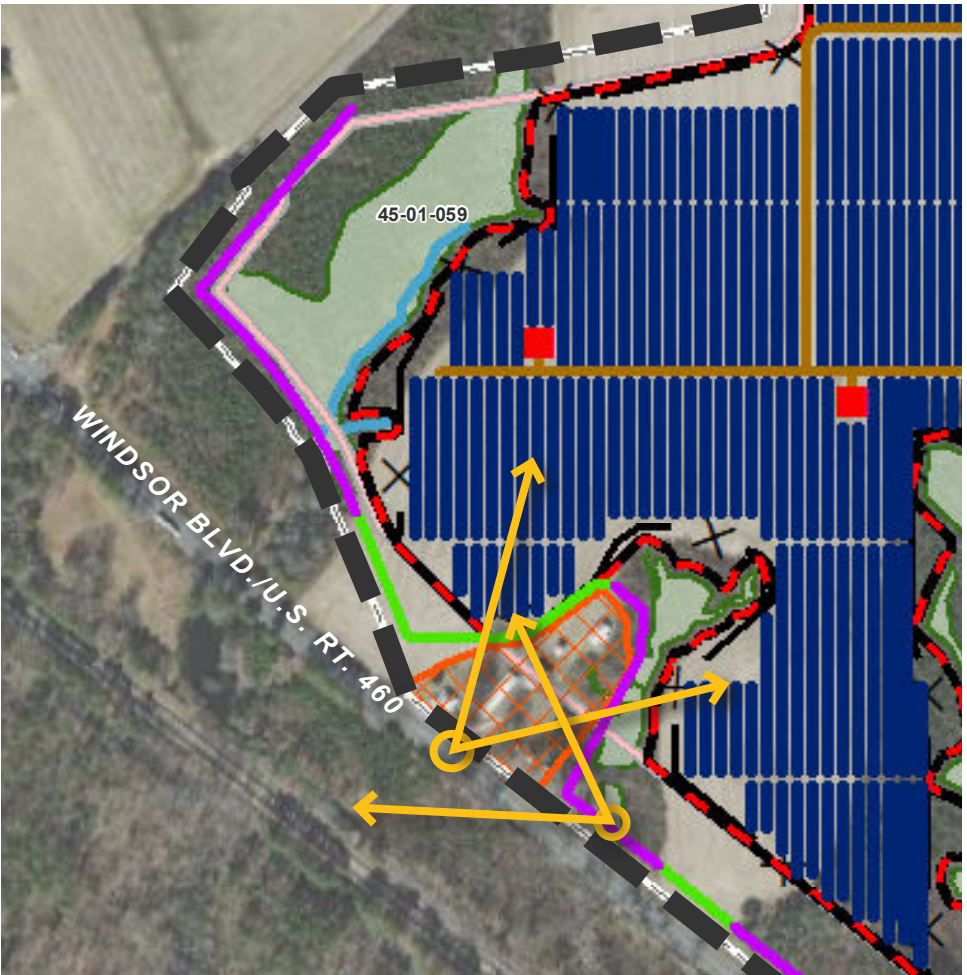
5' Topographic Contours

- Major
- Minor



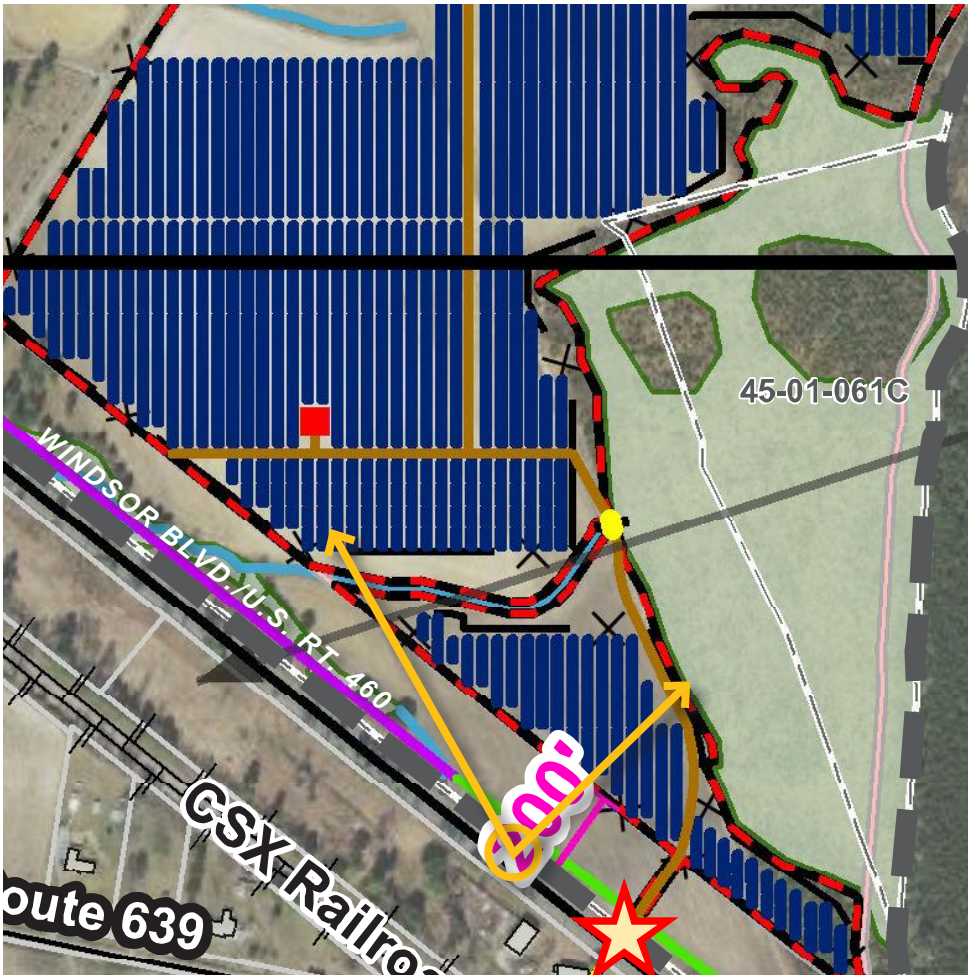
WINDSOR BLVD
VIEW A

FRONTAGE ZONE
LANDSCAPING



WINDSOR BLVD
VIEWS B AND C

NO LANDSCAPING
PANELS NOT VISIBLE



WINDSOR BLVD
VIEW D

FRONTAGE ZONE
LANDSCAPING



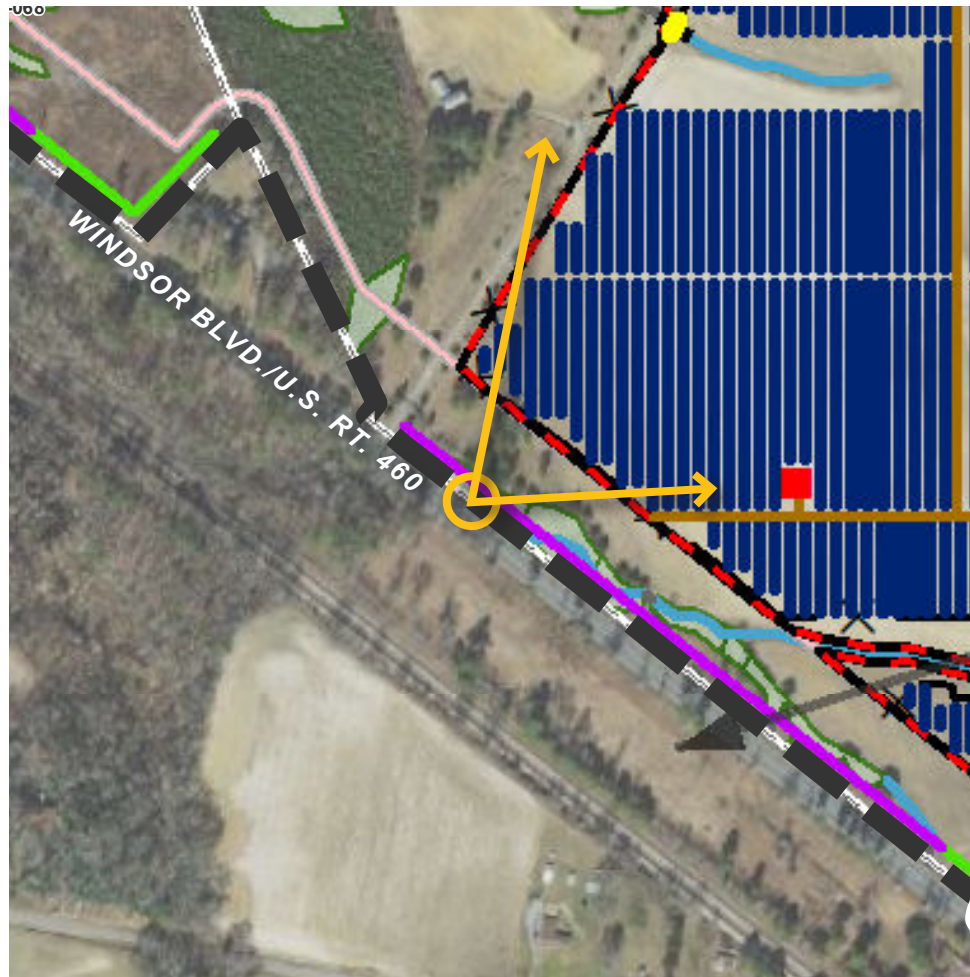
PHOTO LOCATION
& VIEWSHED

Legend

- Project Study Limits - 937.3 Acres
- Property Setback - 75' & 125' from Residential Parcels
- ★ Project Entrance
- Existing Substation
- Existing Transmission Line
- Transmission Line Easement
- Fence
- Panels
- Stream
- Wetland
- FEMA Floodplain
- Isle of Wight Tax Parcels
- Vegetative Buffer**
 - Proposed Vegetation
 - Existing Vegetation to be Retained
- 5' Topographic Contours**
 - Major
 - Minor

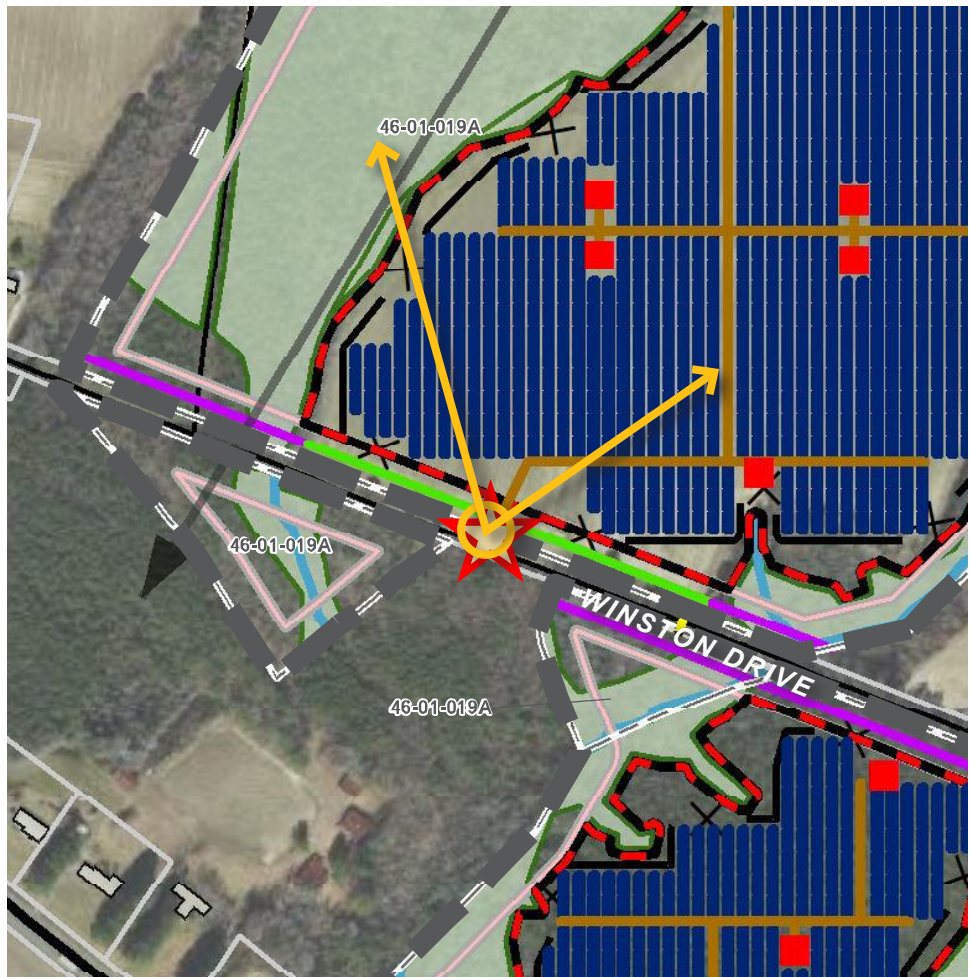
CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – PHOTO LOCATIONS AND VIEWSHEDS



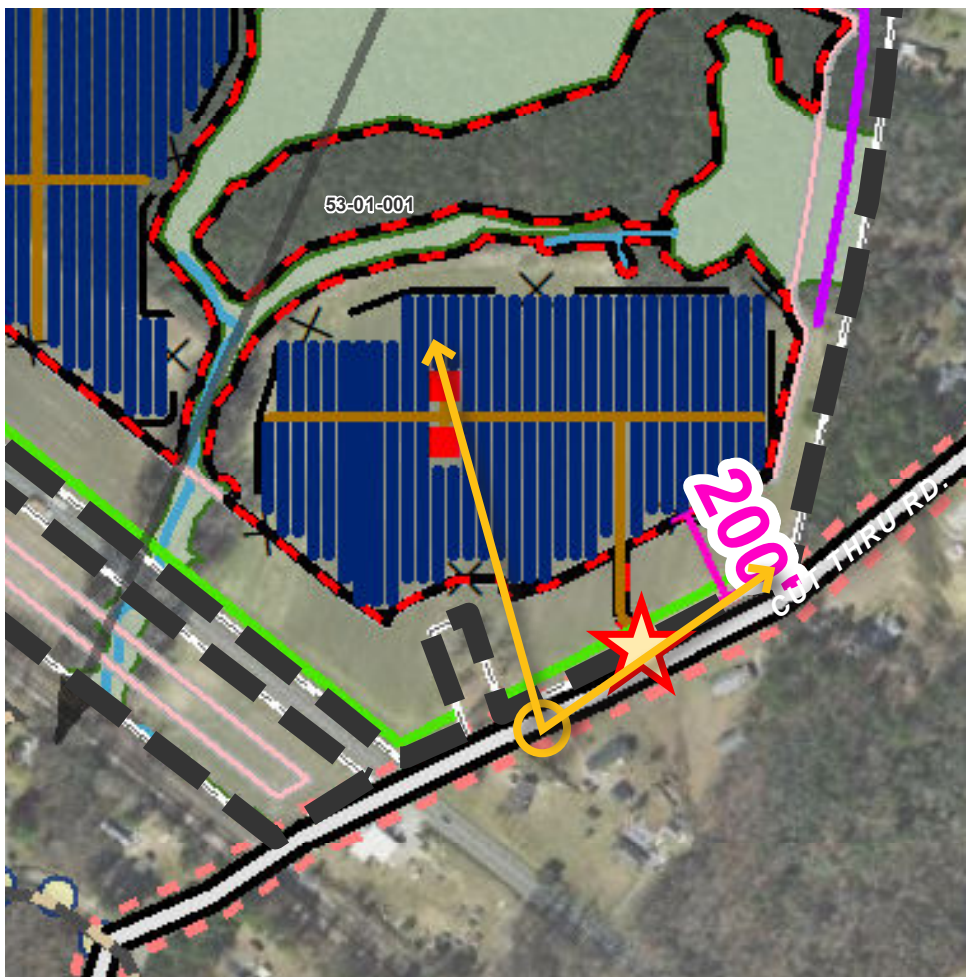
WINDSOR BLVD VIEW E

FRONTAGE ZONE
LANDSCAPING



WINSTON DR.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



CUT THRU RD.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



PHOTO LOCATION
& VIEWSHED

- Legend**
- Project Study Limits - 937.3 Acres
 - Property Setback - 75' & 125' from Residential Parcels
 - Project Entrance
 - Existing Substation
 - Existing Transmission Line
 - Transmission Line Easement
 - Fence
 - Panels
 - Stream
 - Wetland
 - FEMA Floodplain
 - Isle of Wight Tax Parcels
 - Vegetative Buffer**
 - Proposed Vegetation
 - Existing Vegetation to be Retained
 - 5' Topographic Contours**
 - Major
 - Minor

CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – PHOTO LOCATIONS AND VIEWSHEDS

**BARRET TOWN RD.
VIEW A**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

SEPTEMBER 1, 2022

**BARRET TOWN RD.
VIEW B**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

**BARRET TOWN RD.
VIEW C**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

**BARRET TOWN RD.
VIEW D**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

SEPTEMBER 1, 2022

ANTIOCH RD.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

**YELLOW HAMMER
RD.**

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – BEFORE AND AFTER BUFFER INSTALLATION

WINDSOR BLVD.
VIEW A
FRONTAGE ZONE
LANDSCAPING



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

WINDSOR BLVD.
VIEWS B AND C
NO LANDSCAPING
PANELS NOT VISIBLE



EXISTING VIEW A



EXISTING VIEW B

WINDSOR BLVD.
VIEW D
FRONTAGE ZONE
LANDSCAPING



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

CARVER SOLAR FACILITY
LANDSCAPE BUFFER VISUALIZATION – BEFORE AND AFTER BUFFER INSTALLATION

WINDSOR BLVD
VIEW E

FRONTAGE ZONE
LANDSCAPING



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

WINSTON DR.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

CUT THRU RD.

BUFFER ZONE
LANDSCAPING:
*ABUTTING
RESIDENTIAL
PARCELS*



EXISTING



AT PLANTING



AT MATURITY (10+ YEARS)

CARVER SOLAR FACILITY

LANDSCAPE BUFFER VISUALIZATION – BEFORE AND AFTER BUFFER INSTALLATION

RESOLUTION NUMBER PC-22-15

**ISLE OF WIGHT COUNTY PLANNING COMMISSION
A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION
TO THE BOARD OF SUPERVISORS RELATING TO CONDITIONAL USE PERMIT
REQUEST CUP-06-22 TO ALLOW A MAJOR UTILITY SERVICE, SPECIFICALLY A 71 MW
UTILITY SCALE SOLAR ENERGY GENERATION FACILITY AND SUBSTATION, ON 637
ACRES OF PROPERTY WITH TAX MAP PARCELS 52-01-028, 52-01-034, 52-01-035, 52-01-036,
45-01-059, 45-01-059A, 45-01-061, 45-01-061B, 45-01-061C, 45-01-065, 45-01-068, 52-01-037, 52-01-
039, 53-01-001, 53-01-003, 53-01-003M, 53-01-006, 53-01-022, 53-01-022E, AND 46-01-019A**

WHEREAS, Carver Solar I, LLC, applicant, and Carter R. Clements, Joyce G. Clements, Travis W. Williams, Lewis Clarence Lee Trust (Clarence Lee Lewis, Trustee), Joshua Pretlow, Jr., Garrison Farm Solar LLC, Delman Lew Carr Trust (Delman Lew Carr, Trustee), Chester G. Carr Trust (Glenn and Susan S. Carr, Trustees), Helene Johnson Hobbs, Joest Properties, LLC, Scott L. Thomason, Carla A. Thomason, James K. Edwards, Marsha F. Edwards, Cobb Land Limited Partnership, Troy L. Robinson, and Margaret F. Robinson, property owners, has requested approval of a conditional use permit for a 71 MW utility-scale solar energy facility and substation on 637 acres located on tax parcel numbers 52-01-028, 52-01-034, 52-01-035, 52-01-036, 45-01-059, 45-01-059A, 45-01-061, 45-01-061B, 45-01-061C, 45-01-065, 45-01-068, 52-01-037, 52-01-039, 53-01-001, 53-01-003, 53-01-003M, 53-01-006, 53-01-022, 53-01-022E, and 46-01-019A situated in Isle of Wight County; and

WHEREAS, the specific request is to permit a major utility service, specifically a utility-scale solar energy generation facility and substation, in accordance with sections 1-1017 and 5-5003 of the Zoning Ordinance;

WHEREAS the procedural requirements for the consideration of this request by the Planning Commission have been met.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Isle of Wight County, that:

Section 1. Findings.

_____ A. The Isle of Wight County Planning Commission finds that the proposed amendment to conditional zoning is reasonable and warranted due to a change in circumstances affecting the property and has considered the following factors and finds that the proposed rezoning does not conflict with:

1. the existing use and character of property within the County;
2. the Comprehensive Plan;
3. the suitability of the property for various uses;
4. the trends of growth or change;
5. the current or future requirements of the community as to land for various purposes as determined by population and economic studies and other studies;

6. the transportation requirements of the community;
7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;
8. the conservation of natural resources;
9. the preservation of floodplains;
10. the preservation of agricultural and forestal land;
11. the conservation of properties and their values; and
12. the encouragement of the most appropriate use of land throughout the County.

_____ B. The Isle of Wight County Planning Commission does not find that the proposed zoning map amendment is reasonable based on the consideration of the factors listed herein.

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request, CUP-06-22, be:

- ___ a. Granted as submitted, and that the Board of Supervisors adopt the proposed Ordinance without modification.
- ___ b. Denied, and that Board of Supervisors not adopt the proposed Ordinance.
- ___ c. Granted with the specific recommended conditions in the attached exhibit, and that the Board of Supervisors adopt the proposed Ordinance with such conditions.

DATE: _____

READ AND PASSED: _____
Chairman, Isle of Wight County Planning Commission

TESTE: _____
Secretary, Isle of Wight County Planning Commission

Approved as to Form:

Robert W. Jones, Jr., County Attorney

PLANNING REPORT

APPLICATION:

An ordinance to amend the following section of Appendix B, Zoning, of the Isle of Wight County Code: Article 5 (Supplementary Use Regulations), Section 5-5003.B.1, "Cemetery," in order to reduce the front yard setback requirement for any burial plot on land abutting a public or private street to 25 feet.

ELECTION DISTRICT:

All

BACKGROUND:

Section 5-5003.B, "Cemetery," of the Zoning Ordinance requires that any burial plot on land abutting a public or private street comply with the required front yard setback of the underlying zoning district. A request has been received by the Board of Supervisors to allow additional flexibility to place burial plots closer to adjacent roads. There is a need for more room in older or smaller cemeteries to allow for additional burials.

A review of other local ordinances in Virginia reveals that there is no commonly used setback for cemeteries. Some allow no setback while others impose the front yard setback for the underlying zoning ordinance. The shortest front yard setback in the County is 25 feet. The proposed cemetery setback of 25 feet is consistent with setbacks found elsewhere in the Ordinance and would allow room between burial plots and road side ditch maintenance and movement of people and vehicles.

After discussion of the proposed Ordinance change at their October 25, 2022, regular meeting, the Planning Commission directed staff to advertise the change for public hearing at their next regular meeting.

DESCRIPTION:

Section 5-5003.B.1 would be restated to read as follows:

Any burial plot on land abutting a public or private street shall comply with the required setback of twenty-five (25) feet from all property lines. In addition, cemeteries shall comply with all state regulations, including

setbacks from residential uses and public water supplies.

ORDINANCE REVIEW:

Applications for text amendments may be initiated by resolution of the Board of Supervisors, by motion of the Planning Commission, or by application petition of any property owner(s) addressed to the Board of Supervisors. An application for text amendment will set forth the new text to be added and the existing text, if any, to be deleted or amended.

AGENCY REVIEW:

Staff worked with the County Attorney's office to develop the proposed Zoning Ordinance change.

STAFF RECOMMENDATION:

Staff recommends approval of the proposed ordinance change.

ATTACHMENTS:

Description	Type	Upload Date
Proposed Ordinance Change Redline version	Backup Material	11/16/2022

Proposed Cemetery Supplemental Use Zoning Ordinance Revisions
Revised November 16, 2022

New proposed changes are in red underlined text. Language proposed to be deleted is shown in red text with ~~strikethrough~~ markings.

Section 5-5003. - Supplementary use regulations for civic use types.

B. Cemetery.

1. Any burial plot on land abutting a public or private street shall comply with the required ~~front yard~~ setback of ~~the underlying zoning district and~~ twenty-five (25) feet from all property lines. In addition, cemeteries shall comply with all state regulations, including setbacks from residential uses and public water supplies.
2. Arrangements for perpetual maintenance of the cemetery shall be in compliance with all applicable governmental laws and regulatory requirements and shall be approved by the county attorney as to form.
3. Cemeteries and distance from wells. All cemeteries shall meet the requirements set forth below unless otherwise exempted by the department of health.

Well Class	Distance from Cemetery
Class 3A or deep well	Minimum 50 feet
Class 3B well	Minimum 50 feet
Class 3C or a shallow well	Minimum 100 feet
Class 4 well	Minimum 100 feet

4. Landscaping shall be distributed across the area developed as a cemetery to provide a minimum of ten percent (10%) canopy coverage or shading within twenty (20) years.
5. The proposed location for a cemetery shall be compatible with adjacent land uses, existing or proposed highways, and any other elements or factors deemed to affect the public health, safety, and welfare of the inhabitants of such district.

PLANNING REPORT

APPLICATION:

An ordinance to amend the Isle of Wight County Comprehensive Plan, *Envisioning the Isle*, to incorporate by reference the plan known as, “Share the Isle: Isle of Wight County’s Plan for an Aging and Mixed Ability Inclusive Community,” as Appendix XII in the Comprehensive Plan

ELECTION DISTRICT:

County-wide

BACKGROUND:

Isle of Wight County began its plan to develop services for persons age 55 and over in February 2021. This new part of the Comprehensive Plan will serve as a decision-making guide to help the County remain livable for all ages and abilities.

Staff previously presented the draft Plan to the Planning Commission at their April 26, 2022, regular meeting. A copy of the draft Plan is attached to this report.

The Planning Commission public hearing is another opportunity for the community to give feedback on the draft Comprehensive Plan amendment. Staff advertised the draft plan for public comment from October 1 through November 1, 2022. Only one additional comment was received during this time.

DESCRIPTION:

The *Share the Isle* Plan fulfills the January 2020 directive from the Board of Supervisors to develop a special plan accounting for the future impacts of aging on the County’s quality of life and levels of service as part of the new County’s new Comprehensive Plan. Share the Isle includes policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups.

The Plan utilized feedback from the community and its service partners to identify five key focus areas necessary to improve the overall quality of life for all citizens,

including the community's growing senior and special needs populations:

1. Healthy and Active Lifestyle;
2. Quality Healthcare and Community Support Services;
3. Transportation Access;
4. Housing Choices; and
5. Education, Employment and Engagement.

Within each area, there is a background section and a findings section that collectively sets the stage for the recommendations. Whenever possible, they include County-specific data and information. The Plan outlines actions that will support achievement of the overall vision in each focus area. Each set of actions was developed based on community input, research, and data. The overall indicators within each focus area will assist in ensuring the community can evaluate progress towards the vision.

COMPREHENSIVE LAND USE PLAN:

Share the Isle serves as an implementation tool for several policies of the County's Comprehensive Plan, *Envisioning the Isle*, including:

- Studying the locations and demands of the elderly and low income populations of the County to inform transit decisions.
- Examining the impact of changing demographics and recreational needs on parks, facilities and programming;
- Continuing to improve access to parks, trails, and other facilities in order to serve all citizens, regardless of ability;
- Supporting life-long learning through schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for all age groups;
- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities;
- Reviewing and revising regulations to support housing types that allow the elderly to remain in their community as their needs change;
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities; and
- Identifying possible incentives to encourage the development of a range of housing choices near major activity centers such as employment, commercial areas, schools, and recreation areas.

AGENCY REVIEW:

The Commission on Aging, Isle of Wight County Social Services, the Department of Parks and Recreation, and Senior Services of Southeastern Virginia were instrumental in the development of *Share the Isle*.

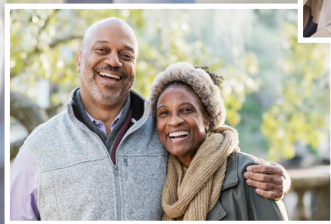
STAFF RECOMMENDATION:

Staff recommends adoption of Share the Isle: Isle of Wight County's Plan for An Aging and Mixed Ability Inclusive Community as an amendment to the Comprehensive Plan, Envisioning the Isle.

ATTACHMENTS:

Description	Type	Upload Date
Share the Isle: Isle of Wight County's Plan for an Aging & Mixed Ability Inclusive Community	Backup Material	4/20/2022

SHARE *the* ISLE



**ISLE OF WIGHT COUNTY'S PLAN FOR AN AGING &
MIXED ABILITY INCLUSIVE COMMUNITY**

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EXECUTIVE SUMMARY

Introduction



On January 16, 2020, the Isle of Wight County Board of Supervisors directed staff to conduct a study on the future impacts of aging on the County's quality of life and levels of service as part of the new County's new Comprehensive Plan. The initial step of the Plan included a community survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The next step of the Plan engaged a small working group recruited from the County's Commission on Aging and supported by County staff as well as staff from the Southeastern Senior Services of Virginia (SSEVA) to develop policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups.

Through the development of the Plan, the initial stakeholder workgroup identified several common issues that were critical to the successful implementation of each of the Plan's focus areas. Specifically, transportation access and a housing supply which can accommodate different ability and socioeconomic needs were found to be critical to successful aging in the community. These two components permit older people and those with special needs to partake in all the recreational, educational, employment and social opportunities the County may have to offer that creates a high quality of life. The third common issue the workgroup identified was the need for a central clearinghouse of information on all these opportunities and services within the County. Information on transportation services, housing assistance, health care, educational, employment and social opportunities is often dispersed among different groups, websites and agencies which can make locating information difficult, especially among those without access to the internet. The group agreed that a critical element in the Plan's successful implementation is the creation of a coordinator position that could not only serve as a central contact for aging-related services and information specific to the County, but also assist residents in obtaining these services. Below is an outline of the policies and implementation steps for the Share the Isle Plan. The full Plan documents includes additional background information and analysis used to develop the Plan.

FOCUS AREA 1: HEALTHY AND ACTIVE LIFESTYLE

OBJECTIVE: The County should provide access to healthy food options, opportunities for walking, biking and exercise, and education on nutrition and wellness.

IMPLEMENTATION STEPS

1. The County should continue to expand its public system of bike and pedestrian trails, especially to destinations including parks, libraries, or community facilities.
2. The County should expand its transit service to provide connections between residential areas and shopping centers which offer groceries in all development service districts within the County.
3. The County should expand its Parks and Recreation programs and facilities to include exercise programs for all ability levels and include educational programs on such topics as nutrition and treatment of chronic conditions, such as diabetes and obesity which are linked to poor nutrition.

FOCUS AREA 2: QUALITY HEALTH CARE AND COMMUNITY SUPPORT SERVICES

OBJECTIVE: The County should provide connections to health facilities and related services and support, including home- and community-based supportive features and programs.

IMPLEMENTATION STEPS

1. Improve the accessibility of health services.
2. Establish a full-time livable community coordinator position to increase availability of information, educational programs, and coordinate volunteer efforts.
3. Establish a regular working group of community service providers, health care professional representatives, community stakeholders and staff to identify specific gaps in the County's available senior and special need health care services.
4. Centralize and expand programs and services to citizens to enable them to remain in their homes.

FOCUS AREA 3: TRANSPORTATION ACCESS

OBJECTIVE: The County should expand its range of safe, dependable, and affordable transportation options that are alternatives to driving, which promote independence, facilitate employment and educational opportunities, and foster social engagement.

IMPLEMENTATION STEPS

1. Increase local funding to expand the existing I-Ride service to provide additional routes to serve areas with the highest senior population and nearby activity centers to better meet daily needs;
2. Identify and expand existing volunteer networks that provide free transportation to seniors for medical and senior center visits utilizing surplus County-owned vehicles for immediate needs;

3. Incorporate smart mobility concepts into future road improvements to capitalize on technological improvements such as driverless vehicles, on demand services, and to accommodate future public transit needs, such as including broadband capabilities in public right of ways as improvements are made; and
4. Continue to support the expansion of the County's multipurpose trail system that connects residential areas to activity centers with shopping, medical, employment, educational, and recreational opportunities.

FOCUS AREA 4: HOUSING CHOICE

OBJECTIVE: The County should provide a range of safe housing options that promotes independence and aging in place through market rate units, subsidies, and appropriate design features such as universal design, visitability, energy efficiency, and use of innovative home features.

IMPLEMENTATION STEPS

1. Create more lifelong livable housing options.
2. Allow for multigenerational housing and increase affordable housing supply by allowing accessory dwelling units in more residential zoning districts.
3. Increase the ability for people to stay in the homes and neighborhoods by creating a grant fund dedicated to retrofitting and rehabilitating existing housing.
4. Zoning regulations should be written to allow homes to be built in close proximity to the services that enable people to remain independent as they age.
5. Implement an affordable dwelling unit ordinance.

FOCUS AREA 5: EDUCATION, EMPLOYMENT AND ENGAGEMENT

OBJECTIVE: The County should ensure employment opportunities for all ages, promote a life-long learning environment, and provide multiple opportunities for economic, social and civic engagement.

IMPLEMENTATION STEPS

1. Encourage the intergenerational use of public facilities for community education programs of rotating educational topics such as health, personal finance, job search, keyboarding, interviewing, coding, or home maintenance. These programs should be held at public facilities around the County at different times that are also accessible by public transit.
2. Continue the County's broadband network expansion program to underserved areas of the County.
3. Consider multiple outreach methods to increase community engagement in public policy decision making.

INTRODUCTION & BACKGROUND

Overview

In a February 2020 report, the US Census Bureau marks the year 2030 as a demographic turning point for the United States. Beginning that year, all baby boomers in the US will be older than 65 years of age. This will expand the size of the older population, so that one in every five Americans is projected to be of retirement age. Later that decade by 2034, older adults will outnumber children for the first time in U.S. history.

For Isle of Wight County, this turning point is projected to happen much sooner. The US Census Bureau projects 19.8% of the County's population was 65 years or older in 2019. The Weldon Cooper projects 21.6% of the population will be within this age bracket by 2020, which increases again to 26.9% of the County's population by 2030. By the end of the planning horizon of Envisioning the Isle, in 2040, the 65 year and older population group reduces in size slightly to 26.1% of the total population.

It is now Isle of Wight's turn to grapple with the implications of this demographic shift in the character of our community. How should we adapt neighborhood design, transportation options, recreational opportunities and even employment to ensure that people can successfully age here? Although there are significant challenges associated with creating a successful age friendly community, the good news is that most Americans want to remain healthy, active, and engaged in their communities as they age. In addition, technological innovation continues to follow the market opportunities presented by the increasing longevity market.

Successful age friendly communities can address some of the following concerns:

- **Financial Security** — provide a reasonable cost of living through such items as safe and affordable housing and employment opportunities for seniors;
- **Health** — offer access to a wide range of healthcare options and recreational opportunities;
- **Housing** — provide a diverse set of housing options to meet multiple needs, whether it's single family homeownership, a rental apartment or assisted living facility;
- **Transportation** — provide mobility and access to convenient transportation systems for seniors for travel, running errands, or making a medical visit;
- **Social Integration** — provide ready connections to family and friends as well as cultural and educational opportunities.

The Plan will identify steps the County can take to ensure its residents can age successfully in the community. The initial step of the Plan included a community survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The next step of the Plan engaged a small working group recruited from the County's Commission on Aging and supported by County and SSEVA staff to develop policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups. Once the draft Plan was developed, the Plan was

presented to the Commission Aging, Planning Commission, the Board of Supervisors, and the community at large for their review and comment.

BACKGROUND

On January 16, 2020, the Isle of Wight County Board of Supervisors directed staff to conduct a study on the future impacts of aging on the County's quality of life and levels of service as part of the new County's new Comprehensive Plan.

This special Plan serves an implementation tool for several policies of the County's Comprehensive Plan, *Envisioning the Isle*, including:

- Studying the locations and demands of the elderly and low income populations of the County to inform transit decisions.
- Examining the impact of changing demographics and recreational needs on parks, facilities and programming;
- Continuing to improve access to parks, trails, and other facilities in order to serve all citizens, regardless of ability;
- Supporting life-long learning through schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for all age groups;
- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities;
- Reviewing and revising regulations to support housing types that allow the elderly to remain in their community as their needs change;
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities; and
- Identifying possible incentives to encourage the development of a range of housing choices near major activity centers such as employment, commercial areas, schools, and recreation areas.

This Plan will further support and implement these policies.

PLAN ON AGING COMMUNITY SURVEY RESULTS

The initial step of the Plan included a survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The Isle of Wight County Plan on Aging public input survey was conducted from Monday, February 1 through Monday, March 1, 2021. The public input survey was not designed as a scientific poll using a random sample of pre-selected households, but rather as a broad public engagement effort. The survey was widely publicized, and all residents, business owners, and property owners were welcome to respond. All responses were provided on a strictly voluntary basis and may or may not represent the perspectives of the average Isle of Wight County citizen.

The survey was available both online using the Survey Monkey web-based platform and in hard copy format located at six key locations across the County. Paper copies of the survey were available at the Carrollton, Smithfield and Windsor Libraries as well as the Windsor and Smithfield Town Halls. Copies were also available at the Isle of Wight County Community Development Department.

Staff mailed out notices to 45 different community stakeholder groups requesting participation in the survey. The notices included the website address of the survey as well as a QR code that provided a direct link to the survey instrument. The community groups

included churches, veterans groups, services organizations, the Commission on Aging, and other agencies that serve the elderly population, including Senior Services of Southeastern Virginia (SSSEV).

SSSEV and Isle of Wight County Social Services also provided valuable additional outreach to the County's senior population by distributing surveys through the administration of their programs, such as Meals on Wheels. Assistance with public outreach was also generously provided by County Departments such as Tourism, Parks and Recreation, Isle Cares, and Economic Development which posted notices about the survey on their social media sites.

A notice with the survey website and QR code was advertised in the Smithfield Times and Tidewater News for four consecutive weeks in March 2021. In addition, the survey could be accessed from links posted on the homepage of the County's website.

A total of 195 individuals participated in the survey. They came from all over Isle of Wight County and used a variety of methods to participate. The majority of participants, or 176 people, chose the online survey tool to complete the survey. This was expected, given that this method allowed participants to take the survey at their convenience. However, about 11%, or 19 people, chose to participate by completing paper surveys.

The survey included several questions for basic demographic information, such as age, gender, household income and which race with which they identify. Below is a summary of the profile of the average survey participant:

- Average age of participant was 63 years.
- About 77% non-military, 23% active or retired military.
- About 48% retired, 49% working part or full-time.
- Majority of respondents were female (63%).
- About 80% white, 12% African American, 4% Multiracial, 2.5% Other, 1% Asian, 0.5% Native American.
- About 61% had household incomes of greater than \$50,000.

Most survey respondents were either somewhat or very concerned about their ability to live independently and remain financially secure as they aged. Most expected their quality of life to remain the same, and most participants planned to stay in the County for the next five years or longer. Most participants owned their own home and felt their neighborhoods were either good or excellent.

When thinking about housing in their senior years, most survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority.

When it came to ranking priorities for future transportation access, most respondents felt that expanding services for people who need assistance should be the top priority. The second highest priority chosen is repairing existing roads and bridges. Adding sidewalks and expanding mass transit services tied as the third priority.

When asked to identify the things necessary to maintain their quality of life in the future, they ranked the following items as the five most important:

1. Having financial means;
2. Staying physically active;
3. Having access to quality healthcare;
4. Staying connected to friends and family;
5. Having quality health care coverage.

The goal of the survey was to ask the community to share its priorities for Isle of Wight County to better serve its growing senior population. The top five priorities for future investment to better serve seniors as indicated by the survey feedback are as follows:

1. Affordable health care services;
2. Senior Centers/Better Transportation Options (tied for second priority);
3. Internet access;
4. Affordable housing; and
5. Home delivered meals such as Meals on Wheels.

Most people participating in the survey felt that the County was not doing a good job supporting the needs of seniors in the community. When asked about different services provided in the County, public safety and volunteer opportunities received the highest marks while job opportunities and community support services were rated poorly.

The survey results provide critical information on which to begin to explore policy recommendations on how to better serve the County's growing senior population in the future. The feedback helps to narrow the focus of future investment in order to make the biggest impact to serve the most pressing needs in the community as well as to improve existing services. A full report on the results of the survey is included as an appendix to this plan.

“SHARE THE ISLE” PLAN

Based on the feedback received from the community survey and the Commission on Aging, the Plan seeks to improve the overall quality of life for all citizens, including the community's growing senior and special needs populations by achieving progress in the following five areas of focus:

1. Healthy and Active Lifestyle;
2. Quality Healthcare and Community Support Services;
3. Transportation Access;
4. Housing Choices; and
5. Education, Employment and Engagement.

Within each area, there is a background section and a findings section that collectively sets the stage for the recommendations. Whenever possible, they include County-specific data and information. The Plan outlines actions that will support achievement of the overall vision in each focus area. Each set of actions was developed based on community input, research, and data. The overall indicators within each focus area will assist in ensuring the community can evaluate progress towards the vision.

The following executive summary of the Plan on Aging includes a list of goals that are the Plan's focus areas, objectives and recommended implementation steps to achieve the County's vision of evolving as an inclusive, accessible community for all ages, abilities, and socioeconomic groups.

FOCUS AREA 1

Healthy And Active Lifestyle



The County's own community survey demonstrated that many people place the ability to live independently and remain both physically and mentally active as important to their quality of life as they age.

OBJECTIVE: The County should provide access to healthy food options, opportunities for walking, biking and exercise, and education on nutrition and wellness.

According to AARP, one aspect of age-friendly communities is that they allow older adults to stay active, stay connected, and stay engaged with their community as they age. The County's own community survey demonstrated that many people place the ability to live independently and remain both physically and mentally active as important to their quality of life as they age. In July 2017, the Milken Institute of Public Health released a ranking of 381 US metropolitan areas on how they performed in promoting and enabling successful aging. Among other criteria such as financial security, transportation, health care, and education, the study also ranked metro areas for overall "wellness" based on how they did on criteria such as their obesity rate, smoking rate, diabetes rate, longevity, prevalence of recreational opportunities, grocery stores and fast food restaurants in the area, among others. The Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area (MSA), of which Isle of Wight County is a part, ranked 69th out of 100 large metropolitan areas overall based on its ability to meet the nine critical elements of successful aging, including wellness.

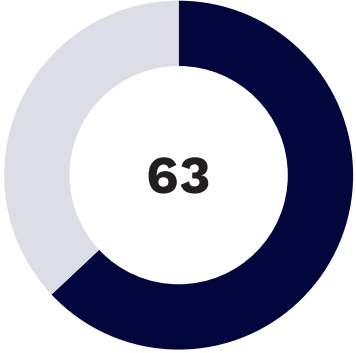
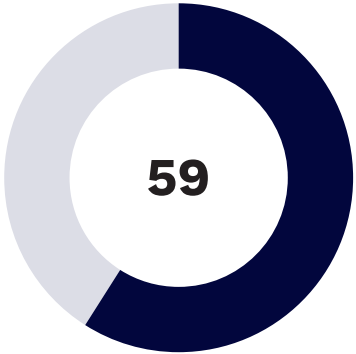
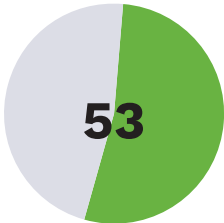
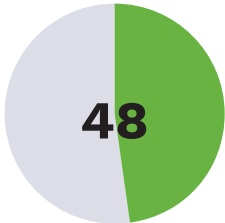
BACKGROUND

Although Isle of Wight County is too small to qualify for an individual assessment in the Milken Institute Study, the criteria used in the report are publicly available. The *US News and World Report*, for example, provides an online tool that ranks individual localities on a scale of 1 to 100 and compares them to municipalities of similar size as well as to state and national averages.

The website gives Isle of Wight County an overall score of 63 out of 100 in its healthy community categories. To arrive at its overall ranking, the magazine used factors identified by the National Committee on Vital and Health Statistics — a policy advisory board to the head of the U.S. Department of Health and Human Services — as part of its Measurement Framework for Community Health and Well-Being. The online assessment tool may be found at <https://www.usnews.com/news/healthiest-communities/virginia/isle-of-wight-county#population-health>.

Although the County's score is the equivalent to a letter grade of "D," the County fared better than the state's average score of 53 and better still than the national average score of 48. The County performed higher than average scores in areas such as overall population health, public safety, education, community vitality and the economy. The County received failing grades (less than 60) for equity, housing, food and nutrition, the environment, and infrastructure.

TABLE FROM
[HTTPS://WWW.USNEWS.COM/NEWS/HEALTHIEST-COMMUNITIES/VIRGINIA/ISLE-OF-WIGHT-COUNTY#EQUITY](https://www.usnews.com/news/healthiest-communities/virginia/isle-of-wight-county#equity)
 NOVEMBER 29, 2021

63/100	OVERALL SCORE	CATEGORY	SCORE
 OVERALL SCORE		Population Health	66
		Equity	59
		Education	68
		Economy	66
		Housing	48
		Food & Nutrition	45
		Environment	50
		Public Safety	79
		Community Vitality	62
		Infrastructure	58
 PEER GROUP AVERAGE Urban, High-Performing			
 STATE AVERAGE			
 U.S. AVERAGE			
Read our methodology to see how the scores and rankings were calculated.		See the top communities overall.	

Opportunities for improvement in the overall health and wellness of the community are noted below:

- **Access to care** — lower than average rates of hospital beds per 1,000 population (0 in Isle of Wight) and primary care doctor availability.
- **Mental Health** — higher than average number of adults with frequent mental distress.
- **Equity** — higher than average racial disparity in educational attainment and poverty rates.
- **Food and Nutrition** — less than average availability of healthy food and higher than average percentage of population without access to a large grocery store. Higher than average prevalence of diabetes and obesity.
- **Environment** — higher than average population served by unsafe drinking water. Only 2% of the County's population lives within a half mile of a public park compared to the national median of 18%.
- **Infrastructure** — only 3% of the County's population lives within walking distance of a library, museum or playground compared to 12.4% of the US population on average. The County receives a walkability score of 5.7 as compared to the US average of 6.1 and the state average of 8.4.

Overall, the County's general quality of life as indicated by its public safety record, higher than average life expectancy, economic well-being and educational standards. However, there is room for improvement to make it even healthier by providing increased walkability, increased nutrition availability, and expanding health care options across all socioeconomic groups and age levels.

IMPLEMENTATION STEPS

1. The County should continue to expand its public system of bike and pedestrian trails, especially to destinations including parks, libraries, or community facilities.
2. The County should expand its transit service to provide connections between residential areas and shopping centers which offer groceries in all development service districts within the County.
3. The County should expand its Parks and Recreation programs and facilities to include exercise programs for all ability levels and include educational programs on such topics as nutrition and treatment of chronic conditions, such as diabetes and obesity which are linked to poor nutrition.

FOCUS AREA 2

*Quality Health Care and
Community Support Services*



Participants in the community survey on aging chose having access to quality healthcare and having quality health care coverage as the third and fifth most important criteria in ensuring their future quality of life in Isle of Wight.

OBJECTIVE: The County should provide connections to health facilities and related services and support, including home- and community-based supportive features and programs.

In 2013, the AARP Policy Institute published a report, *Is this a Good Place to Live? Measuring Quality of Life for All Ages*, which includes benchmarks to measure a community's livability for all ages improving the health of all its members by providing access to healthy food options, exercise opportunities for all abilities, and connections to health care facilities and related services, such as a strong network of community support services.

Increasing access to health care and community support services to those areas of the County with the highest senior and special needs populations can help implement several policies of the County's Comprehensive Plan, *Envisioning the Isle*, including:

- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities; and
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities.

Participants in the community survey on aging chose having access to quality healthcare and having quality health care coverage as the third and fifth most important criteria in ensuring their future quality of life in Isle of Wight. Survey respondents also chose affordable health care as the County's first future investment priority and providing home delivered meals, such as Meals on Wheels, as the fifth most important priority for the County to better serve its aging population.

Most people participating in the survey felt that the County was not doing a good job supporting the needs of seniors in the community. When asked about the quality of different services provided in the County, community support services were rated poorly.

BACKGROUND

Using the most recently available census demographic information, the location of existing health care providers was combined with the location of the census tracts in the County with the highest senior and special needs populations. Consistent with other activity center data, most of the County's health care providers and services are found in the Carrollton and Smithfield areas followed by Windsor, and then the Camptown area. Although the Camptown area within the County limits may have little to no services, it does share a border with the City of Franklin which has additional services to offer, including the Southampton Memorial Hospital.

HEALTH CARE FACILITIES AND SERVICES IN ISLE OF WIGHT, NC

PRIMARY CARE FACILITY		LOCATION
Family Medical Care of Smithfield		Smithfield
Nansemond Family Practice		Smithfield
Isle of Wight Family Practice		Smithfield
Infinity Pediatric and Adolescent Medicine		Smithfield
Eagle Harbor Medical Associates		Carrollton
Riverside Eagle Harbor Primary Care		Carrollton
Sentara Family Medicine Physicians		Carrollton
Nakorn Primary Care		Windsor
URGENT CARE/EMERGENCY ROOM		
Velocity Health Care		Carrollton
PHYSICAL THERAPY		
Hull Physical Therapy		Smithfield
Phoenix Physical Therapy		Smithfield
Tidewater Physical Therapy		Smithfield
Pivot Physical Therapy		Smithfield
Sentara Therapy Center		Carrollton
Toland Chiropractic		Carrollton
Bayview Physical Therapy		Carrollton
Rise Physical Therapy		Carrollton
Southside Physical Therapy		Windsor
HOME HEALTH CARE SERVICES		
Growth Home Health Care		Carrollton
Cuadro Home Health Care		Carrollton
Americare Plus		Carrollton
Grace N Home Care 4 You		Carrollton
Home Sweet Home		Smithfield
Seniors 1st Home Health Care		Smithfield
HCC Personal Care Inc.		Windsor
MENTAL HEALTH SERVICES		
Western Tidewater Mental Health		Smithfield
Smithfield Christian Counseling		Smithfield
Focused Psychiatric and Mental Health Care		Smithfield
Alliance Family Services, LLC		Carrollton
Wholehearted Counseling		Carrollton
Behavioral Health Group		Carrollton

The US Health Resources and Services Administration has designated Isle of Wight County as a Medically Underserved Area (MUA). MUAs identify geographic areas and populations having too few primary care providers, high infant mortality, high poverty or a high elderly population. These designations can help establish health maintenance organizations or community health centers.

A quick internet search reveals the majority of health care providers are in the Carrollton and Smithfield areas of the County. Only one urgent care facility is located in the County in Carrollton. In order to access a hospital for most of the population of the County located in Smithfield and Carrollton, one must drive to Sentara Obici in Suffolk or Riverside Hospital in Newport News. Both of these hospitals are over a twenty minute drive away.

There are several community-wide service providers in the County, including the following programs:

- The Adult Services Program based in the Isle of Wight County Social Services Department provides assistance programs to adults age 60 years of age or older. Services are designed to assist the adult in remaining in the least restrictive setting and functioning as independently as possible, to establish or strengthen appropriate family and social support systems, and to support the adult in self-determination, provision of assistance through approved providers for disabled or elderly when they are unable to care for themselves. Services to seniors can include:
 - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) — is a program designed to address food needs by permitting low-income households to obtain a more nutritious diet through the utilization of a plastic debit card to purchase food items.
 - MEDICARE — is a program designed to provide a payment resource, either totally or in part, for the medical needs of low-income individuals who are elderly, blind, or disabled, as well as families or pregnant women.
 - AUXILIARY GRANTS PROGRAMS — a monetary payment program designed to assist aged, blind, or disabled persons residing in homes for adults who have insufficient funds to meet their needs as established-by the state board of social services.
 - GENERAL RELIEF — is a program designed to provide monetary assistance, either ongoing or short term, for items that cannot be provided through other means.
 - ENERGY ASSISTANCE — programs designed to assist low-income households offset the cost of energy as well as purchase or repair heating equipment that poses a threat to the households.
- Senior Services of Southeastern Virginia (SSEVA) is a nonprofit organization that provides services targeted to older residents in Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk, Virginia Beach, and Isle of Wight and Southampton counties. Senior Services receives funding from federal, state, municipal, and private sources. SSEVA provides the following services within Isle of Wight County:
 - I-Ride transit services; and
 - Meals on Wheels.
- Christian Outreach in Smithfield, Virginia is a nonprofit community food pantry.

INCREASING THE RANGE OF HEALTH CARE SERVICES

Being able to provide a wide range of health services for older people is an important component of an age friendly community. Specific forms of health care for older people could include geriatric clinic services, adult day centers, memory care services, mental health services, respite care and training for caregivers, rehabilitation and palliative care. Other health services could include disease prevention and health promotion, home care, and assisted living facilities.

In the list of important services to support aging successfully in the community are preventive screening, physical activity, education on injury prevention, nutritional guidance, mental health counseling, self-help groups or organizations offering sports activities for fitness and rehabilitation, and regular health checks at home.

STRENGTHENING THE COMMUNITY SERVICES NETWORK

One very consistent theme expressed by both community members, service providers, and the Commission on Aging is the need for a wide range of home support and care services to fulfill a variety of needs from helping with shopping and/or providing meals to home visits from doctors and other service providers. Barriers experienced in getting home care services include a general lack of such services, lack of funding, poor organization of services, restrictive eligibility criteria, and high turnover in home care staff.

A service gap also often cited is the need for increased services to protect and care for older people with low incomes. In addition to enhancing basic income support, there is a need to establish or strengthen shelter options for homeless and destitute older people and people who have been abused; meals services and programs; discounts on utilities for people with low incomes; registers of older people living alone; assistance in obtaining benefits and with health care costs.

Another theme expressed in the survey was a suggestion to use volunteers to help fill gaps in providing community services. More volunteers could assist older people to deliver social services and home care, to provide transportation for shopping and appointments, or simply to walk the pets of older people who are no longer able to do so themselves. Suggested sources of voluntary help are the “50+” associations of young retirees, students in social and health services, and school age children. Strong voluntary networks are easier to mobilize in established communities where people feel socially connected.



IMPLEMENTATION STEPS

The following is list of policy recommendations and implementation actions to begin to improve the health care and community service needs for all ages and ability levels.

1. Improve the accessibility of health services.

If services are not known about, they are not used. Better advertising of local health services, educating older people on available services, coordination of information, and health service telephone hotlines and website information are suggested as possible solutions.

Services that are far away or difficult to reach can be barriers to obtaining health care. Following the recommended actions in the transportation focus area of this Plan would increase mobility options in the County and access to healthcare services.

2. Establish a full-time livable community coordinator position to increase availability of information, educational programs, and coordinate volunteer efforts.

This position could serve as a central point of contact for information on available senior health care and community support services as well as provide assistance to those in need of locating these services. In addition, the coordinator could assist in developing educational programs on preventative health care topics, home maintenance, and coordinate the efforts of volunteer groups. An important task for this position would be the distribution of information easily accessible through a variety of formats, such as a regular newspaper column, website, or hard copy brochures.

3. Establish a regular working group of community service providers, health care professional representatives, community stakeholders and staff to identify specific gaps in the County's available senior and special need health care services.

An ongoing working group of people who regularly serve or use senior health care and community services in the County can share information and help identify ongoing service gaps and potential funding sources to improve these services, especially for low or moderate income individuals. Their findings could inform the budget discussions of organizations who provide grants or regular funding in support of these services.

4. Centralize and expand programs and services to citizens to enable them to remain in their homes.

The County should explore the appropriate agency to coordinate an expanded community outreach program, such as the existing companion provider program managed by the County's Department of Social Services. This program helps senior and special needs persons perform daily activities such as remembering to take medications, cooking, doing laundry and performing other household chores associated with independent living. Expansion of this program would entail providing additional funding and adequate staffing. Other services could include an adult daycare program.

FOCUS AREA 3

Transportation Access



When thinking about their senior years, most of the 2021 Study on Aging survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority.

OBJECTIVE: The County should expand its range of safe, dependable, and affordable transportation options that are alternatives to driving, which promote independence, facilitate employment and educational opportunities, and foster social engagement.

This component of the Plan on Aging serves as an implementation tool for the following policies of the County's Comprehensive Plan, *Envisioning the Isle*:

- Identifies the locations and demands of the elderly and low income populations of the County to inform transit decisions.
- Encourages the development of a range of housing choices near major activity centers that provide employment, shopping, medical offices, schools, and recreation areas creating increased accessibility in meeting daily needs.
- Supports life-long learning by increased access to schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for all age groups.

When thinking about their senior years, most of the 2021 Study on Aging survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority. Access to different mobility options is a key component to the ability to stay in someone's current home and community as they age, and driving no longer remains an option to meet daily needs.

As noted earlier, the US Census projects that nearly 20% of the County's population in 2019 would be 65 years old or older. This represents 7,348 people out of the County's total 2019 projected population of 37,109 people (US Census Bureau). When looking at a map of the County's 2010 census tracts, the majority of the County's senior population resides in the Carrollton and Smithfield areas, followed by the Windsor and Camptown areas. Due to the County's historic rural development pattern, many members of the County's senior population live in remote areas that require vehicular transportation to meet daily needs, such as shopping for groceries or going to a medical appointment. If a senior or disabled person is no longer able to drive, this person must rely on a caregiver, public transit, or a private service to meet their transportation needs.

The following alternative transportation options are currently available in Isle of Wight County for people who cannot drive:

1. Senior Services of Southeastern Virginia I-Ride fixed route public transit;
2. SSSEVA on demand service for medical visits available with advanced reservation;



Toronto's Self-Driving Shuttle Bus

3. Virginia Department of Medical Assistance Services for medicaid members available with advanced reservation; and
4. Private Medical Transport Services.

The map below ranks the County's census tracts by number of people aged 65 years or older as well as illustrates the location of existing public transit routes and public sidewalk and trail connections not internal to residential neighborhoods. The map also identifies activity centers in the County to include medical offices, shopping centers, government offices, schools and libraries. As the map illustrates, existing public transit routes and pedestrian connections do not serve areas with the highest number of seniors or provide connections to all activity centers that provide services needed by seniors.

When it came to ranking priorities for future transportation access, most survey respondents felt that expanding services for people who need assistance should be the top priority. The second highest priority chosen is repairing existing roads and bridges. Adding sidewalks and expanding mass transit services tied as the third priority.

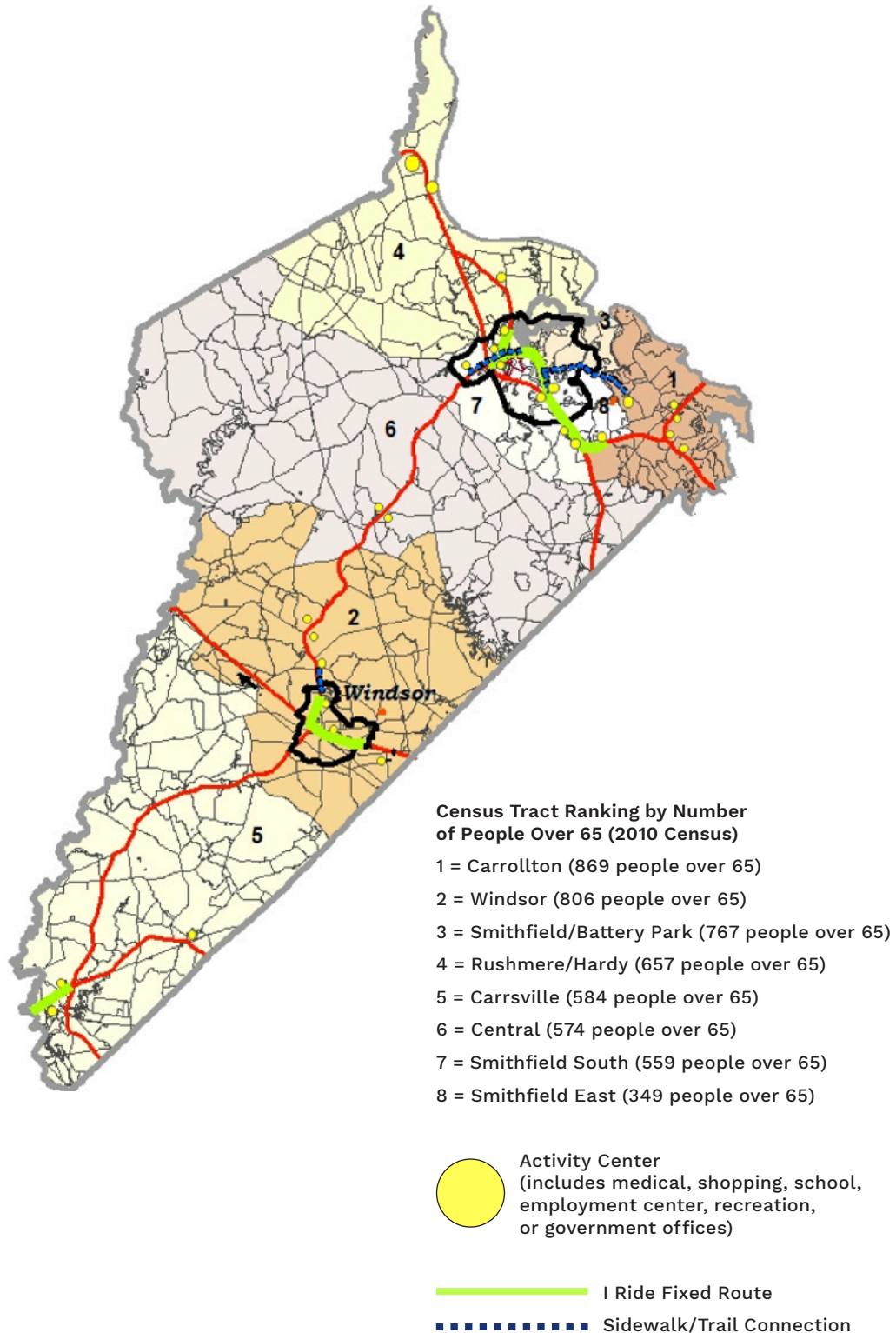
CREATING GOOD MOBILITY

Good mobility can be defined as one's ability to move at will. To ensure good mobility and access to all of the opportunities that the County has to offer, a person needs to be able to get to them. Seniors, as well as others who may have some form of mobility impairment, sometimes find it difficult to access to County services, recreational opportunities and social engagements due to the inability to drive, bicycle or walk, or due to the lack of public transit options.

Developing a good system of mobility options is an essential component for ensuring a high quality of life for seniors and others with mobility challenges. Increasing fixed routes for existing transit, enabling smart mobility options, and expanding the County's fledgling multipurpose trail system are all ways to implement this system, but all face both financial and resource challenges for both County administration and the community itself.

IRIDE: EXPAND THE COUNTY'S EXISTING TRANSIT SYSTEM

IRide recently began a fixed route service in the Town of Windsor and includes a portion of the Camptown area in its Franklin fixed route. The County should include funding for an expanded route to serve more of the Carrollton area where the majority of both the County's general and senior population reside. In order to continue to expand IRide's fixed route system, the Isle of Wight community must establish the provision of public transit as a priority in both its long range and capital improvement plans with a dedicated funding source.





An Image of an autonomous vehicle.

RIDE SHARE: VOLUNTEER BASED

This innovative program is currently found in larger municipalities which can serve as models in creating one in Isle of Wight County. Although the initial costs of establishing such a program would be minimal for donated vehicles, the larger challenge includes the ongoing maintenance of such a program to ensure its success and continued reliability, including volunteer recruitment, background checks, training, fuel, vehicle maintenance, insurance costs, and establishing an easily accessible scheduling platform.

SMART MOBILITY

The advent of widespread smart phone usage has opened the door to new possibilities of accessing on demand mobility services. The lower usage rate of smart phone technology and its expense continues to be a barrier to access for both seniors and lower income socioeconomic groups. In order to take advantage of smart mobility options, broadband networks must be readily available and included in the County's future infrastructure plans.

MULTIPURPOSE TRAIL

The County recently inaugurated its first four mile multipurpose trail that links downtown Smithfield with Nike Park, a regional community park in Carrollton. This trail provides a link for both bike and pedestrian users to existing neighborhoods via existing sidewalks to the recreational opportunities located at the park. It is the County's hope to expand this trail along the new, future Nike Park Extended Parkway that will link Nike Park to Route 17.

The construction of this trail continues the implementation of the County's Master Bicycle and Pedestrian Master Plan first adopted in 2008. Now that this segment is complete, the County should establish a priority list for the construction of the remaining segment of the trail system. Challenges for future implementation include financing, permitting, and continued maintenance of the trail system. Each new segment of the trail brings with it new maintenance responsibility and associated new operational costs for the County's

Parks and Recreation department. The County should include estimates for operational costs to be included in the department's operating budget when new segments of the trail are constructed.

IMPLEMENTATION STEPS

The following recommended actions would increase mobility options in the County:

1. Increase local funding to expand the existing I-Ride service to provide additional routes to serve areas with the highest senior population and nearby activity centers to better meet daily needs;
2. Identify and expand existing volunteer networks that provide free transportation to seniors for medical and senior center visits utilizing surplus County-owned vehicles for immediate needs;
3. Incorporate smart mobility concepts into future road improvements to capitalize on technological improvements such as driverless vehicles, on demand services, and to accommodate future public transit needs, such as including broadband capabilities in public right of ways as improvements are made; and
4. Continue to support the expansion of the County's multipurpose trail system that connects residential areas to activity centers with shopping, medical, employment, educational, and recreational opportunities.



FOCUS AREA 4

Housing Choice



Most participants in the March 2021 community survey expected their quality of life to remain the same as they aged, and most participants planned to stay in the County for the next five years or longer.

OBJECTIVE: The County should provide a range of safe housing options that promotes independence and aging in place through market rate units, subsidies, and appropriate design features such as universal design, visitability, energy efficiency, and use of innovative home features.

By including recommendations to improve housing affordability and choice, this study can help to implement several policies of the County's Comprehensive Plan, Envisioning the Isle, including:

- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities;
- Reviewing and revising regulations to support housing types that allow the elderly to remain in their community as their needs change;
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities; and
- Identifying possible incentives to encourage the development of a range of housing choices near major activity centers such as employment, commercial areas, schools, and recreation areas.

The County's overall population is a stable one, and many choose to live here long-term for its superior quality of life. Most participants in the March 2021 community survey expected their quality of life to remain the same as they aged, and most participants planned to stay in the County for the next five years or longer. Those who chose to participate in the survey owned their own home and feel their neighborhoods are either good or excellent. At the same time, most survey participants were either somewhat or very concerned about their ability to live independently and remain financially secure as they aged. What these survey results reveal is the importance for the community to provide secure housing, including for the senior and disabled homeless population.

When thinking about housing in their senior years, most survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority. Affordable housing ranked fourth in the top five priorities that respondents chose for Isle of Wight County to better serve its growing senior population.

BACKGROUND

Homeownership in the County remains high relatively to the rest of the nation since the 2010 Census. According to the 2019 American Community Survey, the majority, or approximately 75.8%, of all household units in the County were owner-occupied. This

represents a decline from 81.1% of units reported as owner-occupied in the 2010 decennial census. This number reflects the downturn in homeownership as a result of the 2008 financial crises as well as the growing number of rental units as a proportion of total housing units in the County. Although the recession negatively impacted employment and the ability of many people to afford home ownership, the overall percentage of the County's population living below poverty has matched the US average of 10.5% in 2019. Approximately 5.3% of the County's 6,813 people who are 65 years and older fall below this Census- defined poverty threshold as of the 2019 ACS survey.

Faced with high housing costs, less affluent seniors often struggle to pay for expenses such as food and health care. As a person ages and their income stream decreases, single family home ownership can become a burden due to the costs and physical requirements of home maintenance responsibilities. In addition, many existing homes in the County lack one or more universal design features that enable people to remain in their home, if they experience a physical disability. A "universal design feature" can be defined as an adaptation, such as a ramp or wider doorway, that enables adults to live safely and independently at home. For new homes, universal design features can include zero step entries, single story layouts, wheelchair accessible shelves, counters, and cabinets, and lever door handles, to name a few examples.

Increasing housing options available to older adults in the County at a variety of price points requires action from local officials as well as the housing industry. Relying on private market forces alone cannot adequately address the County's need for more affordable and livable housing.

HOUSING AFFORDABILITY

The average median value of a home in the County is \$266,800 for both new and existing homes. The average sales price of a new single family home in the County in 2019, however, is \$328,484. In order to afford a mortgage for the average new single family home in the County, the minimum household income should be approximately \$59,486 based on today's mortgage rate of 3.02%. Popular websites such as bankrate.com advise that no more than 28% of gross income should be devoted to housing costs, and no more than 36% of gross income should be devoted to total debt service, including housing. The 2019 average rental rate in the County was \$1,045 which would be deemed affordable for a household with a minimum annual income of \$44,786. For newer rental units in the County, the rent for an average three bedroom apartment can be as high as \$1,350 per month.

Although the 2019 ACS estimates that the average household income in Isle of Wight was \$73,991, the data also shows that 32% of total households in the County received retirement income with an average value of \$34,131. Approximately 37% of the total number of households received social security income in 2019 with an average value of \$20,950. For households that are fortunate enough to receive both retirement and social security income, the average income for a retired household is \$55,081. Using the common rule of thumb that affordable housing costs should not consume more than 28% of a household's gross annual income, the average monthly household housing allowance should equal no more than \$1,285 per month. The average senior household income could almost qualify as "low income" according to standards set by the US Department of Housing and Urban Development Department (HUD).

HUD has oversight over federal housing assistance programs and defines low, very low and extremely low income limits for different areas across the country based on the median family income for the metropolitan statistical area (MSA). Isle of Wight County

FY 2019 INCOME LIMIT AREA	MODERN FAMILY INCOME EXPLANATION	FY 2019 INCOME LIMIT CATEGORY	PERSONS IN FAMILY							
			1	2	3	4	5	6	7	8
VIRGINIA BEACH, NORFOLK, NEWPORT NEWS, VA-NC HUD METRO FMR AREA	\$79,300	Very Low (50%) Income Limits (\$) Explanation	27,800	31,750	35,700	39,650	42,850	46,000	49,200	52,350
		Extremely Low Income Limits (\$)* Explanation	16,700	19,050	21,450	25,750	30,170	34,590	39,010	43,430
		Low (80%) Income Limits (\$) Explanation	44,450	50,800	57,150	63,450	68,550	73,650	78,700	83,800

is in the Virginia Beach-Norfolk-Newport News MSA. The table below shows the 2019 income limits used by HUD to determine eligibility for housing assistance programs.

Although the average senior household may not be considered low income, it is sometimes ideal for these households to downsize and live closer to services, such as grocery stores and medical facilities, which may mean more expensive housing depending on the area. Sometimes existing homes need to be retrofitted to make them safer and enable their inhabitants to continue to live independently for as long as possible. These home repairs and basic maintenance can be cost prohibitive to households with limited income. Assistance with housing costs, whether for rent, a mortgage, or to make modifications to existing homes, can be obtained through local, state, and federal housing programs to make them more affordable.

The County currently offers housing assistance through the Suffolk and Franklin Redevelopment and Housing Authorities which administer these programs on behalf of the County. Although there are Community Development Block Grants available for emergency housing repair and accessibility grants, the County does not currently manage or have access to these funds.

The County also receives housing rehabilitation and first-time homebuyers down payment assistance through HUD's HOME Investment Partnerships Program (HOME). The HOME program provides grants to states and localities that communities use to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership. The County participates in the Tidewater Home Consortium coordinated by the City of Suffolk. Each year, the state distributes HOME funds to the Consortium that allocates the funds evenly between its member localities. Although HOME funds may be used for home repairs, this program does require that the entire dwelling meet building code requirements at the time of application, frequently resulting in total home replacement which can exhaust funding reserves, thereby limiting the number of people that benefit from this program.

Isle of Wight also operates an exemption program that provides relief for real estate property taxes. Senior citizens and permanently and totally disabled persons who meet the eligibility criteria are granted relief from all or part of their real estate taxes.

HOUSING LIVABILITY

Housing affordability is only one aspect of providing age friendly communities. Incorporating design features in housing units and throughout the community will help residents remain lifelong community members as they age. Another way to describe an age friendly house refers to a term known as “visibility.” The website visibility.org uses the term to describe a single-family or owner-occupied home designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers.

A house is visitable when it meets three basic requirements:

- one zero-step entrance;
- doors with 32 inches of clear passage space; and
- one bathroom on the main floor you can get into in a wheelchair.

The County’s current zoning ordinance does not include requirements for a minimum number of universal design or visibility features for new housing developments, including age-restricted communities. County policies also do not presently include incentives for including affordable units or universal design features in new housing developments.

HOUSING DIVERSITY

The County currently allows a mix of residential use types in several designated mixed use and planned residential zoning districts as a matter of right. These existing ordinances, however, should be examined for their effectiveness over the years in providing a mix of housing types at various price points. The County should consider other tools such as form-based codes that incorporate a mix of housing and building types to support people of all ages and incomes.

In 2007, the County completed a “Workforce Housing Report,” which included recommendations for a workforce housing unit ordinance which included incentives for residential developers to include a certain number of workforce units in exchange for a density bonus to protect and enhance the developers profit margin. Other possible incentives include waiving review fees and expedited review times. Although the County did undertake several recommendations of the study such as permitting accessory apartments and the renting of up to two rooms in an owner-occupied home, the County ultimately did not adopt a workforce housing unit ordinance.

Accessory dwelling units can also increase the supply of affordable homes, since they are generally located on the same property as a larger principal dwelling and are typically used as rental units. They can also provide a helpful supply of senior housing for people who wish to place their elderly family members in a location that is close to them and affordable. The County already permits accessory apartments by right in some residential districts, but this program could be expanded to all residential zoning districts.



IMPLEMENTATION STEPS:

The following is list of policy recommendations and implementation actions to begin to meet the population's housing needs for all ages and ability levels.

1. Create more lifelong livable housing options.

Encourage developers to incorporate universal design elements, energy efficient features, and range of unit sizes in future residential development by including requirements in the County's Zoning Ordinance. These features will help to enable people to live in their homes longer as they age as well as make them more affordable by reducing utility costs.

2. Allow for multigenerational housing and increase affordable housing supply by allowing accessory dwelling units in more residential zoning districts.

Revise the zoning ordinance to permit accessory dwelling units in all residential zoning districts.

3. Increase the ability for people to stay in their homes and neighborhoods through retrofitting and rehabilitating existing housing.

The County does have limited funds for the HOME housing rehabilitation for situations that meet narrow program qualification criteria. The County should create its own separate program that is dedicated to home repair or modification to allow seniors to live in their existing homes longer, by pursuing CDBG grant funds that can be used for emergency home repair and accessibility modifications.

4. Zoning regulations should be written to allow homes to be built in close proximity to the services that enable people to remain independent as they age.

The County's existing zoning ordinance currently permits mixed use development in certain districts at higher densities. An analysis should be performed to refine these regulations to further encourage mixed use development in the County's designated mixed use activity centers as shown on the County's future recommended land use map in the Comprehensive Plan, such as through a form based code or requiring a maximum separation between affordable or senior targeted housing units and nearby services.

5. Implement an affordable dwelling unit ordinance.

Adopting a workforce dwelling unit ordinance could help to increase the supply of more affordable housing for persons of all ages by offering incentives to private developers to provide these types of units. Such an ordinance could help define workforce unit criteria, income qualifications, and possible incentives.

FOCUS AREA 5

*Education, Employment
and Engagement*



This plan has explored how a supply of safe, affordable housing types, transportation options, access to health care services, and recreational opportunities can improve the quality of life for all County residents.

OBJECTIVE: The County should ensure employment opportunities for all ages, promote a life-long learning environment, and provide multiple opportunities for economic, social and civic engagement.

This plan has explored how a supply of safe, affordable housing types, transportation options, access to health care services, and recreational opportunities can improve the quality of life for all County residents. These same community features can help residents better find and maintain employment, take advantage of educational opportunities and attend social and civic events. The whole community in turn benefits from increased levels of local wealth, more spending in the local economy, and a better-informed citizenry.

Increasing employment, education and social engagement opportunities for people of all ages and abilities in the County implements the following County Comprehensive Plan policies:

- Continue to facilitate nonresidential development to grow and diversify our economy.
- Improve public access to high-speed internet networks.
- Support early childhood education and life-long learning through schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for people of all ages.
- Enhance Isle of Wight's quality of life to retain and recruit a highly skilled workforce for the community.
- Improve public access to high-speed networks.

BACKGROUND

According to a 2019 report issue by the BBC, "How Elders Can Reinvigorate the Workforce," more than one in ten workers will be older than 75 by 2026, and roughly three in ten workers will be between the ages of 65 and 74. A November 2020 Brookings Institute report, "Policies to Improve Workforce Services for Older Americans," attributes the rising numbers of older workers in the American economy to several factors, including increased longevity, better health, the desire to remain active, an increase in the eligibility age for claiming full Social Security benefits, and stagnant wages in recent decades for those at the bottom and middle of the earnings distribution, leaving a larger share of Americans without adequate retirement savings.

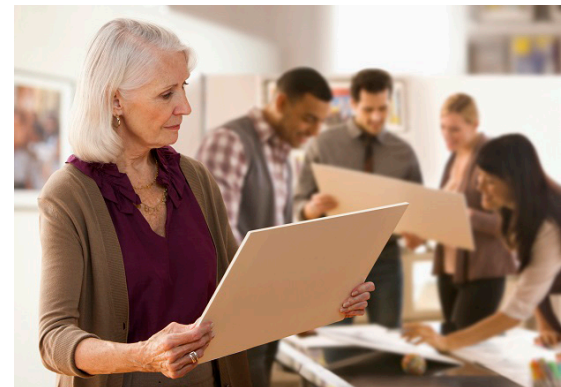


Photo credit: BLS.gov

Despite the reasons for remaining in the job market, there are many advantages to tapping into this large, experienced segment of the local workforce. The same BBC article suggests that age diverse teams are more productive than those of similar ages, suggesting that both older and younger workers learn from each other – benefiting everyone. Older workers also tend to earn more, thus increasing spending levels and invigorating the economy and raising business activity, such as job creation, even further.



Barriers to increasing employment opportunities for older workers, according to the Brookings Institute study, is that these workers' skills may be outdated, making them less attractive to employers, as well as lack of current job search knowledge and skills. Workforce training and educational opportunities can help to overcome these challenges as well as raise the local overall quality of life. Once in place, these resources can enable people to continue to live independently and foster residents' engagement in the community's civic and social life.

IMPLEMENTATION STEPS

1. ENCOURAGE THE INTERGENERATIONAL USE OF PUBLIC FACILITIES FOR A COMMUNITY EDUCATION PROGRAM — The County should establish a program of rotating educational topics such as health, personal finance, job search, keyboarding, interviewing, coding, or home maintenance. These programs should be held at public facilities around the County at different times that are also accessible by public transit.
2. CONTINUE TO EXPAND THE COUNTY'S BROADBAND NETWORK — The County established the Broadband Task Force in 2020 to explore ways to expand its current network to underserved areas of the County. The County could establish a partnership with another service agency such as SSEVA or the Blackwater Public Libraries, to provide access to computers and the internet that is also accessible by public transit. Similarly, these services could be hosted by public facilities around the County that are also accessible by public transit. Investment in technology can translate into increased revenues for the locality, and higher productivity can result in higher wages for workers which are then spent in the local economy.
3. CONSIDER MULTIPLE OUTREACH METHODS TO INCREASE COMMUNITY ENGAGEMENT IN PUBLIC POLICY DECISION MAKING — Although modern communication and commerce are becoming increasingly digital, County leaders and staff should be aware that not all communication platforms are available to everyone in the community. Public surveys and opportunities for input should be provided in several different formats to ensure equitable access to all ages and abilities.





PLANNING REPORT

APPLICATION:

Discussion on the Creation of an Ad Hoc Energy Task Force

DESCRIPTION:

The discussion is to be led by Commissioner Thomas Distefano.