



CONDITIONAL USE PERMIT #02-22

Redbud Run Solar, LLC

Staff Report for the Board of Supervisors

Prepared: April 4, 2022

Staff Contact: M. Tyler Klein, AICP, Senior Planner

This report is prepared by the Frederick County Planning Staff to provide information to the Planning Commission and the Board of Supervisors to assist them in making a decision on this request. It may also be useful to others interested in this zoning matter.

| | <u>Reviewed</u> | <u>Action</u> |
|-----------------------|-----------------|----------------------|
| Planning Commission: | 03/02/22 | Recommended Approval |
| Board of Supervisors: | 04/13/22 | Pending |

EXECUTIVE SUMMARY:

This is a request for a Conditional Use Permit (CUP) to enable construction of an approximately 263-acre +/- utility scale solar power generating facility on RA (Rural Areas) Zoned property in the Stonewall Magisterial District.

In response to feedback received during the Planning Commission discussion and public hearing on March 2, 2022, the *Concept Plan* has been amended to incorporate those comments (dated March 10, 2022). The following revisions have been made:

- Increase the side/rear setbacks to a minimum of 100-feet;
- Added supplemental screening to address concerns of neighboring property owner (included in Landscape Buffer "B" on Sheet 3); and
- Revised section detail and notes for Landscape Buffer "B" to provide 100% evergreen plantings and allowed for varied spacing based on topography and existing conditions (Sheet 3).

Should the Board of Supervisors find this use for a utility-scale solar power generating facility to be appropriate, the Planning Commission has recommended following Conditions of Approval:

1. All review agency comments provided during the review of this application shall be complied with at all times.
2. An engineered site plan, in accordance with the requirements of Article VIII of the Frederick County Zoning Ordinance, shall be submitted to and subject to approval by Frederick County prior to the establishment of the use. The site plan shall address additional regulations for specific uses outlined in §165-204.26 of the Frederick County Zoning Ordinance and be in general conformance with the *Concept Plan*, included with the CUP application, prepared by Greenway Engineering, dated March 10, 2022.
3. Pursuant to Code of Virginia §15.2-2241.2(B), the owner shall comply with the *Decommissioning Plan*, included with the CUP application, prepared by Oriden, and shall update the *Decommissioning Plan* every five (5) years.

4. Within thirty (30) days after the Commercial Operation Date, the Applicant shall make a one-time payment to the County in the amount of Two Hundred and Fifty Thousand Dollars (\$250,000.00). These conditions shall be memorialized in a solar siting agreement with Frederick County, attached as Exhibit A of these Conditions, pursuant to Code of Virginia Section 15.2-2316.6 et seq.
5. Batteries, for the purposes of mass storage of electricity that will eventually be transferred to the grid, shall not be used on the properties subject to this CUP.
6. Access to the site shall be limited to three (3) entrances from Woods Mill Road (Route 660), so to provide one (1) entrance to each solar array land bay. One (1) entrance from Pine Road (Route 661) to be used only during the period of construction shall also be permitted. Approval of the final site entrance locations from Woods Mill Road is subject to review and approval by the Virginia Department of Transportation at time of site plan.
7. Pile-driving of poles for solar arrays shall be limited to 8:00 a.m. to 5:00 p.m. Monday through Friday. All other construction activities are permitted 7:00 a.m. to 7:00 p.m. Monday through Friday and 7:00 a.m. to 5:00 p.m. on Saturday. No construction activities are permitted on Sundays or federal holidays.
8. Any expansion or modification of this land use will require the approval of a new CUP.

Following this public hearing, a decision regarding this Conditional Use Permit application by the Board of Supervisors would be appropriate. The Applicant should be prepared to adequately address all concerns raised by the Board of Supervisors.

Any recommendation for approval also affirms that the proposed solar facility is in accordance with the Comprehensive Plan.

LOCATION: The properties are *generally* located east of Woods Mill Road (Route 660) and north of Pine Road (Route 661), approximately 0.5-mile north of Berryville Pike (Route 7).

MAGISTERIAL DISTRICT: Stonewall

PROPERTY ID NUMBERS: 55-A-136, 55-A-137, 55A-1-19, 55A-1-21, 55-A-135, 55-A-134, 44-A-297, 44-A-294A, and 44-A-295

PROPERTY ZONING & PRESENT USE:

Zoned: RA (Rural Areas)
Land Use: Agricultural, Forestal, Residential* & Vacant

**Existing residential uses on proposed interconnection parcels only.*

ADJOINING PROPERTY ZONING & PRESENT USE:

| | | | |
|--------|------------------|------|------------------------------------|
| North: | RA (Rural Areas) | Use: | Agricultural/Forestal/Residential |
| South: | RA (Rural Areas) | Use: | Agricultural/Forestal/Residential |
| East: | RA (Rural Areas) | Use: | Agricultural/Forestal/ Residential |
| West: | RA (Rural Areas) | Use: | Agricultural/Forestal/ Residential |

PROPOSED USE: This is a request for a Conditional Use Permit (CUP) to enable construction of an approximately 263-acre +/- utility scale solar power generating facility.

REVIEW EVALUATIONS:

Virginia Department of Transportation:

We have completed our review of the Redbud Solar Glare Study. Based on the information provided by Pennoni, it is understood there will be no negative glare impacts to the users of the roadways. We are satisfied with the findings of this report and have no objections to the study. The only outstanding item to address is the previous comment which follows:

The CUP and supplement identifies multiple entrance locations to serve the facility. Some for construction and some to be permanent. The supplement provided details on the sight distance for the proposed locations. You have identified an existing private entrance as “Alternative 1.” The sight distance profile and your supplement clearly show this entrance not meeting minimum sight distance requirements for safe access. In accordance with VDOT Access Management Regulations (24VAC30-73) VDOT will not permit a commercial entrance without meeting minimum sight distance requirements. This entrance needs to be removed from the proposal. There are other locations proposed that meet minimum sight distance requirements and provide safe ingress/egress for those coming to the facility as well as the motorist traveling on the

roadway.

See comment letter dated February 16, 2022.

Frederick County Fire Marshal:

Plans approved by Fire Marshal, Frederick County.

See comment letter dated November 10, 2021.

Frederick County Inspections:

Conditional Use Permit for installation of solar arrays shall be designed per the 2018 Virginia Building Code, U-Utility Use Group.

Solar panel installation not associated with publicly regulated utilities require permits. Plans submitted for permits may require the design to be sealed by a Registered Design Professional licensed in the State of Virginia. Arrays shall be designed for the applicable loads as required in Chapter 16 Virginia Building Code.

Please note the requirements in Chapter 17 of Virginia Building Code for special inspection requirements on the type of structure (soil, concrete etc.).

See comment letter dated October 9, 2021.

Frederick County Public Works:

We offer following comments: We will need to review comprehensive site plan including stormwater and erosion and sediment control. A Frederick County Land disturbance will need to be obtained prior to any site development. The stormwater and erosion and sediment control plans must comply with County Code Chapter 143 and Virginia Law & Regulations.

See comment letter dated December 15, 2021.

Winchester-Frederick County Health Department:

The proposed project will not require an approved water supply or sewage disposal.

See comment letter dated December 18, 2020.

Historic Resources Advisory Board (HRAB):

The Frederick County Historic Resources Advisory Board (HRAB) considered this Conditional Use Permit application during their meeting on November 16, 2021. This application seeks to construct a utility scale solar project located on three parcels of land that total 264 acres. The site is located on the eastern side of Woods Mill Road (Rt 660), north Pine Road (Rt. 661), approximately 0.5-mile north of Berryville Pike (Rt. 7) in Winchester.

Following their review of this application, the HRAB recommended approval of the Conditional Use Permit. The HRAB in their review recommended that the Applicant consider the utilization of methods such as ground penetrating radar (GPR) or terrestrial light detection and ranging (LiDAR) to document the present of archeologic objects or sites.

See comment letter dated December 3, 2021.

Planning and Zoning:

Proposal, Site Configuration & Interconnection

The application proposes use of nine (9) properties totaling approximately 447-acres +/- of RA (Rural Areas) Zoning District property, primarily used for agriculture, to generate photovoltaic (solar) electricity. Approximately 263-acres the subject parcels (four (4) lots – all vacant/agricultural in use) will be utilized (disturbed) for the installation of rows of ground-mounted photovoltaic modules, commonly known as solar panels, other necessary equipment for facility operations, access paths, fencing and landscaping. The solar panels will generate up to 30-megawatts (MW) and will be interconnected, and the power generated by each solar panel will be combined, converted, and the voltage increased to allow delivery of the power to the nearby Redbud-Gaylord overhead transmission lines. The *Impact Analysis* Statement notes that *interconnection applications were submitted to PJM Interconnection (“PJM”) and Rappahannock in July 2020 and studies are in progress. An Interconnection Agreement is expected to be executed for the Project in 2022.*

The proximity of the project to the existing transmission line was a significant factor in the selection of these properties for the development of the facility. The parcels outside for the 263-acres sited with solar arrays will be used only for underground interconnection (as shown on Sheet 3 of the *Concept Plan*).

In protecting the viewshed and mitigate the visual impact to neighboring properties in the vicinity of the property the Applicant has proposed buffering and screening around the perimeter of the property, in addition to maintaining existing mature woodlands (where feasible), to shield view of the facility from adjacent roadways, residences, and other agriculture uses. The proposed landscaping is a 10-foot (FT) wide planting strip (double row of 6-foot-tall evergreen trees) or at least 50-FT of mature woodlands.

Additionally, the project as proposed does not include any batteries for the purposes of mass storage of electricity that will eventually be transferred into the grid. Small batteries will only be utilized as backup for solar tracker motors, substation, and associated equipment. No substation will be required by the project; the power generated will be delivered to the overhead transmission lines through an underground interconnection. All inverters are centrally located to the site, ensuring they do not impact adjoining properties/residences (potential for noise).

Site Access & Transportation:

Vehicular access to the site is proposed from Woods Mill Road (Route 660) to each of the project's three (3) solar array land bays. A temporary construction entrance is proposed from Pine Road (Route 661). The proposed entrances are noted on Sheet 3 of the *Concept Plan*. The final entrance configuration will be determined at time of site plan review and be subject to VDOT review and approval.

Additionally, as part of the Virginia Department of Transportation (VDOT) review, a *Glare Assessment Report*, was provided to analyze potential impacts of glare from the facility (solar arrays) to adjoining roadways (Woods Mill Road & Pine Road). The report notes *the proposed project contains favorable topography with existing vegetation that provides natural concealment while minimizing the nature and extent of viewshed impacts [and] where existing vegetation does not exist or is otherwise insufficient, supplemental landscaping will be planted*. Finally, the report concludes that *coupled with the site's favorable topography, the combination of tree preservation and new landscape plantings will mitigate potential visual impacts at adjacent roads*.

Staff notes Future Route 37 Bypass also bisects the site where solar arrays will be located. The future alignment is shown on the *Concept Plan*, Sheet 3, for reference purposes only. The *Concept Plan* also includes notation regarding how the project is being sited to mitigate future impacts should Route 37 be constructed across the site, including siting of inverter equipment and site access outside of the planned right-of-way and removal of any panels necessary to accommodate the roadway (refer to "Notes" on Sheet 3).

Comprehensive Plan Conformance:

The Comprehensive Plan envisions this area of the County to remain primarily rural in nature and for rural areas to be preserved to ensure the economic viability of agricultural and forestal operations and that those lands are present for the use and enjoyment of future generations (Chapter II – Rural Areas). Further the plan specifically states as it relates to solar that *utility scale solar facilities are typically passive uses with limited impacts to the environment and the rural character. Additionally, implementation of this use can facilitate the preservation of agricultural and rural land for future use once these sites are decommissioned, although the extent to which the use removes agricultural and rural land from current use should also be considered. Utility-scale solar facilities, when located in appropriate areas, can provide opportunities for landowners to recoup value from their property without subdividing. The Code of Virginia also enables localities implementing solar facilities to tax this utility infrastructure through the machinery and tools tax or revenue-share agreements with utility operators, generating additional tax revenue beyond the land use assessment. This additional revenue can help the County offset impacts from residential development* (Chapter IV – Business Development).

The project, as proposed, is in *accordance* with Comprehensive Plan policies. The project will not adversely impact the rural character of the area or the adjoining agricultural and residential uses. The preservation of the underlying land through the solar facility siting agreement (discussed below) maintains the ability to use the property for agriculture in the future if and when the facility is decommissioned. Maintaining the existing topography of the site, utilizing existing vegetation and planting new buffers to screen the facility will preserve the rural viewshed from adjoining properties. Further, the included *Decommissioning Plan* ensures a monetary guarantee to cover associated cost with the restoration of the land to its pre-development state and ability of the land to be used for agricultural purposes again (if so desired) in the future.

Zoning Ordinance Conformance:

Utility-scale solar power generating facilities are a permitted use in the RA (Rural Areas) Zoning District with an approved Conditional Use Permit (CUP). The Board of Supervisors added “utility-scale solar power generating facilities” to the Zoning Ordinance on January 8, 2020, including additional regulations for specific uses. These additional regulations further specify for utility-scale solar power generating facilities to prepare an engineered site plan and enter into a written agreement with Frederick County for facility decommissioning.

The Zoning Ordinance requirements for “Public Utilities” including “utility-scale solar power generating facilities” (§165-204.26) specifies the Zoning Administrator has the authority to determine appropriate setbacks for lots. The Applicant has proposed setbacks for the solar arrays (panels) for this project as follows: a minimum 100-FT side/rear setbacks (from adjoining properties), and a minimum 200-FT setbacks from Agricultural and Forestal Districts. The provided setbacks are noted and shown on Sheet 3 of the *Concept Plan*.

Decommissioning Plan:

A draft *Decommissioning Plan* included with the application materials (Attachment 7 – *Impact Analysis Statement*), satisfies requirements contained in §165-204.26 of the Zoning Ordinance, ensuring that in the event the facility is no longer in operation, the land will be returned to the pre-development condition with all solar infrastructure and related facilities removed, ensuring future viability of the land to resume agricultural operations. Further, proposed condition of approval #3 ensures that Frederick County would maintain a bond that is updated every five (5) years keeping it up to date.

Solar Siting Agreement:

The applicant will also propose consideration before the Board of Supervisors a “solar siting agreement.” Solar siting agreements are outlined in the Code of Virginia § 15.2-2316.7; *the code states any applicant for a solar project, or an energy storage project shall give to the host locality written notice of the applicant's intent to locate in such locality and request a meeting. Such applicant shall meet, discuss, and negotiate a siting agreement with such locality. The siting agreement may include terms and conditions, including (i) mitigation of any impacts of*

such solar project or energy storage project; (ii) financial compensation to the host locality to address capital needs set out in the (a) capital improvement plan adopted by the host locality, (b) current fiscal budget of the host locality, or (c) fiscal fund balance policy adopted by the host locality; or (iii) assistance by the applicant in the deployment of broadband, as defined in § 56-585.1:9, in such locality. The solar siting agreement legislation took effect July 1, 2021 and applies only to projects submitted on or after January 1, 2021.

For the Redbud Run Solar Project, the siting agreement specifies that within thirty (30) after the commercial operation date, the Applicant shall make a one-time payment to the County in the amount of \$250,000.00. These conditions are memorialized in a solar siting agreement with Frederick County, pursuant to Code of Virginia Section 15.2-2316.6 et seq. Ultimately, approval of the siting agreement is an action of the Frederick County Board of Supervisors.

Other Permitting:

In addition to requirements contained in the Zoning Ordinance, the Applicant will pursue a “Permit-by-Rule” (PBR) application through the Virginia Department of Environmental Quality (DEQ). The PBR is a state-level administrative review and approval process for the siting of solar energy facilities in the Commonwealth, including environmental and cultural review and study. One component of the state required PBR review is local jurisdiction “approval” of solar project siting; this CUP application, if approved by the Frederick County Board of Supervisors, would satisfy that requirement enabling proceeding with PBR approval process for this project.

On March 29, 2022, DEQ issued new guidance on post-development stormwater management for solar facilities. DEQ will treat solar panels as “unconnected impervious areas” when calculating post-development water quantity and water quality. This change in the guidance may have a significant impact on the development of solar facilities. Additional acreage may be required at time of final engineering to be developed with stormwater management facilities to handle impervious areas (solar panel) runoff. Additional stormwater facilities with these facilities may impact preservation of existing topography and features on sites approved for solar facilities and solar facility decommissioning and restoring sites to a pre-development condition.

PLANNING COMMISSION SUMMARY AND ACTION FROM 03/02/22 MEETING:

The Planning Commission held a public hearing on the proposed conditional use permit on March 3, 2022. The primary discussion among the Planning Commission was setbacks from adjoining properties, the potential future impact of Route 37 Bypass, interconnection to the overhead transmission lines and Comprehensive Plan conformance. One (1) member of the public spoke in support of the application; the speaker also expressed a desire for the developer to work with her to ensure sufficient screening from her property. The Planning Commission unanimously (Commissioner Manuel – absent) recommended approval of the CUP application.

STAFF CONCLUSION FOR THE 04/13/22 BOARD OF SUPERVISORS MEETING:

This is a request for a Conditional Use Permit (CUP) to enable construction of an approximately

263-acre +/- utility scale solar power generating facility on RA (Rural Areas) Zoned property in the Stonewall Magisterial District.

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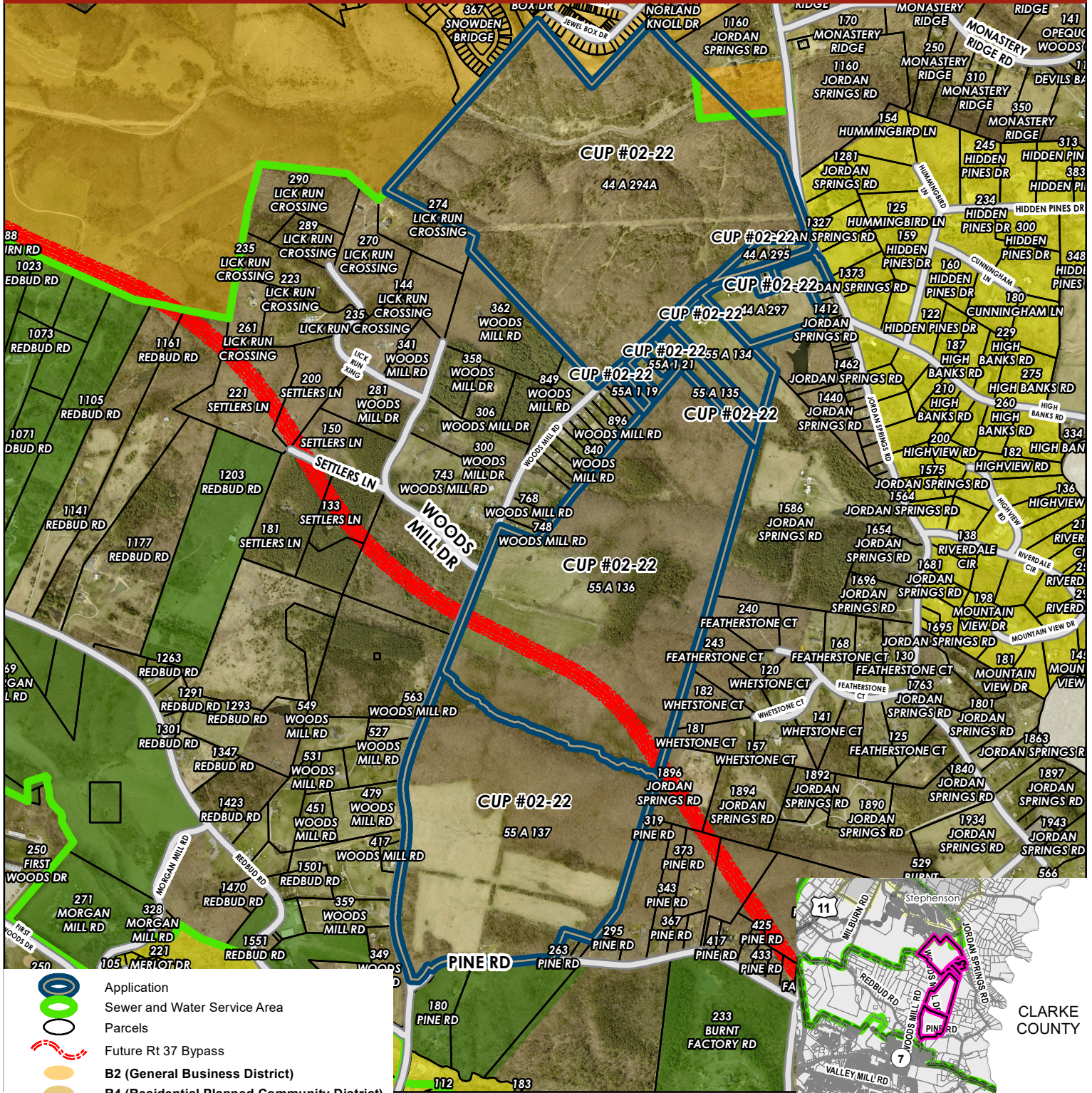
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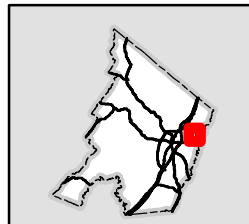
CUP # 02 - 22: Redbud Run Solar, LLC

PINs: 55 - A - 136, 55 - A - 137, 55A - 1 - 19, 55A - 1 - 21, 55 - A - 135,
55 - A - 134, 44 - A - 297, 44 - A - 294A, 44 - A - 295

Utility Scale Solar Facility Zoning Map



- Application
- Sewer and Water Service Area
- Parcels
- Future Rt 37 Bypass
- B2 (General Business District)
- R4 (Residential Planned Community District)
- RP (Residential Performance District)
- Agricultural & Forestal Districts
- Red Bud



CLARKE COUNTY

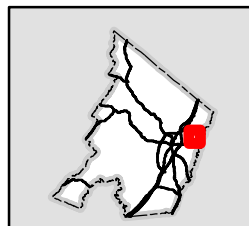
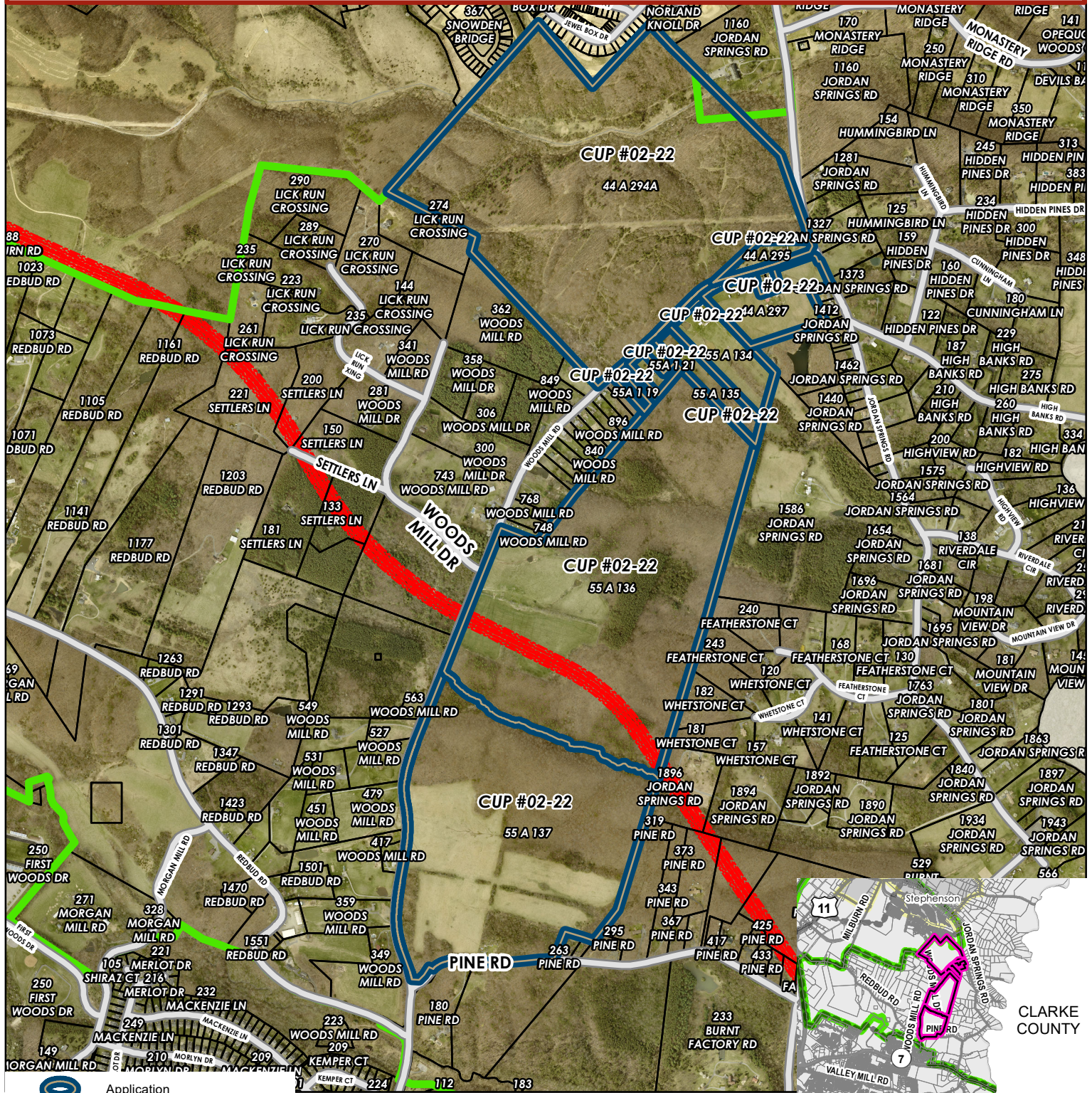


0 800 1,600 3,200 Feet

CUP # 02 - 22: Redbud Run Solar, LLC

PINs: 55 - A - 136, 55 - A - 137, 55A - 1 - 19, 55A - 1 - 21, 55 - A - 135,
55 - A - 134, 44 - A - 297, 44 - A - 294A, 44 - A - 295

Utility Scale Solar Facility Location Map



CLARKE COUNTY





Submittal Deadline _____

P/C Meeting _____

BOS Meeting _____

**APPLICATION FOR CONDITIONAL USE PERMIT
FREDERICK COUNTY, VIRGINIA**

1. Applicant (check one): Property Owner ☐ Other ☒

NAME: Redbud Run Solar LLC Attn: Gary Verkleeren

ADDRESS: 106 Isabella Street, Suite 400, Pittsburgh, PA 15212

TELEPHONE AND EMAIL ADDRESS:

(412) 915-9017; Gary.Verkleeren@OridenPower.com

2. Please list all owners, occupants, or parties in interest of the property:

JRW Properties & Rentals Inc., Ronald A. and Mary C. Lee, Allen R. Conner,

Robert L. Williams, William M. Rexrode, Tonie Wallace

3. The property is located at: (please give exact directions and include the route number of your road or street)

The property is located east of Woods Mill Road (VA Route 660) and north of Pine

Road (VA Route 661), approximately 0.5-mile north of Berryville Pike (VA Route 7).

4. The property has a road frontage of _____* feet and a depth of _____* feet and consists of 477.42 acres. (Please be exact)

*Please see Concept Plan for road frontages and property depths.

5. The property is owned by See Attachment 1 as evidenced by deed from _____ (previous owner) recorded in deed book no. _____ on page _____, as recorded in the records of the Clerk of the Circuit Court, County of Frederick.

6. Property Identification Number (P.I.N.) 55-A-136, 55-A-137, 55A-1-19, 55A-1-21, 55-A-135, 55-A-134, 44-A-297, 44-A-294A, 44-A-295
Magisterial District Stonewall
Current Zoning RA, Rural Areas

7. Adjoining Property:

| | <u>USE</u> | <u>ZONING</u> |
|-------|----------------|---------------|
| North | See Sheet 2 of | |
| East | Concept Plan. | |
| South | | |
| West | | |

8. The type of use proposed is (**consult with the Planning Dept. before completing**):
Utility-scale solar power generating facility

9. Describe, if applicable, any new buildings to-be-constructed associated with this use:
No new buildings are proposed to be constructed. Structures associated with the proposed use include mounted photovoltaic solar panels, skid-mounted inverters/transformers, and underground medium voltage interconnection lines.

10. The following are all of the individuals, firms, or corporations owning property adjacent to both sides and rear and in front of (across street from) the property where the requested use will be conducted. (Continue on back if necessary.)
These people will be notified by mail of this application:

| Name and Property Identification Number | Address |
|-----------------------------------------|---------|
| Name See Attachment 2. | |
| Property # | |
| Name | |
| Property # | |
| Name | |
| Property # | |
| Name | |
| Property # | |
| Name | |
| Property # | |
| Name | |
| Property # | |

11. Please attach a sketch of the property. Show proposed and/or existing structures on the property, including measurements to all property lines, site access, public and private roads, and any other pertinent information specific to the desired use (such as parking). A recorded plat is the best thing to use for this if available.
12. Please attach a written description of the proposed use including (as appropriate): hours of operation, number of employees, number of customers anticipated, outdoor storage, and any other pertinent information to address additional regulation for specific uses contained in §165-204 of the Frederick County Zoning Ordinance.

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

*All owners listed on the property record shall sign the application.

Signature of Applicant SEE ATTACHED SIGNATURE SHEET

Signature of Owner(s) SEE ATTACHED SIGNATURE SHEETS

Owners' Mailing Address SEE ATTACHED SIGNATURE SHEETS

Owners' Telephone No. SEE ATTACHED SIGNATURE SHEETS

TO BE COMPLETED BY THE ZONING ADMINISTRATOR:

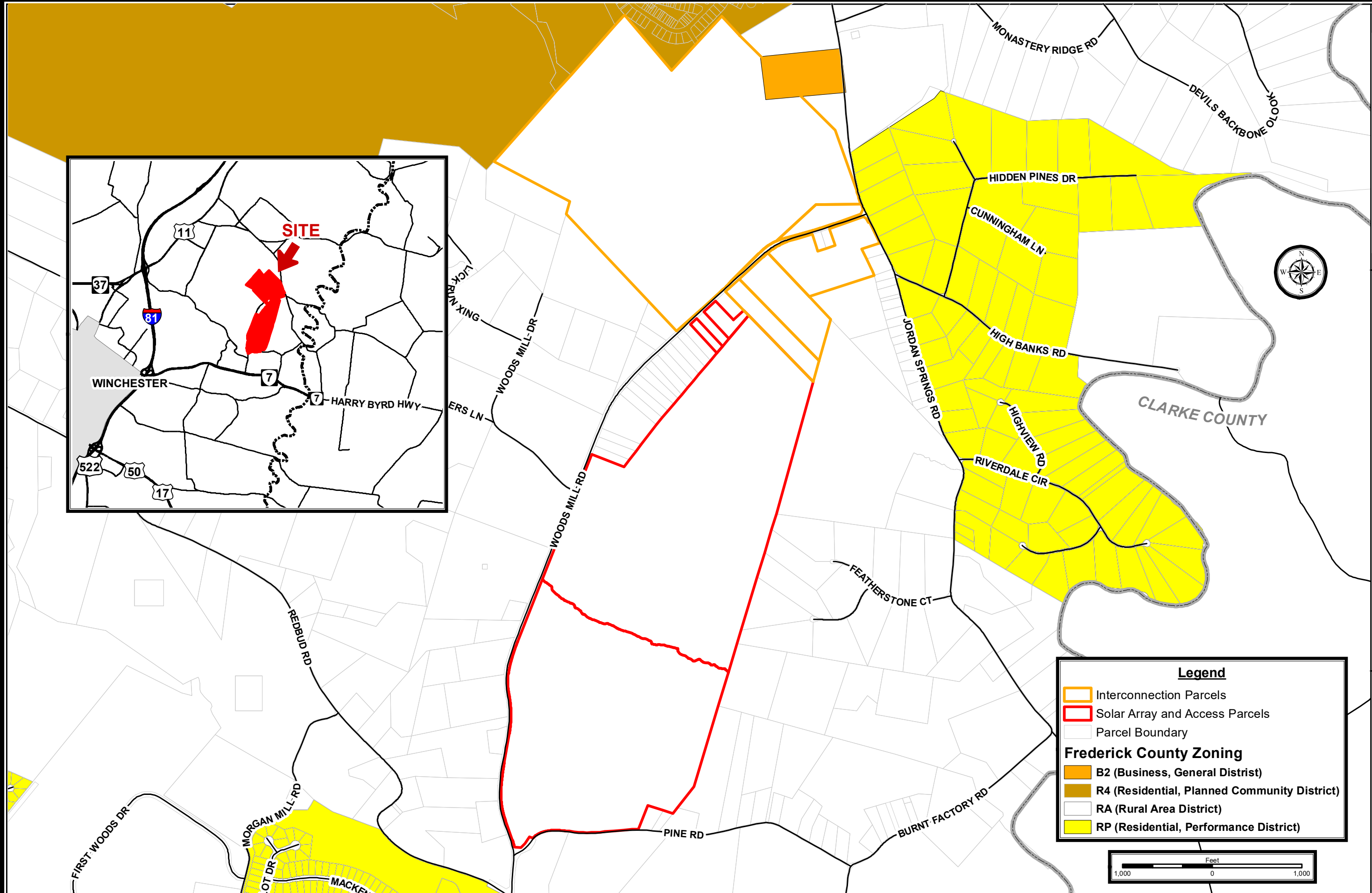
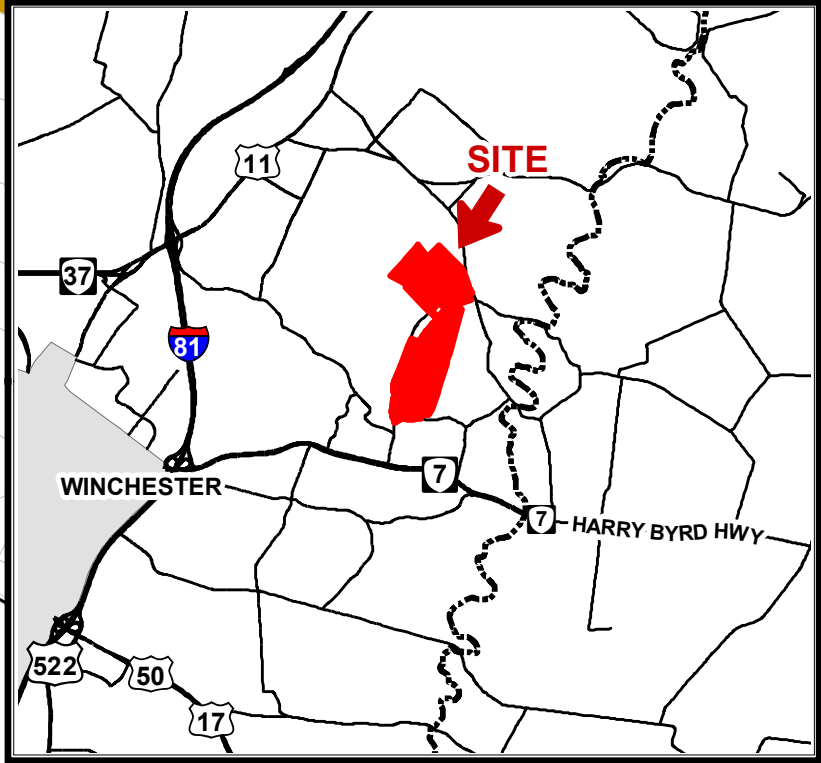
USE CODE: _____

RENEWAL DATE: _____

| Project Parcels | | | | | Project Component |
|-----------------|------------------------------|---------|--------|-------------------------|-------------------------------------------------------------|
| Tax Map Number | Owner | Acreage | Zoning | Record/ Instrument # | |
| 55-A-136 | JRW Properties & Rentals Inc | 128.99 | RA | DB591, PG630 | Solar Arrays and Equipment |
| 55-A-137 | JRW Properties & Rentals Inc | 134.00 | RA | DB591, PG630 | Solar Arrays and Equipment |
| 55A-1-19 | JRW Properties & Rentals Inc | 0.94 | RA | DB596, PG515 | Facility Access |
| 55A-1-21 | Robert L. Williams | 2.57 | RA | Inst. #030019313 | Facility Access |
| 55-A-135 | Ronald A. & Mary C. Lee | 6.00 | RA | DB867, PG1843 | Underground Interconnection Line |
| 55-A-134 | Allen R. Conner | 11.00 | RA | DB804, PG207 | Underground Interconnection Line |
| 44-A-297 | Allen R. Conner | 13.78 | RA | DB804, PG207 | Underground Interconnection Line |
| 44-A-294A | Tonie Wallace Aitken | 176.25 | RA | Inst. #02000485 | Underground Interconnection Line / Point of Interconnection |
| 44-A-295 | William M. Rexrode | 3.89 | RA | Inst #160002648 | Underground Interconnection Line |

| ID | Tax Map Number | Owner | Mailing Address | City | State | Zip | Assessed Acreage | Zoning |
|----|----------------|------------------------------------------------------------------|------------------------------|---------------|-------|-------|------------------|--------|
| 1 | 55A 3 A | WHITACRE ROLAND W, WHITACRE LINDA W | 1392 JORDAN SPRINGS RD | STEPHENSON | VA | 22656 | 0.9 | RA |
| 2 | 55A 2 A | PERRY PATRICIA D | 1466 JORDAN SPRINGS RD | STEPHENSON | VA | 22656 | 8.46 | RA |
| 3 | 56 A 3 | HALLAM BENJAMIN P, HALLAM JEAN JOHNSON | 1586 JORDAN SPRINGS RD | STEPHENSON | VA | 22656 | 54 | RA |
| 4 | 55 5 5 | HAWKINS CYNTHIA D | 240 FEATHERSTONE CT | STEPHENSON | VA | 22656 | 5.07 | RA |
| 5 | 55 5 6 | FRAWLEY EDWARD J TRUSTEE, FRAWLEY ROSE MARIE TRUSTEE | 243 FEATHERSTONE CT | STEPHENSON | VA | 22656 | 5.12 | RA |
| 6 | 55 5 8 | HARTMAN ERIN M, HARTMAN BRIAN R | 172 WHETSTONE CT | STEPHENSON | VA | 22656 | 5.04 | RA |
| 7 | 55 5 9 | PULLEN LARRY R, PULLEN ELIZABETH M TRUSTEES | 182 WHETSTONE CT | STEPHENSON | VA | 22656 | 5.13 | RA |
| 8 | 55 5 10 | BROWN BETTY | 181 WHETSTONE CT | STEPHENSON | VA | 22656 | 5.15 | RA |
| 9 | 55 8 1 | MITCHELL WALTER NEAL, MITCHELL ELIZABETH MARIE | 1896 JORDAN SPRINGS RD | STEPHENSON | VA | 22656 | 10 | RA |
| 10 | 55 A 137E | ADAMKIEWICZ SUSAN LYNN TRUSTEE, SUSAN LYNN ADAMKIEWICZ REV TRUST | 319 PINE RD | STEPHENSON | VA | 22656 | 7.51 | RA |
| 11 | 55 A 137D | MCGUIRE MICHAEL A, MCGUIRE NORMA J | 295 PINE RD | STEPHENSON | VA | 22656 | 3 | RA |
| 12 | 55 A 137A | TRUSTEES OF EMMANUEL UNITED, METHODIST CHURCH | 2732 MARTINSBURG PIKE | STEPHENSON | VA | 22656 | 0 | RA |
| 13 | 55 A 137C | BENNETT GEORGE P, BENNETT JUDITH A | 263 PINE RD | STEPHENSON | VA | 22656 | 1.01 | RA |
| 14 | 55 A 138 | SEMPELES STEPHANIE M | 180 PINE RD | STEPHENSON | VA | 22656 | 21.5 | RA |
| 15 | 55 A 139 | SEMPELES STEPHANIE M | 180 PINE RD | STEPHENSON | VA | 22656 | 7.31 | RA |
| 16 | 55 A 109A | JENKINS BRYAN SCOTT | 1605 HANDLEY AVE | WINCHESTER | VA | 22601 | 9.44 | RA |
| 17 | 55 A 110 | JENKINS BETTE P | 1712 REAVES ST | WINCHESTER | VA | 22601 | 1.75 | RA |
| 18 | 55 A 111 | JENKINS JEFFREY G | 1631 REDBUD RD | WINCHESTER | VA | 22603 | 6.18 | RA |
| 19 | 55 A 112 | JENKINS GARLAND W, JENKINS BARBARA D | 393 WOODS MILL RD | STEPHENSON | VA | 22656 | 10.03 | RA |
| 20 | 55 A 112A | PEARSON WYATT G, PEARSON ARIELLE J | 417 WOODS MILL RD | STEPHENSON | VA | 22656 | 1.11 | RA |
| 21 | 55 A 124 | MENGEL THOMAS C TRUSTEE, MENGEL RACHAEL E TRUSTEE | 479 WOODS MILL RD | STEPHENSON | VA | 22656 | 7.3 | RA |
| 22 | 55 A 125 | SIMKHOVITCH RONALD SR, SIMKHOVITCH VELMA | 2657 MARTINSBURG PIKE | STEPHENSON | VA | 22656 | 5 | RA |
| 23 | 55 A 126A | SPEVAK IDA M, SPEVAK SAMUEL I | PO BOX 3750 | WINCHESTER | VA | 22604 | 2.45 | RA |
| 24 | 55 A 127B | DUNLAP EDITH M | PO BOX 73 | STEPHENSON | VA | 22656 | 1.12 | RA |
| 25 | 55 A 127C | FREDERICK COUNTY VIRGINIA | 107 N KENT ST | WINCHESTER | VA | 22601 | 0.05 | RA |
| 26 | 55 A 127 | J R W PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER | VA | 22601 | 24.98 | RA |
| 27 | 55 7 4 | JOHNS M LESLIE JR | 250 DEVILS BACKBONE OVERLOOK | STEPHENSON | VA | 22656 | 23.22 | RA |
| 28 | 55 7 3 | COMER RONALD L | 743 WOODS MILL RD | STEPHENSON | VA | 22656 | 20.04 | RA |
| 29 | 55A 1 1 | WOHL HEIDI | 2566 E PAULSTAN CT | SARASOTA | FL | 34237 | 1 | RA |
| 30 | 55A 1 2 | MYERS NATHAN LEE, MYERS KELSEY MARIE | 758 WOODS MILL RD | STEPHENSON | VA | 22656 | 0 | RA |
| 31 | 55A 1 3 | ATKINSON JANET | 768 WOODS MILL RD | STEPHENSON | VA | 22656 | 0 | RA |
| 32 | 55A 1 4 | MUNDY MATTHEW W, MUNDY MELODY D | 776 WOODS MILL RD | STEPHENSON | VA | 22656 | 4.5 | RA |
| 33 | 55A 1 8 | WELCH KEVIN J | 830 WOODS MILL RD | STEPHENSON | VA | 22656 | 1.28 | RA |
| 34 | 55A 1 9 | WELCH KEVIN J | 830 WOODS MILL RD | STEPHENSON | VA | 22656 | 1.06 | RA |
| 35 | 55A 1 10 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS CITY | VA | 22655 | 0 | RA |
| 36 | 55A 1 11 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS CITY | VA | 22655 | 0 | RA |
| 37 | 55A 1 12 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS CITY | VA | 22655 | 0 | RA |
| 38 | 55A 1 13 | FELTNER JEFFREY A, FELTNER ANTINEA R | 870 WOODS MILL RD | STEPHENSON | VA | 22656 | 1.25 | RA |
| 39 | 55A 1 14 | RUSSELL SHARON G, RUSSELL REBEKAH L | PO BOX 115 | WHITE POST | VA | 22663 | 1.2 | RA |
| 40 | 55A 1 15 | FRICKE JOHN C JR, FRICKE CLARA M | 886 WOODS MILL RD | STEPHENSON | VA | 22656 | 0 | RA |
| 41 | 55A 1 16 | BORROR RANDY DAVID | 896 WOODS MILL RD | STEPHENSON | VA | 22656 | 0 | RA |
| 42 | 55A 1 17 | NEWLIN TINA | 906 WOODS MILL RD | STEPHENSON | VA | 22656 | 1.11 | RA |
| 43 | 55A 1 18 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER | VA | 22601 | 1.08 | RA |
| 44 | 55A 1 20 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER | VA | 22601 | 0 | RA |
| 45 | 55A 1 22A | LEE RONALD ALLEN, LEE MARY CATHERINE | 1947 MARTINSBURG PIKE | WINCHESTER | VA | 22603 | 1 | RA |

[illegible]



Legend

Interconnection Parcels

Solar Array and Access Parcels

Parcel Boundary

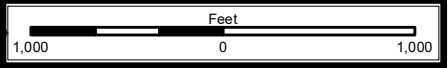
Frederick County Zoning

B2 (Business, General District)

R4 (Residential, Planned Community District)

RA (Rural Area District)

RP (Residential, Performance District)



1971

FND

GREENWAY

ENGINEERING

Greenway Engineering, Inc.

151 Windy Hill Lane

Winchester, VA 22602

T: 540.662.4185

F: 540.722.4185

www.GreenwayEng.com

REDBUD SOLAR FACILITY

ZONING & LOCATION EXHIBIT

FREDERICK COUNTY, VIRGINIA

STONEWALL MAGISTERIAL DISTRICT

DATE: 01-18-2022

PROJECT ID: 08440

DESIGNED BY: MEW

SCALE: 1 inch = 1,000 feet

WINCHESTER, VA | ASHBURN, VA | MARTINSBURG, WV

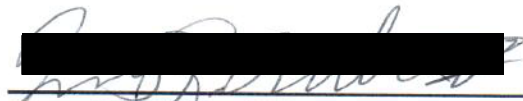
REDBUD RUN SOLAR LLC

Applicant's Mailing Address: 106 Isabella Street, Suite 100, Pittsburgh, PA 15212
Applicant's Phone Number: (412) 235-9110

Owner Signature Page

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

Tax Map: 55-A-136, 55-A-137, 55A-1-19



James R. Wilkins, III

Title: President of JRW Properties & Rentals, Inc.

Owner's Mailing Address: 11 _____

Redbud Run Solar Project
CUP Application Form

Owner Signature Page


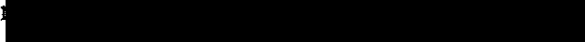
I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

Tax Map: 55A-1-21

 
Robert L. Williams

Owner's Mailing Address: 9

Owner's Telephone Number

Owner Signature Page

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted subject to the following conditions: (1) Landowner to be notified at least 24 hours in advance of inspection (2) Vehicle access for inspection is limited to the paved parking/gravel driveway area (3) Access for inspection of the property beyond the vehicle parking area shall be by foot.

Tax Map: 55-A-135



Ronald A. Lee



Mary C. Lee

Owners' Mailing Address: 1517 [REDACTED] [REDACTED], VA 22662

Owners' Telephone Number: (540) 662-1662

Owner Signature Page

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

Tax Map: 55-A-134, 44-A-297


[Redacted signature line]
Allen R. Conner

Owner's Mailing Address: 10 [Redacted address line]

Owner's Telephone Number: (540) 660-1850 [Redacted phone number]

Redbud Run Solar Project
CUP Application Form

Owner Signature Page

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

Tax Map: 44-A-294A


Toni 

Owner's Mailing Address: 3  03

Owner's Telephone Number: (540) 931-4662 

Redbud Run Solar Project
CUP Application Form

Owner Signature Page

I (we), the undersigned, do hereby respectfully make application and petition the governing body of Frederick County, Virginia to allow the use described in this application. I understand that the sign issued to me when this application is submitted must be placed at the front property line at least seven (7) days prior to the first public hearing and maintained so as to be visible until after the Board of Supervisors' public hearing. Your application for a Conditional Use Permit authorizes any member of the Frederick County Planning Commission, Board of Supervisors or Planning and Development Department to inspect your property where the proposed use will be conducted.

Tax Map: 44-A-295



William M. Rexrode

Owner's Mailing Address:

Owner's Telephone Number:



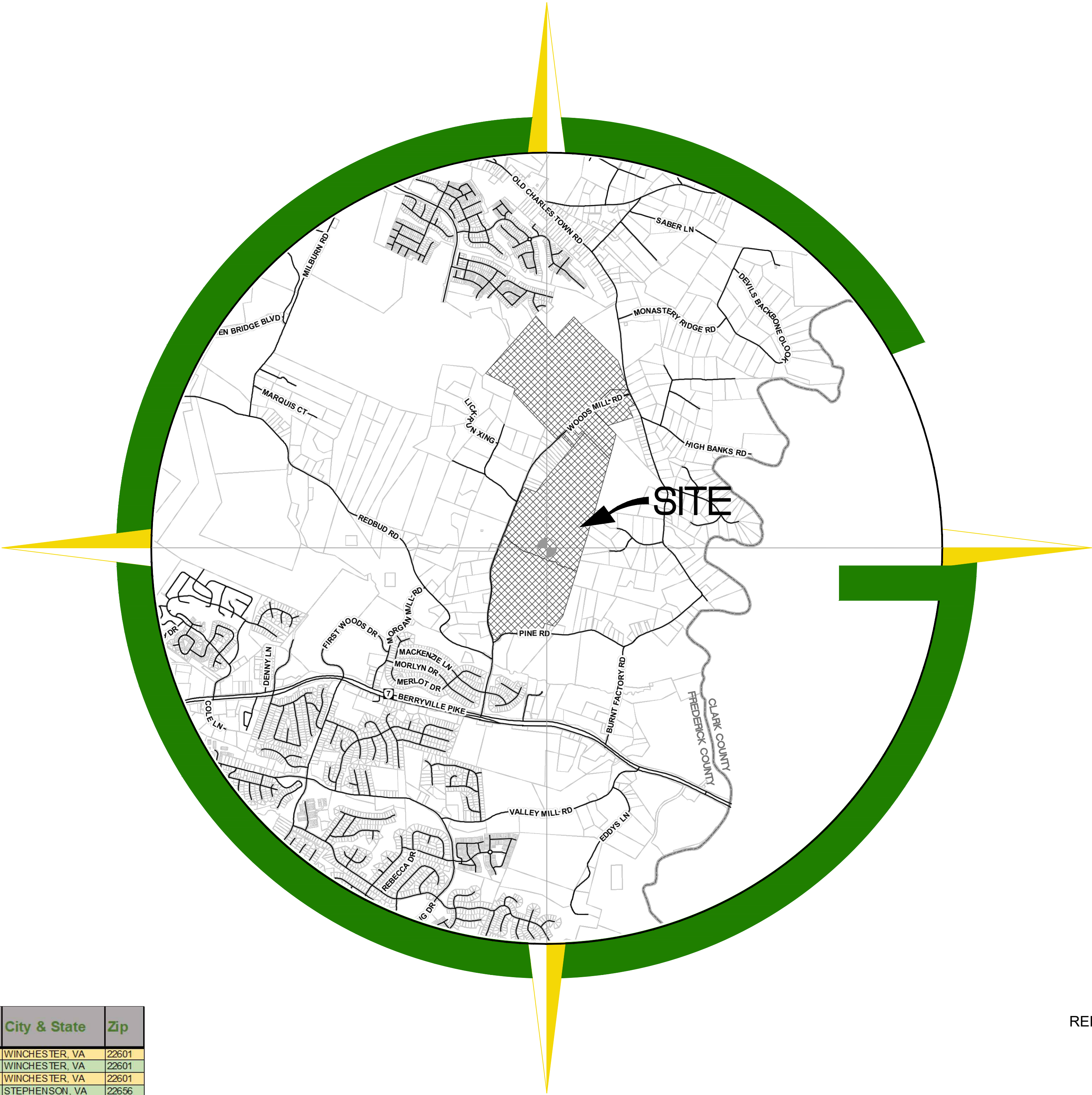
| Plan Revisions | | |
|----------------|------------|---------------------|
| Revision | Date | Comment |
| 1 | 03/10/2022 | PER COUNTY COMMENTS |
| | | |
| | | |
| | | |

REDBUD RUN SOLAR PROJECT

CONCEPT PLAN

STONEWALL MAGISTERIAL DISTRICT
FREDERICK COUNTY

| Sheet List Table | | |
|------------------|-------------|----------------------------|
| Sheet Number | Revision No | Sheet Title |
| 1 | 1 | Cover Sheet |
| 2 | | Project Area |
| 3 | 1 | Concept Development Plan |
| 4 | | Sight Distance Evaluations |
| 5 | | Sight Distance Evaluations |
| 6 | | Sight Distance Evaluations |



OWNERS

| Owner | Mailing Address | City & State | Zip |
|------------------------------------------|------------------------|----------------|-------|
| JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 |
| JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 |
| JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 |
| WILLIAMS ROBERT L | 946 WOODS MILL RD | STEPHENSON, VA | 22656 |
| LEE RONALD A, LEE MARY C | 1947 MARTINSBURG PIKE | WINCHESTER, VA | 22603 |
| CONNER ALLEN R | 1010 WOODSMILL RD | STEPHENSON, VA | 22656 |
| CONNER ALLEN R | 1010 WOODSMILL RD | STEPHENSON, VA | 22656 |
| REXRODE WILLIAM M | 1099 WOODS MILL RD | STEPHENSON, VA | 22656 |
| AITKEN TONIE WALLACE C/O TONIE M WALLACE | 1160 JORDAN SPRINGS RD | STEPHENSON, VA | 22656 |

DEVELOPER

REDBUD RUN SOLAR LLC, C/O ORIDEN LLC
106 ISABELLA STREET, SUITE 400
PITTSBURGH, PA
412-235-9112

VICINITY MAP

SCALE: 1" = 2000'

151 Windy Hill Lane
Winchester, Virginia 22602
Telephone: (540) 662-4185
Fax: (540) 722-9528
www.greenwayeng.com

**GREENWAY**
ENGINEERING

PROUDLY SERVING VIRGINIA & WEST VIRGINIA
OFFICES IN WINCHESTER, VA & MARTINSBURG, WV

COVER SHEET

REDBUD RUN SOLAR PROJECT

STONEWALL MAGISTERIAL DISTRICT
FREDERICK COUNTY

| | |
|--------------|-----------|
| DATE: | 1/18/2022 |
| SCALE: | AS SHOWN |
| DESIGNED BY: | CM/JJ |
| FILE NO. | 08440 |
| SHEET 1 OF 6 | |

PROJECT AREA PARCEL TABLE

| ID | Tax Map Number | Owner | Mailing Address | City & State | Zip | Assessed Acreage | Zoning |
|----|----------------|------------------------------------------|------------------------|----------------|-------|------------------|--------|
| A | 55 A 137 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 | 128.99 | RA |
| B | 55 A 136 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 | 134.00 | RA |
| C | 55A 1 19 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER, VA | 22601 | 0.00 | RA |
| D | 55A 1 21 | WILLIAMS ROBERT L | 946 WOODS MILL RD | STEPHENSON, VA | 22656 | 2.57 | RA |
| E | 55 A 135 | LEE RONALD A, LEE MARY C | 1947 MARTINSBURG PIKE | WINCHESTER, VA | 22603 | 6.00 | RA |
| F | 55 A 134 | CONNER ALLEN R | 1010 WOODSMILL RD | STEPHENSON, VA | 22656 | 11.00 | RA |
| G | 44 A 297 | CONNER ALLEN R | 1010 WOODSMILL RD | STEPHENSON, VA | 22656 | 13.78 | RA |
| H | 44 A 295 | REXRODE WILLIAM M | 1099 WOODS MILL RD | STEPHENSON, VA | 22656 | 3.89 | RA |
| I | 44 A 294A | AITKEN TONIE WALLACE C/O TONIE M WALLACE | 1160 JORDAN SPRINGS RD | STEPHENSON, VA | 22656 | 176.25 | RA |

ADJOINER PARCEL TABLE

| ID | Tax Map Number | Owner | Mailing Address | City & State | Zip | Assessed Acreage | Zoning |
|----|----------------|------------------------------------------------------------------|------------------------------|-----------------|-------|------------------|--------|
| 1 | 55A 3 A | WHITACRE ROLAND W, WHITACRE LINDA W | 1392 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 0.90 | RA |
| 2 | 55A 2 A | PERRY PATRICIA D | 1466 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 8.46 | RA |
| 3 | 56 A 3 | HALLAM BENJAMIN P, HALLAM JEAN JOHNSON | 1586 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 54.00 | RA |
| 4 | 55 5 5 | HAWKINS CYNTHIA D | 240 FEATHERSTONE CT | STEPHENSON VA | 22656 | 5.07 | RA |
| 5 | 55 5 6 | FRAWLEY EDWARD J TRUSTEE, FRAWLEY ROSE MARIE TRUSTEE | 243 FEATHERSTONE CT | STEPHENSON VA | 22656 | 5.12 | RA |
| 6 | 55 5 8 | HARTMAN ERIN M, HARTMAN BRIAN R | 172 WHETSTONE CT | STEPHENSON VA | 22656 | 5.04 | RA |
| 7 | 55 5 9 | PULLEN LARRY R, PULLEN ELIZABETH M TRUSTEES | 182 WHETSTONE CT | STEPHENSON VA | 22656 | 5.13 | RA |
| 8 | 55 5 10 | BROWN BETTY | 181 WHETSTONE CT | STEPHENSON VA | 22656 | 5.15 | RA |
| 9 | 55 8 1 | MITCHELL WALTER NEAL, MITCHELL ELIZABETH MARIE | 1896 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 10.00 | RA |
| 10 | 55 A 137E | ADAMKIEWICZ SUSAN LYNN TRUSTEE, SUSAN LYNN ADAMKIEWICZ REV TRUST | 319 PINE RD | STEPHENSON VA | 22656 | 7.51 | RA |
| 11 | 55 A 137D | MCGUIRE MICHAEL A, MCGUIRE NORMA J | 295 PINE RD | STEPHENSON VA | 22656 | 3.00 | RA |
| 12 | 55 A 137A | TRUSTEES OF EMMANUEL UNITED, METHODIST CHURCH | 2732 MARTINSBURG PIKE | STEPHENSON VA | 22656 | 0.00 | RA |
| 13 | 55 A 137C | BENNETT GEORGE P, BENNETT JUDITH A | 263 PINE RD | STEPHENSON VA | 22656 | 1.01 | RA |
| 14 | 55 A 138 | SEMPELES STEPHANIE M | 180 PINE RD | STEPHENSON VA | 22656 | 21.50 | RA |
| 15 | 55 A 139 | SEMPELES STEPHANIE M | 180 PINE RD | STEPHENSON VA | 22656 | 7.31 | RA |
| 16 | 55 A 109A | JENKINS BRYAN SCOTT | 1695 HANLEY AVE | WINCHESTER VA | 22601 | 9.44 | RA |
| 17 | 55 A 110 | JENKINS BETTIE P | 1712 REAVES ST | WINCHESTER VA | 22601 | 1.75 | RA |
| 18 | 55 A 111 | JENKINS JEFFREY G | 1631 REDBUD RD | WINCHESTER VA | 22603 | 6.18 | RA |
| 19 | 55 A 112 | JENKINS GARLAND W, JENKINS BARBARA D | 393 WOODS MILL RD | STEPHENSON VA | 22656 | 10.03 | RA |
| 20 | 55 A 112A | PEARSON WYATT G, PEARSON ARELLE J | 417 WOODS MILL RD | STEPHENSON VA | 22656 | 1.11 | RA |
| 21 | 55 A 124 | MENGEL THOMAS C TRUSTEE, MENGEL RACHAEL E TRUSTEE | 479 WOODS MILL RD | STEPHENSON VA | 22656 | 7.30 | RA |
| 22 | 55 A 125 | SIMKHOVITCH RONALD SR, SIMKHOVITCH VELMA | 2657 MARTINSBURG PIKE | STEPHENSON VA | 22656 | 5.00 | RA |
| 23 | 55 A 126A | SPEVAK IDA M, SPEVAK SAMUEL I | PO BOX 3750 | WINCHESTER VA | 22604 | 2.45 | RA |
| 24 | 55 A 127B | DUNLAP EDITH M | PO BOX 73 | STEPHENSON VA | 22656 | 1.12 | RA |
| 25 | 55 A 127C | FREDERICK COUNTY VIRGINIA | 107 N KENT ST | WINCHESTER VA | 22601 | 0.05 | RA |
| 26 | 55 A 127 | J R W PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER VA | 22601 | 24.98 | RA |
| 27 | 55 7 4 | JOHNS M LESLIE JR | 250 DEVILS BACKBONE OVERLOOK | STEPHENSON VA | 22656 | 23.22 | RA |
| 28 | 55 7 3 | COMER RONALD L | 743 WOODS MILL RD | STEPHENSON VA | 22656 | 20.04 | RA |
| 29 | 55A 1 1 | WOHL HEIDI | 2566 E PAULSTAN CT | SARASOTA FL | 34237 | 1.00 | RA |
| 30 | 55A 1 2 | MYERS NATHAN LEE, MYERS KELSEY MARIE | 758 WOODS MILL RD | STEPHENSON VA | 22656 | 0.00 | RA |
| 31 | 55A 1 3 | ATKINSON JANET | 768 WOODS MILL RD | STEPHENSON VA | 22656 | 0.00 | RA |
| 32 | 55A 1 4 | MUNDY MATTHEW W, MUNDY MELODY D | 776 WOODS MILL RD | STEPHENSON VA | 22656 | 4.50 | RA |
| 33 | 55A 1 8 | WELCH KEVIN J | 830 WOODS MILL RD | STEPHENSON VA | 22656 | 1.28 | RA |
| 34 | 55A 1 9 | WELCH KEVIN J | 830 WOODS MILL RD | STEPHENSON VA | 22656 | 1.06 | RA |
| 35 | 55A 1 10 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS QTY VA | 22655 | 0.00 | RA |
| 36 | 55A 1 11 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS QTY VA | 22655 | 0.00 | RA |
| 37 | 55A 1 12 | SHAFFER JEANNETTE P, DORSEY JEFFREY S | 142 BUCKINGHAM DR | STEPHENS QTY VA | 22655 | 0.00 | RA |
| 38 | 55A 1 13 | FELTNER JEFFREY A, FELTNER ANTINEA R | 870 WOODS MILL RD | STEPHENSON VA | 22656 | 1.25 | RA |
| 39 | 55A 1 14 | RUSSELL SHARON G, RUSSELL REBEKAH L | PO BOX 115 | WHITE POST VA | 22663 | 1.20 | RA |
| 40 | 55A 1 15 | FRICKE JOHN C JR, FRICKE CLARA M | 886 WOODS MILL RD | STEPHENSON VA | 22656 | 0.00 | RA |
| 41 | 55A 1 16 | BORROR RANDY DAVID | 896 WOODS MILL RD | STEPHENSON VA | 22656 | 0.00 | RA |
| 42 | 55A 1 17 | NEWLIN TINA | 906 WOODS MILL RD | STEPHENSON VA | 22656 | 1.11 | RA |
| 43 | 55A 1 18 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER VA | 22601 | 1.08 | RA |
| 44 | 55A 1 20 | JRW PROPERTIES & RENTALS INC | 13 S LOUDOUN ST | WINCHESTER VA | 22601 | 0.00 | RA |
| 45 | 55A 1 22A | LEE RONALD ALLEN, LEE MARY CATHERINE | 1947 MARTINSBURG PIKE | WINCHESTER VA | 22603 | 1.00 | RA |
| 46 | 44 A 296 | CONNER HAROLD R, CONNER ALLEN R | 1010 WOODS MILL RD | STEPHENSON VA | 22656 | 0.46 | RA |
| 47 | 44 A 297A | CONNER ALLEN R | 1010 WOODS MILL RD | STEPHENSON VA | 22656 | 0.37 | RA |
| 48 | 55 A 133 | HART DOROTHY L | 897 WOODS MILL RD | STEPHENSON VA | 22656 | 1.16 | RA |
| 49 | 55 7 1 | SWEET MICHAEL L | 362 WOODS MILL DR | STEPHENSON VA | 22656 | 17.48 | RA |
| 50 | 55 7 14A | MEIER KEVIN R, MEIER JORDAN V | 274 LOCK RUN CROSSING | STEPHENSON VA | 22656 | 6.39 | RA |
| 51 | 44 A 31A | STEPHENSON ASSOCIATES LC | PO BOX 2630 | WINCHESTER VA | 22604 | 386.24 | R4 |
| 52 | 44 A 31B | BROOKFIELD STEPHENSON VILLAGE LLC | 3201 JERMANTOWN RD STE 150 | FAIRFAX VA | 22030 | 18.05 | R4 |
| 53 | 44 A 293 | BROOKFIELD STEPHENSON VILLAGE LLC | 3201 JERMANTOWN RD STE 150 | FAIRFAX VA | 22030 | 17.96 | R4 |
| 54 | 44E 15 11569C | BROOKFIELD STEPHENSON VILLAGE LLC | 3201 JERMANTOWN RD STE 150 | FAIRFAX VA | 22030 | 2.01 | R4 |
| 55 | 44E 17 11764B | BROOKFIELD STEPHENSON VILLAGE LLC | 3201 JERMANTOWN RD | FAIRFAX VA | 22030 | 2.90 | R4 |
| 56 | 44E 17 11764A | BROOKFIELD STEPHENSON VILLAGE LLC | 3201 JERMANTOWN RD | FAIRFAX VA | 22030 | 12.12 | R4 |
| 57 | 44 A 294 | AITKEN TONIE WALLACE, C/O TONIE M WALLACE | 1160 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 56.67 | RAB2 |
| 58 | 45 4 1 2 | FORTNEY CLARK D, FORTNEY BARBARA K | 1281 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 3.04 | RP |
| 59 | 45 4 1 3 | CONLEY JOHN M, CONLEY K JUNE | PO BOX 218 | STEPHENSON VA | 22656 | 3.07 | RP |
| 60 | 45 4 1 4 | BELL CATHERINE SUE | 1373 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 3.08 | RP |
| 61 | 45 4 1 5 | KIENE CAROLYN L | 1373 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 3.22 | RP |
| 62 | 55A 3 B | VEGA BRUNO G | 1384 JORDAN SPRINGS RD | STEPHENSON VA | 22656 | 0.56 | RA |

NOTES

- SOLAR ARRAY DEVELOPMENT LIMITS WILL BE SETBACK 50'-100' FROM EXTERNAL ROADS AND PROPERTY LINES.
- SOLAR ARRAY DEVELOPMENT LIMITS WILL CONSIST OF GROUND-MOUNTED PHOTOVOLTAIC MODULES AND CENTRAL INVERTERS.
- A 6' HIGH SECURITY FENCE WITH SIGNAGE/24-HOUR CONTACT INFORMATION WILL BE INSTALLED AROUND BOUNDARY OF SOLAR ARRAY DEVELOPMENT.
- LIGHTING WILL BE LIMITED TO SAFETY AND SECURITY PURPOSES ONLY, ON AN AS NEEDED BASIS.
- STORM WATER MANAGEMENT SHOWN FOR PLANNING PURPOSES. LOCATIONS AND ACCESS ROADS TO BE REFINED DURING SITE DESIGN.
- ACCESS TO THE FACILITY WILL BE PROVIDED THROUGH THREE ENTRANCES LOCATED ON WOODS MILL ROAD (IDENTIFIED ON SHEET 3). ADDITIONALLY A TEMPORARY ENTRANCE WILL BE UTILIZED ALONG PINE ROAD TO ACCESS LAY DOWN AREAS DURING THE CONSTRUCTION PROCESS.
- THE LANDSCAPE BUFFER PLANTINGS SHALL BE MAINTAINED IN GOOD HEALTH FOR THE LIFE OF THE PROJECT. EXISTING VEGETATION PRESERVATION AREAS IDENTIFIED ON SHEET 3 SHALL REMAIN UNDISTURBED FOR THE LIFE OF THE PROJECT.

LEGEND

- PROJECT PARCELS
- INTERCONNECTION PARCELS
- PARCELS
- SUBJECT PARCEL TABLE ID'S
- ADJOINER PARCEL TABLE ID'S

PROJECT AREA

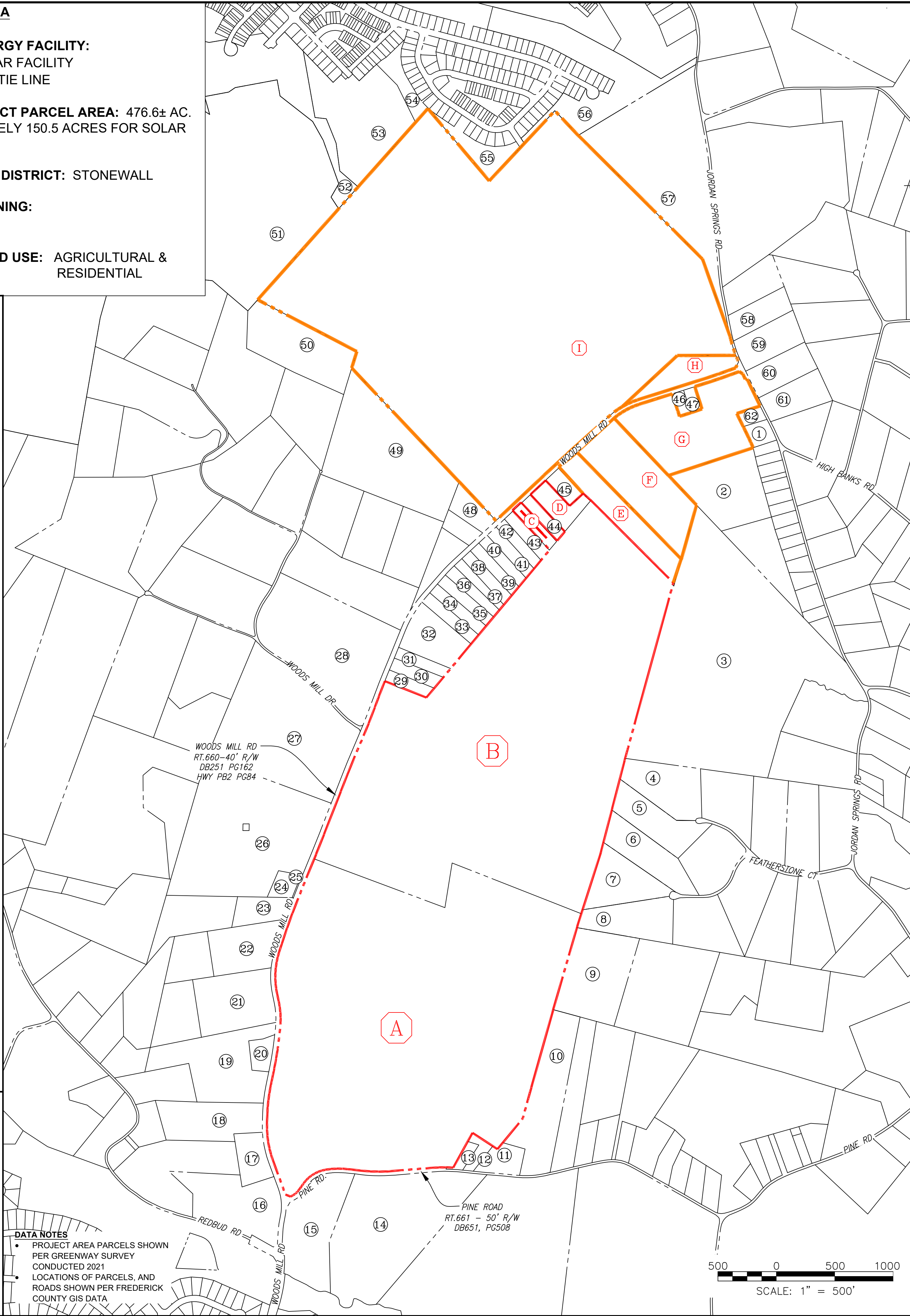
REDBUD ENERGY FACILITY:
~30 MW SOLAR FACILITY
GENERATION TIE LINE

TOTAL PROJECT PARCEL AREA: 476.6± AC.
(APPROXIMATELY 150.5 ACRES FOR SOLAR ARRAYS)

MAGISTERIAL DISTRICT: STONEWALL

ACREAGE/ZONING:
RA DISTRICT

EXISTING LAND USE: AGRICULTURAL & RESIDENTIAL



PROJECT AREA

REDBUD RUN SOLAR PROJECT

STONEWALL MAGISTERIAL DISTRICT
FREDERICK COUNTY

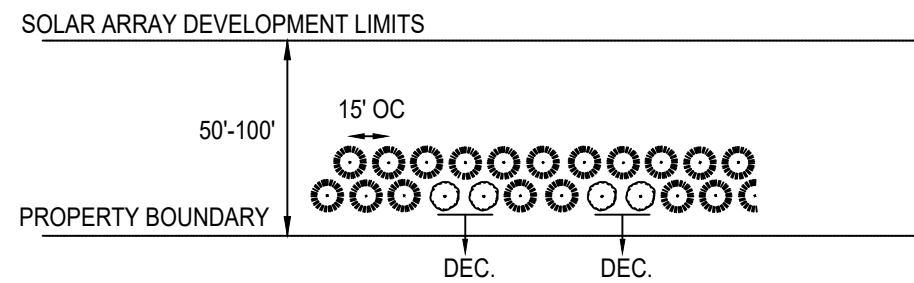
LANDSCAPE BUFFER "A"

DESCRIPTION :

PROVIDE DOUBLE ROW OF EVERGREEN TREES WITH INTERSPERSED DECIDUOUS SPECIES
ALONG PROPERTY LINE/ EASEMENT

LANDSCAPE BUFFER "A"
not to scale

not to scale



1. EVERGREEN TREES TO BE MINIMUM 6' HEIGHT AT PLANTING
2. SPECIES, QUANTITIES AND PLANTING SPECIFICATIONS OF EVERGREEN AND DECIDUOUS TREES TO BE PROVIDED ON SITE PLAN

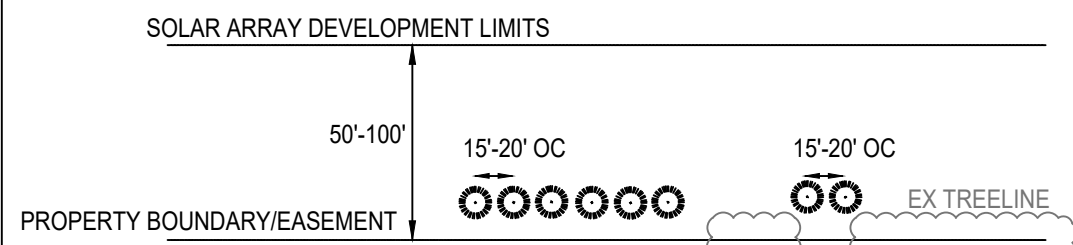
LANDSCAPE BUFFER "B"

DESCRIPTION :

SUPPLEMENT EXISTING TREELINES WITH EVERGREEN TREES

LANDSCAPE BUFFER "B"
not to scale

not to scale



1. EVERGREEN TREES TO BE A MINIMUM 6' HEIGHT AT PLANTING
2. SPECIES, QUANTITIES AND PLANTING SPECIFICATIONS OF EVERGREEN TREES TO BE PROVIDED ON SITE PLAN
3. SPACING OF EVERGREEN TREES WILL BE 15' TO 20' ON CENTER AND WILL BE DETERMINED BASED ON SITE CONDITIONS.

Diagram illustrating a double-span roof structure. The structure consists of two spans supported by a central vertical post. The total length of the structure is 34.2'. The height of the structure is 8.9', which is noted as varying. The distance between the two support points is 19.1'.

SOLAR ARRAY CROSS SECTION

NTS

14' MIN

2% MIN

ALL WEATHER SURFACE/BASE PER GEOTECHNICAL ENGINEER

COMPACTED NATIVE SUBGRADE PER GEOTECHNICAL ENGINEER




















TYPICAL ROAD SECTION

NTS

NOTES

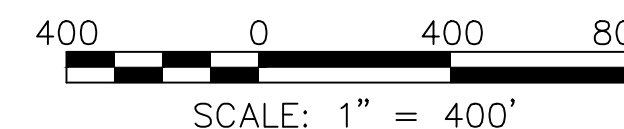
1. REDBUD RUN SOLAR PROJECT WILL INSTALL AN UNDERGROUND GENERATION-TIE LINE WITHIN AN EASEMENT ON TAX MAP PARCELS 44-A-297, 55-A-134, 55-A-135, 44-A-295 & 44-A-294A.
2. PROJECT WILL SUPPLY ELECTRICITY INTO THE RAPPAHANNOCK ELECTRIC CO-OP 34.5KV ELECTRIC LINE.
3. FUTURE ROUTE 37 EAST: THE FREDERICK COUNTY COMPREHENSIVE PLAN SHOWS THE PLANNED ALIGNMENT OF FUTURE ROUTE 37 EAST EXTENDING ACROSS THE PROJECT SITE. THE DEVELOPER WILL DESIGN THE FACILITY TO ACCOMMODATE POTENTIAL CONSTRUCTION OF FUTURE ROUTE 37 EAST DURING THE FACILITY'S LIFE CYCLE. TO THAT END, THE FOLLOWING DESIGN MEASURES WILL BE APPLIED:
 - SOLAR PHOTOVOLTAIC PANELS LOCATED WITHIN THE PLANNED ROUTE 37 EAST CORRIDOR WILL BE PLACED TO ENABLE REMOVAL WITHOUT COMPROMISING FACILITY OPERATION.
 - PERMANENT ENTRANCES TO THE FACILITY WILL BE LOCATED TO THE NORTH AND SOUTH OF THE PLANNED ROUTE 37 EAST CORRIDOR TO AVOID THE NEED FOR RELOCATION AND/OR REDESIGN.
 - INVERTER PADS, UNDERGROUND COLLECTION LINES, AND RELATED IMPROVEMENTS WILL BE PLACED TO MINIMIZE THE NEED FOR RELOCATION.
 - UNDERGROUND COLLECTION LINES CROSSING THE PLANNED ROUTE 37 EAST CORRIDOR WILL BE APPROPRIATELY ENCASED TO SUPPORT CONTINUOUS AND SAFE OPERATION IN THE EVENT OF ROAD CONSTRUCTION.

LEGEND

- | | |
|---------------------------------------------------------------------------------------|--------------------------------------|
|  | PROJECT AREA |
|  | INTERCONNECTION PARCELS |
|  | PARCELS |
|  | PROPOSED ACCESS ROADS |
|  | BUILDING RESTRICTION LINE |
|  | PROPOSED SITE ENTRANCE |
|  | SOLAR ARRAY AREA |
|  | SECURITY FENCE |
|  | PROPOSED MEDIUM VOLTAGE LINE |
|  | PROPOSED TEMPORARY LAY DOWN AREA |
|  | LANDSCAPE BUFFER AREA |
|  | EX VEGETATION TO REMAIN AS SCREEN |
|  | PROPOSED STORM WATER MANAGEMENT |
|  | EXISTING VEGETATION/TREELINE |
|  | DELINEATED WETLANDS |
|  | RIPARIAN BUFFERS |
|  | DELINEATED STREAMS |
|  | WATER/PONDS |
|  | RT. 37 STUDY AREA |

DATA NOTES

- PROJECT AREA PARCELS SHOWN PER GREENWAY SURVEY CONDUCTED 2021
- LOCATIONS OF PARCELS, AND ROADS SHOWN PER FREDERICK COUNTY GIS DATA
- 2' CONTOURS DEPICTED WITHIN PROJECT AREA PER LIDAR FLIGHT CONDUCTED BY GREENWAY ENGINEERING IN 2021.
- DELINEATED STREAMS AND WETLANDS PER PENNONI SURVEY CONDUCTED 2020 AND 2021.



CONCEPT DEVELOPMENT PLAN

REDBUD RUN SOLAR PROJECT

STONEWALL MAGISTERIAL DISTRICT
FREDERICK COUNTY

| | |
|----------|------------|
| Rev. No. | Date |
| 1 | 03/10/2022 |

DATE: 1/18/2022


SCALE: 1" = 400'

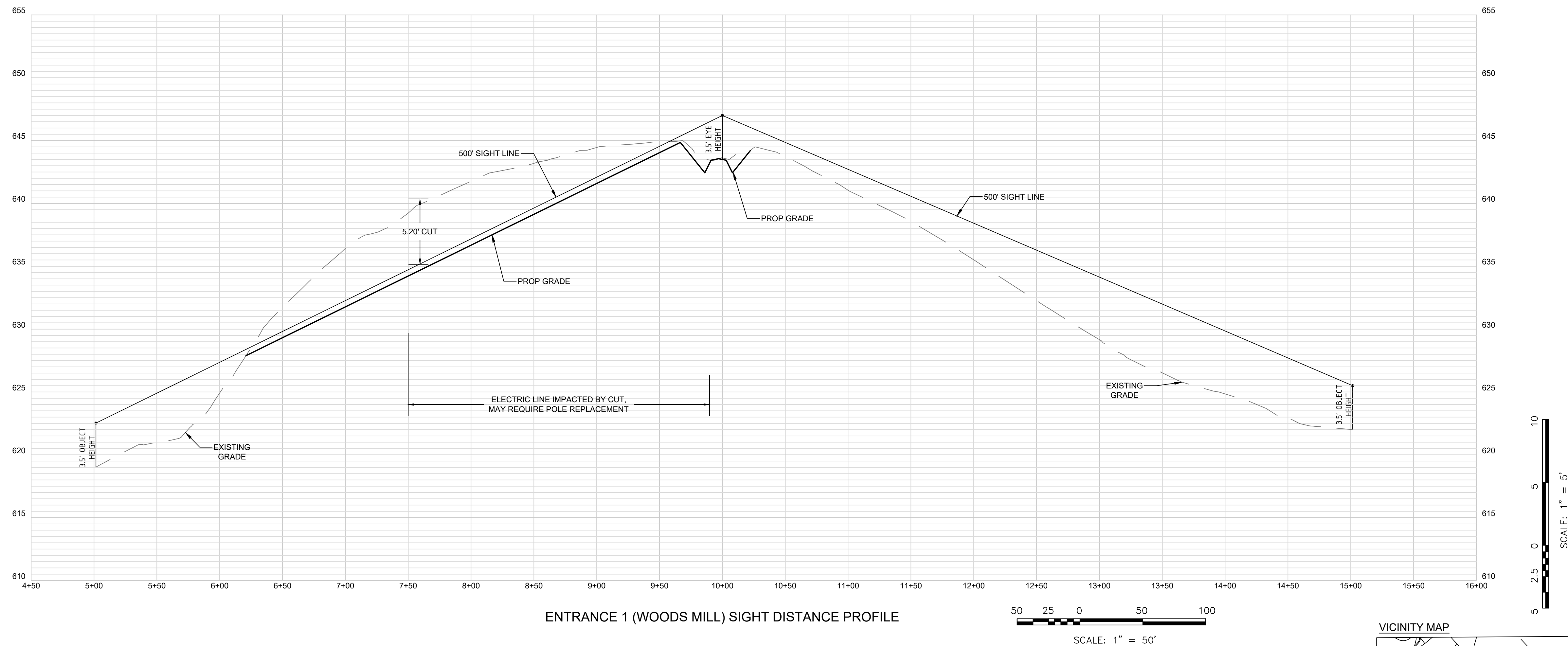
DESIGNED BY: CM/Z

FILE NO. 08440

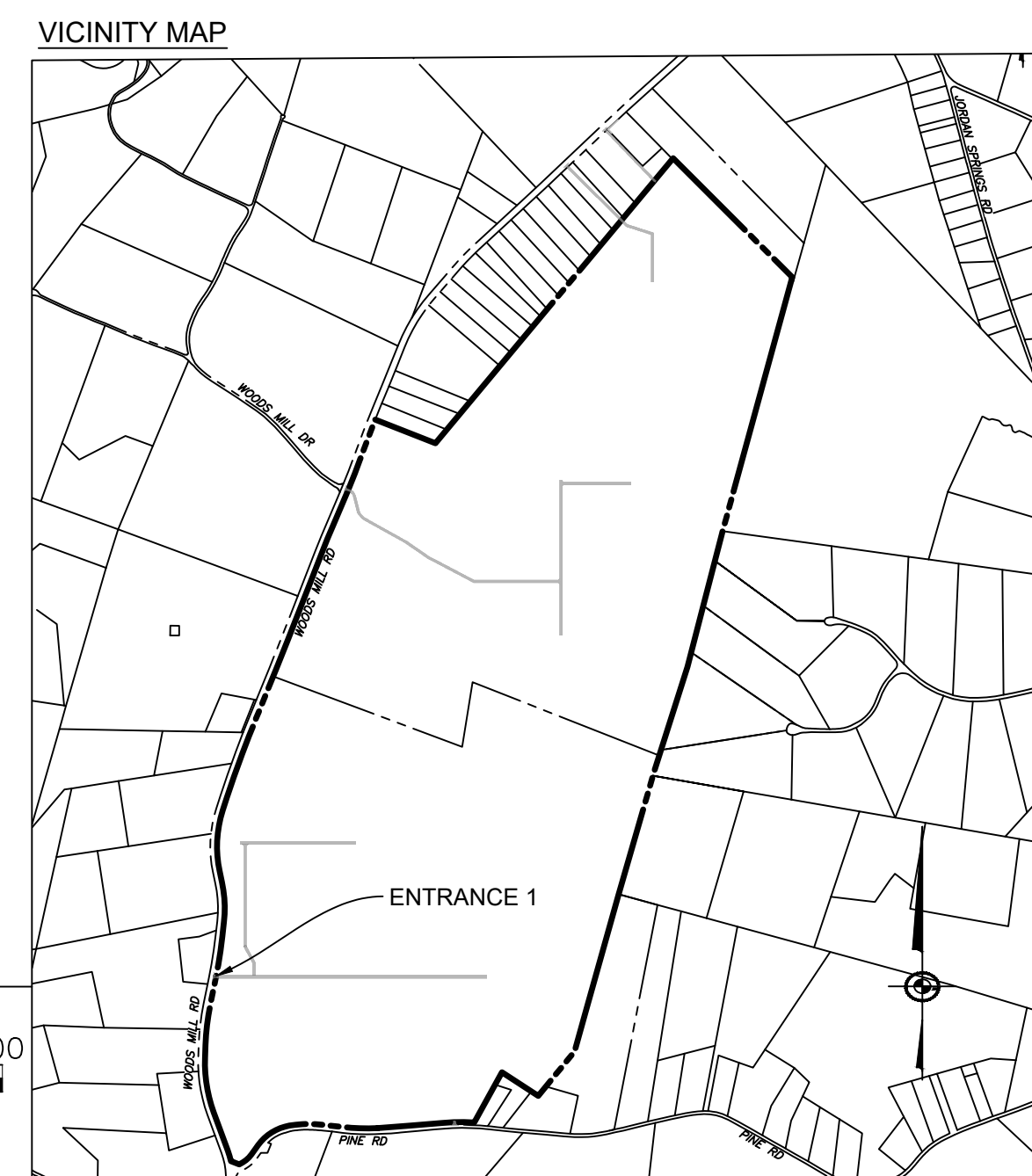
SHEET 3 OF 6 .

151 Windy Hill Lane
Winchester, Virginia 22602
Telephone: (540) 662-4185
Fax: (540) 722-9528
www.greenwayeng.com





NOTES:
1. ANY BRUSH WITHIN THE ROW CONFLICTING WITH THE SIGHT LINE TO BE CLEARED.
2. PROJECT DESIGN CURRENTLY IN CONCEPTUAL STAGES AND SIGHT DISTANCE PROFILES HAVE BEEN DEVELOPED FROM AVAILABLE DATA INCLUDING GIS, AERIAL, FIELD WORK, AND OTHER RELEVANT SOURCES. SUBJECT TO VERIFICATION AND ADJUSTMENT DURING FINAL DESIGN.



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FWD

1971

GREENWAY

ENGINEERING

PROUDLY SERVING VIRGINIA & WEST VIRGINIA
OFFICES IN: WINCHESTER, VA & MARTINSBURG, WV

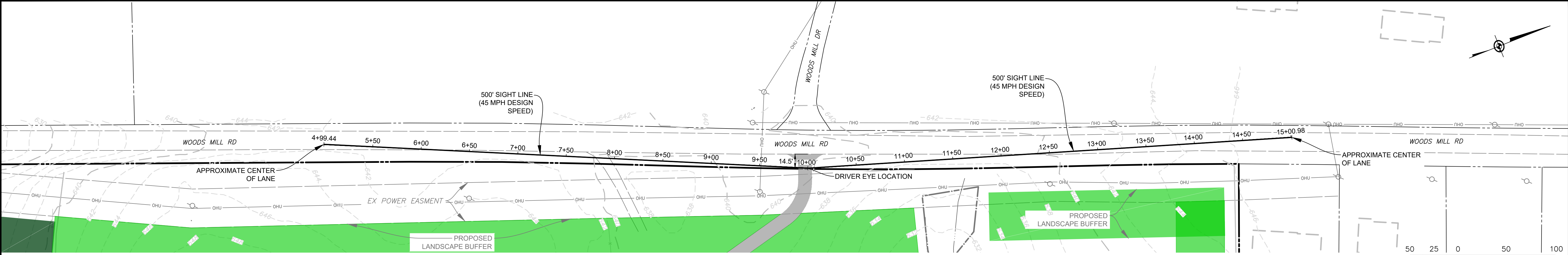
SIGHT DISTANCE EVALUATIONS

REDBUD RUN SOLAR PROJECT

STONEWALL MAGISTERIAL DISTRICT

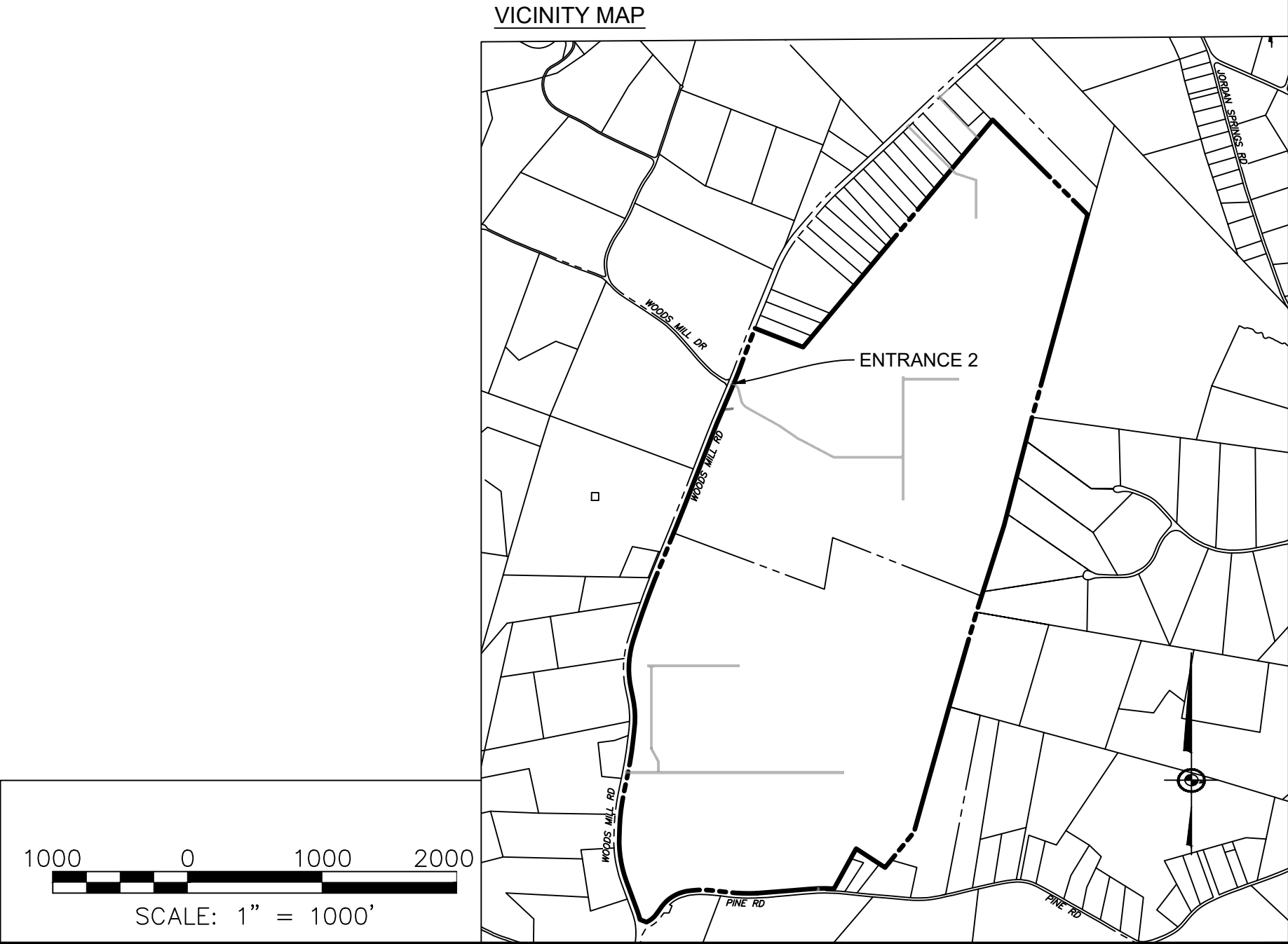
FREDERICK COUNTY, VIRGINIA

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|--------------|-----------|
| Rev. No. | Date |
| DATE: | 1/18/2022 |
| SCALE: | AS SHOWN |
| DESIGNED BY: | CM/ZJ |
| FILE NO. | 08440 |
| SHEET | 4 OF 6 |



ENTRANCE 2 (WOODS MILL) SIGHT DISTANCE PROFILE

- NOTES:
1. ANY BRUSH WITHIN THE ROW CONFLICTING WITH THE SIGHT LINE TO BE CLEARED.
 2. PROJECT DESIGN CURRENTLY IN CONCEPTUAL STAGES AND SIGHT DISTANCE PROFILES HAVE BEEN DEVELOPED FROM AVAILABLE DATA INCLUDING GIS, AERIAL, FIELD WORK, AND OTHER RELEVANT SOURCES. SUBJECT TO VERIFICATION AND ADJUSTMENT DURING FINAL DESIGN.



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**GREENWAY**
ENGINEERING

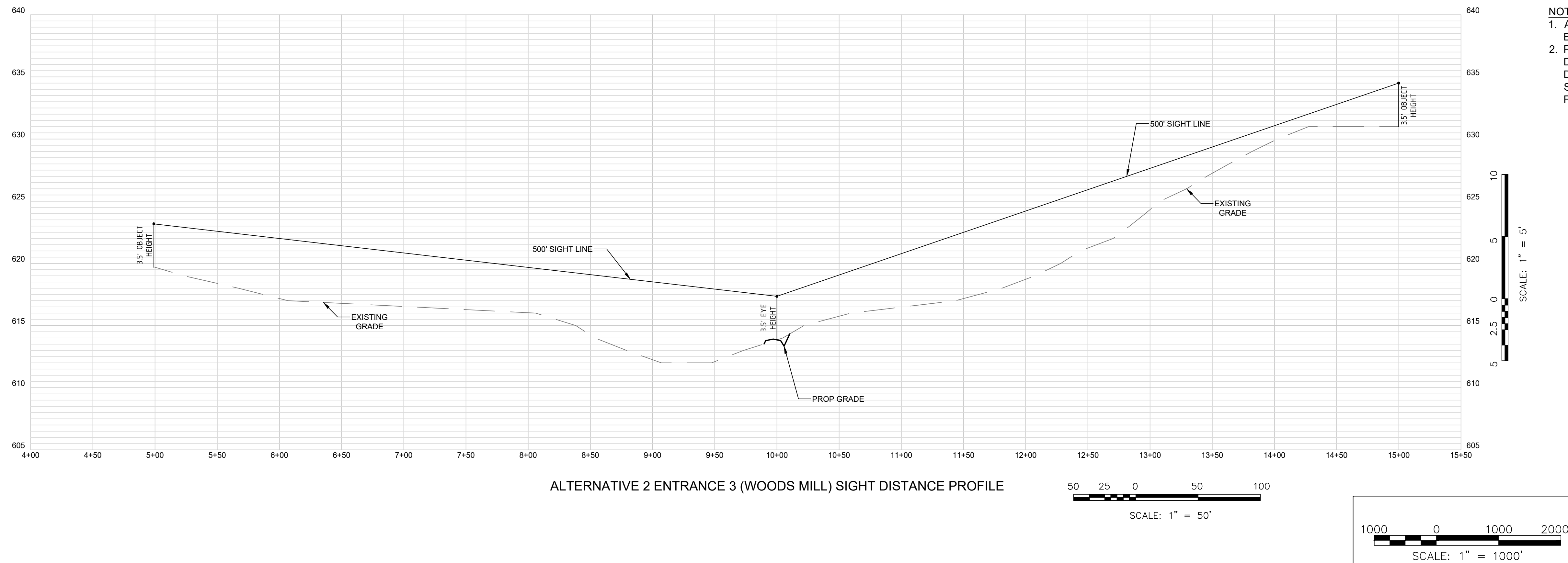
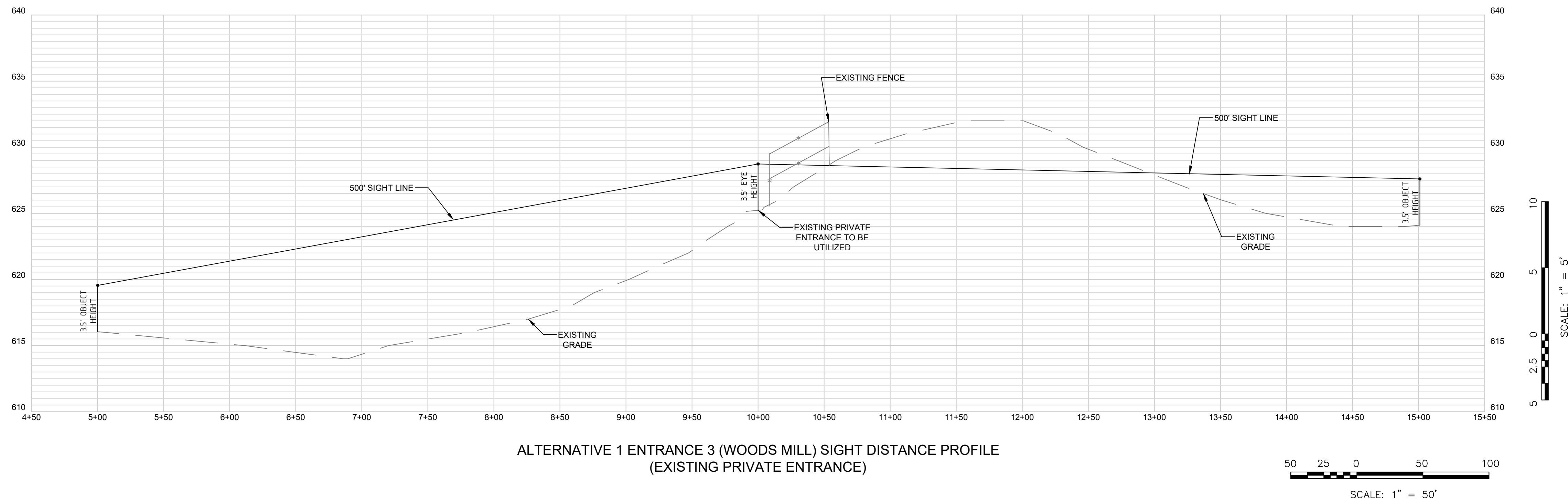
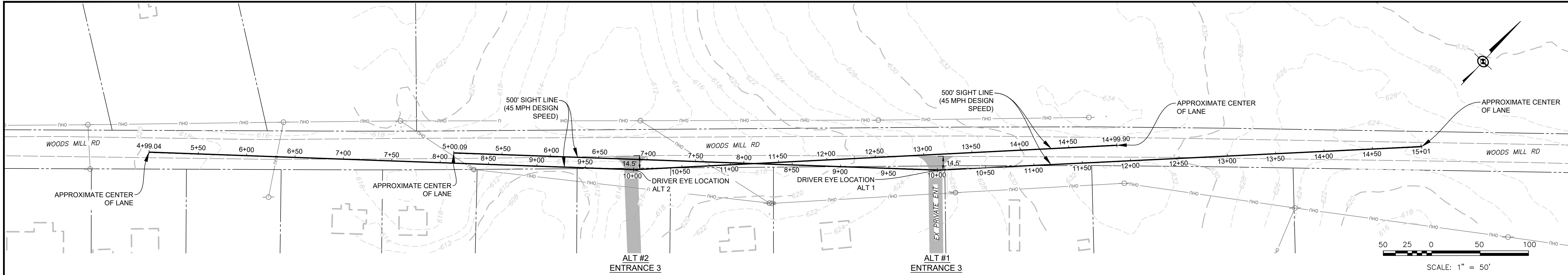
PROUDLY SERVING VIRGINIA & WEST VIRGINIA
OFFICES IN: WINCHESTER, VA & MARTINSBURG, WV

SIGHT DISTANCE EVALUATIONS

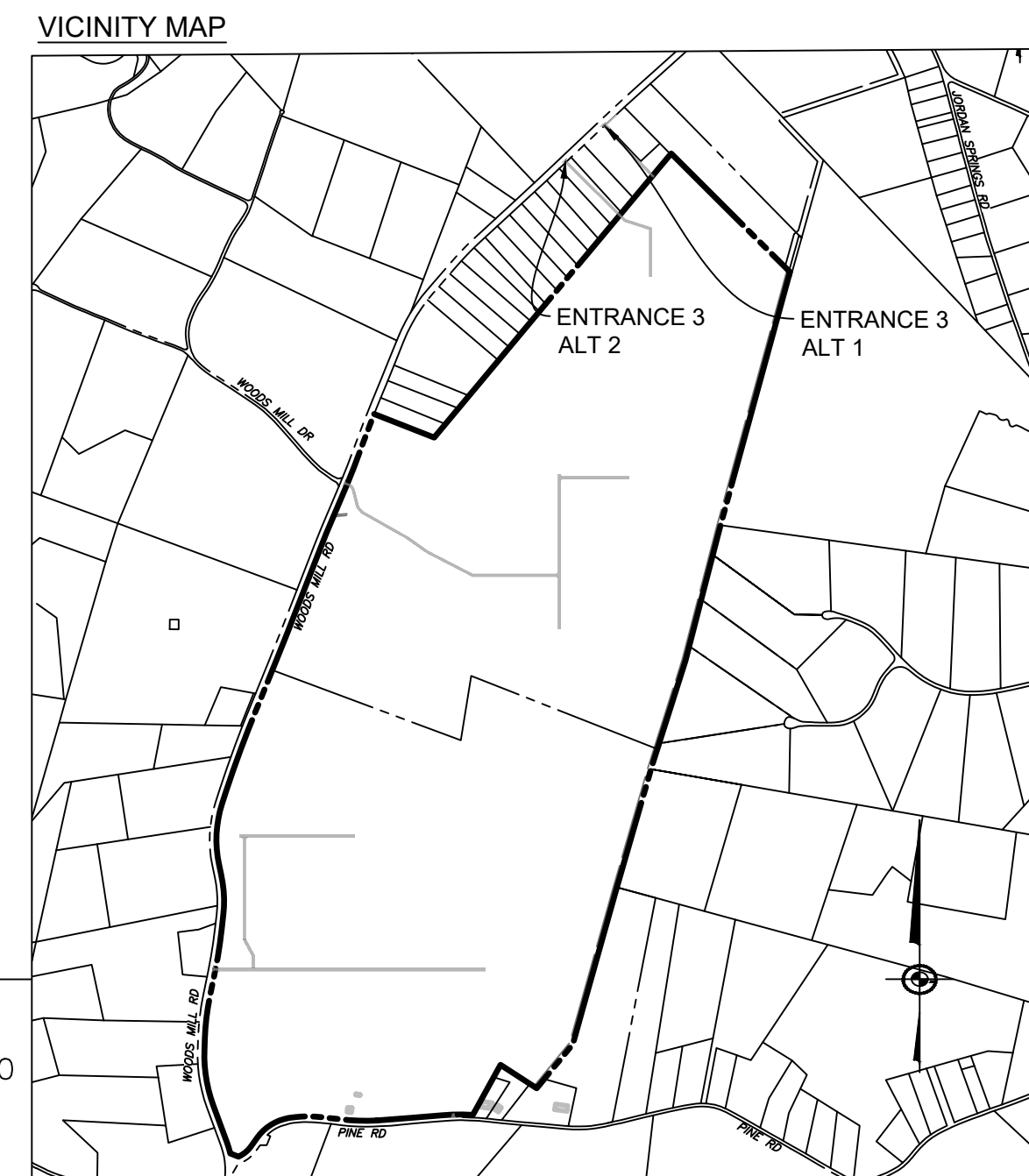
REDBUD RUN SOLAR PROJECT

STONEWALL MAGISTERIAL DISTRICT
FREDERICK COUNTY, VIRGINIA

| | |
|--------------|-----------|
| Rev. No. | Date |
| DATE: | 1/18/2022 |
| SCALE: | AS SHOWN |
| DESIGNED BY: | CM/ZJ |
| FILE NO. | 08440 |
| SHEET | 5 OF 6 |

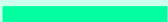


- NOTES:
1. ANY BRUSH WITHIN THE ROW CONFLICTING WITH THE SIGHT LINE TO BE CLEARED.
 2. PROJECT DESIGN CURRENTLY IN CONCEPTUAL STAGES AND SIGHT DISTANCE PROFILES HAVE BEEN DEVELOPED FROM AVAILABLE DATA INCLUDING GIS, AERIAL, FIELD WORK, AND OTHER RELEVANT SOURCES. SUBJECT TO VERIFICATION AND ADJUSTMENT DURING FINAL DESIGN.





A Group Company of  MITSUBISHI POWER



Frederick County Impact Analysis Statement for Conditional Use Permit Application

Redbud Run Solar LLC
106 Isabella St, Suite 400
Pittsburgh, PA 15212

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PROJECT NARRATIVE

This Impact Analysis Statement has been prepared in support of a Conditional Use Permit (“CUP”) application submitted by Redbud Run Solar LLC (“Redbud Run Solar” or “Applicant”), a wholly owned subsidiary of Oriden LLC (“Oriden”, “Facility Owner” and “Operator”). Oriden is the renewable energy development arm and a group company of Mitsubishi Power Americas, Inc. (“MPA”).

Redbud Run Solar plans to construct a small utility-scale solar energy facility (“Facility”) in Frederick County, Virginia. The proposed Redbud Run Solar project (“Project”) will have a project nameplate of up to 30 MWac and will be located on a tract of land containing approximately 263 acres of pasture and timberland adjacent to Woods Mill Road (VA Route 660), of which approximately 150 acres will be developed with solar panels and related facilities enclosed by security fencing.

DESCRIPTION OF THE OWNER

Oriden is comprised of a team of experienced renewable project development professionals that have over 3 GW of development and 752 MW of operational asset experience.

Oriden is a full-service renewable energy developer from concept to operations, with capabilities spanning across site selection, environmental and regulatory permitting, interconnection, power marketing, project financing, EPC, and O&M.

As a wholly owned subsidiary of Mitsubishi Heavy Industries, Ltd (“MHI”) and MPA, Oriden has access to a large balance sheet that is capable of supporting the Project’s financing requirements. Since its inception in 2019, Oriden has developed a diverse portfolio of solar photovoltaic (“PV”) and energy storage system (“ESS”) projects across the U.S. including a sizable near-term development pipeline with growth potential backed up by long-term financial commitments.

Oriden’s first solar + energy storage project was constructed in late 2020 and currently has two other solar projects currently under construction that are slated to come online in early 2022.

Together, the Oriden team members take pride in our 130 years of combined experience in the U.S. renewable energy industry. The team has taken a leading role in taking over 3 GW of renewable energy generation projects, as small as 1.5MW and as large as 370MW, from inception through development and into construction. Having navigated through the challenges of both early and late-stage developments, the team is well versed in the tasks required to overcome inevitable obstacles and advance projects into operations.

DESCRIPTION OF PROPERTY

The Project is located approximately 2 miles east of Interstate 81, roughly 0.5-miles north of Berryville Pike (VA Route 7) near the intersection of Woods Mill Road (VA Route 660) and Pine Road (VA Route 661) in the Stonewall Magisterial District. The Project consists of a total of nine (9) parcels. Two of the parcels, totaling approximately 263 acres, are under lease option for the solar Facility, and two are under lease option for Facility access. The other five parcels are easement agreements for an underground, medium



voltage electric line connecting the solar Facility to the pole-mounted Point of Interconnection (“POI”) located approximately 0.5-miles northwest of the site.

The parcels comprising the CUP application are as follows:

| Project Parcels | | | | Project Component |
|-----------------|------------------------------|---------|--------|-------------------------------------------------------------------------------------------------------|
| Tax Map Number | Owner | Acreage | Zoning | |
| 55-A-136 | JRW Properties & Rentals Inc | 128.99 | RA | Solar Arrays and Equipment |
| 55-A-137 | JRW Properties & Rentals Inc | 134.00 | RA | Solar Arrays and Equipment |
| 55-A-1-19 | JRW Properties & Rentals Inc | 0.94 | RA | Facility Access (Entrance 3 - Alternative 2) |
| 55-A-1-21 | Robert L. Williams | 2.57 | RA | Facility Access (Entrance 3 - Alternative 1) and Underground Single-Phase Electrical Service |
| 55-A-135 | Ronald A. & Mary C. Lee | 6.00 | RA | Underground Interconnection Line |
| 55-A-134 | Allen R. Conner | 11.00 | RA | Underground Interconnection Line |
| 44-A-297 | Allen R. Conner | 13.78 | RA | Underground Interconnection Line |
| 44-A-295 | William M. Rexrode | 3.89 | RA | Underground Interconnection Line |
| 44-A-294A | Tonie Wallace | 176.25 | RA | Underground Interconnection Line / Pole-mounted Point of Interconnection |

The four parcels proposed for development with solar PV arrays, related equipment, and Facility access are zoned RA, Rural Areas District. The parcels proposed for solar PV arrays are currently in various forms of agricultural use, including pasture, hayfield, and forestland. One parcel proposed for Facility access (“Alternative 1”) includes an existing driveway, residence, and out-building. A second parcel proposed for Facility access (“Alternative 2”) is vacant with mature woodlands. The five parcels proposed for locating the underground interconnection line and pole-mounted POI are also zoned RA and currently contain residential uses or are vacant.

COMPLIANCE WITH COUNTY REGULATION

In accordance with Section 165-401.03.CC. of the Frederick County Zoning Ordinance (“Zoning Ordinance”), a utility-scale solar power generating facility is permitted in the RA District with approval of a Conditional Use Permit (“CUP”). The Concept Plan submitted with the CUP application demonstrates compliance with applicable requirements of the RA District as well as other relevant provisions of the Zoning Ordinance, notably concerning protection of environmental features. Utility-scale solar power generating facilities are further subject to the Additional Regulations for Specific Uses applicable to Public Utilities. Specifically, Section 165-204.26.2. requires a facility developer to enter into a written decommissioning agreement and obtain site plan approval prior to establishment of the use, both of which will be completed for the Project. Moreover, the required site plan will address the technical design standards of relevant review agencies internal and external to Frederick County, thereby ensuring compliance with applicable County and state regulations.

PROJECT OVERVIEW

a. Facility Summary

The Facility will utilize mounted photovoltaic solar panels to convert sunlight into direct current (“DC”) electricity, which will be converted to alternating current (“AC”) electricity via solar inverters. These solar inverters will consist of skid-mounted inverters/transformers, and the total facility capacity will be up to 30,000,000 Watts (AC).

The Facility will consist of approximately 71,000 photovoltaic (“PV”) solar panels mounted on a solar racking system. The Project is expected to use a fixed tilt racking system. Fixed tilt panels will be installed in east to west rows, with the panels facing south. A preliminary site layout showing the approximate location and spacing of solar panels is provided as **Attachment 1**. The site layout will continue to be refined through the detailed engineering design phase.

The inverters will balance the module output in terms of voltage and current in DC power and then invert the power into 630-volt AC power output. Each skid will hold inverters and one padmount transformer to transform the voltage to 34.5 kV. The Project will include the following key components:

- Rows of PV panels mounted on posts driven into the ground. Rows of panels are typically spaced 20-40 feet apart to minimize shading from each racking table. Each post is placed individually in an effort to minimize the amount of on-site grading. Redbud Run Solar is planning to build solar arrays on racks that would cover approximately 103.3 acres, or 39%, of the Facility area.
- Electrical collection and communications lines are either mounted on the racking, buried in conduits, or located on overhead utility poles.
- Communication and facility control system and related equipment.
- Unpaved on-site access roads 14-ft wide with sufficient turning radii, grassy and gravel driving aisles, and three entrances from Woods Mill Road allowing a maintenance vehicle to drive around the solar array.
- Chain link security fencing located around the perimeter of the solar array areas spaced 15ft-25ft from the racking tables.



- Stormwater, erosion and sedimentation control features and basins are located in the solar array areas based on preliminary civil engineering recommendations.
- Temporary construction staging areas.

The Project will interconnect to the Redbud-Gaylord 34.5 kV Rappahannock Electric Cooperative ("Rappahannock") line located approximately 0.5-mile northwest of the site. Power will be delivered to the POI via an underground medium voltage electric line within a 30-foot-wide easement. Interconnection applications were submitted to PJM Interconnection ("PJM") and Rappahannock in July 2020 and studies are in progress. An Interconnection Agreement is expected to be executed for the Project in 2022.

b. Construction Schedule

Upon completion of all permitting requirements, construction of the Project is anticipated to take approximately nine to twelve months, from issuance of notice to proceed, to achieve commercial operation. Construction is anticipated to begin with civil site work in late 2022, with equipment installation to begin in early 2023. The proposed commercial operation date is December 2023 with final site restoration activities (e.g., site clean-up, finish grading, seeding, and mulching) to occur in early 2024.

c. Operations and Maintenance Plan

Redbud Run Solar is evaluating multiple Tier 1 O&M contractors for this Project. The contractor will have a dedicated team of field service engineers and technicians who actively oversee the quality and performance of the Project by using preventive, corrective, and predictive maintenance approaches. Each of these methods employs some or all of a number of services to include, but not limited to, performance monitoring and diagnostics, energy forecasting, warranty administration, and preventative maintenance, which could include module cleaning, IV Curve analysis, thermographic & aerial imaging, vegetation control, Supervisory Control and Data Acquisition ("SCADA") systems, and parts replacement.

The scope of O&M would further include scheduled and unscheduled maintenance. The scheduled maintenance is outlined by equipment manufacturer product manuals, and the unscheduled maintenance would involve fixing problems once they occur. Given Oriden's capability to leverage the in-house knowledge of our team member's past professional experience as both asset managers as well as operators, combined with preferred O&M firm's vast experience and knowledge of O&M services, we are confident that the exacting specifications for facility performance will be met.

IMPACT ANALYSIS

In accordance with Section 165-103.02 of the Zoning Ordinance, the Board of Supervisors must consider several standards when deciding whether to approve a CUP request. The intent of these inter-related standards is to protect the health, safety, and welfare of County residents and ensure the proposed use will not adversely impact the surrounding community. The Project satisfies the standards for approval as follows:

- The Project is a passive land use that will be integrated into the landscape in a manner that is harmonious with the established rural character of the area. The Project will maintain the existing size and configuration of the subject parcels and will generally follow existing topography. By forestalling subdivision of the property, the Project will ensure that the established pattern of

development in this area is preserved. Additionally, the Project's operation will not add traffic to the rural road network, nor will noise, light, or vibrations be generated, which will avoid disturbance to the existing rural character of the area.

- The Project's passive nature will further promote its harmonious co-existence with surrounding properties. In addition to its lack of traffic-, noise-, light-, or vibration-related impacts, the Project's design will avoid and minimize adverse effects to the viewsheds enjoyed in the surrounding area. Mature trees will be preserved along existing stream and drainage channels within the site as well as along site boundaries. Where existing vegetation does not exist or is otherwise insufficient, supplemental landscaping will be planted. The combination of tree preservation and new landscape plantings will mitigate potential visual impacts to surrounding properties and protect rural viewsheds.
- The Project will advance the goals and policies of the Frederick County Comprehensive Plan by establishing an interim use of agricultural land that will preempt residential subdivision and generate revenue for both the owner and County for the duration of the Project lease. By forestalling subdivision, the Project will preserve the subject acreage for future agriculture or other rural use and promote the directing of new residential growth away from the rural areas to the Urban Development Area ("UDA").
- The Project will preserve the natural character of the subject acreage and surrounding area through site design that integrates and protects interconnected environmental resources, to include streams, riparian buffers, steep slopes, and mature vegetation. Such onsite resource protection supports the contiguity and cohesiveness of natural corridors that extend onto adjoining properties, thereby promoting the vitality of wildlife habitats and other ecosystems in the surrounding area and County overall.
- The Project is a passive use that will neither require nor impact public services. Project operations will not generate any daily vehicular traffic, as access will only be required for periodic maintenance activities. Such access will be provided by three entrances on Woods Mill Road, the existing condition of which is adequate to accommodate the Project's limited vehicular trips. Installation of the Project entrances will further occur in accordance with applicable VDOT design and permitting requirements. The Project can be developed without impacting drainage conditions in the surrounding area and will be designed to comply with current County and state stormwater management requirements. The Project will therefore be adequately served by existing and planned infrastructure.
- The Project will conform to the applicable regulations of the RA, Rural Areas District. Notably, the required setbacks of the district are used to establish the perimeter boundaries of the solar array land bays, wherein all Project structures and equipment will be located. Moreover, setbacks have been increased voluntarily to 100 feet where possible in response to community feedback.

A detailed analysis of Project impacts is provided in the following sections.

ECOLOGICAL RESOURCES

a. Water Resources

Field surveys conducted by Pennoni in November 2020 and September 2021 identified stream and wetland resources within the Project area. The Project has been designed to avoid direct impacts to these sensitive



resources. Underground medium voltage electric lines will be installed below two perennial streams (unnamed tributaries to Opequon Creek) and one wetland via conventional bore to avoid impacts.

A request for a Preliminary Jurisdictional Determination (“PJD”) was submitted to the U.S. Army Corps of Engineers (“USACE”) in August 2021. A supplemental PJD request for additional properties studied this Fall was submitted in October 2021. Whereas an applicant may pursue an Approved JD when the jurisdiction of a particular resource is in question, a PJD is typically pursued in instances where the applicant presumes all streams and wetlands delineated are under federal jurisdiction. USACE’s PJD is expected in February 2022. ***A copy of the PJD will be forwarded upon receipt.***

The streams identified within the Project area by Pennoni’s delineation differ from those depicted by County GIS data in certain areas. Based on established practice, the County will accept the results of the delineation as the basis for site design with submission of the PJD indicating concurrence of the U.S. Army Corps of Engineers with Pennoni’s findings. The CUP Concept Plan depicts stream resources per Pennoni’s delineation and applies required riparian buffers accordingly.

No Federal Emergency Management Agency (“FEMA”) floodplains are within the Project area.

Erosion and sediment control plans and stormwater management plans, designed in accordance with Virginia Department of Environmental Quality Erosion and Sediment Control Regulations and Stormwater Management Program Regulations, respectively, will be approved prior to any land-disturbing activity and the Project’s Building Permit issuance.

No water supply or sewage facilities are needed for the Project. Routine maintenance, such as panel cleaning, may require water to be trucked in periodically.

b. Protected Species

Redbud Run Solar submitted a Project Review request to the Virginia Department of Conservation and Recreation (“DCR”) in September 2021. DCR’s response from October 2021 confirmed that no natural heritage resources have been documented within the Project boundary. DCR noted that the Project is partly within an area identified by the Virginia Natural Landscape Assessment as including interior forest habitat. This area received the lowest rating, indicating that it is least ecologically relevant. As recommended by DCR, Redbud Run Solar has designed the Project to minimize fragmentation by locating the facility primarily around existing open fields to minimize forest clearing, and by avoiding disturbance in natural forested riparian corridors throughout the site to provide connectivity for wildlife habitat.

Redbud Run Solar also completed a review of the information and data available through the Virginia Department of Game and Inland Fisheries’ (“VDGIF”) Fish and Wildlife Information Service (“FWIS”) and Wildlife Environmental Review Map Service (“WERMS”). No sensitive resources were identified within the Project area.

A copy of the protected species search results and consultations is provided as **Attachment 2**.

CULTURAL RESOURCES

Cardno was commissioned to review the Virginia Department of Historic Resources (“DHR”) CRIS and complete Cultural and Historic Resource fieldwork to allow the Project to meet the VA Department of



Environmental Quality (“DEQ”) Permit by Rule requirements. Cultural resource surveys were completed in May and September 2021, and the results were submitted to the DHR in December 2021. A Phase I Cultural Resource Identification Survey report (“Phase I Survey”) is provided as **Attachment 3**.

Cardno’s Phase I Survey concluded that the Project site will not affect protected archaeological resources or sites that have historical, cultural, or sacred significance. The Phase I Survey further determined that the Project will not impact protected historic properties in the Project vicinity due to the combination of existing vegetation and topography. Virginia DEQ concurred with the survey methodology and findings in December 2021. A response from DHR is pending.

ECONOMICS

An analysis of the economic and fiscal impact was conducted by Mangum Economics, and the report is provided as **Attachment 4**. The Project would provide an estimated one-time pulse of economic activity to Frederick County during its construction phase supporting approximately 111 temporary construction jobs, \$6.4 million in associated labor income, and \$17.2 million in associated economic output (e.g., spending for food, lodging and other services). The estimated annual economic impact during operation of the Project would support approximately 2 jobs, \$89,800 in associated labor income, and \$236,100 in associated economic output. The Project will also make a significant fiscal contribution to Frederick County, through an estimated \$0.5 million in state and local tax revenue from a one-time pulse of economic activity during Project construction. Over the anticipated 30-year operational life of the Facility, the Project is estimated to generate approximately \$2.2 million in cumulative county revenue via real estate and machine and tool taxes, as compared to approximately \$16,800 should the property remain in the current agricultural use.

An analysis of the property values for adjoining properties was conducted by Kirkland Appraisals, and the report is provided as **Attachment 5**. The analysis concluded that the adjoining properties are well set back from the proposed solar panels. Most of the site has good existing landscaping for screening, and additional supplemental vegetation is proposed to supplement screening. The matched pair analysis shows no impact on home values due to abutting or adjoining a solar farm, as well as no impact to abutting or adjacent vacant residential or agricultural land where the solar farm is properly screened and buffered. The criteria that typically correlates with downward adjustments on property values (e.g., noise, odor, traffic) indicate that a solar farm is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

COMMUNITY OUTREACH

Redbud Run Solar has taken a proactive approach to engaging the local community. Conceptual Project design details have been shared with upwards of two dozen adjoining landowners, who have provided valuable feedback. Such feedback has generally been positive, particularly regarding the Project’s planned vegetative screening; avoidance of riparian corridors, streams, and wetlands; and minimal to no impact on traffic, noise, and other disruptions when compared to a residential subdivision.

As a result of community feedback, Redbud Run Solar has voluntarily adopted a 100-foot side and rear setback where possible, which in many areas exceeds the Frederick County minimum Ordinance requirement of a 50-foot setback.

A community open house will be held at Historic Jordan Springs in February 2022.



SAFETY

As utility-scale solar developments are a relatively new type of development, it is common for communities to have questions about potential health and safety impacts. Solar technology has been in use and studied for decades, with wide scientific consensus that solar PV does not contribute to any significant health dangers to the surrounding community.

Solar equipment and facilities are designed to strict electrical safety standards for safe operation. Product safety standards, installation requirements, and building codes for solar facilities are addressed by the National Fire Protection Agency's National Electrical Code, the International Code Council's International Fire Code, the International Association of Firefighters, and several other safety and product standards groups.

Redbud Run Solar will use Crystalline-Silicon PV panels. The structural component of these panels primarily consists of glass, an aluminum frame, and common plastics, while the functioning component (typically less than 5% of the panel weight) includes the silicon PV cells and electric leads and wires. While the panels contain small amounts of lead in soldering, this soldering is sealed within the panel away from moisture to avoid corrosion. A damaged panel results in significantly decreased power generation and is promptly replaced. Furthermore, toxicity characteristic leaching procedure ("TCLP") testing, which evaluates if heavily damaged panels in would leach hazardous substances in a landfill setting, does not indicate risks of leaching for Crystalline Silicon PV panels.

The Project will also use inverters to convert the DC electricity from the panels to AC electricity for delivery to the power grid. This AC electricity produces electromagnetic fields at a very low frequency (i.e., low energy), which has less energy than radio waves, and is equally as harmless as the EMF generated by electricity and appliances within a home.

The Project was submitted to the Federal Aviation Administration ("FAA") for an aeronautical study. The FAA determinations received in February 2021 indicate the Project will not be a hazard to air navigation.

Redbud Run Solar, in collaboration with the O&M contractor, will be fully responsible for the security of the facility, for maintaining consistent safety standards within the Project area, and for communicating with first responders in the event of an emergency. Local first responders will be given training regarding safety and system shutdown procedures. Security lighting may be used in select locations where needed, but overall, the Project will not be lit.

TRAFFIC

Three permanent entrances are proposed on Woods Mill Road (VA Route 660) to provide vehicular access to each of the Project's solar array land bays. A temporary entrance is also proposed on Pine Road for use during the Project's construction phase. Traffic generation will be greatest during Project construction but will drop precipitously once the Project is operational and will remain virtually non-existent thereafter. In fact, the Project will not generate any daily traffic, as vehicular access will be limited to periodic site visits by the O&M contractor. As such, the Project will have no discernable impact on Woods Mill Road or the surrounding rural road network.



Two locations are under consideration for access to the northernmost land bay (Entrance 3 - Alternative 1 and Alternative 2). Alternative 1 would utilize an existing driveway. Alternative 2 would require construction of a new entrance. Sight distance profiles indicate that sight distance requirements at Alternative 1 would not be met due to topography and fencing on an adjacent property; however, Redbud Run Solar intends to apply for an exemption from the sight distance requirements based on planned traffic safety measures and the advantages of utilizing an existing entrance. Alternative 2 is included with the CUP application to enable its use in the event VDOT does not approve the sight distance exemption for Alternative 1.

Sight distance requirements can be met as-is or with minimal site work at the other proposed permanent entrances on Woods Mill Road. Supporting information is included with the Concept Plan.

PRIME FARMLAND

Approximately 50.2 acres (19%) of the Project area consist of soils classified as prime farmland, portions of which will be used for solar arrays and related equipment. The interim nature of the Project will enable these soils to be returned to active agriculture upon decommissioning, should the owner choose to do so.

VISUAL

Solar panels are designed to absorb as much light as possible; they are dark in color and are treated in anti-reflective coating such that they only reflect approximately 2% of incoming light, less than soil or even wood shingles. Solar panels have been approved by the Federal Aviation Administration for installation on and around airports across the country because of their low reflectivity.

That said, the Project's design includes measures to minimize impacts to viewsheds enjoyed in the surrounding area. Mature trees and existing undergrowth will be preserved along existing stream and drainage channels within the site as well as along site boundaries at minimum depths ranging from 50 feet to 100 feet. Where existing vegetation does not exist or is otherwise insufficient, supplemental landscaping will be planted, notably along the Project's frontage on Woods Mill Road. Such landscaping will consist of a double row of evergreen plantings six (6)-feet in height at time of installation, with the row closest to the road interspersed with deciduous plantings to create a more natural and aesthetically appealing visual screen. Coupled with the site's favorable topography, the combination of tree preservation and new landscape plantings will mitigate potential visual impacts to surrounding properties and protect rural viewsheds. Visualizations of the Project from Woods Mill Road are provided in **Attachment 6**.

AIR & NOISE

As with any construction project using conventional equipment, limited emissions from the exhaust of construction equipment will occur during the construction phase of the Project. The Erosion and Sediment Control Plan will be adhered to, minimizing the potential for fugitive dust impacts during construction activities. Once construction is complete, an operating solar farm is not a source of air emissions.

Temporary, elevated noise levels will occur during the construction phase of the Project, but once construction is complete, an operating solar farm includes inverters and transformers which emit only minimal noise during the day and are dormant at night. Inverters and transformers are located internally within the facility, away from adjoining properties. In addition, Redbud Run Solar has proactively taken steps to minimize and mitigate visual impacts of the Project through vegetative buffers and setbacks from property lines, which enhance Facility safety and security considerations as well as provide additional sound



dampening benefits as well. Therefore, adjoining landowners will not experience noise impacts as a result of facility operations.

CONSISTENCY WITH FREDERICK COUNTY COMPREHENSIVE PLAN

The Frederick County Comprehensive Plan (“Comprehensive Plan”) indicates that “utility-scale solar facilities are typically passive uses with limited impacts to the environment and rural character” that can “facilitate the preservation of agricultural and rural land for future use” and “provide opportunities for landowners to recoup value from their property without subdividing” (Chapter IV, p. 35). As such, the Comprehensive Plan is generally supportive of establishing this land use in appropriate areas, with the CUP process identified as the mechanism for ensuring that surrounding properties are protected from potential impacts.

The topography and configuration of the Project site enable the proposed utility-scale solar facility to be established and operated without adverse impact to surrounding properties or the prevailing rural character of the area. Specifically, the terrain is such that the solar arrays can be effectively screened from view from Woods Mill Road and adjoining properties through a combination of existing mature vegetation and new landscape plantings. Additionally, streams and riparian corridors within the site include substantial areas of mature woodlands, the preservation of which will provide continuity to existing viewsheds after Project development. These unique characteristics combine to make the subject property an appropriate location for a utility-scale solar facility consistent with the Comprehensive Plan.

The Project also represents an alternative means of revenue generation for the property owner that does not require residential subdivision, and further enables the owner to return the property to active agriculture after the lease term ends and the facility is decommissioned. These outcomes promote the inter-related goals and policies of the Comprehensive Plan concerning residential development and farmland preservation. Specifically, by forestalling subdivision of the property, the Project eliminates the potential for by-right residential development on 263 acres of rural land for the duration of the lease term (30 years). As such, the Project will facilitate direction of residential growth away from the rural areas and toward the UDA, where it is desired. Additionally, the required decommissioning process will enable the property to be returned to active agriculture, effectively preserving valuable farmland for future use.

POTENTIAL ROUTE 37 EAST BYPASS

The Comprehensive Plan includes a potential expansion of the Route 37 East Bypass, a portion of which crosses the proposed Project site. To the applicant's knowledge, right-of-way has not been acquired and VDOT funding has not been allocated for the bypass expansion; however, the Comprehensive Plan indicates that it is a priority for the county's long-term planning. Therefore, the facility design will accommodate potential construction of the future Route 37 East Bypass during the facility's life cycle. To that end, the following design measures will be applied:

- Solar PV panels proposed within the planned Route 37 East Bypass corridor will be placed strategically to enable removal without compromising facility operation.
- Permanent entrances to the facility will be located to the north and south of the planned Route 37 East Bypass corridor to avoid the need for relocation and/or redesign.
- Inverter pads, underground collection lines, and related improvements will be placed to minimize the need for relocation.



- Underground collection lines crossing the planned Route 37 East Bypass corridor will be appropriately encased during installation to support continuous and safe operation in the event of road construction.

Redbud Run Solar will also commit to working with VDOT on ensuring the compatibility of the facility with the potential bypass, should the road's construction ultimately move forward.

DECOMMISSIONING PLAN

At the end of the project's life, the Project infrastructure will be decommissioned and removed. As added protection for Project landowners and the County, Redbud Run Solar will put financial security in place within ninety (90) days of achieving commercial operation ensuring that neither the County nor the landowners will bear responsibility for decommissioning or restoration. A decommissioning plan has been prepared for the Project and is provided in **Attachment 7**. This plan will be refined to include cost estimates prior to County review and approval of the Site Plan.

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