

REQUEST

Conditional Use to permit a large scale solar energy facility in an Agricultural (A) District.

Notes:

- A. Conditions may be imposed or the property owner may proffer conditions.
- B. Proffered conditions, Exhibits, and adopted Solar Ordinance are located in Attachments 1 4.

SUMMARY

A 20 MW large scale solar energy facility is proposed, requiring approval of a Conditional Use in an Agricultural (A) District. A recent ordinance amendment establishes specific standards for solar energy facilities that address: general layout, location, access, anticipated locations of transmission lines, facility decommissioning, certifications of state and federal approvals, construction activities limits, setbacks, buffers, health and safety, and facility operation and design. The proposed uses will comply with, or exceed, these Zoning Ordinance standards. A conceptual plan identifies the general location of the use. (Exhibit A)

RECOMMENDATIONS		
PLANNING	APPROVAL	
COMMISION		
	APPROVAL	
STAFF	 Proposal complies with Plan relative to land use, transition and parcel aggregation 	
	 As conditioned, impacts on area residential uses minimized 	

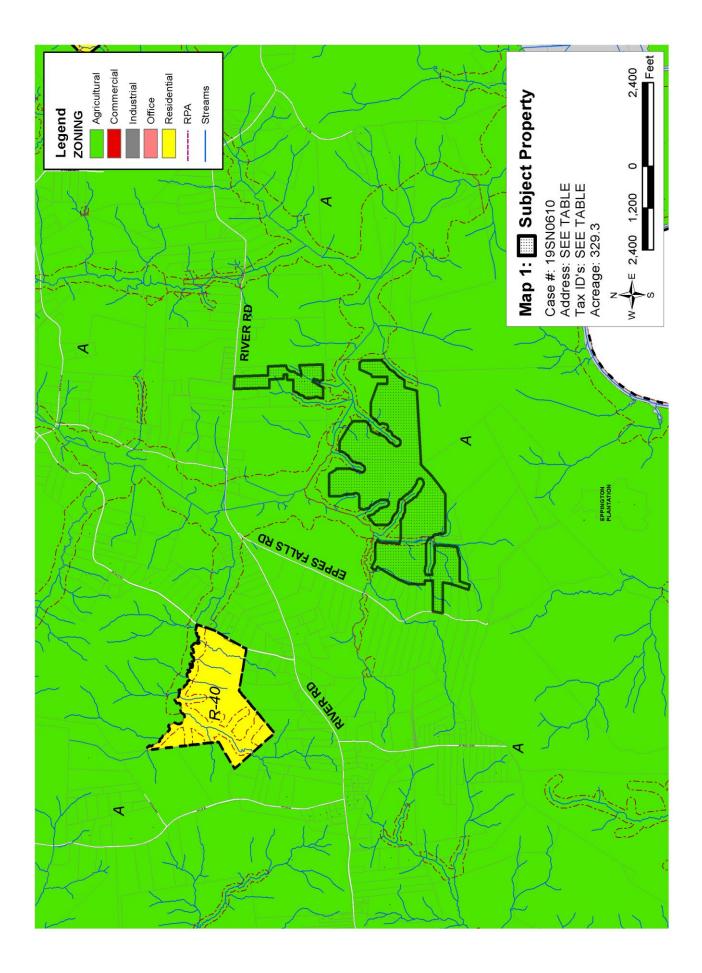
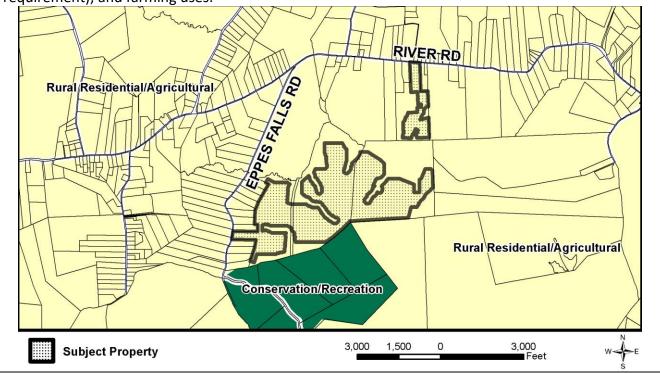


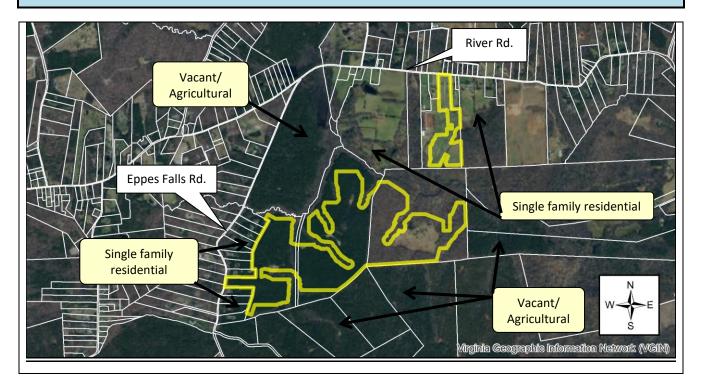
		TABLE A
REQUEST PROPERTIES		
Tax Identification Number	Address	
706-639-Part of 7211	13611 EPPES FALLS RD	
707-639-Part of 6747	13341 EPPES FALLS RD	
710-640-Part of 4102	16521 RIVER RD	
711-642-Part of 0774	16301 RIVER RD	

Comprehensive Plan Classification: RURAL RESIDENTIAL AGRICULTURAL

The designation suggests the property is appropriate for single family dwellings located either on a minimum of 5 acres, 1 acre (family division), or less than 5 acres (if created before the 5 acre requirement); and farming uses.



Surrounding Land Uses and Development



PLANNING

Staff Contact: Jane Peterson (804-748-1045) petersonj@chesterfield.gov

Proposal

A 20 MW large scale solar energy facility is proposed. This use requires approval of a Conditional Use in an Agricultural (A) District. Development of the property will generally conform to the Conceptual Plan (Exhibit A).

The recently adopted Zoning Ordinance for large scale solar energy facilities (Zoning Ordinance – Attachment 3) includes regulations that address: general layout, location, access, anticipated locations of transmission lines, facility decommissioning, certifications of state and federal approvals, construction activity limits, setbacks, buffers, health and safety, and facility operation and design. Development of the site would comply with these adopted standards, except where proffered conditions are more restrictive.

In addition to Ordinance regulations, proffered conditions provide for the following:

General Overview		
Requirements	Details	
Setbacks	 <u>Ordinance</u> – 150 feet from residentially zoned or occupied properties <u>Proffer</u> – 200 feet from eastern property boundaries of adjacent parcels fronting Eppes Falls Road, as noted on Conceptual Plan <i>Conceptual Plan & Proffered Condition 1</i> 	
Preservation of Existing Vegetation	 <u>Ordinance</u> – Not addressed outside of operational area setbacks/buffers <u>Proffer</u> – Provided along north and south lines of site access from Eppes Falls Road. Access driveway relocated to provide separation from northern property boundary. Replanting of existing private road access per landscape plan (Exhibit B). <i>Conceptual Plan & Proffered Conditions 1 & 6</i> 	
Construction Activity (Pile Driving)	 <u>Ordinance</u> – Permitted Monday through Saturday from 9:00 a.m. to 5:00 p.m. <u>Proffer</u> – No Saturday activity on portion of request property adjacent to parcels fronting Eppes Falls Road <i>Proffered Condition 5</i> 	
Gate to preclude trespassing	<u>Proffer</u> – In addition to fencing around operational area, gate installed beyond entrance from Eppes Falls Road to deter use of driveway by others. <i>Conceptual Plan & Proffered Condition 1</i>	

Comprehensive Plan

The request property is located within an area suggested by the Plan for Rural Residential/Agricultural uses, appropriate for single-family dwellings on a minimum of one (1) to five (5) acres, farming and forestry, open space and conservation easements.

The Plan also includes general land use guidelines to address specific development and land use issues. One such guideline includes the promotion of agricultural-related activities through the consideration of non-residential land uses in Rural Residential/Agricultural areas. These include the development of solar facilities through the conditional use process to protect adjacent properties, the rural character and future potential land uses in these areas.

As proposed, the anticipated land use, buffering and setbacks provide an appropriate transition to neighboring residential uses. As such, staff is supportive of this request.

COUNTY TRANSPORTATION

Staff Contact: Steve Adams (804-748-1037) adamst@chesterfield.gov

The applicant is requesting a conditional use permit for a large-scale solar energy facility on the property (329.3 acres). Trip generation rates are not available for this use; however, it is anticipated to be minimal. Traffic generated by the proposal would be distributed to River Road.

River Road is identified on the County's <u>Thoroughfare Plan</u> as a major arterial with a recommended right of way width of 90 feet. River Road is a two-lane road (18 to 20-foot pavement width) with minimal to no usable shoulders and substandard horizontal and vertical curves. VDOT minimum geometric design standards recommend this road have 12-foot lane widths and 10-foot shoulders. In 2018, the Virginia Department of Transportation (VDOT) traffic count on River Road, adjacent to the property, was 660 vehicles per day (Level-of-Service A).

Section 19.1-231 of the County Code outlines the general requirements to meet the needs of the traffic generated by a proposed development, including acceptable levels of service. The applicant has offered the following:

Right of Way Dedications (Proffered Condition 2):

- 45 foot right of way dedication along River Road property frontage
- 30 foot right of way dedication along Eppes Falls Road property frontage

Vehicular Access (Proffered Condition 3):

- One (1) direct access to River Road
- One (1) direct access to Eppes Falls Road

The <u>Thoroughfare Plan</u> identifies an east/west limited access road ("East/West Freeway") bisecting the property with a recommended right of way width of 200 feet. When requested, the applicant chose not to address the East/West Freeway as part of this application.

VIRGINIA DEPARTMENT OF TRANSPORTATION

Staff Contact: Willie Gordon (804-674-2907) willie.gordon@vdot.virginia.gov

The applicant will need to submit traffic projections for the intended use of the site to determine the applicable entrance standards for these two sites. VDOT recommends that the first 50' of the entrance be paved to accommodate the commercial traffic.

FIRE AND EMERGENCY MEDICAL SERVICES

Staff Contact: Anthony Batten (804-717-6167) battena@chesterfield.gov

When the property is developed, the number of hydrants, quantity of water needed for fire protection, and access requirements will be evaluated during the plans review process.

Nearby Fire and Emergency Medical Service (EMS) Facilities	
Fire Station	The Winterpock Fire Station, Company Number 19
EMS Facility	The Winterpock Fire Station, Company Number 19

When the property is developed, the number of hydrants, quantity of water needed for fire protection, and access requirements will be evaluated during the plans review process.

ENVIRONMENTAL ENGINEERING Staff Contact: Rebeccah Ward (804-748-1028) wardr@chesterfield.gov

Geography

The subject properties all drain to Winterpock Creek, either directly or through an unnamed tributary to Winterpock Creek. Winterpock Creek traverses the project site, draining from northwest to southeast, and then to Lake Chesdin. All of the subject properties are located within the Appomattox River Watershed.

Natural Resources

A Resource Protection Area (RPA) Designation has been submitted to and confirmed by the Department of Environmental Engineering – Water Quality Section. RPA exists along the wetlands and floodplains of Winterpock Creek, as well as along the unnamed tributary to Winterpock Creek on the western portion of the property located at 13341 Eppes Falls Road. A Water Quality Impact Assessment must be submitted to and approved by the Department of Environmental Engineering and/or the Board of Supervisors for any improvements which encroach into the RPA.

There are areas of wetlands within the drainage ways located on the properties, as well as along Winterpock Creek and its tributaries. Wetlands and/or streams shall not be impacted without approval from the U.S. Army Corps of Engineers and/or the Virginia Department of Environmental Quality. Additionally, FEMA floodplain exists on the properties along Winterpock

Creek and the unnamed tributary to Winterpock Creek. No solar panels or other associated equipment will be placed within the FEMA floodplain.

The subject properties are located within an area identified on historic maps as the Rowlett Mine. In addition, review of the Virginia Department of Mines, Minerals, and Energy mapping for the subject properties identified the presence of two potential vertical openings, one on the property located at 13341 Eppes Falls Road and another located on a private property to the north. The vertical openings are primarily located within the limits of the on-site RPA and floodplain; however, due to unknown locations of any potential very old mines, air shafts and vents in the general area, the developer will be required to submit a geotechnical report prior to site plan approval for any on-site areas identified as potential mining areas. The geotechnical report will, through the use of borings and other techniques, locate potential mine shafts, air vents, exploratory pits, etc. in the areas where potential mining may have occurred on the properties. The report will also make recommendations based on the findings as to reclamation, setbacks of solar panels, roads, or other types of use needed to address any health, safety and welfare issues. The applicant has offered Proffered Condition 7 to address this impact.

Erosion and Sediment Control

Steep slopes greater than 20 percent are difficult to stabilize when disturbed. The steep slopes on the subject properties border the onsite tributaries; therefore, disturbance of these slopes will result in the increased potential for sediment to impact the streams if erosion occurs. These steep slopes should remain in their natural, undisturbed state to the maximum extent practicable, unless otherwise approved by the Department of Environmental Engineering. The applicant has offered Proffered Condition 4 to address this impact.

Stormwater Management

The development of the subject properties will be subject to the Part IIB technical criteria of the Virginia Stormwater Management Program Regulations for water quality and quantity.

UTILITIES

Staff Contact: Matt Rembold (804-716-7616) remboldm@chesterfield.gov

Water and Wastewater Systems			
	Currently Size of Existing Line Connection Required by County Code Serviced? Serviced Serviced		Connection Required by County Code?
Water	No	N/A	No
Wastewater	No	N/A	No

The proposal's impacts on the County's utility system are detailed in the chart below:

Additional Information:

This property is located outside of the mandatory water and wastewater connection areas for new non-residential structures. The applicant has indicated the use of private wells with their application and "N/A" for wastewater. This request will have minimal impact on the utilities department.

The Utilities Department supports this case.

CASE HISTORY

Applicant Submittals		
3/14/19	Application submitted	
6/11 & 8/5/19	Application amended	
5/28, 6/11, 6/19,	Proffered conditions, zoning site plan and landscape plan submitted	
7/11, 7/12, 7/18,		
8/5, 9/5, 9/9, 9/16 &		
9/17/19		

Community Meeting		
7/23/19	 Issues Discussed: Company history and project financing 	
	 Studies regarding property value, environmental and archeological impacts 	
	 Consideration of alternative locations; question of benefit to neighboring community 	
	 Site security (fencing), and monitoring and routine maintenance of facility Height of panels 	
	Expanded property owner notification for future meetings/hearings	
	Construction, operation and maintenance access	
	 Preclusion of construction activity on Sundays 	
	Removal of row of solar panels closest to neighbors on Eppes Falls Road	

Planning Commission	
9/17/19	 Citizen Comments: Several citizens spoke in opposition and support to the request. Those in opposition noted concerns relative to: Safety of solar panel materials and potential contamination of area water resources (wells and reservoir) in event of breakage/leakage Limited appraisal data relative to impacts of use on area property values Lack of similarity with Agricultural uses; solar farms better suited for industrial areas History of area mining activity and impacts on site stability Those in support noted: Low impacts of use on area residential and historic properties (Eppington) Need for renewable energy Better land use alternative Applicant's responsiveness to neighboring property owners' concerns

	Planning Commission (Continued)	
9/17/19	Applicant's Comments:	
	 76 of 329 acres within buffer/setbacks 	
	 Hosted community meeting, subject site and local solar farm visits 	
	 Responded to community concerns by removing panels closest to River Road; providing larger setbacks from neighboring Eppes Falls Road properties and replanting old logging road access; and proffering geotechnical study to address mining activity Property value studies indicate no negative impacts Use presents low environmental, traffic and noise impacts Agricultural areas appropriate for use – larger parcels, more buffering, preserves industrial property 	
	Commission Discussion:	
	In response to questions of the Commission, staff addressed limits on residential parcel divisions for the site; identification of one vertical on-site mine opening located within floodplain; requirements for detailed geotechnical investigation and Department of Mines, Minerals and Energy (DMME) permitting; and requirements for a traffic management plan to address construction impacts on roads.	
	In response to questions of the Commission, the applicant reviewed the benefits of using agricultural properties for solar facilities and appraisal studies resulting in no impact on property values due to proximity to solar farm.	
	Mr. Stariha noted positive changes made to case as a result of citizen engagement.	
	Action – APPROVAL AND ACCEPTANCE OF THE PROFFERED CONDITIONS IN ATTACHMENT 1.	
	Motion: Stariha Second: Stariha	
	AYES: Jackson, Freye, Jones, Sloan, Stariha	
The Board of Supervisors on Wednesday, October 23, 2019, beginning at 6:00 p.m., will		
consider this re	equest.	

PROFFERED CONDITIONS September 17, 2019

Note: Both the Planning Commission and staff recommend acceptance of the following proffered conditions, as offered by the applicant.

- <u>Conceptual Plan.</u> The plan titled "Zoning Site Plans Winterpock Solar I, LLC. Solar Power Generation Facility", prepared by Cypress Creek Renewables, and last revised 9/10/2019 shall be considered the Conceptual Plan for the proposed development. Development of the Property shall conform generally to the Conceptual Plan. (P)
- 2. <u>Right of Way</u>. The following rights-of-way shall be dedicated, free and unrestricted, to and for the benefit of Chesterfield County, prior to any site plan approval:
 - a. Forty-five (45) feet of right-of-way on the south side of River Road along the property's frontage with River Road measured from the centerline of River Road.
 - b. Thirty (30) feet of right-of-way east side of Eppes Falls Road, measured from the centerline of Eppes Falls Road along the property's frontage with Eppes Falls Road. (T)
- 3. <u>Access</u>. Direct vehicular access from the property to River Road and Eppes Falls Road shall be limited to one (1) entrance/exit on each roadway. (T)
- 4. <u>Steep Slopes</u>. Steep slopes equal to or greater than 20 percent shall remain in their natural, undisturbed state to the maximum extent practicable, unless otherwise approved by the Department of Environmental Engineering. In locations where the disturbance of slopes greater than 20 percent is unavoidable, enhanced erosion and sediment control measures, such as super silt fence (or alternative as approved by the Department of Environmental Engineering) and the application of anionic PAM to denuded areas during construction and final stabilization, will be provided as directed by the Department of Environmental Engineering at the time of site plan review. The Department of Environmental Engineering shall approve the exact design and implementation of these standards. (EE)
- 5. <u>Pile Driving</u>. During construction of the solar facility, pile driving activities on the property west of Tax Map Parcel number 706-639-7211 shall be limited to Monday through Friday from 9:00 AM to 5:00 PM. (P)
- Eppes Falls Road (Private Access Road). The existing private access road from Eppes Falls Road shall be relocated as shown on the Conceptual Plan. Landscaping as depicted in plan prepared by Balzer & Associates, dated September 17, 2019 (Exhibit B) shall be installed within areas occupied by the existing private access road located in the northern fifty (50) setback adjacent to Tax ID 705-638-0456. (P)
- 7. <u>Geotechnical Report.</u> A geotechnical engineering report will be submitted to the Department of Environmental Engineering prior to site plan approval, for any

potential historic mining areas identified within the solar project area. The geotechnical report will, through the use of borings and other techniques, locate potential mine shafts, air vents, exploratory pits, etc. in the areas where potential mining may have occurred on the properties. (EE)

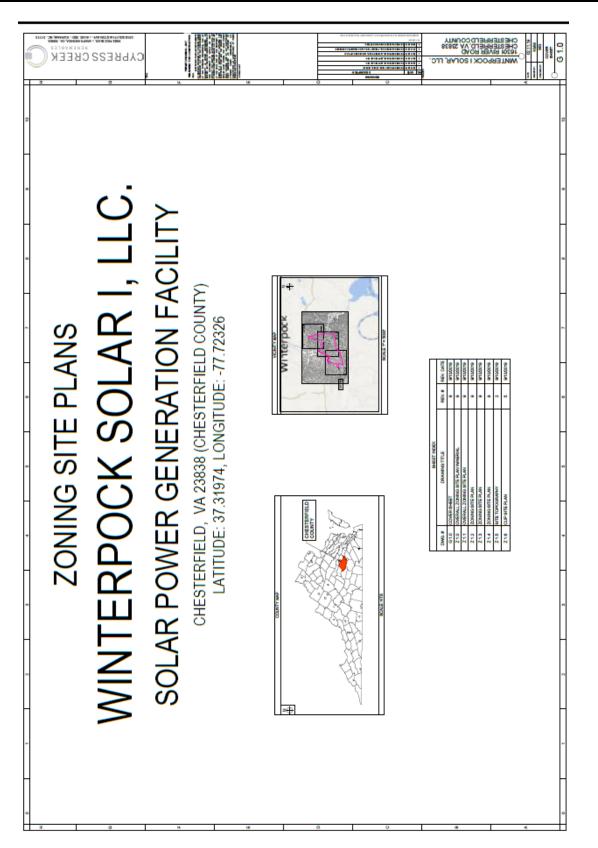
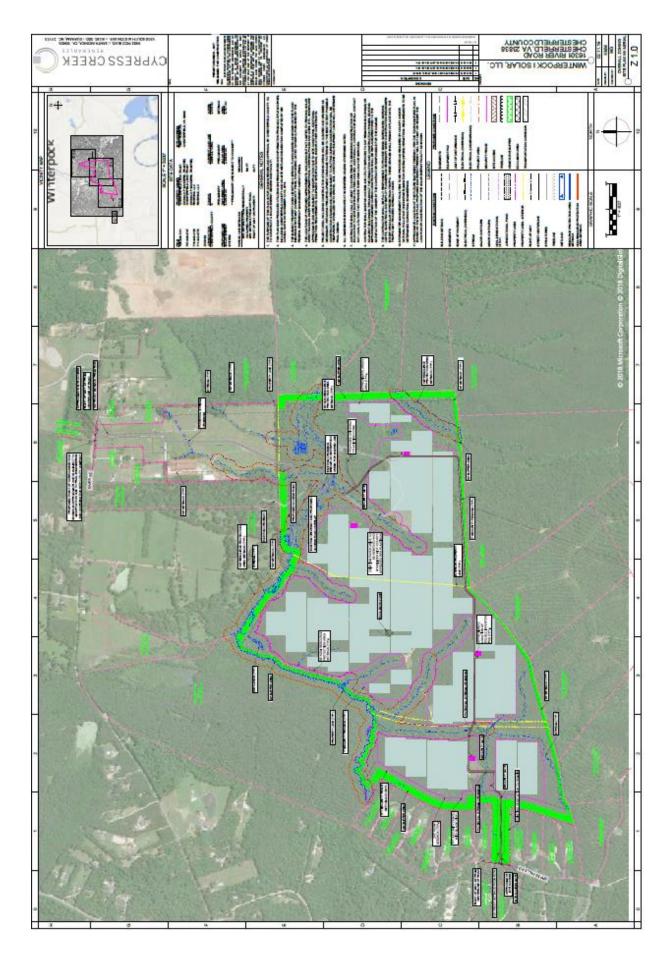
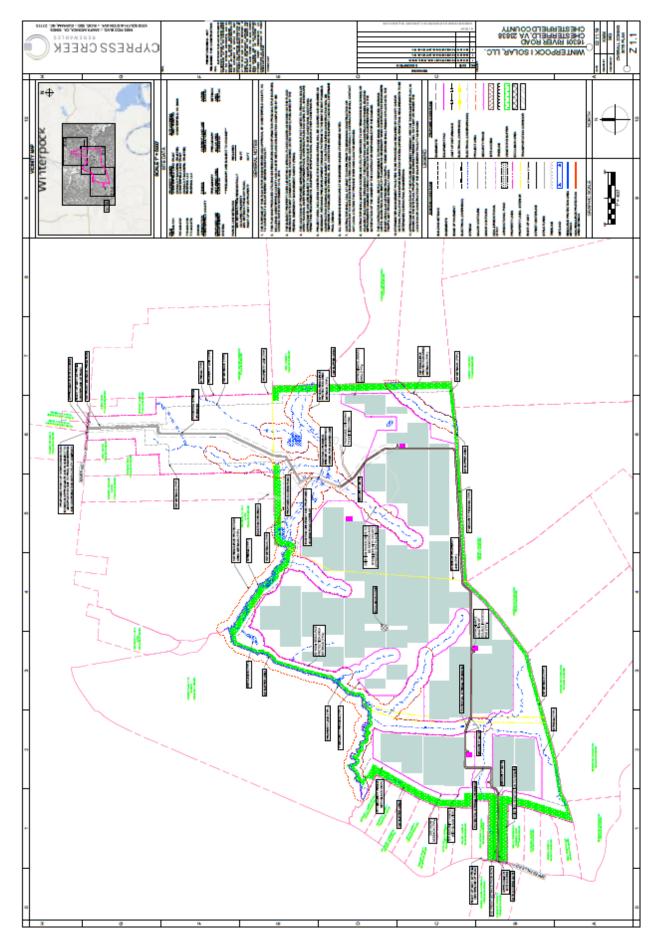


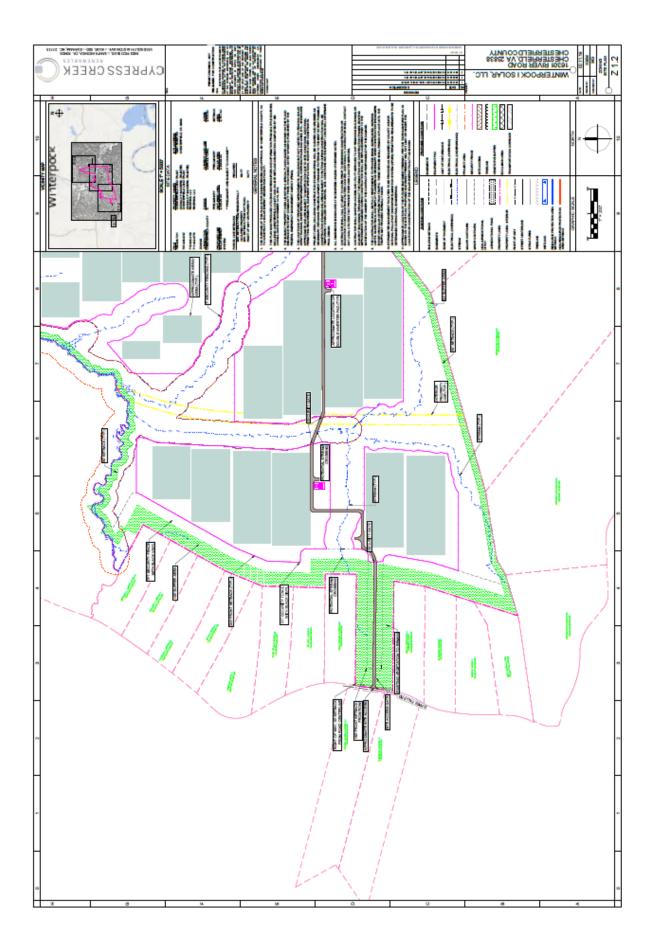
EXHIBIT A: CONCEPTUAL PLAN

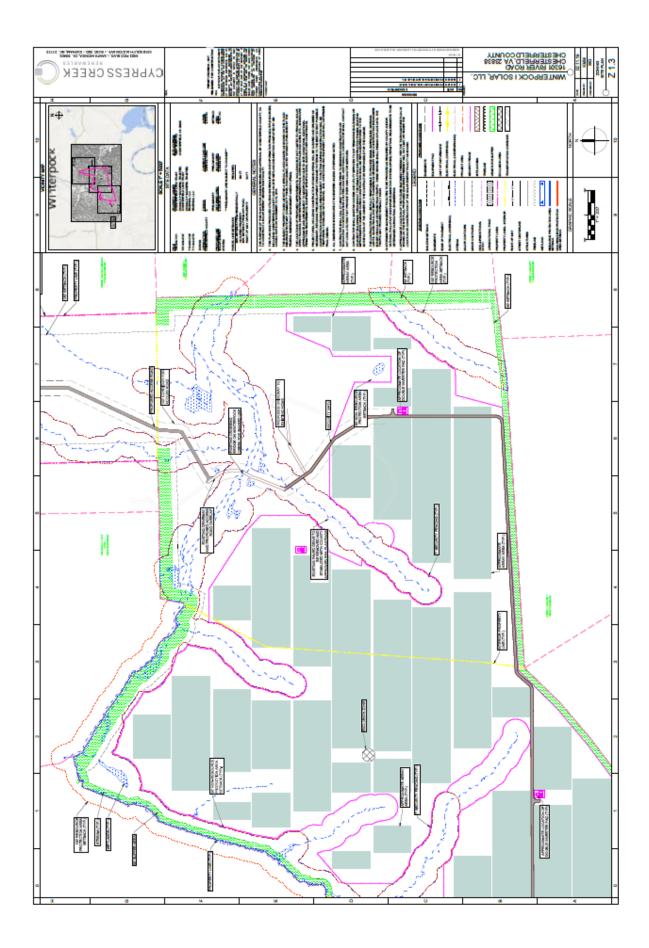
(Last Revised 9/10/19)

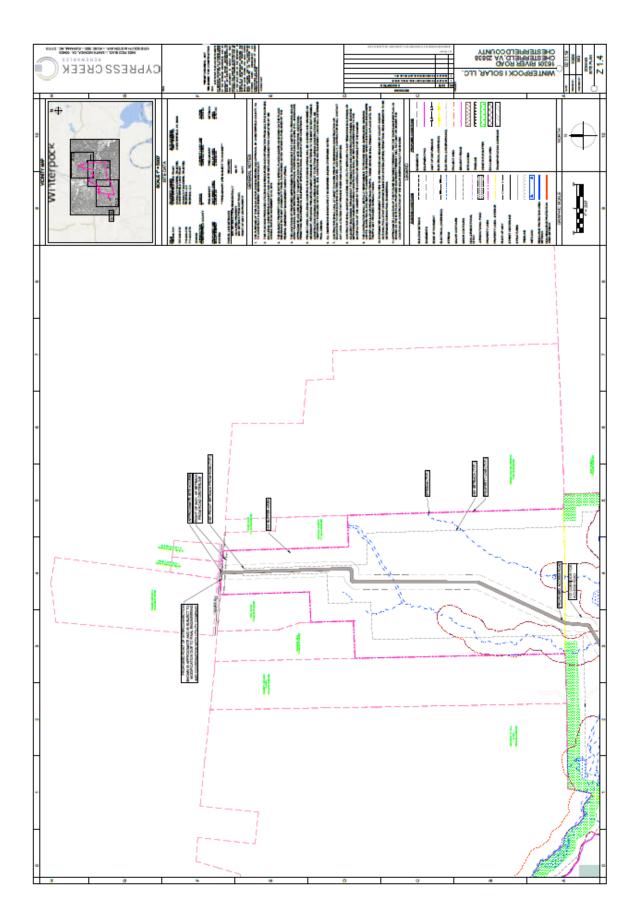
ATTACHMENT 2

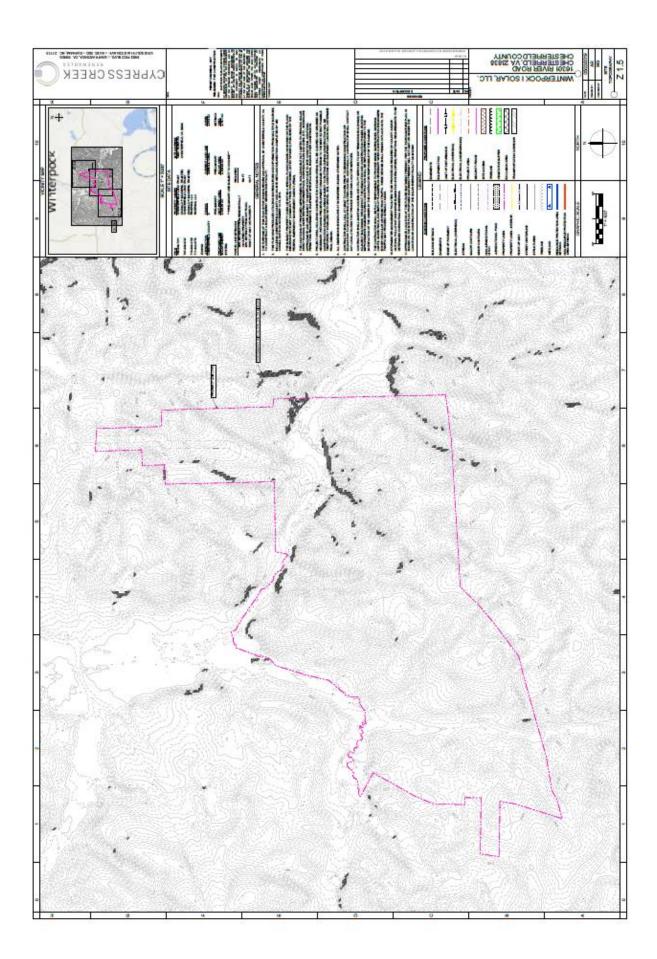












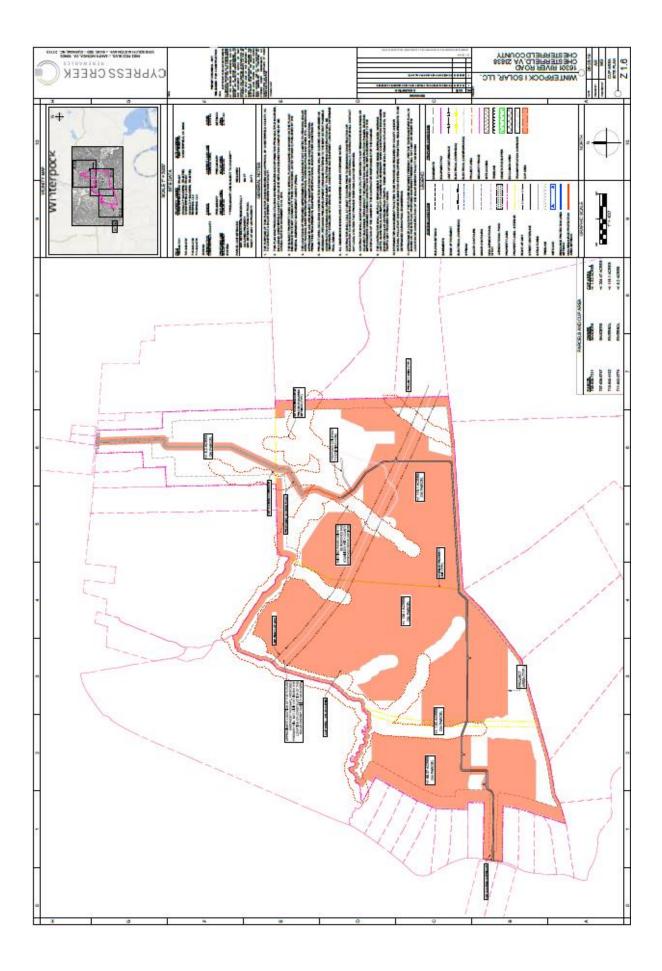


EXHIBIT B: LANDSCAPE PLAN

September 17, 2019



EXHIBIT C: ZONING ORDINANCE

Sec. 19.1-52. Uses Generally.

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D. <u>Special Limitations for Specific Uses</u>. The following uses shall be subject to the limitations as specified:

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- 4. **Solar energy facility, large scale.** Unless modified or otherwise conditioned by the Board of Supervisors at time of zoning approval, large scale solar energy facilities shall be subject to the following limitations and requirements:
 - a. Project description. In addition to other application requirements, application for a facility must include project overview in textual form that includes estimated completion date and operational lifespan of facility, approximate rated capacity of solar energy system, specified types of solar equipment to be placed on site and description of any supplementary structures or uses.
 - b. General plan. General layout plan shall be provided with application. The plan shall include, at a minimum, location, access points, anticipated location of transmission lines and other utility connections, general location of solar equipment and supplementary facilities to be placed on site, buffers and other items required for zoning applications layout plans. If facility development is to be phased, a general phasing plan should also be included.
 - c. Decommissioning plan. A decommissioning plan shall be submitted for review with initial site plan. A decommissioning plan shall include the following:
 - Contact information for the party responsible for site decommissioning;
 - Timeline for, and written description of, decommissioning procedures which shall include, but not be limited to, removal of any above and below ground tanks, cables, fencing, debris, buildings, structures or equipment, to include foundations and pads, related to the facility and the restoration of solar facility land and related disturbed areas to a natural condition or other approved state. At time of zoning approval, the Board of Supervisors may approve and condition a request by an applicant to have certain items intended to be utilized to serve a permitted use on the site, to remain provided site plan approval is obtained;
 - "Natural condition" shall be taken to mean the stabilization of soil to a depth of 3 feet and restoration of site vegetation and topography to pre-existing condition, provided that the exact method and final site restoration plan shall be subject to site plan review giving, among other things, consideration to impacts upon future site use, environmental and adjacent property impacts. The director of planning may approve a request by the landowner for

alternatives to site restoration to allow roads, pads or other items which will serve a future permitted site use to remain. Where applicable, if the director of planning determines that a restoration plan significantly deviates from the description and conditions approved by the Board such plan shall require amendment of conditions through the zoning process;

- A detailed estimate of the cost of decommissioning, which may include net salvage value of such equipment, facilities or devices, and site restoration or, if approved by Board of Supervisors, future site development. If decommissioning is phased then such costs shall be so described and calculated to match phased plan. An estimate shall be prepared by an engineer licensed in the state of Virginia, having expertise in the removal of solar facilities and site restoration as applicable to request;
- Decommissioning plan, accompanying estimates and surety shall be updated every five years and provided to the director of planning; and
- Landowner, applicant or facility owner shall provide the county with a surety, acceptable to the director of planning, equal to the estimated costs of the decommissioning and site restoration or redevelopment as applicable. Any such surety shall be provided prior to site plan approval for the facility and shall include the ability for automatic adjustment for inflation or as necessary based upon decommissioning and/or restoration plan update.
- d. Airport and Federal Aviation Administration (FAA) approval. Prior to site plan approval, applicant shall demonstrate compliance with glint and glare standards of the FAA and approval from and the FAA.
- e. Construction and decommissioning activity. Except as provided herein, all construction and decommissioning activity shall be limited to the hours of 7 AM to 7 PM Monday through Saturday. Pile driving activity will be further limited to the hours of 9 AM to 5 PM Monday through Saturday. On Sunday, construction and decommissioning activity will be limited to the hours of 9 AM and 5 PM, and further restricted only to light construction or decommissioning activity that does not include pile driving, use of heavy equipment or any other activity that exceeds 60 dBA as measured at property line with any adjacent property not part of facility.
- f. Traffic management plan. When determined by the directors of planning and transportation that construction or decommissioning activity for the site creates a significant traffic or safety impact upon or damage to area roads or properties, a traffic management plan shall be provided at time of site plan review, which shall include a reasonable road maintenance plan if appropriate under the circumstances.

- g. Setbacks, buffers and screening.
 - The solar facility operational area, to include any buildings, structures, equipment, parking and disturbed areas, shall be setback a minimum 150 feet from any residentially zoned or occupied property, 100 feet from any road or right-of-way shown on the Thoroughfare Plan, and 50 feet from any other road or property;
 - Except where adjacent to electric power facility producing electricity for others or residentially zoned or occupied property, a buffer shall be provided equal to the required setback. Adjacent to residentially zoned or occupied property, the buffer shall be 100 feet in width. Each buffer shall comply with requirements of Perimeter Landscaping C and the requirements of buffers in this chapter; and
 - Excluding solar panel arrays, facility outdoor equipment or storage shall be screened unless determined through site plan review that provided buffer is sufficient to mitigate view from adjacent property or road.
- h. Access. Access to the property shall be provided for Chesterfield County Fire Department, and where necessary Environmental Engineering, in a manner satisfactory to each department as determined at time of plan review.
- i. Facility operation and design.
 - Facility design, construction and installation shall conform to applicable industry standards, including those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), or other similar certifying organizations, and shall comply with the Uniform Statewide Building Code and with all other applicable fire and life safety requirements. The type, and manufacturer specifications of, solar panels shall be submitted for review and approval as part of the site plan application and may be modified through request to, and approval, by the director of planning;
 - Prior to start of electricity transmission, documentation shall be provided to the director of planning verifying interconnection agreement or similar agreement with the applicable public utility pursuant to a Power Purchase Agreement (PPA) or other off-taker as permitted by state law or the State Corporation Commission, and notification of when electricity transmission is to begin. The director of planning shall be notified certified mail within 30 days of cessation of such agreement. Where such power distribution is permitted by law, agreements for power distribution which do not require a PPA shall also comply with the above documentation and notification;

- Generation of power shall be limited to photovoltaic panels, provided that any on-site buildings may utilize integrated photovoltaic building materials;
- Solvents necessary for the cleaning of solar panels shall be biodegradable;
- Wiring, excluding that which is on a solar array, shall be located underground except where necessary to directly connect to public service corporation;
- Solar panels shall be placed so as to prevent concentrated solar radiation, heat or glare being directed onto other properties or roads;
- Onsite lighting shall be the minimum necessary for security or onsite maintenance and shall comply with Sec. 19.1-205;
- Solar equipment shall not be utilized to provide advertising or function as signs;
- Except for initial construction or decommissioning activity, maintenance periods or emergency conditions which require temporary use of onsite generator, noise generated by the facility shall not exceed 60 dBA as measured at property line with any adjacent property not part of facility; and
- Facility owner shall develop a maintenance inspection agreement with the county to provide for inspection of facility and panels.
- j. Height. Excluding transmission utility poles serving the site, no buildings, structures, solar panel arrays or other equipment utilized on the site shall exceed 25 feet in height. The director of planning may approve the permitted height to be exceeded where due to terrain, screening or other mitigation visibility of a structure is minimized;
- k. Transmission lines. Except for lines that are solely subject to State Corporation Commission jurisdiction, and where necessary for lines to directly connect to existing transmission lines, new transmission lines are subject to site plan review and shall not be located above ground. The director of planning may approve use of above ground transmission lines where determined during plan review that such action would mitigate impact upon protected environmental features or there exist other site-specific features where underground placement of lines is not feasible.
- 1. Health and safety. Security fencing shall be provided for areas of facility operation a minimum of 6 feet in height, having barbed wire or similar along top and providing secured gates. Alternative method of security may be approved at time of site plan approval where demonstrated that such method meets or exceeds intended security of fencing.
- m. Change of facility owner. The director of planning shall be notified by certified mail of any change in ownership and, if different, party responsible for decommissioning of facility within 60 days of such change.

- n. Decommission, abandonment and maintenance compliance.
 - Planning shall be notified by certified mail 30 days prior to the intended decommissioning of a solar facility;
 - Damaged or unusable panels or arrays shall be removed from site within 60 days of removal from service;
 - A solar facility, or any portion thereof, shall be considered abandoned where not utilized for the generation and distribution of electricity for a continuous period of six months. The director of planning may extend such time period where evidence is provided by the facility owner or operator demonstrating that the failure to utilize the facility for power generation is beyond the reasonable control of owner or operator, the facility is operationally capable of generation and has not been abandoned; and
 - Decommissioning procedures shall be completed within 1 year of decommissioning notice, abandonment of a solar facility, or a shorter time period where in writing building official or other county official determines the facility or some aspect thereof to be unsafe. If facility owner fails to meet decommissioning requirements or comply with a request for removal or repair, the county may at its option:
 - remove and salvage facility equipment and structures and perform related restoration using provided surety. If the decommissioning surety and salvage recompense is insufficient, the county shall have the right to recover such costs from facility owner to include legal fees, expenses and fines; or
 - pursue legal recourse to have the solar facility, or portion thereof as applicable, removed at owner's expense. The county may seek to recover its costs, legal fees and legal expenses incurred to have the facility decommissioned in compliance with approved plan.