

Verdanterra  
37 Bailey Avenue  
Latham, NY 12110  
(518) 857-7169

Re: Oak Hill Solar  
13590 Duanesburg Road, Duanesburg, NY 12053  
Issued for Construction (IFC) Plans  
Town Engineer Comment Response Letter #3

October 20, 2021

Dear Mr. Warner:

**Dale Warner**  
Town Planner / Building  
Inspector / Code  
Enforcement Officer  
Town of Duanesburg  
5853 Western Turnpike  
Duanesburg, NY 12053

Greencells USA, Inc. plans to install a solar generation facility at 13590 Duanesburg Road, Duanesburg, NY. We are in receipt of three comment letters dated August 14, 2021, September 15, 2021, and October 15, 2021, prepared by Douglas P. Cole, PE, a September 17, 2021 conference call summary letter dated September 21, 2021, prepared by Douglas P. Cole, PE, and comment letter Addendum #1 dated August 19, 2021, prepared by Jeffrey D. Trzeciak, PE, all from PRIME AE Group of NY. The comments from the August 15, 2021 and August 19, 2021 letters are listed below and are addressed in bold. The additional comments from the September 15, 2021 letter are noted as TE Response unless noted as new Town Engineer comments. Our responses to the September 15, 2021 letter including reference to the September 17, 2021 conference call and September 21 conference call letter where necessary are after the TE Response and are addressed in bold. The additional comments from the October 15, 2021 letter are noted as TE Response 2. Our responses to the October 15, 2021 letter are after the TE Response 2 and are addressed in bold.

IFC Site Plan Drawings and Summary of Changes Letter

1. Per the local solar law, the site is enclosed by a minimum 6' fence for security.  
***Response: An 8' fence has been provided as it will meet the requirements stated in the 2017 National Electrical Code (NEC) as followed by New York State. The fence requirement is stated in NEC Article 110.31. We do not plan to use a barbed wire fence. A fixed knot fence will be used as it will be more aesthetically pleasing for the site.***  
TE Response: An 8' fence has been provided as it will meet the requirements stated in the 2017 National Electrical Code (NEC) as followed by New York State. The fence requirement is stated in NEC Article 110.31. A fixed knot fence will be used, we find this to be acceptable.  
***Response: Comment noted.***
2. The fence signs and plaques appear to be in compliance with the local solar law standards.  
***Response: Comment noted.***  
TE Response: No further comments.  
***Response: Comment noted.***
3. The 25' undisturbed buffer required for screening as described in the local solar law is being complied with as all proposed construction and clearing is shown to take place 100' from the adjacent lots on the plans. There could be cause for concern that there is not sufficient screening on the west side of the site, however, there is currently no developed land on the adjacent property where this would be a potential issue.

***Response: Additional screening (tree buffer) along the western border of the parcel/projects was not contemplated because the projects are already screened effectively by existing forest on the host parcel, whereas the eastern border required additional uninterrupted screening on the host parcel.***

TE Response: Additional screening (tree buffer) along the western border of the parcel/projects was not contemplated because the projects are already screened effectively by existing forest on the host parcel, whereas the eastern border required additional uninterrupted screening on the host parcel.

***Response: Comment noted.***

4. Evergreen tree plantings are proposed on the east side of the property to provide screening along the Susan Liss Briggs property line, which was agreed to for the prior site plan approval.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

5. It appears the largest portion of the property that will have clear-cutting of trees is the south-western most part of the facility as per a review of Google-maps. This section appears to require approximately 9 acres of clear-cutting which is not in accordance with Town Solar code which only permits 20,000 sf of clear cutting in one location. Therefore, a variance may be required.

***Response: The area for tree clearing is within the lease area and limits of disturbance. A check of Google Earth shows their latest aerial as June 2018. The current existing tree lines within this area have been surveyed by Environmental Design Partnership, LLP (EDP) dated November 8, 2018 and are represented on the IFC plan set. The area shown to be cleared within the southwestern portion of the facility is approximately 0.27 acres (less than the 20,000 sf of clear cutting allowed in one location). See IFC plan sheet C1.01.***

TE Response: Survey as performed by Environmental Design Partnership, LLP. (EDP), and as shown on sheet C1.01, indicates a maximum tree clearing of 0.27 acres, or 11,814 sf which is in conformance with local solar code. However, HydroCAD calculations as provided in the SWPPP indicate a 21.5-acre removal of "woods" in sub-catchment areas. How is this explained?

***Response: Based on conversations with property owner, Chris Murray, recalls the tree clearing took place in Summer/Fall 2019. Upon further review, the updated survey provided was done on March 10, 2020. The plans have been revised to denote the proper updated survey date (see Sheet C0.01). The SWPPP has been revised with HydroCAD calculations incorporating the updated land types.***

TE Response 2: Survey as performed by Environmental Design Partnership, LLP. (EDP), and as shown on sheet C1.01, indicates a maximum tree clearing of 0.27 acres, or 11,814 sf which is in conformance with local solar code. HydroCAD calculations are said to have been updated to incorporate updated land types.

***Response: Comment noted.***

6. Lot coverage does not appear to exceed 60% of the total lot, therefore it meets the requirement of the local solar law.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

7. The closest inverter to a parcel boundary is the most north-eastern inverter at about 600' from the adjacent property, also owned by Richard Murray. The next closest inverter to property not-owned by Mr. Murray is approx. 750' from lands owned by Joshua Barnes. The applicant should provide information regarding noise levels produced by proposed inverters.

***Response: At full power, the inverters generate <79 dBA measured next to the inverter. A setback of 750' to the nearest property is a very reasonable setback distance to mitigate adverse effects as a result of inverter operation. The Solar Farm Noise Analysis Report prepared by EDP on August 25,***

*2021 shows how the noise levels will be significantly reduced at a setback distance of 750 feet and is provided as part of this submission.*

TE Response: The noise analysis as prepared by EDP has been reviewed and found to be acceptable regarding equipment noises in respect to surrounding land-owner property lines. Noise analysis shows the sound produced by inverters will be just above 40 decibels at a distance of 750' from the proposed equipment, which is shortest distance from a piece of proposed equipment to a neighboring property line. Duaneburg Zoning Ordinance says properties shall not emit noise in excess of 70 decibels, measured at individual property lines. The provided noise analysis shows compliance with this regulation.

*Response: Comment noted.*

8. All proposed development, save for the evergreen plantings, are within the requirements of a 100' setback as required by local solar law.

*Response: Comment noted.*

TE Response: No further comments.

*Response: Comment noted.*

9. Total area of construction disturbance should be identified on the plans. Applicant should provide a breakdown of types of disturbances anticipated and the quantity of each.

*Response: The plans have been revised to show the limits of disturbance and a breakdown of the types of soil disturbance anticipated (temporary and permanent) with the quantity of each. See Sheet C0.01.*

TE Response: On Sheet C2.00, the sum of limits of disturbance for Oak Hill 1 (36.28 ac), Oak Hill 2 main (36.28 ac), and Oak Hill 2 Landscape (0.79 ac) do not total to 69.75 ac as shown. This drawing should be revised to accurately summarize the proposed disturbances.

*Response: The plans have been revised to show the correct limits of disturbance for each area: Oak Hill 1 (32.68 ac), Oak Hill 2 main (36.28 ac), and Oak Hill 2 landscape (0.79 ac).*

TE Response 2: Sheet C2.00 has been revised to show the correct limits of disturbance for Oak Hill 1 (32.68 ac), Oak Hill 2 main (36.28 ac), and Oak Hill 2 Landscape (0.79 ac) for a total of 69.75.

*Response: Comment noted.*

10. Applicant should include a detail of proposed pads and a schedule of dimensions and quantities of each in the plans.

*Response: The plans have been revised to include typical structural pad details. See Sheet S1.01. Additional structural pad details will be developed after construction permit submission.*

TE Response: Proposed pad details have been provided. Further structural pad details are stated to be developed after construction permit submission, however, these should be provided at the time of construction permit submission for review and approval.

*Response: The plans have been revised to include further structural pad detail.*

TE Response 2: Proposed pad details have been revised in a way that we find satisfactory, however, further structural pad details should be provided at the time of construction permit submission for review and approval.

*Response: Comment noted.*

11. It appears that infiltration trenches are to surround all proposed equipment and pads. Applicant should verify and provide calculations that the bearing capacity of soils, with no dispersion of moment (given that the trenches do not allow for such), can support the concrete pads and the equipment they intend to support.

*Response: Typical structural pad details have been developed and the infiltration trench locations have been revised so there is no dispersion of moment. Soil bearing capacity calculations are not provided.*

TE Response: PRIME AE's response per comment letter did not correspond to the question. This was brought up to PRIME AE via the September 17, 2021 conference call. PRIME AE reviewed this comment and provided the following verbally "We find this explanation to be satisfactory." This response has also been confirmed in the September 21, 2021 letter.

**Response: Comment noted.**

TE Response 2: Infiltration trench locations are satisfactory. We would just ask the applicant to clarify why the infiltration trenches surrounding the energy storage systems will be lined with non-woven geotextile while equipment pad related infiltration trenches will not be lined.

**Response: The plans have been revised to remove non-woven geotextile from the energy storage systems on Sheet S1.01.**

12. The proposed facility falls within the R-2 zoning district and may be permitted for construction by the issuance of a special use permit in this district.

**Response: Comment noted.**

TE Response: No further comments.

**Response: Comment noted.**

13. Access roads for maintenance and emergency services are shown, utilizing existing pathways to the greatest extent practicable as in accordance with local solar law. There are turnarounds at each location of inverters and storage containers for ease of navigation as required by local law. NYSFC 2020 specifies and requires fire apparatus access roads to have an unobstructed width of 20' in section 503.2.1. There is an exception to this requirement described in section 503.1.1 where an approved fire code official may exempt a fire apparatus road from this requirement. We received correspondence from the Esperance Fire Chief, written 9/18/2019, that he found the access road acceptable on the prior plans. It should be noted that the State Fire Code has been revised since the issuance of this correspondence. Therefore, an updated approval from the local fire department should be obtained by the applicant. Furthermore, we have no record that the Esperance Fire Chief is considered an approved fire code official as defined by the NYS Fire Code. The applicant must obtain approval by an approved fire code official as defined by the NYS Fire Code for this previous access road as shown and specified.

**Response: Dale Warner, the Town of Duanesburg Fire Code Official, has reviewed the submitted plans and discussed with the fire chief of the Esperance Fire Department. Under Section 503.1.1 Exception 2, the Fire Apparatus Road may be modified to 10 foot (10') in width as approved in the previous site plan, provided a two foot (2') shoulder on each side to prevent overgrowth and a maximum of 9 percent grade are included as part of the modification. 14 foot (14') roadways are designed within the project area and were approved per the previous site plan.**

TE Response: It is acknowledged that Dale Warner has given his approval upon the conditions that a 2' wide shoulder be provided along each side of the proposed 10' access route and that the slope of the access route does not exceed 10%. Stationing points including, but not necessarily limited to, 3+50, 8+00, 9+50, 10+50, and 13+50 seem to be areas where 2' shoulder on each side seems difficult to obtain. Applicant should verify the practicability of providing 2' of shoulder on either side of the 10' wide access road at all locations, considering slope and vegetation.

**Response: It has been noted and confirmed that the maximum grade of 9% is allowed by Dale Warner, not 10% maximum slope as stated in the TE response. The plans have been reviewed and revised to show that 2' shoulder has been provided along the 10' wide access road on each side for clearance purposes.**

TE Response 2: Longitudinal slopes will not exceed 9% and a 2' shoulder will be provided at all areas along the 10' wide access road.

**Response: Comment noted.**

- Note that maximum grade on the access road appears to be 12%. NYSDOT recommends commercial driveways to not exceed 10%. The applicant should consider revising the maximum slope.

**Response:** *The plans have been revised to show the access road maximum slope is 9% slope as stated by Dale Warner. See response to IFC Plan Site Plan Drawings and Summary of Changes Letter Question 13.*

TE Response: Noted.

**Response:** *Comment noted.*

- For wetland disturbances, the most-eastern access-road-crossing appears to be about 100' long and at least 14' wide. This would equate to 1,400 sf. If additional trenching were to take place adjacent to the road for the medium voltage trench, that would be approximately another 200 sf. Making this disturbance alone equate to approx. 0.04 acres of disturbance. The second wetland, access-road-crossing appears to be identified properly in square footage. The total disturbance of wetlands from this work would equate to 0.043 acres. Please reconsider the total disturbances for this item – USACE and NYSDEC permit applications may need to be revised accordingly.

**Response:** *The plans have been revised and wetland disturbance numbers have been updated based on access road and underground conduit locations. USACE will be notified of the changes and an updated USACE permit will be forthcoming.*

TE Response: Sheets C2.00, C2.01, and C2.02 still do not properly identify the suited dimensions of wetland disturbances. Leaders should be revised. The access road and LV trench crossing area scales to approximately 944 square feet. Leader currently shows 905 square feet. Total of disturbances would equate to approximately 1322 square feet.

**Response:** *The wetland crossing disturbance in question has been measured in AutoCAD to be 905 square feet and has been verified by PRIME AE per the September 17, 2021 conference call. This has also been confirmed by PRIME AE's September 21, 2021 letter. No plan revision has been made.*

#### Site Plan C2

- Site plan was submitted for review, comments can be seen in the IFC plans section.

**Response:** *Comment noted.*

TE Response: No further comments.

**Response:** *Comment noted.*

#### Grading Plan C3

- Site plan was submitted for review, comments can be seen in the IFC plans section.

**Response:** *Comment noted.*

TE Response: No further comments.

**Response:** *Comment noted.*

#### IFC Landscape & Planting Plan

- Landscape and Planting Plan are the same. One of the drawings should be removed for clarity.

**Response:** *The additional landscape plan was provided for clarity as requested by the Town of Duanesburg Planning Board. Tree labels and callouts were cleaned up for the Town's use. Only one landscape plan is provided for the IFC plan set.*

TE Response: No further comments.

**Response:** *Comment noted.*

2. The plan specifies mountain laurels but states that the scientific name is *Morella Penstlvatica*. The scientific name for mountain laurels is *Kalmia Latifolia*. The scientific name specified is for Northern Bayberry. The scientific name and common name should agree for the intended species.

**Response:** *The plans have been revised to denote the correct scientific name for mountain laurels.*

TE Response: Noted.

**Response:** *Comment noted.*

3. The applicant should clarify why plantings are proposed on the easterly side of the lot and not the westerly side as the westerly side also borders a residential property.

**Response:** *Additional screening (tree buffer) along the western border of the parcel/projects was not contemplated because the projects are already screened effectively by existing forest on the host parcel, whereas the eastern border required additional uninterrupted screening on the host parcel.*

TE Response: Noted.

**Response:** *Comment noted.*

### IFC Mechanical Drawings 1 & 2

1. A key should be added to the drawings as well as the height of the solar panels identifying the height at maximum tilt.

**Response:** *The height at maximum tilt has been added to the drawings.*

TE Response: A key should be added to the drawings as well as the height of the solar panels identifying the height at maximum tilt.

**Response:** *The overall height is shown on the Oak Hill 1 IFC Mechanical Drawing set pages 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18 and 19 and Oak Hill 2 IFC Mechanical Drawing set pages 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, and 25. Every time the tracker is shown from the side there are two measurements: 3352mm = pole depth and 4431mm (approx. 14.5 feet) = height at 60° maximum tilt.*

TE Response 2: The height of the panels is shown in millimeters. When they are parallel to the ground, the height of a panel is 2754 mm which equates to approximately 9' above grade. When a panel is at a maximum tilt of 60 degrees, the height of a panel is 4431 mm which equates to approximately 14.5' above grade. This is below the threshold of 20' in height at maximum tilt as required by Duaneburg Town Solar Code.

**Response:** *Comment noted.*

2. Units should be included for each dimension. English units would be preferred. Units should be consistent throughout set.

**Response:** *The racking system has been designed using the metric system. We have confirmed with the mechanical designer that metric units have been used consistently throughout the IFC Mechanical Drawing set.*

TE Response: Units should be included for each dimension. English units would be preferred. Units should be consistent throughout set.

**Response:** *The IFC Mechanical Drawings have been revised. Dimensions have been added and metric units are used (millimeters) per the mechanical designer specifications except where English units are used on Table A and Detail A on the IFC Mechanical Drawings Sheet 2.*

TE Response 2: We appreciate the resubmission of mechanical drawings with units shown. A formal response was transmitted by Wolf Engineering LLC stating that all units are shown in millimeters. We find this to be acceptable.

**Response:** *Comment noted.*

3. Equipment parts should be labeled.

**Response:** *The racking installation manual will be provided which includes labels for all the equipment parts, which are listed on page 31.*

TE Response: Equipment parts should be labeled.

**Response:** *The racking installation manual has been provided which includes figures and labels for the equipment parts.*

TE Response 2: Racking installation manual with figures and labels has been found to be acceptable.

**Response:** *Comment noted.*

#### IFC Electrical Drawings 1&2

1. We have received the IFC Electrical Plans 1 & 2, however, they have not been reviewed. It is our understanding that the building code officer shall review and approve these plans prior to issuance of a building permit.

**Response:** *Comment noted.*

TE Response: No further comments.

**Response:** *Comment noted.*

#### SWPPP

1. Section 3, the first sentence only describes the SWPPP as applying to stormwater management during construction and not post-construction which is required, given that this is a project classified in Table 2 "Construction Activities that Require the Preparation of a SWPPP that Includes Post-Construction Stormwater Management Practices" of Appendix B "Required SWPPP Components by Project Type". This should be revised.

**Response:** *The SWPPP has been revised to include stormwater management in post-construction.*

TE Response: Section 3 has been revised to include mention of stormwater management in post-construction. We find this to be acceptable.

**Response:** *Comment noted.*

2. Section 3, paragraph 2 says inspection will only occur during construction until final stabilization has been achieved. As this is a project classified in Table 2 of Appendix B, post construction stormwater management inspections will be required. This section should be revised.

**Response:** *The SWPPP has been revised to include stormwater management in post-construction.*

TE Response: Section 3 has been revised to include mention of stormwater management in post-construction. We find this to be acceptable.

**Response:** *Comment noted.*

3. Section 4 should be revised to state that the SWPPP should be modified to document final construction conditions as well.

**Response:** *The SWPPP has been revised to include documentation for final construction conditions.*

TE Response: Section 4 has been revised to include documentation for final construction conditions.

**Response:** *Comment noted.*

4. Section 4 should be revised to state that revisions to the SWPPP shall be submitted to the NYSDEC as well as the Town of Duanesburg.

**Response:** *The SWPPP has been revised to include NYSDEC in SWPPP revision submittals.*

TE Response: Section 4 was revised to state that revisions to the SWPPP shall be submitted to the NYSDEC as well as the Town of Duanesburg.

**Response:** *Comment noted.*

5. Section 5 should be revised to include mention of the various wetlands on the project site.  
**Response: The SWPPP has been revised to include descriptions of the various wetlands on the project site.**  
TE Response: Section 5 was revised to include mention of the various wetlands on the project site.  
**Response: Comment noted.**
  
6. Section 5.1 should be revised to include a breakdown of soil groups present on the site by percentages.  
**Response: The SWPPP has been revised to include a breakdown of the soil group percentages.**  
TE Response: Section 5.1 has been revised to include a breakdown of soil groups present on the site by percentages.  
**Response: Comment noted.**
  
7. Drawing C8 shows phasing of the project. This phasing should be identified and discussed how it is incorporated to the sequencing of the project in Section 8.  
**Response: The SWPPP has been revised to include how the phasing has been incorporated into the sequencing of the project. See end of Section 8.**  
TE Response: Section 8 now mentions the phasing to take place in the project.  
**Response: Comment noted.**
  
8. Section 8 should include a detailed proposed schedule of construction and preparation of the site, as the overall schedule identified in the NOI indicates the project construction may take approximately 2 years and the submitted FEAF indicates a duration of 12 months.  
**Response: The EAF and NOI have been modified to show a construction schedule of 12 months. A detailed proposed construction schedule is unavailable and based on several conditions such as phasing, site conditions, weather conditions, soil stabilization, etc.**  
TE Response: Will all steps listed on page 9 of the SWPPP be completed for the whole site all at once or will they all occur sequentially for each phase? Will Stages 1 and 2 on page 8 of the SWPPP occur at each phased site in sequential order or are these steps for the whole site? It is still unclear how phasing will be incorporated. The additional information provided at the end of section 8 should really be incorporated into the existing “stages” as previously described in the section for a more complete and whole picture of events. This section of the SWPPP should state this 12-month time frame.  
**Response: The SWPPP has been revised to remove the construction phasing portion that is included on the IFC plans for clarity purposes. The SWPPP has been revised to add that construction will take place within the 12-month time frame. This was discussed with PRIME AE via the September 17, 2021 conference call and PRIME AE agreed to these revisions within this SWPPP section. The SWPPP revisions discussed have also been stated in PRIME AE’s September 21, 2021 letter.**  
TE Response 2: The SWPPP has been revised to remove the construction phasing portion that is included on the IFC plans for clarity purposes. The SWPPP has been revised to add that construction will take place within the 12-month time frame. We find these items acceptable.  
**Response: Comment noted.**
  
9. SWPPP should be revised to describe minimum erosion and sediment control practices directly associated with each construction activity in accordance with Part III B.e. in the General SPDES permit. A schedule should be provided of when each method will be installed, how long it will remain and the conditions that allow for removal.



***Response: Scheduling soil erosion control measures to be used and to be removed is based on several conditions such as construction schedule, phasing, site conditions, weather conditions, soil stabilization, etc. Therefore, a schedule cannot be provided.***

TE Response: SWPPP should be revised to describe minimum erosion and sediment control practices directly associated with each construction activity in accordance with Part III B.e. in the General SPDES permit. A schedule should be provided of when each method will be installed, how long it will remain, and the conditions that allow for removal. If this cannot be provided in detail due to unforeseen conditions, an estimated schedule should be provided. This can be amended during construction.

***Response: SWPPP Table 3 has been revised to include clarification on when each erosion control measure may be removed as deemed by the SWPPP inspector (percentage, time frame, etc.). This was discussed and agreed to by PRIME AE via the September 17, 2021 conference call since a formal construction schedule cannot be established. This has also been confirmed by the September 21, 2021 letter.***

TE Response 2: Revisions to Table 3 in Section 9.3 show sufficient information pertaining to the installation and removal of all erosion and sediment control practices listed in table.

***Response: Comment noted.***

10. The details provided in the drawing set show many proposed E&SC measures included as included in Table 3 and even more NYS Standards and Specifications for Erosion and Sediment Control were included in the Appendix, however there are details and specifications of practices not described in the SWPPP in this Appendix which makes it discursive and unnecessary. The methods not referenced in the SWPPP or planned to be employed at this site should be removed from the Appendix. Descriptions and details need to be descriptive yet concise.

***Response: See Appendix G for New York State Standards and Specifications for Soil Erosion Controls and SWPPP Section 9.3 for additional soil erosion controls not described in Appendix G. The full New York State Standards and Specifications for Erosion and Sediment Control are included in Appendix G to cover measures to be used and possible additional measures that may be used for construction.***

TE Response: Applicant needs to show on the drawings the minimum required erosion and sediment control measures to be employed at each location of the site – as it is not the responsibility of the contractor to determine the necessary measures to be taken.

***Response: This was discussed with PRIME AE via the September 17, 2021 conference call and agreed to show additional erosion control measures in wetland areas on the ESC plans. The plans have been revised to add additional erosion and sediment control measures in areas around the wetlands. Also shown to PRIME AE via the September 17, 2021 conference call the IFC plans state on Sheet C0.01 that it is the responsibility of the contractor to determine the erosion and sediment control measures to be taken. From the September 21, 2021 letter PRIME AE recognizes the contractor's responsibility regarding erosion and sediment control measures, that the SWPPP is a living document and shall be updated accordingly if new erosion control measures are implemented.***

TE Response 2: Drawing C6.00 has been revised to show the minimum required erosion and sediment control measures to be employed at each location of the site. We acknowledge the statement made on Sheet C0.01 that it is the responsibility of the contractor to determine the erosion and sediment control measures to be taken as they are responsible for the means and methods of work to achieve the end goal.

***Response: Comment noted.***

11. The level of description given for timber matting and temp. stockpiling should be used as an example for how all other erosion control methods listed in table 3 should be described in the SWPPP. Please revise as such.

*Response: Descriptions of the timber matting and temporary soil stockpiling are not included within the New York State Standards and Specifications for Soil Erosion Controls. Therefore, these practices are described here. See Appendix G for descriptions of additional erosion control methods used for this project. See SWPPP Section 9.3. The full New York State Standards and Specifications for Erosion and Sediment Control are included in Appendix G to cover measures to be used and possible additional measures that may be used for construction.*

TE Response: We find this explanation of description measures for temporary stockpiling and timber matting to be sufficient.

*Response: Comment noted.*

12. Sodding is listed in Section 26 of NOI but is not listed in table 3 of the SWPPP. This should be revised.

*Response: The SWPPP has been revised to include Sodding in Table 3.*

TE Response: Table 3 has been revised to include sodding.

*Response: Comment noted.*

13. Level spreader is not included in the SWPPP despite reference to this practice in the plans – SWPPP should be revised accordingly.

*Response: The SWPPP has been revised and the use of level spreaders has been included.*

TE Response: The SWPPP has been revised to include the use of level spreaders.

*Response: Comment noted.*

14. In Section 10.2, it is unclear where 0.0878 (units?) is being sourced from and why the total value is being multiplied by 43,560. The A value is supposed to be the contributing area in acres for the Water Quality Volume calculation. The site itself is approximately 141 acres and the area of disturbance is 69.72 acres according to the FEAF submitted. It should be clarified where these values originate. Furthermore, A and Aic are not equivalent, so wherever 0.0878 and 43,560 originate for the Water Quality Volume, they cannot be used in the same place for the Runoff Reduction Volume. Finally, Section 10.3 describes the total contributing area of the site to be 91.93 acres – if this can be confirmed as accurate, this is the value that should be used as A in the water quality volume assessment.

*Response: The water quality calculations were developed from the drainage areas for the actual BMP's. Water quality is designed for impervious areas. The site has a total of 0.0918 acres of impervious cover (updated from the previous number of 0.0878 acres). This was designed with localized BMP's to control water quality and RRv. The water quality calculations provided are allowed based on April 16<sup>th</sup>, 2018 memorandum from the New York State Department of Conservation (NYSDEC) included in Appendix D of the SWPPP.*

TE Response: The hydroCAD calculations submitted in the appendix appear to show the area to be affected by construction and that will require water quality mitigation is 0.11 acres. This differs from the 0.0918 acres as described in the response August 28th letter and the revised SWPPP. Applicant should clarify this discrepancy.

*Response: 0.11 acres was used in HydroCAD calculations to match the RRv output received from the Water Quality worksheets (RRv=0.008 acre-feet). The spreadsheets give a better Water Quality breakdown and are used in the NOI. When using 0.0918 acres in HydroCAD the RRv is 0.007 acre-feet. Both HydroCAD calculations using 0.0918 acres and 0.11 acres are provided in this response package for comparison. We feel the change in numbers is negligible (approximately 43.6 cubic feet RRv difference for a site limit of disturbance of 69.75 acres). The 0.0918 acreage HydroCAD calculations are in the SWPPP.*

TE Response 2: The HydroCAD pre-construction calculations submitted in the appendix differ from the FEAF "current acreage"

FEAF

Roads & Impervious Surfaces = 0.25 ac  
Forest = 24.98 acres  
Meadows/ grasslands = 71.98 acres

Agricultural = 35.82 acres  
Wetlands (Other) = 7.7 acres  
Total: 140.73 acres

SWPPP

Unconnected Pavement = 0.15 acres  
Woods = 31.253 acres  
Meadow & Pasture/ grasslands = 34.69 acres  
Row Crops = 39.721 acres

Total: 105.814 acres

We reviewed the land types and grouped them as made sense. Ultimately – these categories should reflect one another and equate the associated category from the FEAF to the SWPPP. Applicant should clarify the reason for the differences or revise accordingly.

Furthermore, in the plans, a total of 0.302 acres are shown to be removed of trees. This does not correlate with FEAF's change in forested cover, nor does it correlate with the SWPPP, which shows a change of 4.83 acres of wooded area being removed.

***Response: The difference in the FEAF numbers and the SWPPP are as follows: The FEAF takes into account the parcels associated with the project (Tax Map No's. 74.00-2-5.1 (Oak Hill 2) and 74.00-2-5.2 (Oak Hill 1)). Not all of parcel areas are incorporated into the project drainage area. The parcels are bisected by Duaneburg Road (NYS Route 7). The parcels on northern side of Duaneburg Road have areas to the west that do not affect the project drainage area, hence are not included in the SWPPP area calculations. The bisected parcels to the south do not affect the project drainage area, hence are not included in the SWPPP area calculations. There is a portion of the project drainage area due to topography within the Ganster property that is located outside the parcel areas but included in the SWPPP area calculations.***

***The HydroCAD calculations have been revised to include the change in woods as 0.302 acres from pre- to post-development. There are no runoff rate changes in the HydroCAD calculations between the October 1, 2021 SWPPP and the SWPPP included in this submission package. The FEAF has been revised to update the change in woods (0.30 deduction) from pre-development to post-development (See Section E.1.b.).***

15. The site was identified to be approximately 141 acres in Section 5, however Section 10.3 describes the total contributing area of the site to be 91.93 acres. If anything, the contributing flow area of the site should be at least 141 acres.

***Response: The project is located on two properties containing approximately 141 acres. However, the drainage area affecting the project area is 101.87 acres. A substantial portion of the actual property is not being disturbed nor drains into the project. The drainage area was modified per the additional comments.***

TE Response: As the total area being disturbed by this construction and post-construction alterations to the project site are contained within the three newly defined sub-catchments, we find the contributing area of the site as defined by the SWPPP satisfactory.

***Response: Comment noted. Note that the drainage area affecting the project area has been revised to 105.814 acres to include the landscape buffer per PRIME AE's requirement.***

TE Response 2: We find the contributing area of the site (105.814 acres) as defined by the SWPPP satisfactory.

***Response: Comment noted.***

16. Upon review, we disagree with the sub-catchment boundaries shown in Appendix J, The Stormwater Management Report. For example, the western boundary along the access road would indicate a

high spot or ridge where the area outside of the boundary would drain to a separate location. The contour map shows that this is not the case.

**Response:** *The western side of the project all drains to the west and offsite. Drainage area three has been modified to include additional drainage area. This additional area will be untouched in the post-development condition.*

TE Response: If the applicant can verify that the land outside of the three sub-catchments, but within the host parcels, will not experience any of the stormwater run-off as produced by alterations to the site, we can accept the newly defined sub-catchments. However, it can be seen that the landscaping improvements were not considered in the defined sub-catchments. Applicant should revise accordingly.

**Response:** *The SWPPP has been revised to include the landscape buffer in the stormwater analysis. Note that the drainage area affecting the project area has been revised to 105.814 acres to include the landscape buffer per PRIME AE's requirement.*

TE Response 2: We find the newly defined sub-catchments acceptable.

**Response:** *Comment noted.*

17. Sub-catchment 3 currently shows that in all design storms, the flows are unchanged. However, as a majority of the pervious access road is proposed in this currently-defined sub-catchment, it can be presumed that the flows would decrease in this area if the existing impervious access road is being reconstructed. Additionally, contributing flow areas beyond the parcel boundaries should be shown if they are projected to affect the site.

**Response:** *The drainage area has been modified in drainage area three as requested. Due to the small amount of added haul road in comparison to the overall drainage area there is no calculated increase in runoff in the HydroCAD calculations.*

TE Response: Upon reviewing HydroCAD results more thoroughly, runoff results and changes for sub-catchment 3 regarding the pervious access road are understood and accepted as submitted.

**Response:** *Comment noted.*

18. Qp, Qf, and Qf calculations should be summarized in the body of the SWPPP.

**Response:** *The SWPPP has been revised to include the calculation summary in Section 10.4.*

TE Response: Qp, Qf, and Cpv calculations have been summarized in the body of the SWPPP.

**Response:** *Comment noted.*

19. Total area of disturbance and total area of new impervious cover should be stated in SWPPP.

**Response:** *See Stormwater Management Report Appendix J Section 1.0 for total area of disturbance and new impervious cover numbers.*

TE Response: Total area of disturbance and total area of new impervious cover should be stated in SWPPP. It is unclear where in Appendix J these are stated.

**Response:** *From Appendix J Stormwater Management Report Section 1.0 the last sentence in the first paragraph states "The total area of proposed disturbance is approximately 69.75 acres with approximately 0.09 acres of impervious area added to the site." This was shown to PRIME AE via the September 17, 2021 conference call and was confirmed in the September 21, 2021 letter.*

TE Response 2: Total area of disturbance and total area of new impervious cover are stated in Appendix J- Stormwater Management Report.

**Response:** *Comment noted.*

20. Post-construction stormwater control practices employed are supposed to treat the increase in stormwater flows created by the site development per the NYS Stormwater Design Manual. Calculations should be provided to show how infiltration trenches were sized to show sufficient volume for treatment. It is seen that calculations are included in an appendix; however, these

calculations should be summarized in the body of the SWPPP. This summarization should include dimensions of infiltration trenches.

**Response:** *The infiltration trenches have been designed to address the water quality and recharge volume. The sizing was completed by calculating the volume of stone within each trench and the assuming a void ratio of 40% to calculate the volume of each trench. This is summarized in the Stormwater Management Report Appendix J Table 1. The dimensions are provided on IFC Plan Sheet C5.01.*

TE Response: We find this answer to be satisfactory.

**Response:** *Comment noted.*

21. Please elaborate as to what is meant by the following statement which is included in the description of Infiltration Trenches: "These trenches will not be used to treat stormwater quantity". As complete storm water quantity for the site should be treated by post-construction storm water management practices, if this is accurate, additional post-construction storm water management practices must be considered.

**Response:** *The level spreaders were designed for the plan in order to address the April 16<sup>th</sup>, 2018 memorandum from the New York State Department of Environmental Conservation (NYSDEC) included in the Appendix D of the SWPPP. This memorandum provides guidance on stormwater control for solar projects. The level spreaders were designed to promote sheet flow in areas where ground slope is greater than 5%.*

TE Response: Response provided for our original comment does not seem to be applicable. The statement: "These trenches will not be used to treat stormwater quantity." was included in the SWPPP. It does not appear that infiltration basins are proposed to be used in accordance with the NYS stormwater management design manual. The calculations and explanations shown in the Stormwater Management Report show that these infiltration trenches are proposed only for runoff reduction purposes. This is not an approved method for runoff reduction as shown in table 3.2 in the NYS stormwater management design manual. It is an approved method for Stormwater Quality as shown in Table 3.3 of the manual.

**Response:** *The project was designed to meet the stormwater manual. NYSDEC provided additional technical guidance for solar projects per their April 16<sup>th</sup>, 2018 memorandum included in Appendix D of the SWPPP. Per this guidance, under Scenario 2 Item 5, water quality and runoff reduction must only be addressed for the project impervious areas. For this project the impervious areas are the small pads. The infiltration trenches will capture all runoff from the small impervious pads. The required RRv is 70 cu. ft. The infiltration trenches have a capacity of 1379.6 cu. ft. The 10- and 100-year runoff from the entire site is reduced as shown to meet the overbank and extreme flood requirements. The 10-year storm event total runoff volume for the pad areas is only 0.026 acre-feet (calculations are located in Appendix J). The infiltration trenches have an overall capacity of 0.032 acre-feet. Therefore, there will be no runoff from the pad and infiltration areas. There's no additional runoff to control through any additional BMPs.*

TE Response 2: We find the applicant's response to meeting runoff reduction requirements and the use of infiltration basins to be acceptable, as long as the results of the test pit & perc tests to be performed support the design. If the data does not support the design, revised stormwater plans will need to be submitted for review.

**Response:** *Comment noted. Soils infiltration testing is to be scheduled. The results will be supplied to PRIME AE. It is understood that if the data does not support the design, revised stormwater plans will need to be submitted for review.*

22. The most recent version of the letter from the Fish and Wildlife Service as submitted to USACE should replace the 2018 letter currently in the SWPPP as an exhibit.

**Response:** *The SWPPP has been revised to include the most recent version of the Fish and Wildlife Service letter dated August 2, 2019.*

TE Response: The SWPPP has been revised include the most recent version of the Fish and Wildlife Service letter dated August 2, 2019.

**Response:** *Comment noted.*

23. There are (2) copies of the contractor certification form in the SWPPP, one signed and one incomplete. The incomplete version should be removed.

**Response:** *The incomplete contractor certification form is included for subcontractor certification if/when subcontractors will be on site.*

TE Response: It is understood that the incomplete contractor certification form is included for subcontractor certification if/when subcontractors will be on site.

**Response:** *Comment noted.*

24. SWPPP Inspection Reports should include sections that ask the inspector if improvements are required to the stormwater management practice. There should be an area that describes maintenance performed on the site during inspection or since the last inspection.

**Response:** *The Maintenance and Inspection Form under Appendix I and the SWPPP Inspection Form Template under Appendix L have been revised to include sections that the SWPPP inspector can describe the maintenance performed on site during or since last inspection.*

TE Response: Template under Appendix L has been revised to include sections that the SWPPP inspector can describe the maintenance performed on site during or since last inspection.

**Response:** *Comment noted.*

25. SWPPP should describe the frequency of inspections to take place.

**Response:** *See SWPPP Section 12.2 for frequency of inspections to take place.*

TE Response: It can be seen that section 12.2 of the SWPPP includes the frequency of inspections to be performed.

**Response:** *Comment noted.*

26. Appendix K should have a table to include the date an amendment was made, the name of the qualified amender, their signature and a description of the amendment made.

**Response:** *The SWPPP has been revised to include a table with the information requested.*

TE Response: Appendix K still does not seem to have a table including the date an amendment would be made, the name of the qualified amender, their signature and a description of the amendment made.

**Response:** *The SWPPP has been revised to include a table with the information requested.*

TE Response 2: Appendix K has been revised to include a table highlighting changes made to the SWPPP.

**Response:** *Comment noted.*

27. (ADDED SEPTEMBER 15, 2021 LETTER COMMENT) HydroCAD calculations indicate a 21.5 acre removal of "woods" in sub-catchment areas. This does not appear to correlate with the plans and if it is in more than 20,000 sf increments, this is not in accordance with local solar law.

**Response:** *Based on conversations with property owner, Chris Murray, recalls the tree clearing took place in Summer/Fall 2019. The SWPPP has been revised with HydroCAD calculations incorporating the updated land types.*

TE Response 2: In the plans, a total of 0.302 acres are shown to be removed of trees. This does not correlate with FEAF's change in forested cover (0.27 acres), nor does it correlate with the SWPPP, which shows a change of 4.83 acres of wooded area being removed.

Applicant should clarify and revise accordingly.

*The HydroCAD calculations have been revised to include the change in woods as 0.302 acres from pre- to post-development. The FEAF has been revised to update the change in woods (0.30 deduction) from pre-development to post-development (See Section E.1.b.).*

28. (ADDED SEPTEMBER 15, 2021 LETTER COMMENT) Level spreaders are shown throughout the SWPPP and IFC plans, however these are not included in stormwater quality calculations, nor reduced runoff volume calcs in the Stormwater Management Report. This method should be incorporated into the calculations provided.

*Response: As shown in Appendix D of the SWPPP the proposed level spreaders are included based on guidance provided by the NYSDEC memorandum dated April 16<sup>th</sup>, 2018. This memorandum states under Scenario 1 Number 2, the panels are spaced apart so that rain water can flow off the down gradient side of the panel and continue as sheet flow across the ground surface. The memorandum then specifically references the Maryland Stormwater Design Guidance for Solar Panel Installations. This guidance was utilized for project stormwater design. As such there are no additional calculations beyond meeting the memorandum requirements.*

TE Response 2: We find the applicant's explanation for the use of level spreaders in stormwater management design acceptable.

*Response: Comment noted.*

29. (ADDED SEPTEMBER 15, 2021 LETTER COMMENT) Were perc tests performed at the site? The utilization of infiltration basins and level spreaders would only be feasible if the soils pass perc tests. Given the poor drainage of the soil as described in the Full EAF, this doesn't seem like the best stormwater management practice for the site.

*Response: Soil perc test and soil analysis will be contracted and performed. Verdanterra has provided a conservative design regarding the infiltration trenches and level spreaders. Verdanterra will modify the infiltration trench and level spreader design based on perc test results if modifications are deemed necessary.*

TE Response 2: Applicant states that perc tests are anticipated to take place soon. Applicant will modify the infiltration trench and level spreader design if modifications are deemed necessary.

*Response: Comment noted.*

#### SPDES General Permit Owner Operator Certification, Contractor Certification, and SWPPP Preparer Certification

1. If the SWPPP is revised, each certification shall be re-signed.

*Response: Comment noted.*

TE Response: If the SWPPP is revised, each certification shall be re-signed.

*Response: Comment noted.*

TE Response 2: If the SWPPP is revised, each certification shall be re-signed.

*Response: Comment noted.*

#### NOI for Coverage under Stormwater General Permit for Construction Activity

1. The answer to 5 is "no" but according to the phasing plan included in the plans, that does not seem to be accurate. Please clarify and revise appropriately.

*Response: The phasing plan is broken down into areas up to 5 acres of disturbance. See IFC plan sheet C8.00. Therefore, we will not be disturbing more than 5 acres at one time unless a waiver is requested.*

TE Response: We find the answer "no" to question 5 to be acceptable, as it appears that no more than 5 acres of soil will be disturbed at a time.

*Response: Comment noted.*

2. The answer to 7 is “no” but according to the phasing plan included in the plans, that does not seem to be accurate. Please clarify and revise appropriately.

*Response: eNOI phasing as asked by Question 7 is specific to if a project will have different components that requires it to start and stop. This project will be constructed at one time. The phasing described in this project is construction phasing which has been developed in order to meet construction disturbance limits of 5 acres at one time.*

TE Response: The answer to 7 is “no” but according to the phasing plan included in the plans, 15 phases to stay under the 5 acres of disturbance limit are shown. Applicant has indicated that disturbances will not occur at one time, ie: phasing, but then contradicts their answer by stating that construction will occur at one time. Applicant should clarify.

*Response: The NOI refers to project phasing, not construction phasing. The project has one complete construction season, therefore one project phase. Construction phasing (15 phases) is what is shown to construct the project within the 5-acre threshold. The construction phasing issue is handled in NOI Question 5 which in our case is accurate. Project phasing in the NOI is the same as what is noted as project phasing in the EAF. The EAF states our project is in one project phase.*

*For example, an applicant applies for a Planned Development District (PDD) with several distinct areas of construction. They decide to construct the project based on the types of facilities offered and their ability/time frame to construct the project. Phase 1 is office/retail, Phase 2 is townhomes, and Phase 3 is single family homes each with its own distinct construction start and stop construction time period. Therefore, in the EAF it is noted as 3 phases and the NOI question 7 should be stated as “yes”.*

*This example was presented to PRIME AE via the September 17, 2021 conference call. Based on the example presented and how the NOI interprets the question of project phasing under Question 7, PRIME AE has agreed that the project as noted under NOI question 7 should be stated as “no”. No modification to the NOI needed.*

TE Response 2: After discussions with NYSDEC regarding the intent and interpretation of what is meant by “phasing” for question 7, we accept the applicant’s response.

*Response: Comment noted.*

3. Number 8 has a start date in the past without a building permit obtained yet, this date should be revised accordingly.

*Response: The start date has been modified in the NOI.*

TE Response: Number 8 has been revised to a start date in the future.

*Response: Comment noted.*

4. Number 9 – there are wetlands on the site that should be identified and discussed.

*Response: Number 9 has been addressed on the NOI. Schoharie Creek is the nearest waterbody where construction site runoff will discharge to. Other waterbodies are noted as USACE wetlands off site (Number 9a).*

TE Response: Number 9 discusses off-site wetlands, however there are wetlands on the site that should be identified and discussed.

*Response: The NOI has been revised to note under Question 9 that USACE wetlands are on site. Question 9a has been revised to Wetland/Federal Jurisdiction On Site.*

TE Response 2: We find the revised answer to number 9, indicating the presence of onsite wetlands acceptable.

*Response: Comment noted.*



5. Topsoiling and Protecting Vegetation During Construction are practices listed in table 3 of the SWPPP but are not listed in Section 26 of NOI. This should be revised.

**Response: Topsoiling has been added to the vegetative measures in number 26 of the NOI.**

TE Response: Topsoiling has been added to Section 26 of the NOI, however, Protecting Vegetation During Construction is a practice listed in table 3 of the SWPPP but is not listed in Section 26 of NOI. This should be revised.

**Response: The NOI has been revised to include "Protecting Vegetation" under Vegetative Measures.**

TE Response 2: We find the revision to section 26, the addition of Protecting Vegetation During Construction to this response, acceptable.

**Response: Comment noted.**

6. Section 27 – answer should be provided or clarity as to why this has no answer.

**Response: The site planning practices listed under Question 27 do not apply to this project.**

TE Response: Question 22 of the NOI was answered as "yes", therefore an answer for question 27 should be provided.

**Response: Based on the project type (solar facility) the requirements under NOI Question 27 do not apply, therefore noted as "None Provided". Based on NOI approvals for similar projects in the area, New York State Department of Conservation (NYSDEC) has required Verdanterra to state the type of project (solar facility) and which solar facility project scenario it falls under per the NYSDEC April 16<sup>th</sup>, 2018 memorandum. This provides adequate clarification in why NOI Question 27 does not apply to this project. This clarification was provided by PRIME AE via the September 17, 2021 conference call. PRIME AE stated that they are in agreement. No change to Question 27 has been made.**

TE Response 2: We find the applicant's response regarding section 27 acceptable.

**Response: Comment noted.**

7. Section 28 – if WQv is revised in SWPPP, this will subsequently need to be revised.

**Response: The Water Quality Volume while changed slightly remains correct in the NOI.**

TE Response: Section 28 – the WQv is correct, given the values from the SWPPP.

**Response: Comment noted.**

8. Section 30 – current RRV listed here does not match what is in the SWPPP (.002 af vs .02 af). If RRV is revised in SWPPP, this will subsequently need to be revised.

**Response: The RRV has been corrected in the NOI.**

TE Response: Section 30 – current RRV listed here does not match what is in the SWPPP. The SWPPP, in section 10.2.2 shows RRV as 70 cu. ft. The Calculations in the stormwater management report show RRV as 348 cu. ft. on the infiltration trench worksheet, total RRV listed in NOI section 30 states 0.032-acre- feet. This equates to nearly 1,400 cubic feet of RRV. It is unclear where this value is coming from.

**Response: The calculations in the stormwater management report show the minimum RRV and WQv as 70 cu. ft. (0.002 acre-feet) and 348 cu. ft. (0.008 acre-feet) respectively. The 0.032 acre-feet number in Section 30 refers to the total WQv provided by the infiltration trenches. See Appendix J – Stormwater Management Report Section 5.1.1 Table 1 for the required water quality volume provided in each infiltration trench. Therefore, the number stated in NOI Section 30 is correct.**

TE Response 2: We find the applicant's response regarding section 30 acceptable.

**Response: Comment noted.**

9. Section 31 – according to the SWPPP, RRV is written as .002 af which is less than .008. Clarity should be provided on this. If RRV is truly .002 and RRV is truly .008, Section 31 will need to be revised and 32-36 will need to be revised.

***Response: The site has very minimal localized proposed impervious cover. Therefore, the RRV is very small. NOI Questions have been modified to address minor plan changes.***

TE Response: Section 31 – Current NOI shows that required reduction in runoff is smaller than the proposed required runoff, therefore we find this answer acceptable.

***Response: Comment noted.***

#### USACE Permit Package

1. Original USACE letter states that construction may commence as long as construction complies with Nation Wide Permits 12 & 14 in Section B. This letter was issued on September 26, 2019. USACE shall make a determination on the modified project plans before construction may commence. This determination shall be forwarded to the Town for review prior to construction.

***Response: Comment noted.***

TE Response: USACE shall make a determination on the modified project plans before construction may commence. This determination shall be forwarded to the Town for review prior to construction.

***Response: Comment noted.***

TE Response 2: USACE shall make a determination on the modified project plans before construction may commence. This determination shall be forwarded to the Town for review prior to construction.

***Response: USACE has reviewed the revised plans and has provided correspondence stating that the original issued permit shall cover the proposed construction. The email correspondence regarding this issue has been included in this submission.***

2. For wetland disturbances, the most-eastern access-road-crossing appears to be about 100' long and at least 14' wide. This would equate to 1,400 sf. If additional trenching were to take place adjacent to the road for the voltage trench, that would be approximately another 200 sf. Making this disturbance alone equate to approx. 0.04 acres of disturbance. The second wetland, access-road-crossing appears to be identified properly in square footage. The total disturbance of wetlands from this work would equate to 0.043 acres. Please reconsider this item – USACE and NYSDEC permit applications may need to be revised accordingly.

***Response: The plans have been revised and wetland disturbance numbers have been updated based on access road and underground conduit locations. USACE has been notified of the changes and an updated USACE permit will be forthcoming.***

TE Response: Sheets C2.00, C2.01, and C2.02 still do not properly identify the proposed dimensions of wetland disturbances. Leaders should be revised. The access road and LV trench crossing area scales to approximately 944 square feet. Leader currently shows 905 square feet.

***Response: The wetland crossing disturbance in question has been measured in AutoCAD to be 905 square feet and has been verified by PRIME AE per the September 17, 2021 conference call. This has also been confirmed by PRIME AE's September 21, 2021 letter. No plan revision has been made.***

TE Response 2: Applicant showed us in AutoCAD, during a Zoom call, the true proposed wetland disturbances, which correlate with what was included in the USACE application. Therefore, we find this response acceptable.

***Response: Comment noted.***

3. Note: SHPO no impact letter dated 6/4/2019 was included in this submission.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

- Note: NYS Fish and Wildlife letter dated 8/2/2019 was included in this submission which mentions the possible presence of Northern Long-eared bats in the vicinity. Tree removal as a part of this project should occur within DEC recommended timelines for this species.

**Response: Comment noted.**

TE Response: No further comments.

**Response: Comment noted.**

#### NYSDOT Application and Minor Commercial Driveway Plans

- We have received a copy of the NYSDOT submitted plans for the driveway and the application for construction permit. NYSDOT shall review and approve these plans and application prior to issuance of a Town building permit. Approved permit shall be provided to the Town for record.

**Response: NYSDOT has approved the driveway permit for this project. A copy of the permit is included in this submission and will be provided to the Town for record.**

TE Response: Applicant shall comply with all requirements of the received permit from NYSDOT.

**Response: Comment noted.**

#### Agricultural Data Statement

- It does not appear that this item was delivered for our review.

**Response: Comment noted.**

TE Response: Agricultural Data Statement has been provided. No comments at this time.

**Response: Comment noted.**

#### Full EAF Part 1 & Summary of Changes Letter

- Changes to the acreage to be physically disturbed increased from 0.89 acres to 69.72. The original acreage only accounted for the access road, utility line trenching and equipment pads. The new stated acreage reflects the site's limit of disturbance. This is the possible disturbance that will be encountered during construction.

**Response: Comment noted.**

TE Response: FEAF indicates the possible disturbance that will be encountered during construction.

**Response: Comment noted.**

- Applicant indicates in question D.1.e that the project will be completed in a 12-month period, however the submitted NOI states that the project may take approximately 2 years. Applicant should clarify the construction time frame.

**Response: The NOI has been updated to show a 1-year construction time frame from 10/1/21 to 10/1/22.**

TE Response: Applicant indicates in question D.1.e that the project will be completed in a 12-month period, revised NOI agrees with that timeline.

**Response: Comment noted.**

- Question D.1.g the applicant stated there would be new non-residential construction but did not answer the subsequent questions D.1.g.i,ii,iii. Applicant should indicate the number of structures, dimensions in fee of the largest proposed structures including height, width and length, and if any space is to be heated or cooled.

**Response: The EAF has been revised to denote the BESS structure as the largest proposed structure on site and space that shall be heated or cooled.**

TE Response: Question D.1.g the applicant stated there would be new non-residential construction. Applicant has revised answers to the subsequent questions D.1.g.i,ii,iii. Applicant has indicated the number of structures, and dimensions in feet of the largest proposed structures including height, width and length, and if any space is to be heated or cooled.

**Response: Comment noted.**

4. Original EAF stated 550 sf of utility trench and 2,143 sf of limited use pervious gravel for the access road. This differs from the statement in the Summary of Changes that states it was reduced from 1,585 sf to 990 sf. The revised EAF correctly reflects the reduced wetland disturbance of 990 sf.

**Response: The EAF has been modified to show the revised wetland disturbance based on the updated IFC Plan set.**

TE Response: Revised EAF summarizes the wetland disturbances as according to the leaders in the current IFC drawings. The access road and LV trench crossing area scales to approximately 944 square feet. Leader currently shows 905 square feet. Total of disturbances would equate to approximately 1322 square feet. EAF should reflect this value.

**Response: The wetland crossing disturbance in question has been measured in AutoCAD to be 905 square feet and has been verified by PRIME AE per the September 17, 2021 conference call. This has also been confirmed by PRIME AE's September 21, 2021 letter. No EAF revision has been made.**

TE Response 2: Applicant showed us in AutoCAD, during a Zoom call, the true proposed wetland disturbances, which correlate with what was included in the Full EAF. Therefore, we find this response acceptable.

**Response: Comment noted.**

5. Question D.2.e. states an increase in impervious acreage due to the increase in equipment pad size. Applicant has also updated the new point sources to include energy storage system pads and DC-DC converter pads.

**Response: Comment noted.**

TE Response: (SEPTEMBER 15, 2021 LETTER FULL EAF PART 1 COMMENT 6) Noted that question D.2.e. has been updated to reflect increase in impervious surface from 0.088 acres to 0.092.

**Response: Comment noted.**

6. Question D.2.m.i was left unanswered. Applicant should provide the details of the noise level including sources, time of day and duration.

**Response: The EAF has been modified to provide noise level details. At full power, the inverters generate <79 dBA measured next to the inverter. A setback of 750' to the nearest property is a very reasonable setback distance to mitigate adverse effects as a result of inverter operation.**

TE Response: (SEPTEMBER 15, 2021 LETTER FULL EAF PART 1 COMMENT 7) Question D.2.m.i has been revised to clarify noise details post-construction, however, it does not describe potential noise expected to occur during construction. This should be revised.

**Response: The EAF has been modified to include heavy machinery during construction as an item that will produce noise that will exceed ambient noise levels during construction.**

TE Response 2: Question D.2.m.i has been revised to include potential noise expected to occur during construction.

**Response: Comment noted.**

7. The Applicant has listed changes to question E.1.b under the Acreage After Project Completion and Change columns, however the Current Acreage column differs from the original EAF. Applicant should clarify the difference in current acreage listed for forested, meadows, grasslands, or brushlands, and agricultural land use/cover type.

**Response: There are no changes under the Current Acreage column between the original EAF Part 1 dated/signed 7/19/18 approved under Negative Declaration and the revised EAF Part 1 dated 7/28/21.**

TE Response: (SEPTEMBER 15, 2021 LETTER FULL EAF PART 1 COMMENT 5) In reference to EAF Question E.1.b) In the original EAF dated 7/19/2018 the “current acreage” listed under Forested was 38.90 acres, 51.05 acres under Meadows, grasslands or brushlands, and 44.83 acres under Agricultural. These differ from the current acreage listed under these categories in the revised EAF dated 7/28/2021. The revised EAF dated 7/28/2021 states the “current acreage” under forested as 24.98 acres, meadows, grasslands or brushlands as 71.98 acres, and 35.82 acres under Agricultural. We ask the applicant to identify the conditions that caused the change in “current acreage” under those identified land use/cover type categories. The original EAF dated 7/19/2018 indicated a response of “no,” stating that no agricultural lands consisting of highly productive soils are present. In the revised EAF dated 7/28/2021 the applicant indicated a “yes” stating that 133 +/- acres were present. It is noted that the applicant also states that although listed as highly productive soil by the USDA Soil survey, the landowners experience is that the land is too wet to be productive. Furthermore, this does not correlate with HydroCAD pre and post conditions of the site.

**Response: The “current acreage” listed in the approved EAF dated 7/19/2018 under Negative Declaration is based on the current acreage breakdown on site. The site usage was modified with the removal of woods between the original EAF and approved EAF. Woods were removed in the summer/fall of 2019 as per discussion with the property owner, Chris Murray. The HydroCAD calculations have been modified based on current and proposed site conditions. The statement regarding the lands consisting of highly productive soils are present but too wet to be productive is correct.**

TE Response 2: The HydroCAD pre-construction calculations submitted in the appendix differ from the FEAF “current acreage”

FEAF

Roads & Impervious Surfaces = 0.25 ac  
 Forest = 24.98 acres  
 Meadows/ grasslands = 71.98 acres  
 Agricultural = 35.82 acres  
 Wetlands (Other) = 7.7 acres  
 Total: 140.73 acres

SWPPP

Unconnected Pavement = 0.15 acres  
 Woods = 31.253 acres  
 Meadow & Pasture/ grasslands = 34.69 acres  
 Row Crops = 39.721 acres  
 Total: 105.814 acres

We reviewed the land types and grouped them as made sense. Ultimately – these categories should reflect one another and equate the associated category from the FEAF to the SWPPP. Applicant should clarify the reason for the differences or revise accordingly.

Furthermore, in the plans, a total of 0.302 acres are shown to be removed of trees. This does not correlate with FEAF’s change in forested cover, nor does it correlate with the SWPPP, which shows a change of 4.83 acres of wooded area being removed.

**Response: The difference in the FEAF numbers and the SWPPP are as follows: The FEAF takes into account the parcels associated with the project (Tax Map No’s. 74.00-2-5.1 (Oak Hill 2) and 74.00-2-5.2 (Oak Hill 1)). Not all of parcel areas are incorporated into the project drainage area. The parcels are bisected by Duanesburg Road (NYS Route 7). The parcels on northern side of Duanesburg Road have areas to the west that do not affect the project drainage area, hence are not included in the SWPPP area calculations. The bisected parcels to the south do not affect the project drainage area, hence are not included in the SWPPP area calculations. There is a portion of the project drainage area due to topography**

*within the Ganster property that is located outside the parcel areas but included in the SWPPP area calculations.*

*The HydroCAD calculations have been revised to include the change in woods as 0.302 acres from pre- to post-development. There are no runoff rate changes in the HydroCAD calculations between the October 1, 2021 SWPPP and the SWPPP included in this submission package. The FEF has been revised to update the change in woods (0.30 deduction) from pre-development to post-development (See Section E.1.b.).*

8. The Applicant has changed their response to question E.3.b from the original EAF and was not noted in the Summary of EAF Part 1 Changes. The Applicant has indicated that the project location has highly productive soils present and subsequently provide the acreage and soil rating details.

***Response: There are no changes under question E.3.b between the original EAF Part 1 dated/signed 7/19/18 approved under Negative Declaration and the revised EAF Part 1 dated 7/28/21.***

TE Response: (SEPTEMBER 15, 2021 LETTER FULL EAF PART 1 COMMENT 9) We find response in regard to question E.3.b to be acceptable.

***Response: Comment noted.***

SEPTEMBER 15, 2021 LETTER FULL EAF PART 1 COMMENT 8 HAS BEEN REMOVED PER SEPTEMBER 21, 2021 LETTER.

#### Full EAF Part 2

1. Applicant has indicated in their answer to question 9, Impact on Aesthetic Resources, that the project would have no impact on aesthetic resources. A Visual Impact Assessment was done in 2019 with findings that concluded there would be no impact.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

#### Full EAF Part 3

1. Although it was stated there would be no visual impact, the Applicant has included additional screening to provide evergreen plantings along on the back side of the property within the field of view of the neighboring property.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

#### Decommissioning Plan Summary of Changes Letter

1. Changes Include:
  - a. Appendix 1: Site Location Plan – The site plan has been updated to include the latest overall site plan from the Issued for Construction drawings.
  - b. Appendix 2: Breakdown of decommissioning costs – an updated decommissioning cost estimate is included in the Revised Oak Hill Community Solar 1 And 2 Decommissioning Statement. The overall cost estimate increased from \$211,381.00 (2019 estimate) to \$221,379.50 (2021 estimate) per project. Below is a summary of the changes.
  - c. Reductions to the cost of Fence Removal with Gate and CCTV, and Removal of Posts due to the decreased array footprint and related design changes.

- d. Reduction to the cost of Remove & Dispose of Central Inverters due to the move from distributed to centralized inverters.
- e. Increase to the cost of Removal of Gravel Access Road due to the expansion of the access road network.
- f. Increase to the cost of storage disposal due to the updated energy storage design.
- g. Appendix 4: The Irrevocable Standby Letter of Credit has been replaced with the Decommissioning Performance Bond form agreed to in June 2021.
- h. Appendix 5: Form of Bond Email Correspondence – new appendix containing an email record of the form of bond correspondence.
- i. Appendix 6: Energy Storage Decommissioning Narrative – new appendix containing a narrative explaining the energy storage decommissioning process and providing a breakdown of the storage decommissioning cost estimate.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

#### Decommissioning Agreement Executed

1. Decommissioning Agreement was for the 2019 project and is no longer applicable.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

#### Revised Decommissioning Statement

1. Decommissioning plan should state clearly what the total of the combined projects are for clarity, as it is not mentioned throughout the decommissioning plan what total cost for the 2 projects together will be.

***Response: The aggregate proposed decommissioning fund total for the combined projects has been added to the Revised Appendix 2 – 8/26/2021, which is added to this submission.***

TE Response: Decommissioning plan Appendix 2 now states the total decommissioning fund for the total of the (2) Oak Hill Solar projects, this total is in the amount of \$427,033.

***Response: Comment noted.***

2. Underground conduit is not discussed for removal in the plan. Plan, subsequently, should be revised to include this.

***Response: The removal of underground conduit was included in the Removal of Underground Wires and Backfill item in the Estimated Decommissioning Cost. The line item has been renamed Removal of Underground Wires and Conduits and Backfill to minimize confusion.***

TE Response: Underground conduit has been included in the item Removal of Underground Wires and Conduits and Backfill.

***Response: Comment noted.***

3. Submitted IFC plans do not seem to include CCTV but CCTV removal is included in the summary analysis. Please revise or clarify.

***Response: The CCTV inclusion in the Estimated Decommissioning Cost was a clerical error. CCTV has been removed from the Revised Appendix 2 – 8/26/2021.***

TE Response: CCTV removal is no longer included in the summary analysis which corresponds with revised plans.

***Response: Comment noted.***

4. Removal costs should be revised to clarify whether labor, transport and machinery required is included in each item. If each item does not include these costs, they should be revised.

***Response: Labor, transport, and machinery costs are included in each line item. Clarification verbiage has been added to Revised Appendix 2 – 8/26/2021.***

TE Response: It is understood that labor, transport, and machinery required for each item is included in all costs.

***Response: Comment noted.***

5. Based on plans at a scale of 1"=120', length of fence in its entirety appears to be approximately 8,300 lf. If dividing the cost and quantity of decommissioning evenly amongst the two projects, the length of fence for one project would be 4,150 lf. Please verify length of fence and update plans or decommissioning costs accordingly.

***Response: Verifying the approximately 4,150 lf of fence length per project. Revised Appendix 2 – 8/26/2021 has been updated to reflect this value.***

TE Response: The 8,300 lf of fence associated with the two projects has been divided equally between the two projects. We find this to be satisfactory.

***Response: Comment noted.***

6. Wiring length based on profile and station appears to be at least 4,800 lf. If dividing the cost and quantity of decommissioning evenly amongst the two projects, the length of wiring for one project would be approx. 2,400 lf. Please verify length of wiring and update plans or decommissioning costs accordingly.

***Response: Verifying the approximately 2,400 lf of medium voltage wire length. Revised Appendix 2 – 8/26/2021 has been updated to reflect this value.***

TE Response: The 4,800 lf of underground wiring associated with the two projects has been divided equally between the two projects. We find this to be satisfactory.

***Response: Comment noted.***

7. If the intention is not to split the decommissioning between the two projects individually, there should be a separate cost break down for each of the 2 projects.

***Response: The Revised Appendix 2 – 8/26/2021 includes separate breakdowns for each project. The aggregate project costs across both projects and individual project costs are both included in the Revised Appendix 2 – 8/26/2021.***

TE Response: Separate cost break-downs for each of the 2 projects have been provided. We find this to be satisfactory.

***Response: Comment noted.***

8. The original cost estimate from 2019 reflects the same unit cost/item. It is likely that costs from labor and decommissioning equipment would have increased in this time frame. The unit cost/item should be reevaluated.

***Response: The project team does not believe that there has been a meaningful unit cost increase. The NYSERDA Fact Sheet: Decommissioning Solar Panel Projects document, which informed the project team's 2019 decommissioning estimates was likely published by NYSERDA in 2018 or 2019. The project team is not positive regarding the publication date. NYSERDA's Decommissioning Solar Panel Systems: Information for local governments and landowners on the decommissioning of large scale solar panel systems, which was published in August 2020 and lists 2021-05-06 as its "update time" on the NYSERA website, contains the same costs. Decommissioning Solar Panel Systems: Information for local governments and landowners on the decommissioning of large scale solar panel systems is attached to this submission.***

TE Response: If looking at NYSERDA's Decommissioning Solar Panel Systems Guidebook, it can be seen that they show the future cost estimate in a 20-year time frame. If you use this same, future-cost, analysis for 2 years at 2.5% for \$213,626.5 and \$213,406.50, the future



cost increase is \$10,814.84 and \$10,803.70 respectively. This may not seem like a substantial amount to the project team. However, approximately \$20,000 to the Town of Duaneburg, in the instance the applicant fails to decommission the project themselves, is a substantial amount. We would like the applicant to consider again, increasing the unit costs for all decommissioning items in terms of inflation.

***Response: While the project team continues to disagree with the assertion that decommissioning unit costs are increasing (as asserted above), we have added the \$10,814.84 and \$10,803.70 respectively to the revised decommissioning estimate as an act of good faith.***

TE Response 2: We appreciate the applicant's act of good faith as to increase Oak Hill Solar 1 and Oak Hill Solar 2 decommissioning costs to \$224,441.34 and \$224,210.20 respectively to account for inflation from 2019 to 2021.

***Response: Comment noted.***

9. The storage facilities are listed as N/A for the costs. Please update the quantities and costs per unit. Or provide elaboration as to why this is stated as such.

***Response: The BESS containers will be transported to their manufacturing facility where they will be recycled. This is common practice as to how these containers are handled. Therefore, there is no salvage value for the BESS containers under the decommissioning cost. See the Battery Energy Storage System-Specific Decommissioning Plan Section 5.1.***

TE Response: It is understood that the BESS containers will be transported to their manufacturing facility where they will be recycled. The Battery Energy Storage System-Specific Decommissioning Plan Section 5.1 is sufficient.

***Response: Comment noted.***

10. It appears the Town Attorney's office has been consulted on the preparation of the Decommissioning Bond.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

#### Glare Analysis and Module Specifications

1. According to local solar code, solar panels shall be placed and arranged such that reflected solar radiation or glare shall not be directed onto adjacent buildings, properties or roadways. The Glare Analysis was performed at two neighboring homes. The analysis used software that evaluates the likelihood of glare at a given position, minute by minute for an entire year and found that no glare is predicted for each location. We find this conclusion satisfactory.

***Response: Comment noted.***

TE Response: No further comments.

***Response: Comment noted.***

2. We believe an observation should be taken from Route 7 to prove compliance with local solar code.

***Response: A glare study / visual assessment of Route 7 performed by Environmental Design Partnership, LLP (EDP) is complete and has been included in this submission.***

TE Response: The revised Glare Analysis shows that no glare is predicted along Route 7. We find this conclusion satisfactory.

***Response: Comment noted.***

#### Battery Storage Specification and Photos

1. Battery images were provided and reviewed. No comments.

**Response: Comment noted.**

TE Response: No further comments on this item. However, Paul Rodgers will be contracted to review this material when passed via resolution by the Town Board.

**Response: Comment noted.**

#### Pervious Access Road Questions Received by the Town from Concerned Citizen

Pervious access road questions received by the town from concerned citizen on 7/27/2021 and provided for our review. Answers provided by AMP on 8/6/2021.

- 1.q. Do solar access roads have a weight limit requirement?
- 1.a. It has been our experience that they do not have a weight limit requirement, but they have been designed and developed with materials for heavy truck traffic at low volume (fire truck, tanker truck, etc.)
1. We believe the applicant should provide bearing calculations for the proposed access road to handle the largest fire truck from the local fire company.

**Response: The pervious haul road detail included in the plan is a NYSDEC pre-approved direct substitute for the impervious road detail. Similar to the impervious road detail, there are no load restrictions for the pervious haul road detail. Both details are applicable for heavy duty construction equipment travel, similar to heavy fire trucks, under low volume. Potential localized subgrade failures resulting in rutting will be evident during construction and repaired accordingly. Materials used for the pervious haul road are approved by NYSDEC and NYSDOT. The pervious haul road has been installed in areas within the region and has not seen any issue with heavy truck traffic at low volume. See 3.a. below for sites within the region where the pervious haul road has been installed. See the previously submitted Mirafi BXG110 geogrid specifications.**

TE Response: While the information provided in this response is appreciated, we still would like to know the load rating of the access road.

**Response: Further correspondence with TenCate (the Mirafi distributor) shows that the geogrid works under a H20 rating as well as with a combination of aggregate and geogrid under H20 rating. The aggregate for the pervious haul is 8-inch minimum thickness with requirements as specified per Sheet C5.00. The aggregate has the same properties as if it was used for a normal gravel road. Additional information provided by TenCate has been provided in this package.**

TE Response 2: TenCate representative states that a system could be designed to an H20 rating. The applicant still has not verified that this specific design has a rating of H20 or otherwise.

**Response: See the pervious haul road assessment provided by Stephen Karl, PE (SK) included in this submission package.**

**Please note the following for this assessment: The design code referenced is identified as the AASHTO Guide for Design of Pavement Structures. This code includes the design guide for unpaved gravel roads (Chapter 4) used as the basis for assessment. SK also reached out to New York State's Local Technical Assistance Program (LTAP) at Cornell University to seek their guidance/recommendation on the appropriate analysis method for assessing the NYSDEC Pervious Haul Road. The Federal Highway Administration (FHWA) supports local and rural road agencies across the US Through the LTAP program. NY's program is hosted by Cornell University. SK received correspondence from David Orr, Director at NYS LTAP. He instructed SK to use the guidelines identified in "Gravel Roads: Maintenance and Design Manual" produced by the South Dakota LTAP Center. The South Dakota process was reviewed and makes a direct**

*reference to the same AASHTO Guide used in the pervious haul road assessment.*

- 2.q. Are the access roads required to withstand a 40-ton tanker truck?  
2.a. The access roads use materials that can withstand a 40-ton tanker truck. The Mirafi BXG110 geogrid specified in the design can be used for construction equipment / heavy equipment travel. See attached for Mirafi BXG110 geogrid specification.
2. We believe the applicant should provide bearing calculations for the proposed access road to handle the largest fire truck from the local fire company.

*Response: The pervious haul road detail included in the plan is a NYSDEC pre-approved direct substitute for the impervious road detail. Similar to the impervious road detail, there are no load restrictions for the pervious haul road detail. Both details are applicable for heavy duty construction equipment travel, similar to heavy fire trucks, under low volume. Potential localized subgrade failures resulting in rutting will be evident during construction and repaired accordingly. Materials used for the pervious haul road are approved by NYSDEC and NYSDOT. The pervious haul road has been installed in areas within the region and has not seen any issue with heavy truck traffic at low volume. See 3.a. below for sites within the region where the pervious haul road has been installed. See the previously submitted Mirafi BXG110 geogrid specifications.*

TE Response: See comment 1. In this section.

*Response: Further correspondence with TenCate (the Mirafi distributor) shows that the geogrid works under a H20 rating as well as with a combination of aggregate and geogrid under H20 rating. The aggregate for the pervious haul is 8-inch minimum thickness with requirements as specified per Sheet C5.00. The aggregate has the same properties as if it was used for a normal gravel road. Additional information provided by TenCate has been provided in this package.*

TE Response 2: TenCate representative states that a system could be designed to an H20 rating. The applicant still has not verified that this specific design has a rating of H20 or otherwise.

*Response: See the pervious haul road assessment provided by Stephen Karl, PE (SK) included in this submission package.*

*Please note the following for this assessment: The design code referenced is identified as the AASHTO Guide for Design of Pavement Structures. This code includes the design guide for unpaved gravel roads (Chapter 4) used as the basis for assessment. SK also reached out to New York State's Local Technical Assistance Program (LTAP) at Cornell University to seek their guidance/recommendation on the appropriate analysis method for assessing the NYSDEC Pervious Haul Road. The Federal Highway Administration (FHWA) supports local and rural road agencies across the US Through the LTAP program. NY's program is hosted by Cornell University. SK received correspondence from David Orr, Director at NYS LTAP. He instructed SK to use the guidelines identified in "Gravel Roads: Maintenance and Design Manual" produced by the South Dakota LTAP Center. The South Dakota process was reviewed and makes a direct reference to the same AASHTO Guide used in the pervious haul road assessment.*

- 3.q. Will the access roads withstand winter plowing? Battery storage fires can happen at any time. It makes sense that emergency access roads are required to be kept clear throughout the winter.
- 3.a. The pervious haul access roads can withstand winter plowing. There are sites within the capital region that use the pervious haul road design and have not had issues with plowing.

Some of these sites are CCR - Ellsworth 1 & 2 in Halfmoon, NY, Forefront – Bethlehem-LaGrange in Bethlehem, NY, and Forefront – Guilderland in Guilderland, NY.

3. If these sites are designed with the same specifications, we find this answer satisfactory.

**Response: Comment noted.**

TE Response: No further comments regarding plowing at this time.

**Response: Comment noted.**

4.q. Is there a width limitation to this detail? NYSERDA requires battery energy storage to follow the 2021 International Fire Code even if it is more restrictive than local law. Approved site plans may require amendments expanding the width of the road to meet 2021 IFC. How wide can this detail go?

4.a. The pervious haul roads have been designed with a width of 14'. This width in combination with the truck turnarounds has been approved by the fire chief (email correspondence attached) during the original application. We also provided the fire chief with the updated road layout in an email communication on July 28, 2021 and did not receive any comments. It is our strong preference to keep the road width at 14' to limit the disturbance on site. Please let us know if you require further discussion on this point.

4. NYS Fire Code does specify and require fire apparatus access roads to have an unobstructed width of 20' in section 503.2.1. There is an exception to this requirement described in section 503.1.1 where an approved fire code official may exempt a fire apparatus road from this requirement. We received correspondence from the Esperance Fire Chief, written 9/18/2019, that he found this access road acceptable. It should be noted that the State Fire Code has been revised since the issuance of this correspondence. Therefore, an updated approval from the local fire department should be obtained by the applicant. Furthermore, we have no record that the Esperance Fire Chief is considered an approved fire code official as defined by the NYS Fire Code. The applicant must get approval by an approved fire code official as defined by the NYS Fire Code for this pervious access road as shown and specified.

**Response: Dale Warner, the Town of Duanesburg Fire Code Official, has reviewed the submitted plans and discussed with the fire chief of the Esperance Fire Department. Under Section 503.1.1 Exception 2, the Fire Apparatus Road may be modified to 10 foot (10') in width as approved in the previous site plan, provided a two foot (2') shoulder on each site to prevent overgrowth and a maximum of 9 percent grade are included as part of the modification. 14 foot (14') roadways are designed within the project area and were approved per the previous site plan.**

TE Response: It is acknowledged that Dale Warner has given his approval upon the conditions that a 2' wide shoulder be provided along each side of the proposed 10' access route and that the slope of the access route does not exceed 10%. Stationing points including, but not necessarily limited to, 3+50, 8+00, 9+50, 10+50, and 13+50 seem to be areas where 2' shoulder on each side seems difficult to obtain. Applicant should verify the practicability of providing 2' of shoulder on either side of the 10' wide access road at all locations, considering slope and vegetation.

**Response: It has been noted and confirmed that the maximum grade of 9% is allowed by Dale Warner, not 10% maximum slope as stated in the TE response. The plans have been reviewed and revised to show that 2' shoulder has been provided along the 10' wide access road on each for clearance purposes.**

TE Response 2: No further comments at this time.

**Response: Comment noted.**

### 52'x8' Enclosure Drawings

1. We acknowledge that we have received these details.

*Response: Comment noted.*

TE Response: No further comments at this time.

*Response: Comment noted.*

2. These plans should be reviewed by the Building Code Enforcer, as it is under their jurisdiction.

*Response: Comment noted.*

TE Response: No further comments at this time.

*Response: Comment noted.*

#### Powin Fire Alarm SOP

1. Emergency contact information in the Purpose section is incomplete.

*Response: The emergency contact information in the Purpose section is updated and included in this submission.*

TE Response: Revised Powin fire alarm SOP does not seem to be included for review.

*Response: The Powin Fire Alarm SOP and various safety documents will be provided to ESRG for review.*

TE Response 2: Powin fire alarm SOP will be provided to ESRG for review.

*Response: Comment noted.*

2. This Safety Guide should be presented to the local fire department response team, so they have on file and are aware of the specific requirements of the site before it is required during an emergency.

*Response: The Safety Guide has been shared with the local fire department.*

TE Response: It has been acknowledged that this Safety Guide has been provided to the local fire department.

*Response: Comment noted.*

#### Permit VS IFC Comparison Plan

1. Limits of disturbance are identified on the plan but the corresponding breakdown of area of disturbances are missing.

*Response: The plans have been revised to show the limits of disturbance and a breakdown of the types of soil disturbance anticipated (temporary and permanent) with the quantity of each.*

TE Response: On Sheet C2.00, the sum of limits of disturbance for Oak Hill 1 (36.28 ac), Oak Hill 2 main (36.28 ac), and Oak Hill 2 Landscape (0.79 ac) do not total to 69.75 ac as shown. This drawing should be revised to accurately summarize the proposed disturbances.

*Response: IFC Plan Sheet C2.00 has been revised with the correct limit of disturbance breakdowns.*

TE Response 2: Sheet C2.00 has been revised to show the accurate limits of disturbance for Oak Hill 1, Oak Hill 2 main, and Oak Hill 2 Landscape

*Response: Comment noted.*

2. The original permit approved easement was 50' wide for ingress and egress and utilities.

*Response: Comment noted.*

TE Response: No further comments at this time.

*Response: Comment noted.*

3. The original permit was approved for a 14' wide pervious gravel access road.

*Response: Comment noted.*

TE Response: No further comments at this time.

*Response: Comment noted.*

### Powin 53' Enclosure Stack Drawings

1. We have received the Powin 53' Enclosure Stack Plans, however, they have not been reviewed. It is our understanding that the building code officer shall review and approve these plans prior to issuance of a building permit.

**Response: Comment noted.**

TE Response: No further comments at this time.

**Response: Comment noted.**

### UL 9540A Test Date Letter

1. The letter stated that the Stack 230 Module was tested per UL 9540A but the Test Report was not attached stating the results. We request the results of the test be provided for review.

**Response: The UL 9540A test report is provided as part of this submission.**

TE Response: The UL 9540A test results were received. These results will be reviewed separately by Paul Rodgers when passed via resolution by the Planning Board.

**Response: Comment noted.**

### Amp Storage System Risk Mitigation Strategy

1. It is noted that batteries will comply with National Fire Code (NFPA 1), International Fire Code (ICC IFC-2018), National Electrical Code (NFPA 70) and Standard for the Installation of Stationary Energy Storage Systems (NFPA 855) as stated.

**Response: Comment noted.**

TE Response: No further comments at this time.

**Response: Comment noted.**

2. The gases that may be vented are listed in the Fire and Off-Gas Emergency Procedure. Applicant should verify if these gases can be vented safely and in accordance with DEC and DOH codes and/or recommendations.

**Response: The Powin enclosures are fitted with alarms for smoke, high temperature, and hydrogen.**

**The high temperature alarm is adjustable and typically set to 40° C (104° F). Two separate hydrogen sensors are placed at strategic locations throughout the enclosure and can detect hydrogen at levels significantly below the lower explosive limit (LEL). Alarms will trigger the HVAC system to change damper positions and start evacuating the air from the enclosure.**

TE Response: It is noted that (2) separate hydrogen sensors are placed at strategic locations throughout the enclosure and can detect hydrogen at levels significantly below the lower explosive limit (LEL). However this does not answer the question whether the off gassing is in compliance with DEC and DOH codes and/or recommendations. It was presented by Mitch Boeh at the Public Planning Board Workshop on 9/9/2021 that there are currently no known DEC or DOH codes applicable to these sorts of applications. Furthermore, the vent designs are NFP 69 Compliant as stated by Mitch.

**Response: The Powin documents, including the 9450A test results, which show the gases released during a thermal runaway event will be presented to ESRG for evaluation.**

TE Response 2: It is noted Powin reference documents will be presented to ESRG for review.

**Response: Comment noted.**

3. Multiple items are said to have “very high melting points” – applicant should describe these melting points and state the expected internal temperature of the enclosures in months of June, July and August.

**Response:** *The enclosures and stacks are mostly steel (enclosure, cable trays, and stack frames), with the cells themselves being predominately Lithium iron phosphate and graphite. Individual cells are wrapped in polypropylene (CAS Number 9003-07-0) which has the lowest melt point of any of the construction materials at 157° C (315° F).*

TE Response: It has been clarified that the lowest melting point of any of the materials used for construction will be polypropylene at 315 degrees Fahrenheit. It still was not clarified what the temperature inside the battery storage unit is anticipated to be during the summer months.

**Response:** *The HVAC system is designed to maintain the battery temperatures inside the enclosure between 5° C and 35° C when ambient temperatures outside the enclosure are between -25° C and 40° C. The HVAC system has been suitably sized for the required heating and cooling and expected use of the batteries. Lithium Iron Phosphate battery cells have a wide operating range and high degree of thermal stability. In the unlikely event that temperatures fall outside the batteries allowable operating range, the enclosure high-temperature or low-temperature alarm will be activated and charging or discharging of the batteries will stop.*

TE Response 2: We find the applicant's response regarding the anticipated internal temperature of the enclosure acceptable.

**Response:** *Comment noted.*

#### Fire and Off-Gas Emergency Procedure

1. Applicant should verify that the gases that may be vented can be vented safely and in accordance with DEC and DOH codes and/or recommendations.

**Response:** *The Powin enclosures are fitted with alarms for smoke, high temperature, and hydrogen. The high temperature alarm is adjustable and typically set to 40° C (104° F). Two separate hydrogen sensors are placed at strategic locations throughout the enclosure and can detect hydrogen at levels significantly below the lower explosive limit (LEL). Alarms will trigger the HVAC system to change damper positions and start evacuating the air from the enclosure.*

TE Response: It is noted that (2) separate hydrogen sensors are placed at strategic locations throughout the enclosure and can detect hydrogen at levels significantly below the lower explosive limit (LEL). However, this does not answer the question whether the off gassing is in compliance with DEC and DOH codes and/or recommendations. It was presented by Mitch Boeh, the POWIN representative, at the Public Planning Board Workshop on 9/9/2021 that there are currently no known DEC or DOH codes applicable to these sorts of applications. Furthermore, the vent designs are NFP 69 Compliant as stated by Mitch at the same workshop. We look forward to Paul Rodger's comments on this material.

**Response:** *Materials and project documents will be provided to ESRG for evaluation.*

TE Response 2: No further comments.

**Response:** *Comment noted.*

#### Powin's Approach to Safety Product Guide, Powin Stack230P Product Manual, Fire Suppression Cut Sheet, & Powin Stack Technical Specifications

1. We acknowledge we have received these items, no comments at this time.

**Response:** *Comment noted.*

TE Response: No further comments at this time.

**Response:** *Comment noted.*

TE Response 2: No further comments.

**Response:** *Comment noted.*



THE FOLLOWING SECTIONS HAVE BEEN ADDED FROM THE OCTOBER 15, 2021 PRIME AE COMMENT LETTER:

Supplemental Visual Impact Assessment

1. We have reviewed the Supplemental Impact Assessment. Much of the buffer for the proposed solar array is currently located on the Susan L. Biggs property. The applicant is proposing installing a landscaped buffer on this edge of the property. Visual impact appears to be small.  
*Response: Comment noted.*
2. We do not believe vegetation will be an issue with regard to cross gears at the site, as panels will be mounted approximately 5' above grade.  
*Response: Comment noted.*

Schletter Tracking System Assembly and Installation

1. In Section 5.2 of this Informational booklet, it is said that the proposed solar panel system shall be installed on level ground. Yet, the proposed terrain of the site contains slopes varying from 10-15%. Applicant should verify how system will be installed according to manufacturer's recommendations while minimizing disturbance to the site.  
*Response: Schletter has been involved in the system design and has confirmed that the terrain of the site is within the slope tolerance of the racking system with some grading required as shown in the grading plans.*

TenCate Mirafi Additional Load Bearing Qualifications

1. TenCate representative states that a system could be designed to an H20 rating. The applicant still has not verified that this specific design has a rating of H20 or otherwise.  
*Response: See the previous haul road assessment included in this submission package.*

If you have any questions regarding the enclosed information, please contact me at (518) 857-7169 or [cconnelly@verdanterra.com](mailto:cconnelly@verdanterra.com).

Sincerely,  
Verdanterra, LLC

Christopher W. Connelly, PE  
Civil Engineer

cc: Douglas P. Cole, PRIME AE Group of NY.  
Jeffrey D. Trzeciak, PRIME AE Group of NY  
Teresa Bakner, Town of Duanesburg Attorney  
Kevin Foster, AMP Energy  
Nicole LeBlanc, AMP Energy  
Bill Pedersen, AMP Energy  
Taras Bezchibnyk, AMP Energy  
Pallav Shah, AMP Energy  
Dirk Vollbrecht, Greencells USA, Inc.  
Brandon Smith, Greencells USA, Inc.  
File