

851 Chemung Street
Horseheads, New York 14845

August 20, 2026

Mr. Ken Ripley, Code Enforcement Officer
Town of Veteran Code Enforcement Department
4049 Watkins Road
Millport, New York 14864

**Re: Veteran Hill Road Solar Project
 Veteran Hill Road, Town of Veteran, New York
 Review of Stormwater Management Plan**

Mr. Ripley:

I have completed a review of the following submitted information for the above-referenced project regarding the Stormwater Pollution Prevention Plan (SWPPP) and stormwater management system design for that project.

- Stormwater Management Report for Veteran Hill Road Solar Project, Stamped by a NYS Licensed Professional Engineer, Prepared by akrf, Inc. Project No. 231510, Dated April 20, 2026
- Site Plan Approval Drawing Set for Veteran Hill Road Solar, Stamped by a NYS Licensed Professional Engineer, Prepared by akrf, Inc. Project No. 231510, Dated April 20, 2026

My review comments and questions regarding the SWPPP and stormwater management system for the above-referenced project are as follows. Given that the submittal appears to be preliminary in nature, my review comments are likewise preliminary in nature.

GENERAL

1. It appears that the intent of the submitted Stormwater Management Report is to serve as the Stormwater Pollution Prevention Plan (SWPPP) for the above-referenced project. As such, that document must include all of the pertinent "Required SWPPP Contents" of GP-0-25-001, including (but not limited to) a Phasing Plan, a Sequencing Plan, a Maintenance Schedule for Erosion & Sediment Control Measures, and a description of pollution prevention measures that will be used to control litter, construction chemicals, and construction debris.
2. A detail should be included on the plans that shows the following in a profile.
 - Width of solar table
 - Height of solar panels above the ground
 - Separation distance between solar table rows
 - Gaps between solar modules/panels

3. What is the status of the environmental reviews for this project, including Rare Plants and Animals, and wetlands? Appropriate documentation should be provided.
 - a. What specific "Rare Plants or Animals" (if any) are present on or near the project site? Will the existence of rare plants and/animals necessitate a change in the design of the project?
 - b. Is the existence of Long-eared Bats documented for this site. Will the existence of Long-eared Bats impact the permitting and/or timing of the project?
 - c. Have existing wetlands been delineated in accordance with the NYSDEC's current regulatory procedures?
4. Documentation regarding the Archeological Review for this project is requested. Will archeological considerations impact the design and/or permitting of the project?
5. How will excess cut, tree limbs, and tree stumps be managed? Where will this material be disposed/placed? What erosion and sediment controls would be needed for this disposal site? Would a permit(s) be required for the storage/disposal of this material?
6. Where will the proposed temporary sanitary facilities and dumpsters be located on the project site?
7. Where will staging areas and other laydown areas be located on the project site?
 - a. A detail should be provided that includes the thickness of the proposed gravel and stone layers, the specification for the gravel and stone, and specifics of any underlying geotextile fabric.
 - b. Will runoff from adjacent uphill areas be diverted away from the staging areas and laydown areas? Grading plans should be provided for these areas.
8. Is washing of vehicles and equipment proposed for this project? If so, appropriated details shall be provided, including how spent washwater will be collected/managed.
10. In Section 2.0 of the submitted Stormwater Management Report, it is noted that the project property is within the Chemung River Watershed. Actually, it appears that a portion of the project property is within the Chemung River watershed and the other portion is within the Finger Lakes watershed. In regard to the Finger Lakes watershed, the western portion of the project site is directly tributary to Catherine Creek, a renowned trout fishery.

STORMWATER MANAGEMENT

1. The SWPPP should clearly demonstrate how Runoff Reduction (RRv), Water Quality (WQv), and Channel Protection (CPv) will be accommodated (with supporting documentation and calculations).
2. Soil compaction often occurs during construction, as a result of construction activities of the contractor and their sub-contractors. A plan for soil restoration and decompaction should be included in the SWPPP that clearly outline the specifics of the proposed soil restoration and decompaction measures. The SWPPP and Plans should clearly state that soil restoration and decompaction is a requirement.
 - a. Will the proposed electric conduits be deep enough to avoid impacts from the soil decompaction and restoration activities?

- b. Specific requirements for the restoration and decompaction, including the proposed Temporary Laydown Areas and Temporary Construction Roads, should be included in the Plans and/or the SWPPP.
- c. Specifics regarding how soils that are compacted during construction (and, as such, in need of decompaction/soil restoration) shall be identified and decompacted/restored.

Is it reasonable to expect that soil decompaction and restoration will be completed for 100 percent of the soils compacted during construction? In lieu of or in conjunction with soil decompaction/restoration, in accordance with Chapter 5 (Green Infrastructure Practices) of the NYS Stormwater Management Design Manual, for pervious areas that are compacted during construction, but do not undergo decompaction and soils restoration,

- For the estimation of RRv and WQv, pervious areas that are compacted shall be taken as being impervious
- For volumetric and discharge rate control computations, the Hydrologic Soil Group (HSG) designations and the post-developed CN values would have to be increased for pervious areas that are compacted. For example, a HSG C soil would be increased to a HSG D soil for these calculations.

Is it expected that construction vehicles could compact soils between the panel rows? Can soil decompaction and restoration readily be completed between the panel rows?

On Plan Sheet C101, the existing roads on the project property are proposed to be removed. How will these areas be restored and revegetated?

- 3. The majority of the area proposed for solar panel installation has slopes of over 8 percent. In regards to the Drainage Plan on Sheet C-301 and the submitted SWPPP, it appears that the intent of the Design Engineer is to have that solar panel area of the project fall within Table 1 of the Construction General Permit No. GP-0-25-001.

With that noted, it is unclear how sheet flow conditions shall be maintained, given the proposed stormwater management practices (or lack thereof) on the Drainage Plan. Stormwater management practices consistent with the NYS Stormwater Management Design Manual, the NYS Standards and Specifications for Erosion and Sediment Control, and design guidance from NYSDEC (including NYSDEC's October 23, 2024 response package to the New York State Industries Association) should be incorporated into the Drainage Plan. It is requested that documentation (including supporting calculations) be provided that demonstrates how sheet flow conditions would be maintained and how WQv and RRv would be addressed.

- 4. In regard to the proposed bio-retention filters, the following items are noted.
 - a. Calculations that document the sizing of the bio-retention filters are requested. Are the bio-retention filters sized to treat the entire WQv?
 - b. In regard to the detail entitled "Filtration Bioretention Basin" on Sheet C502, the following questions and comments are provided.
 - i. The dimensions for each of the proposed bio-retention basins should be provided, including the thickness of the filter media.
 - ii. Are impermeable liners proposed for the proposed bioretention filters?
 - iii. What specific media is proposed to be utilized?
 - iv. The cleanout should have a cap and be located outside of the ponding area.
 - v. What type of surface layer is proposed?

- c. How would pretreatment of stormwater flows to the proposed bio-retention basins be accommodated?
 - d. On Plan Sheet C301, what does "Bottom of Basin" pertain to, in regard to the proposed bio retention basins?
 - e. In regard to the Overflow Spillways for the proposed bio-retention filters, the following questions and comments are provided.
 - i. The dimensions for each of the proposed spillways should be provided on the Plans.
 - ii. Calculations regarding the sizing of the spillways should be provided.
 - iii. Appropriate details for the proposed spillways should be provided.
 - f. Would the surface layer be vulnerable to erosion and washout, during high flow periods?
5. In regard to the proposed detention basin, the following items are noted.
- a. Calculations that document the sizing of the spillway are requested.
 - b. Details should be provided for the proposed detention basin should be provided that include the following.
 - i. The proposed outlet structure (including the discharge pipe, anti-seep collars, and discharge pad
 - ii. The proposed spillway
 - iii. The proposed berm (including material type and compaction requirements)
 - c. The scale of Plan Sheet C401 is such that it is difficult to discern the grading of the proposed detention basin (including the elevations of the contour lines).
 - d. As per Sheet C401, it appears that the outer toe of the detention pond will be near/at some of the proposed utility poles. Would this impact maintenance operations for the utility poles (as well as for the detention basin)?

STORMWATER COLLECTION & CONVEYANCE

- 1. Appropriate hydrologic and hydraulic calculations should be provided that justifies the sizing of the various proposed stormwater conveyance systems, including culverts, ditches, and swales. The design storm return period must be noted and justified.
- 2. Would the proposed ditches and swales be erosive? If so, what measures shall be employed to address the erosivity?
- 3. The sizing/design calculations for the proposed Rock Outlet Protection at the discharge of culverts must be provided.

4. As per the Grading Plan on Sheet C301, portions of the proposed ditches along the proposed access drive would be situated upon fill. As such, these ditches may be more prone to erosion and instability. What measures would be employed to prevent erosion and loss of stability of these proposed swales?
5. In regard to the proposed 49 LF 24-inch dia. culvert (to the west of the proposed 48 LF 24-inch dia. culvert), the following items are noted.
 - a. With the proposed ditching along the proposed access drive (in conjunction with the proposed 49 LF 24-inch dia. culvert would act to divert a larger tributary area (and larger runoff rates and volumes) to the "Lands of Richard Miller" and possibly the "Lands of Marc Cassada". It appears that the discharge from this culvert would be close to the existing well for the Miller property.
 - b. As per Sheet C301, the proposed 49 LF 24-inch dia. culvert appears to be intended to discharge to a steep fill slope. This steep fill slope would be vulnerable to erosion, if appropriate measures are not utilized.
6. As per the Gravel Access Road detail on Sheet C502, it is noted that check dams shall be placed within the ditches along the proposed gravel access road and that the locations of these check dams would be shown on Sheet C301. The locations of these check dams are not shown on Sheet C301. It does not appear that a detail was provided for the check dams. Would these check dams be permanent? If so, would these check dams reduce the hydraulic capacity of the ditches?
7. As per the Gravel Access Road detail on Sheet C502, the cross slope of the 16-ft wide gravel access road is shown to be 2%. As per Sheet C301, it appears that the intent is to slope the gravel road to the proposed south roadside ditch. Given the relatively steep longitudinal slope for much of this proposed road, as well as the potential of rutting and deformation of the cross-section, the long-term reliability of sheet flowing runoff from the gravel road to the south ditch is questionable.

HYDROLOGIC & HYDRAULIC MODELING

1. As per the submitted hydrologic calculations, the pre-developed area of gravel was 4.01 acres and the proposed post-developed area of gravel shall be 1.6 acres. It appears that this proposed reduction in gravel area would be largely attributed to the removal of the existing gravel "Woods" roads.

Although the removal of the gravel "Woods" roads would act to reduce runoff from the project site, it is important to note that the construction of the existing gravel roads appear to have been constructed as part of an overall project. This project resulted in land disturbance of over 1 acre (and possibly over 5 acres) and the introduction of a considerable amount of gravel surfaces.

As such, that work should have been permitted through the NYSDEC's SPDES General Permit for Stormwater Discharges program. Furthermore, appropriate permanent post-construction stormwater controls (including stormwater detention basins) should have been constructed to address the impacts presented by the additional gravel surfaces. Such permanent stormwater management facilities do not appear to have been constructed.

Given the above considerations, the following items are recommended.

- The existing gravel "Woods" roads be removed and the associated area be fully restored.
- In regard to hydrologic modeling, the pre-developed condition would be considered to be the wooded condition, before the gravel "Woods" roads were constructed.

2. In the development of CNs for the various sub-areas, consideration should be given to changes in the soil due to construction activities, including the compaction of the soil. Refer to Item 1 under Stormwater Management.
3. How will the vegetation within the solar panel area be routinely managed? This could impact the selection of the post-developed CN and the estimated Times of Concentration. For example, if this vegetation shall be routinely managed with sheep, the post-developed land use could be potentially considered Pasture.
4. The boundaries of the drainage sub-area EDA3 should be reviewed. In regard to the boundary for EDA3 shown on Sheet C601 of the submitted Stormwater Management Report, does this consider the existing 12-inch dia. culvert (below the existing gravel road) that is proposed to be removed?
5. The boundaries of PDA2 and PDA6 are not entirely clear on C602 of the submitted Stormwater Management Report and should be clarified. With that noted, the portion boundaries of PDA6 near the proposed Bioretention Basin B and Detention Basin should be reviewed.
6. What CN was used for the proposed roadside ditches?
7. For the proposed compacted gravel surfaces, a CN value of 96 was utilized. Given that the proposed gravel surfaces are treated as impervious (for purposes of hydrologic modeling), a CN value of 98 should be utilized.

EROSION & SEDIMENT CONTROL

1. As per the submitted SWPPP and Plans, the disturbed project area is over 30 acres. Given the size and slope of the project site and the associated amount of land disturbance, is phasing proposed for the land disturbance/revegetation activities? If so, the Erosion & Sediment Control Plan and Sequencing Plan should dovetail with the Phasing Plan.
2. Would 5 acres or greater of land be disturbed at any one time, during the course of this project? Given that the Town of Veteran is an MS4, the Town of Veteran would need to authorize land disturbance of 5 acres or greater.
3. In regard to the layout of the proposed erosion & sediment controls shown on Sheet C401, the proposed silt fence layout should be reviewed and revised, given the following items.
 - a. A considerable amount of silt fence is shown to be located up-gradient of the proposed soil disturbance. Typically, silt fence is placed down-gradient of the proposed disturbance.
 - b. A considerable amount of silt fence is shown to be placed across elevation contours. This is contrary to common installation recommendations.
 - c. As per Standard and Specifications for Silt Fence in the New York State Standards and Specifications for Erosion and Sediment Control (November 2016), silt fence is installed on the contours across a site. The maximum ponding depth is 1.5 feet behind the fence.
 - d. The spacing and type of silt fence should be consistent with the table in the Standard and Specifications for Silt Fence.
4. In regard to the proposed Compost Filter Sock detail on Sheet C501, the following items are noted.
 - a. Where will Compost Filter Sock be utilized?
 - b. Calculations/documentation, justifying the sizing and spacing of the proposed Compost Filter Sock, are requested.

5. In regards to the proposed Compost Filter Sock Sediment Trap detail on Sheet C501, the following items are noted.
 - a. Where will Compost Filter Sock Sediment Trap be utilized?
 - b. What is the diameter of the proposed Compost Filter Sock?
6. What seed mix is proposed to be utilized for this project? This should be included in the SWPPP and/or Plans.
7. Pertinent specifications and details in the New York State Standards and Specifications for Erosion and Sediment Control should be included in the SWPPP, including (but not limited to) Soil Restoration, Topsoiling, Fertilizer, Seeding, Mulching, Site pollution Prevention, and Dust Control.
8. How will erosion of recently constructed ditches and swales be prevented/controlled.
9. In regards to the Soil Stockpile Control Detail on Plan Sheet C501,
 - a. The diameter of the compost filter sock should be noted.
 - b. How will the end of a length of compost filter sock be placed/secured with the end of an adjoining length of compost filter sock?
10. A detail for Erosion Control Blankets on Slope Installations is provided. Where would Erosion Control Blankets be utilized?
11. What erosion control measures will be employed for the removal of the existing gravel roads on the project site?
12. It appears that there are locations where concentrated flows would occur, as a result of the proposed improvements. For example, near the proposed hammerhead turn-around, the proposed roadside ditch along northside of the proposed access road simply discharges to the slopes at the end of the turn-around. Erosion to the downhill slopes could result and appropriate measures should be pursued to address this potential.

CHEMICAL USE & POTENTIAL POLLUTANTS

1. Are chemicals proposed for the routine cleaning of the modules? If so, what chemicals are proposed to be used and do these present a pollution issue? Will the modules introduce other pollutants to the environment?
2. Appropriate documentation from the panel manufacturer is requested to be provided to the Town of Veteran from the Applicant, regarding the potential of the panels (including ancillary components of the panel systems) of introducing pollutants to the environment. This documentation should be specific to the panels and equipment that are proposed to be utilized. This documentation shall include the results of TCLP testing.

Could damaged (including cracked) panels result in pollutants being introduced to environment? Could panels that have been on fire result in pollutants being introduced to the Environment? What are the Panel manufacturer's written procedures for management of damaged panels? Are the proposed solar panels considered to be a hazardous waste (in terms of the TCLP)?
3. Do other electrical system components have the potential of introducing pollutants to the environment? If so, how are these managed?
4. Are herbicides and/or pesticides proposed to be utilized for this project (including on a routine basis)?

5. What other chemicals are proposed to be utilized for this project? What chemicals, fuels, and oils shall be used on-site during construction? How will these be managed? Will these chemicals present a risk to the environment, as well as to groundwater supplies.

OPERATION & MAINTENANCE AGREEMENT

1. In accordance with the Town's Stormwater Management and Erosion and Sediment Ordinance, a formal, signed enforceable operation and maintenance agreement shall be provided by the Applicant. Furthermore, this agreement must reference and include an approved Operation & Maintenance Plan.

This agreement shall be binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property. This agreement, as well as the Operation & Maintenance Plan, shall be subject to the review and approval of the Town of Veteran, the Town's attorney, and Chemung County Stormwater Coalition.

2. The formal, signed enforceable maintenance agreement for the stormwater management system shall be provided by the Applicant/Owner, accepted by the Town, and executed by the Applicant. Also, the Applicant shall convey to the Town permission to way to access the property for periodic inspections by the Town or their representatives. This agreement must be fully consistent with the Town's Stormwater Management and Erosion and Sediment Control Ordinance.

The maintenance agreement shall include a detailed operation & maintenance plan for the proposed facility and shall have specific provisions for the long-term maintenance of these, including (but not limited) to the following items.

- a. Specific operation and maintenance tasks
 - i. Maintenance of vegetation including specifics of mowing operations (or other vegetation control measures). The maximum height of vegetation should be specified.
 - ii. Corrective actions for areas with soil erosion, bare spots, and/or sparse growth.
 - iii. Maintenance of Bio-Retention Basins, Flow Diffusers, Detention Basins, culverts, etc.
 - iv. Maintenance of Access Drives and ditches (including periodic repairs and reconstruction)
 - v. Action to be taken if concentrated stormwater flows (as opposed to sheet flows) are occurring from runoff from the panels
 - vi. Maintenance of Solar Panels (including washing of modules) and other system components
 - vii. Maintenance of areas downstream of culverts
 - viii. Management of chemicals & debris (including broken/inoperable modules)
- b. Monitoring requirements (including frequency)
- c. Frequency of and thresholds (triggers) for maintenance activities
- d. As part of the Operation & Maintenance Plan, a table outlining inspection tasks shall be provided that includes sections for the date of the date of inspection, the results of the inspection, and other findings and observations.

ACCESS DRIVE

1. A Highway Access Permit from the Chemung County Department of public Works will be required for the proposed entrance onto Veteran Hill Road. As part of the associated permit application, the Applicant's Design Professional shall prepare a report that documents (through field measurements) the available sight distances for motorists on Veteran Hill Road and for motorists entering onto Veteran Hill Road. In turn, these available sight distances shall be compared to the minimum required sight distances. This report shall be stamped by a NYS licensed professional engineer.
2. Would the proposed drive need to accommodate 2-way traffic? This is especially pertinent, given that a single entrance is proposed. Could the lack of being able to accommodate 2-way traffic present issues for traffic on Veteran Hill Road?
3. A profile of the proposed access drive (in relation to existing grade) is requested.
4. Would left turns from the project site onto Veteran Hill Road be prohibited?

DECOMMISSIONING PLAN

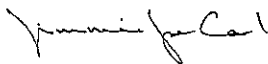
1. A detailed Decommissioning Plan is requested for this project. Would the proposed access drive, buried conduit, perimeter fence, and access gates remain, after decommissioning is complete? What other infrastructure is proposed to remain?

MISCELLANEOUS

1. This review pertains to stormwater management and erosion & sediment control. The Applicant is responsible to obtaining all necessary permits, including those from the Town of Elmira.

If you have any questions regarding these comments, please do not hesitate to contact us. Furthermore, I would be happy to meet to discuss this project.

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Nick Vosburg, P.E., Chemung County DPW
akrf, Inc.