

EXHIBIT B



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July 9, 2025

Mr. Margus Laan, Director of Planning and Development
Town of Plymouth
80 Main Street
Terryville, Connecticut 06786

RE: Ground mounted solar array
270 Preston Road
Plymouth, Connecticut

Dear Mr. Laan

At your request, I have reviewed the site plans and stormwater report for the proposed solar array to be located at 270 Preston Road in Plymouth, Connecticut. I have reviewed the following plans and documents.

Documents and Plans Reviewed:

- a. Existing Conditions Map by Northeast Survey Consultants (1/15/24)
- b. Site plans by Solli Engineering – 9 sheets (revised to 6/24/25)
- c. Solar Ground Mount System by PurePower Engineering – 6 sheets (2/28/25)
- d. Project Narrative and Stormwater Report by Solli Engineering (4/4/25)
- e. Article 6 – Special Permit Uses and Regulations, Section Z. Solar Electric Energy Systems.

Executive Summary:

- A. No stormwater management practices have been proposed for this site. Because of the lack of any stormwater management practices, all downgradient properties will experience increased rates and volumes of runoff from the proposed solar array.
- B. The entire stormwater analysis provided by the applicant makes incorrect assumptions which render the conclusions of no impact invalid.
- C. The erosion and sedimentation control plan are not in compliance with the CT DEP 2024 Guidelines for Soil Erosion and Sediment Control and will adequately protect the downgradient properties during the construction period.

I have the following comments and concerns for consideration by the Plymouth Planning and Zoning Commission.

Existing Conditions Map:

1. No soil types are shown on the existing conditions map. According to the NRCS Websoil Survey, the dominant soils on the site are Paxton/Montauk which are a Hydrologic Soil Group C. Paxton/Montauk soils have a restrictive layer approximately 20” to 30” below the ground surface which creates a high groundwater level.
2. The western 1/3 portion of the site drains in a generally southern direction toward Preston Road. The remaining 2/3rd of the site drains in a east/southeast direction toward the adjacent single family residences.

Site Plans:**Sheet 2.11:**

3. This plan shows that the panels will be installed in 22 rows of varying lengths on a fixed racking system. While the panels face true south, the panel rows slope down the natural contours to the east and southeast. This will direct runoff directly toward the residential properties along the eastern side of the site.

Sheet 2.21:

4. A note on this plan states that the existing grades will be maintained to the maximum extent practicable within array. If any grading is proposed, then it must be shown on this plan.
5. Slopes are shown at several areas on the plan being less than 13%. However, the easternmost rows of solar panels are located on slopes up to 21% based upon the information shown on this plan.
6. A 2’ x 2’ stone trench (curtain drain or French drain) is proposed along the western edge of the gravel access path. It is unclear what runoff will enter this trench. It is noted on Sheet 2.32 that this is an infiltration trench. It will not infiltrate any runoff for the following reasons:
 - a. No deep test holes have been done to determine the depth of the restrictive soil layer in the Paxton/Montauk soils.
 - b. No double ring infiltration tests have been performed to confirm that the soils below the bottom of the trench will infiltrate runoff.
 - c. The trench runs down the slope so any runoff in the trench will simply follow the pipe downslope and will not infiltrate into the soil. Water will always follow the path of least resistance which in this case will be down the slope and not into the ground.
7. Besides the trench shown along the gravel driveway, there are no other stormwater management systems proposed for this site. The lack of stormwater management systems will result in the discharge of increased rates and volumes of runoff to the adjacent properties on the eastern and western sides of the subject property.

Sheet 2.31:

8. Perimeter erosion measures consisting of siltation fence are shown perpendicular or diagonal relative to the existing contours. This is incorrect and will result in concentrated flow along the fence and cause erosion of the native soils. Concentrated flow can easily overwhelm the erosion control at the base of the slope. This type of installation does not comply with the CT DEEP 2024 Guidelines for Soil Erosion and Sediment Control.

9. While no grading is currently proposed in the array, numerous types of construction equipment will be traversing the site to drive the support posts into the ground, deliver the racking system and solar panels to the place where there will be installed. All the vehicle movement will disturb the soil surface and make it more prone to erosion during any rainfall event.
10. The singular erosion control measure is not adequate to fully control runoff during the construction period as the slope/length about the control measures are excessive and the result is that runoff flow velocities will be high. The higher the flow velocity, the greater ability of the runoff erode the soil surface and carry soil in the runoff. As the runoff runs down the slope uninterrupted, the greater the ability to cause additional erosion.
11. The topsoil stockpile is too small for a project like this.

Sheet 2.32:

12. In this phase which involves the installation of the solar array, no additional erosion control measures are proposed. This is simply inadequate and will not protect the downgradient properties surrounding this site.

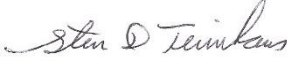
Project Narrative and Stormwater Report:

13. The entire analysis and conclusions stated in the stormwater report are not valid for the following reasons:
 - a. Under pre-development conditions, the applicant is using the Runoff Curve Number (RCN) for Woods/grass combination in Fair Condition on a Class C soil. This is not correct. Based upon the photographs provided in the Davison Environmental Report, Town of Plymouth GIS mapping and Google Earth, the ground surface is covered with a thick layer of grass, with is good hydrological condition, thus the RCN for pre-development conditions must be 72, not 76.
 - b. Under post-development conditions, the applicant is using a RCN of 71 for Meadow, non-grazed for hydrologic group C. This is not correct. Meadow is natural occurring conditions which take years to become fully established. In a Meadow condition, the plants are tall with deep root system which allow for rainfall to follow the root paths deep into the soil. It is not a condition which is created on a disturbed site. The correct RCN for post-development conditions is 84 for the entire array area is Lawn, in fair condition on a Class D soil. The reason for using Class D soil is the compaction of the upper soil layers by the back and forth movement of motorized equipment used to install the solar array. When the upper soil layers become compacted, rainfall is not able to infiltrate into the soil, thus more rainfall becomes runoff. Additionally, the natural vegetative cover gets disturbed during the construction process and exposes the soil surface to rainfall which also increases runoff.
 - c. The applicant is NOT considering the extent of the actual solar panels to be impervious. Solar panels prevent rainfall from landing on the ground surface, which is the very definition of an impervious surface. When the area of the solar panels is considered impervious and the appropriate vegetative cover for post-development conditions is used, both the peak rate and volume of runoff will be 40 to 60% higher than represented by the applicant.

- d. When the panel rows are installed across a slope and not parallel to the existing slope, rainfall on the panels falls off along the downhill edge and will then follow the natural land slope with the runoff becoming more and more concentrated as it moves down the slope. The concentrated flow will cause erosion of the soil's surface and result in the deposition of eroded material at the bottom of the natural slope. In this case, the deposition of material will occur on the adjacent private residential properties.
- e. The increased rate and volume of runoff will be directed to the adjacent residential properties on both sides of the subject property as well as toward Preston Road and will cause flooding and/or erosion on these other properties.
- f. The applicant is not considering the gravel roadway to be impervious. Whether a gravel roadway is impervious or not depends upon the material used. If processed stone (3/4" crushed stone with stone dust mixed in) is used and then compacted, it would be considered impervious. The type of material to be used for the gravel roadway is not clear on the construction detail provided.

Please contact my office if you have any questions concerning this review. A copy of my CV is included for the record.

Respectfully submitted,
Trinkaus Engineering, LLC


Steven D. Trinkaus, PE