From: Gina Wolfman <gina.wolfman@cleanfocus.us>
Sent: Thursday, May 14, 2020 4:39 PM
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<cmislick@greenskies.com>; Jean-Paul La Marche <jean-paul.lamarche@cleanfocus.us>
Subject: FW: Farmland Restoration Plan Application (CSC Petition #1378)

Ms. Bachman,

I hope you're well. We're pleased to forward the email below and submit to the Council the Final Farmland Restoration Plan, demonstrating Greenskies has met the following conditions specified in the Decision Letter for CSC Petition #1378:

- 1. Submission of an Invasive Species Management Plan (included in the Final Farmland Restoration Plan);
- 2. Submission of the final Farmland Restoration Plan (attached).

Let me know if you have any questions or comments. Thanks so much. Please confirm receipt and provide acknowledgement of the same.

With kind regards,

Gína L. Wolfman Senior Project Developer/ Permitting Specialist Greenskies Clean Energy 180 Johnson St. | Middletown, CT 06457 **Remote P** 203-270-1398 |C 203-816-7165 <u>www.greenskies.com</u>





FINAL

Farmland Restoration Plan

35 Taugwonk Spur Road in Stonington, Connecticut CT Siting Council Petition #1378

Prepared for Connecticut's Conservation Districts and The Connecticut Department of Agriculture

Reviewed by:

North Central Conservation District

Kip Kolesinkas Barbara Kelly Emily Perko

April 21, 2020



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1.0 Introduction

This is a Farmland Restoration Plan for the development of a 5.0 +/- megawatt (MW) alternating current (AC) ground-mounted solar photovoltaic (PV) facility on a parcel of land located at 35 Taugwonk Spur Road, Stonington, Connecticut. See Figure 1 – Site Location Map.

The Project site is located on an 86.78-acre parcel in central Stonington situated east of Taugwonk and Taugwonk Spur Roads and north of Interstate 95. The Stonington Assessment Department lists the parcel as 84-1-2 and ownership is currently vested in Wayne Robinson. The parcel makes up a portion of the Robinson family's 151-acre farming operation, Pequot Meadow Farm, started by Wayne's father George Robinson. The area currently comprising Pequot Meadow Farm has been used as pasture and agricultural land for over 100 years. Despite its agricultural past, the site is no stranger to development. In 1960, 17 acres of farmland were acquired through eminent domain to construct the stretch of Interstate 95 that now splits the farm in two. Earlier that century, three acres were acquired by the Mystic Power Company through eminent domain to construct a transmission line that also bisects the parcel. See Figure 2 – Existing Conditions and Figure 3 – Site Survey.

While the Robinsons continue to try to preserve the agricultural character of the area, the economic realities of farming threaten the vitality of the family's business. For the last several decades, Wayne Robinson has worked second shift as a machinist, dedicating his mornings to work on the farm. At nearly 80 years of age, maintaining the family farm has become an increasingly difficult task for George Robinson. Greenskies Clean Energy LLC ("Greenskies") is leasing the Project site from the Robinson family so that the land will remain with the Robinsons. The income generated by the Project lease will allow Wayne to retire from his job as a machinist so he can farm full-time, replace outdated equipment, and invest in the family business.

The site is located within a mixed residential, agricultural, and light industrial area of New London County. The parcel itself straddles two zones in the town of Stonington: Light Industrial (LI-130) and Greenbelt Residential (GBR-130). Wayne Robinson currently resides on an abutting parcel just north of the access road from Taugwonk Spur Road. An avid carpenter, Wayne actively harvests the forest on site to build furniture and harvested lumber sourced on site to construct buildings on his property. The eastern fields on the site are currently used to cultivate hay which is sold to horse farms in Rhode Island.



Greenskies submitted Petition #1378 to the Connecticut Siting Council (CSC) on August 20, and received approval on October 10, 2019. Due to the presence of Prime Farmland soils on-site (See Figure 4 –Existing Soils Map and Figure 6 – Prime Farmland Soils Map), the CT Department of Agriculture ("DOAg") reviewed the proposed project plans and submitted conditions to the CSC to include in the Decision Letter (see Appendix A). Such conditions are summarized in Section 3.0, below. Greenskies worked with the landowner/farmer to prepare and submit a Farmland Restoration Program (FLRP) Application to the CT DOAg on November 22, 2019 (see Appendix B) for review and assignment to a Conservation District to implement this Farmland Restoration Plan. The purpose of this Farmland Restoration Plan is to address and meet the conditions set forth in the CSC Decision Letter, dated October 10, 2019 (see Appendix A).

2.0 Overview of Proposed Solar Project

The site entrance for the Project will be located at the end of Taugwonk Spur Road (at the southwestern end of the site), which serves various commercial/industrial uses. Taugwonk Spur Road connects to Taugwonk Road, approximately 1,800 feet from I-95 interchange 91. The surrounding road network is anticipated to readily support construction-related traffic.

There is an existing, 3,600-foot/.68-mile gravel access road originating at 35 Taugwonk Spur Road. This pre-existing road will be utilized to access the Project site, and additional on-site, 15-foot wide gravel roads will be constructed to provide access to the proposed solar PV facility, as shown in Figure 5 – Proposed Site Layout. A total of .54 miles of existing road will be used, and approximately .4 miles of new onsite road is proposed.

The site is relatively flat and minor (if any) grading is anticipated along the proposed access roads. Two stormwater management basins will be excavated/installed at the site, one in the northeast corner of the project area (Stormwater Basin 1) and one along the western side of the project area (Stormwater Basin 2). Prime farmland soils are present within both stormwater basin locations and will be managed/stockpiled on-site before being reused in the future by the landowner to expand his hayfields to the west. The proposed location of the temporary



stockpile is west of the access road and south of the existing transmission line right-of-way. See Figures 5A and 5B – Site Layout & Grading Plan, for locations of the basins and stockpile.

The proposed Project is comprised of six, independently-metered systems with a total design capacity of about 5.0 +/- MW AC. The proposed solar PV facility has been sited on the parcel to avoid and minimize potential impacts to natural resources and other areas of interest, while maximizing the use of previously disturbed areas. Driven post panel racking systems will be utilized throughout the Project site, unless subsurface conditions require an alternative installation method, which will be determined during pre-construction, geotechnical analysis. Posts are typically driven into the earth to depth of 9 feet below grade. The proposed facility layout is shown in Figures 5A and 5B – Site Layout and Grading Plan.

Wiring that connects the panels will be placed in above grade wire systems/cable trays or trenched conduits. The area under the panels will remain vegetated and will be seeded with a pollinator mix consisting of native New England species. See Figure 8 – Sample Array Seed Mix Photos and Figure 9 – Sample Wildlife Conservation Seed Mix Photos.

3.0 Existing Site Soil Conditions

The uppermost geologic formation underlying the soils at the subject property is the Proterozoic Z age Mamacoke Formation. The Mamacoke Formation comprises the underlying stratigraphy and consists mostly of interlayered light-to dark-grey, medium-grained gneiss, composed of plagioclase, quartz, and biotite; sillimanite, garnet, hornblende, or microcline in certain layers; in upper part locally contains quartz-sillimanite nodules or thin layers of quartzite, amphibolite, or calc-silicate rock.

Based on initial review of information obtained from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey online database, the site is mapped as several soil types. The northwestern portion is mapped as mainly Merrimac fine sandy loam, the northeastern and northcentral portions are mapped as Rainbow silt loam (with a small portion of the northeast corner of the site Woodbridge fine sandy loam), the southeastern portion is mapped as mostly Paxton and Montauk fine sandy loam, and the southwest portion is mapped as mostly Udorthents-Urban land complex. The Rainbow and Woodbridge soil series are designated by



NRCS as "C" and "C/D" hydrologic soil groups, respectively. See Figure 4 – Existing Soils Map and associated Soil Report.

The Merrimac series consists of deep, somewhat excessively drained, moderately high to highly permeable soils formed from loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy gravelly glaciofluvial deposits derived from granite, schist, and gneiss. Depth to water table is typically > 80", as is depth to restrictive feature. The Rainbow silt loam consists of moderately well drained soils formed from Eolian deposits over coarse-loamy lodgment till derived from gneiss and/or schist and/or sandstone and/or basalt. Depth to water table is typically about 18" to 30" and depth to restrictive feature 20" - 40". The Paxton and Montauk series consist of well drained, very slow to moderately slowly permeable soils formed from coarse-loamy lodgment till derived from gneiss, granite, and/or schist. Depth to water table is typically about 18" to 37" and depth to restrictive feature 20" to 39".

As part of project site analysis and permitting, Greenskies performed all required reviews of the soil survey to meet Siting Council and CT DEEP stormwater permit provisions and guidelines. As required by CT DEEP's proposed Appendix I to the Stormwater General Permit for Construction, on September 26, 2019, a soil scientist from Milone & Macbroom (MMI), project civil engineer and environmental consultant, completed a field investigation to confirm the mapped soil series and verify the hydrologic soil groups. A total of seven test pits were dug by hand to a depth of 24 inches or 2 feet below grade within the project limits. Five of the test pits were dug within the existing agricultural field where the proposed solar panels will be located, and two test pits were located within the forested area where the proposed sediment basin will be located. See Figure 4A – Soil Test Pit Locations.

Four deep-hole test pits were dug on the site on August 16, 2019, in the vicinity of the proposed stormwater management basins. Test Pits 1, 2, and 3 were dug at approximately each end and the center of the proposed westerly basin. Groundwater was observed at 7.7', 8.0', and 7.0', respectively. Test Pit 4 was dug in the area of the proposed easterly stormwater management basin, and groundwater was observed at 5.5'. Test pit logs and a location map can be found in Appendix D.



In general, the five test pits (TP-1 through TP-5) completed within the agricultural field were consistent with NRCS mapping. The soil encountered consisted of a relatively thick Ap horizon ranging from 6 to 9 inches; dark brown (10YR 4/2) silt loam; weak fine granular structure; very friable with a clear distinct boundary; followed by a Bw horizon to the bottom of the test pits consisting of yellowish brown (10YR 5/6) silt loam; weak blocky structure; few fine roots; and few pebbles.

The two test pits within the forested area (TP-6 and TP-7) were also consistent with NRCS mapping. The Rainbow silt loam within the wooded area is very stony in the upper horizon with a relatively thick (4 inches) humic organic layer underlain by a distinct Ap horizon (10 to 12 inches) consisting of dark brown silt loam (10 YR 4/2); weak friable granular structure; followed by Bw horizon (13 to 18 inches) consisting of yellowish brown (10 YR 5/4) silt loam with stones; and weak blocky structure.

A Group "C" soil is defined by the NRCS as soils having a slow infiltration rate when thoroughly wet and consists chiefly of soils with a layer that impedes downward movement of water or soils of moderately fine texture or fine texture.

Based on the test pits, the mapped hydrologic group of "C" is consistent with the results of the field investigation. In general, the upper 12 inches of soil consists of silt loam that has been farmed historically, or actively with a distinct boundary and weak granular structure, underlain by a fine-grained subsoil with a weak block structure that would impede downward movement of water with soils consisting of a moderately fine texture.

For the purposes of the stormwater assessment, the soils were assigned a hydrologic soil group "D" for proposed conditions in accordance with recent CTDEEP policies regarding solar projects. CTDEEP requires the hydrologic soil group be reduced by one step to account for soil compaction due to construction activity. Stormwater analysis was performed in consideration of these guidelines and Petitioner received approval on their stormwater general permit application on November 14, 2019. A full version of the final Stormwater Report, Revised October 7, 2019, can be found in the CT Siting Council's public records for Petition #1378.



4.0 Preservation of Prime Farmland Soils

The majority of the proposed Project area contains soils classified by the NRCS as Prime Farmland, however, no Farmland of Statewide Importance Soils have been mapped within the Project area. These designated soils series have been determined to have the potential to support agricultural practices by federal, state, and local organizations. As articulated in the Department of Agriculture's letter to the Siting Council, Greenskies plans to reduce/minimize the potential for adverse impacts to these important soils, and assure that their agricultural integrity is preserved, throughout all phases of development, operation, maintenance, and future decommissioning of the proposed solar facility. See Figure 6 - Prime Farmland Soils Map.

As noted, both soil types found within the Project area are Prime Farmland Soils. Rainbow silt loam comprises approximately 14.44 acres, or 94.6%, of the project area's limit of disturbance, while Woodbridge fine sandy loam makes up the remaining 5.4%, amounting to 0.81 acres. Permanent disturbance of Prime Farmland Soils within the project area includes: .75 acres of access road installation, .82 acres of stormwater basin excavation, .47 acres of equipment pads and 734 SF of post installation for the racking system; a total of 1,957 posts, each with a footprint of 6" x 9" will be used. Total permanent disturbance to/loss of Prime Farmland Soils amounts to a maximum of 2.5 acres, including trenching. To clarify, only Stormwater Basin No. 1 is sited on Prime Farmland Soils, as mapped by NRCS and field verified by project soil scientist. Temporary impacts to these soils as a result of the Project will be minimal and will take place entirely during construction. See Figure 6 – Prime Farmland Soils Map.

Since the grade of the proposed Project area is already suitable for solar panel racking, alterations to topography will be concentrated to the foundations of the Project's access roads and equipment pads, along with stormwater basins in the northeastern corner of the site (Phase 1 construction area) and western side of the project area (Phase 2 construction area). Displaced soils will remain on site, separated by profile layer as defined in the NRCS soil report accompanying Figure 4. Racking will be post-driven and will not cause a disturbance to the soil.

Since the array area design has already been approved by the CT Siting Council (under their authority over projects of this type and scale) and Greenskies has an approved CT DEEP Stormwater General Permit, the NCCD review on this matter is not applicable. Greenskies will



comply with all approval conditions and permit requirements and make the best effort to avoid compaction of soils within the project area. In addition, Greenskies will follow CT DEEP Stormwater General Permit requirements regarding time frames applicable to construction activities after various rain/storm events, particularly those with a rainfall of > $\frac{1}{2}$ ". Once the solar farm/Project is online and vegetative cover is established, the only impact to prime farmland soils within the array area will be compaction from mowing as part of the O & M plan. Landowner will, likely, be contracted for mowing services and will utilize the same, if not smaller, equipment that's historically been driven through the fields as part of annual haying operations. Because a low-growing pollinator/meadow seed mix will be used, mowing is expected to occur 2 +/- times per season. Such vegetative cover will enhance the quality and nutrient content of the soil and provide habitat to support the on-site apiary, one of two agricultural co-uses to be implemented as part of this plan. The proposed use of the project area as a solar farm will preserve the majority of existing Prime Farmland Soils on the parcel for future agricultural use should the landowner's family or future property owner choose to convert the project area to such use at the end of the facility's life.

Trenching for conduits will be performed in compliance with all applicable electrical codes and standards. Trenching and other cuts and fills will be avoided to the extent practicable. Removal and replacement of soil horizons, and compaction, during trenching will be sequenced as close to original conditions as feasible.

5.0 Summary of CSC Petition Conditions

The Decision Letter prepared by the CSC includes the following conditions:

- The handling and management of any/all prime farmland soils disturbed by construction activities shall be in accordance with energy industry BMPs, including the most current Federal Energy Regulatory Commission (FERC) guidelines;
- Any/all prime farmland soils are separated and stored on the farm site, and shall be used and applied solely for agricultural purposes;
- In consultation with the farmland owner(s), a Farmland Restoration Plan shall be developed for the property to restore, at a minimum, an amount of acreage equivalent to the area disturbed, throughout the farm property for current and future agricultural purposes;



- The DOAg shall administer the Farmland Restoration Plan. Such Farmland Restoration
 Plan shall be prepared by a soil scientist who is approved by the Department of
 Agriculture, and is currently on contract with a Conservation District located in
 Connecticut, for the purposes of preparation and review of Farmland Restoration Plans;
- Greenskies shall be responsible for the costs of the farmland restoration work;
- In consultation with the DOAg, Greenskies shall conduct at least two co-location or dualuse agricultural activities on the site. Such co-location or dual-use activities shall include but are not limited to, creating native pollinator habitat, beekeeping, small livestock grazing, and select crop propagation;
- Any/all agricultural research reports, if any, by the University of Connecticut (UCONN), UCONN Cooperative Extension, and/or the Connecticut Agricultural Experiment Station of the dual-use agricultural activities conducted on the site shall be submitted to the DOAg.

6.0 Soils Management Plan

6.1 Overview

Soils management is a necessary part of construction and preservation of farmland soils. The stockpiling process involves removal of the topsoil layer (top 6 - 8") and any other significant overburden soil layers. The topsoil is removed first and stockpiled in one pile and the soil layer below is also removed and stockpiled separately. When construction/installation of the solar facility is complete, the topsoil can be reapplied and spread over areas requiring seeding to provide a planting medium. Soils not needed for site restoration will remain in stabilized stockpiles until the landowner reuses the material onsite for additional agricultural purposes (e.g. expansion of hay fields). The storage period for stockpiled soil typically ranges from a few months to several years.

6.2 Soil Stockpiling and On-site Reuse of Prime Farmland Soils

Generally, soils throughout the solar array area will not be excavated or disturbed. Racking for the equipment will be post-driven and minor trenching will occur for subsurface conduits. Two, permanent, shallow stormwater basins will be installed in the northeastern corner of the site and along the western boundary of the project area. Only soils from Stormwater Basin No. 1 will be excavated, segregated and stockpiled for onsite reuse within the project area or for future,



agricultural purposes by the landowner. In addition, and as noted above in Section 4.0, soils to be managed will also be derived from installation of equipment pads and access road installation. Stormwater Basin No. 2 is not located on designated Prime Farmland Soils. As noted above in Section 4.0, trenching for conduits will be performed in compliance with all applicable electrical codes and standards. Trenching and other cuts and fills will be avoided to the extent practicable. Removal and replacement of soil horizons, and compaction, during trenching will be sequenced as close to original conditions as feasible. Trenches will be backfilled and remaining soil spread, seeded with a conservation/pollinator mix, and stabilized. Prime Farmland Soils will remain on-site and will be stockpiled (see Figure 7 – Farmland Restoration and Agricultural Co-use Plan) south of the transmission line and west of the proposed access road, in an area that will continue to be used by landowner for agricultural purposes (haying).

The topsoil will be placed into stockpiles at a designated location south of the solar array and west of the proposed access road as shown on the construction plans; see Figures 5A and 5B Site Layout and Grading Plan. Stockpiles will be treated with temporary soil stabilization and erosion control measures. Any soil materials not used immediately for farmland restoration will be stockpiled and stabilized with grass plantings. Topsoil stockpile height shall not exceed three meters (10 feet) and slopes will not exceed 12%. In addition, compaction of Prime Farmland Soils will be limited during construction. Periodically, and after each storm event or snow melt, the stockpile will be inspected, repaired, and reseeded if necessary to control erosion and loss of topsoil.

7.0 Restoration of Land for Future Agricultural Uses

As noted above, the Decision Letter prepared by the CSC includes the following condition requested by the CT DOAg:

 In consultation with the farmland owner(s), a Farmland Restoration Plan shall be developed for the property to restore, at a minimum, an amount of acreage equivalent to the area disturbed, throughout the farm property for current and future agricultural purposes;



As noted above in Section 4.0, the total permanent Prime Farmland Soil disturbance area/acreage is 2.5 ac. As part of this Farmland Restoration Plan, landowner is authorized to restore/reclaim portions of the parcel outside Greenskies' lease area. Such areas may not interfere with CT Siting Council approval and approved CT DEEP Storm water General permit conditions and guidelines. As a result, no disturbance may occur within any 100-ft wetland setback/buffer areas associated with stormwater management for the solar project area.

To meet this condition, the landowner has agreed to restore land at two potential locations in the northwestern portion of the parcel for agricultural use (e.g. meadow/pollinator habitat, hayfield, pasture). In addition, landowner intends to expand the southern hayfield to the west and continuing haying for sale to horse farms in RI. During the site walk with North Central Conservation District representative, another suitable restoration area was identified south of the existing farm road west of the proposed array. The landowner prefers to not clear forest in that part of his property to create more fields. The total acreage of these potential restoration areas is 9.52 acres, much greater than the minimum required to replace permanently disturbed Prime Farmland Soils. Of this total, however, 2.84 acres are located within 100' wetland buffer/setback areas and 6.68 acres are located outside.

The landowners' preference is to restore the northwestern portion of their property for farming activities where mapped farmland soils are present, along with expanding existing haying operations to the west of the project access road. During the NCCD site visit, soils that could be classified as hydric were observed near the wetland boundary within the upland resource area. If and when the landowner chooses to expand this activity, he will stay well beyond any potentially "wet" areas. See Figure 7 – Farmland Restoration and Agricultural Co-use Plan.

8.0 Co-location and/or Dual-use Agricultural Activities

8.1 Overview

Greenskies is currently developing a series of dual-use programs designed to incorporate agriculture and conservation in system design at various project sites. In addition, Greenskies has met with Dr. David L. Wagner (Ecology & Evolutionary Biology Dept.) and hopes to consult with him in an in advisory capacity regarding native pollinator habitat enhancement for future projects. Due to seasonal constraints, the beekeeping (apiculture) initiative will be tested on



one of Greenskies' existing solar facilities, the Antares Solar Farm in East Lyme, CT, beginning in Spring of 2020.

Dual-use programs in consideration for Greenskies' solar farm development projects include apiculture, native pollinator and habitat enhancement, berry and suitable crop cultivation, and sheep grazing pasture, among others. Once established, and where applicable, Greenskies intends to include some form of dual-use on appropriate project sites, whichever use is deemed most suitable based on the results of the research and the existing land use, site conditions and landowner preference. For photos of sample seed mixes typically used on solar facilities in New England (e.g. solar array and wildlife conservation seed mixes) see Figures 10 and 11.

Considering the presence of prime farmland and history of agriculture on this site, dual-use will be integral in preserving the agricultural character of the area. The selected uses for this solar system are establishment of pollinator habitat within the array area, beekeeping/apiary management and berry cultivation. The proposed Project will be one of Greenskies' first projects to include this feature.

8.2 Beekeeping at Proposed Project Site

If the PV solar project is completed by the end of the 2020 calendar year, beekeeping will be initiated on the site in Spring 2021. The schedule can be adjusted, accordingly. Greenskies has contracted with Steve Dinsmore, President of the Connecticut Beekeepers Association, to design and manage beekeeping operations at the site.

8.2.1 – Acquisition and Setup of Equipment and Materials

Steve Dinsmore shall obtain all equipment and materials (including bees) necessary to initially establish up to ten (10) hives/colonies on the site. Greenskies shall pay for all bees, equipment and medications, as needed. All equipment and materials will remain the property Greenskies.

8.2.2 - Maintenance and Harvesting of Honey

Beekeeper will be paid a flat fee for time maintaining colonies and harvesting honey; any time above 20 hours per season is the beekeepers contribution. Greenskies will receive 30% of



honey starting in the second year. Split of colonies will be done to replace lost colonies and as swarm prevention. Beekeeper can utilize excess splits, and will replace frames taken. Excessive losses will be replaced by Greenskies. Landowner will consider management of some perimeter areas for more intense hay and/or apiary production. Landowner will also consider planting clover/birdsfoot trefoil, or annuals like buckwheat and mustards, which can increase honey production at critical times; closer/trefoil can be harvested as hay or greenchop.

Please note, there will, most likely, not be any honey the first year. In addition, Connecticut weather tends to make beekeeping challenging. In a severe winter, colony losses can be high. The equipment will be re-usable, but several colonies may need to be replaced. This may be offset with splits. Queens are needed for splits and poorly performing hives. Beekeeper and Greenskies will determine how honey is provided (e.g. in buckets or pails, Ball jars). Greenskies will cover cost of all containers needed for their share of the harvest.

In future years, some equipment will need to be replaced as part of normal rotation of equipment. Costs should not be excessive; Greenskies will cover the cost of replacement equipment.

8.2.3 - Landowner Training/Mentorship

Beekeeper will allow landowner/Wayne Robinson to "shadow" and assist in activities throughout all steps of setup, ongoing maintenance and harvesting. No additional fee will be paid for this service; Greenskies and Beekeeper will agree to a reasonable duration of this mentorship. At some point in the future landowner might have an interest in becoming Beekeeper for the site. If such an interest is expressed a new beekeeping arrangement will be made.

8.3 Berry Cultivation at Proposed Project Site

The second agricultural co-use at the site will be berry cultivation. Wild blackberries are currently growing on-site which indicates soils are capable of sustaining such species. Landowner has historically tested the soil in with fertilizer selection and application. Such records may be provided and continued testing will occur at the landowner's discretion. Greenskies proposes the planting of raspberries or blackberries along a 100-foot section of the

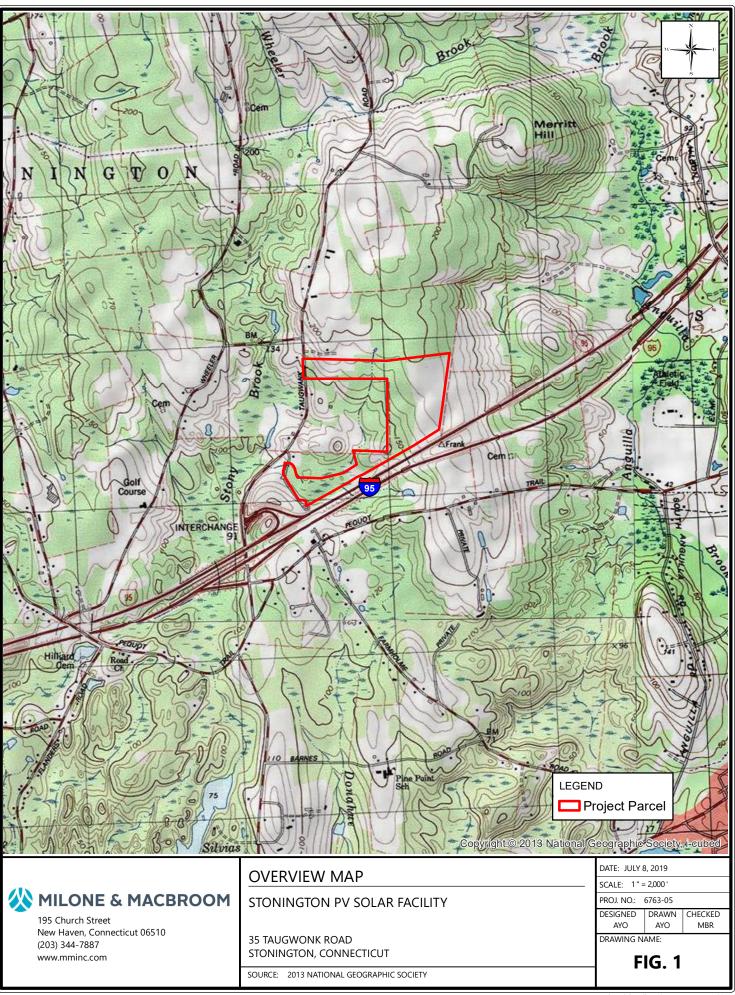


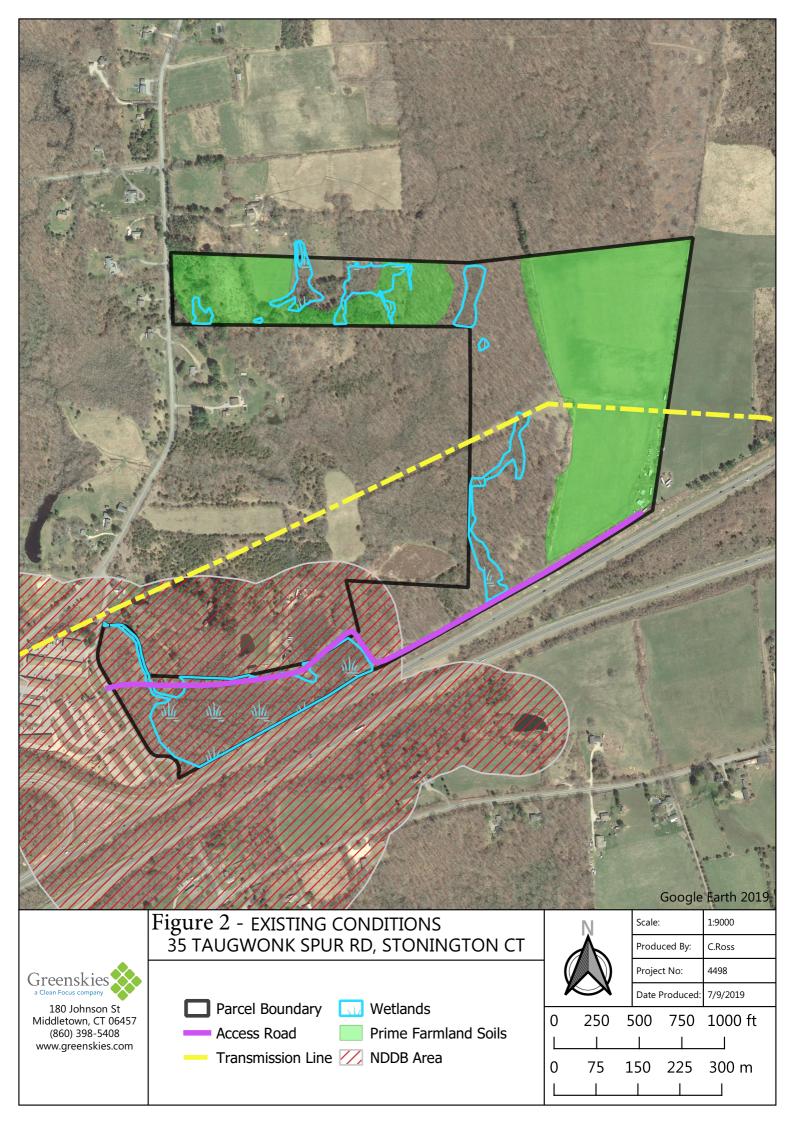
eastern end of the southern fence line of the array. Greenskies will obtain plants and space then accordingly, as recommended by the nursery or supplier. Plants will be secured and trained to grow up the designated section of the 7-foot chain link perimeter fence. Landowner will manage the berry production area. Based on outcome/success of above-noted, proposed planting scheme, landowner will consider other techniques in the future, in accordance with the New England Small Fruit Management Guide. See Figure 7 – Farmland Restoration & Agricultural Co-use Plan.

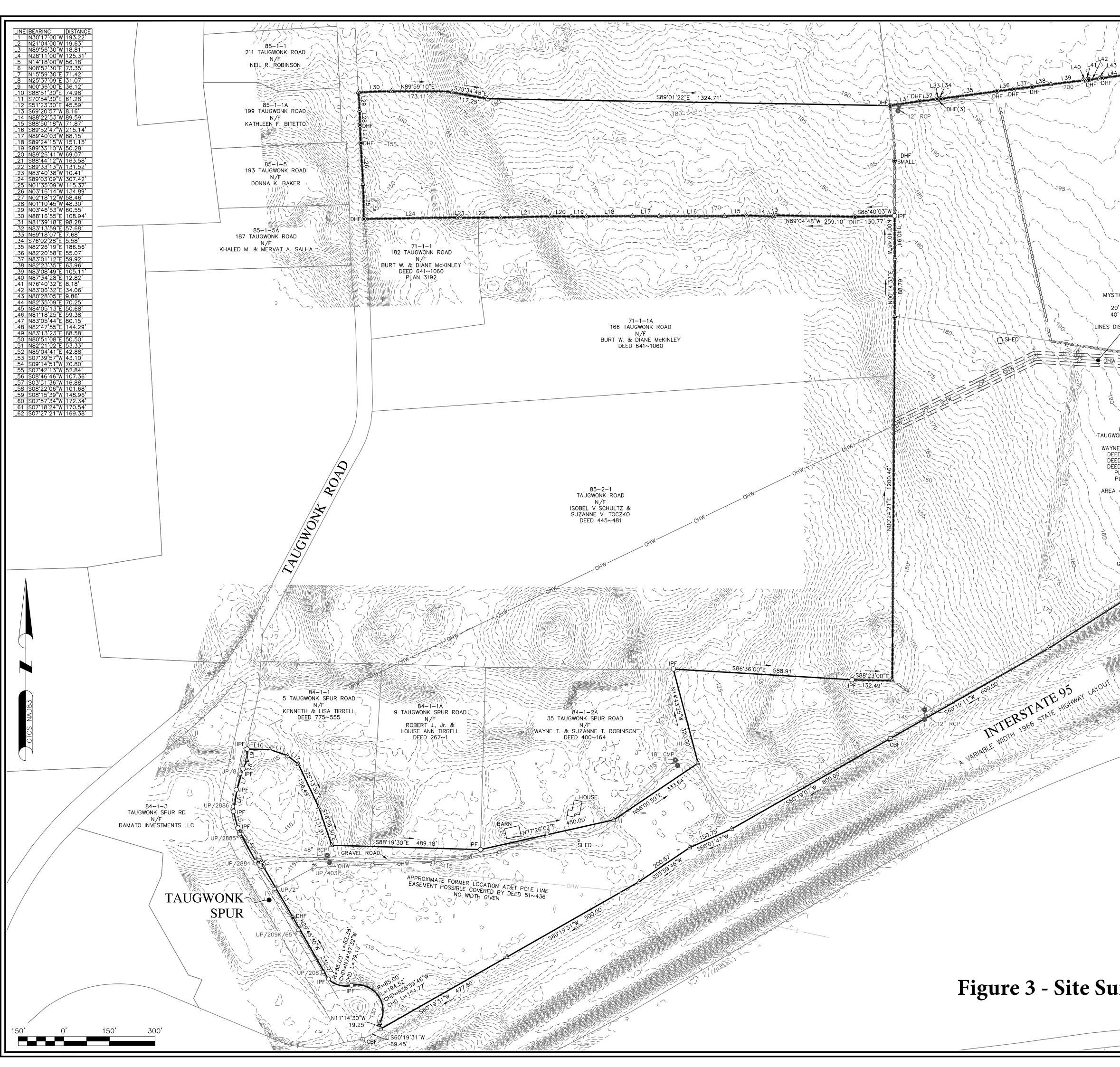
The Robinsons will maintain and care for the berry plants and will, ultimately, harvest the berries for canning and/or use in their fresh state. They will have the option of selling any products or donating to local food pantries.

9.0 Invasive Plant Species Management Plan

The current Project area consists primarily of a large hayfield. A portion of the wooded area to the west will be cleared and grubbed to accommodate some of the panels and a stormwater basin. Invasive plant species were not identified in this area during field studies (e.g. wetlands delineation and verification), however, all cleared areas will be seeded, managed and maintained with a high pollinator species seed mix and regular mowing will occur throughout the growing season over the course of the lease term. The site and surrounding hedgerows and woods contain invasives, both in the area to be restored as well as near the array. A plan for edge mowing and possible spot treatment will be developed to protect the plantings and solar array infrastructure. Mowing in these areas several times a year will likely be important for the first several years.







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	JDG	JED NMC 18-295	95.DW
	SURVEYOR: DRAFTING:	FIELD WORK: Project number:	RAWING NAME:
 4. ALL CONTOURS SHOWN HEREON WERE GENERATED IN ARCMAP FROM DIGITAL ELEVATION MODELS OF THE 2016 CRCOG LIDAR DATA (5' GRID SIZE/TIN GRID METHOD) AS DISTRIBUTED BY NOAA. CONTOURS HAVE BEEN RANDOMLY FIELD CHECKED BY RTK GPS. 5. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, ALL OF THE LOCUS IS LOCATED IN AN AREA DESIGNATED AS ZONE X (UNSHADED): "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN". COMMUNITY PANEL NO. 09011C 0394 G, EFFECTIVE DATE: 07/18/2011 6. THE LOCUS PROPERTY IS LOCATED IN THE LI-130 ZONING DISTRICT. TYPE OF SURVEY: BOUNDARY SURVEY BOUNDARY SURVEY CATEGORY: DEPENDANT RESURVEY CLASS OF ACCURACY: HORIZONTAL CLASS A-2 TOPOGRAPHIC CLASS T-3 PURPOSE OF SURVEY: PROPOSED SOLAR ARRAY THIS DOCUMENT AND COPIES THEREOF ARE VALID ONLY IF THEY BEAR THE LIVE SIGNATURE AND EMBOSSED SEAL OF THE DESIGNATED ARVED REDOSIDAL. UNAUTHORIZED ALTERATIONS RENDER ANY DECLARATION NULL AND VOID. TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. 	Id	PREPARED FOR	CLEAN FUCUS, INC.
CHARLES G. GIDMAN, P.L.S. #70103 DATE	SHEET NC	o. OF	[

USDA NRCS SSURGO SOILS

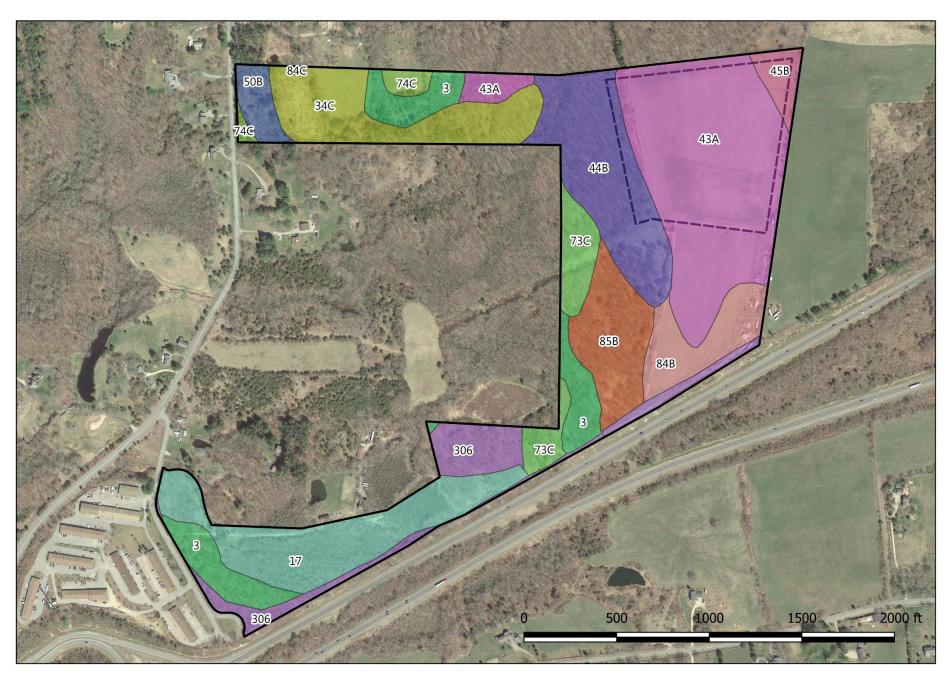


Figure 4 - Existing Soils

SOIL REPORT				
MUSYM	SOIL TYPE	HYDRIC/FARMLAND SOILS	TYPICAL PROFILE	DESCRIPTION
3	<u>Ridgebury</u> , Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	Hydric	Oe - 0 to 1 inches: moderately decomposed plant material A - 1 to 6 inches: fine sandy loam Bw - 6 to 10 inches: sandy loam Bg - 10 to 19 inches: gravelly sandy loam Cd - 19 to 66 inches: gravelly sandy loam	 Landform: Drumlins, ground moraines, hills, drainageways, depressions Parent Material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Poorly drained Depth to water table: About 0 to 6 inches Depth to restrictive feature: 15 to 35 inches to densic material
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	Hydric	 Oe - 0 to 1 inches: moderately decomposed plant material A - 1 to 7 inches: fine sandy loam Bg - 7 to 18 inches: fine sandy loam BC - 18 to 24 inches: fine sandy loam C1 - 24 to 39 inches: gravelly fine sandy loam C2 - 39 to 65 inches: gravelly fine sandy loam 	 Landform: Ground moraines, hills, drainageways, depressions Parent Material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist Natural drainage class: Poorly drained Depth to water table: About 0 to 6 inches Depth to restrictive feature: More than 80 inches
3	Ridgebury, Leicester, and <u>Whitman</u> soils, 0 to 8 percent slopes, extremely stony	Hydric	Oi - 0 to 1 inches: peat A - 1 to 10 inches: fine sandy loam Bg - 10 to 17 inches: gravelly fine sandy loam Cdg - 17 to 61 inches: fine sandy loam	 Landform: Drumlins, ground moraines, hills, drainageways, depressions Parent Material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Very poorly drained Depth to water table: About 0 to 6 inches Depth to restrictive feature: 7 to 38 inches to densic material
17	<u>Timakwa</u> and Natchaug soils, 0 to 2 percent slopes	Hydric	Oa1 - 0 to 12 inches: muck Oa2 - 12 to 37 inches: muck 2Cg1 - 37 to 47 inches: very gravelly loamy coarse sand 2Cg2 - 47 to 60 inches: gravelly loamy very fine sand	 Landform: Depressions Parent Material: Herbaceous and woody organic material over sandy and gravelly glaciofluvial deposits Natural drainage class: Very poorly drained Depth to water table: About 0 to 12 inches Depth to restrictive feature: More than 80 inches

17	Timakwa and <u>Natchaug</u> soils, 0 to 2 percent slopes	Hydric	Oa1 - 0 to 12 inches: muck Oa2 - 12 to 31 inches: muck 2Cg1 - 31 to 39 inches: silt loam 2Cg2 - 39 to 79 inches: fine sandy loam	 Landform: Depressions Parent Material: Highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till Natural drainage class: Very poorly drained Depth to water table: About 0 to 12 inches Depth to restrictive feature: More than 80 inches
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	Farmland of statewide importance	 Ap - 0 to 10 inches: fine sandy loam Bw1 - 10 to 22 inches: fine sandy loam Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand 2C - 26 to 65 inches: stratified gravel to very gravelly sand 	 Landform: Outwash terraces, kames, moraines, outwash plains, eskers Parent Material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss Natural drainage class: Somewhat excessively drained Depth to water table: More than 80 inches Depth to restrictive feature: More than 80 inches
43A	Rainbow silt loam, 0 to 3 percent slopes	All areas are prime farmland	 Ap - 0 to 6 inches: silt loam Bw1 - 6 to 18 inches: silt loam Bw2 - 18 to 26 inches: silt loam 2Cd - 26 to 65 inches: gravelly fine sandy loam 	 Landform: Drumlins, hills Parent Material: Eolian deposits over coarse-loamy lodgment till derived from gneiss and/or schist and/or sandstone and/or basalt Natural drainage class: Moderately well drained Depth to water table: About 18 to 30 inches Depth to restrictive feature: 20 to 40 inches to densic material
44B	Rainbow silt loam, 2 to 8 percent slopes, very stony		 Ap - 0 to 6 inches: silt loam Bw1 - 6 to 18 inches: silt loam Bw2 - 18 to 26 inches: silt loam 2Cd - 26 to 65 inches: gravelly fine sandy loam 	 Landform: Drumlins, hills Parent Material: Eolian deposits over coarse-loamy lodgment till derived from gneiss and/or schist and/or sandstone and/or basalt Natural drainage class: Moderately well drained Depth to water table: About 18 to 30 inches Depth to restrictive feature: 20 to 40 inches to densic material
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland	 Ap - 0 to 7 inches: fine sandy loam Bw1 - 7 to 18 inches: fine sandy loam Bw2 - 18 to 30 inches: fine sandy loam Cd - 30 to 65 inches: gravelly fine sandy loam 	 Landform: Hills, drumlins, ground moraines Parent Material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Moderately well drained Depth to water table: About 18 to 30 inches Depth to restrictive feature: 20 to 39 inches to densic material
50B	Sutton fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland	 Ap - 0 to 5 inches: fine sandy loam Bw1 - 5 to 17 inches: fine sandy loam Bw2 - 17 to 25 inches: sandy loam C1 - 25 to 39 inches: gravelly sandy loam C2 - 39 to 60 inches: gravelly sandy loam 	 Landform: Hills, ground moraines, ridges Parent Material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist Natural drainage class: Moderately well drained Depth to water table: About 12 to 27 inches Depth to restrictive feature: More than 80 inches

73C	<u>Charlton</u> -Chatfield complex, 0 to 15 percent slopes, very rocky		Oe - 0 to 2 inches: moderately decomposed plant material A - 2 to 4 inches: fine sandy loam Bw - 4 to 27 inches: gravelly fine sandy loam C - 27 to 65 inches: gravelly fine sandy loam	 Landform: Hills, ridges Parent Material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist Natural drainage class: Well drained Depth to water table: More than 80 inches Depth to restrictive feature: More than 80 inches
73C	Charlton- <u>Chatfield</u> complex, 0 to 15 percent slopes, very rocky		 Oi - 0 to 1 inches: slightly decomposed plant material A - 1 to 2 inches: fine sandy loam Bw - 2 to 30 inches: gravelly fine sandy loam 2R - 30 to 40 inches: bedrock 	 Landform: Ridges, hills Parent Material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist Natural drainage class: Well drained Depth to water table: More than 80 inches Depth to restrictive feature: 20 to 41 inches to lithic bedrock
74C	<u>Narragansett</u> - Hollis complex, 3 to 15 percent slopes, very rocky		Ap - 0 to 6 inches: silt loam Bw1 - 6 to 15 inches: silt loam Bw2 - 15 to 24 inches: silt loam Bw3 - 24 to 28 inches: gravelly silt loam 2C - 28 to 60 inches: very gravelly loamy coarse sand	 Landform: Hills, till plains Parent Material: Coarse-loamy eolian deposits over sandy and gravelly melt-out till derived from gneiss and/or schist and/or sandstone and shale Natural drainage class: Well drained Depth to water table: More than 80 inches Depth to restrictive feature: More than 80 inches
74C	Narragansett- <u>Hollis</u> complex, 3 to 15 percent slopes, very rocky		Oa - 0 to 1 inches: highly decomposed plant material A - 1 to 6 inches: gravelly fine sandy loam Bw1 - 6 to 9 inches: channery fine sandy loam Bw2 - 9 to 15 inches: gravelly fine sandy loam 2R - 15 to 80 inches: bedrock	 Landform: Hills, ridges Parent Material: Loamy melt-out till derived from granite and/or schist and/or gneiss Natural drainage class: Somewhat excessively drained Depth to water table: More than 80 inches Depth to restrictive feature: 10 to 20 inches to lithic bedrock
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	Farmland of statewide importance	 Ap - 0 to 8 inches: fine sandy loam Bw1 - 8 to 15 inches: fine sandy loam Bw2 - 15 to 26 inches: fine sandy loam Cd - 26 to 65 inches: gravelly fine sandy loam 	 Landform: Hills, ground moraines, drumlins Parent Material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Well drained Depth to water table: About 18 to 37 inches Depth to restrictive feature: 20 to 39 inches to densic material
84C	Paxton and <u>Montauk</u> fine sandy loams, 8 to 15 percent slopes	Farmland of statewide importance	Ap - 0 to 4 inches: fine sandy loam Bw1 - 4 to 26 inches: fine sandy loam Bw2 - 26 to 34 inches: sandy loam 2Cd - 34 to 72 inches: gravelly loamy sand	 Landform: Drumlins, hills, ground moraines, recessional moraines Parent Material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Well drained Depth to water table: About 18 to 37 inches Depth to restrictive feature: 20 to 39 inches to densic material

85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	 Oe - 0 to 2 inches: moderately decomposed plant material A - 2 to 10 inches: fine sandy loam Bw1 - 10 to 17 inches: fine sandy loam Bw2 - 17 to 28 inches: fine sandy loam Cd - 28 to 67 inches: gravelly fine sandy loam 	 Landform: Drumlins, hills, ground moraines, hills Parent Material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Well drained Depth to water table: About 18 to 37 inches Depth to restrictive feature: 20 to 43 inches to densic material
85B	Paxton and <u>Montauk</u> fine sandy loams, 3 to 8 percent slopes, very stony	 Oe - 0 to 2 inches: moderately decomposed plant material A - 2 to 6 inches: fine sandy loam Bw1 - 6 to 28 inches: fine sandy loam Bw2 - 28 to 36 inches: sandy loam 2Cd - 36 to 74 inches: gravelly loamy sand 	 Landform: Drumlins, hills, ground moraines, recessional moraines Parent Material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist Natural drainage class: Well drained Depth to water table: About 18 to 37 inches Depth to restrictive feature: 20 to 43 inches to densic material
306	Udorthents-Urban land complex	 A - 0 to 5 inches: loam C1 - 5 to 21 inches: gravelly loam C2 - 21 to 80 inches: very gravelly sandy loam 	 Natural drainage class: Well drained Depth to water table: About 54 to 72 inches Depth to restrictive feature: More than 80 inches

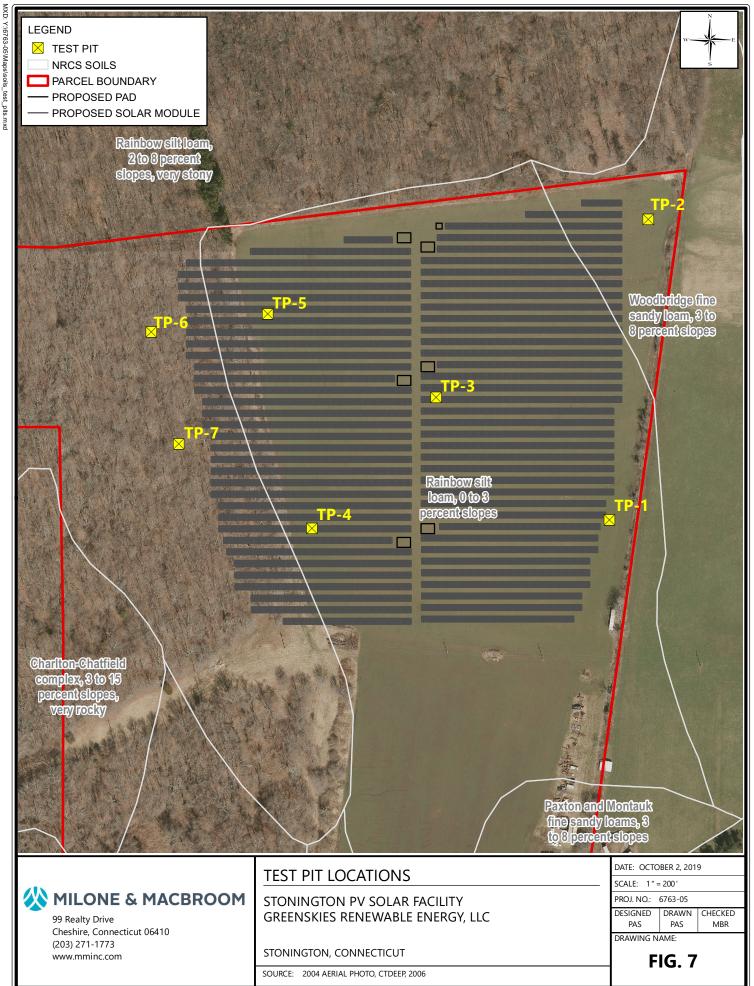
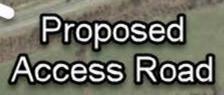


Figure 5

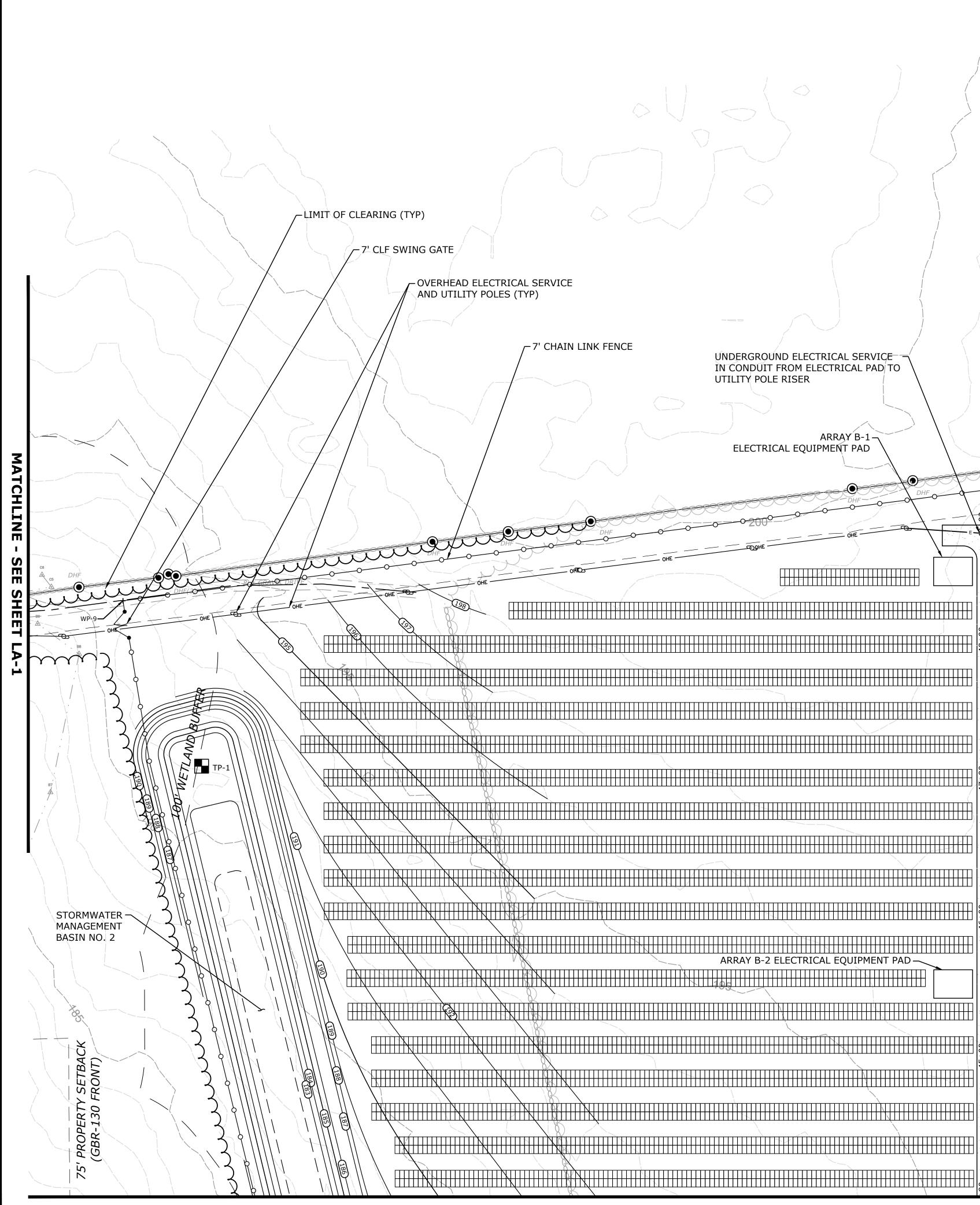
Proposed Three-phase

Existing Access Road









UNDERGROUND ELECTRICAL SERVICE IN CONDUIT FROM ELECTRICAL PAD TO UTILITY POLE RISER

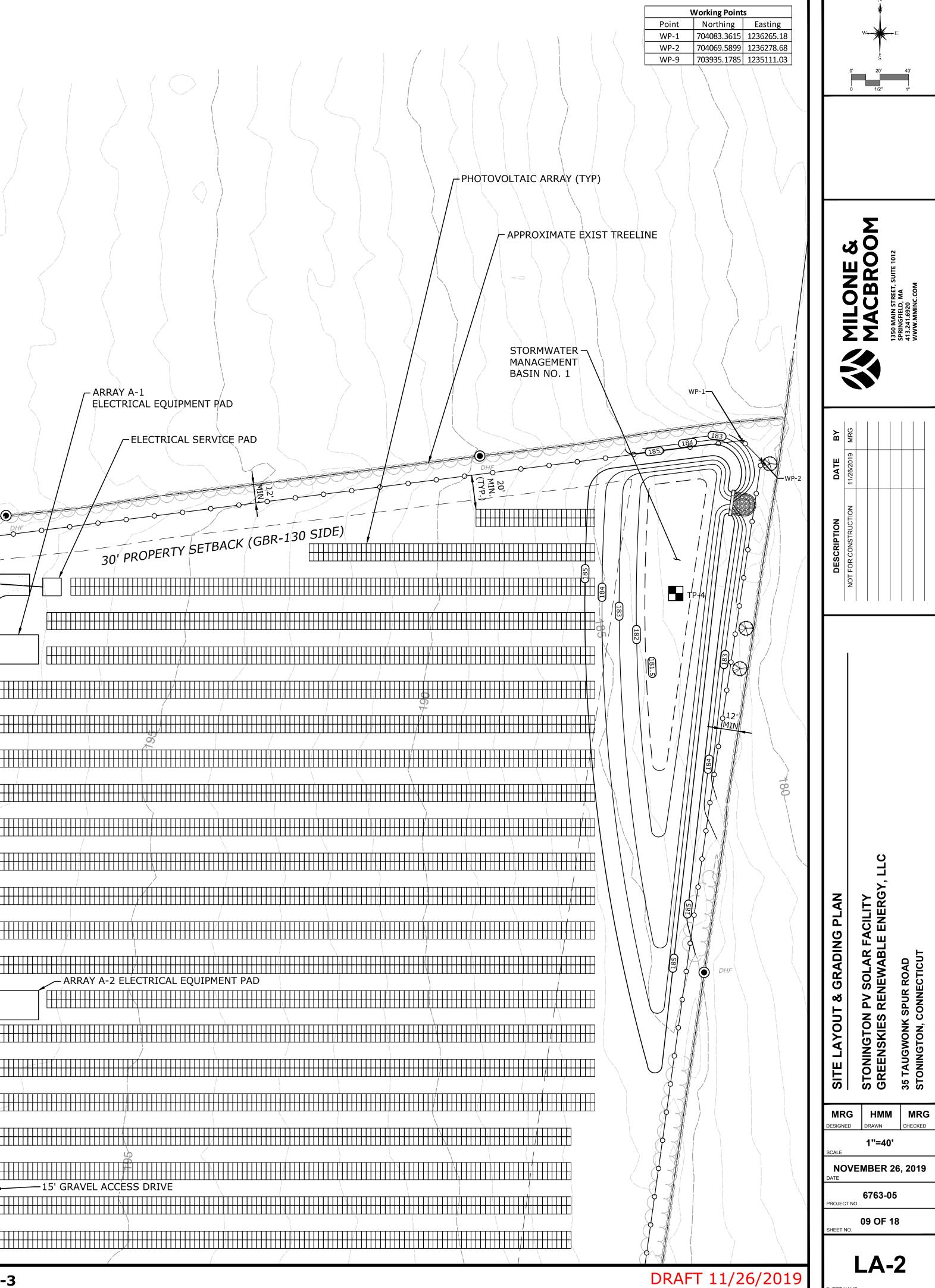
> ARRAY B-1-ELECTRICAL EQUIPMENT PAD

ARRAY B-2 ELECTRICAL EQUIPMENT PAD

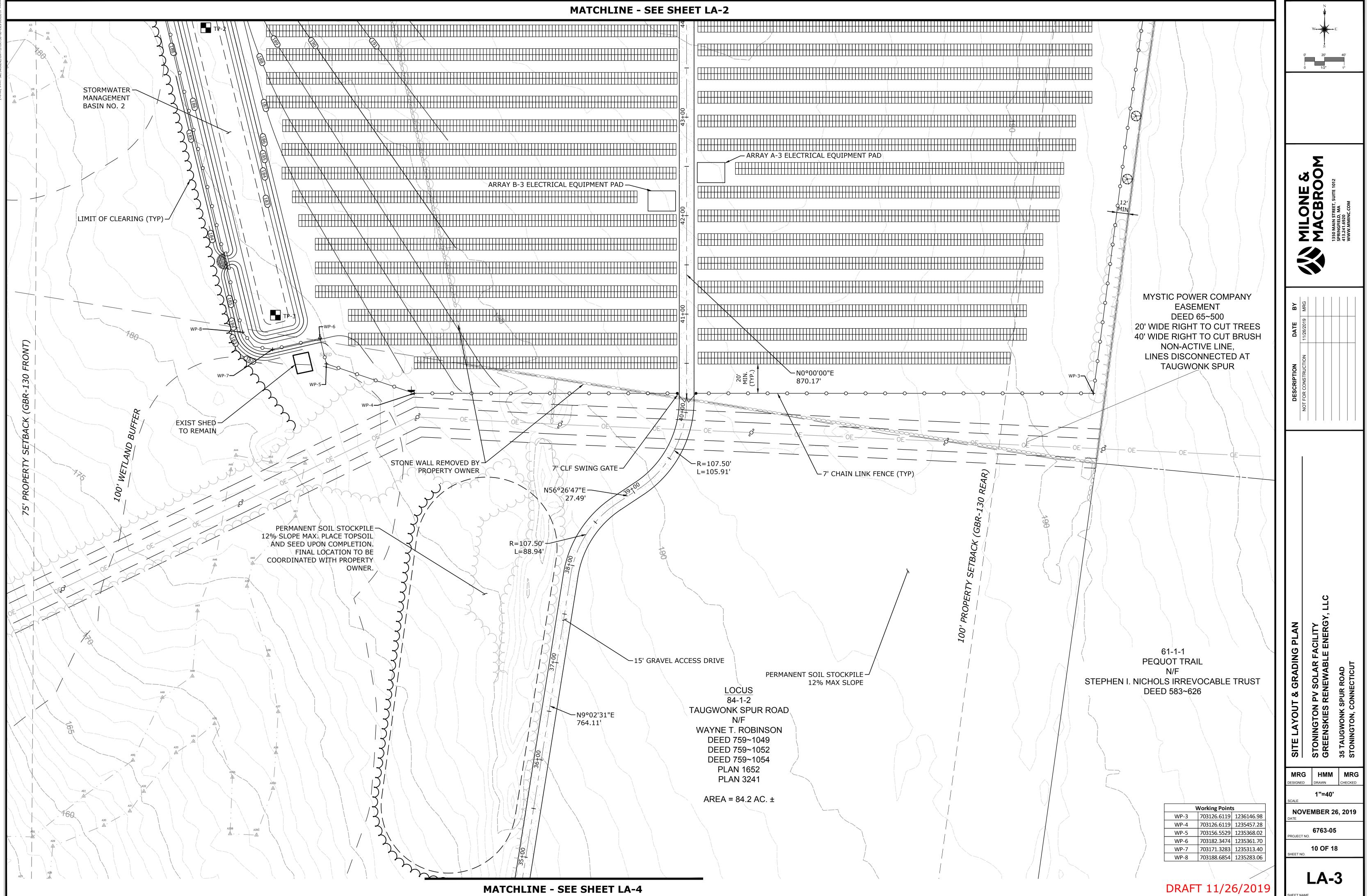
ARRAY A-1 ELECTRICAL EQUIPMENT PAD

-ELECTRICAL SERVICE PAD

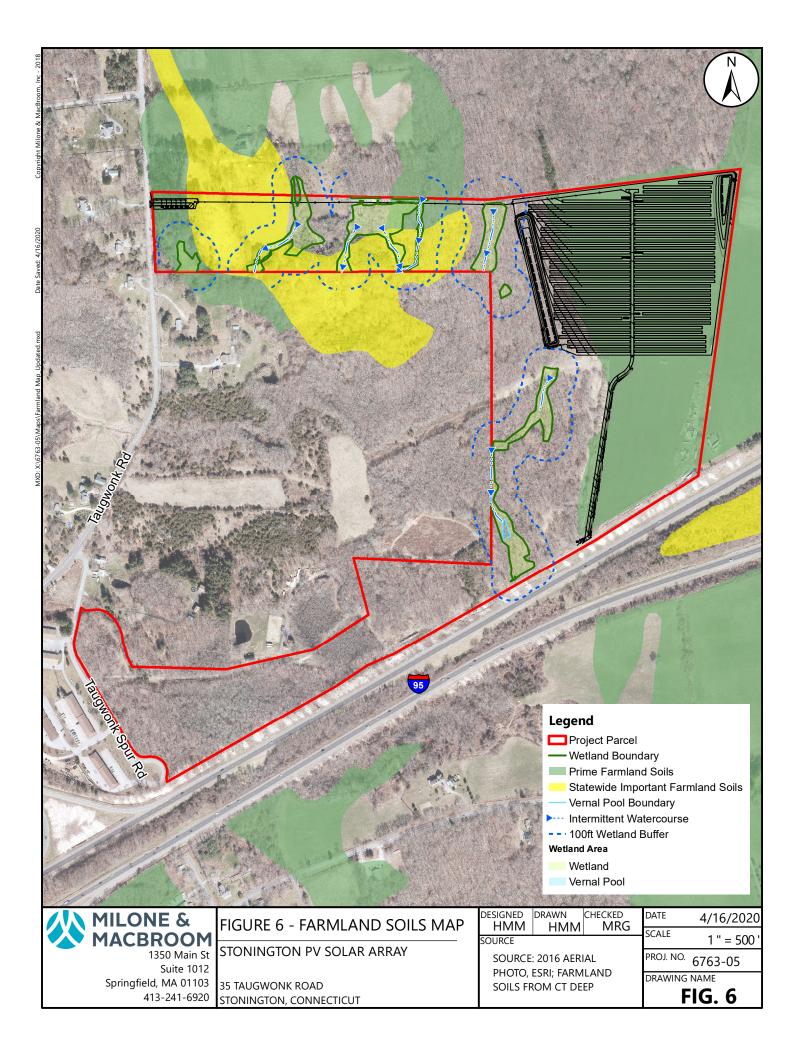
- ARRAY A-2 ELECTRICAL EQUIPMENT PAD







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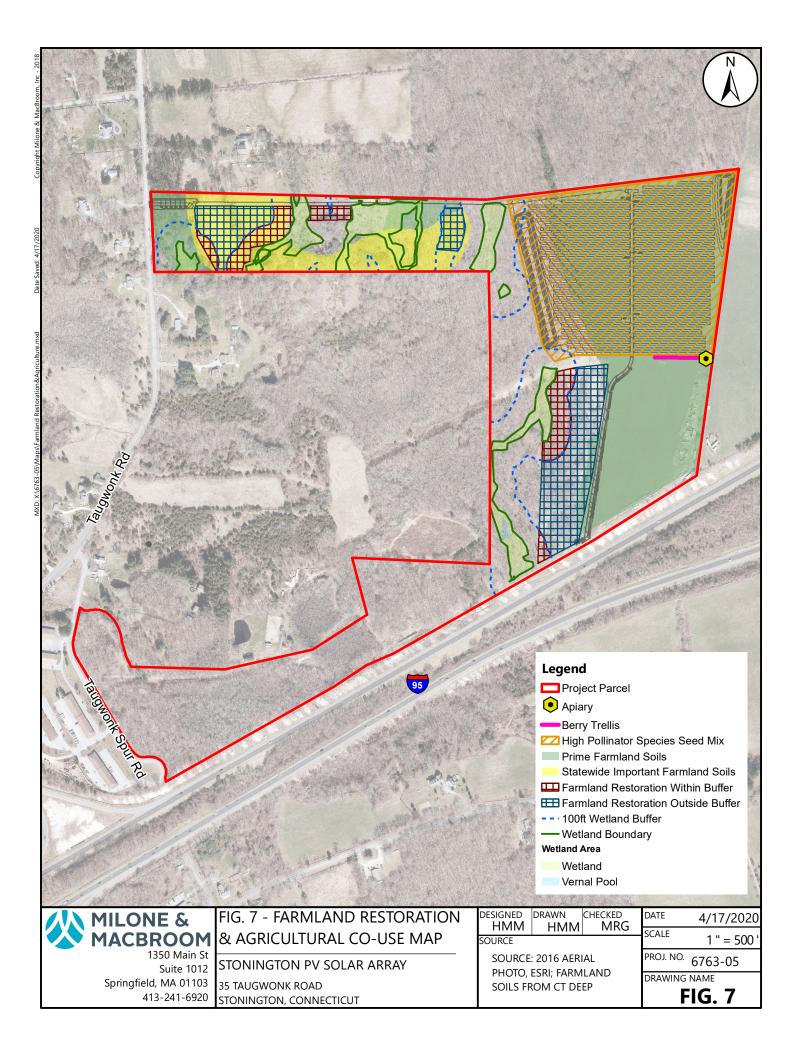


FIGURE 8 - SAMPLE SOLAR ARRAY SEED MIX – PHOTOS

SOLAR ARRAY SEED MIX			
Species:	Per Bulk Pound (lb.)		
Sheep fescue	0.25		
Little bluestem	0.20		
Broomsedge	0.12		
Annual ryegrass	0.15		
Lanceleaf coreopsis	0,08		
Plains coreopsis	0.08		
Black-eyed susan	0.05		
Common yarrow	0.05		
Butterfly milkweed	0.05		
Total:	1 Lb.		



Black-eyed susan



Little bluestem



Broomsedge







Plains coreopsis



Lanceleaf coreopsis

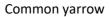






Sheep fescue







Butterfly milkweed



Annual ryegrass

FIGURE 9 - SAMPLE NEW ENGLAND CONSERVATION/ WILDLIFE SEED MIX SAMPLE PHOTOS

NEW ENGLAND CONSERVATION/WILDLIFE SEED MIX (1 LB/1,500 SF)		
Species:	Percent of Mix (%)	
Big bluestem	20	
Little bluestem	20	
Switchgrass	20	
Fox sedge	10	
Silky wild rye	8	
Common milkweed	5	
Deertongue	5	
Pennsylvania smartweed	5	
Partridge pea	4	
Silky smooth aster	1.5	
Nodding bur-marigold	1.0	
Flat-top aster	0.5	
Total:	100%	



Nodding bur-marigold







Partridge pea



Big bluestem







Pennsylvania smartweed



Silky wild rye



Common milkweed

Seed mix at perimeter





Deertongue grass



Fox sedge





Switchgrass

APPENDIX A

CT Dept. of Agriculture and CSC Documentation



STATE OF CONNECTICUT DEPARTMENT OF AGRICULTURE Office of the Commissioner



860-713-2501 www.CTGrown.gov

Bryan P. Hurlburt Commissioner

August 15, 2019

Melanie A. Bachman Executive Director Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

Re: Greenskies Renewable Energy LLC ("Greenskies") Proposed Solar Photovoltaic Development 35 Taugwonk Spur Road, Stonington, CT

Dear Ms. Bachman,

Greenskies Renewable Energy, LLC has contacted the Connecticut Department of Agriculture ("Department") and informed us of their imminent filing of a petition for a declaratory ruling with the Connecticut Siting Council ("Council"). Greenskies proposes to construct a solar photovoltaic facility with a capacity of 5.0 megawatts, to be located at 35 Taugwonk Spur Road, Stonington, CT.

Section 16-50k(a) of the Connecticut General Statutes requires that for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland, "excluding any such facility that was selected by the Department of Energy and Environmental Protection in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j", the Department of Agriculture must represent, in writing, to the Connecticut Siting Council (CSC) that such project will not materially affect the status of such land as prime farmland.

Approximately 16 acres of prime farmland would be impacted by the installation of the solar panels, racking systems, equipment pads, access road, and the associated site work involved with this project. Our Department has reviewed documents submitted by the petitioner concerning this project, which include the following:

- 1) Preliminary site layout plan, dated July 15, 2019, prepared by Milone & MacBroom;
- 2) Site layout & grading plan, dated July 15, 2019, prepared by Milone & MacBroom;
- 3) USDA-NRCS farmland and hydrologic soils report, provided by Milone & MacBroom; and
- 4) Greenskies Renewable Energy, LLC Permit Drawings for the Stonington PV Solar Facility, dated August 9, 2019.

Department staff also met with Greenskies representatives to discuss the project background, proposed site plan, existing site conditions, how Greenskies intends to handle and manage the prime farmland soils, and how Greenskies would incorporate agricultural dual uses on the site.

Based on the above submittals and discussions, and pursuant to Section 16-50k(a) of the Connecticut General Statutes, the Department hereby represents to the Council that this project, as proposed, will not materially affect the status of such land as prime farmland provided that the following minimum conditions are met:

- 1. The handling and management of any/all prime farmland soils disturbed by construction activities is in accordance with energy industry best management practices, adhering to the most current Federal Energy Regulatory Commission (FERC) guidelines;
- 2. Any/all prime farmland soils are separated and stored on the farm site, and shall be used and applied solely for agricultural purposes;
- 3. In consultation with the farmland owner(s), a Farmland Restoration Plan shall be developed for the property to restore, at a minimum, an amount of acreage equivalent to the area disturbed, throughout the farm property for current and future agricultural purposes;
- 4. The Department shall administer the Farmland Restoration Plan. Such Farmland Restoration Plan shall be prepared by a soil scientist who is approved by the Department of Agriculture, and is currently on contract with a Conservation District located in Connecticut, for the purposes of preparation and review of Farmland Restoration Plans;
- 5. Greenskies shall be responsible for the costs of the farmland restoration work;
- 6. In consultation with the Department of Agriculture, Greenskies shall conduct at least two colocation or dual-use agricultural activities on the site. Such co-location or dual-use activities shall include but are not limited to, creating native pollinator habitat, beekeeping, small livestock grazing, and select crop propagation; and
- 7. Any/all agricultural research reports by the University of Connecticut, University of Connecticut Cooperative Extension, and/or the Connecticut Agricultural Experiment Station of the dual-use agricultural activities conducted on the site shall be submitted to the Department.

While the Department of Agriculture believes any loss of prime farmland is of concern, we also fully appreciate that agricultural producers need to have the ability to make business decisions that are in the best interest of their farms and their families. With these reasonable mitigation steps, this project should be allowed to proceed with the Council's declaratory ruling process. Please contact Stephen Anderson if you have any questions or concerns regarding this letter.

Sincerely. Brvan P/Hurlburt Commissioner

cc: Lee D. Hoffman, Esq., Pullman & Comley, LLC Gina Wolfman, Greenskies Renewable Energy, LLC Stephen Anderson, Connecticut Department of Agriculture Cameron Weimar, Connecticut Department of Agriculture



STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

October 11, 2019

Lee D. Hoffman, Esq. Pullman & Comley 90 State House Square Hartford, CT 06103-3702

RE: **PETITION NO. 1378** – Greenskies Renewable Energy, LLC (GRE) petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 5.0-megawatt AC solar photovoltaic electric generating facility on approximately 16.5 acres located generally east of Taugwonk Road and Taugwonk Spur Road and north of Interstate 95 in Stonington, Connecticut and associated electrical interconnection.

Dear Attorney Hoffman:

At a public meeting held on October 10, 2019, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal meets air and water quality standards of Department of Energy and Environmental Protection and would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

- 1. Submission of an Invasive Species Management Plan:
- 2. Submission of the final Farmland Restoration Plan;
- 3. Approval of any minor project changes be delegated to Council staff;
- 4. Submission of a copy of the DEEP General Permit prior to commencement of construction;
- 5. Submission of the final electrical design plans and interconnection route;
- 6. Submission of the final structural design (for the racking system) stamped by a Professional Engineer duly licensed in the State of Connecticut prior to rack system installations;
- 7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director of any schedule changes as soon as is practicable;
- 8. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of **Storing**ton;



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- 9. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- 10. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;
- 11. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and
- 12. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated August 20, 2019 and additional information received on August 26, 2019 and September 26, 2019.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,

Melanie A. Bachman Executive Director

MAB/MP/lm

Enclosure: Staff Report dated October 10, 2019

c: The Honorable Rob Simmons, First Selectman, Town of Stonington Keith Brynes, Town Planner, Town of Stonington Gina L. Wolfman, Senior Project Developer, Greenskies Renewable Energy, LLC

APPENDIX B

Farmland Restoration Program Application

**Filed as a Condition of Greenskies Renewable Energy LLC, CT Siting Council Petition #1378 - Decision Letter



STATE OF CONNECTICUT Department of Agriculture



FARMLAND RESTORATION PROGRAM (FLRP) APPLICATION

NAME OF APPLICANT: Wayne Robinson
FARM NAME:
ADDRESS: <u>35 Taugwonk Spur Road, Stonington, CT</u> (Street/Town/State/ZIP) TELEPHONE: <u>860-912-8361</u> FAX:
E-MAIL: wrobinson35@hotmail.com TAX ID Number: FARM PROPERTY LOCATION (street/town): 35 Taugwonk Spur Road
DEED REFERENCE(S): Vol <u>759</u> Pg <u>1049</u> ; Vol <u>759</u> Pg <u>1052</u> ; Vol <u>759</u> Pg <u>1054</u>
ZONING OF PROPERTY: LI-130; GBR-130
TAX MAP REFERENCE(S): Map84_ Block1 Lot; MapBlockLot (Attach sheet if more space is needed for multiple deed and/or tax map references) Block Lot
Are You a Farmer? (check one) X Yes No: If no, please explain:
Do you farm full time; or part timeX; How long have you been farming Number of employees: full time; part time; seasonal full time; seasonal part time Explain:
Do you own or lease the farm restoration area? X Own; or Lease; lease term If leased, explain annual lease paid or other arrangement: (Attach copy of lease)
Have you applied to the USDA-NRCS for Farm Bill Environmental and/or Easement Programs (EQIP, WHIP, AMA, CSP, GRP, FRPP, CTA, WRP)?Yes;X_No; If yes, please indicate the program(s) and if you have an approved agreement:
Have you consulted the DEEP Natural Diversity Data Base (NDDB) regarding FLRP area? X-Not impact to Yes; No: If your project falls within a listed species area, and your application is approved, you will be required to submit a NDDB review request form to DEEP. NDDB habitat per review request and response.
Check under which Scenario you are applying:
Scenario 1: Existing NRCS approved conservation plan:
Scenario 2: Planning to participate under a NRCS approved conservation plan:
Scenario 3: Planning to participate under a NCCD or other approved plan: Farmland Restoration Plan per Siting

Council condition; Petition #1378

I. DESCRIPTION OF FARM	OPERATION (may attach description sheet):
Production of feed hay	r

1 # comes or made	86 78	N/A	
1. # acres owned: _ 3. # cropland acres	owned: 30	; 2. # acres leased: <u>N/A</u> _; 4. # cropland acres leased: <u>N/A</u>	
5 # acres pasture o	wned: 50	; 6. # acres pasture leased:N/A	
		; 8. # acres important farmland soils:	
		ages):	
-		p, acreage & gross annual receipts from unit p	
CROP	Acres		annual sales
Uan	20		\$3,000
Hay (if more space is need	30 ded, please attach sheet and co		\$3,000
(if more space is need	ded, please attach sheet and co other than crop production):
(if more space is need . Farm income from N/A	ded, please attach sheet and co other than crop production	ontinue) a. (list each source and gross annual sales):
 (if more space is need) Farm income from N/A If applicable, indication Please check your the Farm on contract 	ded, please attach sheet and co other than crop production ate size of herd, flock, etc.: cype(s) of farm marketing t ; if so type of contra	ontinue) . (list each source and gross annual sales):
 (if more space is need) (if more space is need) Farm income from N/A If applicable, indication Please check your the Farm on contract Community and community and	ded, please attach sheet and co other than crop production ate size of herd, flock, etc.: cype(s) of farm marketing t ; if so type of contra l/or educational supported	ontinue) n. (list each source and gross annual sales N/A hat apply, if any: No marketing of any p): product

16. Percent of products sold not produced on the farm _____%; What are they? _____
17. Do you have an agricultural business plan? Yes _____ No X_; (if yes, attach copy)

II. Briefly explain why you are applying to the Farmland Restoration Program: <u>as a condition</u> <u>of CT Siting Council Petition #1378 approval/Decision dated 10/10/2019; requires development</u>

of a Farmland Restoaraton Plan asssociated with solar facility by lessee Greenskies Renewable Energy.

DESCRIPTION OF FARMLAND RESTORATION PROGRAM TREATMENT REQUESTING TO BE COVERED BY THIS APPLICATION (examples: land clearing, stump and stone removal; brush hogging and brush clearing; field surface/subsurface drainage and related swales, waterways and sediment capture; water well, pond restoration and/or improvements; stream ford crossing and stream bank protection; fencing of restored area including permanent perimeter livestock and deer fencing; etc.):

Per letter dated 8/15/19, DOAg to CT Siting Council, the following shall be required: 1. management of any/all prime farmland soils; b.use of all such soils for agricultural purposes; 2. restoration of a minimum acreage throughout property of that disturbed for future agr. use; 3. at least 2 co-location or dual-use agr. activities on the property; 4. provide to DOAg any search reports of the dual-use activities. Proposed uses include: beekeeping, berry propagation, expansion of hayfields, timber harvesting. Invasive plant species mangement will be incorporated, as well.

harvesting. Invasive plant species mangement will be incorporated, as well. How many people do you estimate this project will employ? <u>N/A</u>; For what period of time? Will you and/or your family be doing any of the work? (please explain): ______

Your Farm and Farmland Restoration Area Land Use:

- 1. # acres in woodland: <u>48.9</u>; # acres in wetlands: <u>14.4</u>; # acres prime farmland: <u>30.5</u> # acres important farmland: <u>8.3</u>; # acres local important farmland: <u>N/A</u>
- 2. Describe the existing use of restoration area: <u>Hay field</u>, pasture, woodland/timber harvesting
- 3. # acres to be cleared: <u>3.8</u>; # wetland acres to be cleared if any:_____
- 4. Is the restoration area in forest land? <u>X</u>Yes <u>No;</u> **Partially
- 5. Does the farm have a conservation easement on it? Yes X No; If yes, with what entity:
- 6. Does the farm have a current USDA-NRCS Conservation Plan? Yes ____; No X
- 7. Does the farm have a current Comprehensive Nutrient Management Plan? Yes____; No_X___
- 8. Have you received a highly erodible land/wetland determination from NRCS for the farmland restoration area? (When you visit the local USDA Farm Services Agency you will find out if this has already been done or if NRCS has to make the determinations) Yes____; No_X_ if no, did you will out the form (AD-1026) requesting the determination?
- 9. Have the soils on site been upgraded through the removal of stones, stumping, topsoil amendments or conditioning, or any other method(s)? Yes X; No Please explain:

Removal of stones; fertilizing fields

III. ESTIMATED PROJECT COSTS - Total Acres to be restored <u>9.23</u> \$/acre <u>\$ 2,000</u>

- 1. Federal USDA financial payments: _____
- 2. Other cost share: ____See attached cost estimate for solar-agricultural co-use fees_____
- 3. State FLRP funds request: _
- 4. Owner Costs: ___\$18,460_(converting land to/expanding hayfields______
- 5. Value of in-kind cost(s):
- 6. Total Estimated Cost: _____\$18,460_____

Explain in kind cost(s) or other cost you wish to note:

IV. ADDITIONAL INFORMATION:

Other Department of Agriculture program information can be obtained at our web-site: www.ct.gov/DOAG

Please let us know if you would like to receive information on any of the following: Farmland preservation programs: _____ Estate planning information: _____ Farm-Link program: _____ Conservation Options Booklet: _____ Leasing of agricultural lands guide: _____

- **V. REQUIRED APPLICATION DOCUMENTS** (these documents are required with your application, if not available, state reasons why):
 - 1. Completed and signed Farmland Restoration Program application
 - 2. If applying under an existing approved NRCS Conservation Plan, or approved Comprehensive Nutrient Management Plan, attach copy
 - 3. Supporting documentation including aerial photograph of FLR Plan area; soils map of Plan area; tax map of Plan area, Survey if available, or like documents to identify Plan area; (a copy of the property tax map is available from you local Tax Assessor's office)
 - 4. Copy of the tax card(s) for the subject property
 - Detailed map identifying the common land units (field locations, crops grown & acres per field). This map MUST be obtained from the Farm Service Agency office at your local USDA-Service Center, see below
 - 6. Detailed sketch of the Farmland Restoration Plan site area, identifying treatment(s) on an aerial photograph
 - 7. Pictures of the planned Farmland Restoration area site in both electronic format and paper photo
 - 8. Detailed project budget / job sheet itemizing estimated project costs (see attached)
 - 9. If land is leased, a copy of the executed lease, and owner letter of activity approval
 - 10. If state, municipal or land trust leased lands a copy of lease and letter indicating entity's approval to apply for the Farmland Restoration Program
 - 11. If land encumbered by conservation or like easement, a letter of plan activity approval from interest holder;
 - 12. If Plan impacts inland/wetlands, copy of letter notifying the local inland-wetland of the proposed activity.
 - 13. Copy of your IRS Tax schedule F, Form 1120 S, or schedule C from most current year;
 - 14. Copy of State Department of Revenue Services tax exempt form (note reason if you don't have one)______

If you have any questions on the application, feel free to call the Department of Agriculture, Farmland Preservation Program at 860-713-2511. It is necessary for all owners of the land submitted to give their approval and consent to this application by signing the application. By signing, applicant(s) declare under penalty of law, they have completed the application, including any accompanying schedules and statements, to the best of the applicant's knowledge and belief all is true, complete and correct. The Applicant understands the FLRP grant program is not an entitlement program, and the State is under no obligation to fund your request. The applicant also understands that other local, state or federal jurisdiction(s) may apply on or near such lands as inland wetlands and watercourses or endangered species list, and such treatment approval or notification responsibility is the applicants:

Signed Wager Rohm

Date	11-20-2019
Date	
Dute	

Maps and crop information on your specific farm may be obtained from the United States Department of Agriculture by contacting the Farm Services Agency at your area Agricultural Service Center listed below:

U.S.D.A. Natural Resources Conservation Service and Farm Service Agency Offices and Centers

Hartford and Tolland Counties

Windsor Service Center 100 Northfield Drive, 4th Floor Windsor, CT 06095 860,688,7725

Litchfield County

Torrington Field Office 1185 New Litchfield Street Torrington, CT 05790 860.626.8258

Fairfield and New Haven Counties

Hamden Service Center 51 Mill Pond Road Hamden, CT 06514 203,287,8038

Middlesex and New London Counties

Norwich Field Office 238 West Town Street Norwich, CT 06360 860,887,3604

Windham County

Danielson Service Center 71 Westcott Road Danielson, CT 06239 860,779.0557

State Office

Tolland State Office USDA-NRCS 344 Merrow Road Tolland, CT 06084-3917 860.871.4011 North Central Conservation District (NCCD)

24 Hyde Avenue Vernon, CT 06066 860.875.3881

Completed applications must be sent to the Connecticut Department of Agriculture at the address below. Please feel free to call or email with any Farmland Restoration Program questions.

Via email: <u>cam.weimar @ct.gov</u> or <u>lance.shannon@ct.gov</u>

Connecticut Department of Agriculture Farmland Restoration Program 450 Columbus Blvd., Suite 703

Hartford, CT 06103-1841 860-713-2511 Attn: Cameron Weimar or Lance Shannon

APPENDIX C

Agricultural Co-use Documentation



Fuzz & Buzz[™] Seed Mix for Solar Arrays

Ernst Conservation Seeds, the largest producer of native grass and wildflower seeds in the eastern United States, has partnered with Ernst Pollinator Service, a leader in pollinator establishment in all types of habitats, and the American Solar Grazing Association (ASGA), a non-profit trade organization devoted to promoting the grazing of sheep on solar installations, to develop the new Fuzz & Buzz[™] Seed Mix.

The Fuzz & Buzz[™] seed mix was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species chosen for the mix were vetted by experts at the Cornell University Sheep Program for their palatability to sheep.

The diversity of grass and flowering species in the mix adds the ecological benefit of providing pollen and nectar sources for honeybees, native pollinator species, birds and other wildlife.





Robin Ernst, president of Ernst Pollinator Service, said, "We embrace new and inventive ways for America's farmers to make their land productive and profitable, sometimes in ways they might not have previously considered. Solar sites offer many landowners just such an opportunity on their property. The addition of grazing potential for sheep on these sites can multiply that profitability even further. And when those sites bring with them habitat for pollinators, it's a winning proposition on many fronts."

"What could be better than a seed mix designed for solar sites that is durable, intended for grazing and biodiverse enough to support a range of pollinator species," said **Lexie Hain, executive director of the ASGA**. She continued, "This is the launch of the newest in solar: solar pastures.

"Our mission is to provide seeds that solve problems ecologically," said Calvin Ernst, president of Ernst Conservation Seeds. "With the Fuzz & Buzz™ seed mix, we're able to offer a three-part solution that minimizes maintenance for solar operators, provides an opportunity for sheep graziers who need additional pasture, and improves soil health and biodiversity for the benefit of pollinators and wildlife."

> A portion of the proceeds from the sale of the mix will be donated to the ASGA in support of its mission.



Contact customer service at **Ernst Conservation Seeds** for current pricing and formulation.

Phone: 800-873-3321

Email: sales@ernstseed.com or Fax: 814-336-5191



Fuzz & Buzz™ Mix — Premium

(ERNMX-147)

Lolium perenne, Tetraploid (Perennial Ryegrass, Tetraploid) Dactylis glomerata'(Orchardgrass) Festuca elatior (Meadow Fescue) Poa pratensis (Kentucky Bluegrass (pasture type)) Trifolium hybridum (Alsike Clover) Trifolium pratense, Medium (Red Clover, Medium) Trifolium incarnatum (Crimson Clover) Chrysanthemum leucanthemum (Oxeye Daisy) Cichorium intybus (Blue Chicory) Lotus corniculatus (Bird's Foot Trefoil) Aster prenanthoides (Zigzag Aster) Coreopsis lanceolata (Lanceleaf Coreopsis) Solidago juncea (Early Goldenrod) Tradescantia ohiensis (Ohio Spiderwort) Zizia aurea (Golden Alexanders)

Seeding Rate: Expect to apply about 28 lbs per acre.

Fuzz & Buzz[™] Mix — Standard

(ERNMX-146)

Lolium perenne, Tetraploid (Perennial Ryegrass, Tetraploid) Dactylis glomerata (Orchardgrass) Festuca elatior (Meadow Fescue) Poa pratensis (Kentucky Bluegrass (pasture type)) Trifolium hybridum (Alsike Clover) Trifolium pratense, Medium (Red Clover, Medium) Chrysanthemum leucanthemum (Oxeye Daisy) Cichorium intybus (Blue Chicory) Lotus corniculatus (Bird's Foot Trefoil) Coreopsis lanceolata (Lanceleaf Coreopsis) Solidago juncea (Early Goldenrod)

Seeding Rate: Expect to apply about 26.5 lbs per acre.



<u>Note</u>: Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ernstseed.com

October 24, 2019

Ms. Gina L. Wolfman Senior Project Developer GDCenskies Development Company, LLC c/o GDCenskies Renewable Energy 180 Johnson Street Middletown, CT 06457

Re: Stonington CSCU (35 Taugwonk Spur Rd., Stonington, CT) <u>Proposal for Beekeeping/Apiculture</u>

Dear Gina:

Pursuant to your request, I am pleased to provide GDCenskies Development Company, LLC (GDC) with this proposal for beekeeping/apiculture services as an agricultural co-use at GDC's Photovoltaic (PV) Solar Array project at 35 Taugwonk Spur Road in Stonington, Connecticut.

This project consists of the construction of a new PV ground-mounted solar array system on a parcel of approximately 84.6 acres located on the east side of Taugwonk Spur Road and north of the I-95 corridor. I understand the full build layout consists of a 5.0+/- MW AC array, generally located within an open field at the northeast corner of the parcel. Access to the site will be from an existing gravel farm road off Taugwonk Spur Road from the southwest.

The landowner/GDC's landlord is Wayne Robinson and this parcel makes up a portion of the Robinson family's 151-acre farming operation, Pequot Meadow Farm, started by Wayne's father George Robinson. The area currently comprising Pequot Meadow Farm has been used as pasture and agricultural land for over 100 years. I understand for the last several decades, Wayne has worked second shift as a machinist, dedicating his mornings to work on the farm with his dad, George, who is nearly 80 years of age. They hay the fields as a cash crop. GDC has conveyed that Wayne intends to resign from his "day job" and farm full-time and that beekeeping is something he's always had an interest in and would like to pursue on his land, with assistance.

Please see Scope of Services, Hold Harmless Agreement, and cost estimates provided on the following pages.

SCOPE OF SERVICES - BEEKEEPING PARTNERSHIP

Task 1.0-Acquisition and Setup of Equipment and Materials

Beekeeper shall obtain all equipment and materials (including bees) necessary to initially establish ten (10) hives/colonies on the site. GDC shall pay for all bees, equipment and medications, as needed. Bear fencing might be utilized based on site conditions but is not essential. The necessity of this item can be assessed on an ongoing basis. All equipment and materials will remain the property of GDC. Work will commence in Spring 2021.

Task 2.0 - Maintenance and Harvesting of Honey

Beekeeper will be paid a flat fee of \$1000/year for time maintaining colonies and harvesting honey; any time above 20 hours is the beekeeper's contribution. GDC will receive 30% of honey starting in the second year. Split of colonies will be done to replace lost colonies and as swarm prevention. Beekeeper can utilize excess splits, and will replace frames taken. Excessive losses will be replaced by GDC.

Please note, there will, most likely, not be any honey the first year. In addition, Connecticut weather tends to make beekeeping challenging. In a severe winter, colony losses can be high. The equipment will be re-usable, but several colonies may need to be replaced. This may be offset with splits. Queens are needed for splits and poorly performing hives. Beekeeper and GDC will determine how honey is provided (e.g. in buckets or pails, Ball jars). GDC will cover cost of all containers needed for their share of the harvest.

In future years, some equipment will need to be replaced as part of normal rotation of equipment. Costs should not be excessive; GDC will cover the cost of replacement equipment.

Task 3.0 - Landowner Training/Mentorship

Beekeeper will allow landowner/Wayne Robinson to "shadow" and assist in activities throughout all steps of setup, ongoing maintenance and harvesting. No additional fee will be paid for this service. GDC and Beekeeper will agree to a reasonable duration of this mentorship. At some point in the future landowner might have an interest in becoming Beekeeper for the site. If such an interest is expressed a new Beekeeping arrangement will be made.

HOLD HARMLESS AGREEMENT

GDC shall not be liable for any loss, injury, death, or damage to persons or property (a) which at any time may be suffered or sustained by Beekeeper or by any person whosoever may at any time be using, occupying, visiting or intending to visit the site in conjunction with Beekeeper, or (b) which at any time may be suffered or sustained on the site by Beekeeper's employees, agents, invitees or persons occupying, visiting, or intending to visit the Leased Premises, unless such loss, injury or death is caused by GDC's negligence, and Beekeeper shall i ndemnify and defend GDC against all claims, liability, loss or damage whatsoever on account of any such loss, injury, death, or damage. Beekeeper shall indemnify GDC against all claims, liability, loss or damage arising by reason of the negligence or misconduct of Beekeeper, its agents or employees. Beekeeper hereby waives all claims against GDC for damages to the building and improvements that are now on or hereafter placed or built on the site and to the property of Beekeeper in, on, or about the site, and for injuries to persons or property in or about the site, from any cause arising at any time. The preceding sentences shall not apply to loss, injury, death, or damage arising by reason of the negligence or intentional misconduct of GDC, its agents, or employees.

Cost Estimate for Ten (10) Hives/Colonies			
First Year Wooden Ware:	,		
2 Deeps/colony	\$400.00		
Bottom board	\$150.00		
20 frames	\$200.00		
Foundation	\$280.00		
Inner cover	\$120.00		
Outer cover	\$200.00		
Entrance Reducer	\$20.00		
Feeders	\$270.00		
Sub-total:	\$1,640.00		
Miscellaneous Items:			
Cinder blocks	\$50.00		
Pollen Patties	\$100.00		
Miticides	\$160.00		
Sub-total:	\$310.00		
Bees:	\$1,400.00 (estimate)		
Sub-total:	\$1,400.00		
Estimated First Year Costs:	\$3,350.00		
Second Year - Honey Supers	; Four Supers/Hive		
Boxes	\$600.00		
Frames	\$400.00		
Foundation	\$400.00		
Replacement Queens (if needed)	\$300.00 TPD		
Containers (e.g. pails/buckets/jars) Labels	TBD		
Labels	TBD		
Estimated Second Year Costs (up	\$1700		
Bear Fence (if needed)	\$500.00 - \$1,000.00		
Bear Fence (If needed)	φ500.00 - φ1,000.00		

ACCEPTANCE

If the above proposal meets with your approval, work may be initiated by signing a copy in the space provided below and returning it to me for my files.

I look forward to your acceptance of this proposal and a continued pleasant and rewarding association on this project.

Very truly yours,

Stephen D. Dinsmore, Beekeeper President, Connecticut Beekeepers Assn. (Address) (Tel) Email: <u>ctbeeguy@yahoo.com</u>

The above proposal is understood and accepted:

Ву:_____

Date: _____

Stephen D. Dinsmore, Beekeeper (Print name and title)

The above proposal is understood and accepted:

By: _____

Date:

Stanley Chin, President and CEO (Print name and title)

APPENDIX D

Deep Soil Test Pit Logs and Location Map Stormwater Report Excerpts on Soil Mapping

Stormwater Report

35 Taugwonk Spur Road Stonington, Connecticut August 19, 2019 (Revised October 7, 2019)

Prepared for: Greenskies Renewable Energy, LLC 180 Johnson Street P.O. Box 251 Middletown, Connecticut 06457

MMI #6763-05-03

Prepared by: MILONE & MACBROOM, INC. One Financial Plaza 1350 Main Street, Suite 1012 Springfield, Massachusetts 01103 (413) 241-6920 www.mminc.com



ENGINEERING | PLANNING | LANDSCAPE ARCHITECTURE | ENVIRONMENTAL SCIENCE

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APPENDIX D DEEP HOLE TEST PIT RESULTS





	Stonington PV Solar, Taugwonk Spur		
Project:	Road, Stonington, CT	Job No.:	6763-05
Date:	August 16, 2019	Weather:	Clear, 70°
Test Performed by:	Michael R. Gagnon, P.E.	Test Hole No.:	1
Test Hole Depth:	7.7 feet	Depth to Groundwater:	7.7 feet

From	То	Description of Soils	
0.0'	1.1'	Topsoil and organics	
1.1'	3.2'	Light brown fine sand	
3.2'	7.7'	Grey fine sand, silt	
		Groundwater observed at 7.7'	





TEST PIT LOG

	Stonington PV Solar, Taugwonk Spur		
Project:	Road, Stonington, CT	Job No.:	6763-05
Date:	August 16, 2019	Weather:	Clear, 70°
Test Performed by:	Michael R. Gagnon, P.E.	Test Hole No.:	2
Test Hole Depth:	8.0 feet	Depth to Groundwater:	8.0 feet

From	То	Description of Soils
0.0'	0.5'	Topsoil and organics
0.5'	2.3'	Light brown fine to medium sand
2.3'	6.3'	Grey fine sand, silt
		Groundwater observed at 8.0'
	<u>oto 2</u> it No. 2	



TEST PIT LOG

	Stonington PV Solar, Taugwonk Spur		
Project:	Road, Stonington, CT	Job No.:	6763-05
Date:	August 16, 2019	Weather:	Clear, 70°
Test Performed by:	Michael R. Gagnon, P.E.	Test Hole No.:	3
Test Hole Depth:	7.7 feet	Depth to Groundwater:	7.0 feet

From	То	Description of Soils	
0.0'	1.2'	Topsoil and organics	
1.2'	3.4'	Light brown fine to medium sand	
3.4'	7.7'	Grey fine sand, silt	
		Groundwater observed at 7.0'	
	<u>to 3</u> t No. 3		

TEST PIT LOG

	Stonington PV Solar, Taugwonk Spur		
Project:	Road, Stonington, CT	Job No.:	6763-05
Date:	August 16, 2019	Weather:	Clear, 70°
Test Performed by:	Michael R. Gagnon, P.E.	Test Hole No.:	4
Test Hole Depth:	7.7 feet	Depth to Groundwater:	5.5 feet

From	То	Description of Soils
0.0'	0.7'	Topsoil
0.7'	3.5'	Light brown fine to medium sand, little silt
3.5'	5.5'	Light brown and grey fine sand, silt
		Groundwater observed at 5.5'
	p <u>to 4</u> it No. 4	



Stormwater Report

35 Taugwonk Spur Road Stonington, Connecticut August 19, 2019 (Revised October 7, 2019)

Prepared for: Greenskies Renewable Energy, LLC 180 Johnson Street P.O. Box 251 Middletown, Connecticut 06457

MMI #6763-05-03

Prepared by: MILONE & MACBROOM, INC. One Financial Plaza 1350 Main Street, Suite 1012 Springfield, Massachusetts 01103 (413) 241-6920 www.mminc.com



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ATTACHMENTS

Construction Drawings Wetland Delineation Report



2.5 <u>Natural Resources Conservation Service (NRCS) Hydrologic Soil Group (HSG)</u>

Soil types within the watershed were obtained from the NRCS Web Soil Survey for New London County, Connecticut. Most of the site is mapped by NRCS as Rainbow silt loam, with a small portion in the northeast as Woodbridge fine sandy loam. The Rainbow and Woodbridge soil series are designated by NRCS as "C" and "C/D" hydrologic soil groups, respectively.

On September 26, 2019, MMI completed a field investigation to confirm the mapped soil series and verify the hydrologic soil groups. A total of seven test pits were dug by hand to a depth of 24 inches or 2 feet below grade within the project limits. Five of the test pits were dug within the existing agricultural field where the proposed solar panels will be located, and two test pits were located within the forested area where the proposed sediment basin will be located (Figure 7).

In general, the five test pits (TP-1 through TP-5) completed within the agricultural field were consistent with NRCS mapping. The soil encountered consisted of a relatively thick Ap horizon ranging from 6 to 9 inches; dark brown (10YR 4/2) silt loam; weak fine granular structure; very friable with a clear distinct boundary; followed by a Bw horizon to the bottom of the test pits consisting of yellowish brown (10YR 5/6) silt loam; weak blocky structure; few fine roots; and few pebbles.

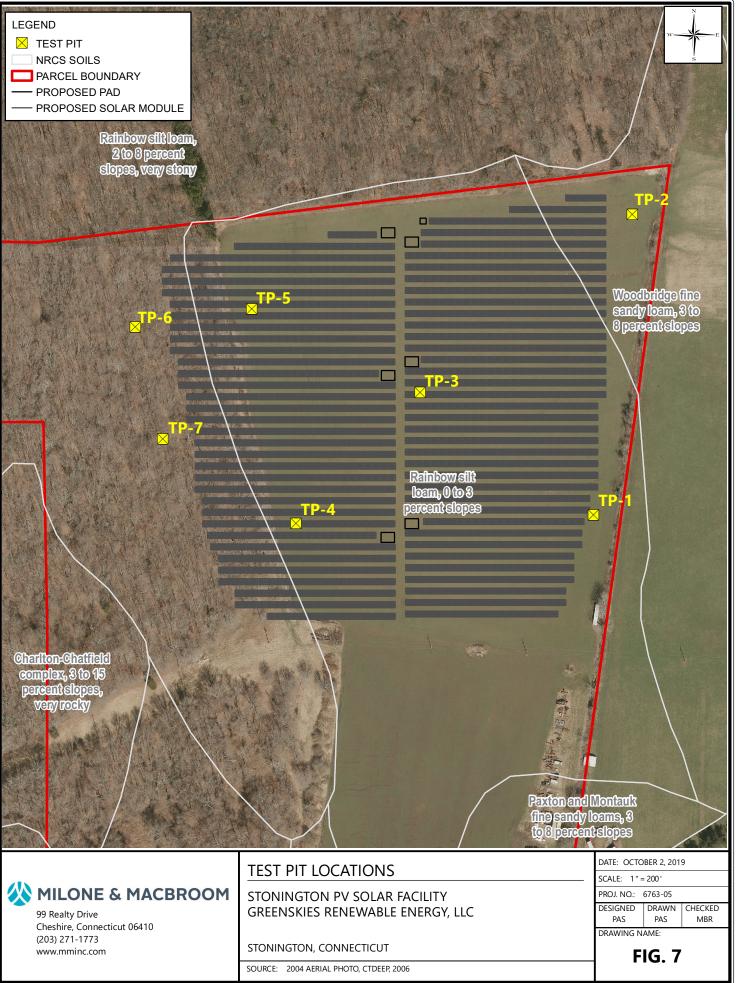
The two test pits within the forested area (TP-6 and TP-7) were also consistent with NRCS mapping. The Rainbow silt loam within the wooded area is very stony in the upper horizon with a relatively thick (4 inches) humic organic layer underlain by a distinct Ap horizon (10 to 12 inches) consisting of dark brown silt loam (10 YR 4/2); weak friable granular structure; followed by Bw horizon (13 to 18 inches) consisting of yellowish brown (10 YR 5/4) silt loam with stones; and weak blocky structure.

A Group "C" soil is defined by the NRCS as soils having a slow infiltration rate when thoroughly wet and consists chiefly of soils with a layer that impedes downward movement of water or soils of moderately fine texture or fine texture.

Based on the test pits, the mapped hydrologic group of "C" is consistent with the results of the field investigation. In general, the upper 12 inches of soil consists of silt loam that has been farmed historically, or actively with a distinct boundary and weak granular structure, underlain by a fine-grained subsoil with a weak block structure that would impede downward movement of water with soils consisting of a moderately fine texture.

For the purposes of the stormwater assessment, the soils were assigned a hydrologic soil group "D" for proposed conditions in accordance with recent CTDEEP policies regarding solar projects. CTDEEP requires the hydrologic soil group be reduced by one step to account for soil compaction due to construction activity.





MXD: Y:\6763-05\Maps\soils_test_pits.mxd