



# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### CERTIFIED MAIL

### RETURN RECEIPT REQUESTED

July 26, 2016

Steve Broyer  
Windham Solar LLC  
c/o Ecos Energy LLC  
222 South 9<sup>th</sup> Street, Suite 1600  
Minneapolis, MN 55402

RE: **PETITION NO. 1222** - Windham Solar LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of three 2.0 Megawatt and four 1.0 Megawatt Solar Photovoltaic Electric Generating facilities located southeast of Hartford Turnpike and south of Fisk Road, Hampton, Connecticut.

Dear Mr. Broyer:

At a public meeting held on July 21, 2016, the Connecticut Siting Council (Council) considered and voted to approve the 6 MW proposed in Projects 1-5 and to deny the 2 MW proposed in the Future Project on the basis that the development plans and environmental impacts for the Future Project are incomplete and not ripe for review.

The Council ruled that the 6 MW proposed in Projects 1-5 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. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Hampton for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) A final site plan for Projects 1 through 5 including, but not limited to, the electrical interconnection design, fence design and access drives;
  - b) Landscaping along Fisk Road on the subject property;
  - c) Erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control*;
  - d) A stormwater management plan consistent with the *2004 Connecticut Stormwater Quality Manual*;
  - e) Name and resume of an independent environmental inspector for Council review and approval;
  - f) Vernal Pool Habitat Impact Mitigation Plan;
  - g) Plans to avoid tree clearing during the June 1 through July 31 as a protective measure for the northern long-eared bat;
  - h) Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel; and
  - i) Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer

2. 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. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
3. 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 Towns of Hampton;
4. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
5. 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;
6. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferee 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
7. 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 for Projects 1-5 dated March 15, 2016 and additional information received on May 2, 2016, June 29, 2016, and July 11, 2016.

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

Very truly yours,



Robert Stein

Chairman

RS/MP/lm

Enclosure: Staff Report dated July 21, 2016

- c: The Honorable Allan Cahill, First Selectman, Town of Hampton  
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton  
Michael Melone, Windham Solar LLC, c/o Allco Renewable Energy Limited  
The Honorable Matthew Cunningham, First Selectman, Town of Chaplin  
Jay Gigliotti, Zoning Enforcement Officer, Town of Chaplin  
Tim Huchthausen, (via e-mail service)



# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

**Petition No. 1222**  
**Windham Solar LLC**  
**390 Hartford Turnpike, Hampton**  
**Staff Report**  
**July 21, 2016**

### Introduction

On March 22, 2016, Windham Solar LLC (WS or Petitioner) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, operation and maintenance of a 10 megawatt (MW) alternating current (AC) solar photovoltaic generating facility located on 390 Hartford Turnpike, Hampton, Connecticut. The size of the project was decreased to 8 MW, as discussed further on page 4 of the staff report. Council member Robert Hannon and Michael Perrone of the Council staff visited the site on April 21, 2016 to review this proposal. Steve Broyer from WS; Michael Chapel, Selectman, Town of Hampton; Randy Thompson, Hampton Conservation Commission (HCC) and Planning and Zoning Commission (HPZC); Everett Hyde, HPZC; Susan Hochstetter, HPZC; Stanley Crawford, Chair, Town of Hampton Inland Wetlands and Watercourses Agency (HIWWA); Glen Newcombe, HIWWA; John Valente, Wetlands Agent, Town of Hampton; and Martha Fraenkel, Town Planner also attended the field review. Residents Gary & Regina DeCesare; Tim Huchthausen; Bob Grindle; Krist Mclaughlin; John Searles; and John Sokoloski also were present at the field review.

On or about March 15, 2016, the Petitioner notified the Town of Hampton (Town), other state and local officials and abutting property owners of the proposed project. To date, the Council has not received any comments from abutters.

### Municipal Consultation

The Petitioner contacted the Town Land Use Planner/Zoning Enforcement Officer to introduce the project. In addition, WS met with the Town at a joint Commissions meeting on April 21, 2016, subsequent to the Council's field review.

By letter dated April 28, 2016, the HPZC provided written comments to the Council. Specifically, the HPZC has the following requests:

- a) Petitioner coordinate with the Town so as to minimize impacts to stone walls and major trees along the affected segment of Fisk Road;
- b) Petitioner preserve stone walls, whether boundary walls or interior walls, to the greatest extent possible;
- c) Petitioner provide the Town with all operation and maintenance plans developed for the site;
- d) The site fence be the minimum required to provide security for the site and provide safety from hazardous conditions associated with electrical equipment;
- e) Fencing be raised approximately six inches above grade to accommodate the passage of wildlife and that the Petitioner evaluate the need to locate fencing, especially chain link fencing, around the entire perimeter of the site;



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer

- f) Petitioner provide the Town plans for stormwater and erosion and sedimentation controls and Town land use staff be granted access to the site upon their request (and reasonable notice to the Petitioner);
- g) Petitioner provide the mandated inspection correspondence related to the Connecticut Department of Energy and Environmental Protection (DEEP) General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities;
- h) Petitioner create an invasive species management plan;
- i) All A horizon soil remain on the site; and
- j) Spruce or other appropriate evergreen species are added to the buffer along Fisk Road on its west (interior) side.

By letter dated May 2, 2016, the Council responded to the HPZC and indicated that HPZC's concerns would be considered by the Council.

By letter received May 5, 2016, the HIWWA provided written comments to the Council. Specifically, the HIWWA has the following requests:

- a) Construction should be conducted in 5-acre phases pursuant to the DEEP General Permit for the Discharge of Stormwater and Dewatering Waste-wasters Associated with Construction Activities.
- b) Petitioner have a third party certified/qualified Inspector on site.

By letter dated May 5, 2016, the Council responded to the HIWWA and indicated that HIWWA's concerns would be considered by the Council. In its interrogatory responses dated June 24, 2016, WS addressed municipal comments/recommendations. WS' modifications or accommodations regarding municipal comments include, but are not limited to, the following:

- a) WS would minimize impacts to existing stone walls, and the entrance alignment off of Fisk Road has been revised for minimal impacts;
- b) WS would consult with the Town of Hampton in preparing the D&M Plan;
- c) While WS is proposing chain link fence, WS is amenable to installing square knotted fence, and the final fence design would be in the D&M Plan;
- d) WS would prepare an invasive species plan as part of the D&M Plan;
- e) WS does not expect to export soil from the site, regardless of type;
- f) Approximately 200 American Arborvitae are proposed along the northern limits of the project;
- g) Project phasing will be identified in the D&M Plan;
- h) Erosion control phasing will be identified in the D&M Plan, and erosion control methods will be adjusted to accommodate the Town's concerns;
- i) WS would outline the third party inspector requirements in the stormwater pollution prevention plan (SPPP);
- j) WS would mitigate the impacts of constructing the project on steep slopes through project phasing, stormwater detention/retention and overall site design in the SPPP in the D&M Plan.

### **Public Benefit**

The project would be a "grid-side distributed resources" facility, as defined in Connecticut General Statutes (CGS) § 16-1(a)(37). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The 2013 Connecticut Comprehensive Energy Strategy emphasizes low- or no-

emission sources of electric generation and development of more distributed generation. The proposed facility is distributed generation. Specifically, the proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard as a zero emission Class I renewable energy source.

### **Proposed Site**

The project would be located on an approximately 99.3-acre parcel owned by PLH, LLC and currently wooded and vacant. To the west is one residence with frontage along Route 138. To the east and south is undeveloped. To the north/northwest is Fisk Road and some residential properties on that road.

### **Proposed Project**

The solar field would include a total of 27,410 solar photovoltaic modules on fixed rack systems oriented to the south. These solar panels would be tilted on an angle of 15 degrees with the horizontal. The solar panels would reach a maximum height of about 6-foot 5-inches above ground level (agl) at the top edge and about three feet agl on the bottom edge.

The project was originally proposed as 10 MW AC or three arrays of 2 MW each and four arrays of 1 MW each. See attached Original Site Plan. This included a solar array located directly southwest of Route 138. However, at the field review, potential wetlands were discovered in its vicinity. Such array has been eliminated from the site plan.

According to WS' most updated Site Plan dated June 24, 2016, the solar project has seven arrays located on central portion of the subject property: Project 1 – 1 MW; Project 2 – 1 MW; Project 3 – 1 MW; Project 4 – 1 MW; Project 5 – 2 MW; and Future Project – 2 MW (combined from two arrays). Thus, the revised total is 8 MW AC. See attached Revised/Updated Site Plan.

WS has made an initial interconnection request of 3 MW with Eversource, which was approved. The remaining MW outputs are being reviewed by Eversource. The project will interconnect with Eversource's existing overhead distribution on Fisk Road. However, Eversource would have to upgrade the distribution line from single-phase to three-phase on Fisk Road to accommodate the solar project. If the solar project is approved, staff suggests that the electrical utility interconnection (between the solar facility and electric distribution on Fisk Road) be included in the D&M Plan.

WS is seeking approval for the entire 8 MW, but plans to construct Projects 1 through 5 first, and then would construct the Future Project at a later date. Council staff notes that, if the project is approved, WS could file a D&M Plan for the current arrays (i.e. Projects 1 through 5) and submit a separate D&M Plan for the Future Project at a later date.

WS is proposing a seven-foot tall chain link security fence with two-inch mesh, without barbed wire, and raised six inches above the ground (per the Town's request). WS evaluated a one-inch mesh fence, but found that the cost is nearly double that of the two-inch mesh fence. WS does not believe that a smaller mesh would provide sufficient added security value for the project to justify the incremental cost. WS is also considering square knotted fence per municipal comments. If approved, staff recommends that the final fence design be included in the D&M Plan.

The Petitioner would construct an access drive from Fisk Road that would run in a southeast direction to serve the solar facility. Off of the primary access drive would be an access drive to the west to serve the Project 7 array. If approved, staff recommends that the final details of the access drive design be included in the D&M Plan.

### Environment, Cultural and Scenic Values

The proposed project would involve a total of about 35.2 acres of tree clearing to accommodate the 39.7 acre project. No clearing in wetlands is proposed. The Petitioner has performed a carbon debt analysis. While the loss of trees necessarily reduces carbon capturing ability, the carbon dioxide emissions reductions due to the solar power displacing more traditional generation (which includes fossil-fueled generation) results in a very rapid “carbon payback” of about two days of full energy production. Thus, the proposed project would very quickly result in a net reduction in carbon dioxide emissions for the environment.

The solar rack posts are H-beams which would be driven into the ground. An alternative grouted foundation would be designed if subsurface boulders or ledge is encountered and used on an as needed basis. Approximately 1600 cubic yards of cut and approximately 1600 cubic yards of fill would be required to grade the project. Thus, no import or export of soil would be required.

With respect to stormwater management and erosion and sedimentation controls, if approved, staff recommends including a condition that a stormwater management plan consistent with the *2004 Connecticut Stormwater Quality Manual* and the final erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* be provided in the D&M Plan.

A Decommissioning Plan was included in the Petition and has provisions for project removal after a service life of up to 45 years.

The project would have no adverse environmental effect to air or water quality. The solar project would not produce air emissions of regulated air pollutants or greenhouse gasses during operation. The proposed project is not located within a DEEP-designated Aquifer Protection Area. While a 100-year flood zone exists on the subject property, the project itself would not be constructed within a 100-year or 500-year flood zone.

A large wetland system is located in the south and southwest portions of the subject property. Wetlands are also located in the eastern portion of the property. However, the project has been designed to avoid any direct wetland impacts. The 100-foot upland review area would remain largely intact with only very minor clearing (at the northeast portion of the project).

On March 23, 2016, a survey for breeding amphibians was conducted on the property. A second survey was performed on April 13, 2016. No isolated vernal pools were identified on the subject property. However, breeding amphibians were noted within two areas of the wetlands and there is the likelihood of an additional breeding area immediately off-site. The first breeding area was encountered in the northern finger of wetlands that are part of the large wetland complex in the south/southwestern portion of the site. Ten spotted salamander egg masses were noted thirty feet east of wetland flag #151. A large tree was blown down, and a small pool of standing water accumulated where the root ball of the down tree has created a small depression. The water was one foot or less in depth, and the total area of standing water was within a ten-foot circle. This breeding area is rated as Tier III per Klemens and Calhoun 2002 Best Development Practices (2002 BDPs). The hydrology of the breeding area may be marginal for life cycle completion.

The second breeding area was noted in the eastern finger of the same wetland complex. At wetland flag #75, a small pool of surface water has formed due to the blockage of surface water from slash that was left in the wetland from a previous logging operation. The surface flow has been partially blocked, and a small area of surface water approximately 20 feet by 50 feet and up to twelve inches deep has formed. The hydrology appears marginal, as this may be a temporary condition due to the

accumulated slash. Three wood frog and one spotted salamander egg masses were found. This breeding area is rated as Tier I per 2002 BDPs.

The two areas where breeding amphibians were found are well protected with no activity proposed within 100 feet of each.

Vernal Pool Assessment Sheets were provided in the Wetland Report dated April 27, 2016 in order to assess the quality of the breeding areas as they exist currently consistent with the requirements of the 2002 BDPs. These sheets indicate that at least 75 percent of the vernal pool envelopes (VPE) for each breeding area is currently undeveloped. In addition, at least 50 percent of the critical terrestrial habitat (CTH) areas for each breeding area is currently undeveloped. The existing distance of developed areas from the VPE and CTH of both breeding areas is a factor in the Cumulative Assessment ratings described above. The other factor incorporated into the Cumulative Assessment rating is the biological value of the breeding area including what breeding species were identified in the breeding area, which is also described above. Both amphibian breeding areas identified would be at least 130 feet from the proposed area of development.

Assuming that these breeding areas are vernal pools, there would be no construction within the 100-foot vernal pool envelopes (VPE). However, there would be construction within the 100-foot to 750-foot critical terrestrial habitat areas (CTH). The proposed Projects 1 through 5 would result in about 12.7 acres of development within the CTH of Vernal Pool 2. This is about 32 percent proposed development area within the CTH of Vernal Pool 2.

9.8 acres of the CTH for Vernal Pool 1 would be developed for the Future Project. This would result in about 24.6 percent development area of the CTH for Vernal Pool 1.

WS filed with DEEP regarding the Natural Diversity Database (NDDB). By letter dated January 26, 2016, DEEP noted that no negative impacts to State-listed species are anticipated. While DEEP NDDB analysis covers State-listed species, Council staff inquired about federally-listed species. Specifically, WS' consultant, E3 Environmental (E3), reviewed the project to assess possible impacts to federally-listed species. E3 notes that the northern long-eared bat, a federally-designated Threatened species, has the potential to occur within the project area. However, E3 notes that, provided tree clearing is suspended during the pup rearing season (i.e. June 1 through July 31), the proposed project would not result in adverse impacts to this species. E3 also notes that the sandplain gerardia, a federally-designated Endangered plant species, has the potential to occur in Windham County. However, E3 notes that, the proposed project, due to its distance from the coast, would not result in a negative impact to this species. The small whorled pogonia, a federally-designated plant Threatened species, has the potential to occur in Windham County. However, E3 notes that due to the lack of preferred habitat, the proposed project is not expected to have an adverse impact on the small whorled pogonia.

WS quantified the area of the proposed project on Prime Farmland and/or Farmland of Statewide Importance. The results are listed below. Council staff notes that P1 through P5 refer to Projects 1 through 5, and F1 refers to Future 1, respectively. Although agricultural land is not a natural resource, but is an economic resource, according to the Connecticut Supreme Court, with respect to the possible farmland value of the subject parcels to be developed for a solar facility, the Connecticut Department of Agriculture has not purchased any development rights for the proposed project as part of the State Program for the Preservation of Agricultural Land. WS owns all of the development rights on the parcels.

Project #	Soil Type	Designation	Impact Area (AC)	% Project Footprint
P1 - P5	73C	Not prime farmland	24.92	95.0%
P1 - P5	47C	Not prime farmland	0.79	3.0%
P1 - P5	3	Not prime farmland	0.52	2.0%
F1	73C	Not prime farmland	8.61	99.5%
F1	3	Not prime farmland	0.04	0.5%

By letter dated June 23, 2016, the State Historic Preservation Office (SHPO) indicated no properties listed on the National Register of Historic Places have been documented within or immediately adjacent to the project parcels and requested a professional cultural resources assessment and reconnaissance survey be completed prior to construction.

The proposed project would meet DEEP noise standards at the boundaries of the subject property. Noise related to construction would be exempt per DEEP noise regulations.

There are approximately 10 homes located within a 1000-foot radius of the center of the project. The nearest off-site residence is located on the south side of Fisk Road, approximately 358 feet northwest of the proposed project.

The visual impact is not expected to be significant given that there would be significant tree cover around all solar arrays in the project and distance of nearly 360 feet to the nearest home to the northwest along Fisk Road. In addition, the Petitioner has provided a 30-foot setback from the northern limits of the project to Fisk Road. As noted above, WS would plant 200 American Arborvitae roughly along the northern limits of the project to mitigate visual impacts on residents along Fisk Road.

### Conclusion

The Petitioner contends that pursuant to CGS § 16-50k(a), the Siting Council shall approve by declaratory ruling the construction or location of “any customer-side distributed resources project or facility or grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Protection.” The proposed project meets these criteria. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize wetland impacts, and furthers the State’s energy policy by developing and utilizing renewable energy resources and distributed energy resources. In addition, as demonstrated above, the proposed project will not have a substantial adverse environmental effect.

### Recommendations

Staff recommends inclusion of the following conditions:

1. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Hampton for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) A final site plan for Projects 1 through 5 including, but not limited to, the electrical interconnection design, fence design and access drives;
  - b) A final site plan for the Future Project including, but not limited to, the electrical interconnection design, fence design and access drives;

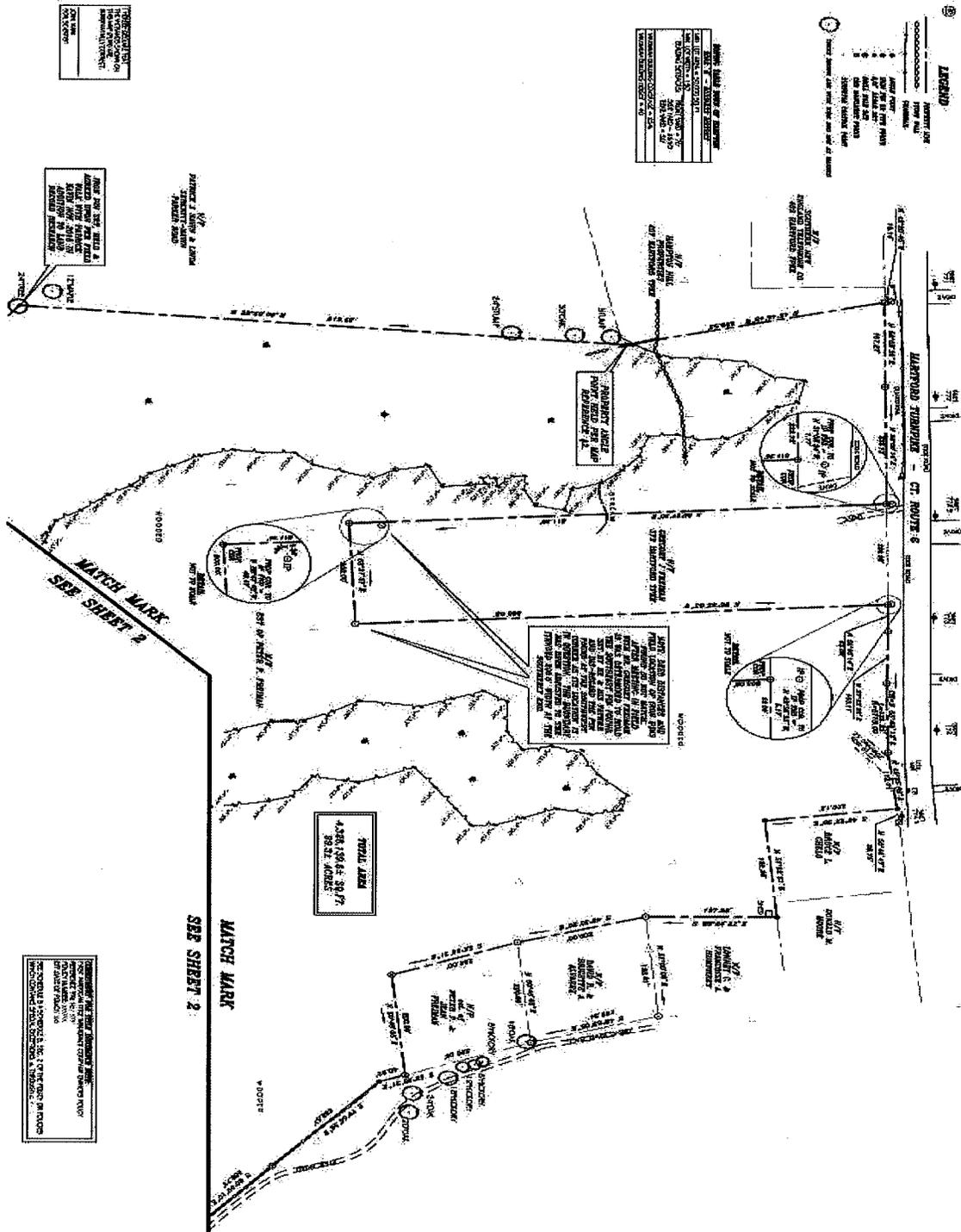
- c) Landscaping along Fisk Road on the subject property;
- d) Erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control*;
- e) A stormwater management plan consistent with the *2004 Connecticut Stormwater Quality Manual*;
- f) Name and resume of an independent environmental inspector for Council review and approval;
- g) Vernal Pool Habitat Impact Mitigation Plan;
- h) Plans to avoid tree clearing during the June 1 through July 31 as a protective measure for the northern long-eared bat;
- i) Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel; and
- j) Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes.



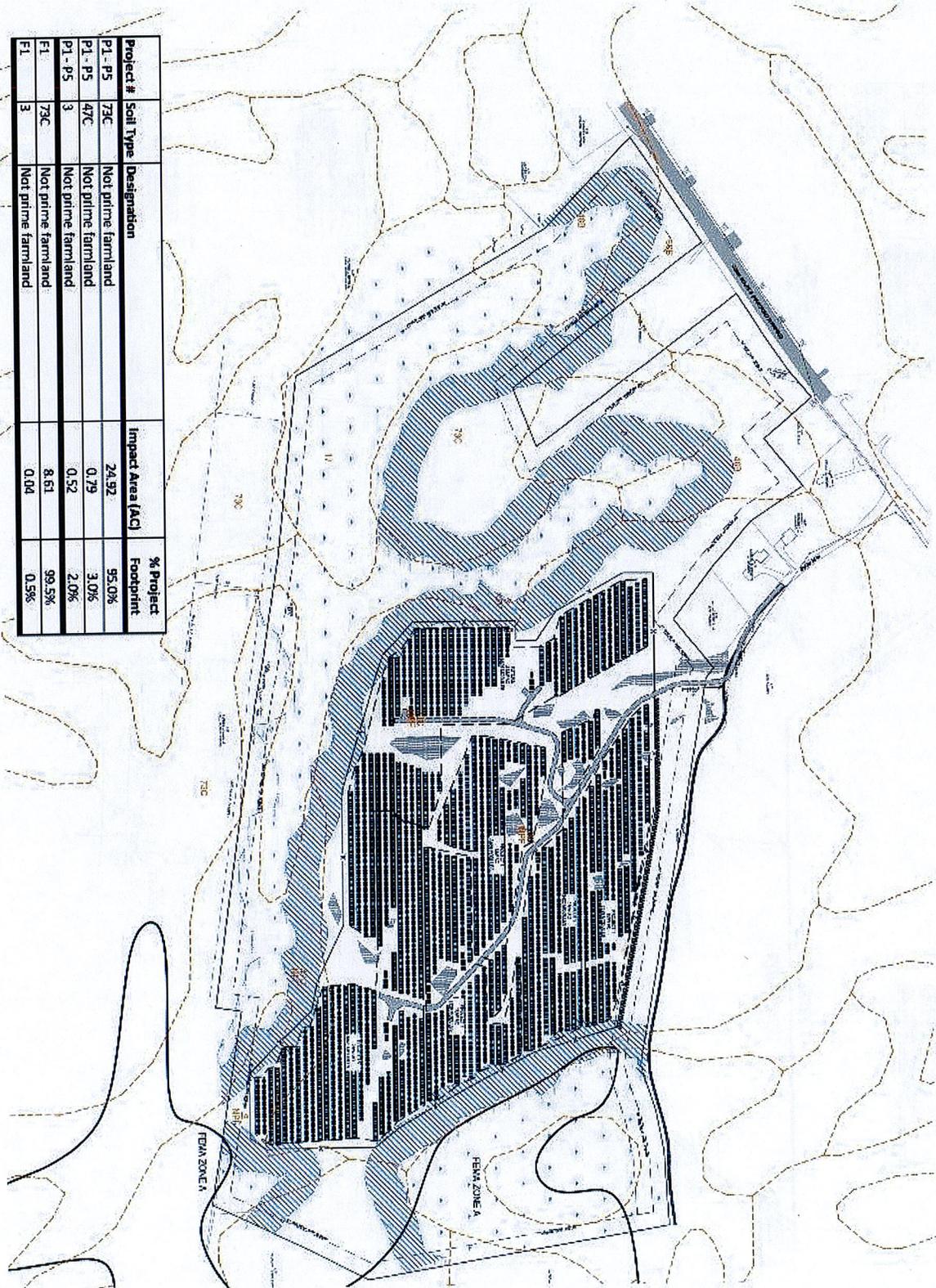




**Figure 4 - Site Survey with Wetland Flags**



**Figure 5 - Analysis of Agricultural Land Values**



Project #	Soil Type	Designation	Impact Area (Ac)	% Project Footprint
P1 - P5	79C	Not prime farmland	24.92	95.0%
P1 - P5	47C	Not prime farmland	0.79	3.0%
P1 - P5	3	Not prime farmland	0.52	2.0%
E1	79C	Not prime farmland	8.61	99.5%
E1	3	Not prime farmland	0.04	0.5%