DRAFT

Petition No. 1507
VCP EPC, LLC d/b/a Verogy Solar Facility
99 International Drive, Windsor, CT

Staff Report
July 1, 2022

Introduction

On April 20, 2022, the Connecticut Siting Council (Council) received a petition from VCP EPC, LLC d/b/a Verogy (Verogy) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 2.99 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility located on the roof of the Dollar Tree Distribution Center building at 99 International Drive, Windsor, Connecticut, and associated electrical interconnection (Petition or Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, on or about March 28, 2022, Verogy notified abutting property owners, Town of Windsor (Town) and Town of East Granby[1] officials, and state officials and agencies of the proposed project. No comments were received.

The Council issued interrogatories to Verogy on June 13, 2022, Verogy submitted responses to the Council's interrogatories on June 27, 2022.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take action on a petition within 60 days of receipt. On June 9, 2022, pursuant to CGS §4- 176(e), the Council voted to set the date by which to render a decision on the Petition as no later than October 17, 2022, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

Municipal Consultation

In March 2022, Verogy informed municipal officials in Windsor and East Granby of its plans to develop the Project. No comments were received.

On April 22, 2022 and April 25, 2022, respectively, the Council sent correspondence to the Towns of Windsor and East Granby stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by May 20, 2022. No comments were received from the Towns.

State Agency Comments

On April 25, 2022, the Council sent correspondence requesting comments on the proposed project from the following state agencies by May 20, 2022: Department of Energy and Environmental Protection (DEEP); Department of Agriculture (DOAg); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Emergency Services and

[1] The Town of East Granby is located within 2,500 feet of the proposed facility.

Public Protection (DESPP); Department of Consumer Protection (DCP); Department of Labor (DOL); Department of Administrative Services (DAS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO).

No state agencies provided written comments on the proposed Project.

Public Act 17-218

Public Act 17-218 (PA 17-218) requires "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such project will not materially affect the status of land as core forest." Verogy has secured written confirmation from both DoAG and DEEP.

Public Benefit

The project would be a distributed energy resource facility as defined in CGS § 16-1(a)(49). 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 2018 Comprehensive Energy Strategy (2018 CES) highlights eight key strategies to guide administrative and legislative action over the next several years. Specifically, Strategy No. 3 is "Grow and sustain renewable and zero-carbon generation in the state and region." Furthermore, on September 3, 2019, Governor Lamont issued Executive Order No. 3, which calls for complete decarbonization of the electric sector by 2040. The proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard and Global Warming Solutions Act as a zero emission Class I renewable energy source.

Verogy was awarded one 15-year Zero Emissions Renewable Energy Credit (ZREC) contract for approximately 1.0 MW AC and one 15-year Low Emissions Renewable Energy Credit (LREC) contract for approximately 2.0 MW AC with The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) under the state's LREC/ZREC Program to sell the renewable energy credits (RECs) from the facility. The LREC/ZREC Program was developed as part of Public Act 11-80, "An Act Concerning the Establishment of the [DEEP] and Planning for Connecticut's Energy Future." The LREC/ZREC Program is not among the competitive energy procurement programs that are exempt from PA 17-218. [2]

There are no provisions to extend the LREC and ZREC contracts.

The LREC/ZREC Program is not among the competitive energy procurement programs that are exempt from Public Act 17-218.

Verogy may participate in an ISO-New England, Inc. Forward Capacity Auction.

Proposed Site

Verogy proposes to construct the solar facility on the roof of a commercial building located on an approximately 93.1-acre parcel zoned Industrial (I). The parcel is located south of International Drive and west of Stone Road. It hosts the Dollar Tree Distribution Center (DTDC).

[2] ZREC contracts are limited to 1 MW, and LREC contracts are limited to 2 MW. (CGS §16-244r).

The Project would be located on the central portion of the DTDC roof, which is approximately 43 feet above ground level (agl) on its eastern and western sides and approximately 50 feet agl in the center.

Surrounding land uses consist of industrial and residential properties to the east, residential properties and forested wetlands to the south, agricultural uses and forested wetlands to the west, and International Drive directly to the north. The nearest property line from the solar facility is approximately 362 feet to the south at 43 Loren Circle. The nearest residence to the host property is approximately 430 feet to the south at 43 Loren Circle.

Proposed Project

DTDC will own the facility. Verogy proposes to install a 2.99 MW AC solar facility consisting of a total of 8,320 solar panels rated at 540 Watts on the roof of the DTDC. One 1.00 MW AC array would consist of 2,768 solar panels, and one 1.99 MW AC array would consist of 5,552 solar panels.

The panels would be installed facing south on a fixed racking system. The panels would be installed at a 10 degree angle, approximately 13.5 feet above the roof at the highest point.

Panel row wiring would be installed within the racking system or cable tray to reduce exposure to weather events or animals. The solar panels would connect to approximately 51 string inverters.

The facility would be interconnected to two existing switchgear units located inside the building's electrical room. The switchgear units are currently served by two pad-mounted utility transformers. One existing 1,500 kilovolt-ampere (kVA) Eversource-owned transformer would be replaced with a 2,000 kVA transformer, and new service conductors would be run within the existing conduits to the existing switchgear.

An interconnection application has been submitted to Eversource for the Project. Subsequently, Eversource initiated an impact study for the Project. Review by ISO-NE would be addressed by Eversource during the interconnection process. Any distribution upgrades, if necessary, would be determined by the impact study.

The capacity factor for the Project is approximately 19.4 percent. The power output would decline over time with an anticipated annual power output loss of approximately 0.69 percent.

The proposed Project is not designed to support a microgrid or a battery storage system.

Access to the solar facility would be via the existing driveway and parking lot for the DTDC.

Construction is anticipated to begin in summer/fall 2022 and would occur over an approximately 8 month period. Typical construction hours and work days of the week are as follows: Monday – Saturday, 7:00 AM to 5:00 PM; and Sunday, 9:00 AM to 5:00 AM.

The estimated cost of the project is approximately $6,500,000.

Public Safety

The proposed project would comply with the National Electrical Code, National Electrical Safety Code and National Fire Protection Association codes and standards, as applicable.

The nearest federally-obligated airport to the site is Bradley International Airport located 1.75 miles northeast of the site. Under Federal Aviation Administration (FAA) criteria, the Project would not be a Hazard to Air Navigation or require a FAA glare analysis.

The Facility would be remotely monitored 24/7 to monitor the full site and inverter level production, alarm status and site weather data.

An emergency shut-off switch with appropriate signage and accessible to emergency responders would be located at ground level. DTDC would coordinate with Town emergency responders regarding access to the facility and the emergency shutoff switch.

A Professional Engineer duly licensed in the State of Connecticut has certified that the existing roof structure of the building is adequate to support the proposed loading.

The proposed facility would be in compliance with DEEP Noise Control Standards. Construction-related noise is exempt from DEEP Noise Control Standards.

The ground equipment associated with the electrical interconnection is not located within a Federal Emergency Management Agency designated 100-year or 500-year flood zone.

Environmental Effects and Mitigation Measures

Historic and Recreational Resources

There are no historic districts or properties near the site. No public parks or other publicly accessible recreation resources are located adjacent to the site.

Visibility

The proposed facility would not have significant visual impacts. Views of the facility are not expected from the residential neighborhoods located off of Winterwood (to the east); and Loren Circle and Webber Road (to the south).

There are no national, state and/or locally designated scenic roads near the proposed site.

Agriculture

The host parcel contains prime farmland soils according to mapping maintained by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). Under PA 17-218, "prime farmland" means land that meets the criteria for prime farmland as described in 7 Code of Federal Regulations (C.F.R.) 657, as amended from time to time. 7 C.F.R. 657 defines prime farmland in relevant part as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses."

The subject parcel contains 14.8 acres of prime farmland soils that are already impacted by a distribution facility and paved parking areas. There is no current agricultural production at the site.

By letter dated April 5, 2022, DOAg indicated that there would be no further material impact on prime farmland soils resulting from the Project.

Wetlands and Watercourses

Forested wetlands are located to the west and south of the site. The limited ground disturbance associated with the electrical interconnection is located over 300 feet from the wetlands. Thus, the Project would not adversely impact wetlands.

Wildlife

The project area is not located within a DEEP Natural Diversity Database (NDDB) buffer area.

The northern long-eared bat (NLEB), a state-listed Endangered Species and federally-listed Threatened Species, is known to occur in Connecticut. However, no trees would be removed to construct the facility.

Forest

Under PA 17-218, "core forest" means unfragmented forest land that is three hundred feet or greater from the boundary between forest land and nonforest land, as determined by the Commissioner of DEEP. UCONN's Center for Land Use Education and Research (CLEAR) defines "core forest" as forested areas that are essentially surrounded by more forested areas and fall into three classes – small core forest, medium core forest and large core forest. Small core forest is comprised of core forest patches that are less than 250 acres. Medium core forest is comprised of core forest patches that are between 250-500 acres. Large core forest is comprised of core forest patches that are greater than 500 acres.

The Project is a rooftop facility that would not require tree clearing. By letter dated March 10, 2022, DEEP indicated that there would be no material impact to core forest.

Air Quality

The Project would not produce air or water emissions as a result of operation. The Project would not produce air emissions of regulated air pollutants or greenhouse gases during operation.

Water Quality

The site is not within a DEEP-designated Aquifer Protection Area. There are no public drinking water supply watershed areas located on the site.

The facility would not use or discharge water during site operations.

Stormwater

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater discharges. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. The DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) requires implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. The SWPCP incorporates project designs consistent with the *2002 Guidelines* and the *2004 Connecticut Stormwater Quality Manual (2004 Stormwater Manual).*

A DEEP-issued General Permit is not required prior to commencement of construction activities because the Project would disturb less than one acre for the required utility connections, and the solar arrays would be roof-mounted.

The building roof has an existing stormwater drainage system. Stormwater is captured through a perimeter roof drainage system that is discharged to the on-site stormwater management system.

No upgrades to the existing stormwater drainage system are required. The proposed racking system would sit on pads that elevate the bottom of the arrays approximately one inch above the roof.

Operation and Maintenance

A post-construction Operations and Maintenance (O&M) Plan has been developed that includes provisions for periodic inspections of physical site features and structural and electrical components.

An evaluation of the facility and performance of preventative maintenance measures would be conducted annually by on-site personnel. The evaluation would include the electrical system/components and physical infrastructure.

Module cleaning would only be conducted on an as needed basis using water. Snow removal is not anticipated.

Decommissioning

The Project has an operational life of approximately 35 years. At the end of the Project's useful life, the Project would be decommissioned and removed from the site. Project decommissioning would include removal and disposal or recycling of project components.

The selected solar panels for the Project meet current Toxicity Characteristic Leaching Procedure (TCLP) criteria for characterization as nonhazardous waste in the event the solar panels are not recycled at the end of the project's life.

Conclusion

The project is a distributed energy resource with a capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, would not materially affect the status of prime farmland or core forest, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize environmental impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources. Furthermore, the project was selected under the state's LREC/ZREC Program.

Recommendations

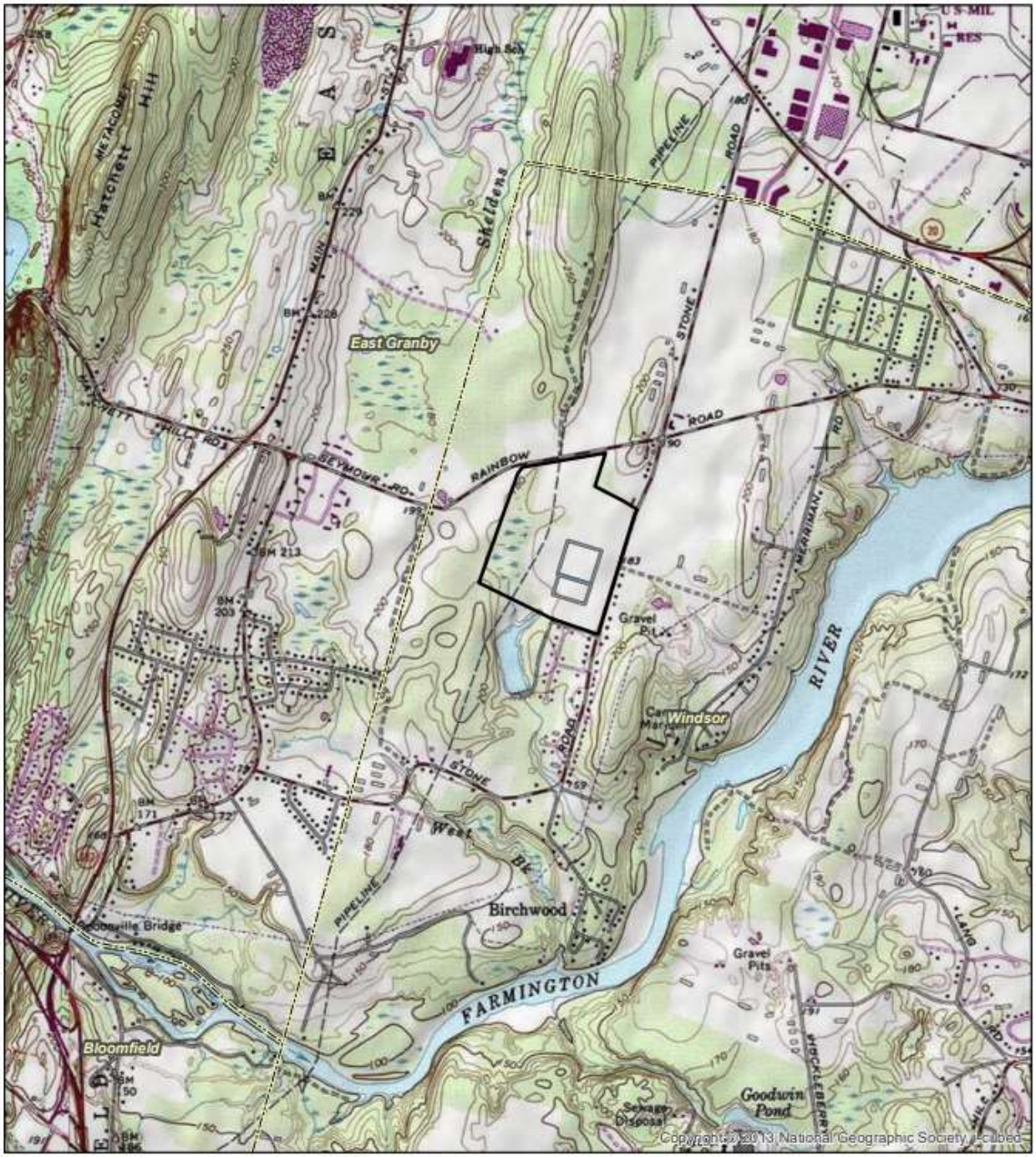
If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff;

2. Submit the final structural design for the racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction; and

3. Provide training to emergency responders.

Site Property Map



Legend

- Site
- Project Area
- Municipal Boundary (CTDEEP)

Site Location Map
March 2022

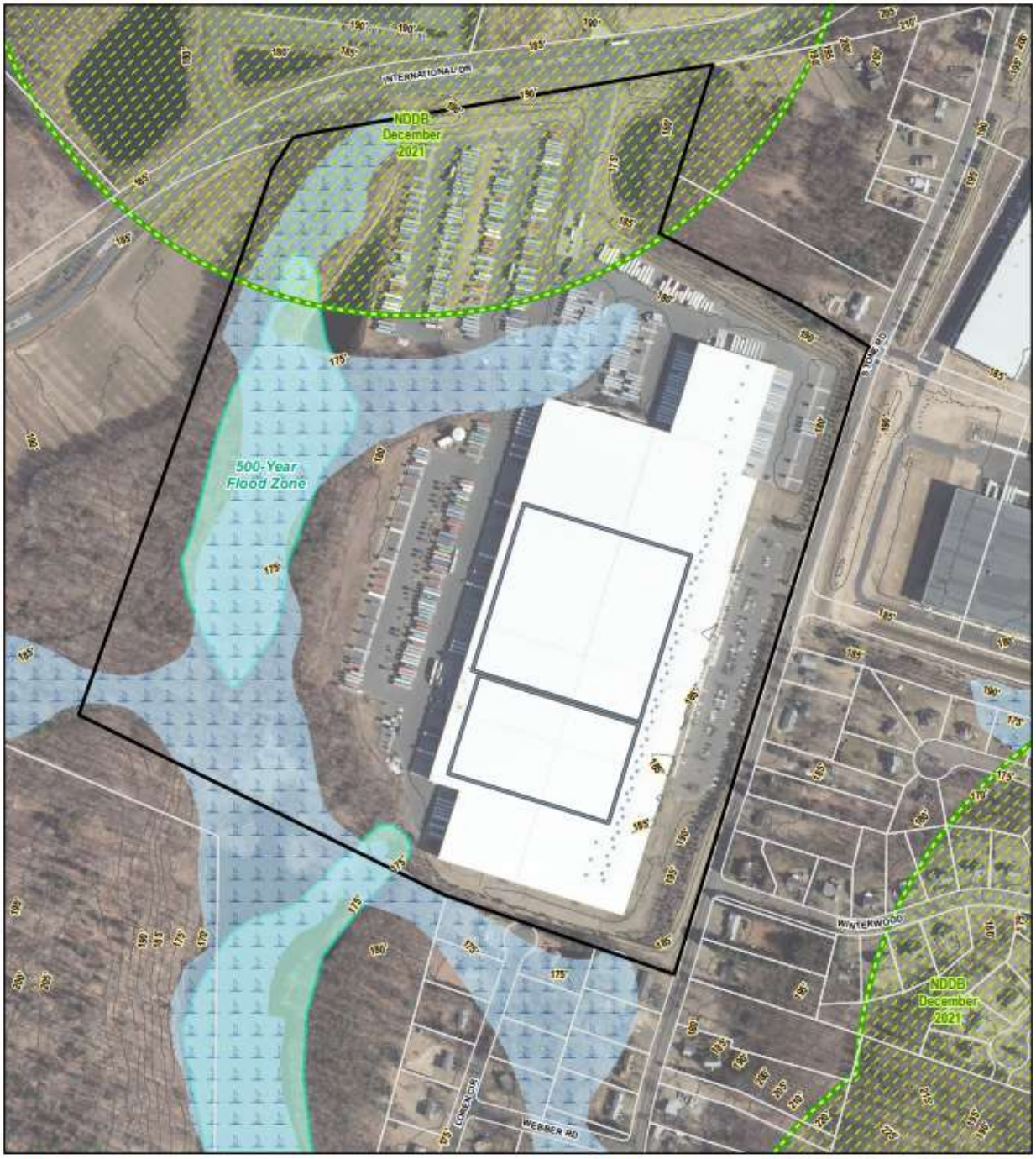
2.99 MW Roof-Mounted Solar Project
Dollar Tree Distribution Center
99 International Drive, Windsor, Connecticut

1,000 0 1,000 Feet

Figure 1

Source: USGS 7.5 Minute Topographic Quadrangle Map, Tariffville, CT (1984) and Windsor Locks, CT (1984)

Host Property – Existing Conditions



Legend

- Site
- Project Area
- Approximate Parcel Boundary
- 5-foot Contour Line
- Natural Diversity Database Area (Dec 2021)
- Critical Habitat (Oct 2019)*
- Wetlands (CTDEEP)
- Tidal Wetland*
- Aquifer Protection Area (Jan 2022)*

FEMA Flood Zones

- 100-Year Flood Zone*
- 500-Year Flood Zone
- Floodway*

Data Sources:
*Data layer not located within mapped extent
Aerial Base Map: State of Connecticut 2019 aerial imagery CTECO
Elevation Contours: 2016 LiDAR data CTECO
Other: CTDEEP's data library (http://www.ct.gov/deep)

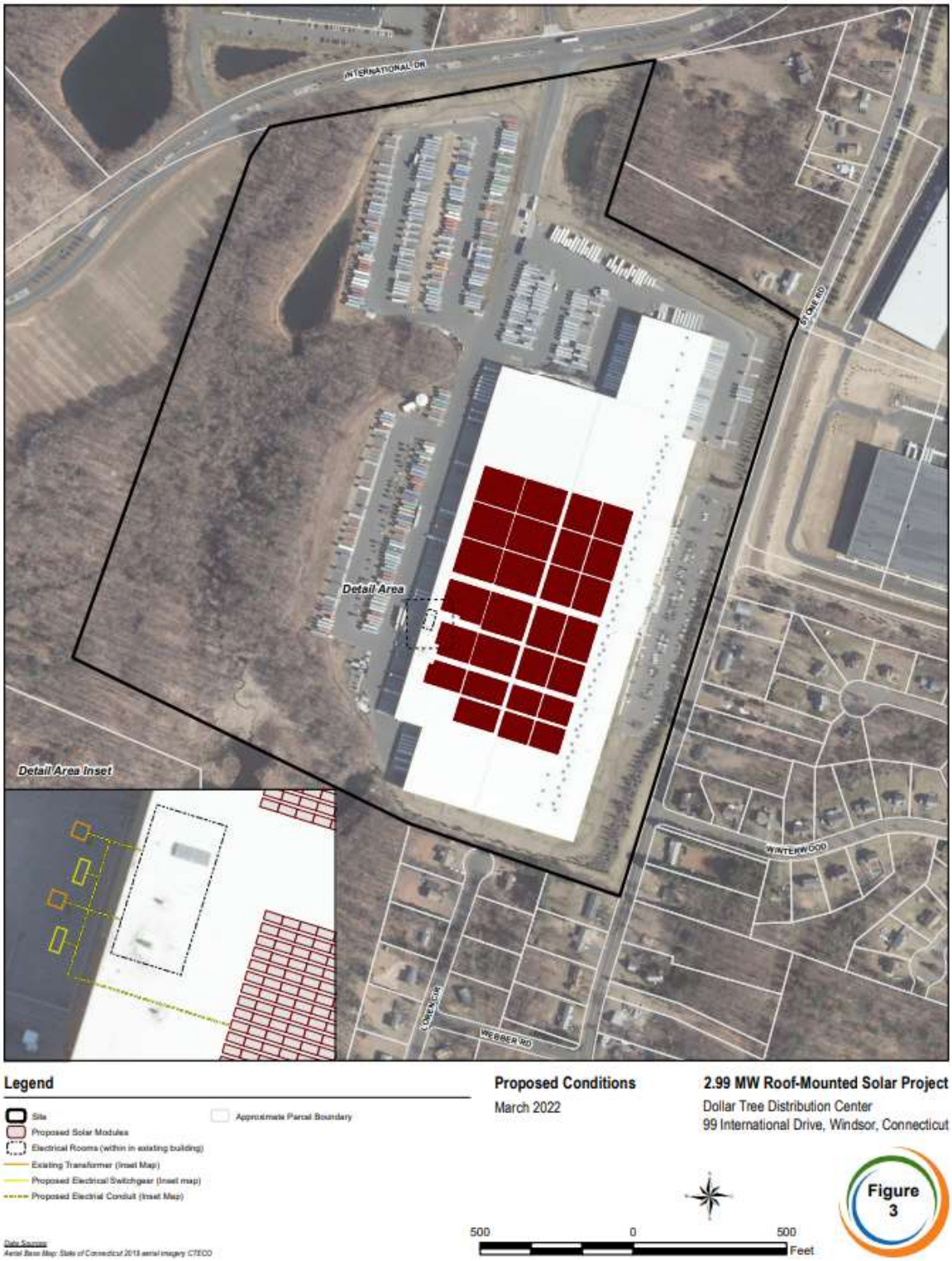
Existing Conditions
March 2022

2.99 MW Roof-Mounted Solar Project
Dollar Tree Distribution Center
99 International Drive, Windsor, Connecticut

500 0 500
Feet

Figure 2A

Site Layout


INTERNATIONAL DR
ST OLAF RD
Detail Area
Detail Area Inset
WINTERWOOD
WEBBER RD
Legend
Site
Approximate Parcel Boundary
Proposed Solar Modules
Electrical Rooms (within in existing building)
Existing Transformer (Inset Map)
Proposed Electrical Switchgear (Inset map)
Proposed Electrial Conduit (Inset Map)
Data Sources
Aerial Base Map: State of Connecticut 2019 aerial imagery CTECO
Proposed Conditions
March 2022
2.99 MW Roof-Mounted Solar Project
Dollar Tree Distribution Center
99 International Drive, Windsor, Connecticut
500
0
500
Feet
Figure 3