



# Windsor Substation Project

---

January 22, 2024

Town of Windsor Selectboard  
Town of Windsor Planning Commission  
Mt. Ascutney Regional Commission  
ePUC Statutory Parties

Re: Windsor Substation Project  
Certificate of Public Good – Section 248 Permit Process  
45-Day Notice of Project Filing

This letter and enclosed information describe the Vermont Electric Power Company Inc. and Vermont Transco LLC (collectively VELCO) proposed Windsor Substation Project (the Project), which includes upgrades to VELCO's existing facilities in the Town of Windsor, and generally consists of upgrading VELCO's substation located at 488 Hunt Road in Windsor, Vermont.<sup>1</sup>

We anticipate filing our formal petition with the Vermont Public Utility Commission (Commission) on or after March 7, 2024, requesting a Certificate of Public Good to construct the Project. The state permitting process requires VELCO to provide notice to the Town of Windsor Planning Commission and Selectboard, and to the Mt. Ascutney Regional Commission, at least 45 days before a formal filing with the Commission.<sup>2</sup> For your information, we have attached a Project overview and a substation site layout to this letter.

Before the Project is filed with the Commission, VELCO will conduct informal discussions to address concerns you may have about the Project's impact. On February 8, 2024, at 5:30 PM, VELCO will hold an in-person meeting at the town office in Windsor to share information, collect feedback, and address concerns from affected communities.

You will also receive notice of our petition when, after filing, it is deemed complete by the Commission.<sup>3</sup> Please note that the Windsor Planning Commission and Mt. Ascutney Regional Commission may make recommendations to VELCO about the Project within 40 days of the date of this notice. If our Petition provides new or more detailed plans about the Project than what is provided with this notice, the Windsor Planning Commission and the Mt. Ascutney Regional Commission are entitled to submit revised recommendations within 45 days after the date the petition is filed with the Commission. VELCO also welcomes feedback about the Project from the

---

<sup>1</sup> Information about the Project is also available at: <http://www.velco.com/windsor>.

<sup>2</sup> The process is governed by Public Utility Commission Rule 5.400, which can be found on the Commission's website at: <https://puc.vermont.gov/document/commission-rule-5400-requirements-construct-electric-gas-facilities-pursuant-30-vs-a-248>.

<sup>3</sup> As noted earlier, we anticipate filing the formal petition on March 7, 2024. However, the formal notice of the petition may not go out until a few days later, as the Commission must first determine whether the petition is complete.

Windsor Selectboard, state agencies, and any other interested party. To give VELCO sufficient time to incorporate your feedback before the March 7, 2024 anticipated filing date, VELCO is requesting that comments be submitted by February 22, 2024.

For additional information regarding the Commission’s processes, including your right to participate in the proceeding, please refer to the Commission document titled “A Citizens Guide to the Public Utility Commission,” which is available on the Commission’s website at:

<https://puc.vermont.gov/document/citizen-guide-public-utility-commission>.

The Commission’s website also includes a Section 248 procedures document found at

<https://puc.vermont.gov/document/section-248-procedures>.

The Project is still in the design phase, so we will continue discussions and expect to receive feedback on our plans from various stakeholders. Please note that we expect to make the formal filing with the Commission on March 7, 2024. If you are interested in a presentation on the Windsor Substation Project, have comments, or want further information, please contact Bill Allard, Project Manager, at 207-712-9483 or ballard@velco.com. So that we may better address any questions or concerns you may have, please contact us by February 22, 2024.

Sincerely,

***William J. Allard***

William J Allard

Enclosures:

Attachment A – Project Overview

Attachment B – Windsor Substation – Overall Ortho Plan



# Windsor Substation Project

---

## PROJECT OVERVIEW

### Introduction

Vermont Electric Power Company Inc. (VELCO) was formed when local distribution utilities joined together to create the nation's first statewide "transmission only" company to provide access to clean hydro power and build and maintain the state's high-voltage electric transmission grid.<sup>1</sup> VELCO constructs, owns, and operates most of this in-state, high-voltage transmission grid (essentially 115 kV and above) that connects Vermont to the regional and national electric power supply system. VELCO's network also provides the electric supply to Windsor's local distribution utility, Green Mountain Power, Inc. (GMP).

The Windsor Substation Project (the Project) is driven by the need to improve the condition of VELCO's existing facilities in the Town of Windsor and comprises improvements to VELCO's Windsor Substation. We expect to file a request on or after March 7, 2024, with the Vermont Public Utility Commission (Commission) for permission to undertake this Project and, assuming the Commission and other approvals are granted, currently plan for the Project work to be completed by the spring of 2026.

This Project overview describes the following:

- Deficiencies at VELCO's Windsor Substation
- Alternatives evaluated for this Project
- The Project's description
- The Project's impact
- The anticipated Project filing date with the Commission
- Rights to comment on the project plans and to participate in the Certificate of Public Good (CPG) proceeding

### Description of the VELCO Windsor Substation Deficiencies

Electricity remains a cornerstone of our local and state economies, our quality of life, and our communities. Households, businesses, and public services like schools and hospitals all rely on electricity for communication, lighting, heating, ventilation, and the operation of appliances and equipment. If transmission facilities fail, large geographic areas can lose their electric service. Transmission utilities such as VELCO are required to design, operate, and maintain a transmission network according to national and regional reliability standards. In addition, VELCO continuously assesses the adequacy of its system to ensure Vermont's transmission network meets national and regional reliability criteria.

---

<sup>1</sup> Transmission refers to the part of the electric system that operates at high voltage and carries large amounts of electricity from generation plants to the lower-voltage distribution system, which supplies electricity to local areas.

The VELCO Windsor Substation is located at 488 Hunt Road in Windsor, Vermont, on two parcels of land comprising approximately 20.8 acres adjacent to Interstate 91. The Substation is a 115kV/46kV radial facility that feeds GMP's sub-transmission system in the Windsor area, enabling GMP to serve its retail electric customers. The Substation was originally commissioned in 1978.

In 2023, VELCO performed a condition assessment of the Substation to identify deficiencies in equipment and site conditions. VELCO uses a 20-year plan for substation operability and reliability. Using current standards and evaluation criteria, the condition assessment identified several deficiencies in the Windsor Substation that the Project will address.

The primary deficiency is the Substation's control building, which must be replaced with a larger building that meets current VELCO standards. The new control building will have water and wastewater facilities to accommodate workers and will use a new more energy-efficient heating and cooling system. The Project will also replace the existing perimeter fence and relocate approximately 620 feet of driveway and entryway onto Hunt Road. To make efficient use of company resources, while the Project is under construction, other improvements will be made, such as security upgrades, replacing the existing secondary transformer oil containment system, upgrading the facility's protection, control, and telecommunications systems, and replacing certain equipment in the ordinary course of business with in-kind equipment.

To maintain electrical transmission while executing corrective actions with minimal necessary outages, VELCO plans to install temporary breakers and disconnects to feed the GMP system from an existing transformer. The temporary facilities will be removed once construction is complete and the upgraded Substation is commissioned.

The attached orthographic plan (Attachment B) identifies the proposed new control building in red and identifies the existing control building that VELCO proposes to remove in blue.

### **Alternatives Evaluated**

As an integral part of Vermont's electric system, the Windsor Substation is needed to keep power flowing to end-user customers. The proposed scope of work addresses the deficiencies and concerns identified above, and this work does not preclude future substation modifications if future reliability concerns are identified. Replacing and repairing deficient equipment at the Windsor Substation is the most cost-efficient way to address the existing condition-related concerns.

VELCO screened the Project for its potential to be resolved through non-transmission alternatives (e.g., energy efficiency or new generation) using the tool developed by the Vermont System Planning Committee (VSPC). The screening determined that the Project was not a candidate for a non-transmission solution because the proposed upgrades are being driven by the conditions of the substation equipment. Thus, non-transmission alternatives could not avoid or defer the VELCO Windsor Substation Project. The VSPC Geographic Targeting Subcommittee reviewed the screening conclusion in the June 2023 meeting.

## Project Description

The Project consists of the following primary components:

- Replace and relocate the existing 20' X 28" control building with a 32' X 60' control building that can accommodate a new protection and control system, redundant AC & DC station services, communication equipment, security systems, and new bathroom facilities. The new control building will be in the northwest corner of the substation yard.
- Replace the existing perimeter fence and expand 30' north, 12' east and 4' south to accommodate the new control building and improve access around the energized equipment.
- Replace the existing 115 kV circuit switcher with an SF6 gas circuit breaker that meets VELCO's current design standards.
- Reconstruct and widen the driveway to 20 feet with a turn around.
- Relocate approximately 620 feet of driveway and the entryway onto Hunt Road.
- Improve site drainage.
- Perform tree clearing to accommodate the temporary infrastructure, temporary construction support area, expanded substation, and improvements and relocation of the driveway.

VELCO will need to install temporary feeds to GMP's 46 kV system, which will be removed, with any disturbance restored at the end of the Project. The areas where this equipment will be installed are identified on the site plan. The Project will also require VELCO to drill a well and install a wastewater system because there are no municipal water supply or wastewater connections available at the site. The new systems conform to VELCO's Water Supply Siting Standard, and the Wastewater System and Potable Water Supply Rules administered by the Vermont Department of Environmental Conservation Drinking Water and Groundwater Protection Division. To maintain proper clearance to the fenced yard and to allow for the expansion in the northwest corner, the project will require cleanup of the ledge on the west side of the substation, which likely will require us to do some blasting and rock hammering. Please see note 5 on the site plan.

While the Project is constructed, VELCO will take advantage of the opportunity to perform regular condition-based maintenance and in-kind replacements at the Substation. This opportunity work is not part of the Project requiring Commission approval (since in-kind replacements and maintenance work are exempt), but will occur at the same time and includes: replacement of the existing transformer berm oil-containment system with the VELCO standard transformer secondary oil-containment system, replacement of transformer bushings and gaskets, replacement of oil circuit breakers, replacement of disconnect switches, replacement of the protection and control system, updates to the telecommunications, security, and monitoring systems, replacement of redundant AC & DC station services, replacement of telecommunications equipment, installation of power transformer and circuit breaker monitoring systems, and improvements to security systems.

Assuming regulatory approval, construction is expected to start in January of 2025 with a targeted completion and commissioning date of June 2026.

## **Project Impacts**

### ***Aesthetics***

VELCO's aesthetic consultant, T. J. Boyle Associates, LLC (TJB), a landscape architecture and planning firm, has reviewed the preliminary design plans and performed a visual analysis of the areas of the proposed Project upgrades. TJB's preliminary analysis indicates that the Project will not result in an undue adverse impact on aesthetics and scenic and natural beauty of the area. The Windsor Substation is located approximately 1200 feet from Hunt Road in a low-visibility wooded area that is adjacent to Interstate 91. There are no residential or commercial structures near the site. Vegetation and landform significantly screen visibility of the existing substation from the surrounding area. Proposed improvements will require vegetation clearing, shown on Attachment B, Overall Site Ortho, which is unlikely to increase visibility of the substation and proposed improvements from the surrounding area, with the exception of the relocated driveway and entryway. Vegetation will be allowed to regrow in the areas adjacent to the relocated driveway and entryway, and no landscape mitigation plantings are proposed. VELCO's Petition to be filed in March 2024 will address any comments received on the proposed plan and will include a full analysis of potential aesthetic impacts.

### ***Transportation***

The Project will not result in long-term traffic impacts to Windsor or require special transportation permits. Traffic during construction will be typical of modest construction projects like the Windsor Substation Project with the delivery of equipment and material to the Substation site. Such deliveries will use existing roads with vehicles that are commonly used on public roads. If needed, VELCO will employ the services of traffic control personnel to manage traffic flow in and out of the Substation property. Once operational, the Substation will be visited on occasion by VELCO personnel for regular maintenance and repairs.

### ***Natural Resources***

The Windsor Substation property contains natural resource constraints that VELCO must evaluate for avoidance and to minimize impacts. Wetlands occur north of the Substation within the GMP line corridor and south of the station along the K15 corridor west of the existing access drive off Hunt Road. The wetland identified to the south also has a vernal pool associated with it. Although not currently defined as or associated with a stream, a ~300ft long conveyance culvert connects wetlands on the south side of the Substation to wetlands on the north side directly beneath electrical equipment within the Substation. VELCO conducted a site visit with the Vermont Wetlands Program and the U.S. Army Corps of Engineers, and the wetlands were confirmed as Class II. The Project is designed to avoid the wetlands, but it will encroach on the 50-foot buffer zone on the north side of the substation.

Prime agricultural soils of statewide significance are present at the site. VELCO will employ Best Management Practices to mitigate impacts to prime agricultural soils where such impacts are unavoidable. The Best Management Practices include construction matting, stone on fabric and/or soil segregation, and decompaction during restoration.

There are no known or reported occurrences of rare, threatened, or endangered (RTE) species within the immediate vicinity of the Substation. Tree clearing will be avoided to the extent possible by using open portions of the site for any temporary substation equipment and staging areas. Any tree clearing will be subject to review under the new Northern Long-Eared Bat guidance, and time-of-year restrictions on tree clearing are likely.

There are no Outstanding Resource Waters, floodplains, or shorelines directly in the vicinity of the existing Windsor Substation.

In the past there have been issues with ravens nesting at the Windsor Substation causing reliability concerns. VELCO will evaluate the need and feasibility of any deterrents or proactive measures that could be implemented to protect migratory birds and the electrical infrastructure.

VELCO's CPG application will include a complete natural resource impact assessment to demonstrate that the Project will not have an undue adverse impact on the natural environment.

### **Comments on the Project Plans and Participation in the CPG Proceeding**

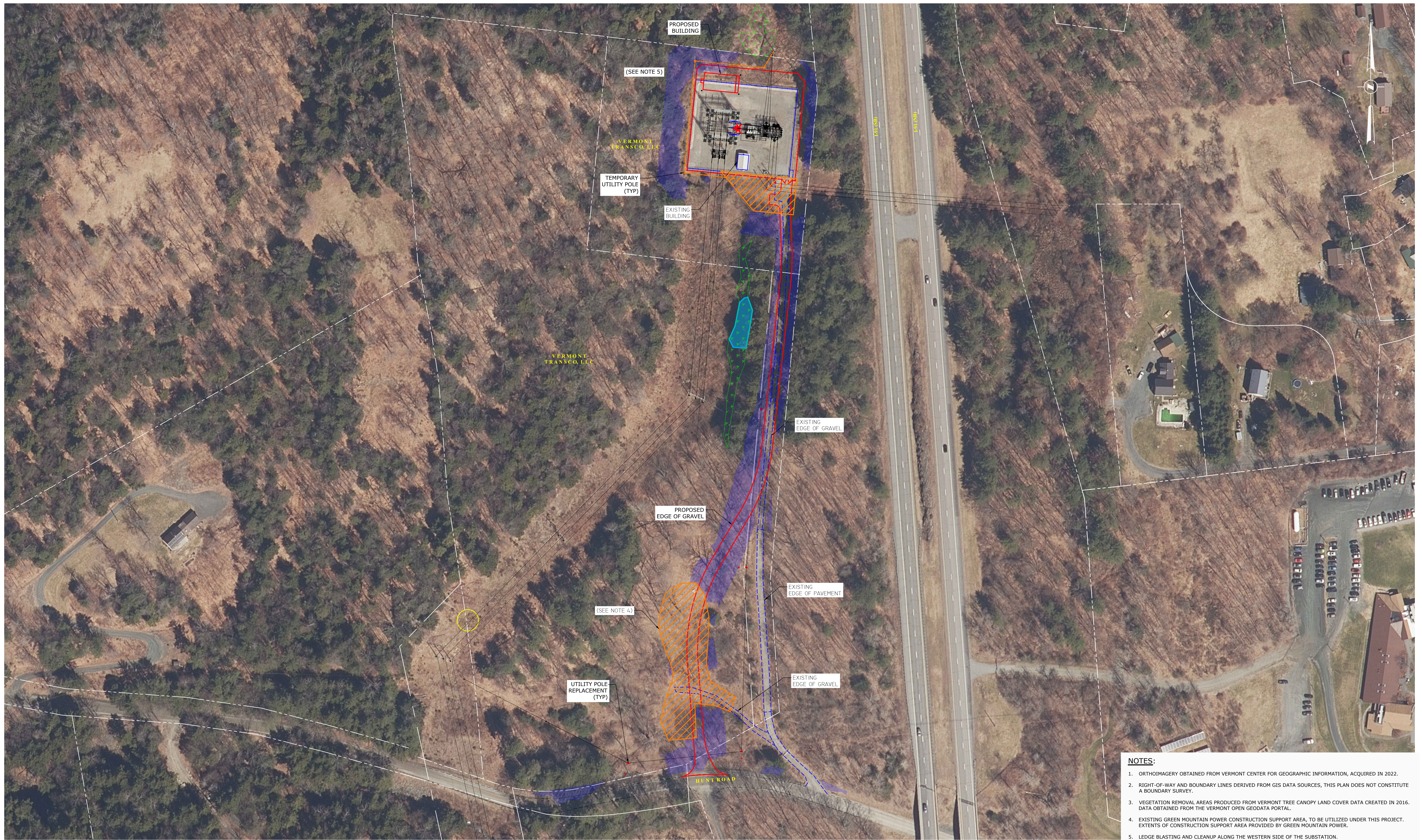
State statute (30 V.S.A. § 248(f)) gives the Windsor Planning Commission and the Mt. Ascutney Regional Commission (Planning Commissions) the right to make recommendations about VELCO's plans for the Windsor Substation Project to VELCO and the Public Utility Commission within 40 days of this letter (March 4, 2024), preferably by February 22, 2024. The statute also gives the Planning Commissions the opportunity to comment on the petition for a CPG once it is filed with the Commission. If VELCO includes more detailed information about the Project than is included with this letter, the Planning Commissions may provide revised recommendations to the Commission within 45-days of the date the petition is filed with the Commission.

In addition to comments on VELCO's plans, the Planning Commissions and the Windsor Selectboard may intervene, participate as parties in the CPG proceeding before the Commission, and offer evidence. Recommendations made to the Commission under Section 248(f), or the lack of such recommendations, do not preclude the Planning Commissions or Selectboard from presenting evidence if they decide to participate as a party in the proceeding.

For additional information regarding the Commission's processes, including your right to participate in the proceeding, please refer to the Commission document titled "A Citizens Guide to the Public Utility Commission," which is available on the Commission's website at: <https://puc.vermont.gov/document/citizen-guide-public-utility-commission>. The Commission's website also includes a Section 248 procedures document that you may find helpful: <https://puc.vermont.gov/document/section-248-procedures>.

As the Project is still in the design phase, we will continue discussions and expect to receive feedback on this Project from various stakeholders. Please note that VELCO anticipates filing its petition for a CPG on or about March 7, 2024. The petition and other relevant Project updates will be posted on VELCO's website at: <https://www.velco.com/Windsor>.

If you are interested in a presentation on this Project, have comments or desire further information, please contact Bill Allard, Project Manager, at 207-712-9483 or [ballard@velco.com](mailto:ballard@velco.com).



- NOTES:**
1. ORTHOIMAGERY OBTAINED FROM VERMONT CENTER FOR GEOGRAPHIC INFORMATION, ACQUIRED IN 2022.
  2. RIGHT-OF-WAY AND BOUNDARY LINES DERIVED FROM GIS DATA SOURCES, THIS PLAN DOES NOT CONSTITUTE A BOUNDARY SURVEY.
  3. VEGETATION REMOVAL AREAS PRODUCED FROM VERMONT TREE CANOPY LAND COVER DATA CREATED IN 2016. DATA OBTAINED FROM THE VERMONT OPEN GEODATA PORTAL.
  4. EXISTING GREEN MOUNTAIN POWER CONSTRUCTION SUPPORT AREA, TO BE UTILIZED UNDER THIS PROJECT. EXTENTS OF CONSTRUCTION SUPPORT AREA PROVIDED BY GREEN MOUNTAIN POWER.
  5. LEDGE BLASTING AND CLEANUP ALONG THE WESTERN SIDE OF THE SUBSTATION.

COLOR KEY		LEGEND	
	EXISTING INFRASTRUCTURE TO REMAIN		APPROXIMATE BOUNDARY LINE
	TEMPORARY INFRASTRUCTURE (GMP)		APPROXIMATE RIGHT-OF-WAY LINE
	EXISTING INFRASTRUCTURE TO BE REMOVED		SUBSTATION FENCE
	PROPOSED OR RELOCATED INFRASTRUCTURE		UTILITY POLE
			TEMPORARY CONSTRUCTION SUPPORT AREA
			UNCOMMON SPECIES
			WETLAND
			WETLAND/ VERNAL POOL BUFFER
			VERNAL POOL
			VEGETATION REMOVAL AREA (SEE NOTE 3)



				<b>VELCO</b>		VERMONT ELECTRIC POWER CO., INC. RUTLAND, VERMONT	
				WINDSOR SUBSTATION			
				OVERALL SITE ORTHO 115/ 46 kV YARD			
0D	01/17/24	JJO	JWK	ISSUED FOR 45-DAY NOTICE	SCALE: AS SHOWN	DRAWN BY: JJO	APPROVED BY:
0C	01/20/24	JJO	JWK	DRAFT	DATE: 11/16/23	CHECKED BY: JWK	DATE
0B	11/20/23	JJO	JWK	DRAFT			
0A	11/16/23	JJO	JWK	DRAFT			
REV	DATE	DR	CK	DESCRIPTION	SHEET NUMBER:	211-ORTHO	