

MEMORANDUM

TO: North Yarmouth Planning Board
Through Cassandra Bacon, Administrative Assistant to Code Enforcement

CC: Allison Barbour, ReVision Energy

From: Kate Burch, Senior Planner, North Star Planning

RE: North Yarmouth Solar Preapplication – Planning Board meeting May 14, 2024

Date: May 1, 2024

Overview

The applicant proposes to construct a 254.88kW DC ground-mounted solar array at 238 Sweetser Road, on property owned by the Yarmouth Water District (YWD). The solar array will be owned and operated by Yarmouth Water District to offset the cost of their electricity. The total limit of work, including cleared area, will be about 2.5 acres. The property is in the Farm and Forest and Groundwater Protection Overlay zones.

In an email dated April 23, 2024, the applicant provided additional information about the project:

The 238 Sweetser Road parcel is 100 acres. Approximately 14 acres of this parcel are currently leased to Water Line Solar/Branch Renewable Energy. In 2022, the North Yarmouth Planning Board approved a site plan for an approximately 2 MW community solar project to be constructed on those 14 acres.

The new proposed array will not overlap with the Water Line Solar project. Both projects will use the existing access road off Sweetser Road for construction and maintenance.

The entire 100-acre parcel was delineated for natural resources in 2022 by Biodiversity Research Institute (BRI). BRI provided a letter to YWD that they may rely on this data for this 2024 permitting process. No vernal pools were identified by BRI. There are three wetlands adjacent to this project. The project will be designed to meet required setbacks from those wetlands.

The array will be fenced with an agricultural-style fence that allows for wildlife passage. The entire area of development will be reseeded and vegetated using a conservation seed mix, and the grass will be mowed no more than two times a year.

The project is located in the Groundwater Overlay District. The applicant anticipates that approximately 10 gallons of diesel and 10 gallons of gasoline will be kept on site in OSHA-approved containers. A forklift, skid steer, and drill machine will also be stored on site.

Because this is a preapplication meeting, the Board is not expected to vote on the project. The findings of fact are included below to let the applicant know the standards that are relevant to this project and the standards that are not applicable.

If the application moves forward to a site plan review, in addition to the general site plan application materials, the applicant should include the following:

- A decommissioning or removal plan if the solar facility ceases to produce power after twelve (12) consecutive months.
- An Operations and Maintenance Plan.
- Provisions for security and emergency access.
- The applicant should submit information on noise levels on inverters, transformers, and other electrical equipment.
- The applicant should confirm if any signs, particularly containing emergency contact information, will be installed for the project.

This project will be a site plan amendment to the previous solar project at 238 Sweetser Road.

Applicant: Allison Barbour, ReVision Solar

Owner: Yarmouth Water District

Location: 238 Sweetser Road

Zoning: Farm and Forest, Groundwater Protection Overlay

Tax Map Number: Map 5 Lot 2

Existing Land Use: undeveloped

Proposed Land Use: ground-mounted solar

Acreage: 2.5 acres of 100 acre parcel

Waivers: The applicant has not requested any waivers.

Site Walk: The Board should decide if a site walk for this project is necessary.

Public Hearing: A public hearing for this project has not been scheduled.

Preapplication Completeness Review: NSP reviewed the project for completeness and the project meets the preapplication submission requirements.

Site Plan Review - Findings of Fact:

1. Utilization of the Site
 - The applicant plans to construct ground-mounted solar on part of an undeveloped parcel owned by the Yarmouth Water District.
 - Approximately 2.5 acres of the 100 acre parcel will be disturbed.
 - No habitat is identified on state maps.
 - In 2022, Biodiversity Research Institute delineated the entire 100 acre parcel for natural resources. No vernal pools were found.
 - The project avoids impacting 3 adjacent wetlands and will follow required setbacks.
2. Utilities
 - The project will connect to the CMP power grid.
 - No other utilities are required.
3. Building Standards
 - Not applicable.
4. Impact on Community Facilities
 - No negative impact on community facilities will result from this project.
5. Hazardous Materials and Emissions
 - No hazardous materials or emissions will result from the project.
6. Exterior Lighting
 - The applicant should clarify if any exterior lighting will be proposed for the project.

7. Financial and Technical Capacity

- The applicant should provide a deed or lease for the property in their next submission.
- The applicant should provide an itemized decommissioning estimate.

8. Landscaping, Buffers and Screening

- The solar array will be constructed in an undeveloped area.
- The applicant should confirm if the solar array will be visible from any abutting property or public road.
- The applicant should confirm that existing vegetation on site will be retained and minimal grading is proposed.
- The applicant should confirm if any landscaping is being proposed.

9. Noise

- No noise levels in excess of the town standards will result from the project.
- The applicant should submit information on noise levels on inverters, transformers, and other electrical equipment.

10. Signs

- The applicant should confirm if any signs, particularly containing emergency contact information, will be installed for the project.

11. Storage of Materials

- No outside storage areas will be included for the project.

12. Stormwater Control

- The applicant should show what provisions are being made for stormwater control on the site plan.
- The applicant should clarify and discuss the DEP Standards for Stormwater Management that are relevant to this project.

13. Protection of Significant Wildlife Habitat

- No significant wildlife habitat is located in the project area.

14. Access Management and Vehicular Circulation

- The project will not produce vehicular traffic other than for construction and maintenance needs.
- The project will use the existing access road.

15. Pedestrian Ways and Bicycle Access

- No pedestrian or bicycle ways are being proposed for this project.

16. Off-Street Parking and Loading

- No off-street parking or loading will be included for the project.

Conclusions of Law:

1. The development **will/will not** reflect the natural capabilities of the site to support development.
2. Utilities serving developments in the Village Center District and Village Residential District **will/will not** be installed underground.
3. The proposed development **will/will not** result in a negative impact to the environment or to the community facilities or services.
4. The development **will/will not** contribute emission of dust, ash, smoke or other particular matter.
5. The proposed development **will/will not** have adequate exterior lighting to provide for its safe use during nighttime hours.
6. The landscape **will/will not** be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, retaining existing vegetation where desirable, and keeping any grade changes in character with the general appearance of neighboring areas.
7. The development **will/will not** control noise levels such that it **will/will not** create a nuisance for neighboring properties.
8. The size, location, design, color, texture, lighting and materials of all exterior signs **will/will not** detract from the design of proposed buildings and structures.
9. Exposed non-residential storage areas, exposed machinery, and areas used for storage **will/will not** have sufficient setbacks and screening.
10. Adequate provisions **will/will not** be made for the collection and disposal of all storm water that runs off proposed roads, parking areas, roofs and other surfaces.
11. Developments **will/will not** be designed to protect and conserve important wildlife habitat to the greatest extent feasible.
12. The layout of the site **will/will not** provide for the safe movement of passenger, service, and emergency vehicles throughout the site.

13. The site plan **will/will not** provide for a system of pedestrian ways within the development appropriate to the type and scale of development.
14. Parking areas **will/will not** be constructed to protect the natural environment and visual character of the community, improve pedestrian safety and accessibility, and promote the quality of life in developed areas.



**TOWN OF NORTH YARMOUTH
PLANNING BOARD**

SITE PLAN REVIEW AND CONDITIONAL USE APPLICATION
(See Section 4 pages 23 through 36 of the North Yarmouth Land Use Ordinance)

NAME OF APPLICANT: _____ PHONE #: _____

EMAIL: _____ ALT. PHONE#: _____

FULL ADDRESS: _____

PROPERTY ADDRESS: _____

MAP: _____ LOT: _____

AGENT/REPRESENTATIVE (if other): _____ PHONE #: _____

EMAIL: _____

FULL ADDRESS: _____

1. Names and Addresses of ALL property owners within 500' of any and all property boundaries **(use a separate sheet). Please contact the code office for an updated list)**

2. Plan preparer information if other than property owner:

Name: _____

Address: _____

Phone Number: _____ Professional Lic. # _____

Email: _____

3. Zoning Classification of the Property

_____ Village Center

_____ Village Residential

_____ Farm and Forest

_____ Shoreland Residential

_____ Resource Protection

_____ Royal River Overlay

_____ Groundwater Protection Overlay

4. Provide a General Description of the proposed use or activity, including but not limited to the type of use, square footage involved, hours of operation, types and amount of traffic to be generated **(use separate sheet).**

5. Historic Structures: Are there any historic structures or areas of historical importance on the property? _____ YES _____ NO

6. Complete List of all chemicals, pesticides, fuels, nutrients and other potentially toxic or hazardous materials to be used or stored on the premises, and the quantities of these materials **(use a separate sheet).**

7. List of Equipment to be used, parked or stored **(use a separate sheet).**

8. To the best of my knowledge, all the above-stated information, and all prepared submissions in this application are correct.

Signature of Applicant/Owner

Date



**Site Plan Application Narrative
Ground Mount Solar Array
Yarmouth Water District
238 Sweetser Road North Yarmouth, ME 04097**

ReVision Energy, on behalf of Yarmouth Water District, is pleased to provide the Town of North Yarmouth with the below narrative description of its proposed ground mounted solar photovoltaic project, which would create 254.88kW DC of solar generation.

The location of the proposed site plan revision is 238 Sweetser Road, North Yarmouth, ME 049097 (Map 5, Lot 2). The project area is within both the Farm and Forest and the Groundwater Protection Overlay Districts.

This proposal looks to create 254.88kW DC / 233.3kW AC of ground mount solar generation to the east of the water district's access road off of Sweetser Road. The project will connect directly to the existing CMP utility owned infrastructure and all generation will directly credit Yarmouth Water District who will own and operate the system. The primary components of a ground mounted solar array are screws driven into the earth to serve as foundations, aluminum racking fastened to the foundations, and solar panels affixed to the racking. The rows of panels would be oriented almost due south, sloping 35 degrees. This will be a fixed array meaning there are no moving components. At their peak, the panels would stand approximately 10-12 ft above grade from the leading edge to the top of the panels.

The rows of panels would be electrically connected via underground conduit and wire. Inverters and AC switchboards would be positioned at the back of the southernmost array. The array will be surrounded by a 6ft fence to meet national electric code. Signage will be limited to electrical componentry labeling and emergency contact information. There is no lighting proposed.

During solar installation, we anticipate 2-10 workers on site during regular work hours depending on the project stage. Construction waste is minimal and will be collected and removed from site as it is generated. Once completed, the system will require only periodic service visits annually for preventative and reactive maintenance, as well as mowing for vegetation management. The bulk of the system's oversight will be performed remotely via internet-based production monitoring software to ensure the system is producing power as-designed and constructed. This project will not affect normal traffic flows once construction is completed.

We are hoping to start tree clearing and site work in August or September of 2024 and have the array completed and functional by the end of the year.

Potentially Toxic Or Hazardous Materials

We anticipate having 10 gallons of diesel and 10 gallons of gasoline on site. These will be stored in OSHA approved containers. No chemicals or pesticides will be on site.

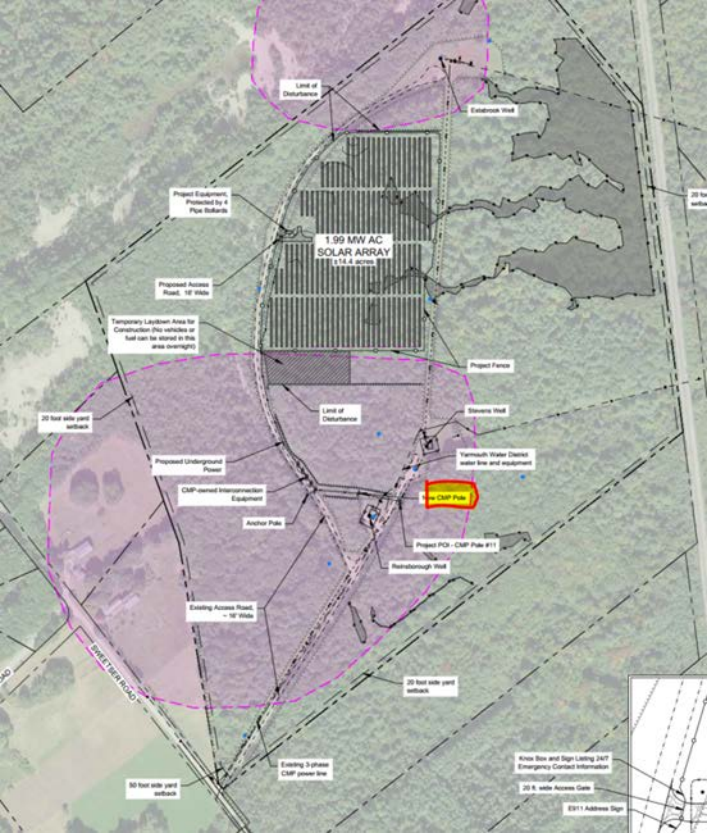
Equipment To Be Used On Site

We anticipate using and storing the following equipment on site:

- 10K Lull
- Track Skid Steer
- Drill Machine for ground screws
- Solar modules
- Racking materials
- Electrical equipment

Parcel Number	Property Address	Owner Name
001-089	0 SWEETSER RD	NORTH YARMOUTH, TOWN OF
001-092	0 SWEETSER RD	BASTON, CLARK M.
002-016-001	SLIGO RD	YARMOUTH WATER DISTRICT
002-017	0 SLIGO RD	MILLIKEN, PETER G.
002-018	0 SLIGO RD	MILLIKEN, PETER G.
002-019	754 SLIGO RD	MILLIKEN, PETER G.
004-223	129 BASTON RD	YARMOUTH WATER DISTRICT
004-224	243 SWEETSER RD	BROWN, JOSEPH G. C.
005-001	0 SWEETSER RD	YARMOUTH WATER DISTRICT
005-003	208 SWEETSER RD	WILLIAMS, JOHN W.
005-004	200 SWEETSER RD	BAKUTIS, ALAN T.
005-005	0 GRAVEL PIT OFF SWEETSER RD	YARMOUTH WATER DISTRICT
005-006	0 SWEETSER RD	YARMOUTH WATER DISTRICT
005-019	774 SLIGO RD	GAMBIT, LLC & C/O PETER MILLIKEN, PRESIDENT

Owner Address	Owner City	Owner State	Owner Zip
10 VILLAGE SQUARE RD	NORTH YARMOUTH	ME	04097
282 SWEETSER RD	NORTH YARMOUTH	ME	04097
P.O. BOX 419	YARMOUTH	ME	04096-0419
754 SLIGO RD	NORTH YARMOUTH	ME	04097
754 SLIGO RD	NORTH YARMOUTH	ME	04097
754 SLIGO RD	NORTH YARMOUTH	ME	04097
P.O. BOX 419	YARMOUTH	ME	04096-0419
243 SWEETSER RD	NORTH YARMOUTH	ME	04097
P.O. BOX 419	YARMOUTH	ME	04096-0419
208 SWEETSER RD	NORTH YARMOUTH	ME	04097
200 SWEETSER RD	NORTH YARMOUTH	ME	04097
P.O. BOX 419	YARMOUTH	ME	04096-0419
P.O. BOX 419	YARMOUTH	ME	04096-0419
754 SLIGO RD	NORTH YARMOUTH	ME	04097



Limit of Disturbance

Estabook Well

Project Equipment, Protected by 4 Pipe Supports

1.99 MW AC SOLAR ARRAY
1.14.4 acres

Proposed Access Road, 10' Wide

Temporary Laydown Area for Construction (No vehicles or fuel can be stored in this area overnight)

Project Fence

20 foot side yard setback

Limit of Disturbance

Stevens Well

Proposed Underground Power

Yarmouth Water District water line and equipment

CMP-owned Interconnection Equipment

CMP Pole

Anchor Pole

Project POI - CMP Pole #11

Reinborough Well

Existing Access Road, ~10' Wide

20 foot side yard setback

SWEETSER ROAD

Existing 3 phase CMP power line

Knee Box and Sign Listing 2477
Emergency Contact Information
Substation Construction

50 foot side yard setback

20 ft. wide Access Gate

8011 Address Sign



SYSTEM SUMMARY	
DC SYSTEM SIZE	254,880 kW DC
AC SYSTEM SIZE	233,300 kW AC
PROJECT TYPE	GROUND MOUNT
TILT / AZIMUTH	35° / 180°

EQUIPMENT SUMMARY		
ITEM	DESCRIPTION	QTY
MODULE	Q CELLS Q.PEAK DUO XL-G1S.3/BFG (590W)	432
INVERTER 1	SMA SUNNY TRIPOWER CORE1 50-US-4I	4
INVERTER 2	SMA SUNNY TRIPOWER CORE1 33-US-4I	1
DAS	POWERDASH RGM	1



REVISION ENERGY

758 WESTBROOK STREET
SOUTH PORTLAND, ME 04106
(207) 221-6342

CLIENT:

YARMOUTH WATER DISTRICT

PROJECT ADDRESS:

238 SWEETSER ROAD, NORTH
YARMOUTH, ME 04097

SYSTEM TYPE:

GROUND MOUNT
PHOTOVOLTAIC ARRAY

NOT FOR CONSTRUCTION

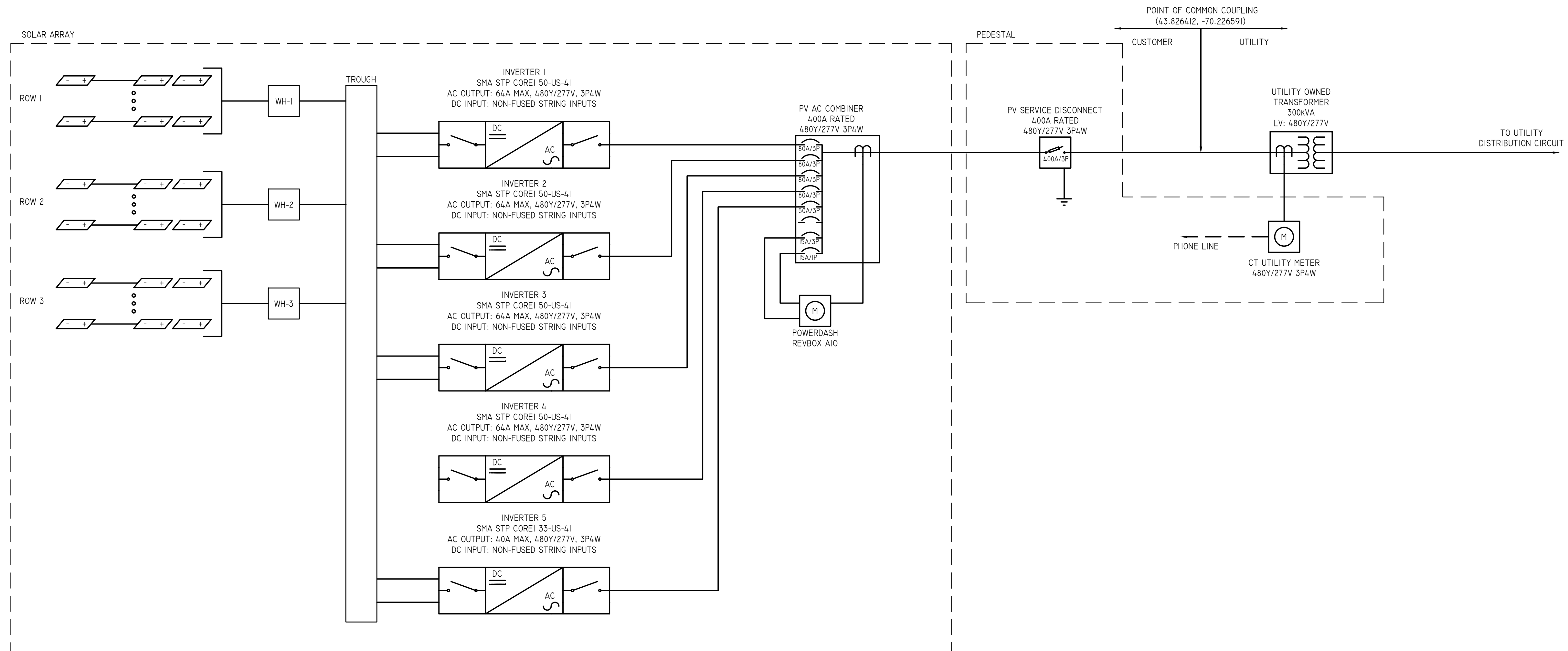
REV	DATE	STATUS
001	02/22/2023	ISSUED FOR INTERCONNECTION
002	3/14/2024	REVISED LAYOUT FOR WETLAND SETBACKS

DESIGNED BY: SFC
PRINT SIZE: 24" x 36"
SCALE: 1" = 20'
DATE: MARCH 14, 2024

SITE PLAN

E100

© COPYRIGHT REVISION ENERGY
PROPRIETARY AND CONFIDENTIAL. THIS WORK
MAY NOT BE USED, DISTRIBUTED, REPRODUCED
OR OTHERWISE COMMUNICATED IN ANY FORM OR
BY ANY MEANS WITHOUT PRIOR WRITTEN
CONSENT OF REVISION ENERGY, INC. THIS
DIAGRAM IS BASED ON THE INFORMATION
SUPPLIED AND IS SUBJECT TO CHANGE BASED
ON ACTUAL CONDITIONS. APPLICABLE EDITION
OF THE NATIONAL ELECTRIC CODE AND LOCAL
GOVERNMENTAL AUTHORITIES.



SYSTEM SUMMARY	
DC SYSTEM SIZE	254,880 kW DC
AC SYSTEM SIZE	233,300 kW AC
PROJECT TYPE	GROUND MOUNT
TILT / AZIMUTH	35° / 180°

EQUIPMENT SUMMARY		
ITEM	DESCRIPTION	QTY
MODULE	Q CELLS Q.PEAK DUO XL-G1S.3/BFG (590W)	432
INVERTER 1	SMA SUNNY TRIPOWER CORE1 50-US-4I	4
INVERTER 2	SMA SUNNY TRIPOWER CORE1 33-US-4I	1
DAS	POWERDASH RGM	1

INTERCONNECTION APPLICATION TABLE		
ELECTRICAL UTILITY COMPANY	CMP	
MAX FAULT CURRENT CONTRIBUTION	2200 A	INSTANTANEOUS
TOTAL HARMONIC DISTORTION (THD)	THD < 3% (IEEE 1547)	
START UP REQUIREMENTS	5 MINUTES HEALTHY UTILITY VOLTAGE AND FREQUENCY PER IEEE 1547.	
INVERTER CERTIFICATION	UL1699B, IEEE 1547-2018, UL1741 SA/SB, UL1998, UL 3741	

PROPOSED INVERTER VOLTAGE AND FREQUENCY SETPOINTS				
DEVICE SETPOINT	PICKUP RANGE	TOTAL CLEARING TIME		
		SECONDS	CYCLES	
27 UNDER VOLTAGE 1	88% 243.8V (L-N)	3	180	
27 UNDER VOLTAGE 2	50% 138.5V (L-N)	1.1	66	
59 OVER VOLTAGE 1	110% 304.7V (L-N)	2	120	
59 OVER VOLTAGE 2	120% 332.4V (L-N)	0.16	9.6	
8IU UNDER FREQUENCY 1	58.5 Hz	300	18,000	
8IU UNDER FREQUENCY 2	56.5 Hz	0.16	9.6	
8IO OVER FREQUENCY 1	61.2 Hz	300	18,000	
8IO OVER FREQUENCY 2	62 Hz	0.16	9.6	

NOTES: BASE VOLTAGE = 277V



REVISION ENERGY

758 WESTBROOK STREET
SOUTH PORTLAND, ME 04106
(207) 221-6342

CLIENT:

YARMOUTH WATER DISTRICT

PROJECT ADDRESS:

238 SWEETSER ROAD, NORTH
YARMOUTH, ME 04097

SYSTEM TYPE:

GROUND MOUNT
PHOTOVOLTAIC ARRAY

NOT FOR CONSTRUCTION

REV	BY	DATE	STATUS
001	SFC	11/29/2023	ISSUED FOR INTERCONNECTION

DESIGNED BY: SFC
PRINT SIZE: 24" x 36"
SCALE: NA
DATE: MARCH 14, 2024

ONE-LINE DIAGRAM

E400

© COPYRIGHT REVISION ENERGY
PROPRIETARY AND CONFIDENTIAL. THIS WORK
MAY NOT BE USED, DISTRIBUTED, REPRODUCED
OR OTHERWISE COMMUNICATED IN ANY FORM OR
BY ANY MEANS WITHOUT PRIOR WRITTEN
CONSENT OF REVISION ENERGY, INC. THIS
DIAGRAM IS BASED ON THE INFORMATION
SUPPLIED AND IS SUBJECT TO CHANGE BASED
ON ACTUAL CONDITIONS, APPLICABLE EDITION
OF THE NATIONAL ELECTRIC CODE, AND LOCAL
GOVERNMENTAL AUTHORITIES.