NY Lansing II, LLC
33 Lower Main Street / PO Box 384
Callicoon, NY 12723

April 9, 2024

Town of Lansing Building Department
29 Auburn Road
Lansing, New York 14882

Attn: Code Enforcement Officer
C/O Scott Russell

Re: North Triphammer Road, South Parcel Project #2 - Solar Energy Facility

Dear CEO Russell,

The purpose of this letter is to request for the above reference application for a Use variance for NY Lansing I, LLC – Solar Energy Facility Project ("Project") to be placed on the May 8th Zoning Board meeting agenda.

The site plan application materials are written specific to this project on parcel 44.-1-3.3 and a portion of 44-1-1.2 for the access road, and any zoning requirements listed in the code as required by the Town Solar Law.

Please be advised the Project Summary, Operation and Maintenance Plan and the Decomissioning Plan are draft documents that will need review and possible revision. The submission of those three documents are presented with both projects together as much of the information is the same for both projects. As we move through the review process, if you would like us to separate these documents for each project we will accommodate that request.

Included in this submission are the following items, per the Town website portal directives.

- The Project Cover Page and Project Summary or Narrative
- The Boundary Survey, T.G. Miller PC has been contracted to work on a lot line adjustment for these two parcels. A proposed survey will be presented to the Town in a future submission.
- The Memo of Lease provided to show written permission of the Property Owner
- Photos of the site have been provided from the Site Assessment Study.
- The deed has been provided.
- The title commitment letter has been provided showing easements and / or Covenants.
- A letter from HodgsonRuss has been provided as a response to the balancing questions and the Public Use Standard for determining variances.
- The Long EAF has been provided

In addition to those items requested please also review the additional attachments uploaded to the permit portal.

- The proposed Site Plan Set
- The Operations and Maintenance Plan
- The Draft Decomissioning Plan

Respectfully Submitted,

Mollie Messenger

Encs.
Rich Winter, Chief Executive Officer

Draft #:_1__ Date: __4/8/2024_____

Approved Date: _____

Decommissioning Plan

North Triphammer Road
Project #1 and #2
Project #1 - SBL: #144-1-1.2 5MW Solar Facility
Project #2 - SBL#: 44-1-3.3 3MW Solar Facility

Prepared for**:**

Town of Lansing

Tompkins County, New York

Prepared by:
NY Lansing I, LLC & NY Lansing II, LLC
P.O. Box 384
Callicoon NY, 12783

Contents

1. Introduction

#1: NY Lansing I, LLC & #2: NY Lansing II, LLC ("Project Owner"), an affiliate of Delaware River Solar, LLC, proposes to build a photovoltaic (PV) solar facility ("Solar Facility") at North Triphammer Road in the Town of Lansing ("Town") under New York State's Community Solar initiative. The Solar Facility is planned to have a nameplate capacity of approximately 5MW ac (MW) from Project #1 and 3MW ac from Project #2, to be constructed on private land ("Project Site") leased by the Project Owner from the property owner ("Property Owner").

This Decommissioning Plan ("Plan") is being submitted to the Town as part of the application with respect to Town of Lansing Local Law #3 of 2020 Section 802.18 ("Solar Law"). The Solar Facility is considered a Solar Energy Facility as set forth in the Solar Law. The decommissioning requirement of the Solar Law reads as follows:

The decommissioning requirement for a Solar Facility set forth in §802.18.14 of the Solar Law read as follows:

"802.18.14 *Abandonment and Decommissioning. A Decommissioning Plan shall be submitted with each Application in accordance with § 802.21 of this Chapter. Approval of the Decommissioning Plan by the Town Planning Board shall be required, including under Site Plan review. Removal of Solar Energy Facilities must be completed in accordance with the Decommissioning Plan. If the Solar Energy Facility is not decommissioned after being considered abandoned, the municipality may remove the system and restore the property and impose a lien on the property to cover these costs to the municipality.*

802.21.1 *A Decommissioning Plan shall, at a minimum, contain the following elements and meet the following requirements.*

i. Specify when and what constitutes an event requiring decommissioning, including abandonment of the facility. In all cases the lack of production for 6 months (or for 12 of any 18 months) and the violation of any site plan conditions, the lack of a current permit or violation of permit conditions, including but not limited to maintenance of any required decommissioning bond or security, shall be an event requiring decommissioning.

ii. Specify the form and type of notice required to the Town in the event of any decommissioning, sale, transfer, partial transfer, assignment, or occurrence of any event which may result in an act or partial order requiring partial or complete decommissioning of the site.

iii. The means and methods by which utility interconnections will be removed and permitted by the utility provider, as well as all electrical and other safety precautions undertaken during removal.

iv. All decommissioning and restoration activities shall be completed within 150 days of the date decommissioning was ordered or required, including under the plan.

v. Demonstrate the removal of all Solar Panels, Battery Energy Storage Systems, wind turbines, electrical appurtenances, Towers, structures, equipment, security

barriers and transmission lines.
vi. Demonstrate the minimization of disruption to field drains and soils, and the remediation of drains and soils, including stabilization and revegetation of any sites or disturbances, including as minimize erosion. Decompaction of soils to 18 inches and removal of any installed materials to 4 feet is required. The Planning Board may allow the owner or operator to leave landscaping or designated belowgrade foundations in place to minimize erosion and disruption to vegetation in a proper case, but generally all of the New York Department of Agriculture and Markets' Guidelines for Agricultural Mitigation for Wind Power Projects or Solar Energy Projects, as applicable, shall be adhered to in any plan.
vii. Specify disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations, including the removal of any damaged or contaminated soils. No designation of any facilities by a 'beneficial use declaration' shall be permitted to vary this clean-up and remediation/ disposal rule.
viii. Include an expected timeline for execution, together with a cost estimate detailing the projected cost of executing the Decommissioning Plan, duly prepared and sealed by a Professional Engineer. Cost estimations must take inflation into account over the expected life of project, and have a mechanism to ensure the periodic updating and securitization of decommissioning costs."

This Plan provides an overview of activities that will occur during the decommissioning phase of the Solar Facility, including activities related to the restoration of land, management of materials and waste, and responsibility of removal.

The Solar Facility is expected to have a useful life of thirty (30) years.

This Plan assumes the Solar Facility will be dismantled, and the Project Site restored to a state similar to its pre-construction condition, at the thirty (30) year anniversary of the Solar Facility's commercial operation date ("Expected Decommissioning Date"). This Plan also covers the case of the abandonment of the Solar Facility, for any reason, prior to the Expected Decommissioning Date.

Decommissioning of the Solar Facility will include the disconnection of the Solar Facility from the utility electrical grid and the removal of all Solar Facility components, including:

- Photovoltaic (PV) modules, module racking and supports
- Inverter units, substation, transformers, and other electrical equipment, including wiring cables
- Access roads and perimeter fence
- Inverter pad concrete foundations.

This Plan is based on current best management practices and procedures. This Plan may be subject to revision based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to stakeholders prior to decommissioning.

2. The Proponent

The Project Owner will manage and coordinate the decommissioning process. The Project Owner will obtain all necessary regulatory approvals that may vary depending on the jurisdiction, project capacity, and site location. The Project Owner will be committed to the safety, health, and welfare of the hosting community.

The conditions and obligations of this Plan shall be bound upon the Project Owner, it heirs, executors, administrators, successors or assigns.

Contact information for the proponent is as follows through the permitting process. An agent of the project company will be identified prior to construction of the Solar Facility:

Company: NY Lansing I, LLC & NY Lansing II, LLC

Contact: Mollie Messenger

Address: PO Box 384 Callicoon, NY 12723

Telephone: 845-800-8914

Email: mollie.messenger@delawareriversolar.com

2.1 Project Information

Address: North Triphammer Road, Lansing

Tax ID: Project #1 - SBL: #144-1-1.2 Project #2 - SBL#: 44-1-3.3

Project Size: Project #1 - 5MW ac and Project #2 – 3MW ac

Property Owner: John, James, Julie Young & Susan Barnett

Site Agreement: Contract of Sale for Delaware River Solar Real Estate, LLC to acquire the site

3. Decommissioning of the Solar Facility

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. All removal of equipment will be done in accordance with any applicable laws and regulations, including without limitation, the local laws of the Town applicable to solar energy systems, and manufacturer recommendations. All applicable permits will be acquired.

The decommissioning process of the Solar Facility may commence for the following reasons:

(a) Project Owner provides written notice to the Town of its intent to retire or decommission the Project ("Owner Decommissioning Notice") for any reason, including the Solar Facility is damaged and will not be repaired or replaced,

(b) the Solar Facility ceases to be operational for more than twelve (12) consecutive months, or

(c) the expiration of the lease agreement with the Property Owner. In event the Project Owner fails to decommission the Solar Facility within three hundred sixty (360) days after providing Owner Decommissioning Notice or fails to respond with a reasonable explanation for cessation of operation of the Project within 60 days of the Town Decommissioning Notice, the Town may commence the decommissioning of the Project. The Town shall provide Project Owner sixty (60) days written notice

("Town Decommissioning Notice") prior to the commencement of any decommissioning of the Solar Facility by the Town. For the purposes of this Agreement, "ceases to be operational" shall mean no generation of electricity, other than due to repairs to the Project or causes beyond the reasonable control of the Project Owner.

4.1 Equipment Dismantling and Removal

Generally, decommissioning of a Solar Facility proceeds in the reverse order of the installation.

1. The Solar Facility shall be disconnected from the utility power grid.
2. PV modules shall be disconnected, collected, and disposed at an approved solar module recycler or reused / resold on the market.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site at an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site at an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by at approved facility.
6. Concrete foundations shall be removed and disposed off-site at an approved facility.
7. Fencing shall be removed and will be disposed off-site by at approved facility.

4.2 Environmental Effects

Decommissioning activities, particularly the removal of project components, could result in environmental effects similar to those of the construction phase. For example, there is the potential for disturbance (erosion/sedimentation) to adjacent watercourses or significant natural features. Mitigation measures similar to those employed during the construction phase of the Solar Facility will be implemented. These will remain in place until the site is stabilized to mitigate erosion and silt/sediment runoff and any impacts on the significant natural features or water bodies, if any, located adjacent to the Project Site.

Road traffic will temporarily increase due to the movement of decommissioning crews and equipment. There may be an increase in particulate matter (dust) in adjacent areas during the decommissioning phase. Decommissioning activities may lead to temporary elevated noise levels from machinery and an increase in trips to the Project Site. Work will be undertaken during daylight hours and conform to any applicable restrictions.

4.3 Site Restoration

Through the decommissioning phase, the Project Site will be restored to as natural a condition as possible within one year of removal and as close to its original state as reasonably possible. All project components (see Appendix 1) will be removed. Rehabilitated lands will be seeded with a low-growing species to help stabilize soil conditions, enhance soil structure, and increase soil fertility. After decommissioning, the Project Site will be primarily meadows with soil conditions in an improved state for agricultural use by allowing the land time to fallow over the life of the Project.

4.4 Managing Materials and Waste

During the decommissioning phase a variety of excess materials and wastes (see listed in Appendix 1) will be generated. Most of the materials used in a Solar Facility are reusable or recyclable and some equipment may have manufacturer take-back and recycling requirements. Any remaining materials will be removed and disposed of off-site at an approved facility. The Project Owner will establish policies and procedures to maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be disposed of, recycled, or reused.

The Project Owner will be responsible for the logistics of collecting and disposing or recycling the PV modules. Currently, some manufacturers and new companies are looking for ways to recycle and/or reuse solar modules when they have reached the end of their lifespan. Due to a recent increase in the use of solar energy technology, a large number of panels from a variety of projects will be nearing the end of their lifespan in 25-30 years. It is anticipated there will be more recycling options available for solar modules at that time. The Project Owner will dispose of the solar modules using best management practices at the time of decommissioning.

4.5 Decommissioning During Construction or Abandonment Before Maturity

In case of abandonment of the Solar Facility during construction or prior to the Expected Decommissioning Date, the same decommissioning procedures as for decommissioning after ceasing operation will be undertaken and the same decommissioning and restoration program will be honored. The Solar Facility will be dismantled, materials removed and disposed, the soil that was removed will be graded and the site restored to a state similar to its preconstruction condition.

4.6 Decommissioning Notification

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Project Site. The local municipality will be notified prior to commencement of any decommissioning activities. Prior to decommissioning, Project Owner will update their list of stakeholders and notify appropriate municipalities of decommissioning activities. Federal, county, and local authorities will be notified as needed to discuss the potential approvals required to engage in decommissioning activities.

4.7 Approvals

Well-planned and well-managed renewable energy facilities are not expected to pose environmental risks at the time of decommissioning. Decommissioning of the Solar Facility will follow standards of the day. Project Owner will ensure that any required permits are obtained prior to decommissioning.

This Decommissioning Plan may be updated as necessary in the future to ensure that changes in technology and site restoration methods are taken into consideration.

5. Cost of Decommissioning and Responsibility of Removal

The current estimated costs indicated on Appendix 2 are the costs, that the contractor anticipates to install and commission the Solar Facility. During the Special Permit review process, the Project Owner will revise the estimated costs to the extent any site plan changes are made.

While the salvage value of valuable recyclable materials (aluminum, steel, etc.) is not factored into the decommissioning costs, the salvage value of such materials (determined on market rates at the time of salvage) is expected to be an amount that could substantially cover the estimated decommissioning cost.

APPENDIX I

Management of Excess Materials and Waste

Material / Waste	Means of Managing Excess Materials and Waste
PV Modules	If there is no possibility for reuse, the panels will either be returned to the manufacturer for appropriate disposal or will be transported to a recycling facility where the glass, metal and semiconductor materials will be separated and recycled.
Metal array mounting racks and steel supports	These materials will be disposed off-site at an approved facility.
Transformers and substation components	The small amount of oil from the transformers will be removed on-site to reduce the potential for spills and will be transported to an approved facility for disposal. The substation transformer and step-up transformers in the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Inverters, fans, fixtures	The metal components of the inverters, fans and fixtures will be disposed of or recycled, where possible. Remaining components will be disposed of in accordance with the standards of the day.
Gravel (or other granular)	It is possible that the municipality may accept uncontaminated material without processing for use on local roads, however, for the purpose of this report it is assumed that the material will be removed from the project location by truck to a location where the materials can be processed for salvage. It is not expected that any such material will be contaminated.
Geotextile fabric	It is assumed that during excavation of the components, a large portion of the geotextile will be “picked up” and sorted at the reprocessing site. Geotextile fabric that is remaining or large pieces that can be readily removed from the excavated aggregate will be disposed of off-site at an approved disposal facility.
Concrete inverter/transformer Foundations	Concrete foundations will be broken down and transported by a certified and licensed contractor to a recycling or approved disposal facility.
Cables and wiring	The electrical line that connects the utility electrical grid to the point of common coupling will be disconnected and disposed of at an approved facility. Support poles, if made of untreated wood, will be chipped for reuse. Associated electronic equipment (isolation switches, fuses, metering) will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Fencing	Fencing will be removed and recycled at a metal recycling facility.
Debris	Any remaining debris on the site will be separated into recyclables/residual wastes and will be transported from the site and managed as appropriate.

APPENDIX 2

Estimated Decommissioning Costs [(1)] Project #1 5MW ac

Tasks	Estimated Cost ($)[(1)]
Remove Panels	$6,500
Remove Racking Wiring	$6,000
Dismantle Racks	$30,000
Remove and Load Electrical Equipment	$4,000
Break up Concrete Pads	$4,000
Remove Racks	$20,000
Remove Cable	$14,000
Remove Ground Screws and Power Poles	$34,000
Remove Fence	$10,000
Grading	$7,500
Seed Disturbed Areas	$2,000
Truck to Recycling Center	$7,000
Administration	$5,000
Decommissioning Cost – Current	$150,000

(1) Does NOT include salvage value.

Estimated Decommissioning Costs [(1)] Project #2 3MW ac

Tasks	Estimated Cost ($)[(1)]
Remove Panels	$3,900
Remove Racking Wiring	$3,600
Dismantle Racks	$18,000
Remove and Load Electrical Equipment	$2,400
Break up Concrete Pads	$2,400
Remove Racks	$12,000
Remove Cable	$8,400
Remove Ground Screws and Power Poles	$20,400
Remove Fence	$6,000
Grading	$4,500
Seed Disturbed Areas	$1,200
Truck to Recycling Center	$4,200
Administration	$3,000
Decommissioning Cost – Current	$90,000

Total Estimated Decommissioning Costs [1] Project #1 and #2

Tasks	Estimated Cost ($)[1]
Remove Panels	$10,400
Remove Racking Wiring	$9,600
Dismantle Racks	$48,000
Remove and Load Electrical Equipment	$6,400
Break up Concrete Pads	$6,400
Remove Racks	$32,000
Remove Cable	$22,400
Remove Ground Screws and Power Poles	$54,400
Remove Fence	$16,000
Grading	$12,000
Seed Disturbed Areas	$3,200
Truck to Recycling Center	$11,200
Administration	$8,000
Decommissioning Cost – Current	$240,000

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: NY Lansing II, LLC - Proposed Commercial Solar Facility		
Project Location (describe, and attach a general location map): North Triphammer Road (County Route 122), Town of Lansing, Tompkins County, NY (Tax Map Nos. 44.-1-1.2 and 44.-1-3.3)		
Brief Description of Proposed Action (include purpose or need): The proposed action includes the development of an approximate 3-megawatt of alternating current (MW AC) ground-mounted solar facility on two (2) tax parcels totaling 66.83± acres located on the east side of North Triphammer Road (County Route 122) (hereinafter the "subject property"). The owner would lease approximately 14.84 acres of the subject property to the applicant (i.e., NY Lansing II, LLC). The area of disturbance for the proposed project would be 16.76± acres. The solar facility would be situated along the southern portion of the southern tax parcel (44.-1-3.3). The proposed action would include the installation of solar modules with a maximum height of 15 feet, an eight (8)-foot-high deer fence around the proposed solar facility, one (1) concrete equipment pad to house electrical equipment (i.e., one [1] inverter and two [2] transformers) and electric utility lines to connect the solar panels to the existing distribution power line along the west side of the subject property. The proposed action would also include the construction of a gravel access road on the northern tax parcel (44.-1-1.2) from North Triphammer Road (County Route 122). It is noted that the project area would be seeded with a northeast solar pollinator mix. All solar power generated by the proposed action would be sold as Community Distributed Generation. This program allows subscribed participants to share the benefits of clean energy production. According to the applicant, a mix of residential and commercial customers, specifically New York State Electric and Gas (NYSEG) customers, would be able to receive a share of the solar power.		
Name of Applicant/Sponsor: NY Lansing I, LLC attn: Mollie Messenger	Telephone: 646-998-6495 E-Mail: mollie.messenger@delawareriversolar.com	
Address: P.O. Box 384		
City/PO: Callicoon	State: NY	Zip Code: 12783
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Jessie Young	Telephone: 607-533-0346 E-Mail: jessie@youngbros.com	
Address: 3105 North Triphammer Road Suite 1		
City/PO: Lansing	State: NY	Zip Code: 14882

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Town of Lansing Planning Board - Site Plan Approval and Decommissioning Plan Approval	TBD
c. City, Town or Village Zoning Board of Appeals ☑Yes ☐No	Town of Lansing Zoning Board of Appeals - Use Variance	April 2024
d. Other local agencies ☑Yes ☐No	Town of Lansing Code Enforcement Officer - Building Permit	TBD
e. County agencies ☑Yes ☐No	Tompkins County Department of Planning and Sustainability - GML §239m Referral Tompkins County Highway Department - Highway Work Permit	TBD
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - SPDES General Permit for Construction Activity NYSERDA - Partial Funding (NY-Sun Incentive Program)	TBD
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
The subject property is located within the Residential - Moderate Density (R2) Zoning District.

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Ithaca City School District

b. What police or other public protection forces serve the project site?
Tompkins County Sheriff's Department

c. Which fire protection and emergency medical services serve the project site?
Lansing Fire Department provides both fire protection and emergency medical services.

d. What parks serve the project site?
N/A - the proposed use includes a commercial solar facility.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial solar energy facility

b. a. Total acreage of the site of the proposed action? 66.83± acres
b. Total acreage to be physically disturbed? 16.76± acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 66.83± acres (The property owner would lease 14.84± acres of the subject property to the applicant.)

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
_____
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 5 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 6,048± solar modules

ii. Dimensions (in feet) of largest proposed structure: 15± feet height; 3.5± feet width; and 7.9± feet length

iii. Approximate extent of building space to be heated or cooled: 0 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑ Yes ☐ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): The unregulated wetland areas located on the southern portions of the subject property would be disturbed as part of the proposed action.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

The proposed action would involve excavation and fill associated with the construction of the proposed access road. Excavation would be approximately 0.36 acre and fill material would be approximately 0.59 acres. The proposed access road would be built upon a portion of the existing wetland vegetation. Grubbing and/or clearing would be performed as necessary for larger wooded/dense vegetated areas within the wetlands.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No

If Yes, describe: The proposed action would require regrading/excavation for the construction of the access road.

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☑ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed: 0.95± acre to be built upon and/or removed
- expected acreage of aquatic vegetation remaining after project completion: 12.76± acres
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Construction of the proposed access road
- proposed method of plant removal: Mechanical clearing and grubbing, as necessary.
- if chemical/herbicide treatment will be used, specify product(s): None

v. Describe any proposed reclamation/mitigation following disturbance: Erosion and sedimentation control measures would be undertaken prior to and during construction.

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☑ No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☑ No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 0.01± acres (impervious surface)

_____ Square feet or 66.83± acres (parcel size)

ii. Describe types of new point sources. Solar panels, concrete equipment pad, footings and gravel access road

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

The proposed design would include waters bars and five (5) rain gardens. Stormwater runoff would flow towards the rain gardens to the south of the solar facility, and to the surrounding on-site wetland areas which is where stormwater runoff currently flows.

- If to surface waters, identify receiving water bodies or wetlands: _____

Stormwater runoff would flow towards the rain gardens to the south of the solar facility, and to the surrouding on-site wetland areas which is where stormwater runoff currently flows.

_____

- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8:00am-6:00pm
- Saturday: 8:00am-6:00pm
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: 24/7*
- Saturday: 24/7*
- Sunday: 24/7*
- Holidays: 24/7*

*The site would not be occupied 24/7. It would be remotely monitored and inspections would occur as needed to ensure a properly maintained site.

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Temporary noise during construction would be expected. Construction would occur during non-sensitive hours (i.e., 8:00am-6:00pm Monday through Saturday with no construction on Sundays or holidays).

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: The project area would result in the clearing of 7.21± acres of woodland for the proposed solar facility. However, upon implementation of the proposed action, 20.41± acres of woodland would remain.

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 0.1 tons per month (unit of time)
- Operation : 0 tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: According to the applicant, waste would consist of office waste and cardboard items from deliveries, which would be recycled to the maximum extent practicable.
- Operation: N/A

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: A refuse container would be placed on-site during construction and would be emptied by a licensed hauler as needed.
- Operation: N/A

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☑ Agriculture ☐ Aquatic ☑ Other (specify): Institutional (NYS Department of Transportation Sub-Residency Facility)

ii. If mix of uses, generally describe:

The subject property is currently agricultural land with forested areas. The surrounding area includes residential, commercial and institutional land uses, as well as forested areas.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	0.01±	+0.01
• Forested	27.62±	20.41±	-7.21
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	25.50±	16.90±	-8.60
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	13.71±	12.76±	-0.95
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Landscaping/seeded areas (inclusive of rain gardens) and gravel access road*	0	16.75±	+16.75

*Upon implementation of the proposed action, 1.84± acres of gravel would be installed for the proposed access road.

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 3± feet below grade surface (bgs)

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:
Langford channery silt loam, 2-8% slopes (LaB) 26 %
Tuller channery silt loam, 0-6% slopes (TeA) 24 %
Lordstown channery silt loam, 5-15% slopes (LnC) 21 %

d. What is the average depth to the water table on the project site? Average: 20± feet bgs*

e. Drainage status of project site soils:
☑ Well Drained: 34 % of site
☑ Moderately Well Drained: 26 % of site
☑ Poorly Drained 40 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 84 % of site
☑ 10-15%: 16 % of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters Approximate Size *See below
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

*There are areas on the eastern portion of the subject property with perched water at approximately 2 feet bgs and 6 feet bgs.
*The EAF Mapper indicates the presence of federal waterbodies on or adjoining the subject property. Review of the U.S. Fish and Wildlife Services National Wetlands Inventory (NWI) Mapper indicates that a 13.14-acre Freshwater Forested/Shrub Wetland habitat classified as PFO1/4E is located on the southeastern portion of the southern tax parcel (44.-1-3.3) and adjoining area. It is noted that review of the NYSDEC Environmental Resource Mapper indicates that there are no state-regulated freshwater wetlands or streams located on or adjacent to the subject property.

m. Identify the predominant wildlife species that occupy or use the project site:

Rabbits | White-tailed deer

Grey squirrels | Field rodents

Raccoons

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: According to the applicant, there may be areas on or near the subject property that are occasionally used for hunting. Upon implementation of the proposed action, hunting could still occur on or near the subject property; however, no future hunting would occur on the solar project site.

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No

i. If Yes: acreage(s) on project site? The subject property contains 17.5± acres of Soil Group 3; however, only 2.21± acres would be disturbed as part of the proposed action.

ii. Source(s) of soil rating(s): United State Department of Agriculture Web Soil Survey and NYSERDA 2022 Soils Data

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Lansing Town Park; Sunset Park; Stewart Park; Allen H. Treman State Marine Park; Cornell Botanical Gardens; Thompson Park; Conway Park; Strawberry Fields Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Town Park; Town Park; Town Park; State Park; Botanical Gardens; Village Park; Village Park; Village Park

iii. Distance between project and resource: varying distances within 5 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name NY Lansing II, LLC Attn: P.W. Grosser Consulting, Inc. as Environmental Consultant Date 4/5/2024

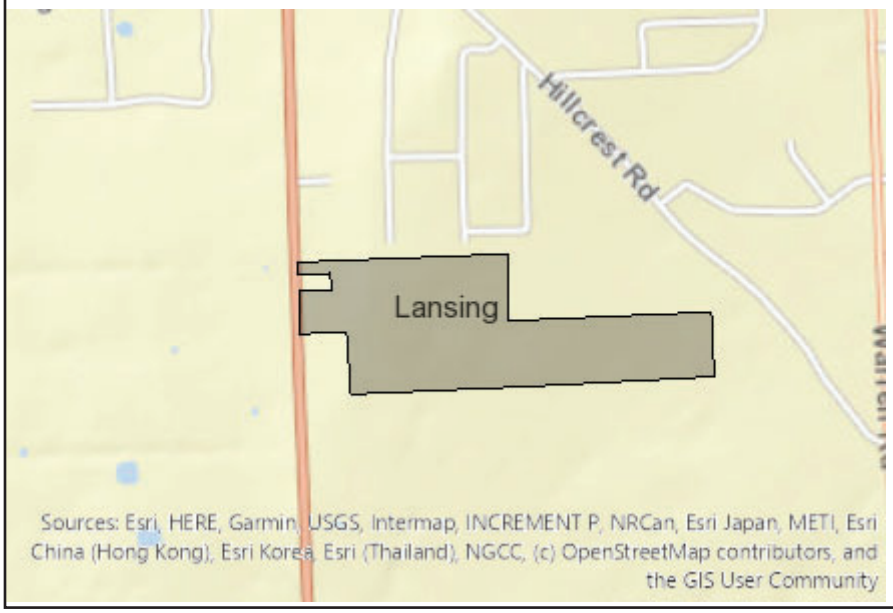
Signature Katelyn R. Kaim Title Sr. Environmental Planner/Project Manager

Katelyn Kaim, AICP

PRINT FORM

EAF Mapper Summary Report

Tuesday, April 2, 2024 11:28 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No

E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Subject Property

Proposed Access Road

Proposed Project Area (approximate)

All boundaries are approximate

Source: Google Earth, 2024

Site Location Map

NY Lansing II, LLC
North Triphammer Road
Town of Lansing, Tompkins County, NY

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

Draft #:_1__ Date: __4/8/2024_____

Approved Date: _____

Operations & Maintenance Plan

North Triphammer Road
Project #1 and #2
Project #1 - SBL: #144-1-1.2 5MW Solar Facility
Project #2 - SBL#: 44-1-3.3 3MW Solar Facility

Prepared for**:**

Town of Lansing

Tompkins County, New York

Prepared by:
NY Lansing I, LLC & NY Lansing II, LLC
P.O. Box 384
Callicoon NY, 12783

Content

1. Introduction

#1: NY Lansing I, LLC & #2: NY Lansing II, LLC ("Project Owner"), an affiliate of Delaware River Solar, LLC, proposes to build a photovoltaic (PV) solar facility ("Solar Facility") at North Triphammer Road in the Town of Lansing ("Town") under New York State's Community Solar initiative. The Solar Facility is planned to have a nameplate capacity of approximately 5MW ac (MW) from Project #1 and 3MW ac from Project #2, to be constructed on private land ("Project Site") leased by the Project Owner from the property owner ("Property Owner").

This Operations and Maintenance Plan ("Plan") is being submitted to the Town as part of the application with respect to the Town of Lansing Local Law #3 of 2020 802.18 ("Solar Law"). The Solar Facility is considered a Solar Energy Facility as set forth in the Solar Law.

Prior to commercial operation, the Project Owner will enter an Operation and Maintenance Contract ("O&M Contract") with an operations and maintenance provider(s) ("O&M Contractor"), the scope of which shall include essential works and services needed for the (a) proper operation and maintenance of the Solar Facility and (b) maintenance of the Project Site. The following is a general overview of the O&M Plan to be covered in the O&M Contract.

2. General Requirements of the O&M Plan

- All scheduled Solar Facility maintenance and all landscaping and vegetation maintenance will occur during normal business hours (8:00 A.M. and 7:00 P.M. Eastern Standard Time).
- Commercially reasonable efforts will be used to ensure minimal limits of disturbance when performing any maintenance work of the Solar Facility or Project Site.
- The Project Owner will not use herbicides to manage vegetation. In the event the use of herbicides becomes necessary, the Project Owner will provide the Town's Code Official with the proposed herbicide type, manufacturer and application details for approval before any application is made.
- In the event there is any damage to ground cover, vegetation or vegetative screening due to maintenance activities (other than caused by normal maintenance activities), the affected areas and vegetation will be repaired.
- Corrective maintenance of the Solar Facility may require specialists outside the abilities and responsibility of the Project Owner.

3. Solar Facility (Components) Maintenance

3.1 Scheduled Service Visits: Preventative Maintenance and Inspections

- Semi-Annual interim maintenance visit
- Annual full maintenance visit
- System testing and verification of data acquisition systems, at least once per calendar year
- Module cleaning once a year, or as determined by Project Owner
- Solar Facility field inspection: visual, electrical and mechanical once per month, or as determined by Project Owner
- Data acquisition system maintenance as needed
- Inverter cleaning and servicing to ensure proper operation. Scheduled maintenance and testing as required to maintain manufacturer's warranties.
- Scheduled maintenance and testing required to maintain all manufacturers' warranties on Solar Facility components.

3.2 Unscheduled Service Visits: Corrective Maintenance and Repairs

Unscheduled maintenance visits will generally occur during “Emergency Situations” that would endanger the health and/or safety of surrounding area or “Major Disruptions” to the Solar Facility that degrades electricity generation that does not create an Emergency Situation, such as failure of Solar Facility components, vandalism, or fallen trees.

In the event of an Emergency Situation, the O&M Contractor and/or the Project Owner will contact the appropriate personnel (fire department, police department) to inform them of the emergency. The O&M Contractor will then dispatch appropriate personnel to the Project Site as soon as possible.

In the event of a Major Disruption to the Solar Facility, the O&M Contractor will schedule a corrective maintenance visit as soon as possible with all reasonable effort to schedule any such maintenance activities between 8:00 A.M and 7:00 P.M.

3.3 O&M Contract

The scope of the O&M Contract shall include essential works and services needed for the proper operation and maintenance of the Solar Facility. The scope of work shall generally include at least, but not limited to, the following items:

- Compliance with the Local, State and Federal Rules, Codes, Regulations and Laws regarding the health and safety of any operation and maintenance works.
- Performance of a preventive and corrective maintenance plan.
- Control and monitoring of the Solar Facility 24/365, including, CCTV alarms and system failures, and coordination with the local fire department and law enforcement.
- Maintain and operate all the infrastructures, equipment and facilities related to the Solar Facility required for the proper operation.
- Provide reports to Project Owner (monthly and yearly) of any major unexpected event.
- Administer and manage supplier's guarantees and warranties.
- Management the paperwork involved with third party site visits such as insurance, governmental agencies and others related.
- On site annual peak power and degradation performance testing of modules to a representative sample of modules.
- Annual IR thermography field test of modules and connections of the electrical panels. The test will be done in the appropriate weather conditions taking into account that the main purpose is to detect hot spot events.
- Spare parts stock management, including all cost associated like insurance, security or transportation.

3.4 Preventative and Corrective Maintenance Plan

The O&M Contractor shall comply with the preventive and corrective maintenance programs to maintain and operate the Solar Facility in the proper way. These actions shall include:

- Inspect, test, and clean equipment, including a periodically cleaning of the modules.
- Replace all spare parts, supplies and consumables necessary for performance of the O&M Contract according to the Preventive and Corrective Maintenance Program and the manufacturer's user manual.
- Perform annual field tests and fix any potential failures that arise due to the test.
- Provide Project Owner a monthly report including at least the following information: energy estimate, energy production, % of availability, weather station information, preventive maintenance services performed, corrective maintenance services performed including spare parts and consumables used. Monthly report should also include a detailed description of:

1. Any material failure covered by any warranties, action plan and expected timeframe to cover the incident.
2. Any violation of any applicable law, applicable permit or prudent industry practice due to the O&M practices, including environmental laws, rules, or regulations enforced by governmental agencies.
3. Any adverse events or conditions that may affect normal Solar Facility operation.
4. Record of all tests and reviews performed to maintain systems in compliance with the manufacturer user manual, including name of company involved and nature of service.

- Guaranties and warranties of the manufacturers that arise, including without limitation any claims or remedies against any subcontractors or suppliers; and
- Comply with all permits and maintain in effect all permits required for operation and maintenance of the Solar Facility.

4. General Project Site Maintenance

Frequency of site visits shall be determined based on season (more in summer, less in winter), but no less than quarterly to monitor vegetation. Any required corrective actions will be taken as soon as practical or warranted by the circumstances.

- Visually inspect and report on all fencing for signs of damage, intrusion, and overgrowth of vegetation.
- Inspect signage to ensure all originally installed signs are present and legible.
- Maintenance of access road, including snow removal as needed.
- Vegetation may need to be trimmed or cut back to avoid shading of the solar arrays. Shading inspections will be done semi-annually, and trimming will occur as needed. This would include ground cover, existing vegetation, and screening vegetation. Ground cover will be either mowed, as needed, or sheep may be utilized to graze the array area.
- Adherence to any Storm Water Pollution Prevention Plan practices, if any.

5. Summary

This O&M Plan has been submitted as part of the Site Plan review and Special Condition for a Solar Energy Facility as set forth in Local Law #3 of 2020; Section 802.18.

The Solar Facility is considered a Solar Energy Facility as defined in the Solar Law. The Project Owner will enter into an O&M Contract prior to commercial operation of the Solar Facility with an O&M Contractor taking into consideration any conditions of Local Law #3 of 2020; Section 802.18.

Draft #:_1__ Date: ____4/8/2024____

Approved Date: _____

Project Summary

North Triphammer Road
Project #1 and #2
Project #1 - SBL: #144-1-1.2 5MW Solar Facility
Project #2 - SBL#: 44-1-3.3 3MW Solar Facility

Prepared for**:**

Town of Lansing

Tompkins County, New York

Prepared by:
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Content

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

AC	Alternating Current
DC	Direct Current
kV	Kilovolt
MW	Megawatt
PV	Photovoltaic
roHS	Restriction of Hazardous Substances

Project Information

Project Owner:	#1: NY Lansing I, LLC & #2: NY Lansing II, LLC
Property Owner:	John, James, Julie Young & Susan Barnett
Property Address:	North Triphammer Road, Lansing
Town:	Town of Lansing, Tompkins County, New York
Utility:	New York State Electric & Gas ("NYSEG")
Solar Law:	Local Law #3 of 2020 802.18
Property:	66.83 combined acres between 2 parcels: Tax ID: 44-1-2.5 & 44-1-3.3
Project Site:	66.83 acres
Lot Coverage:	9.4%
Maximum Array Height:	Average <15 feet in height
Access point:	Driveway located North of 2699 N Triphammer Road
	The access for both projects may be a shared driveway, subject to change after lot improvement
Construction Schedule:	Six months from building permit
Community Solar Program:	Discount utility rate program
Building Code:	New York State Uniform Fire Prevention
Energy Code:	New York State Energy Conservation Code
Substation Circuit:	South Lansing Tap
Solar Facility:	Project #1 5 MWac x 5.9MWdc
	Project #2 3MWac x 3.5MWdc
Project #1	
Flat Panel area	29.52 SF x 10,080 panels = 297562 SF = 6.83 ac.
Access Road	0.50 ac.
Rain Gardens	0.33 ac.
Total	7.66 ac.
Site Coverage	7.66 ac./66.83 ac. = 11.5%
Project #2	
Flat Panel area	29.52 SF x 6,048 Panels = 178,541 SF = 4.1 ac.
Access Road	1.84 ac.
Rain Gardens	0.32 ac.
Total	6.26 ac.
Site Coverage	6.26 ac./66.83 ac. = 9.4%
Lot coverage per Town code:	Max Lot Coverage per code is 25%. Requesting 9.4%

INTRODUCTION

Project Owner has prepared this project summary for the proposed development, installation, and operation of a Solar Energy Facility ("Solar Facility") including an interconnection line to interconnect the Solar Facility to the Utility electrical grid. The proposed Solar Facility and Interconnection Line are referred to collectively as the Project.

This Project is being submitted to the Town as part of the application with respect to the special use permit and site plan review by the Town as set forth in the Code of the Town's Solar Law. The Solar Facility is considered a Solar Energy Facility.

The proposed site for the Solar Facility Project Site is on land within the Property. Lot Coverage was calculated by total impervious surface coverage which includes flat panel area, access road, rain gardens as a percentage of the area of the Solar Facility Project Site. The Property access is located north of 2699 N Triphammer Road, within the jurisdiction of the Town.

The connection of the Solar Facility to the Utility electrical grid, including the specific interconnection equipment, is pursuant to a standard Interconnection Agreement executed between the Project Owner and Utility. The Solar Facility will have a total generation capacity of not more than 5.0 MW AC for project #1 and 3 MW AC for Project #2. The generation capacity will be limited by the final site plan approved by the Town.

Energy generated from the Solar Facility will be distributed to the Utility for use by the Utility's customers and directly benefit customers enrolled in a Community Solar Program provided by or on behalf of the Project Owner. The objective of the Community Solar Program is to offer electricity at a discount to the Utility's rate. The Project Owner's goal is to provide residences and businesses in the Town with the opportunity to enroll in a Community Solar Program.

The Solar Facility design will adhere to technical and environmental requirements in accordance with current federal state and Town laws, including all applicable codes, regulations, and industry standards as referenced in the and Building Code, the Energy Code, and the Solar Law.

Key Attributes of the Project Include:

- Direct conversion of sunlight to electricity without generation of waste materials.
- Solar power generated producing no carbon emissions or air pollutants.
- Minimal ambient noise generated during solar power generation, no nighttime noise.
- Minimal traffic disturbance during Project operational lifespan.
- No use of public water utilities.
- Uniform Array Height with minimal visual effects
- Non-array structures approximately 8 feet in height to minimize visual effects.
- Existing vegetation around the Project Site will minimize visual effects.
- Modules secured using a racking system minimizing ground grading and ground disturbance.

This Project Summary includes general descriptions of and guidelines for design, construction, operation, maintenance, and decommissioning of the Projects. Design, construction, operation, maintenance, and decommissioning of the Projects will meet or exceed the requirements of the National Electrical Safety Code and U.S. Department of Labor Occupational Safety and Health Standards, as well as Town requirements for the safety and protection of landowners and Property. Project Owner may submit additional materials/documents regarding the above containing more detail (including a separate Decommissioning Plan and Operations and Maintenance Plan).

The Project Owner has compiled this Project Summary to the best of its knowledge, based upon currently available information. Certain additional reports, such as topography, geotechnical, and environmental, have been completed.

THE INFORMATION CONTAINED IN THIS PROJECT SUMMARY IS NOT INTENDED TO DESCRIBE ALL RELEVANT PROJECT INFORMATION AND IS QUALIFIED IN ITS ENTIRETY BY THE PROJECT OWNER'S FINAL APPLICATION AND SITE PLANS APPROVED BY THE TOWN DURING THE TOWN'S REVIEW PROCESS.

1.1. Purpose

Provide a cost-effective source of renewable solar electricity. Additional objectives include:

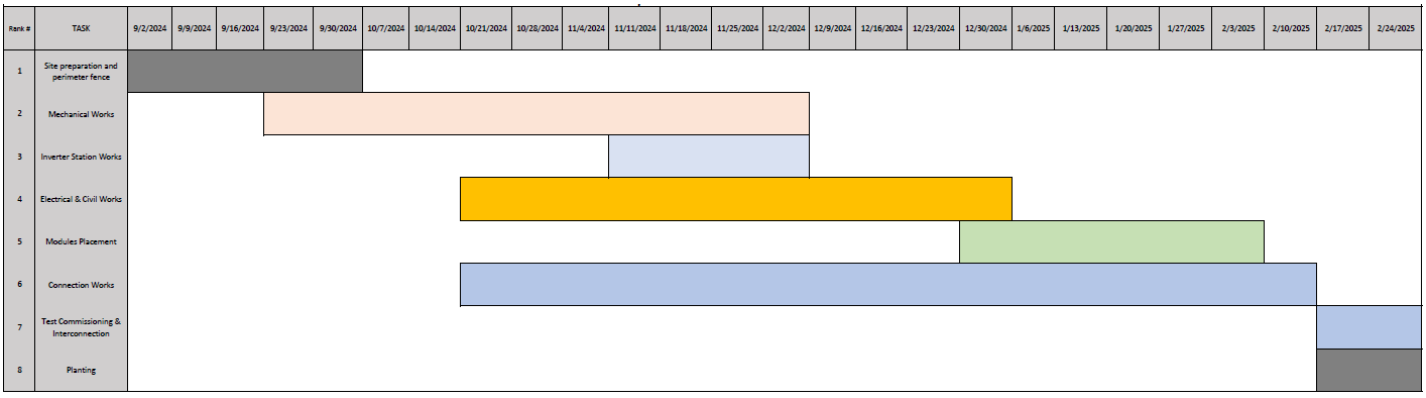
- Develop a solar generation facility that is feasible, quick to construct and easy to operate while providing the Utility and its customers with a cost-effective, cleaner energy alternative.
- Establish emission-free solar electricity and reduce greenhouse gas emissions while avoiding, minimizing, and mitigating the impacts to the environment.
- Generate electricity without local utility needs.
- Provide other important economic and environmental benefits to the Utility and the Town, including improving local air quality and public health, developing local energy sources, promoting local jobs, and diversifying the energy supply.
- Contribute to the State of New York renewable energy goals.

Based on historical information, the average energy usage for a standard home is 10,000 kWh/year. The proposed Solar Facility for Project #1 would generate approximately 7,700,000 kWh/year, equivalent to the electricity consumption of 700 homes. The proposed Solar Facility for Project #2 would generate approximately 4,900,000 kWh/year, equivalent to the electricity consumption of 490 homes. The Project Owner's goal is to provide residents and businesses in the Town the opportunity to enroll in a Community Solar Program.

1.2. Estimated Construction Schedule

Construction of the Project is estimated to take approximately 6 months to complete. An example timeline is below:

Table 1. Gantt's Diagram



2.0. PROJECT DESCRIPTION

2.1. Project Site and Control

Selection of the Project Site over other locations is based on several site criteria including:

- Contiguous site with suitable topography of adequate size to host the Solar Facility.
- Proximity to existing Utility electrical grid.
- Availability, lease agreement with current or future landowner.
- Avoiding sensitive areas, such as rivers, lakes, etc.
- Minimizing visual impact by utilizing the topography and existing vegetation on the property.
- Good highway access for construction, operation, and maintenance activities.

The Project Site will be leased from the Property Owner and/or purchased.

The proposed Project Sites are located on the Property (See Figure 1a and the Property parcel with purple marker). Project Site access will be from the Access Point (see Figure 1b). There will need to be a proposed lot line improvement for this project, which will be sent to the Town in a future submission and the Project summary will be updated in a future draft.

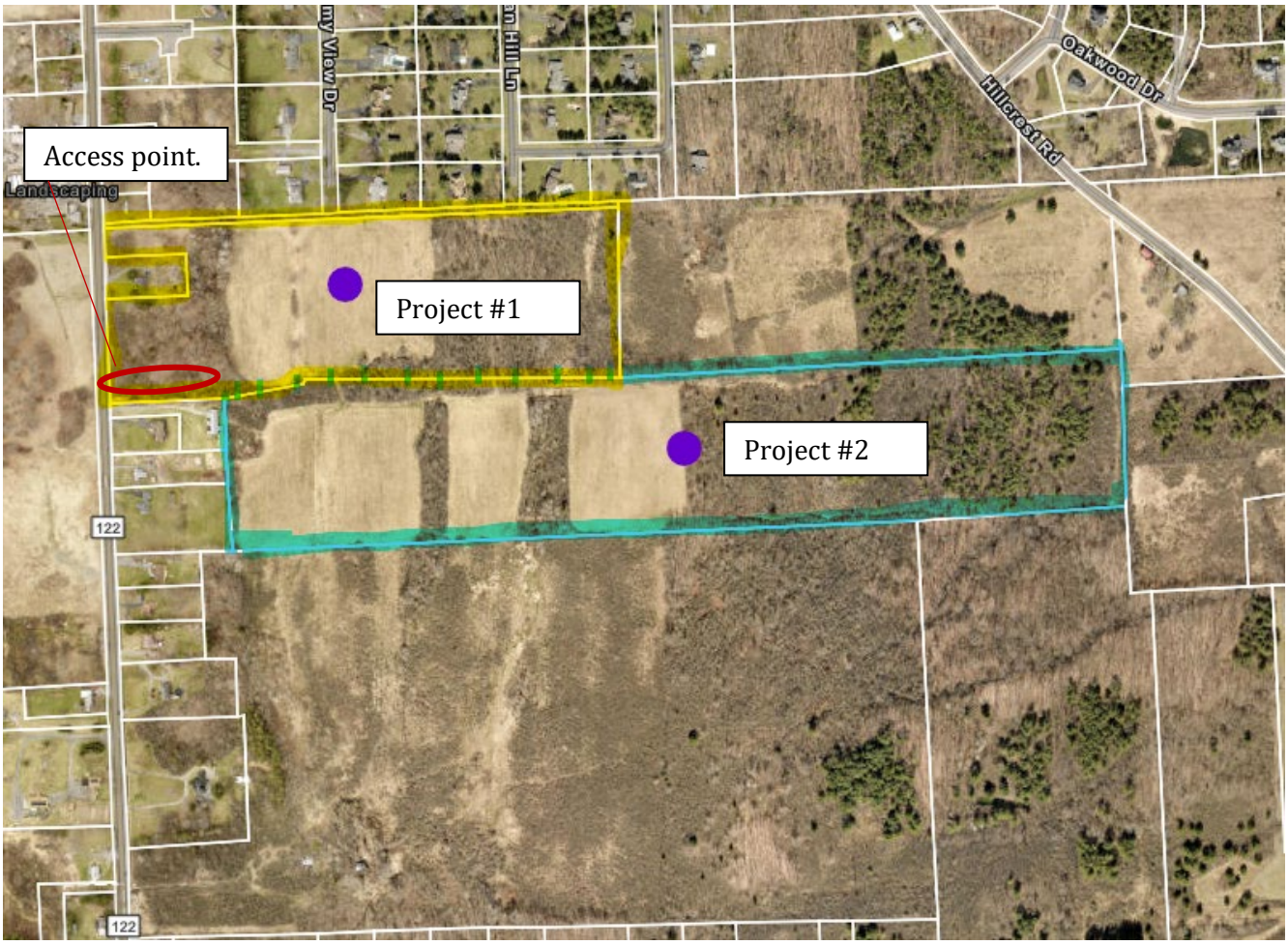


Figure 1a. Property Location

Figure 1b. Access Point

2.2. General Overview of Solar Facility

A grid-connected photovoltaic ("PV") power system is an electricity generating solar system that is connected to the Utility electrical grid. A grid-connected system consists of solar modules one or more inverters, a power conditioning unit and grid connection equipment. The proposed installation is composed of a field of photovoltaic generators (See Figure 2).

The Solar Facility is composed of monocrystalline photovoltaic modules. Modules are electrically interconnected in series of strings and can be mounted on racking that can either 1) track the path of the sun or 2) is fixed at orientation and tilt angle.

To collect all DC output, an inverter station and step-up power transformer will be interconnected, conditioning the electric parameters for feeding energy to the Utility electric distribution network. Power

generated from the modules will be transferred via shielded cables within underground conduits to switch gear which forms part of the main power generation facility.

The modules are electrically protected, and above-grade wires are both shielded and secured to avoid exposure or accidental contact. All necessary protections for this type of facility and supporting structures for photovoltaic modules are included.

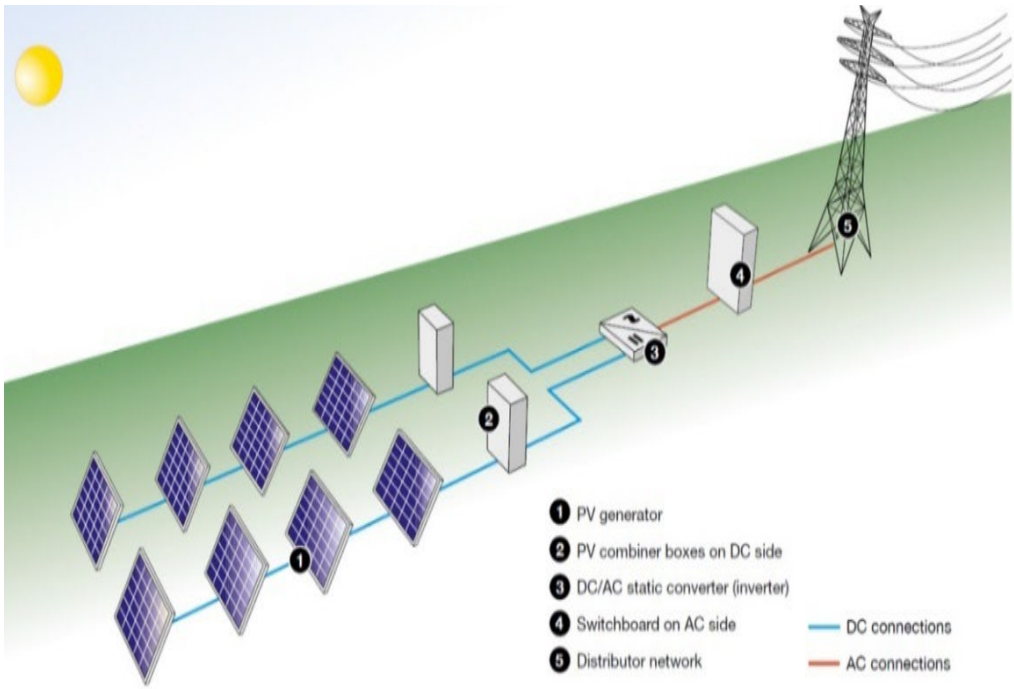


Figure 2. Diagram of a Grid-Connected Photovoltaic Facility

2.3. Acreage and General Dimensions of the Project Site

The Property is owned by the Property Owner, and the Project Site is a part of the Property. Surface Coverage is based on total impervious surface area including the flat panel area, access road, rain gardens occupying the land as a percentage of the Project Site. The Interconnection Line assumes a maximum of 20 ft of temporary, and 2 ft. permanent wide trench.

2.4. Solar Facility

The following sections describe the major components of the Solar Facility. ***Selected manufacturers are not indicated as equipment selection may change during the design and permitting process due to market and economic conditions.*** The final selected equipment is expected to be substantially similar to those proposed.

2.4.1. Summary of Project Components

Supporting structures are set considering economic, technical and land conditions for the modules to capture the most amount of solar radiation and obtain the best solar yield possible. The arrays are distributed into rows and consider surrounding shadings in the array design. There are open corridors between the rows of modules to perform construction and allow maintenance. The inverter station, which contains the transformer, will connect the Solar Facility to the existing Utility distribution network.

2.4.2. Solar Modules

The module manufacturer will depend on the availability of the modules during the procurement period. Manufacturer equipment specification sheets will be provided to the Town along with the Project's building permit application. The solar modules will meet New York's Uniform Fire Prevention and Building Code Standards. Expected minimum requirements of the modules are:

- Conform with IEC 61215, IEC 61730, IEC 61701, UL 61730 Solar Project Standards and other certificates.
- Project Standards and other certificates.
- High Module Conversion Efficiencies
- Dimensions 2384x1096x35mm
- Cell type: Monocrystalline
- Maximum System Voltage: 1500 Vdc (UL)
- Efficiency up to 21 %
- 30 years power output warranty
- Electrical Characteristics STC
- Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m^2, Cell Temperature 25º)

2.4.3. Supporting Structures

Evaluation of the structural design of support for the modules shall account for permanent loads, snow and wind loads, seismic conditions, structural calculation and foundations, module sizing, control of connections, geotechnical analysis and effects of temperature changes in accordance with applicable law and Building Code.

The metal supporting bases for modules shall be hot dip galvanized steel components with a minimum average thickness of 70μm as ISO/EN 1461 or equivalent or by an appropriate anodized aluminum of heavy-duty type and alloy for the better anti-corrosion protection of the construction. All connections including bolts/nuts, shall be of A2 stainless steel or compliant with other industry standard practices appropriate for the application defined.

To minimize ground disturbance, the supporting bases will be pile driven into the ground, considering the results of a geotechnical study. Following are several examples of the potential support structure considered for the Project.

Tracker Racking in Stowed Position:

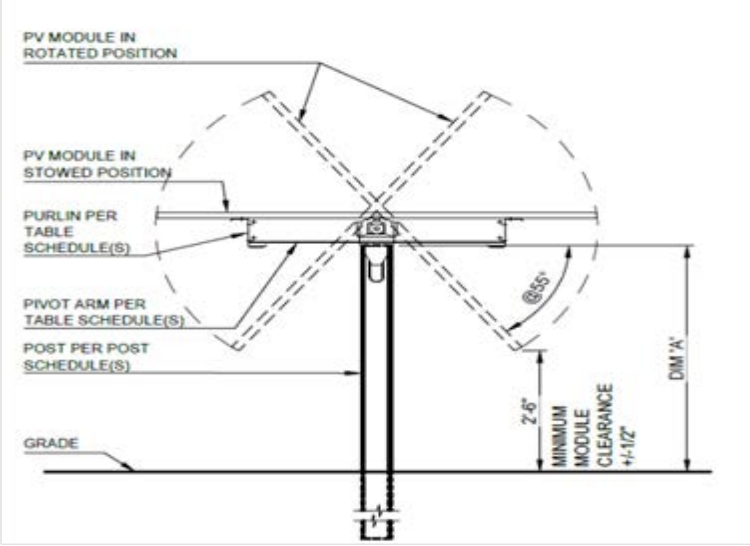


Figure 3a. Supporting Structure Overview (Tracker)

Key points of the Supporting Structure:

- Portrait mounting
- Mono-post anchored to the ground
- All connections bolted without welding.
- One tie bar and a crossbar in which the straps are supported

The module height above ground once attached to the tracker racking, is expected to be approximately 3 feet at the low-end with minimal visual effects at the Maximum Array Height.

Fixed-Tilt Racking:

Figure 3b. Supporting Structure Overview

In the case of fixed-tilt racking, the module height above ground once attached to the racking, is expected to be approximately 3 feet at the low-end and have visual effects at the Maximum Array Height.

2.5. Inverter and Transformer Station (“MV Station”)

The MV Station is inside a standard-sized outdoor container protected with weather-proof material to NEMA 4X protection degree and houses an inverter, transformer, power distribution and monitoring unit. The MV Station converts DC current generated from the PV array into grid-compatible AC current, which can be directly fed into the medium voltage grid.

2.5.1. Inverter

The inverter, part of a MV Station, shall meet at least the following requirements, international standards and tested by:

- UL 1741, UL 1741 SA
- IEEE 1547
- Rule 21
- NEC Code

DC load break switches and AC circuit breakers are provided on the inverter.

The DC cabinet of the inverter is shown in the following figure:

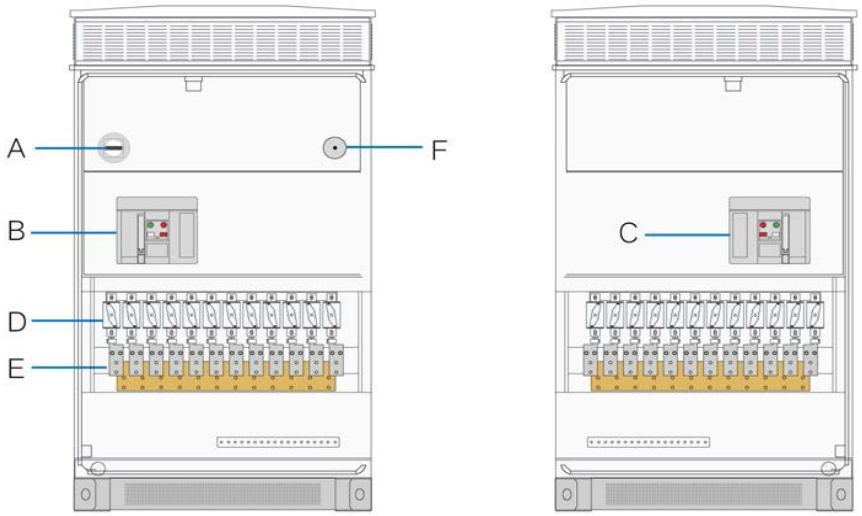


Figure 4. Inverter (Example)

No.	Name	Description
A	AC maintenance switch	Disconnect the switch before maintaining AC cabinet components.
B	QS1, DC load break switch 1	Disconnect the switch before maintaining AC cabinet components.
C	QS2, DC load break switch 2	Connect/disconnect the DC side of the unit 2.
D	Fuse	---
E	DC connection area	The upper part of the copper bar is for positive cable connection area while the lower part is for negative cable connection.
F	DC maintenance switch	Disconnect the switch before maintaining DC cabinet components.

2.5.2. Transformer

The transformer, part of a MV Station, is designed for installation at medium and large-scale utility solar facilities. Critical power connections are completed and tested in a factory environment and the pre-tested unit is shipped to the field ready for the final field connections. Factory manufactured MV Stations reduce installation and commissioning time. The all-in-one solution simplifies the installation, saves space and the visual impact is lower than other configuration options.

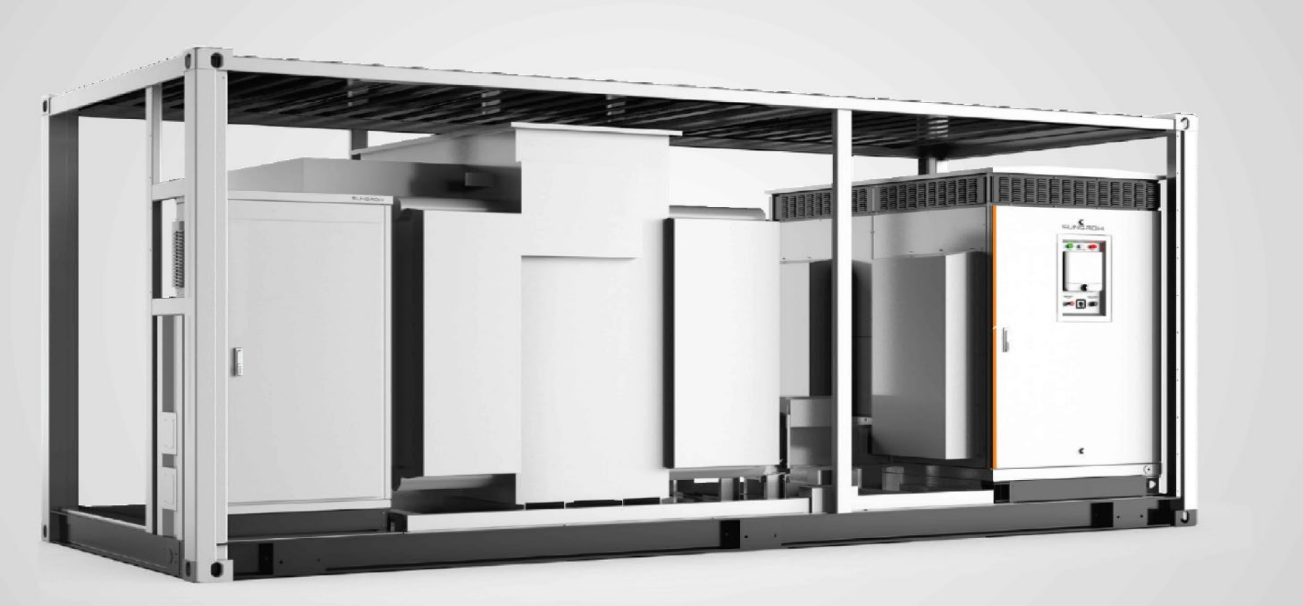


Figure 5. "All-in-one" LV Cabinet, Inverter, & Transformer Station

2.6. Electrical Installation

This section contains the remainder of the electrical devices required in the Solar Facility.

2.6.1. DC Electric Switchboards

Within each array, strings of modules are to be combined in parallel in a combiner box with a protection rating of NEMA 3R or above. The combiner boxes will have at least the following characteristics:

- Suitable for outdoor installation
- Designed for UV resistance
- Protection isolation
- Grounding copper tape
- Anti-condensation filter
- Mounting lugs and required nuts and bolts for installation
- Self-extinguishing and halogen-free materials
- Cable glands for output DC cable (up to 4x1x300mm² Al XLPE cable; defined per project) and signaling cable input & output
- Cable glands for communication cable and grounding cable
- DC fuse in negative pole per string
- Coverage of electrical items with methacrylate plate
- Disconnecting isolators 1500VDC must comply with applicable standards
- Fitted with surge protection Device, 3pole, 1500Vdc, 40kA
- Fully labeled and color-coded wiring (as per project all strings)
- Appropriate number of string inputs and associated fuse sizing
- In case of armored cable, glands have to be able to earth the aluminum armor

Operational ambient conditions are to be as follows:

- Temperature:77.0°F to + 10.0 °F
- Relative humidity: 15 to 95 %

2.6.2. Wiring

Two types of wiring will be required in the Project, from modules to DC Box, and from DC Box to the general DC Disconnect Switch. Cables will meet the requirements of UL standard 4703, appropriate for solar photovoltaic applications.

Wiring will consist of single conductor, sunlight-resistant, direct burial photovoltaic wire, 2000 V for interconnection wiring of grounded and ungrounded photovoltaic power systems with the following features:

- Rated 90°C wet and dry
- Rated for direct burial
- Deformation-resistant at high temperatures
- Excellent moisture resistance, exceeds UL 44
- Stable electrical properties over a broad temperature range
- Increased flexibility
- Excellent resistance to crush and compression cuts
- Resistant to most oils and chemicals
- UV/sunlight-resistant
- Meets cold bend and cold impact tests at -40°C

2.6.3. Grounding

Metal enclosures containing electrical conductors or other electrical components may become energized as a result of insulation or mechanical failures. Energized metal surfaces, including the metal frames of modules, can present electrical shock and fire hazards.

By properly bonding exposed metal surfaces together and to the earth, the potential difference between earth and the conductive surface during a fault condition is reduced to near zero, reducing electric shock potential. The proper bonding to earth by the equipment grounding system is essential, because most of the environment (including most conductive surfaces and the earth itself) is at earth potential. The conductors used to bond the various exposed metal surfaces together are known as equipment grounding conductors (“EGC”).

The metallic device used to make contact with the earth is the *grounding electrode*. The conductor that connects the central grounding point (where the equipment grounding system is connected to the grounded circuit conductor on grounded systems) and a grounding electrode that is in contact with the earth is known as the *grounding electrode conductor* (“GEC”).

Combined Direct-Current Grounding-Electrode Conductor and Alternating-Current Equipment Grounding Conductor: An unspliced, or irreversibly spliced, combined grounding conductor shall be run from the

marked DC grounding electrode conductor connection point along with the AC circuit conductors to the grounding busbar in the associated ac equipment. See Figure 6.

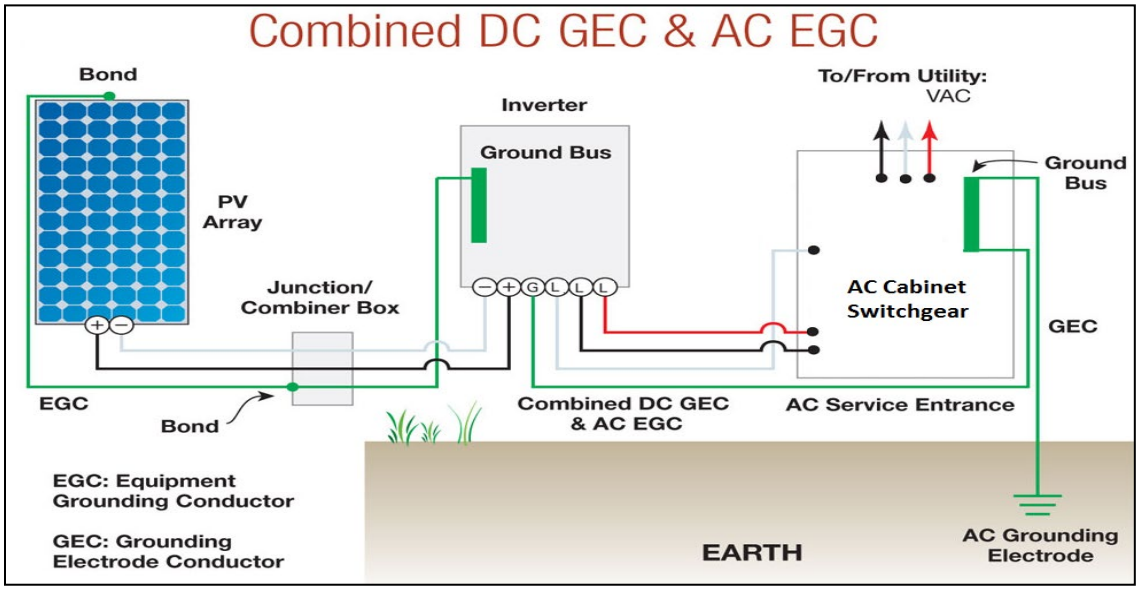


Figure 6. Combined EGC/GEC grounding routing ***Solar Facility***

2.7. Monitoring

Sensors include:

- Combiner Box temperature
- Ambient temperature
- Solar irradiation
- Wind speed
- Panel temperature

All sensors such as the weather station and pyranometers must use dedicated MODBUS Channels for the collection of measurements. The MODBUS channels cannot exceed a maximum of 16 devices (pyranometers, temperature sensors, wind sensors, weather stations) with no other devices such as string monitors, inverters or relays are to be connected to the dedicated MODBUS channel for the weather sensors and pyrometer. All data sent to the Industrial PC (Supervisor software) must be received using MODBUS TCP protocol.

The monitoring system considered is centralized. This becomes possible by using the Inverter Station as a core data collection through a basic set of equipment. It is first necessary to obtain the values of the different variables to monitor. The monitoring system can monitor the AC installation and the DC installation (panels). For monitoring smaller parts of the DC installation at the inverter level there are more Combiner Boxes of lesser strings.

The best way to capture inverter information is using a system to provide communication with a PC. The inverter's own hardware is used for measurement, (hardware that is already included with the central

inverter). The price of a centralized monitoring system is usually lower than other solutions. Measuring switchboards have the advantage that they can monitor multiple system parameters, such as level of harmonics, phase equilibrium, etc.

The inverter station is a central monitoring system of the Solar Facility with these features:

- Grid visualization
- Generator visualization
- Inverter visualization
- Clearly visible external warning signals concerning voltage at the base of pad-mounted transformer and substation
- Registers
- Fault history visualization
- Warning history visualization
- Status visualization
- Internal debug
- * SI visualization menu

2.8. Mid Voltage Connection

The Solar Facility will satisfy the Utility technical interconnection requirements in order to work in parallel with the Utility distribution system. The Project will meet the following requirements:

- Voltage response range
- Frequency response range
- Inverters certified
- Protective function requirements
- Metering
- Operating requirements
- Dedicated transformer
- Disconnect switch
- Power quality
- Power factor
- Islanding
- Equipment certification
- Verification testing
- Interconnection inventory

2.8.1. Mid Voltage Interconnection Line

The proposed Interconnection Lines would be designed for 12.5 kV three-phase Wye-grounded (three conductors) circuits. The Interconnection Line will connect the transformer to the existing electrical grid on the Substation Circuit connecting to the Utility substation bank. The Interconnection Line will be underground until required by the Utility to interconnect to the Utility electrical grid.

The Interconnection Line will be installed in underground conduit. The conductor will be rated at 15 kV, backfilled with select and native backfill, and compacted. The main characteristics of the wire are:

- EPR/Copper Tape Shield with overall LSZH
- Conductor 1350 Aluminum Compact Class B strand
- Three conductor and grounding wire in contact with metallic shielding cape
- Medium-Voltage Power
- Shielded 15 kV
- For use in aerial, conduit, open tray and underground duct installations
- Electrical stability under stress
- Chemical-resistant
- Meets cold bend test at -35˚C
- 105°C rating for continuous operation

- UL Type MV-105, 133%
- Ins. Level, 220 Mils
- Rated at 105˚C
- Excellent heat and moisture resistance
- Excellent flame resistance
- Flexibility for easy handling
- Low friction for easy pulling
- 140°C rating for emergency overload conditions
- 250°C rating for short circuit conditions
- RoHS Compliant
- According to National Electrical Code (NEC), UL 1072 and more compliances

2.8.2. Point of Common Coupling ("PCC")

The PCC is the point where the Project interconnects with the electric Utility grid.

Table 3. PCC Configuration Summary

Line Voltage at PCC (kV)	34.5
PCC Line Type	3 phase
PCC Line Configuration	Wye-Wye

2.8.3. AC Generator Disconnect Switch

In order to isolate and protect the Solar Facility from the Utility electrical grid, a load break disconnecting switch is necessary. The 3-phase disconnect switch located between the generating equipment and interconnection at the PCC, must be manual, visible, lockable and gang-operated. The Project Owner will have 24-hour/7-day unlimited access and control of this isolation switch.

The disconnect switch must be rated for the voltage and current requirements of the installation. Disconnecting means shall be rated to interrupt the maximum generator output; meet applicable Underwriters Laboratories (UL), American National Standards Institute (ANSI), and Institute of Electrical and Electronic Engineering (IEEE) standards; and shall be installed to meet the NEC and all applicable local, state, and federal codes. It will be clearly marked with permanent larger letters: "Generator Disconnect Switch".

In accordance with the Project Owner's safety rules and practices, this isolation device must be used to establish a visually open, working clearance boundary when performing maintenance and repair work. The designated generator disconnect also must be accessible and lockable in the open position and have provisions for both Project Owner and Utility padlocks and be capable of being tagged and grounded on the Project Owner side by Project Owner personnel.

The visible generator disconnect switch shall be a gang-operated, blade-type switch (knife switch) meeting the requirements of the NEC and nationally recognized product standards. Installation will also require a recloser with remote control and data access to be installed to:

- Monitor voltage current
- Provide for remote disconnect
- Act as a Utility controlled redundant protection system

2.9. Operation and Maintenance

The Property operation and maintenance plan requirement for a Solar System set forth in the Solar Law reads as follows:

Local Law #3 of 2020 Section 802.18.1 (ix)

ix. An operation and maintenance plan, including description of continuing Solar Energy Facility maintenance and property upkeep, such as mowing and trimming, safe access to the installation, as well as general procedures for operational inspections and maintenance of the installation.

x. An operation and maintenance plan, including description of continuing Solar Energy Facility maintenance and property upkeep, such as mowing and trimming, safe access to the installation, as well as general procedures for operational inspections and maintenance of the installation.

A separate "stand alone" Operations and Maintenance Plan ("O&M Plan") has been submitted to the Town as part of the application for a special use permit and site plan approval. The O&M Plan is submitted separately for ease of tracking the Solar Law requirements.

The following is a summary of general operation and maintenance activities:
During operation, maintenance activities will focus on the scheduled preventive maintenance and repairs of the solar generating equipment. The maintenance and repair of Project components is expected to be coordinated through monitoring, on-site inspections, and technical support from the various warranty services provided by the equipment manufacturers. Unsafe, inoperable, and/or abandoned equipment, shall be removed by the Project Owner.

The Solar Facility will operate 7 days per week, generating electricity during daylight hours. Preventive maintenance activities will occur during normal working hours, generally twice per year, with the occasional need to conduct corrective maintenance to certain equipment or facilities during non-scheduled or weekend hours.

The solar generating equipment will be continuously monitored and controlled from a central control room during normal working hours with 24-hour monitoring from a remote source. The generation units, auxiliary systems and balance of the Solar Facility will be connected to a Supervisory Control and Data Acquisition system ("SCADA").

Standard maintenance for the Solar Facility will include:

- Modules Cleaning: Module cleaning will be performed during preventive maintenance visits on an as-needed basis following extraordinary snowstorms. Module cleaning does not involve use of chemicals.
- Scheduled Project Maintenance: There will be the need to periodically inspect the modules (snow, ice, grass, vegetation) and make necessary alignment adjustments (i.e. tighten fasteners) or replace damaged modules to prevent breakdowns and production losses. Project components will go through maintenance checklist once or twice per year.

  The checklist shall include such items as:

  - Checking wire connections
  - Testing voltage/current
  - Inspecting components for moisture
  - Confirming settings on the inverter
  - Transformer maintenance
  - Resealing of system components

- Corrective Maintenance: Corrective maintenance will occasionally be required due to uncontrollable circumstances such as severe weather or premature failure of components. These unscheduled repairs will be undertaken in a manner to minimize impacts to the continued operation of the **Solar Facility**.
- Monitoring Management**:** uses real-time data to oversee Project parameters.

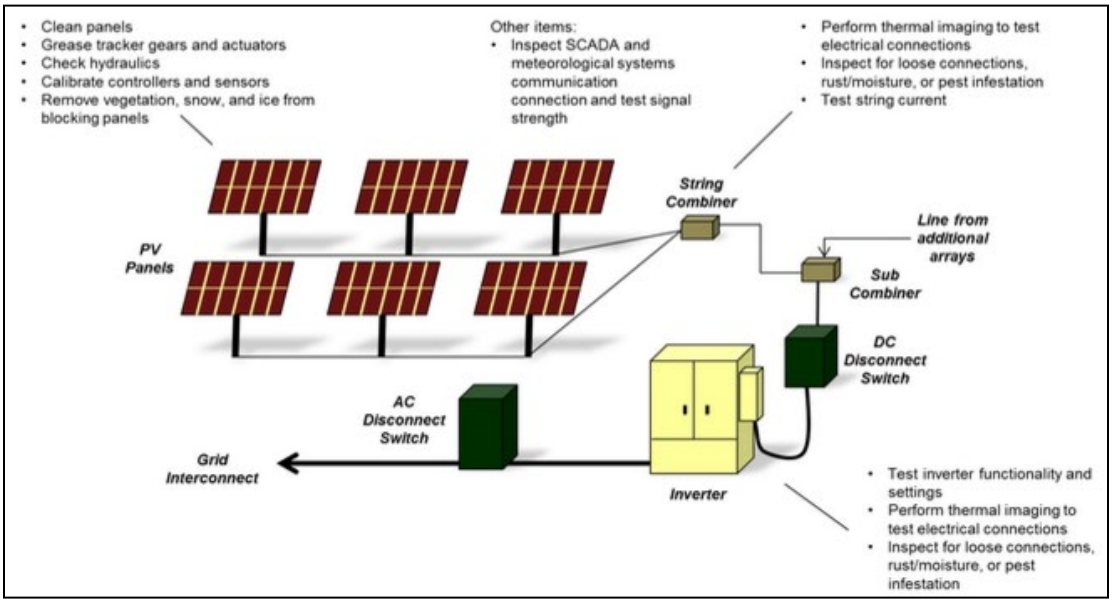


*Figure 7. Highlights of the **Solar Facility** Maintenance*

Typical equipment required to support operation and maintenance of the Solar Facility includes:

- Cleaning systems
- Standard electrical tools
- Building support systems
- Transport vehicles (pick-up truck, ATV, etc.)
- Standard mechanists tools

Project Site Maintenance: Frequency of site visits shall be determined based on season (more in summer, less in winter), but no less than quarterly to monitor vegetation. Any required corrective actions will be taken as soon as practical or warranted by the circumstances. Typical activities include:

- Visually inspect and report on all fencing for signs of damage, intrusion, and overgrowth of vegetation.
- Inspect signage to ensure all originally installed signs are present and legible.
- Maintenance of access road, including snow removal as needed.
- Vegetation may need to be trimmed or cut back to avoid shading of the solar modules. Shading inspections will be done semi-annually, and trimming will occur as needed. This would include ground cover, existing vegetation, and screening vegetation. Ground cover will be either mowed, as needed, or sheep may be utilized to graze the array area.
- Adherence to any Storm Water Pollution Prevention Plan practices, if any

2.10. Site Security

Limiting access to the Project Site to non-authorized personnel is necessary both to ensure the safety of the public and to protect equipment from potential theft and vandalism.

The perimeter of the Solar Facility will be fenced with an approximately eight-foot-high fence to facilitate Project and equipment security (see Figure 8 for proposed fencing type). Surveillance methods such as security cameras or motion detectors may be installed at locations along the Project Site boundary. There is no lighting proposed on the Project Site. Warning signs with the Project Owner's phone number will appear on signs placed at the entrance and perimeter of the of the Solar Facility.

Figure 8. Fencing

2.11. Temporary Construction

Temporary construction staging areas are required for temporary construction offices, construction parking, material laydown and storage areas, an equipment assembly area, and portable toilet facilities. These areas will be located on the Project Site and used throughout the Project construction period and then decommissioned. The exact location of the temporary construction staging areas will be defined in the drawings.

Graded all-weather roads may be required in selected locations on the Project Site during construction to bring equipment and materials from the staging areas to the construction work areas. These roads may not be decommissioned after construction and may be utilized for long-term Project operation and maintenance.

2.12. Water Uses and Sources

The Project will not use any utility water for electrical power generation.

2.13. Erosion Control and Storm Water Drainage

A Storm Water Pollution Prevention Plan (SWPPP) study has been prepared, submitted and reviewed by the Town's review engineer.

2.14. Vegetation Treatment and Management

The Project Site consists of low volume forest land with dense undergrowth. The project site will be cleared for the construction of the project. Native vegetation (low growing grasses) will be planted after construction to grow amongst the solar panels.

2.15. Waste Materials Management

The Project will generate a variety of non-hazardous wastes during construction and operation. These waste items may include the materials listed in Table 4:

Table 4: Waste and Hazardous Materials Management

Item	Description
PVC Cement	Adhesive used for underground PVC conduit and ground sleeve
Cardboard	General packaging
Plastic	General packaging, wiring coating
Cold Galv	Anti-rust galvanizing spray used when cutting material to prevent rust.
Copper & Aluminum	Wiring systems trims

Material Safety Data Sheets ("MSDS") will be maintained at the Project Site during construction. All waste shall be disposed of according to what is specified in the MSDS.

2.15.1. Construction Waste Management

During construction, inert solid wastes may include recyclable items such as paper, cardboard, solid concrete, metals and wire, Type 1 to 4 plastics, drywall, and wood. Non-recyclable items include insulation, other plastics, food waste, packing materials, and other construction wastes. Management of wastes will be the responsibility of the Project Owner. Typical management practices required for contractor waste include recycling, when possible, proper storage of waste and debris to prevent wind periodic transport and disposal of waste by an authorized trash hauler. A waste management plan will be implemented during construction.

It is expected that a 40-cubic-yard container will be staged at the Project Site and emptied (exchanged) on an "as needed" basis. Construction waste is not expected to have an impact on public health. No hazardous wastes are expected.

2.15.2. Operations Waste Management

During operations, inert solid wastes generated would be predominantly routine maintenance wastes, such as scrap metal, wood, and plastic from surplus and deactivated equipment. Scrap materials such as paper, packing materials, glass, metals, and plastics will be segregated for recycling. Non-recyclable inert wastes would be stored in covered trash bins in accordance with local ordinances and picked up by an authorized local trash hauler for transport and disposal.

2.16. Fire Protection

Fire protection at the Project Site will include safety measures to ensure the safeguarding of human life, prevent personnel injury, and preserving property. The Project Owner will offer to meet with the local fire department(s) to provide them with information related to the Project.

2.17. Health and Safety

A "Health and Safety" plan will be in effect during construction with regular inspections. Workers will be required to use personal protective equipment ("PPE") during construction activities. Required PPE will be approved for use, distinctly marked to facilitate identification, and be used in accordance with the manufacturer's instructions. The PPE will be of such design, fit, and durability as to provide adequate protection against the hazards for which it is designed. The use of PPE for site activities includes but is not limited to safety glasses or goggles, hardhat, earplugs, dust mask, leather and/or insulated gloves, safety-toe and/or metatarsal shoes, apron, and safety belt.

During construction, a first aid station, complete with all emergency medical supplies, will be located on the Project Site.

3.0. CONSTRUCTION OF THE SOLAR FACILITY

The following section generally describes the activities that are anticipated to occur before and during Project construction and throughout operation and maintenance of the Project.

3.1. Solar Field Design, Layout, Installation and Construction Processes

The site plan for the Solar Facility is shown in Figure 9a and Figure 9b. The Solar Facility consists of arrays anchored to the ground. Arrays may be reconfigured as required by site characteristics such as parcel boundaries, roads, topography or similar constraints.

The arrays are installed in a block configuration. Modules are attached to horizontal steel shafts supported by vertical steel posts. All panels will have minimal visual effect and the minimum height in relation to the ground will be approximately 3 ft. All mechanical equipment will be completely enclosed by an approximately 8' high fence.

Figure 9a. Project Site Layout Project #1

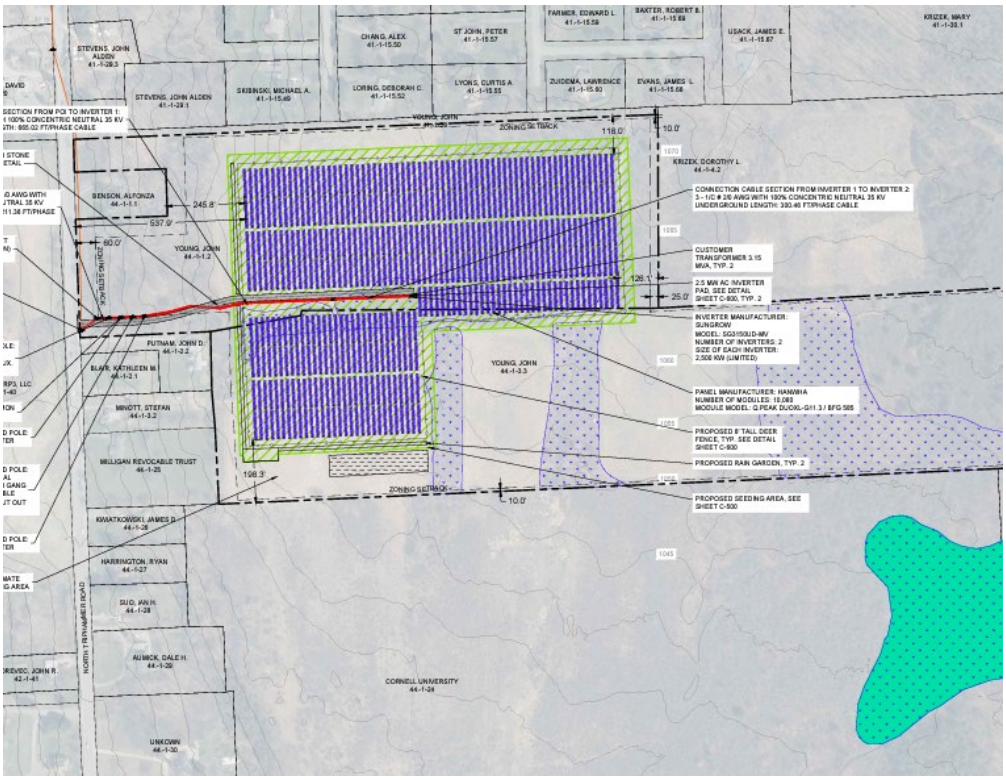
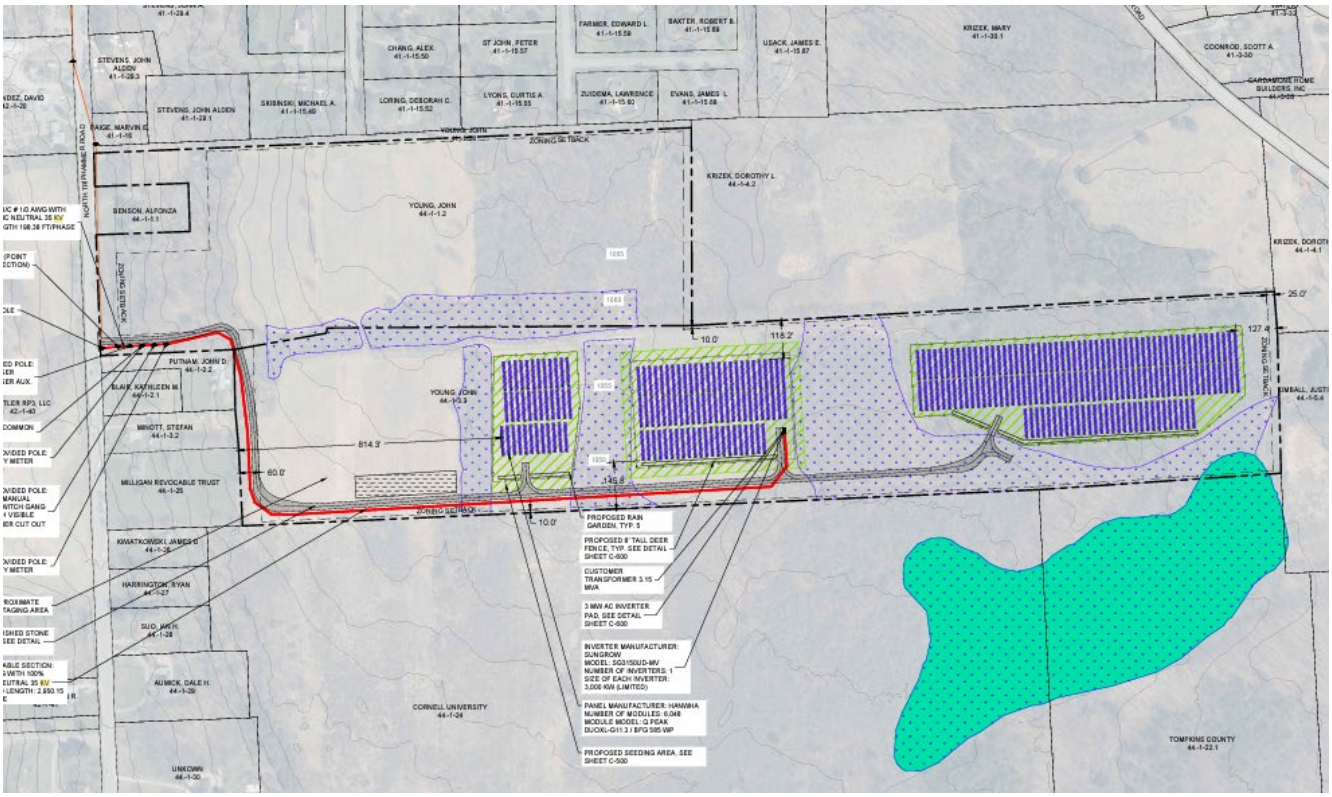


Figure 9b. Project Site Layout Project #2



3.2. Access and Transportation System, Component Delivery, Worker Access

The Project Sites access for general construction traffic will be from the Access Point by an access road. Traffic will come from there onto the main access drive to the Project Sites where all deliveries will occur. The Access Point will also be the primary route for workers to access the Project Site.

Parking will be provided at the Project Site. It is not expected, but if necessary, a traffic and transportation plan will be developed to address flagging and traffic management along public roads during the construction phase. Construction traffic would continue for approximately six months from the start of construction.

3.3. Construction Work Force Numbers, Vehicles, Equipment, Timeframes

Construction activities would include road and access construction, solar installation, operation and maintenance facility construction, Interconnection Line trenching, installation of a direct buried rated Interconnection Line, cleanup, and site reclamation. The anticipated number of workers and type of equipment to construct the Project are provided in Table 5.

Table 5: Typical construction estimated personnel and equipment required		
Item:	# of Personnel	Equipment
Survey	3	2 pickup trucks
Solar Installation	12	1 piling and drilling machine 1 fork lift 2 trucks
Temporary Road Construction	6	1 excavator 1 road grader 2 trucks
Trench and backfill	4	1 excavator 1 compactor 2 trucks
Interconnection Line	4	1 spool truck 1 trencher 1 truck
Clean-up	4	1 truck
Rehabilitation	2	1 truck
Estimated personnel	35	

3.4. Site Preparation, Surveying and Staking

A detailed land survey will be performed to establish local benchmarks and Project Site boundaries. A topographic survey will be performed to establish the Project Site's grading and drainage plans for the arrays, roadways, and other Project features. A lot line improvement may be needed for the projects and will be submitted at a later date. Detailed maps with GPS coordinates will be supplied to proper authorities having jurisdiction as required for permitting.

A licensed survey team, prior to commencement of construction, will properly stake the Project Site physical boundaries and construction footprints. The survey team will additionally stake the path through any right of ways ("ROW"s) for the Interconnection Lines or provide a detailed map using GPS coordinates.

3.5. Site Preparation and Vegetation Removal

Vegetation will only be removed in disturbed areas as required for placement of modules, electrical equipment, access road and drainage swales. Vegetation removal will be minimized as much as possible.

The Project Site is expected to require minimal grading. To the extent possible, the racking system will be adapted to the existing topography. Minimal grading may be required for the inverter and transformer pad.

3.6. Solar Facility Construction

Prior to installation of the modules, the supporting steel posts would be installed, generally pile driven to minimize ground disturbance. The modules would be mounted by hand to the steel posts and all necessary

electrical, communications, and other connections will be made. All significant assembly and erection will be conducted on site.

3.7. Project Construction

The anticipated Construction Schedule may change based on time of year/product availability.

3.8. Gravel Needs and Sources

Gravel needs would be moderate. The main access road, if needed, would use compacted, crushed gravel imported from offsite. Materials will be locally sourced to the extent possible.

3.9. Electrical Construction Activities

Power generated by the modules will be collected through a power collection system. The collection system will direct the output from the modules to the on-site transformer to be transmitted through the Interconnection Line to the Utility grid.

3.10. Interconnection Line Construction Sequence

The Interconnection Line from the Project Site to poles required the Utility will be underground. The construction of the Interconnection Line is a several step process. The initial step will be clearly surveying the ROW boundaries and marking any existing underground utilities. After the ROW has been staked, excavation equipment can be used to dig the trench. The excavated soil will be used for backfilling or disposed of on-site. When the trench is prepared, the conduit installation process can begin, utilizing the proper backfill around the conduit, if required. Above the conduit placement, the previously excavated native soil can be used to fill in the remaining trench depth.

The Engineering, Procurement and Construction contractor (EPC Contractor) shall provide a compilation of all user manuals, guarantees and warranties to the Project Owner and O&M Contractor including a data sheet for each item of equipment.

4.0. ENVIRONMENTAL CONSIDERATIONS

4.1. Description of Project Site and Potential Environmental Issues

4.1.1. Special or Sensitive Species and Habitats

General locations where rare animals, rare plants, and significant natural communities (such as forests, wetlands, and other habitat types) are already documented in New York State. The Project Site is not located

within an area designated as having the potential for habitat for rare plants and/or endangered animals via the NYSDEC Environmental Resource Mapper Rare Plants and Animals Overlay Map ("DEC Mapper"). The Project Site does not fall within lands known or expected to be near critical habitat protected under the U.S. Fish and Wildlife Service ("USFWS").

4.1.2. Visual

There will be a landscaping plan provided to mitigate the view of the solar field.

The Project Site consists of mostly vacant areas. The Property is bounded as follows:

North: residential area

East: heavily wooded areas

South: heavily wooded areas

West: densely wooded areas at project #1, as well as residential homes on project #2

See Figure 10 on the following page for the location of nearby residences and structures.

Figure 10. Nearby Residences / Buildings

4.1.3. Glare and Glint

Solar panels are designed to not reflect sunlight. In general, solar panels absorb as much sunlight as possible while reflecting as little light as possible. Solar panels produce less glare and reflectance than standard home window glass. Solar panels use “high-transmission, low-iron” glass, which absorbs more light, producing smaller amounts of glare and reflectance than window glass. Research has shown that they reflect less light than snow, white concrete, and energy-efficient white rooftops.

Glint is typically defined as a momentary flash of bright light, often caused by a reflection off a moving source. A typical example of glint is a momentary solar reflection from a moving car, or “catching” something bright out of the corner of your eye.

Glare is defined as a continuous source of bright light. Glare is generally associated with stationary objects, which, due to the slow relative movement of the sun, reflect sunlight for a longer duration. The difference between glint and glare is duration. Industry-standard glare analysis tools evaluate the occurrence of glare on a minute-by-minute basis; accordingly, they generally refer to solar hazards as “glare”.

The ocular impact of solar glare is quantified into three categories (Ho, 2011):

1. Green – Unproblematic shine. Low potential to cause after-image. This type of glare can be compared to noticing something shiny in the distance.
2. Yellow - Potential to cause temporary afterimage (flash blindness). This type of glare is much like sunrise and sunset glare for drivers who struggle to find the perfect angle for car visors so they can continue to operate their vehicle safely while traveling through areas of such glare.

a. Standard levels of yellow glare can, for the most part, be handled with relative ease utilizing slatted fencing or local foliage landscape mitigation measures.

b. Only extremely high levels of this type of glare (in the area of the chart labeled as “direct viewing of the sun” which is uncommon to find with PV installations) would be considered an insurmountable hurdle to a PV installation of any size.

c. High levels/intensities and long durations are different factors.

3. Red - Potential to cause retinal burn (permanent eye damage). PV modules do not focus reflected sunlight and therefore retinal burn (RED glare) is typically not possible.

d. This is the ONLY type of glare that would be considered an insurmountable hurdle to a PV installation of any size.

These categories assume a typical blink response in the observer.

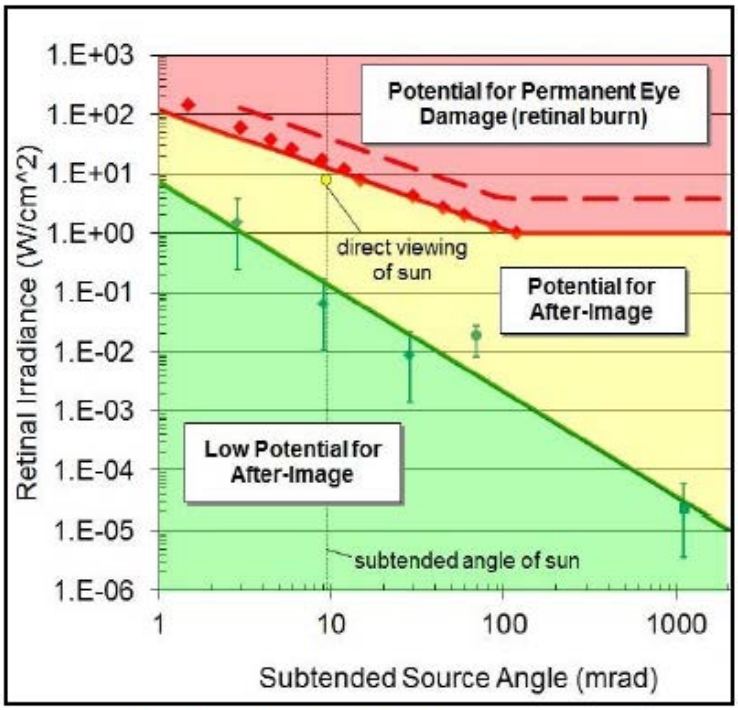


Figure 1 – From *ForgeSolar* website (sample glare hazard plot defining ocular impact as function of retinal irradiance and subtended source angle *(Ho, 2011)*)

To further put glare into perspective, the following is presented.

YELLOW glare such as in the graphic below could only be seen when standing directly next to project panels at the perfect angle when the sun is in a perfect place—indeed the point of a photographer standing directly by these panels and waiting for the perfect moment to capture this image. It is also possible that the panels in the picture shown do not have an anti-reflective coating.

Solar panel showing solar glare

GREEN glare, as illustrated below, is the more common occurrence with solar projects—a noticeable shiny area (in the northwest area) as compared to panels where the sun is not quite in perfect alignment yet.

The effect of this noticeable shine to certain areas of the project area is still seen from a relatively close up vantage point and at the optimal height this image was captured, possibly by a drone. A similarly sized project in the distance, closer to the horizon of the photo would be unlikely to show even the levels of green glare that the system in the foreground reflects.

US patent # 6359212 (method for testing solar cell assemblies and second surface mirrors by ultraviolet reflectometry for susceptibility to ultraviolet degradation) explains the differences in the refraction and reflection of solar panel glass versus standard window glass.

When a ray of light falls on a piece of glass, some of the light is reflected from the glass surface, some of the light passes through the glass (transmitted), and some (very little) is absorbed by the glass. Following are parameters to consider when considering glare from solar panels:

- The measure of the proportion of light reflected from surface is called reflectance (reflection): R
- The measure of the proportion transmitted is the transmittance (this is where the term high light transmission glass comes from because the glass is formulated to allow more sunlight to pass through its surface than would pass through a standard glass surface): T
- The measure of the proportion absorbed is absorptance (absorption) (this amount is very small for clear glass, much smaller proportionately, than the other two components): A

  Each quantity is expressed as a fraction of the total intensity (quantity) of a ray of light. Intensity may be expressed as follows: R + A + T = 1.

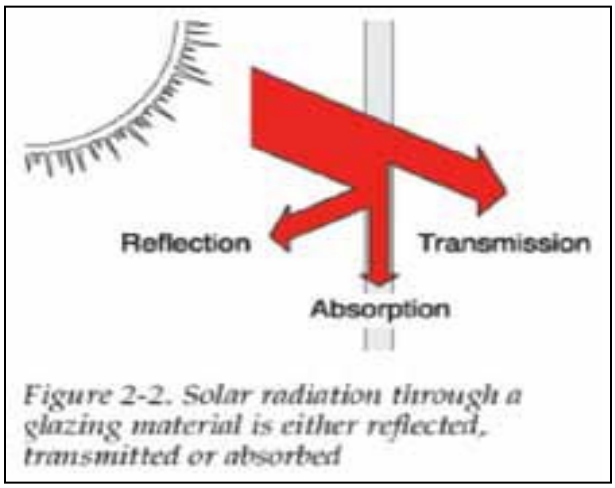


Figure 2-2. Solar radiation through a glazing material is either reflected, transmitted or absorbed

Table 6. Solar Radiation through Glazing Material

The reflection/refraction behavior of a medium is directly related to its index of refraction. Lower the index of refraction is suitable because the medium is allowing more of the incident ray to pass directly through.

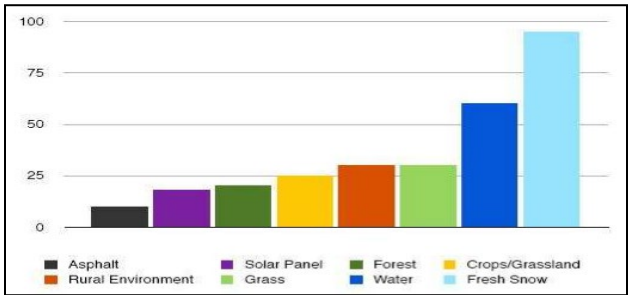


Table 7. Common Reflective Surfaces

It should be noted from the graph and the table above, that the reflected energy, in percentage, of solar glass is much lower than water and even below that of forest reflection.

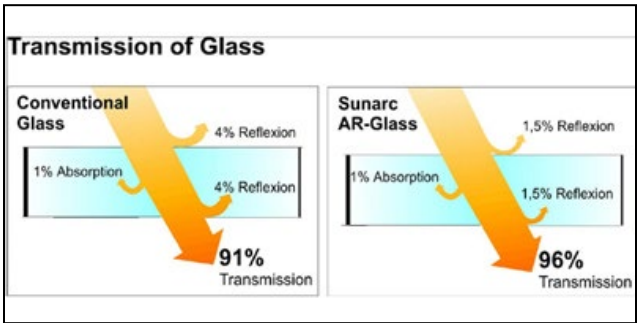


Table 8. Anti-Reflective Coating reflect a lower percentage of light than smooth water.

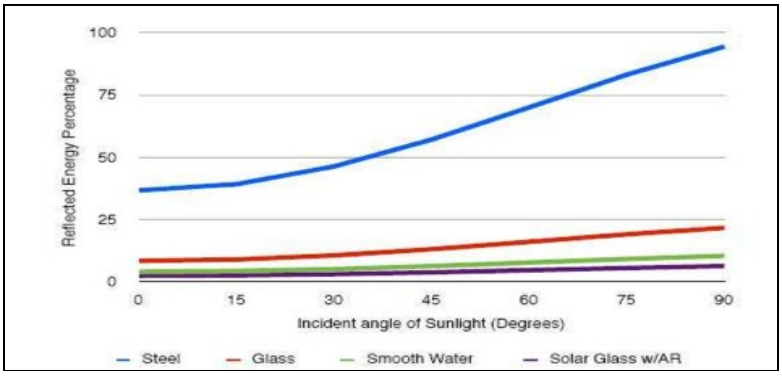


Table 9. Analysis of typical Material Reflectivity with sunlight angle (from normal).

Steel, a common building material, reflects far more incident sunlight than a solar panel.

The percentage of the incoming sunlight that is reflected is very low for high sun angles (most of the day) and increases for a very low sun angles (near sunrise and sunset when the intensity of the sun is already substantially lower than at mid-day.).

Taking into account existing vegetation and distance from the road as well as the aforementioned information regarding glare off the solar modules, roadways, buildings and flights paths will not be impacted by glare from the panels.

4.1.4. Storm Water Drainage

4.1.4.1 Storm Water Drainage off Modules

The storm water impacts of a solar installation will depend upon the project design, site conditions and characteristics, as well as topographic conditions. A SWPPP determines the impact, if any, of the existing runoff conditions and remediation actions, if needed, for the proposed runoff conditions. The Solar Facility

is a fixed structure mounted and is installed with minimal impact to the current topography and groundcover conditions. Also, the Solar Facility is arranged with sufficient distance between the modules to allow rainfall to infiltrate between each module and flow between arrays, allowing any runoff to naturally infiltrate and drain over all ground surfaces.

The conceptual design of the Project has been arranged, to the maximum extent practicable, to mimic natural hydrology. Rainwater falling on the modules will not channel or accumulate in large volumes as it will run-off the modules using the gap between each module, about 1 inch. Rainwater will fall off each module within a few feet of where it would naturally fall. Additionally, the site has full grass ground cover, minimizing erosive actions.

Figure 11. Module Spacing Gaps

Elements of the Solar Facility that alter natural infiltration, such as steel poles driven into the ground and any other racking components are treated as impervious. Other impervious elements would include concrete pads or foundations for racks or inverter cabinets.

The following factors have been considered during the design process:

- Runoff to flow onto and across vegetated areas to maintain the disconnection
- Disconnecting impervious surfaces works best in undisturbed soils.
- Minimizing ground disturbance.

The rows of solar panels will be installed according to Figure 12 below. In this scenario, the disconnection length is the same as the distance between rows and is at least 80% of the width of each row. Therefore, each row of modules is adequately disconnected between modules and between rows.

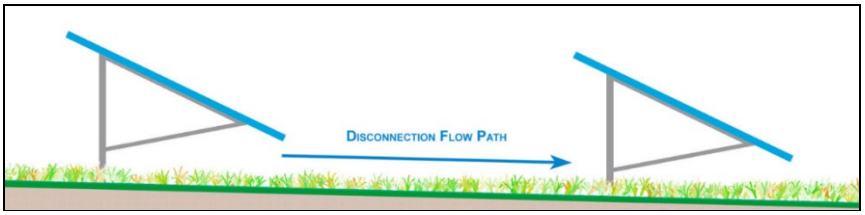


Figure 12. Array Spacing - disconnection flow path between arrays

4.1.4.2 Vegetation under Modules

The modules will reduce direct sunlight under each module in direct proportion to its total collection area; this may reduce plant coverage and density under the modules. In contrast, this shading will increase the moisture of the ground providing an extra water source for vegetation.

There will be shading underneath each module (varies based on sun position and type of array layout). Within this area there will be reduced sunlight intensity. Sunlight intensity is reduced but still enough intensity remains to allow grass to persist under the shaded area. The growing pattern will be slower than the conditions associated with full open environments but good enough to allow grass to endure. Generally, the measurements made in the various light regimes indicate native grasses grows best when light values exceed 600 Lx but the growing patterns will be reduced to a level where the grass will have a thinner cover and resulting a slower growing path for the grass. Other contiguous grasses may actually benefit from some shading providing a slightly moister substrate that could be utilized by the grasses. (Source: proposed solar panels vegetation impacts, prepared by Joseph Arsenault, July 2010)

4.1.5. Noise

Very minimal low-level noise is generated from the electrical inverter and distribution transformer. Inverters are tested and do not generate disturbing noise levels, and noise from equipment will not be audible at the Property boundary. Central inverters are usually surrounded by the solar panel arrays whose electricity they manage–further distancing them from anyone who might happen to be nearby. At a distance of 1m, central inverters have a sound pressure level of less than 70dB. Furthermore, because solar modules produce power only when the sun is shining, inverters will be completely silent at night.

If trackers are proposed for the Solar Facility, the tracking racking will move slowly following the sun. This tracker movement is slow and will not create any perceptible noise.

4.1.6. Dust and Waste

The inclination of the modules allows water to flow freely through them and clean the surface when it is raining. No dust will be generated during operations. Modules after use (20 or 30 years) are 95% recyclable. The equipment will be designed for a 30-year lifespan, and end-of-life site remediation and equipment replacement options will be discussed in the Decommissioning Plan.

4.1.7. Safety

A health and safety plan will be implemented during construction. All equipment installed will comply with safety rules. Warning signs (visible, in good condition and permanent) will be posted. Perimeter fencing and surveillance system will be considered. All the equipment will be tested and in warranty. Equipment must comply with Federal, State and local regulations and applicable laws.

The electrical safety for workers will be designed and evaluated in detail. The hot parts will be isolated, and general equipment or switching devices will be mechanically interlocked. The electrical installations are equipped with protection against abnormal operating conditions, providing compliance with safety rules.

4.1.8. Impacts During Construction

It is expected that some noise will be generated during construction activities. All actions involving risk will be considered: civil engineering, machinery, transportation, etc. Impacts due to construction will be investigated, and mitigation measures will be proposed. The contingency provision for the Solar Facility consists of a detailed analysis of the possible occurrence of an incident while under construction; the purpose is to have a response to maintain the safety of people, environment, and Property.

4.1.9. Cultural and Historic Resource Sites and Values

The historic and archeological map will be utilized to identify if any cultural or historical significance exist on site. Any cultural resource that would be directly or indirectly impacted, if any, would be subject to further evaluation.

4.1.10 Solar Facilities Classified as Non-Hazardous Materials

Photovoltaic panels are designed to last more than 30 years, and many manufacturers back their products with performance guarantees backed by warranties. Many Solar Energy Industry Association ("SEIA") members already operate take-back and recycling programs for their products. They are committed to guiding both state and federal regulations that support safe and effective collection and recycling of end-of-life modules.

End-of-life disposal of solar products in the US is governed by the Federal Resource Conservation and Recovery Act ("RCRA") (http://www.epa.gov/lawsregs/laws/rcra.html), and state policies that govern waste. To be governed by RCRA, panels must be classified as hazardous waste.

To be classified as hazardous, panels must fail the Toxicity Characteristics Leach Procedure test ("TCLP Test"). Most panels pass the TCLP test, and thus are classified as nonhazardous and are not regulated. Numerous companies make available to its customers modules that do not contain toxic heavy metals (no more lead or cadmium than allowed under RoHS).

Because panel materials are enclosed, and don't mix with water or vaporize into the air, there is little, if any, risk of chemical releases to the environment during normal use. The most common type of panel is made of tempered glass, which is quite strong. They pass hail tests.

All solar panel materials are contained in a solid matrix, insoluble and non-volatile at ambient conditions, and enclosed. Therefore, releases to the ground from leaching to the air from volatilization during use, or from panel breakage, are not a concern. Ground-mounted arrays are typically made up of panels of silicon solar cells covered by a thin layer of protective glass, which is attached to an inert solid underlying substance (or "substrate").

The main component of most modules is silicon, which isn't intrinsically harmful, but parts of the manufacturing process do involve hazardous chemicals and these need to be carefully controlled and regulated to prevent environmental damage. It is important to note that the same materials are in other electronic goods such as computers and TVs.

Generally, companies participate in a fully funded collection and recycling system for end-of-life modules produced globally; have written a letter to SEIA urging it to support Extended Producer Responsibility ("EPR") laws and regulations; support public EPR policies in the regions where the company manufactures and sells modules and takes responsibility for recycling by including the "crossed out garbage bin" symbol on module name plates, including a PV Cycle link on the company website; and clearly describe on the website how customers can responsibly return modules for recycling.

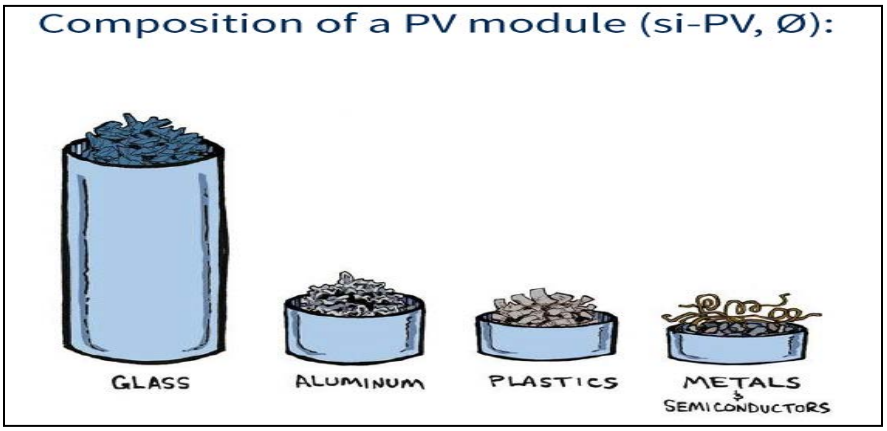


Figure 13. PV Module Composition - Source: PV Cycle

Transformers used at solar installations are similar to the ones used throughout the electricity distribution system in cities and towns. Modern transformers typically use non-toxic coolants, such as mineral oils. Potential releases from transformers using these coolants at solar installations are not expected to present a risk to human health. Release of any toxic materials from solid state inverters is also unlikely provided appropriate electrical and installation requirements are followed.

4.1.11 Decommissioning Plan

The decommissioning requirement for a Solar Facility set forth in §802.18.14 of the Solar Law read as follows:

Local Law #3 of 2020 Section 802.18.14

Abandonment and Decommissioning. A Decommissioning Plan shall be submitted with each Application in accordance with § 802.21 of this Chapter. Approval of the Decommissioning Plan by the Town Planning Board shall be required, including under Site Plan review. Removal of Solar Energy Facilities must be completed in accordance with the Decommissioning Plan. If the Solar Energy Facility is not decommissioned after being considered abandoned, the municipality may remove the system and restore the property and impose a lien on the property to cover these costs to the municipality.

Local Law #3 of 202 Section 802.21.1

A Decommissioning Plan shall, at a minimum, contain the following elements and meet the following requirements.

i. Specify when and what constitutes an event requiring decommissioning, including abandonment of the facility. In all cases the lack of production for 6 months (or for 12 of any 18 months) and the violation of any site plan conditions, the lack of a current permit or violation of permit conditions, including but not limited to maintenance of any required decommissioning bond or security, shall be an event requiring decommissioning.
ii. Specify the form and type of notice required to the Town in the event of any decommissioning, sale, transfer, partial transfer, assignment, or occurrence of any event which may result in an act or partial order requiring partial or complete decommissioning of the site.
iii. The means and methods by which utility interconnections will be removed and permitted by the utility provider, as well as all electrical and other safety precautions undertaken during removal.
iv. All decommissioning and restoration activities shall be completed within 150 days of the date decommissioning was ordered or required, including under the plan.
v. Demonstrate the removal of all Solar Panels, Battery Energy Storage Systems, wind turbines, electrical appurtenances, Towers, structures, equipment, security barriers and transmission lines.
vi. Demonstrate the minimization of disruption to field drains and soils, and the

remediation of drains and soils, including stabilization and revegetation of any sites or disturbances, including as minimize erosion. Decompaction of soils to 18 inches and removal of any installed materials to 4 feet is required. The Planning Board may allow the owner or operator to leave landscaping or designated belowgrade foundations in place to minimize erosion and disruption to vegetation in a proper case, but generally all of the New York Department of Agriculture and Markets' Guidelines for Agricultural Mitigation for Wind Power Projects or Solar Energy Projects, as applicable, shall be adhered to in any plan.
vii. Specify disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations, including the removal of any damaged or contaminated soils. No designation of any facilities by a 'beneficial use declaration' shall be permitted to vary this clean-up and remediation/ disposal rule.
viii. Include an expected timeline for execution, together with a cost estimate detailing the projected cost of executing the Decommissioning Plan, duly prepared and sealed by a Professional Engineer. Cost estimations must take inflation into account over the expected life of project, and have a mechanism to ensure the periodic updating and securitization of decommissioning costs."

A separate "stand alone" Decommissioning Plan has been submitted to the Town as part of the application for a special use permit and site plan approval. The Decommissioning Plan is submitted separately for ease of tracking the Solar Law requirements.

The following is a summary of general Decommissioning Plan activities:

Decommissioning of the Solar Facility will include the disconnection of the Solar Facility from the Utility electrical grid and the removal of all Solar Facility components, including:

- Photovoltaic (PV) modules, module racking and supports.
- Inverter units, substation, transformers, and other electrical equipment.
- Wiring cables, perimeter fence.
- Inverter pad concrete foundations.

Generally, decommissioning of a Solar Facility proceeds in the reverse order of the installation.

1. The Solar Facility shall be disconnected from the Utility power grid.
2. PV modules shall be disconnected, collected, and disposed of at an approved solar module recycler or reused / resold on the market.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site at an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site at an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by at approved facility.
6. Concrete foundations shall be removed and disposed off-site at an approved facility.
7. Fencing shall be removed and will be disposed off-site by at an approved facility.

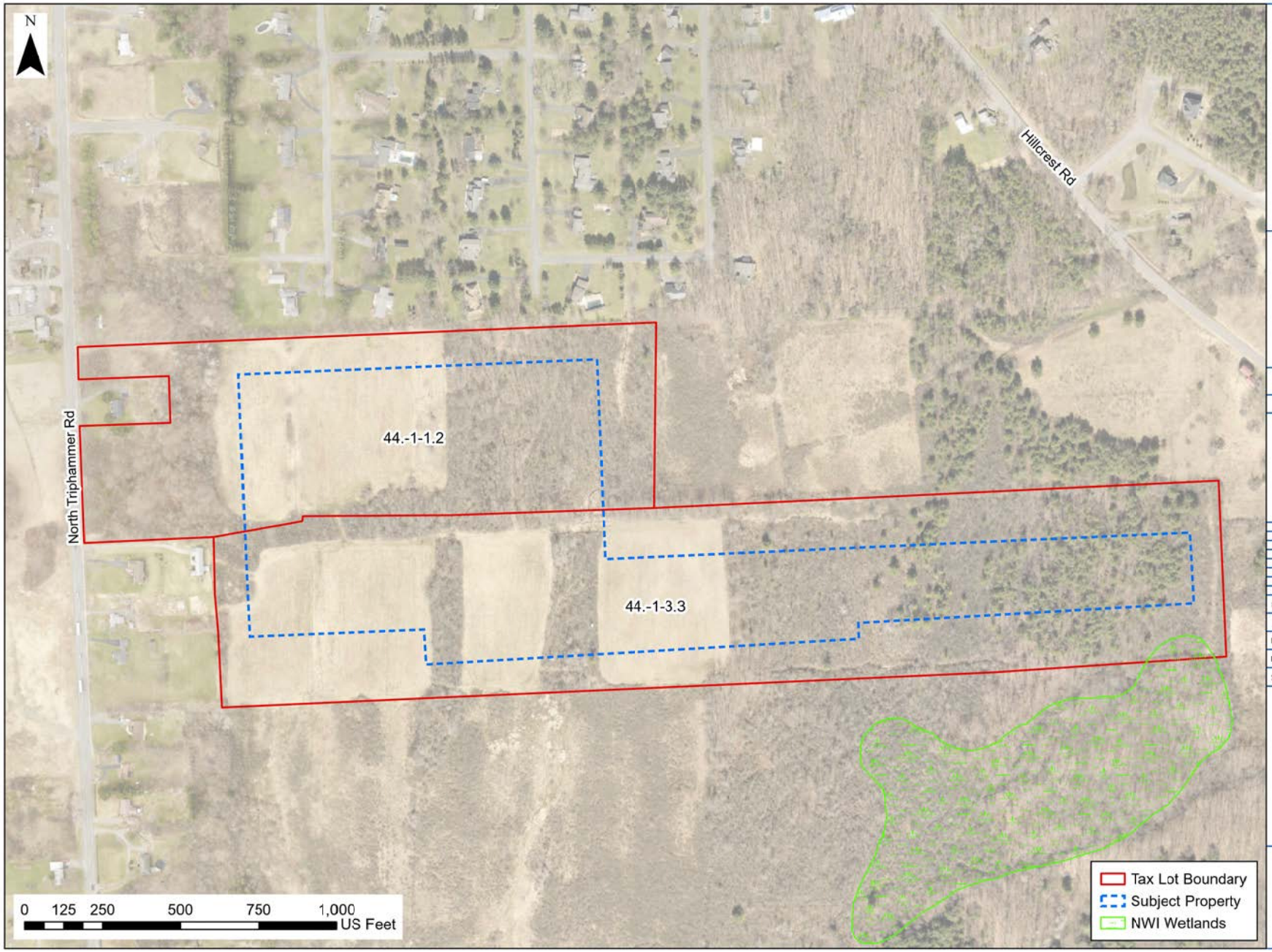
Site decommissioning and equipment removal can take a month or more. Therefore, access roads, fencing, electrical power, and other facilities will temporarily remain in place for use by the decommissioning workers until no longer needed. Demolition debris will be placed in a temporary onsite storage area pending final transportation and disposal and/or recycling according to procedures. No hazardous materials or waste will be used during operation of the Solar Facility; disposal of hazardous materials or waste will not be required at decommissioning.

The piling for support structures is without concrete foundation, so removing piles will not be onerous. The diameter of the holes in the ground are small in terms of impacted area and will be refilled accordingly. Excavations will be backfilled and restored with native onsite material. No significant grading or rework of the site will be performed.

Most materials of the Solar Facility have value: steel, copper, aluminum, and others. The quantity and value of recycled and reusable materials could vary according to markets value, facility conditions and lifespan.

4.1.12. Other Environmental Considerations

Visual resources in the Project area have been affected by past and present actions, including the construction of highways and roads, Utility lines, sewerage, water utility lines, and limited commercial and residential development, but the existing vegetation allows direct view of the solar project from nearby buildings and highways to be avoided.



PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

DRAWING PREPARED FOR:

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	DRS2404	Designed by:	EL
Date:	3/22/2024	Drawn by:	AM
Scale:	AS SHOWN	Approved by:	EL

Site Plan

North Triphammer Road
Ithaca, NY 14882

FIGURE NO:

2

APPENDIX A
SITE PHOTOGRAPHS

P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SHELTON, CT

Photo Log
Unlisted address on N Triphammer Road, Ithica, New York
PWGC Project #DRS2404

Photo 1– View of subject property from access road along N Triphammer Road.

Photo 2 – West border of the SW Field, view to the north.

Photo 3 – Representative field conditions throughout the property.

Photos 4 & 5 –
Photo 4 - View of drainpipe and stream in the south-central portion of the property.,
Photo 5 - View of standing water on the southern portion of the property.

Photo 6 - View of the hunting deer stand at west border of the SE portion of the property.

Photo 7 – View of the vegetated area on the east portion of the property.

Photo 8 – View of the central portion of the property.

Photo 9 – View of the solid waste disposal identified in the central portion of the property.

Photo 10 – View of solid waste disposal identified in central portion of the property.

Photo 11 - View of the solid waste disposal identified in the central portion of the property.

Photo 12 – View of the adjacent property to the south improved with one single-family residential dwelling.

Photo 13 – View of residential dwelling north of access road, view to the northwest.

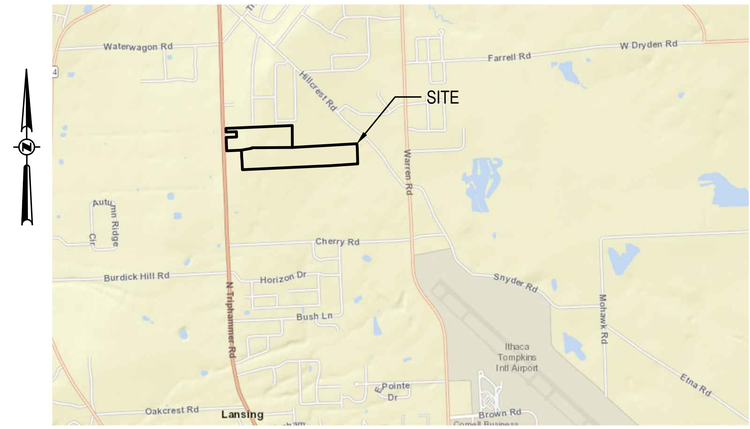
Photo 14– View of N Triphammer road, view to the south.

Photo 15 – View of N Triphammer Road, view to the north.

Photo 16 – View of N Triphammer Road and Landscaping Business, view to the west.

NY LANSING II, LLC

NORTH TRIPHAMMER ROAD SOLAR PROJECT
3.0 MW AC
LANSING, NEW YORK



SOURCE: NEW YORK STATE GIS RESOURCES

VICINITY MAP
SCALE: 1"=2000'
0 2000 4000
SCALE: 1" = 2000'

PLANS

ISSUED FOR: CLIENT REVIEW
ISSUE DATE: 04/05/2024
LAST REVISED: 04/05/2024

PROJECT CONTACTS

ENGINEER:
P.W. GROSSER CONSULTING, INC.
630 JOHNSON AVENUE, SUITE 7, BOHEMIA, NY 11716
TEL: (631) 589-6353
FAX: (631) 589-8705

MUNICIPAL CONTACTS

TOWN:
TOWN OF LANSING
26 AUBURN ROAD
LANSING, NY 14882
TEL (607) 533-4142

COUNTY:
TOMPKINS COUNTY
320 N TIOGA STREET
ITHACA, NY 14850
TEL (607) 274-5431

SITE INFORMATION

SITE: NORTH TRIPHAMMER ROAD, LANSING NY, 14882
TM #: 44-1-1.2 & 44-1-3.3
LOT AREA: 66.83 AC

SHEET INDEX

CLIENT INFORMATION

CLIENT:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

STATE OF NEW YORK
MICHAEL SCANLON
103321
LICENSED PROFESSIONAL ENGINEER

FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING, INC.
630 Johnson Avenue. ▪ Suite 7
Bohemia ▪ NY ▪ 11716-2618
Phone: (631) 589-6353 ▪ Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

COVER
SHEET 1 OF 11

PLOT DATE/TIME: Apr 05, 2024-3:59pm By: rmaybin

BASEMAP NOTES

1. EXISTING CONDITIONS BASEMAP INFORMATION IS BASED ON LIDAR FROM NYS GIS DATA DOWNLOADED ON 04-01-24.
2. PROPOSED SOLAR DEVELOPMENT LAYOUT INFORMATION IS BASED ON CONCEPTUAL LAYOUT PLAN DEVELOPED BY MONGAUP RIVER SOLAR, SHEET TITLED "LAYOUT TECHNICAL REVIEW" AT 1":250' SCALE, DATED 03-26-24. ALL BASEMAP INFORMATION IS TO BE CONSIDERED APPROXIMATE AND IS TO BE FIELD VERIFIED BY A NEW YORK STATE LICENSED SURVEYOR PRIOR TO FINALIZING DESIGN.
3. LOT LINES BASED ON INFORMATION PROVIDED FROM NYS GIS; DOWNLOADED ON 04-01-24.

SURVEY NOTES

1. ALL SURVEY AND SITE STAKEOUTS FOR PROPOSED FEATURES SHALL BE PERFORMED BY A NEW YORK STATE LICENSED SURVEYOR.
2. CONTRACTOR WILL BE RESPONSIBLE TO LOCATE, MARK AND PROTECT ALL EXISTING SURVEY, PROPERTY, AND RIGHT-OF-WAY MARKERS FOR THE SITE. ANY MARKERS, PINS, MONUMENTS OR OTHER FEATURES DEFINING PROPERTY LIMITS THAT MAY BE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE PROPERLY TIED AND RESET BY A NEW YORK STATE LICENSED SURVEYOR UPON COMPLETION OF THE WORK.
3. THE HORIZONTAL DATUM IS NAD83 NEW YORK STATE PLANE COORDINATE SYSTEM, (US FT).
4. THE VERTICAL DATUM IS NAVD88.

GENERAL NOTES

1. THE INFORMATION IN THIS DRAWING SET IS CONCEPTUAL AND IS INTENDED FOR TOWN BOARD PLANNING AND DISCUSSION PURPOSES ONLY. THIS DRAWING SET IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.
2. CONTRACTOR WILL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS AND SITE FEATURES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FOUND SHALL BE DOCUMENTED IN WRITING AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
3. CONTRACTOR WILL BE RESPONSIBLE TO LOCATE AND MARK OUT ALL EXISTING UTILITIES, INCLUDING THOSE UNDERGROUND, PRIOR TO CONSTRUCTION. ANY POTENTIAL INTERFERENCES WITH PROPOSED FEATURES SHALL BE DOCUMENTED IN WRITING AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE FEATURES AND UTILITIES THAT ARE NOT DESIGNATED FOR REMOVAL. ANY SITE FEATURE, UTILITY, STREET APPURTENANCE, OR OTHER ITEM THIS IS DAMAGED BY THE CONTRACTOR OR ITS SUBCONTRACTORS DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED IN-KIND BY THE CONTRACTOR, AS DETERMINED BY THE OWNER OR ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR WILL BE REQUIRED TO OBTAIN ANY ADDTIONAL PERMITS REQUIRED TO DO THE WORK OR DELIVER MATERIALS TO THE SITE THAT ARE NOT PROVIDED BY THE OWNER OR ENGINEER. ALL WORK WITHIN AN EXISTING RIGHT-OF-WAY WILL REQUIRE PERMITTING WITH RESPECTIVE OWNER, STATE OR COUNTY AGENCY, TOWN DEPARTMENT OF PUBLIC WORKS, OR HIGHWAY DEPARTMENT AS APPLICABLE.

ZONING ANALYSIS

TM # :	44-1-1.2 & 44-1-3.3
EXISTING ZONING:	RESIDENTIAL - MODERATE DENSITY (R2)
LOT AREA:	66.83 ACRES
PROPOSED USE:	SOLAR ENERGY FACILITY

	REQUIRED	PROPOSED
LOT SIZE	N/A	66.83 AC.
MAX. LOT COVERAGE	25%	9.4%
MAX. HEIGHT	18'	15'
PROPERTY SETBACK (FRONT & ROAD)	60'	814.3'
PROPERTY SETBACK (SIDE)	10'	118.2'
PROPERTY SETBACK (BACK)	25'	127.4'

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (BLUE BOOK), AND LOCAL GOVERNING SOIL AND WATER CONSERVATION DISTRICT STANDARDS. THE EROSION AND SEDIMENT CONTROLS SHOWN ON THESE PLANS AND AS DESCRIBED IN THE PROJECT SWPPP REPRESENT THE MINIMUM REQUIREMENTS AND ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED BASED ON CONDITIONS ENCOUNTERED IN THE FIELD. CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING PROJECT REMAINS IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS PERTAINING TO EROSION AND SEDIMENT CONTROLS.
2. EROSION AND SEDIMENT CONTROLS WILL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES AND WILL BE MAINTAINED FOR THE DURATION OF THE WORK, INCLUDING TEMPORARY CONSTRUCTION SWALES AND DETENTION POND WITH OUTLET STRUCTURE AND ROCK OUTLET PROTECTION.
3. CONTRACTOR WILL UTILIZE MEANS, METHODS AND SEQUENCING THAT MINIMIZE THE AMOUNT OF EARTH DISTURBANCE TO THE EXTENT PRACTICAL, AND NOT TO EXCEED MORE THAN 5.0 ACRES AT ANY GIVEN TIME.
4. CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM STORM/SANITARY SEWERS, AND/OR OTHER WATER COURSES FROM CONTAMINATION BY WATER BORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS OR OTHER POLLUTANTS ORIGINATING FROM THE SITE OR WORK BEING PERFORMED.
5. CONTRACTOR WILL FOLLOW GOOD HOUSEKEEPING AND SPILL CONTROL PRACTICES DURING SITE ACTIVITIES TO MINIMIZE STORMWATER CONTAMINATION FROM CONCRETE, PETROLEUM PRODUCTS AND WASTE MATERIALS. NO WET OR FRESH CONCRETE, LEACHATE OR WASHINGS FROM EQUIPMENT SHALL BE ALLOWED TO MIGRATE INTO EXISTING STORM/SANITARY SEWERS, DITCHES OR OTHER WATERS OF NEW YORK STATE.
6. ALL EXCAVATED OR IMPORTED MATERIAL STOCKPILES SHALL BE SUITABLY STABILIZED AND SURROUNDED BY SILT FENCE TO MINIMIZE POTENTIAL FOR SEDIMENT LADEN RUNOFF DISCHARGING TO DOWNSTREAM AREAS OR DRAINAGE FEATURES. DISTURBED SOILS OR STOCKPILES THAT ARE TO BE EXPOSED FOR MORE THAN 14 CALENDAR DAYS SHALL BE TEMPORARY STABILIZED WITH SEED MIX CONSISTING OF RYEGRASS (ANNUAL OR PERENNIAL) APPLIED AT 30 LBS PER ACRES (0.7 LBS PER 1,000 SQ. FT.), OR CERTIFIED "AROOSTOOK" WINTER RYE (CEREAL RYE) APPLIED AT 100 LBS PER ACRES (2.5 LBS PER 1,000 SQ. FT.) IF SEEDING IN OCTOBER OR NOVEMBER
7. CONTRACTOR MATERIAL AND EQUIPMENT STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF CONSTRUCTION. CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS MAY BE MODIFIED BY THE CONTRACTOR WITH PRIOR APPROVAL FROM THE OWNER AND ENGINEER.
8. ALL EXISTING OR NEWLY INSTALLED CATCH BASINS/DRAINAGE INLETS SHALL HAVE DROP INLET PROTECTION INSTALLED THROUGHOUT THE DURATION OF CONSTRUCTION TO PREVENT SEDIMENTATION FROM ENTERING THE STORM SYSTEM. CONTRACTOR SHALL MAINTAIN OR REPLACE DROP INLET PROTECTION WHEN SIGNIFICANT SEDIMENT BUILDUP IS OBSERVED OR IS NOT FUNCTIONING CORRECTLY.
9. CONTRACTOR SHALL TAKE ALL NECESSARY AND APPROPRIATE MEASURES TO MITIGATE OR PREVENT FUGITIVE DUST THROUGHOUT THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL ADHERE TO METHODS AS DESCRIBED IN THE PROJECT SWPPP.
10. COMPLETED WORK THAT IS NOT SUBJECT TO FURTHER EARTHWORK OR CONSTRUCTION ACTIVITIES SHALL BE PERMANENTLY SEEDED AND MULCHED WITH HAY OR STRAW WITHIN ONE WEEK OF FINAL DISTURBANCE. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER IS ESTABLISHED.

GRADING NOTES

1. CONCEPTUAL GRADING DESIGN SHOWN IN THESE PLANS IS BASED ON NYS LIDAR INFORMATION PROVIDED TO PWGC BY PACKER ASSOCIATES, INC. AND IS TO BE CONSIDERED APPROXIMATE AND CONCEPTUAL, AND FOR DISCUSSION PURPOSES ONLY. GRADING DESIGN IS SUBJECT TO CHANGE BASED ON FURTHER SITE INVESTIGATIONS AND ANALYSIS.
2. ADDITIONAL SITE GEOTECHNICAL ANALYSIS IS REQUIRED TO VERIFY GRADING CONSTRAINTS AND FEASIBILITY.
3. GRADING SHALL PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND OSHA REQUIREMENTS. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF OSHA, AND ANY OTHER AGENCY HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS WITH TRENCHING OR EXCAVATION AND GRADING OPERATIONS. THE REQUIREMENTS SET FORTH HEREIN ARE INTENDED TO SUPPLEMENT REQUIREMENTS ESTABLISHED BY THESE AGENCIES. IN THE CASE OF A CONFLICT BETWEEN REQUIREMENTS OF OTHER JURISDICTIONAL AGENCIES AND THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT ON THE CONTRACTOR SHALL APPLY.
4. VOIDS LEFT BY UTILITY OR STRUCTURE EXCAVATIONS, OR GRUBBING OPERATIONS SHALL BE BACKFILLED AND PROPERLY COMPACTED WITH STRUCTURAL FILL (NYSDOT ITEM 304.12 OR EQUIVALENT) IN AREAS UNDER AND WITHIN 5 FEET HORIZONTALLY OF ALL STRUCTURES, AND PAVEMENTS. IN GRASSED AREAS, VOIDS LEFT SHALL BE FILLED AND PROPERLY COMPACTED WITH SUITABLE ON-SITE BACKFILL AS APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS TO PREVENT THE INTRODUCTION OF GROUNDWATER OR PONDED WATER INTO THE TRENCHES/EXCAVATIONS AND WILL PROVIDE ALL EQUIPMENT NECESSARY TO MAINTAIN THE WATER AS NECESSARY. DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SWPPP.
6. UNLESS OTHERWISE DIRECTED, THE CONTRACTOR SHALL PLACE AT MINIMUM 6 INCHES OF CLEAN TOPSOIL IN ALL DISTURBED AND NEWLY GRADED AREAS PRIOR TO SEEDING.

WETLANDS NOTES

1. EXISTING STREAM AND WETLANDS INFORMATION IS BASED ON DEC ENVIRONMENTAL RESOURCE MAPPER PUBLICLY AVAILABLE DATA DOWNLOADED ON 04-01-24.
2. ACTUAL LIMITS OF ALL STREAMS, WETLANDS AND WETLAND ADJACENT AREAS ARE TO BE FIELD VERIFIED VIA SURVEY AND WILL BE MARKED IN THE FIELD BY SURVEY MARKERS, RIBBON, FLAGS, OR EQUIVALENT PRIOR TO START OF CONSTRUCTION.
3. EFFORTS SHALL BE MADE TO MINIMIZE DISTURBANCE TO ANY STATE OR FEDERALLY REGULATED WETLANDS. UNNECESSARY REMOVAL OF VEGETATION OR DEGRADATION ALONG STREAM BANKS IS PROHIBITED.
4. IF TEMPORARY ACCESS IS REQUIRED IN WETLAND AREAS, TEMPORARY TIMBER MATS WILL BE USED TO MINIMIZE DISTURBANCE TO UNDERLYING WETLAND SOILS.
5. STAGING OF ANY CONSTRUCTION MATERIALS OR EQUIPMENT IS PROHIBITED IN WETLAND AREAS.
6. ANY WETLAND DISTURBANCE IS TO BE RESTORED WITH APPROPRIATE WETLAND SEED MIX IN ACCORDANCE WITH NYSDOT ITEM 203.01920007 OR MOST CURRENT NYSDEC REQUIREMENTS RELATED TO WETLAND RESTORATION. COMPONENT OF THE SEED MIX MAY BE SUBSTITUTED WITH THE ENGINEER'S APPROVAL.

LEGEND

EXISTING	CONCEPTUAL	NOTES
TOPOGRAPHIC FEATURES		
1320	1320	MINOR CONTOURS (5-FT INTERVAL)
		MAJOR CONTOURS (10-FT INTERVAL)
		LIMITS OF GRADING
DRAINAGE ELEMENTS		
		STREAM
		WATER BAR
		LINED SWALE
		ROCK OUTLET PROTECTION
		DRAINAGE CULVERT
		DETENTION POND OUTLET STRUCTURE
		STORMWATER DETENTION POND
SITE FEATURES		
		PROPERTY BOUNDARY
		ZONING SETBACK
		APPROXIMATE WETLAND LIMITS
		POTENTIAL WETLAND LIMITS
		ADJACENT PROPERTY BOUNDARY
		APPROXIMATE WETLANDS OFFSET
		PAVED ROADWAY
		GRAVEL ROADWAY
		OVERHEAD ELECTRICAL UTILITY
		UNDERGROUND ELECTRICAL UTILITY
		8-FT TALL DEER FENCE
		SOLAR PANEL ARRAY
		SEED RESTORATION LIMITS
		TREE LINE
EROSION AND SEDIMENT CONTROL		
	SF SF	SILT FENCE
		LAND GRADING ACTIVITIES
		STABILIZED CONSTRUCTION ENTRANCE
	DC	DUST CONTROL MEASURES
		LIMITS OF CLEARING

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.
630 Johnson Avenue. • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By:
Drawn By: HLW
Approved By: MTS
Date Submitted:
Date Created: 03/28/2024
Scale: AS NOTED

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

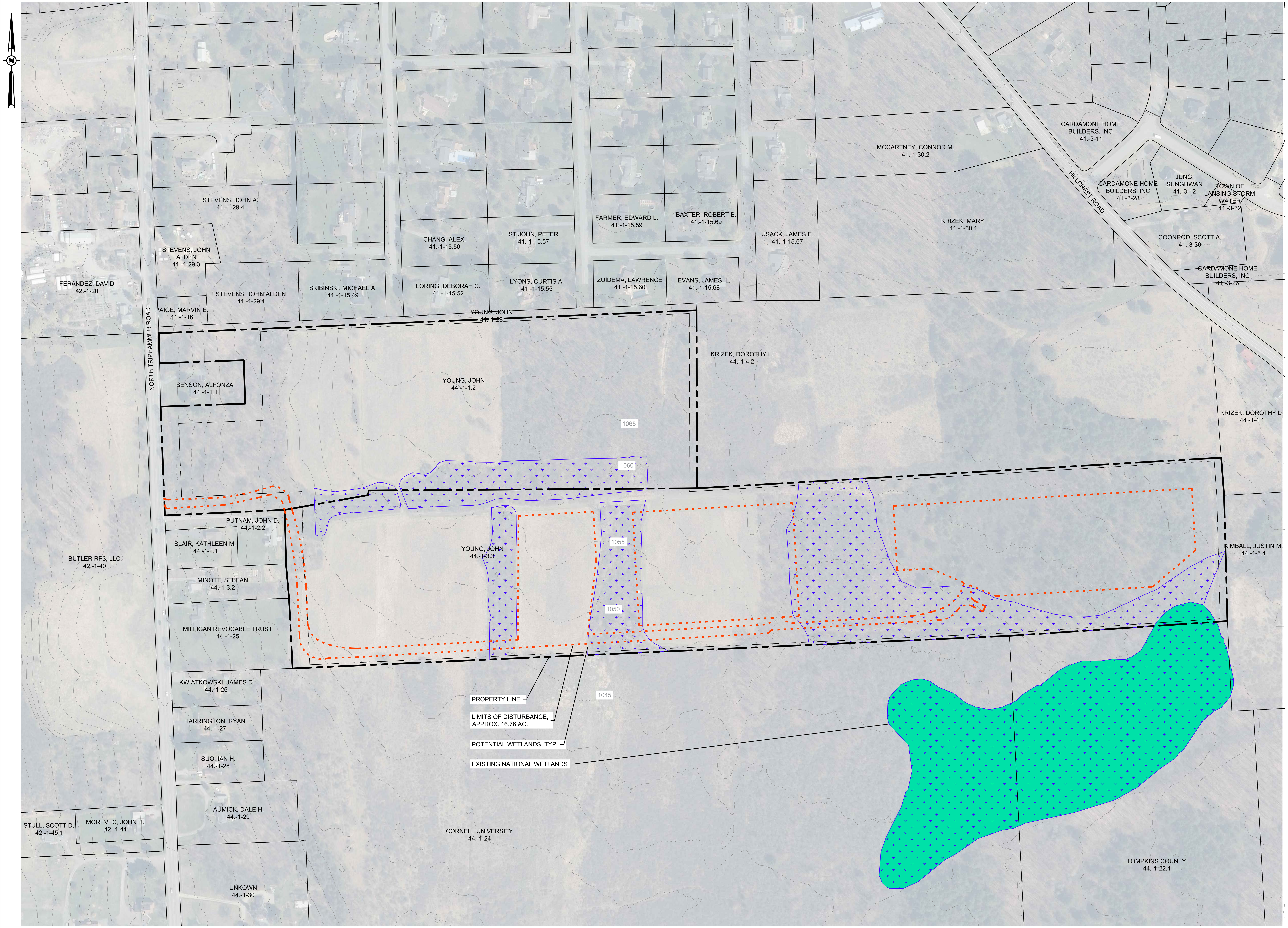
Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
GENERAL NOTES AND LEGEND INFORMATION

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Drawing Number: C-001
Sheet 2 of 11
PWGC Project Number: DRS2404



PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.
630 Johnson Avenue • Suite 7
Bohemia • NY • 11716-2618
Phone: (631) 589-6353 • Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By:
Date Submitted:
Drawn By: HLW
Date Created: 03/28/2024
Approved By: MTS
Scale: 1" = 150'

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
EXISTING CONDITIONS PLAN

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Unauthorized alteration or addition to this drawing and related documents is a violation of Section 7209 of the New York State Education Law

Drawing Number: C-100
Sheet 3 of 11
PWGC Project Number: DRS2404

PWGC FILE NAME: J:\Projects A-D\DRS\2404 - N. Triphammer Rd, Lansing\CAD\Triphammer Road Conceptual Site Plans Layout #2 - 03.28.24.dwg (C-100)
PLOT DATE/TIME: Apr 05, 2024-4:00pm By: rvaughn

34.5 KV 3PH OVERHEAD

COMPANY	NYSEG
SUBSTATION	SOUTH LANSING TAP
NUMBER OF PHASES	3
CIRCUIT NAME	4303601

NOTE:
IT IS NECESSARY TO REQUEST THE UTILITY TO UPGRADE THE EXISTING 1 PH LINE TO 3PH LINE AND EXTEND THE LINE TO THE NEW POI.

STEVENS, JOHN A.
41.-1-29.4

STEVENS, JOHN ALDEN
41.-1-29.3

FERANDEZ, DAVID
42.-1-20

STEVENS, JOHN ALDEN
41.-1-29.1

SKIBINSKI, MICHAEL A.
41.-1-15.49

PAIGE, MARVIN E.
41.-1-16

CHANG, ALEX
41.-1-15.50

ST JOHN, PETER
41.-1-15.57

LORING, DEBORAH C.
41.-1-15.52

LYONS, CURTIS A.
41.-1-15.55

FARMER, EDWARD L.
41.-1-15.59

BAXTER, ROBERT B.
41.-1-15.69

ZUIDEMA, LAWRENCE
41.-1-15.60

EVANS, JAMES L.
41.-1-15.68

USACK, JAMES E.
41.-1-15.67

MCCARTNEY, CONNOR M.
41.-1-30.2

CARDAMONE HOME BUILDERS, INC
41.-3-11

CARDAMONE HOME BUILDERS, INC
41.-3-28

JUNG, SUNGHWAN
41.-3-12

TOWN OF LANSING-STORM WATER
41.-3-32

KRIZEK, MARY
41.-1-30.1

COONROD, SCOTT A.
41.-3-30

CARDAMONE HOME BUILDERS, INC
41.-3-26

HILLCREST ROAD

NORTH TRIPHAMMER ROAD

YOUNG, JOHN
44.-1-1.3

ZONING SETBACK

KRIZEK, DOROTHY L.
44.-1-4.2

KRIZEK, DOROTHY L.
44.-1-4.1

BENSON, ALFONZA
44.-1-1.1

YOUNG, JOHN
44.-1-1.2

AAAC/ACSR 4 - 1/C # 1/0 AWG WITH 100% CONENTRIC NEUTRAL 35 KV OVERHEAD LENGTH 198.38 FT/PHASE CABLE

PRESUMED POI (POINT OF INTERCONNECTION) LOCATION

BRANCH OUT POLE

UTILITY PROVIDED POLE:
UTILITY RECLOSER
UTILITY RECLOSER AUX.
TRANSFORMER

PCC (POINT OF COMMON COUPLING)

CUSTOMER PROVIDED POLE:
UTILITY PRIMARY METER

CUSTOMER PROVIDED POLE:
CUSTOMER AC MANUAL DISCONNECT SWITCH GANG OPERATED WITH VISIBLE BREAK CUSTOMER CUT OUT FUSES

CUSTOMER PROVIDED POLE:
UTILITY PRIMARY METER

PROPOSED APPROXIMATE LOCATION OF STAGING AREA

PROPOSED CRUSHED STONE ACCESS ROAD SEE DETAIL SHEET C-600

CONNECTION CABLE SECTION:
3 - 1/C # 2/0 AWG WITH 100% CONCENTRIC NEUTRAL 35 KV UNDERGROUND LENGTH: 2,950.15 FT/PHASE CABLE

PUTNAM, JOHN D.
44.-1-2.2

BLAIR, KATHLEEN M.
44.-1-2.1

BUTLER RP3, LLC
42.-1-40

MINOTT, STEFAN
44.-1-3.2

MILLIGAN REVOCABLE TRUST
44.-1-25

KWIATKOWSKI, JAMES D
44.-1-26

HARRINGTON, RYAN
44.-1-27

SUO, IAN H.
44.-1-28

AUMICK, DALE H.
44.-1-29

CORNELL UNIVERSITY
44.-1-24

UNKOWN
44.-1-30

YOUNG, JOHN
44.-1-3.3

1065
1060
1055
1050

814.3'
60.0'
145.8'
10.0'
118.2'
10.0'
25.0'
127.4'
ZONING SETBACK

KIMBALL, JUSTIN M.
44.-1-5.4

TOMPKINS COUNTY
44.-1-22.1

PROPOSED RAIN GARDEN, TYP. 5

PROPOSED 8' TALL DEER FENCE, TYP. SEE DETAIL SHEET C-600

CUSTOMER TRANSFORMER 3.15 MVA

3 MW AC INVERTER PAD, SEE DETAIL SHEET C-600

INVERTER MANUFACTURER: SUNGROW
MODEL: SG3150UD-MV
NUMBER OF INVERTERS: 1
SIZE OF EACH INVERTER: 3,000 KW (LIMITED)

PANEL MANUFACTURER: HANWHA
NUMBER OF MODULES: 6,048
MODULE MODEL: Q.PEAK DUOXL-G11.3 / BFG 585 WP

PROPOSED SEEDING AREA, SEE SHEET C-500

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.

630 Johnson Avenue. - Suite 7
Bohemia - NY - 11716-2618
Phone: (631) 589-6353 - Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

SYSTEM SUMMARY

MODULE:

MANUFACTURER:	HANWHA
MODEL:	Q.PEAK DUO XL-G11.3 / BFG
MODULE OUTPUT POWER:	585 WP
STRING SIZE:	24
NUMBER OF STRINGS:	252
MODULE QUANTITY:	6,048
PV SYSTEM OUTPUT:	3,538.08 KWP DC

COMBINER BOX:

CB QTY/INPUTS (QTY/INP):	11 CBs (6 INPUTS) 12 CBs (5 INPUTS)

INVERTER:

MANUFACTURER:	SUNGROW
MODEL:	SG3150 UD-MV
QUANTITY/RATING:	1 / 3,000 KW (LIMITED)
PV SYSTEM OUTPUT:	3,000 KW AC
DC SYSTEM VOLTAGE:	1,500 V

MV INTERCONNECTION:

TRANSFORMER

QTY/RATING:	2 / 3,425 KW
INTERCON. VOLTAGE:	34.5 KV

RACKING:

MANUFACTURER:	TBD
CONFIGURATION:	SAT - 1 MODULE POTRAIT
TILT:	±55°
AZIMUTH:	177°

Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By	
Drawn By: HLW	Date Submitted
Approved By: MTS	Date Created: 03/28/24
	Scale: 1" = 150'

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3	Contract Number: ---
Regulatory Reference Number: ---	

Title of Drawing:

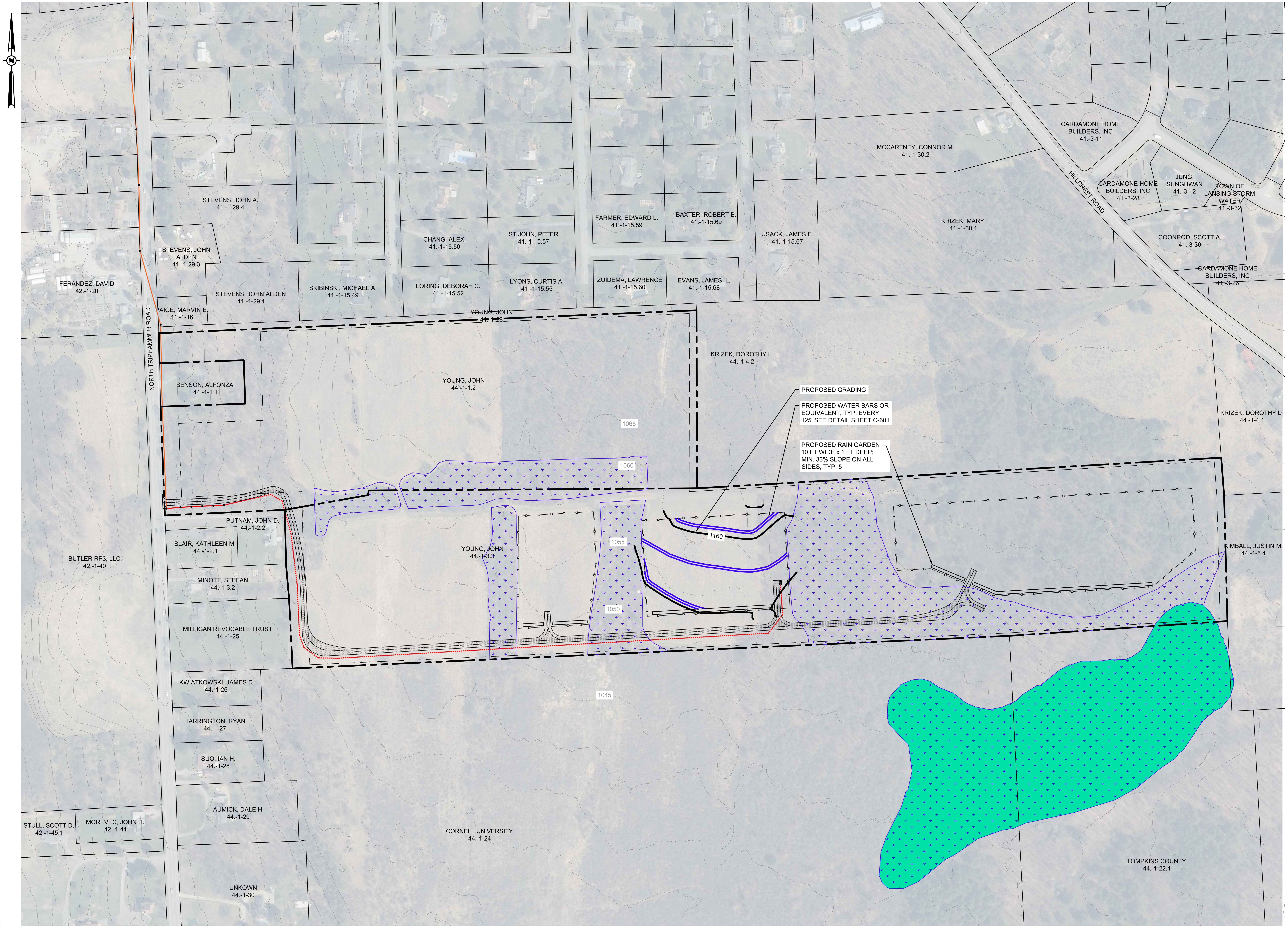
CONCEPTUAL SITE LAYOUT PLAN

STATE OF NEW YORK
MICHAEL SCANLON
103321
LICENSED PROFESSIONAL ENGINEER

Drawing Number:
C-101

Sheet 4 of 11

PWGC Project Number:
DRS2404



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Designed By: | Date Submitted:
Drawn By: HLW | Date Created: 03/28/2024
Approved By: MTS | Scale: 1" = 150'

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P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

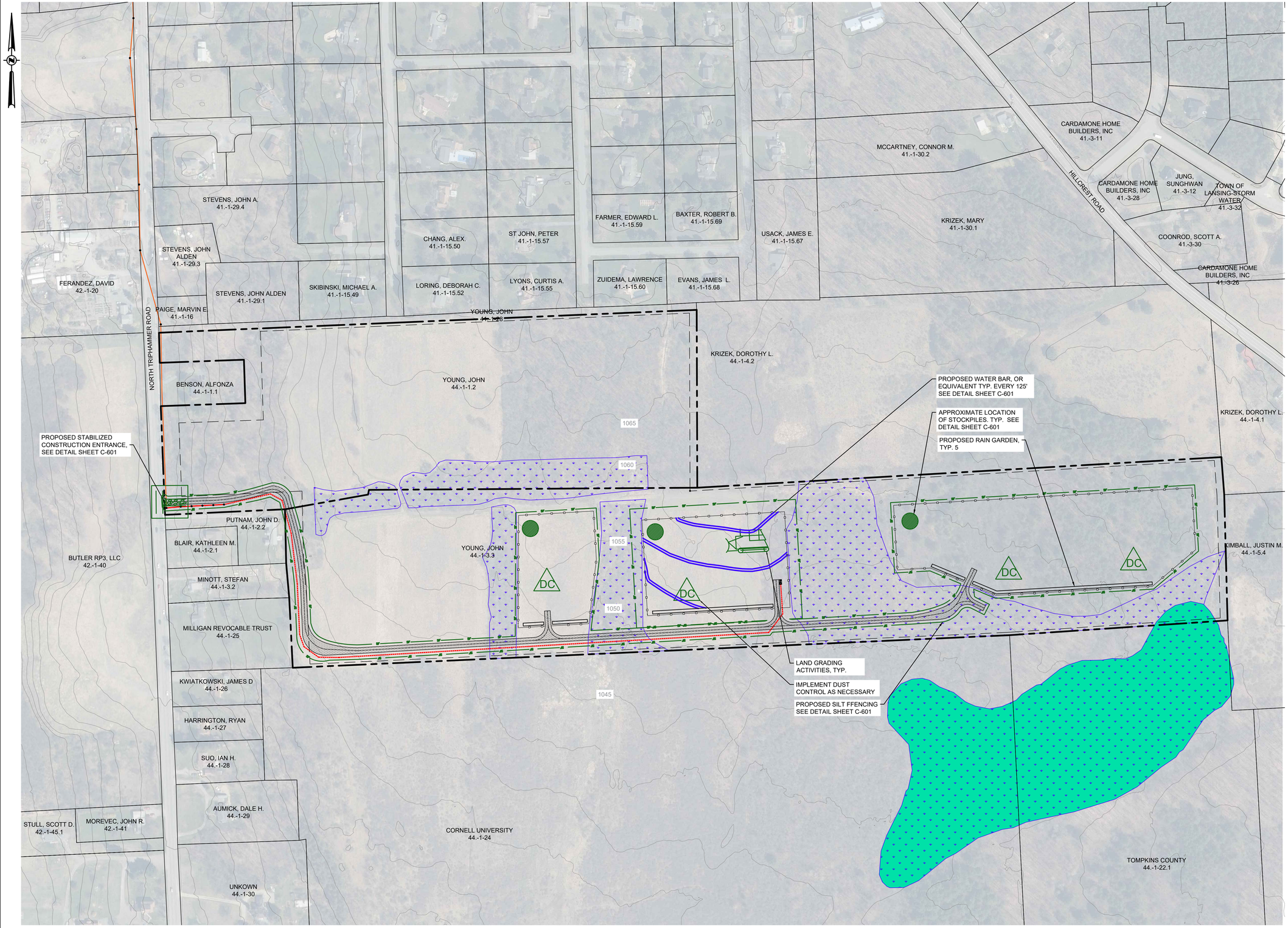
Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3 | Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
CONCEPTUAL GRADING AND DRAINAGE PLAN

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Drawing Number: C-200
Sheet 5 of 11
PWGC Project Number: DRS2404



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E-mail: INFO@PWGROSSER.COM

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NOT FOR CONSTRUCTION

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NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
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Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:

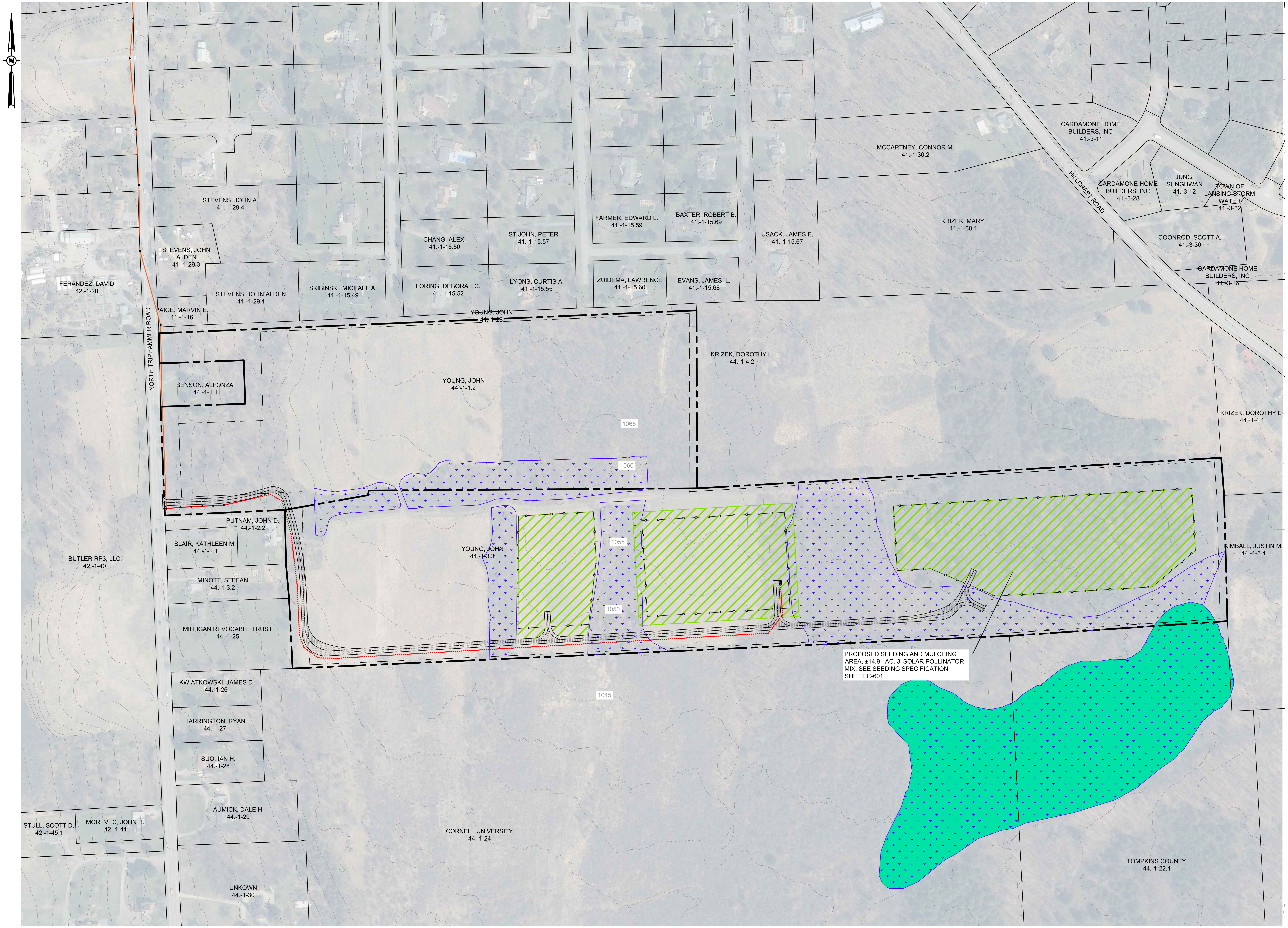
CONCEPTUAL EROSION AND SED. CONTROL PLAN

STATE OF NEW YORK
MICHAEL SCANLON
103321
LICENSED PROFESSIONAL ENGINEER

Drawing Number: C-201

Sheet 6 of 11

PWGC Project Number: DRS2404



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7		
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Designed By | Date Submitted
Drawn By: HLW | Date Created: 03/28/2024
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P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

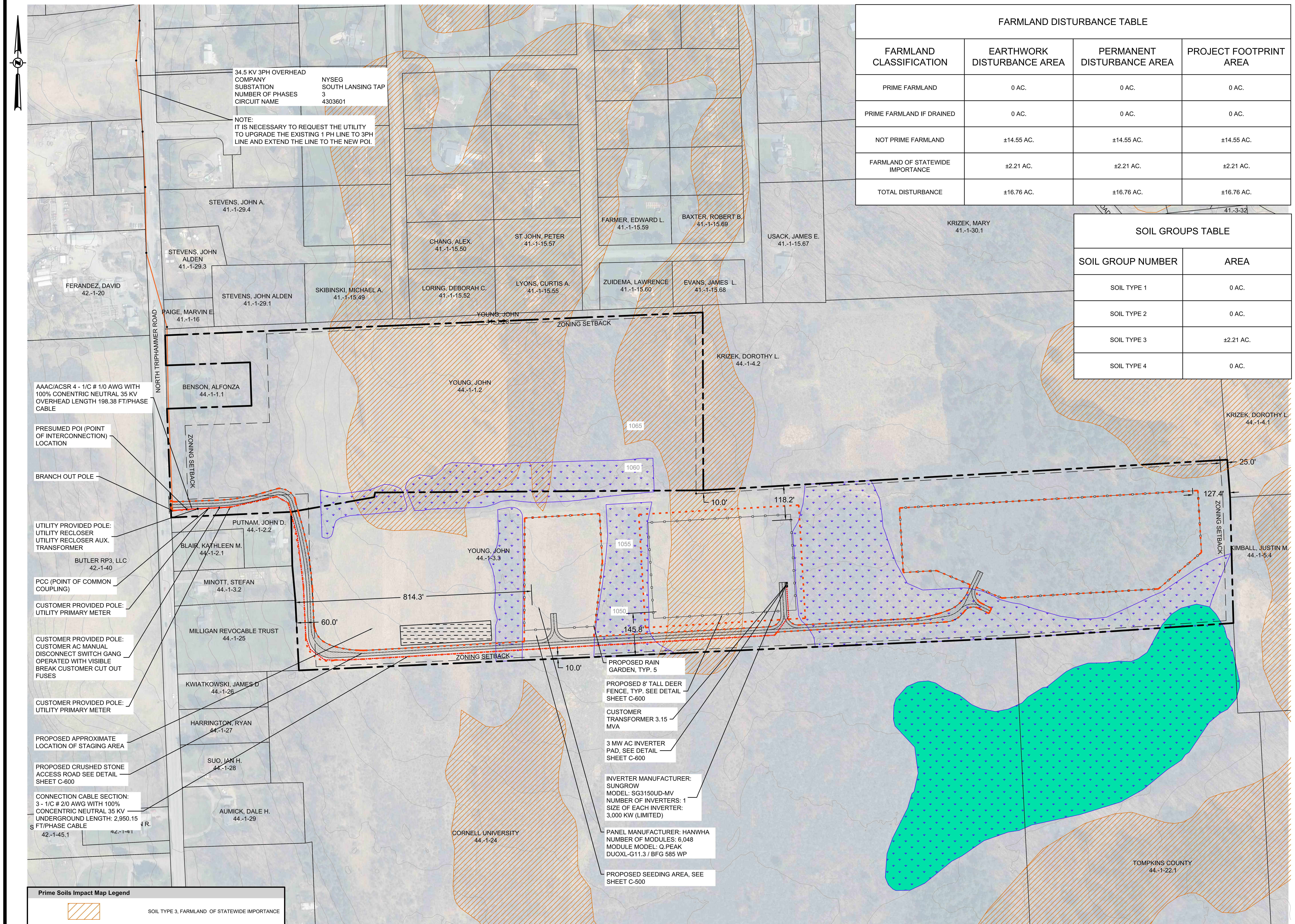
Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3 | Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
CONCEPTUAL LANDSCAPING PLAN

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Drawing Number: C-500
Sheet 7 of 11
PWGC Project Number: DRS2404



34.5 KV 3PH OVERHEAD
COMPANY NYSEG
SUBSTATION SOUTH LANSING TAP
NUMBER OF PHASES 3
CIRCUIT NAME 4303601
NOTE:
IT IS NECESSARY TO REQUEST THE UTILITY TO UPGRADE THE EXISTING 1 PH LINE TO 3PH LINE AND EXTEND THE LINE TO THE NEW POI.
STEVENS, JOHN A. 41.-1-29.4
STEVENS, JOHN ALDEN 41.-1-29.3
FERANDEZ, DAVID 42.-1-20
STEVENS, JOHN ALDEN 41.-1-29.1
SKIBINSKI, MICHAEL A. 41.-1-15.49
CHANG, ALEX. 41.-1-15.50
ST JOHN, PETER 41.-1-15.57
LORING, DEBORAH C. 41.-1-15.52
LYONS, CURTIS A. 41.-1-15.55
FARMER, EDWARD L. 41.-1-15.59
BAXTER, ROBERT B. 41.-1-15.69
ZUIDEMA, LAWRENCE 41.-1-15.60
EVANS, JAMES L. 41.-1-15.68
USACK, JAMES E. 41.-1-15.67
KRIZEK, MARY 41.-1-30.1
41.-3-32
PAIGE, MARVIN E. 41.-1-16
NORTH TRIPHAMMER ROAD
YOUNG, JOHN 44.-1-1.3
ZONING SETBACK
KRIZEK, DOROTHY L. 44.-1-4.2
BENSON, ALFONZA 44.-1-1.1
YOUNG, JOHN 44.-1-1.2
KRIZEK, DOROTHY L. 44.-1-4.1
AAAC/ACSR 4 - 1/C # 1/0 AWG WITH 100% CONENTRIC NEUTRAL 35 KV OVERHEAD LENGTH 198.38 FT/PHASE CABLE
PRESUMED POI (POINT OF INTERCONNECTION) LOCATION
BRANCH OUT POLE
1065
1060
1055
1050
25.0'
127.4'
10.0'
118.2'
814.3'
60.0'
145.8'
10.0'
UTILITY PROVIDED POLE: UTILITY RECLOSER UTILITY RECLOSER AUX. TRANSFORMER
PUTNAM, JOHN D. 44.-1-2.2
BLAIR, KATHLEEN M. 44.-1-2.1
BUTLER RP3, LLC 42.-1-40
YOUNG, JOHN 44.-1-3.3
KIMBALL, JUSTIN M. 44.-1-5.4
PCC (POINT OF COMMON COUPLING)
MINOTT, STEFAN 44.-1-3.2
CUSTOMER PROVIDED POLE: UTILITY PRIMARY METER
MILLIGAN REVOCABLE TRUST 44.-1-25
CUSTOMER PROVIDED POLE: CUSTOMER AC MANUAL DISCONNECT SWITCH GANG OPERATED WITH VISIBLE BREAK CUSTOMER CUT OUT FUSES
PROPOSED RAIN GARDEN, TYP. 5
KWIATKOWSKI, JAMES D 44.-1-26
PROPOSED 8' TALL DEER FENCE, TYP. SEE DETAIL SHEET C-600
CUSTOMER PROVIDED POLE: UTILITY PRIMARY METER
CUSTOMER TRANSFORMER 3.15 MVA
HARRINGTON, RYAN 44.-1-27
PROPOSED APPROXIMATE LOCATION OF STAGING AREA
3 MW AC INVERTER PAD, SEE DETAIL SHEET C-600
PROPOSED CRUSHED STONE ACCESS ROAD SEE DETAIL SHEET C-600
SUO, IAN H. 44.-1-28
INVERTER MANUFACTURER: SUNGROW
MODEL: SG3150UD-MV
NUMBER OF INVERTERS: 1
SIZE OF EACH INVERTER: 3,000 KW (LIMITED)
CONNECTION CABLE SECTION: 3 - 1/C # 2/0 AWG WITH 100% CONCENTRIC NEUTRAL 35 KV UNDERGROUND LENGTH: 2,950.15 FT/PHASE CABLE
AUMICK, DALE H. 44.-1-29
42.-1-45.1
42.-1-41
CORNELL UNIVERSITY 44.-1-24
PANEL MANUFACTURER: HANWHA
NUMBER OF MODULES: 6,048
MODULE MODEL: Q.PEAK DUOXL-G11.3 / BFG 585 WP
TOMPKINS COUNTY 44.-1-22.1
PROPOSED SEEDING AREA, SEE SHEET C-500
Prime Soils Impact Map Legend
SOIL TYPE 3, FARMLAND OF STATEWIDE IMPORTANCE

FARMLAND DISTURBANCE TABLE

FARMLAND CLASSIFICATION	EARTHWORK DISTURBANCE AREA	PERMANENT DISTURBANCE AREA	PROJECT FOOTPRINT AREA
PRIME FARMLAND	0 AC.	0 AC.	0 AC.
PRIME FARMLAND IF DRAINED	0 AC.	0 AC.	0 AC.
NOT PRIME FARMLAND	±14.55 AC.	±14.55 AC.	±14.55 AC.
FARMLAND OF STATEWIDE IMPORTANCE	±2.21 AC.	±2.21 AC.	±2.21 AC.
TOTAL DISTURBANCE	±16.76 AC.	±16.76 AC.	±16.76 AC.

SOIL GROUPS TABLE

SOIL GROUP NUMBER	AREA
SOIL TYPE 1	0 AC.
SOIL TYPE 2	0 AC.
SOIL TYPE 3	±2.21 AC.
SOIL TYPE 4	0 AC.

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Bohemia • NY • 11716-2618
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E-mail: INFO@PWGROSSER.COM

CONSULTANTS

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P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

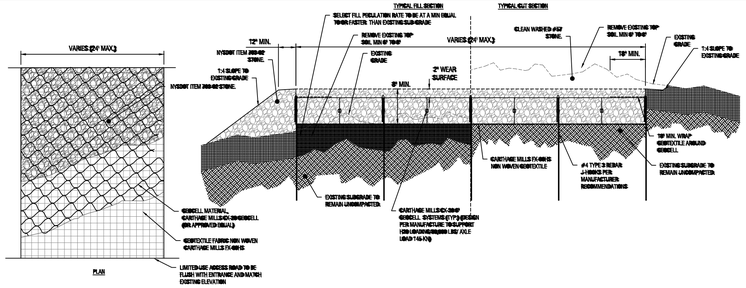
County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
PRIME SOILS IMPACT MAP

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Drawing Number: **C-501**
Sheet 8 of 11
PWGC Project Number: **DRS2404**

PWGC FILE NAME: J:\Projects A-D\DRS\2404 - N. Triphammer Rd, Lansing\CAD\Triphammer Road Conceptual Site Plans Layout #2 - 03.28.24.dwg (C-501)
PLOT DATE/TIME: Apr 05, 2024-4:00pm By: rvaughn



EXISTING ELEVATION

GENERAL NOTES

1. PROVIDE A 4800 LB/FT ENHANCED WOVEN GEOTEXTILE SEPERATION LAYER AND INSTALL PER MANUFACTURER RECOMMENDATIONS INCLUDING OVERLAPS BASED ON SUB GRADE CBR.
2. THE GEOCELL SHALL BE CONNECTED WITH TYP 3 REBAR J HOOKS.
3. PROVIDE TYP 3 ANCHORS TO KEEP PANELS OPEN FOR INFILL AS REQUIRED
4. GEOCELL INFILL SHALL BE ¾" TO 1.5" CRUSHED AGGREGATE WITH FINE LIMITED TO LESS THAN 10% TO ALLOW FREE DRAINAGE.
5. LIMIT THE DROP OF INFILL TO PREVENT PANEL DISTORTION.
6. ASSUME HS-20 LOADING

PERMEABLE ACCESS ROAD GENERAL NOTES

1. USE OF THIS DETAIL/CRITERION IS LIMITED TO ACCESS ROADS USED ON AN OCCASIONAL BASIS ONLY (I.E. PROVIDE ACCESS FOR MOWING EQUIPMENT REPAIR OR MAINTENANCE, ETC.)
2. LIIMITED USE PERVIOUS ACCESS ROAD IS LIMITED TO LOW IMPACT IRREGULAR MAINTENANCE ACCESS ASSOCIATED WITH RENEWABLE ENERGY PROJECTS IN NEW YORK STATE.
3. REMOVE STUMPS, ROCKS AND DEBRIS AS NECESSARY, FILL VOIDS TO MATCH EXISTING NATIVE SOILS AND COMPACTION LEVEL.
4. REMOVED TOPSOIL MAY BE SPREAD IN ADJACENT AREAS AS DIRECTED BY THE PROJECT ENGINEER. COMPACT TO THE DEGREE OF THE NATIVE INSITU SOIL. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
5. GRADE ROADWAY, WHERE NECESSARY TO NATIVE SOIL AND DESIRED ELEVATION MINOR GRADING FOR CROSS SLOPE CUT AND FILL MAY BE REQUIRED
6. REMOVE 6" TO 8" TOPSOIL AS DIRECTED BY ENGINEER.
7. REMOVE REFUSE SOILS AS DIRECTED BY THE PROJECT ENGINEER. DO NOT PLACE IN AN ARE THAT IMPEDES STORMWATER DRAINAGE.
8. ROADWAY WIDTH TO BE DETERMINED BY CLIENT.
9. THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL BE 0% IN MOST CASES AND SHOULD NOT EXCEED 5%. THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHOULD NOT EXCEED 5%.
10. LIMITED USE PERVIOUS ACCESS ROAD IS NOT INTENDED TO BE UTILIZED FOR CONSTRUCTION WHICH MAY SUBJECT THE ACCESS TO SEDIMENT TRACKING. THIS SPECIFICATION IS TO BE DEVELOPED FOR POST-CONSTRUCTION USE, SOIL RESTORATION PRACTICES MAY BE APPLICABLE TO RESTORE CONSTRUCTION RELATED COMPACTION TO PRE-EXISTING CONDITIONS AND SHOULD BE VERIFIED BY SOIL PENETROMETER READINGS. THE PENETROMETER READINGS SHALL BE COMPARED TO THE RESPECTIVE RECORDED READINGS TAKEN PRIOR TO CONSTRUCTION, EVERY 100 LINEAR FEET ALONG THE PROPOSED ROADWAY.
11. TO ENSURE THAT SOIL IS NOT TRACKED ONTO THE LIMITED USE PERVIOUS ACCESS ROAD, IT SHALL NOT BE USED BY CONSTRUCTION VEHICLES TRANSPORTING SOIL, FILL MATERIAL, ETC. IF THE LIMITED USE PERVIOUS ACCESS IS COMPLETED DURING INITIAL PHASES OF CONSTRICTION, A STANDARD NEW YORK STATE STABILIZED CONSTRUCTION ACCESS SHALL BE CONSTRUCTED AND UTILIZED TO REMOVE SEDIMENT FROM CONSTRUCTION VEHICLES AND EQUIPMENT PRIOR TO ENTERING THE LIMITED USE PERVIOUS ACCESS ROAD FROM ANY LOCATION ON, OR OFF SITE. MAINTENANCE OF THE PERVIOUS ACCESS ROAD WILL BE REQUIRED IF SEDIMENT IS OBSERVED WITHIN THE CLEAN STONE.
12. THE LIMITED USE PERVIOUS ACCESS ROAD SHALL NOT BE CONSTRUCTED OR USED UNTIL ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS HAVE ACHIEVED FINAL STABILIZATION.
13. PROJECTS SHOULD AVIOD INSTILLATION OF THE LIMITED USE PERVIOUS ACCESS ROAD IN POORLY DRAINED AREAS, HOWEVER IF NO A
14. THE DESIGN PROFESSIONAL MUST ACCOUNT FOR THE LIMITED USE PERVIOUS ACCESS ROAD IN THEIR SITE ASSESSMMENT/HYDROLOGY ANALYSIS. IF THE HYDROLOGY ANALYSIS SHOWS THAT THE HYDROLOGY HAS BEEN ALTERED FROM PRE- TO POST-DEVELOPMENT CONDITIONS (SEE APPENDIX A OF GP-0-20-001 FOR THE DEFINITION OF "ALTER THE HYDROLOGY..."), THE DESIGN MUST INCLUDE THE NECESSARY DETENTION/RETENTION PRACTICES TO ATTENUATE THE RATES (10 AND 100 YEAR EVENTS) TO PRE-DEVELOPMENT CONDITIONS.

GEOCELL MATERIAL NOTES:

1. THE GEOCELL, OR COMPARABLE PRODUCT, IS SUGGESTED FOR USE ON ROAD PROFILES EXCEEDING 5%. THE GEOCELL PRODUCT IS INTENDED TO LIMIT SHIFTING STONE MATERIAL DURING USE.
2. INSTILLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. WHERE REQUIRED, A NATIVE SOIL WEDGE SHALL BE PLACED TO ACCOMODATE ROAD CROSS SLOPE OF 2%. NATIVE SOIL SHALL BE COMPACTED TO MATCH EXISTING SOIL CONDITIONS.
4. GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYSDOT ITEM 703-02, SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED.
5. GEOCELL SYSTEM SHALL BE CARTHAGE MILLS CX-20 6" HS20 LOADING OR APPROVED EQUAL. GEOCELL SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
6. LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE, SIZE 3A, MEETING NYSDOT ITEM 703-02 SPECIFICATIONS.
7. THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FLUSH WHEN CONNECTING. ALIGN THE I-SLOTS FOR INTERLEAF AND END TO END CONNECTIONS. THE GEOCELL PANELS SHALL BE CONNECTED WITH TYPE 3 J HOOKS AT EACH INTERLEAD AND END TO END CONNECTIONS. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER INSTILLATION. TYING AND CONNECTIONS.
8. [PREPARE THE SUBGRADE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
9. COMPACT THE SOIL TO A MINIMUM 95% STANDARD PROCTOR.
10. VERIFY THAT THE SUBGRADE STRENGTH. IF UNACCEPPTABLE, THE SOILS SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
11. WHERE REQUIRED, PROVIDE GEOTEXTILE SEPARATION LAYER.
12. EXPAND THE GEOCELL SECTIONS INTO POSITION AND CONNECT THE END TO END INTERLEAD CONNECTIONS WITH ATRA KEYS.
13. PLACE THE SPECIFIED INFILL MATERIAL TO 2 INCHES ABOVE CELL WALLS AND COMPACT TO A MINIMUM 95% STANDARD PROCTOR.
14. PROVIDE ADDITIONAL SURFACE MATERIAL AS SPECIFIED.

BASIS OF DESIGN: CARTHAGE MILL

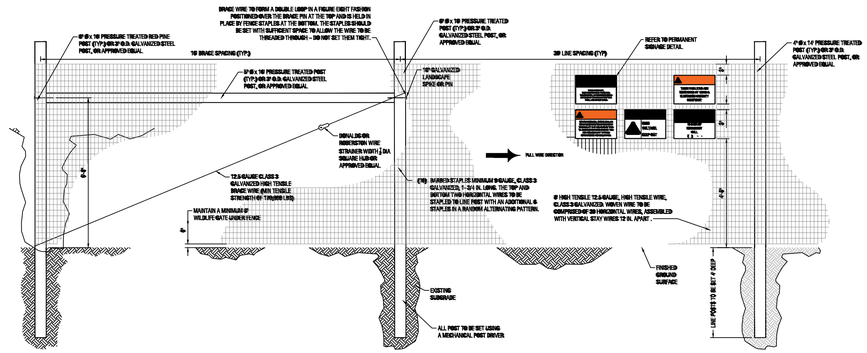
WOVEN GEOTEXTILE MATERIAL NOTES:

1. GEOTEXTILE MATERIAL TO B CARTHAGE MILL FX-60HS OR APPROVED EQUAL.

BASIS OF DESIGN: CARTHAGE MILLS

GRAVEL ACCESS ROAD DETAIL

NOT TO SCALE



BRACING NOTES

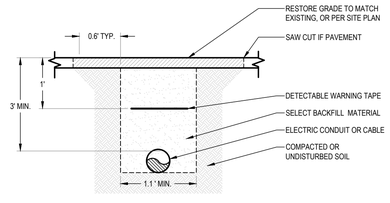
1. BRACING IS REQUIRED AT ALL CORNER, END GATE, AND PULL ASSEMBLIES IN THE FENCE.
2. CORNERS ARE REQUIRED AT ALL POINTS WHERE THE FENCE ALIGNMENT CHANGES 15 DEGREES OR MORE THREE, 6 IN. X 16 FT. VERTICAL POSTS AND TWO 5 IN. X 16 FT. HORIZONTAL BRACES ARE REQUIRED FOR EACH CORNER.
3. END BRACING IS REQUIRED WHERE THE FENCE ENDS AT A BUILDING OR ON EACH SIDE OF A GATE OPENING, TWO, 6 IN X 16 FT. VERTICAL POSTS AND ONE 5 IN. X 16 FT. HORIZONTAL BRACE ARE REQUIRED FOR EACH END BRACE.
4. PULL ASSEMBLIES ARE REQUIRED IN STRAIGHT SECTIONS OF FENCE SO THAT THE MAXIMUM DISTANCE BETWEEN CORNERS DOES NOT EXCEED 1,320 DT. TWO 6 IN. X 16 FT. VERTICAL POSTS AND ONE 5 IN. X 16 FT. BRACE ARE REQUIRED
5. DOUBLE BRACES (FIGURE 4) SHOULD BE USED ON EACH END FOR STRAIGHT FENCE LINES EXCEEDING 1,000 FT. DOUBLE END BRACES REQUIRE THREE 6 IN. X 16 FT. HORIZONTAL BRACES.

8-FT DEER FENCE DETAIL

NOT TO SCALE

8-FT DEER FENCE GATE DETAIL

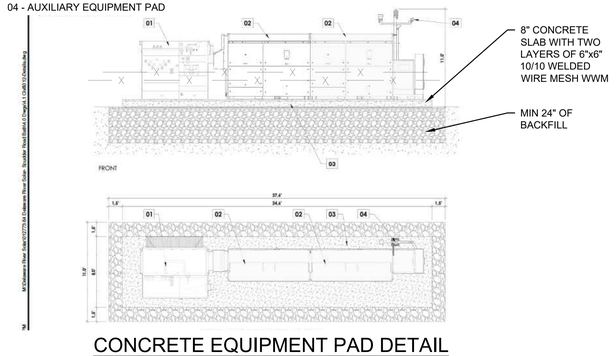
NOT TO SCALE



ELECTRICAL TRENCH DETAIL

NOT TO SCALE

01 - TRANSFORMER
02 - INVERTER
03 - REINFORCED CONCRETE SLAB PSI 3500
04 - AUXILIARY EQUIPMENT PAD

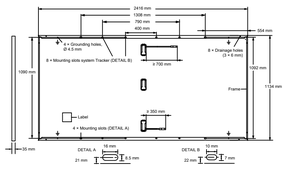


CONCRETE EQUIPMENT PAD DETAIL

NOT TO SCALE

MECHANICAL SPECIFICATION

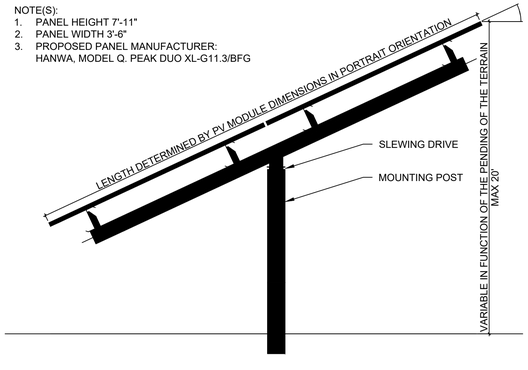
Format	2416 mm × 1134 mm × 35 mm (including frame)
Weight	34.4 kg
Front Cover	2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	2 mm semi-tempered glass
Frame	Anodised aluminium
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 700 mm, (−) ≥ 350 mm
Connector	Stäubli MC4-Evo2, Hanwha Q CELLS HQC4; IP68



SOLAR PANEL MECHANICAL SPECIFICATION DETAIL

NOT TO SCALE

NOTE(S):
1. PANEL HEIGHT 7'-11"
2. PANEL WIDTH 3'-6"
3. PROPOSED PANEL MANUFACTURER: HANWA, MODEL Q. PEAK DUO XL-G11.3/BFG



TYPICAL RACK SECTION DETAIL

NOT TO SCALE

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.
630 Johnson Avenue. - Suite 7
Bohemia - NY - 11716-2618
Phone: (631) 589-6353 - Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

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Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By:
Drawn By: HLW
Approved By: MTS
Date Submitted:
Date Created: 03/28/24
Scale: AS NOTED

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---
Title of Drawing:

SITE DETAILS

STATE OF NEW YORK · MICHAEL SCANLON · 103321 · LICENSED PROFESSIONAL ENGINEER

Unauthorized alteration or addition to this drawing and related documents is a violation of Section 7209 of the New York State Education Law

Drawing Number: C-600
Sheet 9 of 11
PWGC Project Number: DRS2404

STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING FOR WINTER SHUTDOWN

SYMBOL

CONSTRUCTION SPECIFICATIONS

1. THE AREA MUST BE ROUGH GRADED AND SLOPES PHYSICALLY STABLE. LARGE DEBRIS AND ROCKS ARE USUALLY REMOVED.
2. SEED BED MUST BE SEEDED WITHIN 24 HOURS OF DISTURBANCE OR SCARIFICATION OF THE SOIL SURFACE WILL BE NECESSARY PRIOR TO SEEDING.
3. FERTILIZER OR LIME ARE NOT TYPICALLY USED FOR TEMPORARY SEEDINGS.
4. LATE FALL OR EARLY WINTER, THEN SEED CERTIFIED 'AROOSTOOK' WINTER RYE AT 100 LBS. PER ACRE (2.5 LBS./1000 SQ. FT.).
5. HYDRO-SEEDING METHOD TO BE USED WHICH WILL PROVIDE UNIFORM APPLICATION OF SEED TO THE AREA AND RESULT IN RELATIVELY GOOD SOIL TO SEED CONTACT.
6. MULCH THE AREA WITH WOOD FIBER HYDRO-MULCH OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL.

STANDARD AND SPECIFICATIONS FOR LOOSE STABILIZATION BLANKETS FOR WINTER SHUTDOWN

HYDRAULICALLY APPLIED BLANKETS

THESE BLANKETS ARE FORMED BY MIXING DIFFERENT TYPES OF MATERIALS WITH WATER AND ARE THEN APPLIED USING STANDARD HYDROSEEDING EQUIPMENT. THESE BLANKETS SHOULD NOT BE USED IN AREAS OF CONCENTRATED FLOW SUCH AS DITCHES AND CHANNELS.

FLEXIBLE GROWTH MEDIUM (FGM) – THIS METHOD HAS THE ADDED COMPONENT OF 1/2 INCH LONG, CRIMPED MANMADE FIBERS WHICH ADD A MECHANICAL BOND TO THE CHEMICAL BOND PROVIDED BY BFMS. THIS INCREASES THE BLANKET'S RESISTANCE TO BOTH RAINDROP IMPACT AND EROSION DUE TO RUNOFF. UNLIKE BFMS, A FLEXIBLE GROWTH MEDIUM TYPICALLY DOES NOT REQUIRE A CURING TIME TO BE EFFECTIVE. PROPERLY APPLIED, AN FGM IS ALSO VERY EFFECTIVE.

THERE IS NO NEED TO SMOOTH THE SLOPE PRIOR TO APPLICATION. IN FACT SOME ROUGHENING OF THE SURFACE (EITHER NATURAL OR MECHANICALLY INDUCED) IS PREFERABLE.

HOWEVER, LARGE ROCKS (≥9 INCHES) AND EXISTING RILLS SHOULD BE REMOVED PRIOR TO APPLICATION. MIXING AND APPLICATION RATES SHOULD FOLLOW MANUFACTURER'S RECOMMENDATIONS.

CONSTRUCTION SPECIFICATIONS

1. FGMS ARE TYPICALLY APPLIED IN TWO STAGES. UNLESS SPECIFICALLY RECOMMENDED TO BE APPLIED IN ONE APPLICATION BY THE MANUFACTURER.
2. THE SEED MIXTURE AND SOIL AMENDMENTS SHOULD BE APPLIED FIRST.
3. AFTER THE SEED MIXTURE IS APPLIED, THE HYDRAULICALLY APPLIED BLANKETS SHOULD BE SPRAYED OVER THE AREA AT THE REQUIRED APPLICATION RATE, ACCORDING TO THE MANUFACTURES RECOMMENDATIONS

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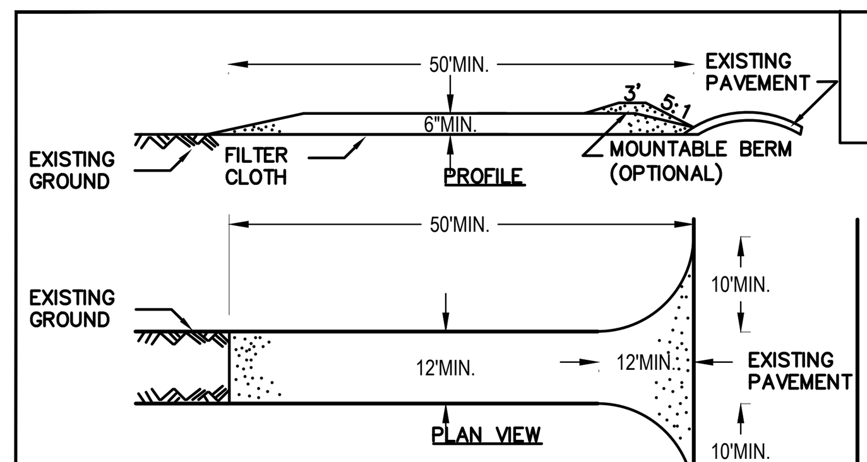
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

SEEDING/STABILIZATION BLANKET SPECIFICATIONS

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

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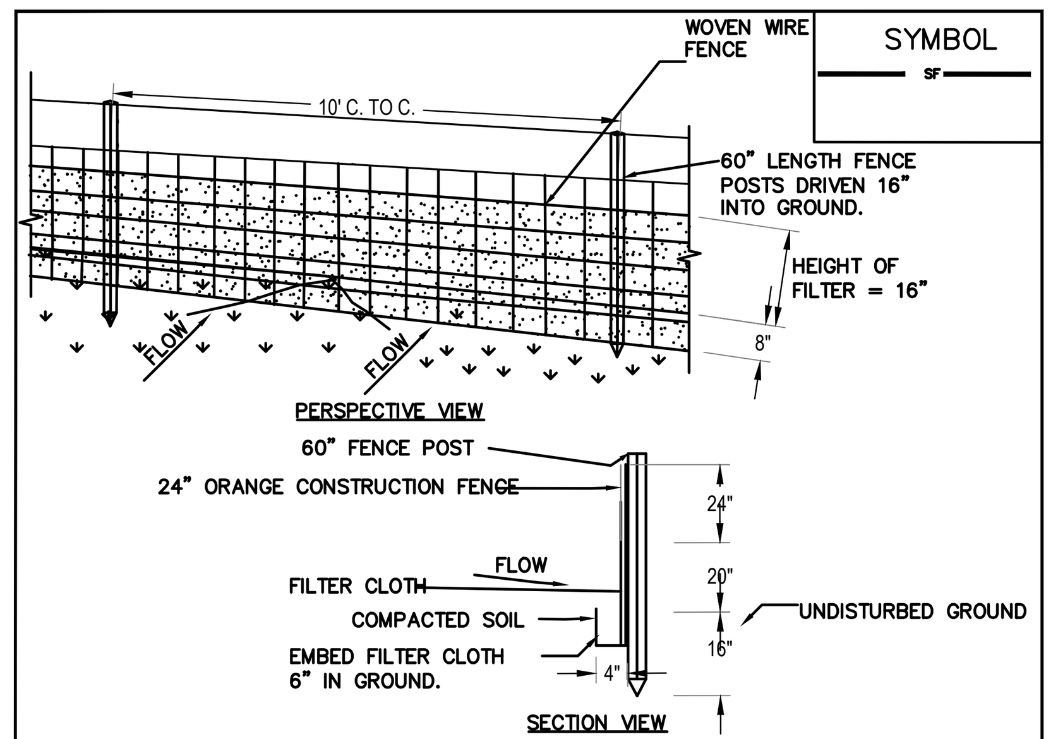
STABILIZED CONSTRUCTION ENTRANCE

SYMBOL

SF



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH AND ORANGE CONSTRUCTION FENCING TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN .
3. WHEN TWO SECTIONS OF FILTER CLOTH AND ORANGE CONSTRUCTION FENCING ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

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SILT FENCE

SYMBOL

= CRS =

CONSTRUCTION SPECIFICATIONS

1. CLEAN AND STRIP ROADBED AND PARKING AREAS OF ALL VEGETATION, ROOTS AND OTHERS OBJECTIONABLE MATERIAL.
2. LOCATE PARKING AREAS ON NATURALLY FLAT AREAS AS AVAILABLE. KEEP GRADES SUFFICIENT FOR DRAINAGE, BUT NOT MORE THAN 2 TO 3 PERCENT.
3. PROVIDE SURFACE DRAINAGE AND DIVERT EXCESS RUNOFF TO STABILIZED AREAS.
4. MAINTAIN CUT AND FILL SLOPES TO 2:1 OR FLATTER AND STABILIZED WITH VEGETATION AS SOON AS GRADING IS ACCOMPLISHED.
5. SPREAD 6-INCH COURSE OF CRUSHED STONE EVENLY OVER THE FULL WIDTH OF THE ROAD AND SMOOTH TO AVOID DEPRESSIONS.
6. PROVIDE APPROPRIATE SEDIMENT CONTROL MEASURES TO PREVENT OFFSITE SEDIMENTATION.

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CONSTRUCTION ROAD STABILIZATION

CONSTRUCTION SPECIFICATIONS

1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
2. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN AND THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
7. ALL FILL TO BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.
8. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
9. FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
10. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
11. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
12. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
13. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
14. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

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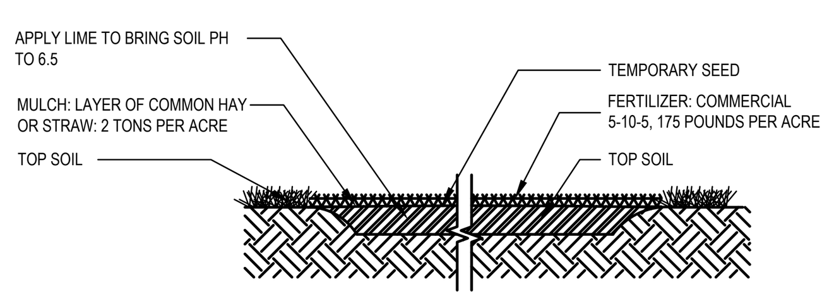
LANDGRADING SPECIFICATIONS

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. TOP SOIL, SEED, MULCH, AND FERTILIZER DISTURBED SOIL AREAS THAT WILL BE EXPOSED FOR 14 DAYS OR MORE

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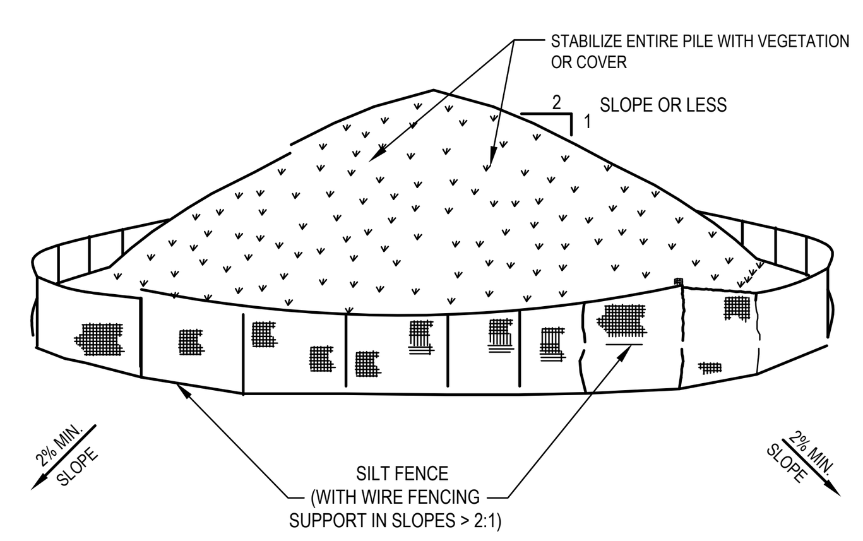
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

TEMPORARY TOPSOIL , FERTILIZER, SEED AND MULCH DETAIL

SYMBOL



INSTALLATION NOTES

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SILT FENCE DETAIL ABOVE.
5. SILT FENCE TO BE 10' FROM TOE OF SLOPE AND 10' FROM PROPERTY LINES.

SOIL STOCK PILE DETAIL

SEEDING NOTE:

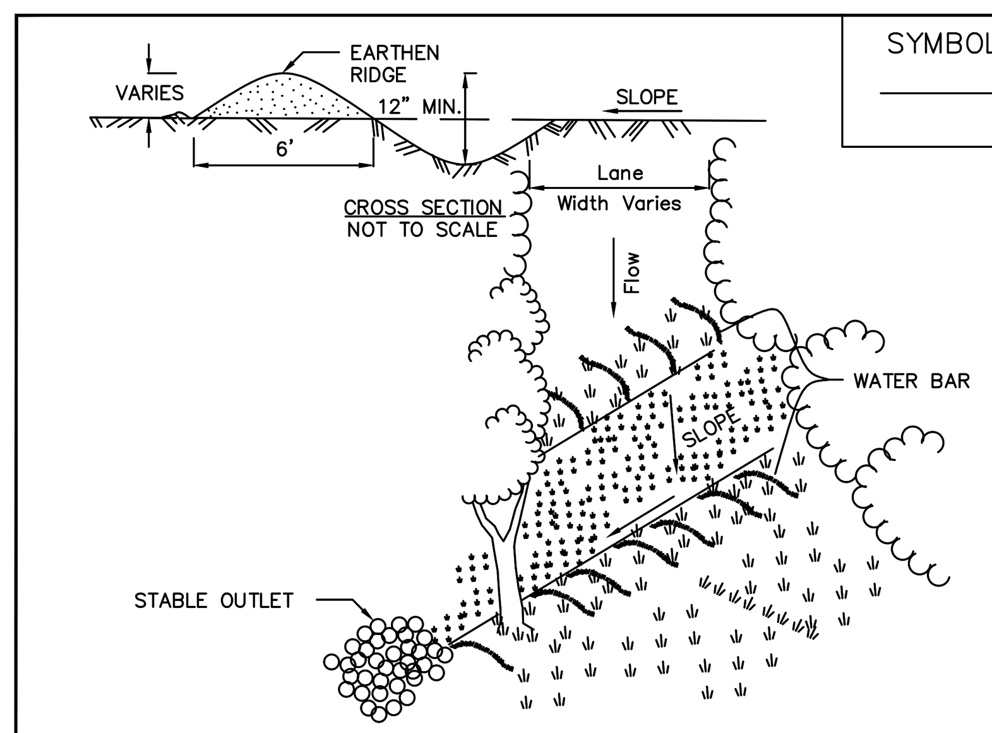
1. ERNEST CONSERVATION SEEDS NORTHEAST POLLINATOR 3' MIX - ERNMX-612 TO BE SEEDED BELOW SOLAR PANELS. SEED AT 40 LB/AC WITH 30 LB/AC OF A COVER CROP. FOR A COVER CROP USE EITHER GRAIN OATS (1 JAN TO 31 JUL) OR GRAIN RYE (1 AUG TO 31 DEC).

NORTHEAST SOLAR POLLINATOR 3' MIX - ERNMX-612	
SHEEP FESCUE, VARIETY NOT STATED	94.90%
BUTTERFLY MILKWEED	2.50%
PARTRIDGE PEA, PA ECOTYPE	2.00%
SHOWY EVENING PRIMROSE	0.30%
ZIGZAG SPIDERWORT, VA ECOTYPE	0.30%

WINTER SHUTDOWN CONSTRUCTION SCHEDULE

1. POST CLEARING THE EXPOSED SOIL SHALL BE COVERED WITH MATERIAL(S) AS SET FORTH IN THE TECHNICAL STANDARD, NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, TO PREVENT THE EXPOSED SOIL FROM ERODING (SEE STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING/STABILIZATION FOR WINTER SHUT DOWN, ABOVE).
2. REGULARLY INSPECT, MAINTAIN AND RE-SEED ANY AREAS THAT ARE NOT ADEQUATELY STABILIZED UP UNTIL THE JULY 1 START DATE AND THEREAFTER, UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
3. SITE INSPECTIONS ARE TO TAKE PLACE TWICE PER MONTH WITH PHOTOS PROVIDED TO THE TOWN TO DEMONSTRATE THAT THE SITE REMAINS STABILIZED/PROTECTED UNTIL CONSTRUCTION STARTS.
4. ONCE CONSTRUCTION STARTS, INSPECTIONS SHALL CONTINUE MONTHLY, WITH PHOTOS SUBMITTED TO THE TOWN, TO ENSURE THAT THE TEMPORARY STABILIZATION MEASURES REMAIN IN PLACE IN AREAS NOT UNDER ACTIVE CONSTRUCTION.

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. INSTALL THE WATER BAR AS SOON AS THE RIGHT OF WAY IS CLEARED AND GRADED.
2. DISK OR STRIP THE SOD FROM THE BASE FOR THE CONSTRUCTED RIDGE BEFORE PLACING FILL.
3. TRACK THE RIDGE TO COMPACT IT TO THE DESIGN CROSS SECTION.
4. THE OUTLET SHALL BE LOCATED ON AN UNDISTURBED AREA. FIELD SPACING WILL BE ADJUSTED TO USE THE MOST STABLE OUTLET AREAS. OUTLET PROTECTION WILL BE PROVIDED WHEN NATURAL AREAS ARE NOT ADEQUATE.
5. VEHICLE CROSSING SHALL BE STABILIZED WITH GRAVEL. EXPOSED AREAS SHALL BE SEEDED AND MULCHED WITHIN 2 DAYS.
6. PERIODICALLY INSPECT WATER BARS FOR EROSION DAMAGE AND SEDIMENT. CHECK OUTLET AREAS AND MAKE REPAIRS AS NEEDED TO RESTORE OPERATION.

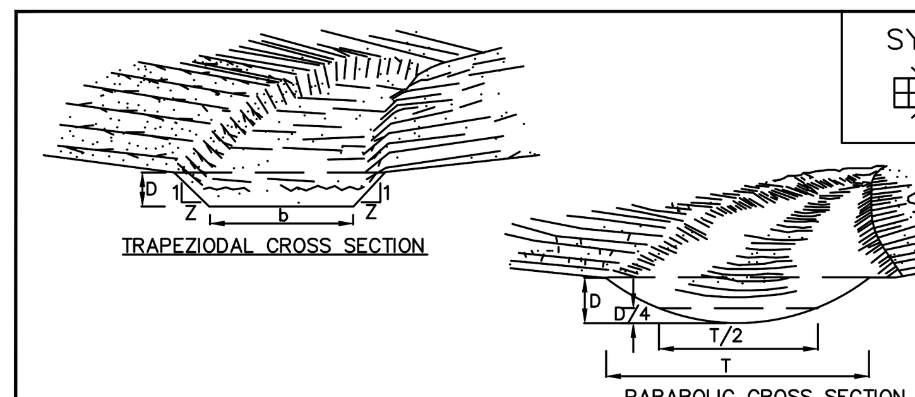
N.T.S.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

WATER BARS

SYMBOL

GL



CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE WATERWAY.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
   A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY WATERWAYS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE ESTABLISHMENT OF THE VEGETATION.
   B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE WATERWAY SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.
   C. STRUCTURAL – VEGETATIVE PROTECTION
   SUBSURFACE DRAIN FOR BASE FLOW SHALL BE CONSTRUCTED AS SHOWN ON THE STANDARD DRAWING AND AS SPECIFIED IN THE STANDARD AND SPECIFICATIONS FOR SUBSURFACE DRAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

GRASSED WATERWAY

SOLAR ARRAY

COMPANY, LLC
24HR EMERGENCY CONTACT
NAME, PHONE, ADDRESS

⚠ DANGER

HIGH VOLTAGE.
KEEP OUT

SIGNAGE DETAIL

NOT TO SCALE

SIGNAGE NOTE:

1. SIGNAGE SHALL BE DEPICTED WITH AN AREA NO MORE THAN 8 SQUARE FEET AND MUST HAVE A YELLOW BACKGROUND WITH BLACK LETTERS AND BE LOCATED NEAR PAD MOUNTED TRANSFORMERS/SUBSTATION, ON THE GATE OF THE PERIMETER FENCE, AND ALONG THE PERIMETER FENCE.

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.

630 Johnson Avenue . Suite 7
Bohemia . NY . 11716-2618
Phone: (631) 589-6353 . Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

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Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By

Date Submitted

Drawn By: HLW

Date Created: 03/28/2024

Approved By: MTS

Scale: AS NOTED

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

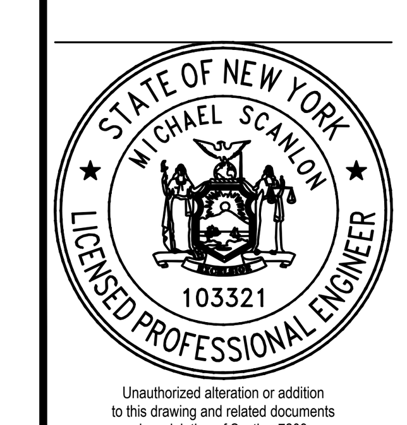
County Tax Map Number: 44-1-1.2 & 44-1-3.3

Contract Number: ---

Regulatory Reference Number: ---

Title of Drawing:

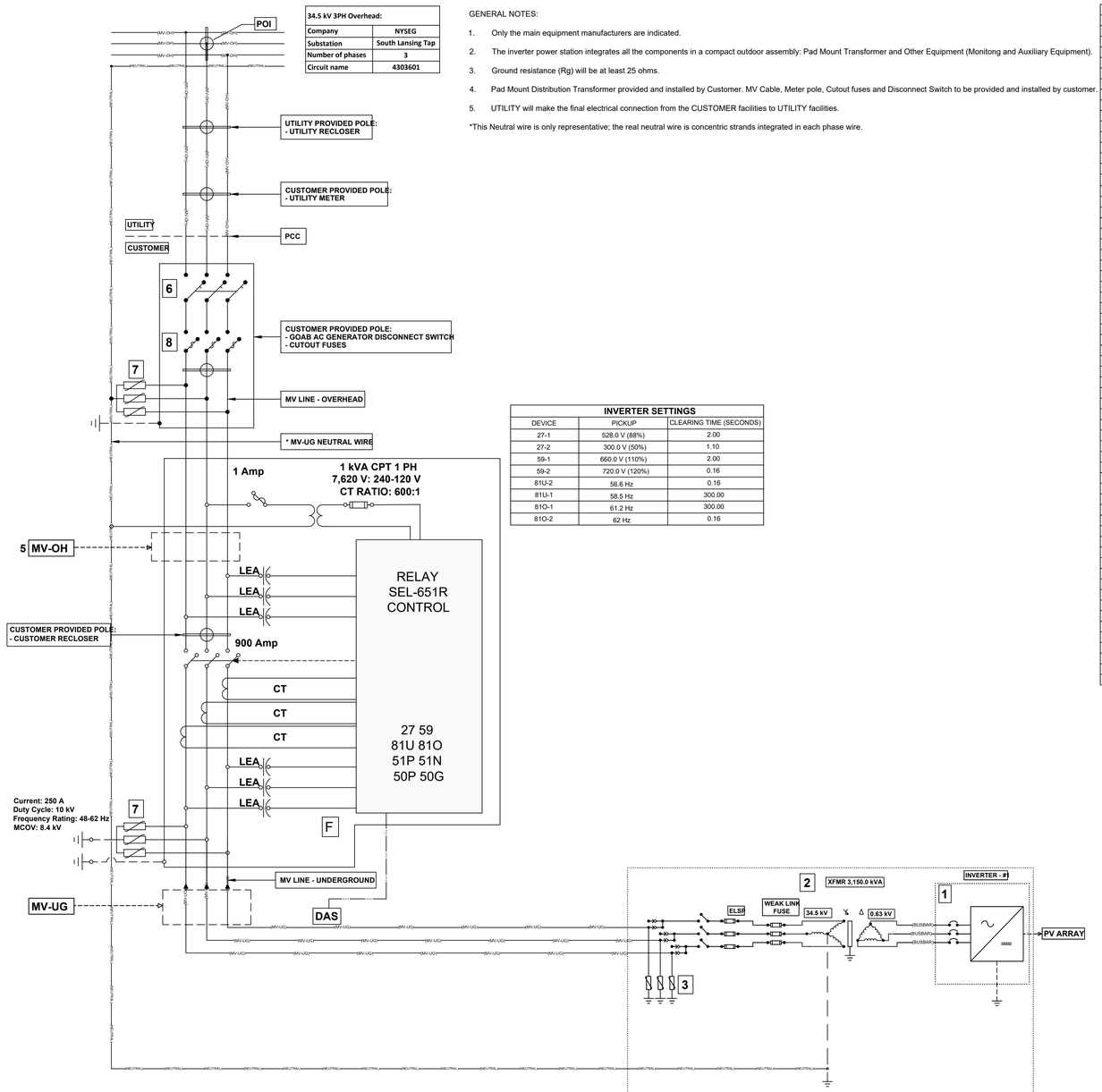
EROSION AND SED. CONTROL DETAILS



Drawing Number: **C-601**

Sheet 10 of 11

PWGC Project Number: **DRS2404**



ELECTRICAL THREE LINE DIAGRAM

NOT TO SCALE

34.5 kV 3PH Overhead:	
Company	NYSEG
Substation	South Lansing Tap
Number of phases	3
Circuit name	4303601

GENERAL NOTES:

1. Only the main equipment manufacturers are indicated.
2. The inverter power station integrates all the components in a compact outdoor assembly: Pad Mount Transformer and Other Equipment (Monitong and Auxiliary Equipment).
3. Ground resistance (Rg) will be at least 25 ohms.
4. Pad Mount Distribution Transformer provided and installed by Customer. MV Cable, Meter pole, Cutout fuses and Disconnect Switch to be provided and installed by customer.
5. UTILITY will make the final electrical connection from the CUSTOMER facilities to UTILITY facilities.

*This Neutral wire is only representative; the real neutral wire is concentric strands integrated in each phase wire.

INVERTER SETTINGS		
DEVICE	PICKUP	CLEARING TIME (SECONDS)
27-1	528.0 V (88%)	2.00
27-2	300.0 V (50%)	1.10
59-1	660.0 V (110%)	2.00
59-2	720.0 V (120%)	0.16
81U-2	56.6 Hz	0.16
81U-1	58.5 Hz	300.00
81O-1	61.2 Hz	300.00
81O-2	62 Hz	0.16

VOLTAGE LINE (kV)	34.50
Utility	NYSEG
SUBSTATION	South Lansing Tap
NUMBER OF PHASES	3
CIRCUIT NAME	4303601
AC SYSTEM SIZE (MW)	3.00
POWER FACTOR	1.00
OUTPUT CURRENT (A)	50.20
AC SYSTEM SIZE (MVA)	3.00
1	
MANUFACTURER	Sungrow
MODEL	SG3150UD-MV
QUANTITY	1
MAX PV INPUT VOLTAGE (V)	1,500
AC POWER (kVA)	3,150
AC OUTPUT POWER (kW) (LIMITED)	3,000
AC OUTPUT VOLTAGE (V)	630
AC OUTPUT CURRENT (A)	2,886.75
UL 1741 AND IEEE 1547	YES
2	
MANUFACTURER	EATON
QUANTITY	1
POWER (kVA)	3,150
HV BIL (kV)	150
LV BIL (kV)	30
NOMINAL HIGH VOLTAGE (kV)	34.50
NOMINAL LOW VOLTAGE (V)	630
IMPEDANCE (%)	5.75
X/R Ratio	>=5
PRIMARY WINDING	WYE
SECONDARY WINDING	DELTA
3	
MANUFACTURER	EATON
MCOV RATING (kV)	22.00
DUTY CYCLE (kV)	27.00
4	
SIZE	2/0 AWG
NORMAL TEMP RATING (ºC)	105
JACKET	XLPE
CONCENTRIC NEUTRAL	100%
INSULATION LEVEL (%)	100
VOLTAGE RATING (kV)	35
LENGTH (ft)	2,590.15
5	
TYPE	ACSR
SIZE	1/0 AWG
LENGTH (ft)	198.38
6	
MANUFACTURER	EATON
RATING (A)	600
VOLTAGE (kV)	15.5
BIL (kV)	200
7	
MANUFACTURER	EATON
QUANTITY	3
MCOV (kV)	22.00
ARRESTER RATING (kV)	27.00
8	
MANUFACTURER	S&C
RATING (kV)	35
RATING (A)	175
BIL (kV)	200
QUANTITY	3

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. GROSSER CONSULTING INC.
630 Johnson Avenue. - Suite 7
Bohemia - NY - 11716-2618
Phone: (631) 589-6353 - Fax: (631) 589-8705
E-mail: INFO@PWGROSSER.COM

CONSULTANTS

FOR PERMITTING PURPOSES ONLY
NOT FOR CONSTRUCTION

Number	Revision Description	Revision Date
7		
6		
5		
4		
3		
2		
1	CLIENT REVIEW	04/05/2024

Designed By:
Date Submitted:
Drawn By: HLW
Date Created: 03/28/24
Approved By: MTS
Scale: AS NOTED

Client:
NY LANSING II, LLC
P.O. BOX 384
CALLICOON, NY 12783

Project:
NORTH TRIPHAMMER ROAD SOLAR FARM CONCEPTUAL SITE PLAN

Project Address:
NORTH TRIPHAMMER ROAD
TOWN OF LANSING
TOMPKINS COUNTY, NEW YORK

County Tax Map Number: 44-1-1.2 & 44-1-3.3
Contract Number: ---
Regulatory Reference Number: ---

Title of Drawing:
ELECTRICAL THREE LINE DIAGRAM

STATE OF NEW YORK
MICHAEL SCANLON
103321
LICENSED PROFESSIONAL ENGINEER

Unauthorized alteration or addition to this drawing and related documents is a violation of Section 7209 of the New York State Education Law

Drawing Number: C-602
Sheet 11 of 11
PWGC Project Number: DRS2404