GENESEE COUNTY PLANNING BOARD REFERRALS
NOTICE OF FINAL ACTION

GCDP Referral ID	**T-01-BAT-01-23**
Review Date	**1/12/2023**
Municipality	**BATAVIA, T.**
Board Name	**PLANNING BOARD**
Applicant's Name	**Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc.**
Referral Type	**Special Use Permit**
Variance(s)	
Description:	**Special Use Permit for a 5 MW solar energy system on 20.6 acres of farmland.**
Location	**Oak Orchard Rd. (NYS Rt. 98), Batavia**
Zoning District	**Agricultural-Residential (A-R) District**

PLANNING BOARD RECOMMENDS:

APPROVAL WITH MODIFICATION(S)

EXPLANATION:

The required modifications are as follows: 1) The applicant obtains a permit from NYS DOT for the proposed driveway; 2) Given that the project site will be located primarily on prime agricultural soils and active agricultural land, the applicant commits to following the New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects-Construction Mitigation for Agricultural Lands; 3) the applicant amends the decommissioning plan to include decompaction of the footprint of the access road/equipment pads where they occur in currently farmed areas of the field to a minimum of 24 inches beneath the bottom of the former stone layer and post-decommissioning monitoring for a minimum of three growing seasons; and 4) Given that the project parcels are enrolled in Agricultural District No. 2 and that the project will receive public funding, the required modification is that the applicant comply with NYS Agriculture and Markets Law Section 305 (Notice of Intent provision). With these required modifications, the proposed solar energy system should pose no significant county-wide or intercommunity impact. It is recommended that the applicant submits the enclosed application for 9-1-1 Address Verification to the Genesee County Sheriff's Office to ensure that the address of the proposed solar system meets Enhanced 9-1-1 standards.

Felice A. [illegible]

Director

January 12, 2023

Date

If the County Planning Board disapproved the proposal, or recommends modifications, the referring agency shall NOT act contrary to the recommendations except by a vote of a majority plus one of all the members and after the adoption of a resolution setting forth the reasons for such contrary action. Within 30 days after the final action the referring agency shall file a report of final action with the County Planning Board. An action taken form is provided for this purpose and may be obtained from the Genesee County Planning Department.

SEND OR DELIVER TO:
GENESEE COUNTY DEPARTMENT OF PLANNING
3837 West Main Street Road
Batavia, NY 14020-9404
Phone: (585) 815-7901

Clear Form

DEPARTMENT USE ONLY:
GCDP Referral # T-01-BAT-01-23

* GENESEE COUNTY * PLANNING BOARD REFERRAL

RECEIVED
Genesee County
Dept. of Planning
1/5/2023

Required According to:
GENERAL MUNICIPAL LAW ARTICLE 12B, SECTION 239 L, M, N
(Please answer ALL questions as fully as possible)

1. REFERRING BOARD(S) INFORMATION

Board(s) Town of Batavia Planning Board
Address 3833 West Main Street Road
City, State, Zip Batavia, NY, 14020
Phone (585) 343 - 1729 Ext.

2. APPLICANT INFORMATION

Name Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc.
Address 7755 Oak Orchard Road
City, State, Zip Batavia, NY 14020
Phone (978) 995 - 3054 Ext. Email wperegoy@newleafenergy.c
FAO

MUNICIPALITY: ☐ City ☒ Town ☐ Village of Batavia

3. TYPE OF REFERRAL: (Check all applicable items)

- ☐ Area Variance
- ☐ Use Variance
- ☒ Special Use Permit
- ☒ Site Plan Review
- ☐ Zoning Map Change
- ☐ Zoning Text Amendments
- ☐ Comprehensive Plan/Update
- ☐ Other:

Subdivision Proposal
- ☐ Preliminary
- ☐ Final

4. LOCATION OF THE REAL PROPERTY PERTAINING TO THIS REFERRAL:

A. Full Address 7755 Oak Orchard Road Batavia NY 14020
B. Nearest intersecting road Batavia Elba Townline Road
C. Tax Map Parcel Number 4.-1-16
D. Total area of the property 83.5 Area of property to be disturbed 2.2 Acres
E. Present zoning district(s) Ag-Res

5. REFERRAL CASE INFORMATION:

A. Has this referral been previously reviewed by the Genesee County Planning Board?

☒ NO ☐ YES If yes, give date and action taken

B. Special Use Permit and/or Variances refer to the following section(s) of the present zoning ordinance and/or law

235-63 D

C. Please describe the nature of this request Install and operate a 5 megawatt solar system

6. ENCLOSURES – Please enclose copy(s) of all appropriate items in regard to this referral

- ☒ Local application
- ☒ Site plan
- ☐ Subdivision plot plans
- ☒ SEQR forms
- ☐ Zoning text/map amendments
- ☒ Location map or tax maps
- ☒ Elevation drawings
- ☒ Agricultural data statement
- ☐ New or updated comprehensive plan
- ☐ Photos
- ☐ Other:

7. CONTACT INFORMATION of the person representing the community in filling out this form (required information)

Name Daniel Lang Title CEO/ZEO Phone (585) 343 - 1729 Ext. 222
Address, City, State, Zip 3833 West Main St. Rd. Batavia NY 14020 Email dlang@townofbatavia.com
FAO

ERDMAN ANTHONY

December 12, 2022

Mr. Daniel Lang, Building Inspector
Town of Batavia
3833 West Main Street Road
Batavia, NY 14020

SUBJECT: Building & Zoning Application: Land Subdivision, Special Use Permit & Site Plan Approval
7755 Oak Orchard Road Community Solar project

Dear Mr. Lang;

On behalf of Oak Orchard Solar 3, LLC and New Leaf Energy, Inc. (NELI), we are submitting the enclosed Building and Zoning Application documents for the subject site address. Included with this submission is a check from New Leaf Energy, Inc. (on behalf of the Applicant: Oak Orchard Solar 3, LLC) payable to the Town of Batavia for a total amount of $300.00 to cover the initial Site Plan and Special Use Permit Application fees.

The proposed project will construct and operate a 5.0 Mw (AC) community solar energy project on a 83.5 acre parcel of agricultural land. We are requesting the enclosed Applications be referred to the Genesee County Planning Board for their January 12, 2023 meeting, and introduced to the Town Planning Board at either one of their upcoming December or January meetings.

Enclosed please find four (4) copies of the Site Plan and Special Use Permit Application documents consisting of the following:

1. Completed and signed "*Building and Zoning Application*", and a "*Site Plan Review Checklist*".
2. Signed Owner's Authorization.
3. Completed & Signed *Agricultural Data Statement*.
4. Completed *Part 1 Full Environmental Assessment Form*.
5. Soils Report.
6. Stormwater Management Narrative.
7. Wetland Delineation Report dated January 2021.
8. Proof of National Grid Coordination.
9. Single-Line Electrical Drawing (11" x 17").
10. Decommissioning Plan / Estimate.
11. Preliminary Equipment Specification Sheets
12. Site Plans: Full Size 24" x 36".

ERDMAN ANTHONY

Electronic copies of all the above files will be emailed to you and the following Town of Batavia staff:

Steve Mountain, Town Engineer smountain@townofbatavia.com
Raymond Tourt, Assistant Town Engineer rtourt@townofbatavia.com

The FAA aeronautical project study will be initiated by NELI because of the project's close proximity to the Genesee County Airport. A Glare Study and Visual Impact Analysis will also be initiated after the initial Town Planning Board meeting and will be submitted (to the Town) once completed. Also, within the next 3-4 weeks, we expect to submit (to the Town) the required Stormwater Pollution Prevention Plan (SWPPP).

If you have any questions or need additional information, please contact me at (585) 427-8888, ext 1012.

Sincerely,

Marc Kenward, PE
Senior Associate
ERDMAN ANTHONY

Enc: As noted above

c: William Peregoy, New Leaf Energy, Inc.
Wil Nieves, New Leaf Energy, Inc.

Building and Zoning Application Permit No._____

Town of Batavia 3833 West Main Rd. Batavia NY 14020 PH. 585-343-1729

Date 12 / 12 / 22 Zone AG-R Flood Zone n/a Wellhead Protection n/a Corner Lot n/a

New Construction ☑ Fence ☐ Pond ☐ Sign ☐ Alteration(s) ☐ Addition ☐ Demolition ☐

Accessory Bldg. ☐ Mobile Home ☐ Fill Permit ☐ Home Occupation ☐ Land Separation ☐ Site Plan Approval ☑

Special Use Permit ☑ Temporary Use ☐ Subdivision ☐ Zoning Variance Request ☐ Other ☐ Specify:_____

Tax Map No. 4.-1-16

Owners Name Call Farms, Inc. [contact - Tim Call, President] Phone No. (716) 560 - 1822

Address 8127 Lewiston Rd., Batavia, NY 14020 Project Road Width 66 ft (ROW)

Applicants Name Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc. [contact - Will Peregoy] 55 Technology Drive, Suite 102; Lowell, MA 01851 Project Address 7755 Oak Orchard Rd., Batavia, NY 14020

E Mail Address wperegoy@newleafenergy.com Phone No (978) 995 - 3054

Description of Project: Construct and operate a 5.0 Mw (AC) ground mounted utility grade Community Solar Energy system on a 83.5 acre parcel of land.

Existing Use Agricultural & solar energy system Proposed Use Agricultural & 2 solar energy systems

Estimated Cost Building_____ Plumbing N/A Mechanical N/A Miscellaneous_____

SEQR CLASSIFICATION Type 1 ☐ Type 2 ☐ Unlisted ☐

Review completed by Planning Board ☐_____ Zoning Board of Appeals ☐_____

Permit Fee $_____ Application Date ____ /____ /____ Permit Expires On ____ /____ /____

Issuing Officer _____ Date____ /____ /____

IN SIGNING THIS DOCUMENT I HEARBY GIVE THE RIGHT OF AN ON SITE INSPECTION TO THE TOWN OF BATAVIA CODE ENFORCEMENT OFFICIAL OR THEIR DESIGNE. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PREFORMANCE OF CONSTRUCTION.

I, William Peregoy, as Owner or Authorized Agent hereby declare that the statements and information on the foregoing application are true and accurate, to the best of my knowledge.

DocuSigned by:
William Peregoy
869D945D38594DD...

12/12/2022

Signature of Owner or Authorized Agent Date

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3833 West Main Street Road Batavia, New York 14020-9402
Phone: (585) 343-1729 Fax: (585) 343-8461 TDD: 1-800-662-1220 www.townofbatavia.com

SITE PLAN REVIEW CHECKLIST

The Town of Batavia would like to work with you to streamline the site plan review process. We strongly encourage that any applicants to schedule an appointment with our Town Building and Zoning Dept. Director **Dan Lang at (585) 343-1729 extension 222 (dlang@townofbatavia.com)** prior to submitting a project for review.

The initial meeting can be scheduled at any time. The site plan submission shall be submitted to the Dan Lang one (1) week prior to the Town Planning Board Meetings held every 1st and 3rd Tuesday of the month at 7:30 pm at the Town Hall. The Town will review the Site Plans and provide comments back to the applicant within one (1) week following the Planning Board Meeting.

Office Use	INITIAL SITE PLAN REVIEW MEETING REQUIREMENTS:
☐ ☐	1. One (1) copy of Zoning Permit Application. 2. One (1) printed copy and an electronic copy of the following: a. Scaled site plans on an instrument survey showing: i. Existing and proposed parking. ii. Existing and proposed buildings. iii. Existing and proposed conceptual drainage improvements including storm water treatment. iv. Existing and proposed property lines and highway Right of Way. v. Existing Environmental features such as wetlands and flood plains.
Office Use	**SITE PLAN SUBMISSION REQUIREMENTS**
☐ ☐ ☐ ☐ ☐	1. SEQRA short or long form or Environmental Impact Statement 2. Three (3) full size, one (1) half size and an electronic copy, Plans shall include: a. site plans and details that are stamped and signed by a PE (see attached checklist) b. Scaled floor plan of all proposed structures c. Scaled elevations of all proposed structures and facades 3. Three (3) copies of color renderings or other type of visual aids depicting any proposed structures in its built conditions within the site. 4. One (1) copy of Storm Water Pollution Prevention Plans (for developments great than one (1) acre). 5. The following applications/ reports as applicable (applications are available on the Town web site): a) Engineering Report providing all basis of design criteria b) Traffic Study as required c) Water- Sewer Service application d) Backflow design report including applicable Health Dept. forms and backflow design checklist e) Sign Permit application f) Driveway and/or Highway Construction Permit Application g) Minor Subdivision application h) Smart Growth application i) Any applicable variance applications

SITE PLAN REVIEW CHECKLIST		
Project Name: 7755 Oak Orchard Road Solar Community Project		**Reviewed By:**
Applicant Name: Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc.		
Office Use	**Plan Components**	**Comments**
☐	Instrument Survey including Public Right-of-Way	
☐	North Arrow, Scale, Title and Address	
☐	Lot Coverage, Building Coverage and Open Space Percentage Table	
☐	Setback Dimensions for building and parking	
☐	Building/Structure Details and Elevation Views	
☐	Existing Natural and Topographical Features	
☐	Wetland delineation or boundaries shown if on site	
☐	Proposed Driveway/Roadway with dimensions and details	
☐	Parking layout including aisles and queuing aisles with dimensions and number of spaces	
☐	Snow storage location for parking of more than 10 vehicles	
☐	Drainage and Grading plans and details, use Town std.	
☐	Utility Plan with appropriate details, use Town std. details for all wtr- swr improvements	
☐	Ex. or Proposed Fire hydrants located per NYS Code	
☐	Lighting Plan with lighting contours and appropriate details	
☐	Landscaping, Fencing and Screening Plan and details	
☐	Pedestrian safety around building, curbing, sidewalks and ADA accessible ramps as necessary	
☐	Profiles of roadway and utilities if applicable	
☐	Appropriate notes to include topsoil to remain on site	
☐	Trash Storage/ dumpster enclosure	
☐	Town of Batavia Signature Block on Cover Sheet	
☐	Engineering Report	
☐	Traffic Study (if req'd) and traffic flow easily identified	
☐	Water- Sewer Service Application	
☐	Backflow report and Town Backflow Design checklist	
☐	Ex. and Proposed Sign shown and Sign Permit Application	
☐	Driveway Permit Application	
☐	Storm Water Pollution Prevention Plan	
☐	Storm Water Maintenance Agreement	
☐	SEQRA Short or Long form part 1 or Envir. Impact Stat.	
☐	Smart Growth Application	
☐	Minor Subdivision Application	

EXHIBIT F

November 28, 2022

To Whom It May Concern

New Leaf Energy, Inc. and its employees and affiliates are hereby authorized to act as our agent for submission of applications and related plans and documents, and to appear before boards and other officials, with respect to obtaining approvals for solar installations and/or energy storage systems to be constructed on my property located at 7757 Oak Orchard Rd, Batavia, NY 14020.

Sincerely,

DocuSigned by:
Tim Call
B713FB9831BA404...

Tim Call, President
Call Farms, Inc.

New York State Standard Site Control Certification Form

National Grid
[UTILITY DEPT. NAME AND CONTACT NAME]
[UTILITY STREET ADDRESS]
[CITY/TOWN, New York [ZIP CODE]

Re:	DEVELOPER	New Leaf Energy, Inc.
		Intx-ny@newleafenergy.com
	PROJECT	305239
		7757 Oak Orchard Rd, Batavia, NY 14020
	PROPERTY	Town of Batavia, Genesee County
		Town of Batavia, 14020

Call Farms, Inc. (the "Property Owner") is the owner of the above-referenced property (the "Property").

Wilfred Nieves (the "Developer") is the developer of the project identified above.

The Property Owner and the Developer have entered into an agreement authorizing the Developer to use the Property for the purpose of constructing and operating a distributed generation facility. The type of agreement that is in place is indicated below by a check mark.

X	Signed option agreement to lease or purchase the Property
	Executed lease agreement for the Property
	Executed agreement to purchase the Property
	License or other agreement granting exclusive right to use the Property for purposes of constructing and operating the distributed generation facility

Property Owner and Developer entered into the agreement on or about 4/21/2021

Term of Agreement (including options to extend) 10/12/2024

Property Owner

DocuSigned by:
By: Tim Call
B713FB9831BA404...

Printed Name: Tim Call

Title: President

Date: 11/30/2022

Developer

DocuSigned by:
By: Wilfred Nieves
03E87E3738044EC...

Printed Name: Wilfred Nieves

Title: Project Developer

Date: 11/29/2022

AGRICULTURAL DATA STATEMENT

Per § 305-a of the New York State Agriculture and Markets Law, any application for a special use permit, site plan approval, use variance, or subdivision approval requiring municipal review and approval that would occur on property within a New York State Certified Agricultural District containing a farm operation or property with boundaries within 500 feet of a farm operation located in an Agricultural District shall include an Agricultural Data Statement.

Property Owner Name & Address
Call Farms, Inc.
[contact - Tim Call, President]
8127 Lewiston Rd., Batavia, NY 14020
Phone - (716) 560 - 1822
Email - timc@empiretractor.com

A. Name of applicant: Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc. [contact - Will Peregoy]
Phone - (978) 995 - 3054 Email - wperegoy@newleafenergy.com

Mailing address: 55 Technology Drive, Suite 102
Lowell, MA 01851

B. Description of the proposed project: Construct and operate a 5.0 Mw (AC) ground mounted utility scale solar energy system on a 83.5 acre parcel of agricultural land.

C. Project site address: 7755 Oak Orchard Road, Batavia, NY 14020 Town: Batavia

D. Project site tax map number: 4.-1-16

E: The project is located on property:
☑ within an Agricultural District containing a farm operation, or
☐ with boundaries within 500 feet of a farm operation located in an Agricultural District.

F. Number of acres affected by project: 20.6 +/- acres of a 83.5 acre parcel.

G. Is any portion of the project site currently being farmed?
☑ Yes. If yes, how many acres 53.3 +/- or square feet__________ ?
☐ No.

H. Name and address of any owner of land containing farm operations within the Agricultural District <u>and</u> is located within 500 feet of the boundary of the property upon which the project is proposed.

1. Daws Corners, LLC.	Batavia-Elba Townline Rd., Batavia, NY 14020 (Mail to 4112 Batavia-Elba Townline Rd, Oakfield, NY 14125)	Tax Map No. 4.-1-12.111
2. John Torrey	Batavia-Elba Townline Rd., Batavia, NY 14020 (Mail to P.O. Box 187, Elba, NY 14058)	Tax Map No. 5.-1-4.11
3. Raymond Pionessa	7774 State St. Rd., Batavia, NY 14020 (Mail to 13404 Carney Rd., Akron, NY 14001)	Tax Map No. 4.-1-19.1
4. Alice St John Living Trust	Oak Orchard Rd., Batavia, NY 14020 (Mail to 6551 NW 153 Ln., Cheifland, FL 32626)	Tax Map No. 4.-1-20.2
5. Offhaus Farms, Inc.	Oak Orchard Rd., Batavia, NY 14020 (Mail to 7892 Oak Orchard Rd., Batavia, NY 14020)	Tax Map No. 4.-1-32.1
6. Offhaus Farms, Inc.	Oak Orchard Rd., Batavia, NY 14020 (Mail to 7892 Oak Orchard Rd., Batavia, NY 14020)	Tax Map No. 4.-1-33.1
7. Torrey Lands, LLC.	4276 Batavia-Elba Townline Rd., Batavia, NY 14020 (Mail to P.O. Box 187, Elba, NY 14058)	Tax Map No. 4.-1-36

I. Attach a copy of the current tax map showing the site of the proposed project relative to the location of farm operations identified in Item H above.

~ ~

FARM NOTE

Prospective residents should be aware that farm operations may generate dust, odor, smoke, noise, vibration and other conditions that may be objectionable to nearby properties. Local governments shall not unreasonably restrict or regulate farm operations within State Certified Agricultural Districts unless it can be shown that the public health or safety is threatened.

~ ~

Marc Kenward, Senior Associate
Erdman Anthony Consulting Engineers
KenwardMD@erdmananthony.com
145 Culver Road, Suite 200
Rochester, NY 14620 (525) 427-8888

Name and Title of Person Completing Form

December 12, 2022
Date

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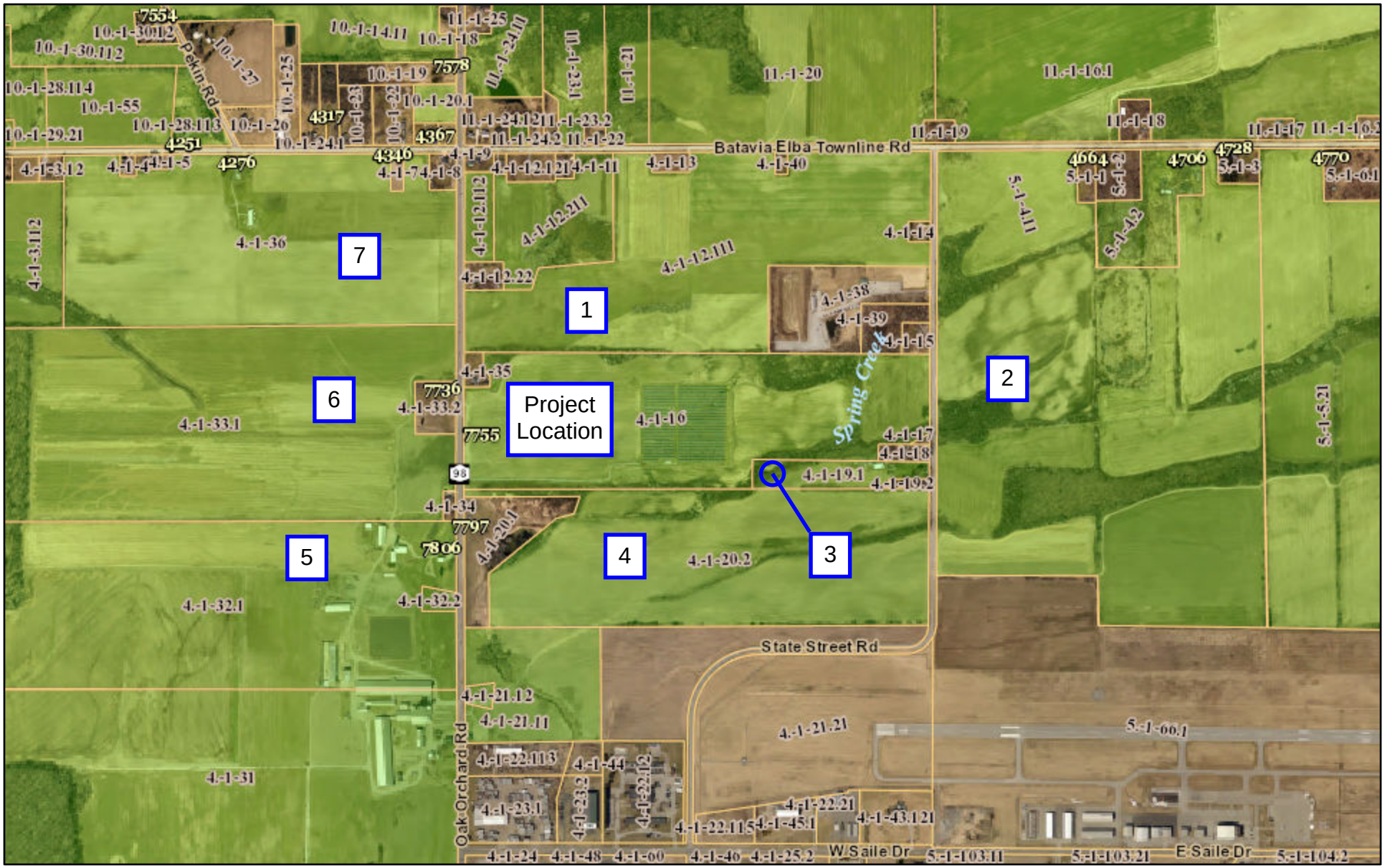
7755 Oak Orchard Road



11/21/2022, 2:18:26 PM

NYS Agricultural Districts

Parcels with labels

Roads (Large Scale)

Year 2021 Aerial Photos (Scale Dependent)9in

Red: Band_1

Green: Band_2

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA

Web AppBuilder for ArcGIS

Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS |

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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: 7755 Oak Orchard Rd., Batavia NY Solar Project		
Project Location (describe, and attach a general location map): 7755 Oak Orchard Rd., Batavia, NY 14020 (Tax Map No. 4.-1-16)		
Brief Description of Proposed Action (include purpose or need): Construct and operate a 5.0 Mw (AC) ground mounted, utility grade solar energy system.		
Name of Applicant/Sponsor: Oak Orchard Solar 3, LLC. c/o New Leaf Energy, Inc. [contact - Will Peregoy]	Telephone: (978) 995 - 3054 E-Mail: wperegoy@newleafenergy.com	
Address: 55 Technology Drive, Suite 102		
City/PO: Lowell	State: MA	Zip Code: 01851
Project Contact (if not same as sponsor; give name and title/role): Erdman Anthony Consulting Engineers [contact - Marc Kenward, PE]	Telephone: (585) 427 - 8888 E-Mail: KenwardMD@erdmananthony.com	
Address: 145 Culver Road, Suite 200		
City/PO: Rochester	State: New York	Zip Code: 14620
Property Owner (if not same as sponsor): Call Farms, Inc. [contact - Tim Call, President]	Telephone: (716) 560 - 1822 E-Mail: timc@empiretractor.com	
Address: 8127 Lewiston Rd		
City/PO: Batavia	State: NY	Zip Code: 14020

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 Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Town of Batavia Planning Board: Special Use Permit and Site Plan Approvals	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Genesee County Planning Board	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC GP 0-15-001 for Stormwater Discharges	
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):

Town of Batavia Agricultural & Farmland Protection Plan, NYS Agricultural Districts Program.

_____

_____

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?
Agricultural - Residential

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? Elba Central School District

b. What police or other public protection forces serve the project site?
New York State Police, Genesee County Sheriff, Batavia Police Department

c. Which fire protection and emergency medical services serve the project site?
Batavia Fire Protection District, Genesee County Emergency Management, Mercy Flight for EMS/Ambulance

d. What parks serve the project site?
None

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)? Construct and Operate a Utility grade (large scale) solar energy project.

b. a. Total acreage of the site of the proposed action? 83.5 acres
b. Total acreage to be physically disturbed? 2.2 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 83.5 acres

Project will encompass approximately 20.6 +/- acres of the total parcel area

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: _____ 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 _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ 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): _____

_____

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:

_____

_____

_____

_____

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

If Yes, describe: _____

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: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

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?

504 Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. Electrical Equipment Pads and equipment. Note that solar arrays are considered disconnected roof-top draining onto grass meadow. New access drive is permeable stone.

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)?

Sheet flow across grass meadow. Proposed stormwater run-off is equal to the existing conditions with an overall composite (run-off) curve number (CN) of 78 compared to the existing curve number (CN) of 78.

- If to surface waters, identify receiving water bodies or wetlands: Spring Creek
- 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: 7:00 am - 6:00 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: Daylight Hours
- Saturday: Daylight Hours
- Sunday: Daylight Hours
- Holidays: Daylight Hours

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:

_____

_____

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

Describe: _____

_____

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: _____ tons per _____ (unit of time)
- Operation : _____ 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: _____

  _____
- Operation: _____

  _____

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

- Construction: _____

  _____
- Operation: _____

  _____

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): Existing Ground Mounted Solar Energy System

ii. If mix of uses, generally describe:

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	0.489	0.479	-0.010
• Forested	2.529	2.512	-0.016
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	4.019	32.527	+28.508
• Agricultural (includes active orchards, field, greenhouse etc.)	28.970	0.000	-28.970
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	1.810	1.810	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Pervious Driveway	0	0.489	+0.489

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? >6.67 feet

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:

Palmyra gravelly loam	38.9 %
Lima silt loam	25.4 %
Romulus silt loam	15.7 %

d. What is the average depth to the water table on the project site? Average: 0 to >6.67 feet

e. Drainage status of project site soils:

☑ Well Drained:	39.8 % of site
☑ Moderately Well Drained:	33.9 % of site
☑ Poorly Drained	26.2 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	100 % of site
☐ 10-15%:	_____% 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 _____
- 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: _____

m. Identify the predominant wildlife species that occupy or use the project site:
Deer, possum, raccoon, skunk; Fox, woodchucks;
Songbirds, Turkey, Hawks, blackbirds; Meadow Moles, Field Mice

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: _____

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: GENE002

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No
i. If Yes: acreage(s) on project site? Prime Farmland - 25.8 AC, Farmland of Statewide Importance - 5.5 AC
ii. Source(s) of soil rating(s): USDA NRCS Web Soil Survey

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: MacArthur Park, Lambert Park, Centennial Park, Austin Park, Williams Park & Trail, Lions Park, Batavia Town Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Parks, Scenic Trail

iii. Distance between project and resource: 2.05, 2.06, 2.37, 2.72, 2.92, 3.80, & 4.03 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

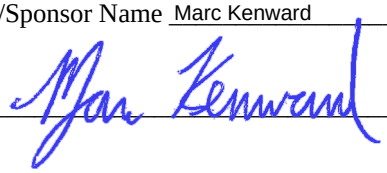
Attach any additional information which may be needed to clarify your project.

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 Marc Kenward Date December 12, 2022

Signature  Title Senior Assoicate

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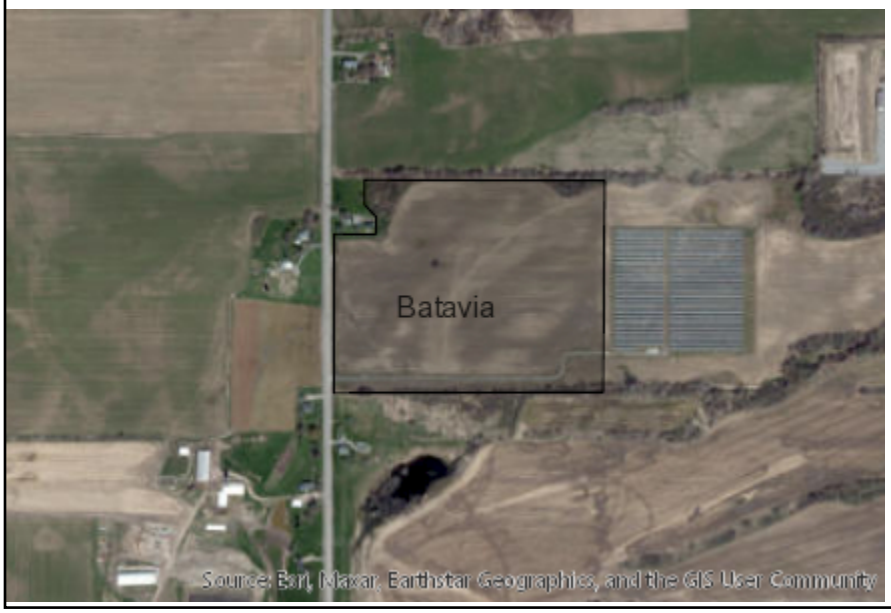
EAF Mapper Summary Report

Monday, November 21, 2022 8:14 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]	Yes
E.3.a. [Agricultural District]	GENE002
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

ERDMAN ANTHONY

145 Culver Road, Suite 200
Rochester, NY 14620
(585) 427-8888

TITLE:

PROJECT LOCATION MAP

7755 Oak Orchard Road, Batavia, New York

Prepared For: Sol Source Power, Inc.

DRAWING BY:	DATE:	PROJECT:
NA	December, 2022	19715.01

SCALE: NTS

REFERENCE:

FIGURE I

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Genesee County, New York

7755 Oak Orchard

November 21, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (7755 Oak Orchard)

Map Scale: 1:2,830 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 29, 2011—Oct 18, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (7755 Oak Orchard)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GnA	Galen very fine sandy loam, 0 to 2 percent slopes	0.2	0.6%
HaA	Halsey silt loam, 0 to 4 percent slopes	3.2	9.3%
LmB	Lima silt loam, 3 to 8 percent slopes	8.9	25.4%
LoA	Lyons soils, 0 to 3 percent slopes	0.4	1.1%
OnB	Ontario loam, 3 to 8 percent slopes	0.3	0.9%
OvB	Ovid silt loam, 3 to 8 percent slopes	0.0	0.1%
PhA	Palmyra gravelly loam, 0 to 3 percent slopes	1.5	4.2%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	12.1	34.7%
PsA	Phelps gravelly loam, 0 to 3 percent slopes	0.0	0.0%
PsB	Phelps gravelly loam, 3 to 8 percent slopes	2.8	7.9%
RsA	Romulus silt loam, 0 to 3 percent slopes	5.5	15.7%
Totals for Area of Interest		**35.0**	**100.0%**

Map Unit Descriptions (7755 Oak Orchard)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called

noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can

be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Genesee County, New York

GnA—Galen very fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: p7q5
Elevation: 570 to 1,180 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Galen and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galen

Setting

Landform: Deltas on lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Deltaic deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 9 inches: very fine sandy loam
H2 - 9 to 20 inches: very fine sandy loam
H3 - 20 to 40 inches: loamy very fine sand
H4 - 40 to 72 inches: stratified fine sand to very fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Minoa

Percent of map unit: 5 percent

Hydric soil rating: No

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Collamer

Percent of map unit: 5 percent
Hydric soil rating: No

Niagara

Percent of map unit: 5 percent
Hydric soil rating: No

HaA—Halsey silt loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: b3yn
Elevation: 570 to 1,300 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Halsey and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Halsey

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 26 inches: gravelly loam
H3 - 26 to 72 inches: stratified gravelly sand to sand

Properties and qualities

Slope: 0 to 4 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F101XY007NY - Wet Outwash
Hydric soil rating: Yes

Minor Components

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

Pavilion

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lamson

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

LmB—Lima silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3kk
Elevation: 380 to 1,680 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lima and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lima

Setting

Landform: Drumlins, till plains, ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt/E - 9 to 12 inches: loam
Bt1 - 12 to 16 inches: loam
Bt2 - 16 to 25 inches: gravelly loam
C - 25 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Honeoye

Percent of map unit: 6 percent
Landform: Drumlins, till plains, ridges
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 3 percent
Landform: Drumlins, till plains, ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave

Across-slope shape: Linear
Hydric soil rating: No

Appleton

Percent of map unit: 3 percent
Landform: Drumlins, till plains, ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cazenovia

Percent of map unit: 2 percent
Landform: Reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Lyons

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

LoA—Lyons soils, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2spjy
Elevation: 250 to 1,900 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyons and similar soils: 75 percent
Lyons, frequently ponded, and similar soils: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyons

Setting

Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous loamy lodgment till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam
Bg1 - 10 to 19 inches: silt loam
Bg2 - 19 to 25 inches: silty clay loam
BCg - 25 to 34 inches: gravelly silt loam
C - 34 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Description of Lyons, Frequently Ponded

Setting

Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous loamy lodgment till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: mucky silt loam
Bg1 - 10 to 19 inches: silt loam
Bg2 - 19 to 25 inches: silty clay loam
BCg - 25 to 34 inches: gravelly silt loam
C - 34 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 0 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Canandaigua

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Appleton

Percent of map unit: 3 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Kendaia

Percent of map unit: 2 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Ilion

Percent of map unit: 1 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Palms, undrained

Percent of map unit: 1 percent
Landform: Swamps, marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

OnB—Ontario loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3ps
Elevation: 250 to 1,490 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ontario and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ontario

Setting

Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam
E - 8 to 14 inches: loam
Bt/E - 14 to 21 inches: loam
Bt - 21 to 39 inches: gravelly loam
C1 - 39 to 48 inches: gravelly loam
C2 - 48 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Hilton

Percent of map unit: 5 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Concave, convex
Hydric soil rating: No

Honeoye

Percent of map unit: 5 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Cazenovia

Percent of map unit: 3 percent
Landform: Reworked lake plains, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

OvB—Ovid silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: b40j
Elevation: 250 to 1,000 feet

Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Ovid and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ovid

Setting

Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till with a significant component of reddish shale or reddish glaciolacustrine clays, mixed with limestone and some sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 29 inches: silty clay loam
H3 - 29 to 72 inches: gravelly silty clay loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Appleton

Percent of map unit: 5 percent
Hydric soil rating: No

Romulus

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Odessa

Percent of map unit: 5 percent

Hydric soil rating: No

Cazenovia

Percent of map unit: 5 percent
Hydric soil rating: No

PhA—Palmyra gravelly loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: p7s2
Elevation: 660 to 1,150 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Palmyra and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palmyra

Setting

Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 12 inches: gravelly loam
H2 - 12 to 29 inches: gravelly clay loam
H3 - 29 to 72 inches: stratified very gravelly sand to fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Arkport
Percent of map unit: 5 percent
Hydric soil rating: No

Dunkirk
Percent of map unit: 5 percent
Hydric soil rating: No

Fredon
Percent of map unit: 5 percent
Hydric soil rating: No

Phelps
Percent of map unit: 5 percent
Hydric soil rating: No

PhB—Palmyra gravelly loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: p7s5
Elevation: 570 to 1,250 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Palmyra and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palmyra

Setting
Landform: Terraces, deltas, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile
H1 - 0 to 12 inches: gravelly loam
H2 - 12 to 29 inches: gravelly clay loam

H3 - 29 to 72 inches: stratified very gravelly sand to fine sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Dunkirk

Percent of map unit: 5 percent
Hydric soil rating: No

Phelps

Percent of map unit: 5 percent
Hydric soil rating: No

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

PsA—Phelps gravelly loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: p7rc
Elevation: 570 to 1,160 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Phelps and similar soils: 80 percent
Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Phelps

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 12 inches: gravelly loam
H3 - 12 to 24 inches: gravelly clay loam
H4 - 24 to 35 inches: gravelly loam
H5 - 35 to 72 inches: stratified very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F101XY006NY - Moist Outwash, F140XY022NY - Moist Outwash
Hydric soil rating: No

Minor Components

Halsey

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

Galen

Percent of map unit: 5 percent
Hydric soil rating: No

Palmyra

Percent of map unit: 5 percent
Hydric soil rating: No

PsB—Phelps gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: b40v
Elevation: 570 to 1,210 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Phelps and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Phelps

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 12 inches: gravelly loam
H3 - 12 to 24 inches: gravelly clay loam
H4 - 24 to 35 inches: gravelly loam
H5 - 35 to 72 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F101XY006NY - Moist Outwash

Hydric soil rating: No

Minor Components

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Scio

Percent of map unit: 5 percent
Hydric soil rating: No

Palmyra

Percent of map unit: 5 percent
Hydric soil rating: No

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

RsA—Romulus silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: p8xn
Elevation: 570 to 920 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Romulus and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Romulus

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till derived from reddish calcareous shale, limestone, and sandstone, in places intermixed with glaciolacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 26 inches: silty clay loam
H3 - 26 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Ovid

Percent of map unit: 5 percent
Hydric soil rating: No

Lyons

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Remsen

Percent of map unit: 5 percent
Hydric soil rating: No

Madalin

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Burdett

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

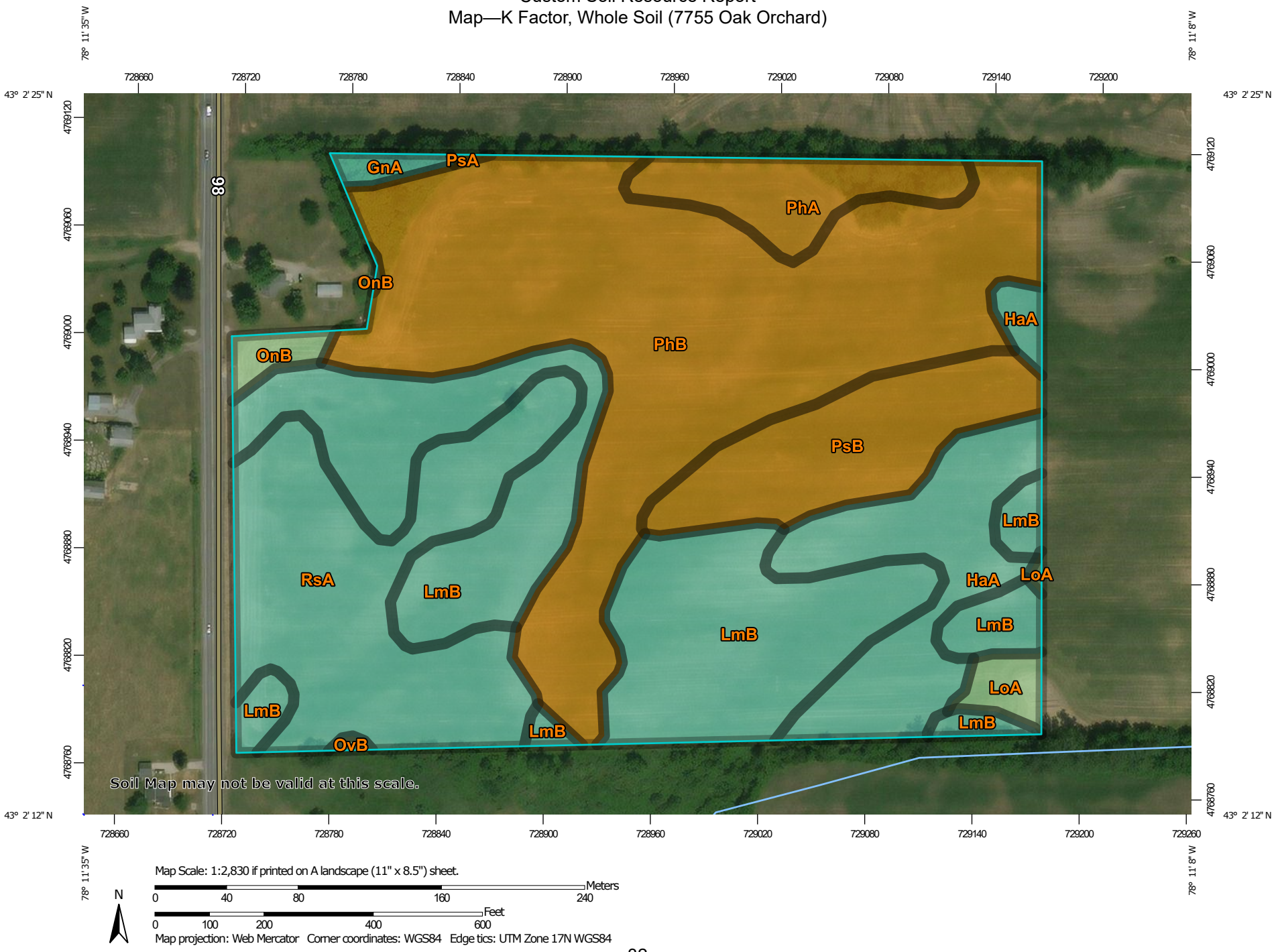
K Factor, Whole Soil (7755 Oak Orchard)

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Map—K Factor, Whole Soil (7755 Oak Orchard)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 29, 2011—Oct 18, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—K Factor, Whole Soil (7755 Oak Orchard)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GnA	Galen very fine sandy loam, 0 to 2 percent slopes	.32	0.2	0.6%
HaA	Halsey silt loam, 0 to 4 percent slopes	.32	3.2	9.3%
LmB	Lima silt loam, 3 to 8 percent slopes	.32	8.9	25.4%
LoA	Lyons soils, 0 to 3 percent slopes	.28	0.4	1.1%
OnB	Ontario loam, 3 to 8 percent slopes	.28	0.3	0.9%
OvB	Ovid silt loam, 3 to 8 percent slopes	.28	0.0	0.1%
PhA	Palmyra gravelly loam, 0 to 3 percent slopes	.10	1.5	4.2%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	.10	12.1	34.7%
PsA	Phelps gravelly loam, 0 to 3 percent slopes	.10	0.0	0.0%
PsB	Phelps gravelly loam, 3 to 8 percent slopes	.10	2.8	7.9%
RsA	Romulus silt loam, 0 to 3 percent slopes	.32	5.5	15.7%
Totals for Area of Interest			**35.0**	**100.0%**

Rating Options—K Factor, Whole Soil (7755 Oak Orchard)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

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7755 Oak Orchard Road
Batavia, NY

Stormwater Management Narrative

The proposed stormwater management for the proposed solar array field will be based on improved ground cover compared to existing conditions in order to yield a similar **or lesser** stormwater runoff. The proposed solar array area is currently tilled agricultural land. Following the installation of the solar array, the finished ground covers/surfaces will be small impervious equipment pads, a pervious gravel access driveway and a low maintenance, shade tolerant meadow seed mix (See picture on the following page of a meadow ground cover). As demonstrated in this narrative for the solar array, the curve number (CN) for proposed conditions is equal to the existing, which indicates equal stormwater runoff for any given storm event.

The following table depicts the calculations of weighted CN values for existing and proposed conditions. Under proposed conditions, the overall CN for the project limits will be equal to the existing conditions. In addition, the run-off from the impervious solar panels is treated as a disconnected impervious cover which reduces runoff by promoting overland filtering and infiltration.

Composite CN Value Calculations & Comparison					
Existing Conditions			**Proposed Conditions**		
Cover Type / Finish	**Area (acres)**	**CN**	**Cover Type / Finish**	**Area (acres)**	**CN**
Meadow, non-grazed	3.575	78	Meadow, non-grazed	32.106	78
Woods (& heavy brush), Good	2.529	77	Woods (& heavy brush), Good	2.512	77
Impervious Areas – Asphalt	0.010	98	Impervious Areas – Asphalt	0.010	98
Impervious Areas – Gravel Driveway	0.480	91	Impervious Areas – Gravel Driveway	0.458	91
Mowed Lawn	0.444	80	Mowed Lawn	0.421	80
Tilled Farm – Straight Row (SR) (Modeled as Meadow PER NYSDEC SWDM)	28.970	78	Tilled Farm – Straight Row (SR) (Modeled as Meadow PER NYSDEC SWDM)	0.000	78
			Impervious Areas – Equipment Pads	0.012	85
			Pervious Driveway	0.489	98
TOTAL & Weighted CN	36.007	**78**	TOTAL & Weighted CN	36.007	**78**
Note 1: All CN values based on an HSG Soil Rating of D.					

WETLAND AND STREAM DELINEATION REPORT

Oak Orchard
7739 Oak Orchard Road, Batavia, New York 14020
LaBella Project No. 2202313

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Date: January 2021

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Borrego Solar Systems, Inc. (Client) retained LaBella Associates, D.P.C. (LaBella) to perform a wetland and stream delineation for the Oak Orchard Solar Project (the Project), located at 7739 Oak Orchard Road. Borrego Solar Systems, Inc. plans to construct a solar array in Town of Batavia, Genesee County, New York. For the purposes of the wetland and stream delineation, the Project Study Area is defined as an 70-acre area consisting of one tax parcel. Please refer to Appendix A, Figure 1 for the Study Area location and boundary. The geographic coordinates of the approximate Study Area center are: 43.0387, -78.1854 (NAD83). Wetland and stream delineation field work was performed on August 5, 6, and 7, 2020.

1.2 PURPOSE

This report was prepared for the purpose of obtaining concurrence from the United States Army Corps of Engineers (USACE)–Buffalo District on jurisdictional wetland and stream boundaries within the Study Area, in support of the Project. Specific tasks performed for this report include a field delineation of Federal Waters of the United States (WOUS) encompassing wetlands and streams, New York State Article 24 Freshwater Wetlands (State wetlands), and Article 15 State-classified Streams within the Study Area, a survey of jurisdictional water boundaries, and a detailed description of the delineated waters based on hydrology, vegetation, and soils information collected in the field.

This report describes the results of the delineation and data collection efforts performed by LaBella, and a description of the wetlands and streams that were delineated. This document is intended to provide the information required to support a Jurisdictional Determination with the USACE-Buffalo District, or a Joint Permit Application if regulatory permit authorizations are required.

2.0 METHODOLOGY

2.1 RESOURCES

Materials and literature supporting this investigation are derived from a number of sources, including: United States Geological Survey (USGS) 7.5-minute Topographic Quadrangles; United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Genesee County, New York Soil Survey (USDA-NRCS, 1969); USDA-NRCS Soil Map Unit shapefiles; USDA-NRCS Field Indicators of Hydric Soils in the United States (USDA-NRCS, 2018); Munsell Soil Color Charts (Kollmorgen Corporation, 1988); Federal Emergency Management Agency (FEMA) digital Flood Hazard data; United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) shapefiles; USGS 10 meter Digital Elevation Model (DEM); NYSDEC Freshwater Wetland shapefiles; NYSDEC Environmental Resource Mapper (NYSDEC, 2019); and NYSDEC Stream Classification shapefiles. Vascular plant names follow nomenclature found in the USDA PLANTS database (USDA, 2019). Wetland indicator status for vegetative species was determined by reference to the National Wetland Plant List (Lichvar et al., 2018). Jurisdictional features are characterized according to the NWI mapped wetlands and deepwater habitat classification system (Cowardin, 1979).

2.2 JURISDICTIONAL AREA DELINEATION

LaBella field staff performed the wetland and stream delineation within the Study Area on August 5, 6, and 7, 2020, in accordance with the methods presented in the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE, 2012). Because active agriculture is located within the Study Area, atypical methodology was utilized for wetland determination where necessary.

Wetland and stream boundaries were defined in the field with sequentially-numbered pink surveyor's flagging or pink pin flags. Each flag was digitally recorded using a sub-foot Global Positioning System unit. Data and observations were collected from both wetland and upland data points within the Study Area. These data points were recorded on routine USACE Wetland Determination Data Forms (Appendix B).

Representative photographs were taken of the data point locations, delineated wetlands, and streams within the Study Area (Appendix C).

The USACE has jurisdiction of WOUS under section 404 of the Clean Water Act (CWA) (40 Code of Federal Regulations [CFR] 230) (CFR, 2010).

The Freshwater Wetlands Act (FWA) (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law [ECL]) gives the NYSDEC jurisdiction over State wetlands and a 100-foot adjacent area. Article 24 of the FWA requires the NYSDEC to map all State-protected wetlands (generally 12.4 acres or greater) to allow landowners and other interested parties a means to determine where State jurisdictional wetlands exist.

Under Article 15 of the ECL (Protection of Waters), the NYSDEC has jurisdiction over any activity that disturbs the bed or banks of protected streams. A protected stream is any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, AA(t), A, A(t), A(ts), B, B(t), B(ts), C(t), or C(ts) (6 NYCRR Part 701). Additional NYSDEC stream classifications include: C and D.

3.0 PHYSICAL CHARACTERISTICS AND RESOURCES

3.1 PHYSIOGRAPHY

The Project is located in the Lake States Fruit, Truck Crop, and Dairy Region (LRR L), Ontario-Erie Plain and Finger Lakes Region (MLRA 101). The Study Area topography consists of moderately sloped glacial hillsides. Land cover within the Study Area consists of agricultural fields, undeveloped forests, and undeveloped grasslands. Elevations within the Study Area range from approximately 830 feet above mean sea level (AMSL) to approximately 875 feet AMSL.

3.2 SOILS

The Soil Survey of Genesee County, New York and NRCS Web Soil Survey indicates there are 22 soil map units within the Project Study Area, as outlined in Table 1.

Table 1. Soil Map units within the Study Area

NRCS Soil Map Unit	Map Unit Symbol	Drainage Class	Hydric Soil?	Hydric Rating (%)
Appleton silt loam, 0 to 3 percent slopes	ApA	Somewhat poorly drained	Yes	4
Appleton silt loam, 3 to 8 percent slopes	ApB	Somewhat poorly drained	Yes	5
Arkport very fine sandy loam, 1 to 6 percent slopes	ArB	Well drained	No	0
Benson soils, 8 to 25 percent slopes	BeD	Excessively drained	No	0
Fredon gravelly loam, 0 to 3 percent slopes	FpA	Poorly drained	Yes	10
Galen very fine sandy loam, 0 to 2 percent slopes	GnA	Moderately well drained	Yes	5
Gravel pits	GP	Poorly drained	Yes	5
Halsey silt loam, 0 to 4 percent slopes	HaA	Very poorly drained	Yes	95
Lima silt loam, 3 to 8 percent slopes	LmB	Moderately well drained	Yes	1
Lyons soils, 0 to 3 percent slopes	LoA	Very poorly drained	Yes	95
Ontario loam, 0 to 3 percent slopes	OnA	Well drained	No	0
Ontario loam, 3 to 8 percent slopes	OnB	Well drained	No	0
Ontario loam, 8 to 15 percent slopes	OnC	Well drained	No	0
Ovid silt loam, 0 to 3 percent slopes	OvA	Somewhat poorly drained	Yes	5
Ovid silt loam, 3 to 8 percent slopes	OvB	Somewhat poorly drained	Yes	5
Palmyra gravelly loam, 0 to 3 percent slopes	PhA	Well drained and somewhat excessively drained	No	0
Palmyra gravelly loam, 3 to 8 percent slopes	PhB	Well drained and somewhat excessively drained	No	0

NRCS Soil Map Unit	Map Unit Symbol	Drainage Class	Hydric Soil?	Hydric Rating (%)
Palmyra gravelly loam, 8 to 15 percent slopes	PhC	Well drained and somewhat excessively drained	No	0
Palmyra and Arkport soils, 15 to 25 percent slopes	PkD	Well drained and somewhat excessively drained	No	0
Phelps gravelly loam, 0 to 3 percent slopes	PsA	Moderately well drained	Yes	5
Phelps gravelly loam, 3 to 8 percent slopes	PsB	Moderately well drained	No	0
Romulus silt loam, 0 to 3 percent slopes	RsA	Poorly drained	Yes	85

Source: USDA, NRCS, 1969; Soil Survey Staff, 2019

The Hydric Soil ratings outlined in Table 1 and the Web Soil Survey map provided in Appendix D, indicate there are 12 soil map units contain hydric components. These soil map units range from one to 95 percent hydric components.

3.3 HYDROLOGY

The Study Area is located in the Lower Genesee watershed (USGS Hydrologic Unit code 04130003).

The source of surface hydrology for the Study Area is precipitation and surface waters from the adjacent hillsides. The nearby Town of Batavia receives an average of 36.81 inches of precipitation annually (NRCC, 2020).

4.0 AGENCY RESOURCES

4.1 USFWS NATIONAL WETLAND INVENTORY

USFWS NWI mapping indicates there are two NWI-mapped wetlands within the Study Area (refer to Appendix A, Figure 2), as outlined in Table 2.

Table 2. USFWS-NWI Mapped Wetlands within the Study Area

NWI Wetland Code	Classification Code description	Delineated Wetland
R3UBHx	Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated	Stream 2
PFO1/SS1C	Palustrine, Forested, Broad Leaved Deciduous, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded	N/A

4.2 NYSDEC FRESHWATER WETLANDS AND PROTECTED STREAMS

NYSDEC freshwater wetland mapping indicates there are no State-mapped wetlands within the Study Area (refer to Appendix A, Figure 3). The closest State wetland to the Study Area is BN-27. This wetland is located 2,400 feet to the north of the Study Area.

According to NYSDEC stream classification mapping there is one State-classified stream within the Study Area (refer to Appendix A, Figure 3), as outlined in Table 3.

Table 3. NYSDEC Classified Streams within the Study Area

Stream Name	Stream Classification	Delineated Stream
Spring Creek	C	Stream 2

4.3 FEMA 100-YEAR FLOOD ZONES

There is a FEMA 100-year Flood Zone associated with Spring Creek on the eastern portion of the Study Area (refer to Appendix A, Figure 4).

4.4 TOWN OF BATAVIA

According to the Town of Batavia wetland code under Chapter 116 (Town of Batavia, 1976), the Town of Batavia has jurisdiction over NYSDEC recognized wetlands and regulates a 100-foot controlled area from the edge of all NYSDEC wetlands and watercourses. Coordination with the Town of Batavia may be required.

5.0 RESULTS

LaBella field staff delineated three palustrine emergent (PEM) wetlands, one palustrine forested (PFO) wetland, and one mixed palustrine scrub-shrub (PSS) and PEM wetland. Two ephemeral streams and one perennial stream were also delineated within the Study Area (See Appendix A, Figure 5 and 6). Tables 4 and 5 provide areas and classifications of the delineated wetlands. The remainder of the Study Area is considered to be upland agricultural fields. These habitats lack wetland hydrology and hydric soils.

Table 4. Delineated Wetlands

Wetland ID	Cowardin Classification	Acreage Onsite	Latitude, Longitude (NAD83)	Jurisdiction
Wetland 1	PEM	0.83	43.0396, -78.1836	USACE
	PSS	0.22	43.0394, -78.1829	
Wetland 2	PEM	0.24	43.0374, -78.1866	USACE
Wetland 3	PEM	0.20	43.0373, -78.1849	USACE

Wetland ID	Cowardin Classification	Acreage Onsite	Latitude, Longitude (NAD83)	Jurisdiction
Wetland 4	PEM	0.17	43.0388, -78.1784	USACE
Wetland 5	PFO	0.14	43.0383, -78.1790	USACE

Table 5. Delineated Streams

Stream ID	Flow Regime/Stream Order	NYSDEC Class	Stream Length/Width in Study Area (lf)	Stream Bed Substrate	Latitude, Longitude (NAD83)	Jurisdiction
Stream 1	Ephemeral/1st	unclassified	530/2	Silt	43.0396, -78.1812	USACE
Stream 2	Perennial/2nd	C	1,495/5	Cobble and silt	43.0388, -78.1806	USACE
Stream 3	Ephemeral/1st	unclassified	335/2	Silt	43.038, -78.1784	USACE

5.1 UPLANDS

Most of the Study Area is active soybean agricultural field with the remainder of the Study Area consisting of undeveloped fields and forests. There is also an existing solar array in the center of the site. The dominant plants within the uplands include soybeans (*Glycine max*), paper birch (*Betula papyrifera*), velvetleaf (*Abutilon theophast*), and buckthorn (*Rhamnus cathartica*). Data Forms, provided in Appendix B, summarize the observed conditions adequate to characterize all uplands and wetlands within the Study Area.

5.2 WETLANDS

5.2.1 Wetland 1

Wetland 1 is located in an upland soybean field near the northern boundary of the Study Area but is not actively farmed. Stream 1 drains in a northeastern direction through a portion of Wetland 1. At the time of the site visit, Wetland 1 appeared to have a hydrologic regime driven by precipitation and groundwater.

Areas around the wetland contain active agriculture fields. The plant community of PEM/PSS Wetland 1 is dominated by creeping bentgrass (*Agrostis stolonifera*), rough barnyard grass (*Echinochloa muricata*), and yellow nutsedge (*Cyperus esculentus*). At the time of the site visit, hydrology indicators observed include a high water table, saturated soils, geomorphic positioning, saturation visible on aerial imagery, and completion of a FAC-neutral test. Soils consist of silt loams with a redox dark brown (10YR 3/2) matrix with red (10YR 5/6) redoximorphic concentrations.

5.2.2 Wetland 2

Wetland 2 is a depression in an upland soybean field along the southern boundary of the Study Area. At the time of the site visit, Wetland 2 appeared to have a hydrologic regime driven by precipitation and runoff from adjacent agriculture fields.

The wetland is surrounded mostly by active soybean fields. The plant community of PEM Wetland 2 is dominated by rough barnyard grass, barnyard grass (*Echinochloa crus-galli*), and narrowleaf cattail (*Typha angustifolia*). At the time of the site visit, hydrology indicators observed include surface water, aquatic fauna, and saturation visible on aerial imagery. The upper layer of soils consist of brown (10YR 3/2) loams. The lower layer of soils consist of silt loams with a depleted brown (10YR 4/1) matrix with red (10YR 5/6) redoximorphic concentrations.

5.2.3 Wetland 3

Wetland 3 is located in a depression within an upland soybean field along the southern boundary of the Study Area. At the time of the site visit, Wetland 3 appeared to have a hydrologic regime driven by precipitation and runoff.

The wetland is surrounded on three sides by active agricultural field but is not farmed itself. The plant community of PEM Wetland 3 is dominated by cottonwood saplings (*Populus deltoids)*, purple-stem aster (*Symphyotrichum puniceum*), and yellow nutsedge. At the time of the site visit, hydrology indicators observed include geomorphic positioning and saturation visible on aerial imagery. The upper layer of soils consist of brown (10YR 3/4) silt loams. The lower layer of soils consist of silt loams with a depleted dark brown (10YR 4/2) matrix with red (10YR 4/6) redoximorphic concentrations.

5.2.4 Wetland 4

Wetland 4 is located in an upland field near the eastern border of the Study Area. At the time of the site visit, Wetland 4 appeared to have a hydrologic regime driven by precipitation.

The wetland appears to be periodically mowed along with the surrounding field. The plant community of PEM Wetland 4 is dominated by creeping bentgrass, reed canary grass (*Phalaris arundinacea*), and soft rush (*Juncus effusus*). At the time of the site visit, hydrology indicators observed include surface water, saturated soils, geomorphic positioning, and inundation was visible on aerial imagery. Soils consist of silt loams with a depleted brown (10YR 4/1) matrix with red (10YR 4/6) redoximorphic concentrations.

5.2.5 Wetland 5

Wetland 5 is located in an upland forest near the southeastern border of the Study Area. At the time of the site visit, Wetland 5 appeared to have a hydrologic regime driven by precipitation and runoff.

The plant community of PFO Wetland 5 is dominated by silver maple *(Acer saccharinum*) and buckthorn. At the time of the site visit, hydrology indicators observed include surface water, water stained leaves, aquatic fauna, and silt lining on tree trunks. A soil sample was not taken due to standing water therefore hydric soils are assumed.

5.3 STREAMS

5.3.1 Stream 1

Stream 1 is an unclassified ephemeral stream. It flows to the northeast near the northern boundary of the Study Area and continues northeast until converging with Stream 2. The stream is approximately 530 linear feet long with an average width of two linear feet, and has a silt bottom.

5.3.2 Stream 2

Stream 2 (Spring Creek) is a NYSDEC Class C perennial stream. Stream 2 flows to the northeast near the eastern edge of the Study Area and continues north offsite. The stream is approximately 1,495 linear feet long with an average width of five linear feet with a silt and cobble bottom. Most of the channel flows within a forested or shrubland corridor.

5.3.3 Stream 3

Stream 3 is an unclassified ephemeral stream. It flows to the southwest near the eastern boundary of the Study Area through Wetland 5 and continues west before converging with Stream 2. The stream is approximately 335 linear feet long with an average width of two linear feet with a silt bottom.

6.0 CONCLUSIONS

LaBella delineated three PEM, one PFO, one mixed PEM/PSS wetland, two ephemeral streams, and one perennial stream within the Study Area.

The wetlands were identified based on the observed presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. The primary functions provided by the wetlands appear to include water retention, water quality improvement, and nutrient production and cycling. The streams were identified by the presence of a continuous bed and bank and an ordinary high water mark and by evidence of flow during a typical year.

All of the observed wetlands and streams are considered to be jurisdictional WOUS under the CWA. Any Project-related filling or disturbances within the delineated boundaries of the wetlands and streams (as approved by the USACE) will require Federal CWA Section 404 authorization through the USACE and a Water Quality Certification through the NYSDEC. The final jurisdictional status and boundaries of all wetlands, streams are subject to final determination by the USACE-Buffalo District.

7.0 SIGNATURE OF WETLAND PROFESSIONALS

We appreciate the opportunity to serve your professional environmental needs. If you have any questions please do not hesitate to contact Dustin Bradley at 716-867-1810.

Report Prepared By:

Dustin Bradley
Wetlands Ecologist

Report Prepared By:

Owen Hennigan
Environmental Scientist

8.0 REFERENCES

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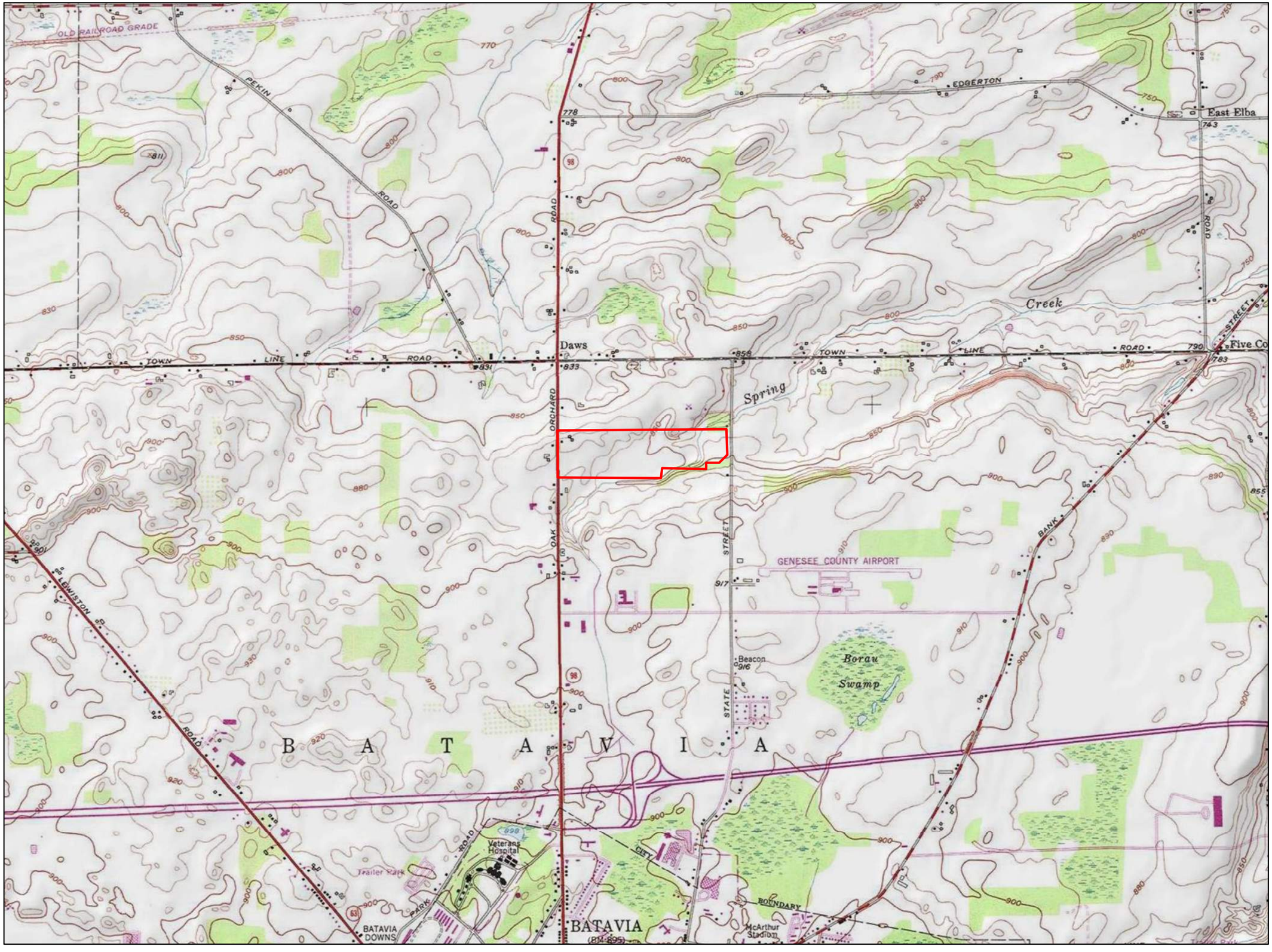
APPENDIX A

FIGURES

Creator: OH Reviewer: LD



Path: I:\Borrego Solar\2202313 - Oak Orchard Wetland Delin\Drawings\Wetlands\Figure 1- USGS Site Location.mxd

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Borrego Solar

Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 1,000 2,000 Feet

1 inch = 2,000 feet

Legend

Study Area

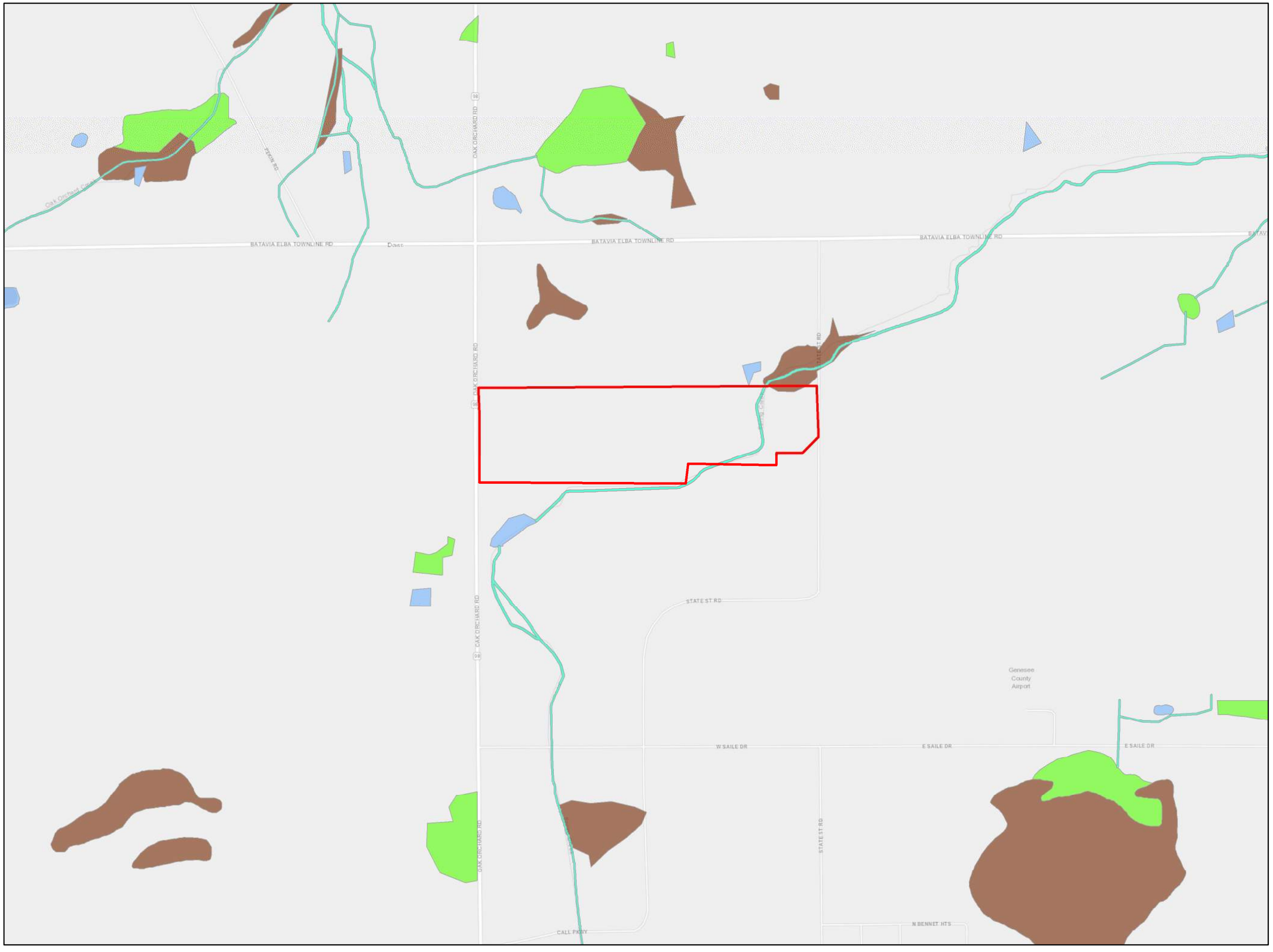
Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: ESRI USA Topo Map (Updated: 2020) in reference to USGS Topographic Batavia North Quadrangle (1978).

USGS Site Location

FIGURE 1

LaBella Project No: 2202313
Date: January 2021

Creator: OH Reviewer: LD



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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

Study Area

National Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors 2020.

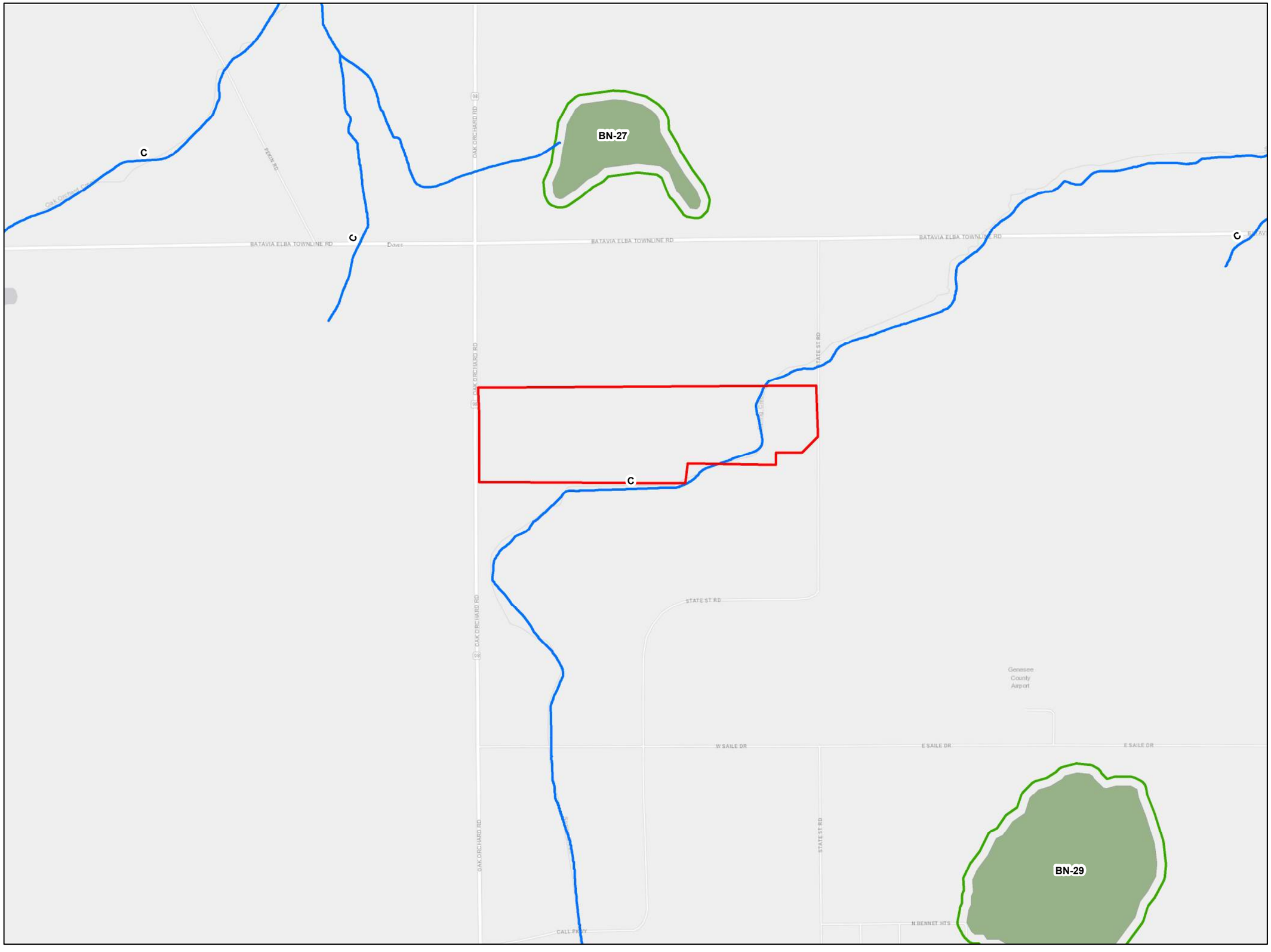
NWI- Mapped Resources

FIGURE 2

LaBella Project No: 2202313
Date: January 2021

Path: I:\Borrego Solar\2202313 - Oak Orchard Wetland Delin\Drawings\Wetlands\Figure 2 - NWI- Mapped Resources.mxd

Creator: OH Reviewer: LD



Path: I:\Borrego Solar\2202313 - Oak Orchard Wetland Delin\Drawings\Wetlands\Figure 3 - NYSDEC- Mapped Wetlands and Streams.mxd

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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

- Study Area
- NYSDEC-Classified Stream
- NYSDEC Wetland
- NYSDEC Wetland 100-Foot Adjacent Area

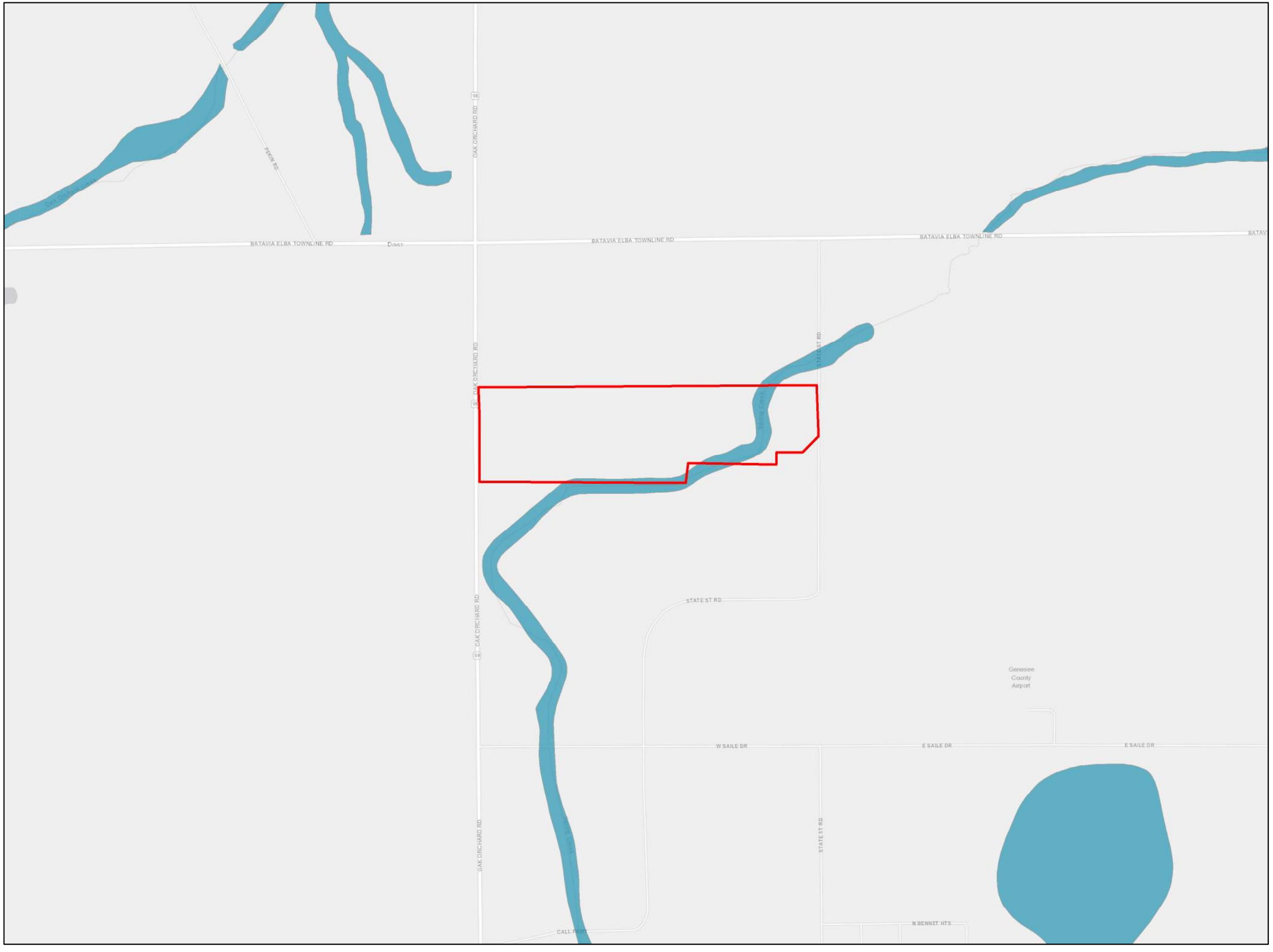
Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors 2020.

NYSDEC-Mapped Wetlands and Streams

FIGURE 3

LaBella Project No: 2202313
Date: January 2021

Creator: OH Reviewer: LD



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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

- Study Area
- 100-Year FEMA Flood Zone

Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors 2020.
3. FEMA Flood Zone: FIRM Panel # 3602780012B (01/17/1985).

FEMA Flood Zones

FIGURE 4

LaBella Project No: 2202313
Date: January 2021

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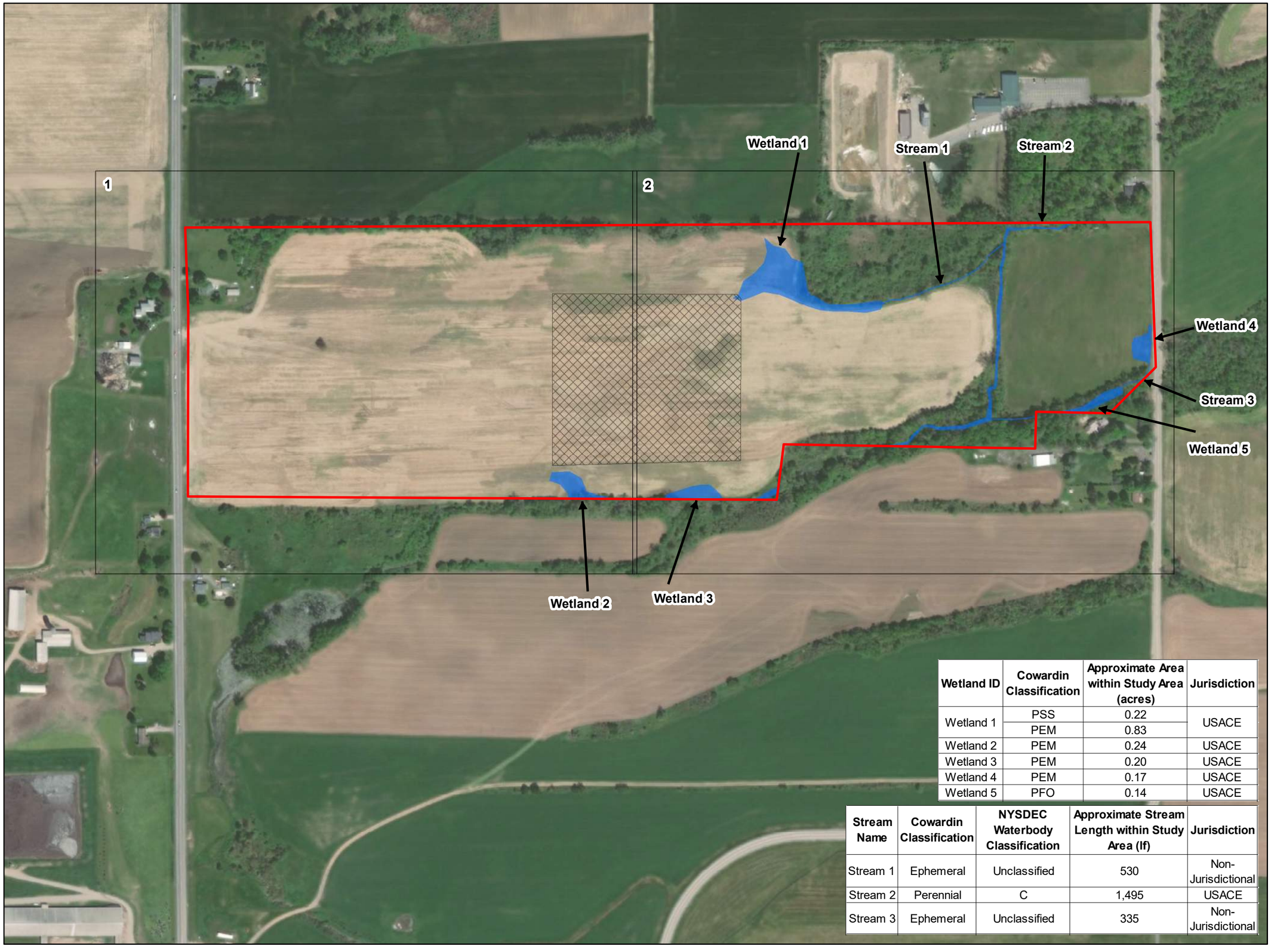
Creator: LD Reviewer: DB



Wetland ID	Cowardin Classification	Approximate Area within Study Area (acres)	Jurisdiction
Wetland 1	PSS	0.22	USACE
	PEM	0.83	
Wetland 2	PEM	0.24	USACE
Wetland 3	PEM	0.20	USACE
Wetland 4	PEM	0.17	USACE
Wetland 5	PFO	0.14	USACE

Stream Name	Cowardin Classification	NYSDEC Waterbody Classification	Approximate Stream Length within Study Area (lf)	Jurisdiction
Stream 1	Ephemeral	Unclassified	530	Non-Jurisdictional
Stream 2	Perennial	C	1,495	USACE
Stream 3	Ephemeral	Unclassified	335	Non-Jurisdictional

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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 175 350 Feet

1 inch = 350 feet

Legend

- Study Area
- Delineated Wetlands and Streams
- Existing Solar Field

Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community 2017.

Overview Map

FIGURE 5

LaBella Project No: 2202313
Date: January 2021

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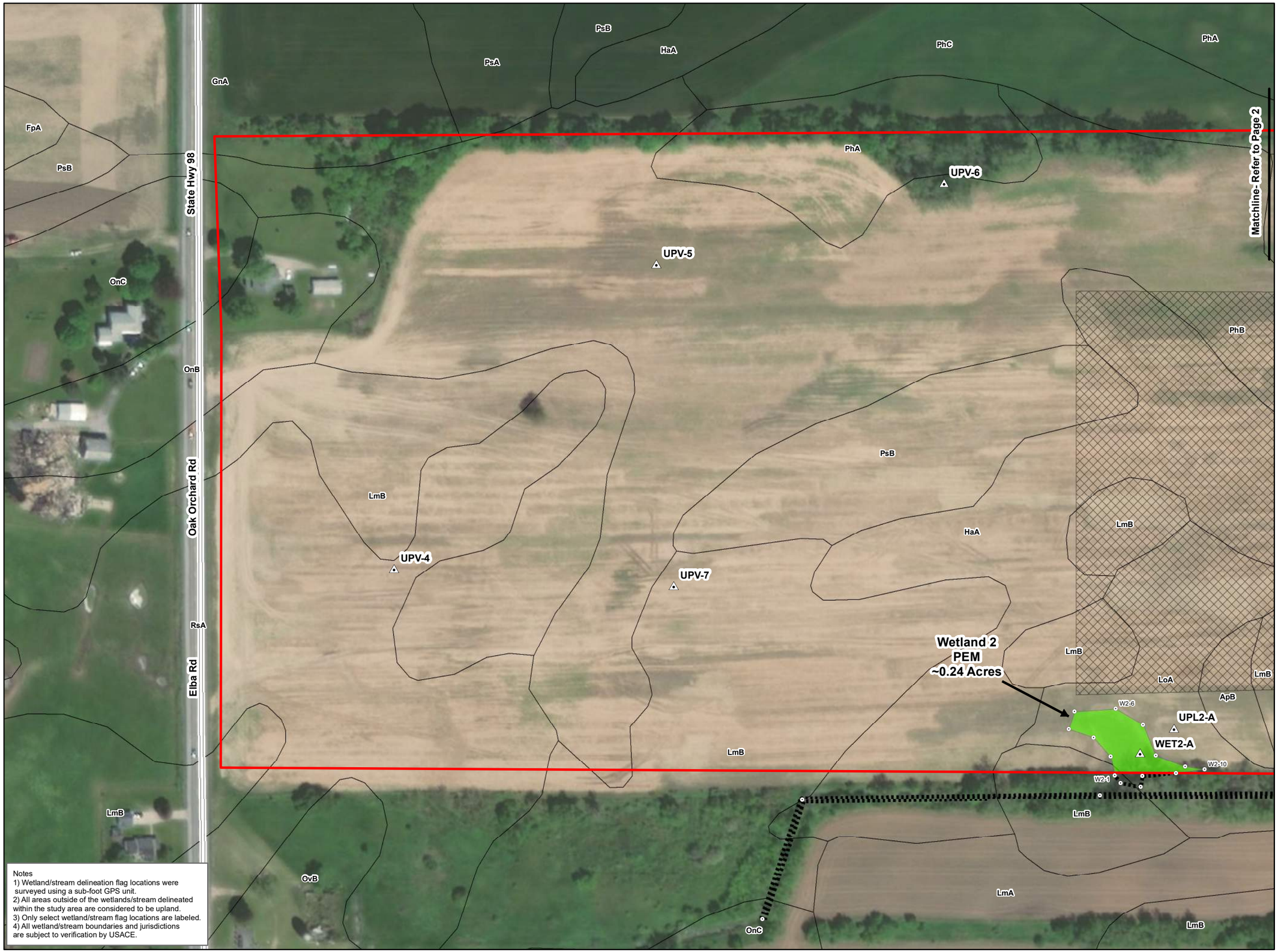
Creator: LD Reviewer: DB



Notes
1) Wetland/stream delineation flag locations were surveyed using a sub-foot GPS unit.
2) All areas outside of the wetlands/stream delineated within the study area are considered to be upland.
3) Only select wetland/stream flag locations are labeled.
4) All wetland/stream boundaries and jurisdictions are subject to verification by USACE.

Path: I:\Borrego Solar\2202313 - Oak Orchard Wetland Delin\Drawings\Wetlands\Figure 6- Wetland Delineation.mxd

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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 75 150 Feet

1 inch = 150 feet

Legend

- Study Area
- Data Point Location
- Wetland Flag Location
- Forested Wetland (PFO)
- Scrub-Shrub Wetland (PSS)
- Emergent Wetland (PEM)
- Perennial Stream
- Ephemeral Stream
- Existing Solar Field
- Approximate Offsite Wetland/Stream Boundary
- Stream Flow Direction
- Road
- Soil

Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community 2017.
3. Mapped soil data were obtained from the NRCS online Soil Data (soildatamart.nrcs.usda.gov).

Wetland and Stream Delineation Survey

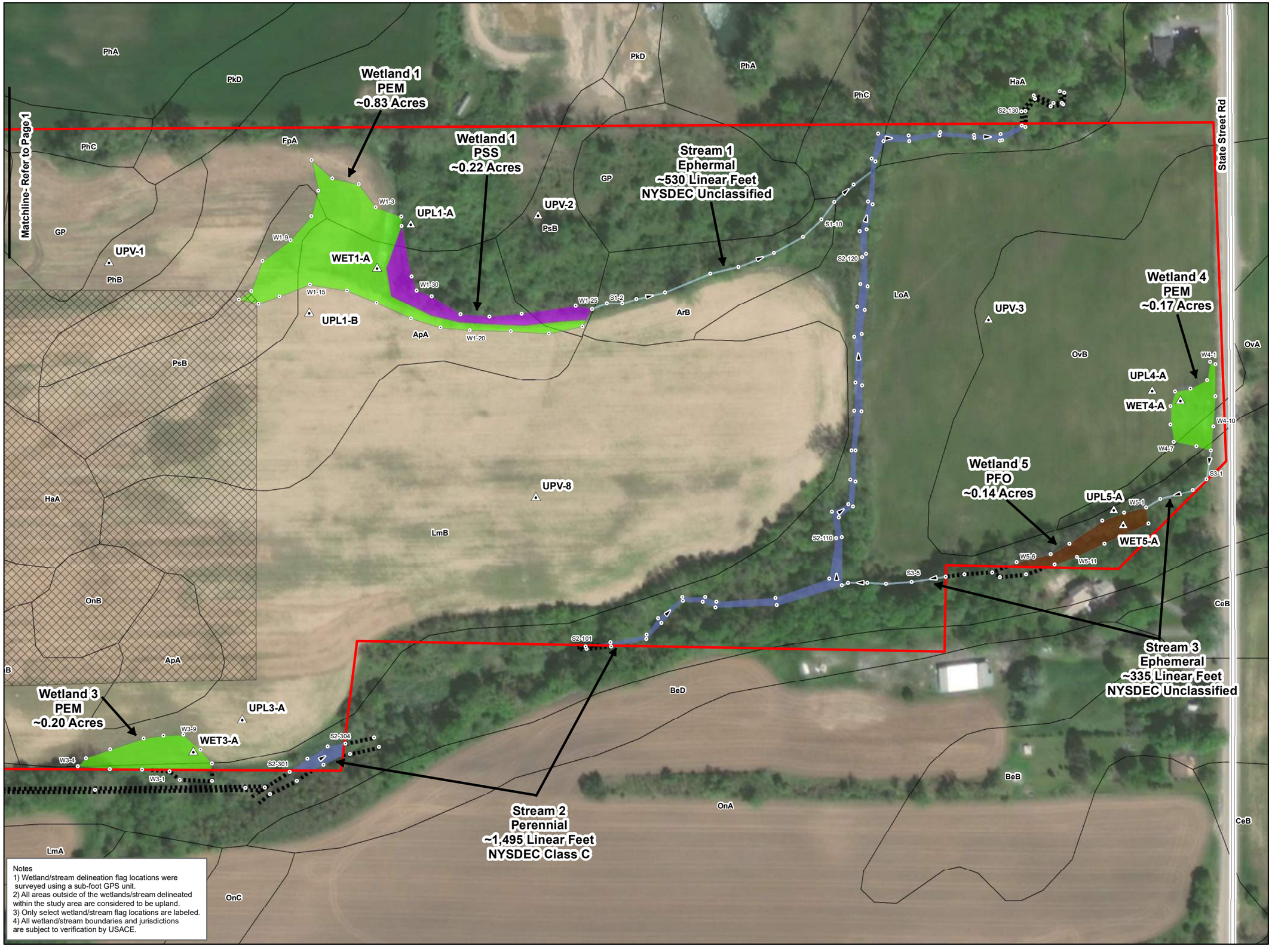
FIGURE 6

Page 1 of 2

LaBella Project No: 2202313
Date: January 2021

Creator: LD Reviewer: DB

Path: I:\Borrego Solar\2202313 - Oak Orchard Wetland Delin\Drawings\Wetlands\Figure 6- Wetland Delineation.mxd



Notes
1) Wetland/stream delineation flag locations were surveyed using a sub-foot GPS unit.
2) All areas outside of the wetlands/stream delineated within the study area are considered to be upland.
3) Only select wetland/stream flag locations are labeled.
4) All wetland/stream boundaries and jurisdictions are subject to verification by USACE.

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Wetland and Stream Delineation Report

7739 Oak Orchard Road Batavia, NY

N

0 75 150 Feet

1 inch = 150 feet

Legend

- Study Area
- Data Point Location
- Wetland Flag Location
- Forested Wetland (PFO)
- Scrub-Shrub Wetland (PSS)
- Emergent Wetland (PEM)
- Perennial Stream
- Ephemeral Stream
- Existing Solar Field
- Approximate Offsite Wetland/Stream Boundary
- Stream Flow Direction
- Road
- Soil

Sources:
1. Study Area: Provided to LaBella by the client.
2. Basemap: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community 2017.
3. Mapped soil data were obtained from the NRCS online Soil Data (soildatamart.nrcs.usda.gov).

Wetland and Stream Delineation Survey

FIGURE 6

LaBella Project No: 2202313
Date: January 2021

APPENDIX B

Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: WET1-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): plain Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0395 Long: -78.1834 Datum: NAD83

Soil Map Unit Name: Appleton silt loam, 0 to 3 percent slopes NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 1

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: WET1-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Echinochloa muricata*	30	Yes	OBL
2. *Polygonum hydropiper*	5	No	OBL
3. *Cyperus esculentus*	10	No	FACW
4. *Agrostis stolonifera*	50	Yes	FACW
5. *Typha latifolia*	5	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET1-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 3/2	95	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL1-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope %: 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0397 Long: -78.1832 Datum: NAD83

Soil Map Unit Name: Fredon gravelly loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL1-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lonicera tatarica*	80	Yes	FACU
2. *Cornus racemosa*	25	Yes	FAC
3. *Rhamnus cathartica*	10	No	FAC
4.			
5.			
6.			
7.			
	115 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Parthenocissus quinquefolia*	30	Yes	FACU
2. *Lonicera tatarica*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals:	160 (A)		600 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL1-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 5/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL1-B

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope %: 4

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0393 Long: -78.1839 Datum: NAD83

Soil Map Unit Name: Fredon gravelly loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical situation methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL1-B

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	20 (A)		100 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPL1-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	7.5YR 4/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: WET2-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0373 Long: -78.1865 Datum: NAD83

Soil Map Unit Name: Lyons soils, 0 to 3 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 2

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- X Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: WET2-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Echinochloa muricata*	80	Yes	OBL
2. *Typha angustifolia*	5	No	OBL
3. *Echinochloa crus-galli*	25	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		160 (B)

Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET2-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy/Clayey	
6-24	10YR 4/1	90	10YR 5/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL2-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0374 Long: -78.1863 Datum: NAD83

Soil Map Unit Name: Lyons soils, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL2-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	20 (A)		100 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPL2-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/4	100					Loamy/Clayey	
12-18	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: WET3-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0373 Long: -78.1846 Datum: NAD83

Soil Map Unit Name: Lima silt loam, 3 to 8 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 3

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WET3-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Cyperus esculentus*	30	Yes	FACW
2. *Echinochloa crus-galli*	10	No	FAC
3. *Panicum virgatum*	40	Yes	FAC
4. *Populus deltoides*	10	No	FAC
5. *Symphyotrichum puniceum*	15	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	30	x 2 =	60
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		255 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET3-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/4	100					Loamy/Clayey	
4-18	10YR 4/2	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _X_ **No** _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL3-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 4

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0375 Long: -78.1843 Datum: NAD83

Soil Map Unit Name: Lima silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL3-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	20 (A)		100 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPL3-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/4	100					Loamy/Clayey	
10-24	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: WET4-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0389 Long: -78.1785 Datum: NAD83

Soil Map Unit Name: Ovid silt loam, 3 to 8 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 4

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WET4-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Agrostis stolonifera*	75	Yes	FACW
2. *Phalaris arundinacea*	20	No	FACW
3. *Typha angustifolia*	5	No	OBL
4. *Carex vulpinoidea*	10	No	OBL
5. *Juncus effusus*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		215 (B)

Prevalence Index = B/A = 1.79

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET4-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL4-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0389 Long: -78.1786 Datum: NAD83

Soil Map Unit Name: Ovid silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL4-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago canadensis*	10	No	FACU
2. *Dactylis glomerata*	60	Yes	FACU
3. *Taraxacum officinale*	10	No	FACU
4. *Trifolium hybridum*	15	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	95 (A)		380 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL4-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 4/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: WET5-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0383 Long: -78.1788 Datum: NAD83

Soil Map Unit Name: Lyons soils, 0 to 3 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 5

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- X Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- X Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 6
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Silt line on tree trunks

VEGETATION – Use scientific names of plants.

Sampling Point: WET5-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	75	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer saccharinum*	10	Yes	FACW
2. *Rhamnus cathartica*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	85	x 2 =	170
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		215 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET5-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Hydric soils are assumed. Soils were not sampled due to standing water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPL5-A

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): plain Local relief (concave, convex, none): convex Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0384 Long: -78.1789 Datum: NAD83

Soil Map Unit Name: Lyons soils, 0 to 3 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPL5-A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus virginiana*	25	Yes	FACU
2. *Tilia americana*	30	Yes	FACU
3. *Acer platanoides*	20	Yes	UPL
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	10	Yes	FAC
2. *Cornus racemosa*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago canadensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1. *Vitis riparia*	10	Yes	FAC
2.			
3.			
4.			
	10	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	65	x 4 =	260
UPL species	20	x 5 =	100
Column Totals:	115 (A)		450 (B)

Prevalence Index = B/A = 3.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPL5-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/4	100					Loamy/Clayey	
8-18	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-1

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): plain Local relief (concave, convex, none): none Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0395 Long: -78.1851 Datum: NAD83

Soil Map Unit Name: Palmyra gravelly loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPV-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Dactylis glomerata*	60	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	60 (A)		240 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPV-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100					Loamy/Clayey	
4-24	10YR 4/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-2

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0397 Long: -78.1824 Datum: NAD83

Soil Map Unit Name: Phelps gravelly loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPV-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula papyrifera*	30	Yes	FACU
2. *Populus deltoides*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Pinus sylvestris*	5	Yes	UPL
2. *Cornus racemosa*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago canadensis*	10	No	FACU
2. *Daucus carota*	15	No	UPL
3. *Abutilon theophrasti*	70	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	110	x 4 =	440
UPL species	20	x 5 =	100
Column Totals:	155 (A)		615 (B)

Prevalence Index = B/A = 3.97

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPV-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100					Loamy/Clayey	
4-24	10YR 4/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-3

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0393 Long: -78.1797 Datum: NAD83

Soil Map Unit Name: Ovid silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-3

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago canadensis*	10	No	FACU
2. *Dactylis glomerata*	60	Yes	FACU
3. *Taraxacum officinale*	10	No	FACU
4. *Trifolium hybridum*	15	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	95 (A)		380 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPV-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 4/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-4

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0382 Long: -78.1911 Datum: NAD83

Soil Map Unit Name: Romulus silt loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical situation methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPV-4

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	10	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	10 (A)		50 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPV-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100					Loamy/Clayey	
12-18	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-5

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0396 Long: -78.1895 Datum: NAD83

Soil Map Unit Name: Palmyra gravelly loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical situation methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-5

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	10	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	10 (A)		50 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPV-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100					Loamy/Clayey	
12-18	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-6

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0399 Long: -78.1877 Datum: NAD83

Soil Map Unit Name: Palmyra gravelly loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UPV-6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	25	Yes	FAC
2. *Prunus virginiana*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica*	80	Yes	FAC
2. *Prunus virginiana*	10	No	FACU
3. *Lonicera tatarica*	10	No	FACU
4.			
5.			
6.			
7.			
	100	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Rhamnus cathartica*	50	Yes	FAC
2. *Prunus virginiana*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	155	x 3 =	465
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	205 (A)		665 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point UPV-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loamy/Clayey	
2-24	10YR 3/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-7

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): plain Slope %: 4

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0381 Long: -78.1894 Datum: NAD83

Soil Map Unit Name: Lima silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical methodology utilized due to active agriculture

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No in-field hydrology indicators

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	20 (A)		100 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPV-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/4	100					Loamy/Clayey	
12-24	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Oak Orchard City/County: Genesee Sampling Date: 8/5/2020

Applicant/Owner: Borrego Solar Systems, Inc. State: NY Sampling Point: UPV-8

Investigator(s): DB Section, Township, Range: Batavia

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.0385 Long: -78.1825 Datum: NAD83

Soil Map Unit Name: Lima silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Atypical methodology utilized due to active agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-8

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glycine max*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	20 (A)		100 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No natural vegetation due to active agriculture.

SOIL

Sampling Point UPV-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					Loamy/Clayey	
12-24	10YR 5/6	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

STREAM DETERMINATION DATA FORM

Investigator: **Dustin Bradley** **Project Name:** Oak Orchard

Stream Name: Stream 1 **Date:** 8/5/2020

Bank Width: 3 ft **Flow Regime:** Ephemeral

Stream Width: 2 ft **Flow Direction:** Northeast

SUBSTRATE

	Bed Rock
	Boulder
	Cobble
	Gravel
	Sand
X	Silt
	Clay

INSTREAM COVER

	Undercut bank
X	Overhanging vegetation
	Logs/woody debris
	Deep pools

Culvert Type:

Field Notes:

Ephemeral drainage in the northern portion of the site. Drains Wetland 1 toward the east into Stream 2.

STREAM DETERMINATION DATA FORM

Investigator: **Dustin Bradley** **Project Name:** Oak Orchard

Stream Name: Stream 2 **Date:** 8/5/2020

Bank Width: 8 ft **Flow Regime:** Perennial

Stream Width: 5 ft **Flow Direction:** Northeast

SUBSTRATE

	Bed Rock
	Boulder
X	Cobble
	Gravel
	Sand
X	Silt
	Clay

INSTREAM COVER

	Undercut bank
X	Overhanging vegetation
	Logs/woody debris
	Deep pools

Culvert Type:

Field Notes:

This is a slow moving perennial stream that flows east in the southern portion of the site then flows north in the eastern portion of the site. Most of the stream exists within a forested or shrubland corridor.

STREAM DETERMINATION DATA FORM

Investigator: **Dustin Bradley** **Project Name:** Oak Orchard

Stream Name: Stream 3 **Date:** 8/5/2020

Bank Width: 3 ft **Flow Regime:** Ephemeral

Stream Width: 2 ft **Flow Direction:** Southwest

SUBSTRATE

	Bed Rock
	Boulder
	Cobble
	Gravel
	Sand
X	Silt
	Clay

INSTREAM COVER

	Undercut bank
	Overhanging vegetation
	Logs/woody debris
	Deep pools

Culvert Type:

Field Notes:

Stream 3 is an ephemeral drainage originating in the eastern portion of the site and draining toward the west along the southern border. Drains into Stream 2.

APPENDIX C

Photo Log

Wetland and Stream Delineation Photos – Oak Orchard

Batavia, New York August 5, 6, and 7, 2020

View of emergent Wetland 1 in north-central.

View of scrub-shrub Wetland 1.

View of emergent Wetland 2 in south-central, looking NW.

View of emergent Wetland 4 in SE, looking SE.

Wetland and Stream Delineation Photos – Oak Orchard

Batavia, New York August 5, 6, and 7, 2020

View of forested Wetland 5.

View of ephemeral Stream 1.

View of perennial Stream 2.

View of ephemeral Stream 3.

Wetland and Stream Delineation Photos – Oak Orchard

Batavia, New York August 5, 6, and 7, 2020

View of forested portion of Study Area in north-central.

View of mowed field in east portion of Study Area.

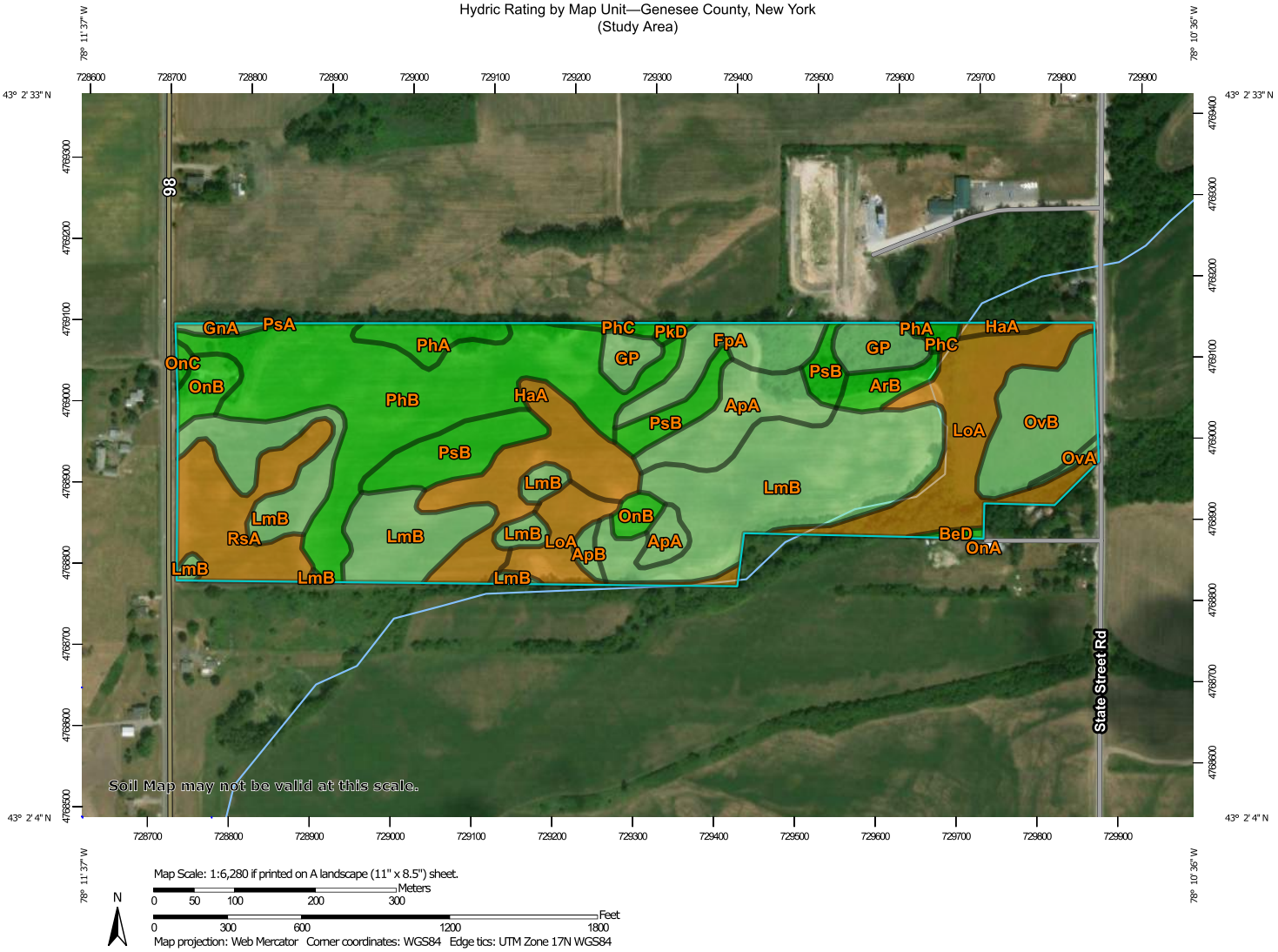
Typical view of active soybean agriculture.

View of access road in southwest.

APPENDIX D

Hydric Soil Map

Hydric Rating by Map Unit—Genesee County, New York
(Study Area)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Genesee County, New York
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 29, 2011—Oct 18, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ApA	Appleton silt loam, 0 to 3 percent slopes	4	4.2	5.1%
ApB	Appleton silt loam, 3 to 8 percent slopes	5	0.4	0.5%
ArB	Arkport very fine sandy loam, 1 to 6 percent slopes	0	1.1	1.4%
BeD	Benson soils, 8 to 25 percent slopes	0	0.2	0.2%
FpA	Fredon gravelly loam, 0 to 3 percent slopes	10	3.0	3.6%
GnA	Galen very fine sandy loam, 0 to 2 percent slopes	5	0.3	0.4%
GP	Gravel pits	5	2.5	3.0%
HaA	Halsey silt loam, 0 to 4 percent slopes	95	5.9	7.2%
LmB	Lima silt loam, 3 to 8 percent slopes	1	20.6	25.0%
LoA	Lyons soils, 0 to 3 percent slopes	95	9.7	11.7%
OnA	Ontario loam, 0 to 3 percent slopes	0	0.0	0.0%
OnB	Ontario loam, 3 to 8 percent slopes	0	1.8	2.2%
OnC	Ontario loam, 8 to 15 percent slopes	0	0.2	0.2%
OvA	Ovid silt loam, 0 to 3 percent slopes	5	0.2	0.3%
OvB	Ovid silt loam, 3 to 8 percent slopes	5	4.6	5.6%
PhA	Palmyra gravelly loam, 0 to 3 percent slopes	0	1.5	1.9%
PhB	Palmyra gravelly loam, 3 to 8 percent slopes	0	15.2	18.4%
PhC	Palmyra gravelly loam, 8 to 15 percent slopes	0	0.6	0.8%
PkD	Palmyra and Arkport soils, 15 to 25 percent slopes	0	0.2	0.2%
PsA	Phelps gravelly loam, 0 to 3 percent slopes	5	0.0	0.0%

Back

PRELIMINARY SCREENING ANALYSIS

(re: December 2019 NYS SIR)

Interconnecting Customer:**Edward Shambeau**

CLA.25.1-13:**00305239**

5000.00 kW (AC) Inverter Based Interconnection Project

Project Address:**7757 Oak Orchard Road, Batavia, New York, 14020**

I. Executive Summary:

The Interconnecting Customer (IC) has submitted an application for the interconnection of the generating system described herein to the National Grid (Company) Electrical Power System (EPS). When reviewed against the requirements of the NYS DPS SIR (effective December 2019) and National Grid's Electrical Service Bulletin 756 Appendix B, the Company has determined that the local area is not suitable for the interconnection of the generator system as proposed and further evaluation would be required. The IC shall not proceed with the proposed installation of the system until these technical requirements are satisfied.

The IC Applicant may proceed to a Preliminary Analysis Results Meeting within 10 business days to help determine if they wish to i.) proceed with a Supplemental Analysis, or ii.) proceed to the full CESIR review, or iii.) withdraw their application. Significant upgrades such as substation transformer ground overvoltage protection and feeder anti-islanding protection among others will be evaluated in a Supplemental Analysis and, if necessary, in the final CESIR.

II. NYS SIR Appendix G Screening Review:

Screen A: Is the PCC on a Networked Secondary System?

Does the proposed system connect to a secondary network system?

National Grid Review Result:*No, Screen A passes. Continue to Screen B.*

Screen B: Is Certified Equipment Used?

Does the applicant propose to use equipment that has been listed to meet UL 1741 (Inverters,Converters and Charge Controllers for Use in Independent Power Systems) and for inverter basedequipment, UL 1741 and its supplement SA, by a nationally recognized testing laboratory?

National Grid review result:*Yes, Screen B passes. Continue to Screen C.*

Screen C: Is the Electric Power System (EPS) Rating Exceeded?

Does the maximum aggregated generation or loading capacity connected to an EPS (existing and approved prior to application) exceed any EPS ratings (modified per established utility practice)?

National Grid review result:*Yes, Screen C fails, the (Substation / feeder / line section) rating or operating characteristic is exceeded; please see data below.Further study is required.*

Note that the following information is based on the current status of the EPS and available information at the time of this report's issue, and are not binding if the applicant proceeds to Supplemental Screening Analysis or full CESIR. Additionally, the thermal limitation described in this screen is the device with the largest margin of failure based on aggregate DG queue. It should be noted that other equipment on the feeder and substation may also fail thermal limitations. This information will be conveyed in a Final CESIR should the project choose to proceed.

Interconnected and In-Process Generating Facilities Data:

- Total Interconnected DG on the Subject Feeder: 17.00 DG sites; 4378.12 kW total
- Total In-Process DG on Subject Feeder (Incl. Applicant): 1.00 DG sites; 5000.00 kW total
- Applicant DG Size: 5000.00 kW

National Grid EPS data related to this proposed DG application's location:

- Substation Name: BATAVIA 1
- Substation Bank Number: 1
- Substation Bank Nameplate Rating: 33.00 MVA
- Substation Transformer Winding Configuration: delta - wye-grounded
- Feeder Number: 36_04_0154
- Feeder Nominal Voltage: 13.20 kV
- PCC Section Line to Line Voltage: 13.20 kV
- Est. Feeder Minimum Load: 1,457.31 kVA
- Number of Distribution Reclosers or Regulators Upstream of DG location: 1

Limiting Element Information:

- Element Type: Switch
- Element Rating: 2,286.31 kVA
- Downstream DG at location: 9,378.12 kVA

Is aggregate DER >15% of peak load supplied through a voltage regulator?: No

Does DG exceed existing service transformer rating?: No

Is PCC site >500kW, and therefore requires further protection analysis?: Yes

Is DG site >300kW on a 5kV class feeder, which will require monitor and control?: No

Does the DG include energy storage that requires further analysis?: No

Screen D: Is the Line and Grounding Configuration Compatible with the Interconnection Type?

Identify primary distribution line configuration that will serve the distributed generation or energy storage.

- DER Connection to Primary: 3 Phase
- DER Grounding: Grounded

- National Grid Primary Configuration: 3 Phase 4 Wire (3P4W)

National Grid review result:
Proposed Interconnection to Primary Distribution Line Type is a(n)Grounded , 3 Phase DER system connected to a 3 Phase 4 Wire (3P4W) distribution line configuration.

Fail Screen D - The customer's aggregate DER nameplate rating is greater than 10% of the line section peak load connected to this type line configuration. Continue to Screen E.

Screen E: Simplified Penetration Test
If the aggregate DER capacity on any medium voltage line section (existing and approved prior to application) is less than 15% of the annual peak load for all line sections bounded by automatic sectionalizing devices upstream of the DER?

- Annual Peak Load at Feeder Head: 5829.23 kVA
- Sectionalizing Device Section: 36_04_0154 , Equipment Type: Source
- Annual Peak Load at Sectionalizing Device: 5,829.23 kVA
- Downstream DG: 9378.12 kVA
- 15% of Annual Peak Load at sectionalizing device: 874.38 kVA

Is downstream DG < 15% of Annual Peak Load at sectionalizing device section?
No. Screen E Fails. Further study is required. Continue to Screen F.

Screen F: Is Feeder Capacity Adequate for Individual and Aggregate DER?
Is the feeder available short circuit capacity at the medium voltage PCC, divided by the rating of the individual DER, greater than 25? Is the feeder available short circuit capacity at the substation divided by the capacity all aggregate DG on the feeder, greater than 25?

- DER Size: 5.00 MVA
- Fault Power at PCC: 0 MVA
- Fault Power at Substation: 0 MVA
- Stiffness Factor at PCC: 0
- Stiffness Factor at Substation: 0

Do both stiffness factor tests (PCC and Substation) pass?
No. Screen F Fails.Further study is required.

III. References (Universal for every customer):

National Grid's New York Distributed Generation Website:
https://ngus.force.com/s/ (https://ngus.force.com/s/)

ESB 750 and ESB 756 are available on National Grid's website at:
https://ngus.force.com/s/article/NY-BUSINESS-Interconnection-Documents (https://ngus.force.com/s/article/NY-BUSINESS-Interconnection-Documents)

IV. Revision History:

Version	Date	Revision Description
1.0	09-15-2016	Template to align with NYS SIR effective April 29, 2016

Version	Date	Revision Description
1.1	10-27-2016	Revised Screen F method and other edits to template response choices
1.2	11-22-2016	Screen F response choices changed due to Screens B-E and voltage analyses are performed in Supplemental or CESIR stages
1.3	03-20-2017	Screen D revised to include 5kV class 3-phase interconnection projects
1.4	07-19-2018	Template revised to align with NY SIR effective July 19, 2018
1.5	10-03-2018	Template revised to align with NY SIR effective October 03, 2018
1.6	12-13-2019	Template revised to align with NY Sir effective December 13, 2019

The customer has 10 business days to respond to National Grid indicating how they would like to proceed:

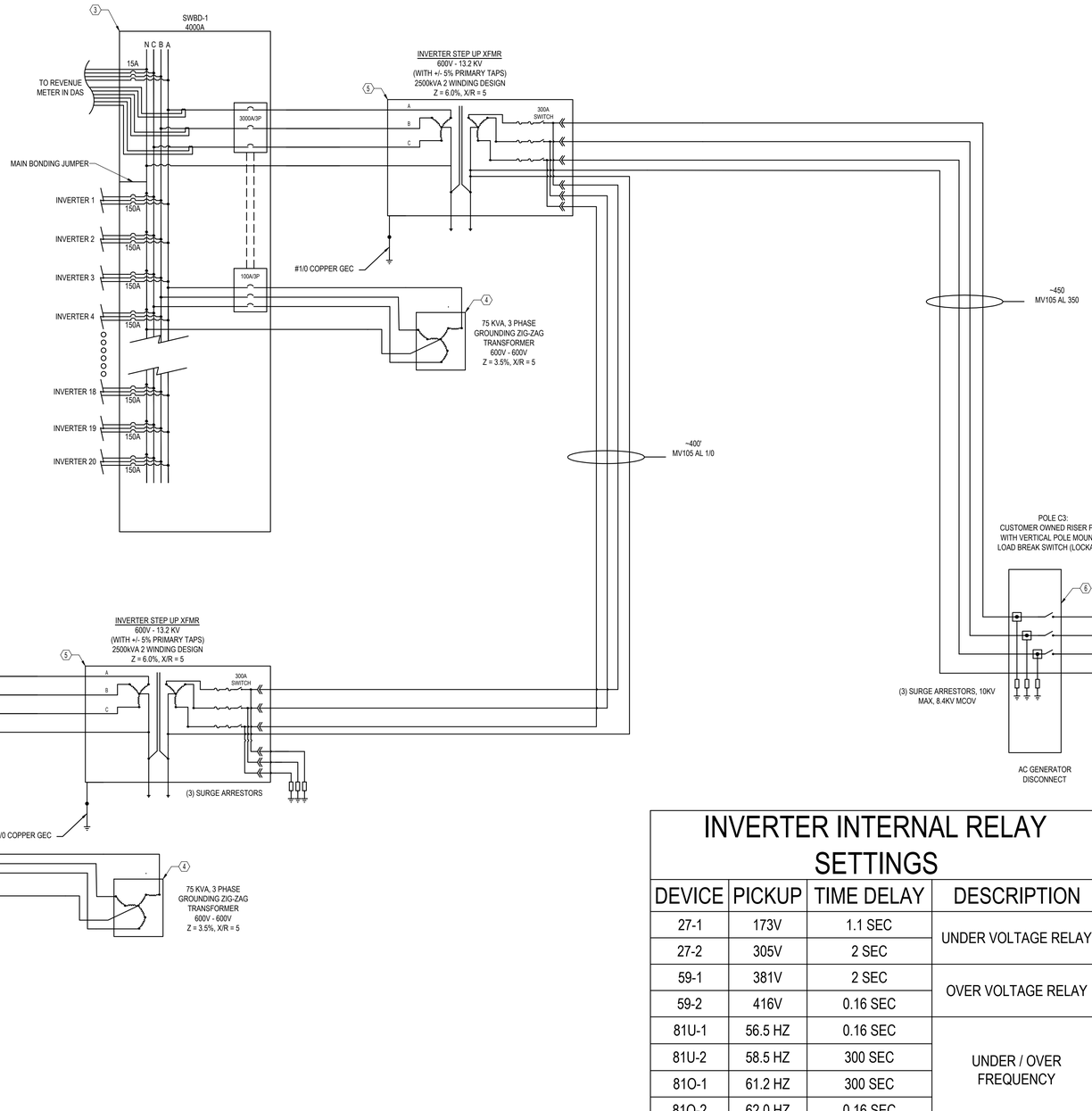
CUSTOMER RESPONSE TO PRELIMINARY SCREENING ANALYSIS

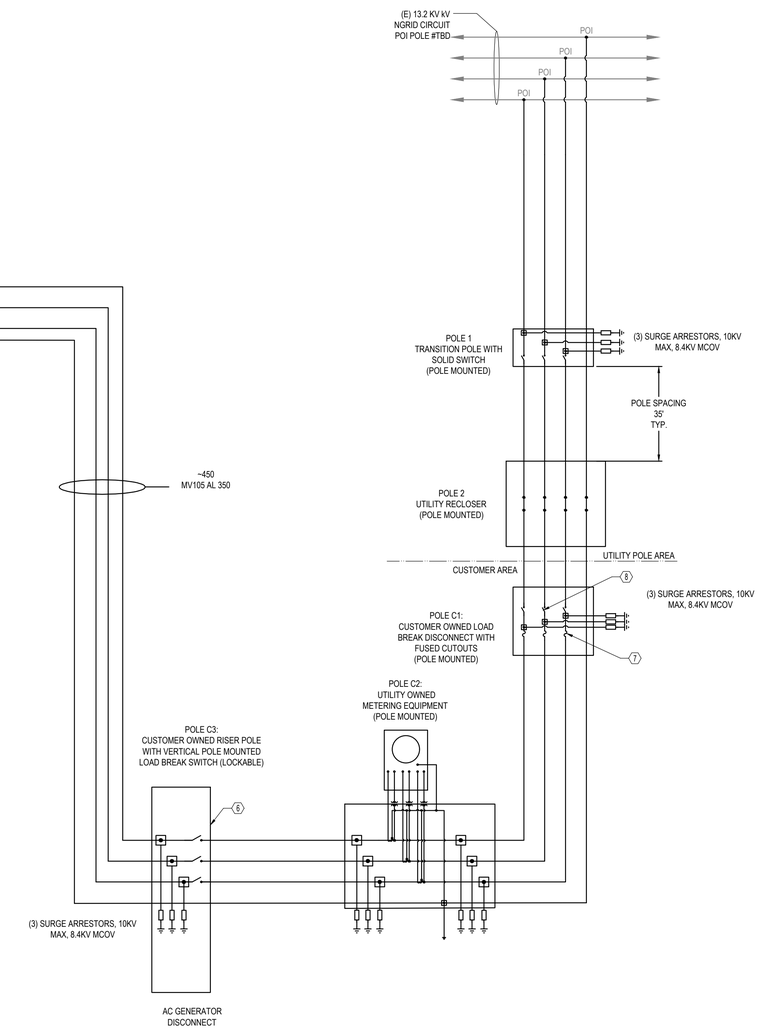
1. Proceed to Full Study (Estimated Study Fee: $9000.00 - payment due upon receipt of invoice)
2. Proceed to Supplemental Review (Fixed Supplemental Review Fee: $2500.00 - payment due upon receipt of invoice)
3. Request Preliminary Results Meeting (To be scheduled by National Grid)
4. Withdraw (Request that the application is cancelled)

In order to proceed to a Fully Study or Supplemental Review, please submit any additional documentation or updates noted in the report. Please only submit payments based on the instructions provided in the invoice or the online payment system. Other methods of submitting payments may result in delays.

Applicant Decision For Next Steps --None--

Save





INVERTER INTERNAL RELAY SETTINGS

DEVICE	PICKUP	TIME DELAY	DESCRIPTION
27-1	173V	1.1 SEC	UNDER VOLTAGE RELAY
27-2	305V	2 SEC	
59-1	381V	2 SEC	OVER VOLTAGE RELAY
59-2	416V	0.16 SEC	
81U-1	56.5 HZ	0.16 SEC	UNDER / OVER FREQUENCY
81U-2	58.5 HZ	300 SEC	
81O-1	61.2 HZ	300 SEC	
81O-2	62.0 HZ	0.16 SEC	

ELECTRICAL EQUIPMENT SCHEDULE

REF. #	QTY.	DESCRIPTION
1	13026	ASTRONERGY CHSM72M(DG)/F-BH 530 SERIES 182 MODULE
2	40	CPS SCH125KTL-DO/US-600(125KVA)
3	2	4000A/3000A MAIN BREAKER SWITCHBOARD
4	2	XFMR-3, XFMR-4 75KVA, 3PH, 600V ZIG-ZAG GROUNDING XMFR
5	2	XFMR-1, XFMR-2, EATON, 2500KVA, 13.2KV GWYE PRIMARY, 600V GWYE SECONDARY
6	1	S&C15KV POLE MOUNTED, LOAD BREAK SWITCH, 900A, 65KAIC, GANG OPERATED AIR-BREAK LOCKABLE VERTICAL DISCONNECT, 147532R4-B-P1/ED-713R4-S10
7	3	S&C SMD40, 14.4kV, 25kA, 110kV BIL, CATALOG #192322, SMU40, 14.4kV, 250E, CATALOG #822250
8	1	S&C 15KV POLE MOUNTED,LOAD BREAK SWITCH 900A, 65KAIC, GANG OPERATED AIR-BREAK LOCKABLE HORIZONTAL DISCONNECT, 147442R4-A2-P1/ED-711R4-S1

PRESALE AC THREE LINE DIAGRAM - 7757 OAK ORCHARD ROAD 5MWAC PV PROJECT

SCALE: NTS

BORREGO SOLAR
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (888) 898-6273
FAX: (888) 843-6778
WWW.BORREGOSOLAR.COM

PV Engineers P.C.
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (888) 898-6273
FAX: (888) 843-6778
WWW.BORREGOSOLAR.COM

7757 OAK ORCHARD ROAD
BATAVIA, NY, 14020 USA

PROJECT NUMBER:
XXXX

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
1	07/29/20	JM	MK	INTERCONNECTION APPLICATION 3LD [APP]

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

E-2.3
AC THREE LINE DIAGRAM

Decommissioning Estimate/Plan

Oak Orchard Road
Batavia, NY

Date: 12/12/2022
Calculated By: WP

This Decommissioning Estimate has been prepared by New Leaf Energy in an attempt to predict the cost associated with the removal of the proposed solar facility. The primary cost of decommissioning is the labor to dismantle and load as well as the cost of trucking and equipment. All material will be removed from the site, including the concrete equipment pads, which will be broken up at the site and hauled to the nearest transfer station.

No salvage values have been assumed in this calculation.

The following values were used in this Decommissioning Estimate:

System Specifications	
Number of Modules	12,288
Number of Racks	512
Number of Inverters	2
Number of Transformers	2
Electrical Wiring Length (ft)	2,800
Number of Foundation Screws	2,048
Length of Perimeter Fence (ft)	4,120
Number of Power Poles	6
Access Rd Material Volume (YD)	494
Total Disturbed Area (SF)	22,138
Total Fence Weight (lbs)	2,925
Total Racking Weight (lbs)	435,200
Total Foundation Screw Weight (lbs)	81,920

Labor and Equipment Costs		
Labor Rate ($/hr)	$	54.96
Operator Rate ($/hr)	$	73.80
Bobcat Cost ($/hr)	$	94.00
Front End Loader Cost ($/Day)	$	780.20
Excavator Cost ($/Day)	$	1,259.60
Trucking Cost ($/hr)	$	117.50
Backhoe Cost ($/hr)	$	94.00
Power Pole Removal Cost ($/pole)	$	1,500.00
Grader Cost ($/day)	$	1,222.00
Gravel Export Cost ($/YD)	$	8.00
Loam Import Cost ($/YD)	$	20.00
Seeding Cost ($/SF)	$	0.10
Fuel Cost ($/mile)	$	0.50

Equipment & Material Removal Rates	
Module Removal Rate (min/module)	1
Rack Wiring Rem. Rate (min/mod)	0.25
Racking Dismantling Rate (min/rack)	30
Inverter Removal Rate (hr/unit)	0.5
Transformer Removal Rate (hr/unit)	1
Rack Loading Rate (min/Rack)	10
Elect. Wiring Removal Rate (min/LF)	0.5
Screw Rem. Rate (screws/day)	300
Fence Removal Rate (min/LF)	1
Days req. to break up concrete pads	2
Days req. with Rough Grader	1
Days req. with Fine Grader	1
Total Truckloads Required	27
Round-Trip Dist. to Trans. Sta.(miles)	20
Round-Trip Time to Trans. Sta. (hr)	0.75

Labor, Material, and Equipment Costs

1. Remove Modules

The solar modules are fastened to racking with clamps. They slide in a track. A laborer needs only unclamp the module and reach over and slide the module out of the track.

Module Removal Rate • Total Number of Solar Modules • Labor Rate = Module Removal Cost

Total = $ 11,255.81

2. Remove Rack Wiring

The modules are plugged together in the same manner as an electrical cord from a light is plugged into a wall socket. The string wires are in a tray. A laborer needs only unplug the module, reach into the tray and remove the strands of wire.

Wire Removal Rate • Total Number of Solar Modules • Labor Rate = Rack Wiring Removal Cost

Total = $ 2,813.95

3. Dismantle Racks

The racking is supported by screw foundations. The racking will be disconnected from the foundation and removed seperately.

Number of Racks • Rack Dismantling Rate • Labor Rate = Rack Dismantling Cost

Total = $ 14,069.76

4. Remove and Load Electrical Equipment

Electrical equipment includes transformers and inverters.

(Number of Inverters • Inverter Removal Rate + Number of Transformers • Transformer Removal Rate) • (Operator Rate + Bobcat Cost) = Electrical Equipment Removal Cost

Total = $ 503.40

5. Break Up Concrete Pads

Concrede pads are broken up using an excavator and jackhammer.

Number of Demolition Days • (Excavator Cost + Operator Cost) = Total Concrete Pad Removal

Total = $ 2,741.20

6. Load Racks

Once the racks have been dismantled, they will be loaded onto trucks for removal from the site. The trucking cost associated with this line item represents the additional time a truck will be needed during loading. Please see item # 13 for additional trucking costs.

Number of Racks • Rack Loading Rate • (Operator Cost + Front End Loader Cost + Trucking Cost) = Total Rack Removal Cost

Total = $ 24,345.60

7. Remove Electrical Wiring

Electrical wiring will be removed from all underground conduits.

Cable Length • Cable Removal Rate • (Operator Cost + Backhoe Cost) = Total Cable Removal Cost

Total = $ 3,915.33

8. Remove Foundation Screws

Foundation screws will be backed out of the ground and loaded onto a truck to be removed from site.

(Total Number of Screws / Daily Screw Removal Rate) • (Operator Rate + Excavator Cost) = Total Screw Removal Cost

Total = $ 12,629.33

9. Remove Fencing

Fencing posts, mesh, and foundations will be loaded onto a truck and removed from site. Trucking costs included in this line item are for the removal process. Trucking to a recycling facility are included in item #13.

(Total Length of Fence • Fence Removal Rate) • (Operator Rate + Bobcat Cost + Trucking Cost) =

Total = $ 19,590.60

10. Remove Power Poles

Power poles will be removed and shipped off site.

Number of Power Poles • Pole Removal cost = Total Power Pole Removal Cost

Total = $ 9,000.00

11. Gravel Road Reclamation

Reclamation of the gravel access road will entail removing the gravel material and exporting it off site. The area will then be backfilled with loam and graded.

(Days with Rough Grader + Days with Fine Grader) • (Grader Cost per Day+Operator Cost per Day) + [Roadway Material Volume • (Gravel Export Cost + Loam Import Cost)] = Gravel Road Reclamation Cost

Total = $ 17,458.87

12. Seed Disturbed Areas

Seeding cost includes labor and materials for reseeding all disturbed areas including the reclaimed gravel road area, former electrical areas, and areas disturbed by racking foundation removal.

Seeding Cost • Disturbed Area = Total Seeding Cost

Total = $ 2,213.80

13. Truck to Transfer Station

All material will be trucked to the nearest Transfer station that accepts construction material. The nearest transfer station is Scofield Transfer & Recycling

(Total Truckloads • Roundtrip Distance • Fuel Cost) + (Total Truckloads • Round Trip Time • Trucking Cost) = Total Trucking Cost to Transfer Station

Total = $ 2,649.38

Salvage Values | Salvage Value Not Included

Summary of Decommissioning Costs and Salvage Values

Line Item	Task	Cost
1	Module Removal	$ 11,255.81
2	Rack Wiring Removal	$ 2,813.95
3	Rack Dismantling	$ 14,069.76
4	Electrical Equipment Loading and Removal	$ 503.40
5	Break Up Concrete Pads	$ 2,741.20
6	Load Racks	$ 24,345.60
7	Electrical Wiring Removal	$ 3,915.33
8	Foundation Screw Removal	$ 12,629.33
9	Fence Removal	$ 19,590.60
10	Power Pole Removal	$ 9,000.00
11	Gravel Road Reclamation	$ 17,458.87
12	Seed Disturbed Areas	$ 2,213.80
13	Trucking to Transfer Station	$ 2,649.38
	Sub Total =	$ 123,187.04

Additional Item	Task	Value
Salvage Values Not Included		

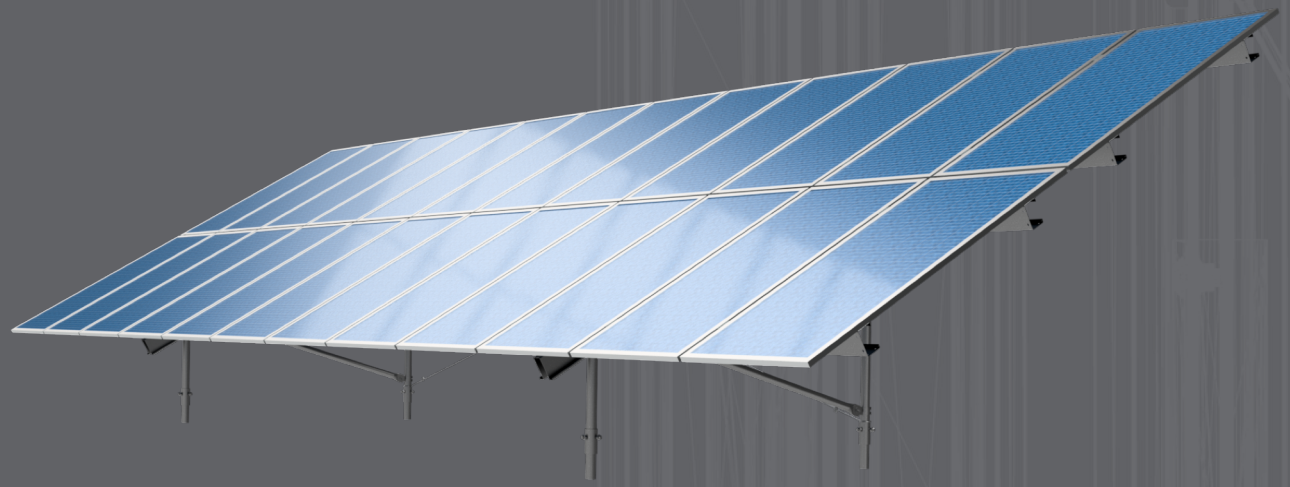
Additional Item Subtotal $ -

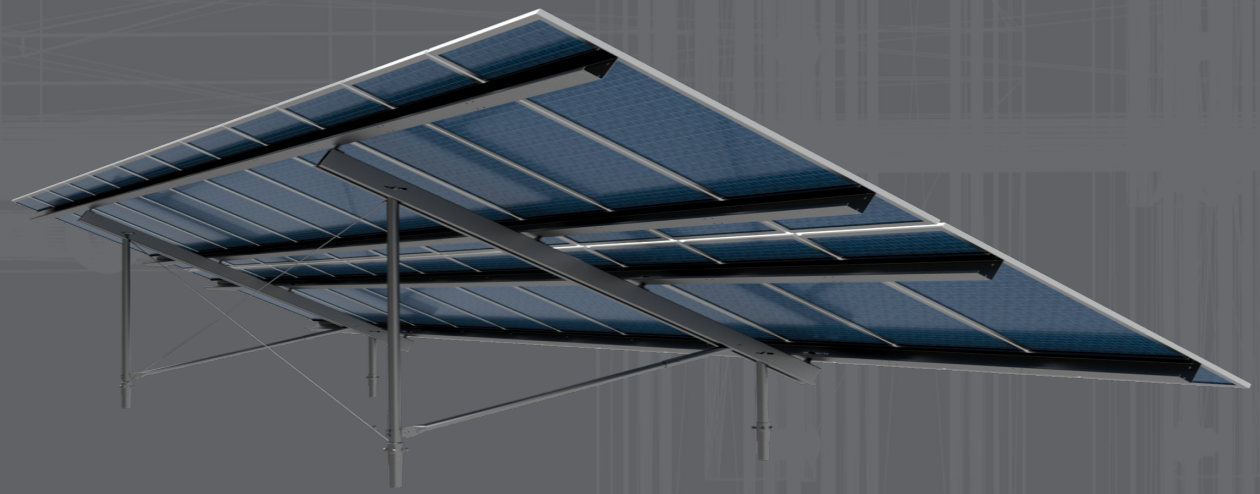
Total = $ 123,187.04

Task	Future Value
Inflation	
# of Years= 25	
Inflation Rate= 2.5%	
Total • (1+ Inflation Rate)^Number of Years =Grand Total	

Grand Total = $ 228,381.88

TERRASMART.





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GLIDE - TGP

Fixed-Tilt Ground Mount

OVERVIEW

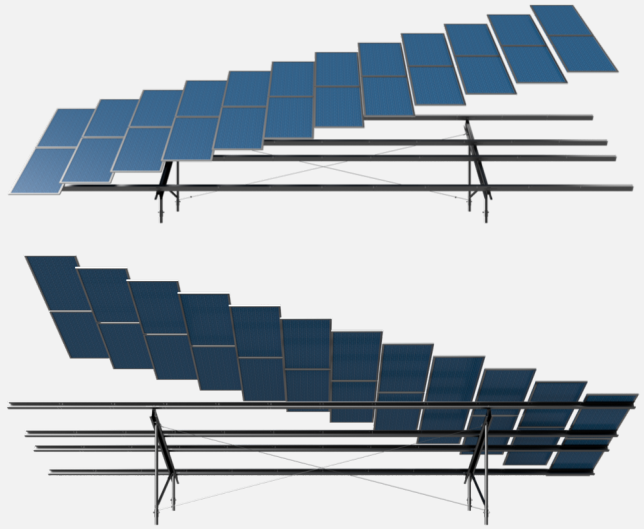
GLIDE Portrait (TGP) is TerraSmart's next generation fixed-tilt ground mount racking solution. TGP is the culmination of ten years and over 3 gigawatts of installed-capacity experience in engineering, manufacturing and construction. As a result, GLIDE is currently the most economical racking system in TerraSmart's fixed-tilt ground mount racking portfolio. Leveraging the benefits of TerraSmart's widely deployed proprietary ground screw foundation, TGP is designed to work in any soil condition.

TerraSmart's state-of-the-art surveying, rock drilling and installation equipment removes project risks and provides post-installation documentation for increased project bankability. All of these benefits improve upon TerraSmart's industry-leading construction efficiency and raise the bar by offering customers increased install efficiency, reduced labor hours and tenders significant savings in material costs.

START SMART. BUILD SMART.

SPECS

Specifications Member Material	ASTM AIOII Cold Rolled Steel, Hot Dip Galvanized to ASTM A653 (G90 min) ASTM A 500 Hollow Structural Steel, Hot Dip Galvanized to ASTM A123 (3.0 mils min)
Hardware Material	316 Stainless Steel for Module Mounting Hardware Carbon Steel Alloy, Magni Coated to ASTM F2833 for all Structural Hardware
Foundation Options	Ground Screw Portrait
Module Orientation	Portrait
Module Mounting	Bottom Mount Integrated Electrical Bonding
Tilt Angle	5 to 40 degrees
Wire Management	Incorporated in Structure – NEC Compliant
Configuration	Portrait: Up to 2 high x up to 12 wide
Slopes	East or West facing, up to 30%, north or south facing, up to 36%
Load Capacities	Project Specific; Up to 170 MPH wind speed and 100 PSF Ground Snow Load
Certifications	UL 2703, Edition 1; CPP Wind Tunnel Tested
Warranty	20 - year limited warranty



FAST
- Exponentially Less Hardware
- Integrated Electrical Bonding
- Included Wire Managment

COMPLIANT
- UL 2703, Edition 1 Listed
- NEC Compliant
- Wind Tunnel Tested

VERSATILE
- Numerous Configurations
- Adapts to Steep Slopes
- Accommodates Arduous Soils

LIGHT
- Lighter / Stiffer Components
- Less Freight Costs

(239) 362-0211 | WWW.TERRASMART.COM

Efficient

- Up to 4 inverters can be transported in one standard shipping container
- Overdimensioning up to 150% is possible
- Full power at ambient temperatures of up to 35°C

Robust

- Intelligent air cooling system OptiCool for efficient cooling
- Suitable for outdoor use in all climatic ambient conditions worldwide

Flexible

- Conforms to all known grid requirements worldwide
- Q on demand
- Available as a single device or turnkey solution, including Medium Voltage Power Station

Easy to Use

- Improved DC connection area
- Connection area for customer equipment
- Integrated voltage support for internal and external loads

SUNNY CENTRAL
2660 UP-US / 2800 UP-US / 2930 UP-US / 3060 UP-US

The new Sunny Central: more power per cubic meter

With an output of up to 3060 kVA and system voltages of 1500 V DC, the SMA central inverter allows for more efficient system design and a reduction in specific costs for PV power plants. A separate voltage supply and additional space are available for the installation of customer equipment. True 1500 V technology and the intelligent cooling system OptiCool ensure smooth operation even in extreme ambient temperature as well as a long service life of 25 years.

SUNNY CENTRAL 2660 UP-US / 2800 UP-US

Technical data*	SC 2660 UP-US	SC 2800 UP-US
Input (DC)		
MPP voltage range V_{DC} (at 35 °C / at 50 °C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	849 V / 1030 V	891 V / 1071 V
Max. input voltage $V_{DC, max}$	1500 V	
Max. input current $I_{DC, max}$ / with DC coupling	3200 A / 4800 A	
Max. short-circuit current $I_{DC, sc}$	6400 A	
Number of DC inputs	24 double pole fused (32 single pole fused)	
Number of DC inputs with optional DC coupling of battery	18 double pole fused (36 single pole fused) for PV, 6 double pole fused for batteries	
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²	
Integrated zone monitoring	○	
Available PV fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Available DC-DC converter fuse size (per input)	750 A	
Output (AC)		
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2667 kVA / 2400 kVA	2800 kVA / 2520 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	2134 kW / 1920 kW	2240 kW / 2016 kW
Nominal AC current $I_{AC, nom}$ (at 35°C / at 50°C)	2566 A / 2309 A	
Max. total harmonic distortion	< 3% at nominal power	
Nominal AC voltage / nominal AC voltage range[1) 8)]	600 V / 480 V to 720 V	630 V / 504 V to 756 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9)]	> 2	
Power factor at rated power / displacement power factor adjustable[8) 10)]	1 / 0.8 overexcited to 0.8 underexcited	
Efficiency		
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.7%* / 98.6%* / 98.5%*	98.7%* / 98.6%* / 98.5%*
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection	NEMA 3R	
General Data		
Dimensions (W / H / D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	
Weight	< 3400 kg / < 7500 lb	
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer	
Operating temperature range[8)]	−25°C to 60°C / −13°F to 140°F	
Noise emission[7)]	67.0 dB(A)*	
Temperature range (standby)	−40°C to 60°C / −40°F to 140°F	
Temperature range (storage)	−40°C to 70°C / −40°F to 158°F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8)] 1000 m / 2000 m	● / ○ (earlier temperature-dependent derating)	
Fresh air consumption	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	UL 62109-1, UL 1741 (Chapter 31, CDR 6I), UL 1741-SA, UL 1998, IEEE 1547, MIL-STD-810G	
EMC standards	FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional * preliminary		

1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) Efficiency measured with internal power supply
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25°C
6) Self-consumption averaged out from 5% to 100% Pn at 25°C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) A short-circuit ratio of < 2 requires a special approval from SMA
10) Depending on the DC voltage

SUNNY CENTRAL 2930 UP-US / 3060 UP-US

Technical data*	SC 2930 UP-US	SC 3060 UP-US
Input (DC)		
MPP voltage range V_{DC} (at 35 °C / at 50 °C)	962 to 1325 V / 1100 V	1003 to 1325 V / 1100 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	934 V / 1112 V	976 V / 1153 V
Max. input voltage $V_{DC, max}$	1500 V	
Max. input current $I_{DC, max}$ / with DC coupling	3200 A / 4800 A	
Max. short-circuit current $I_{DC, sc}$	6400 A	
Number of DC inputs	24 double pole fused (32 single pole fused)	
Number of DC inputs with optional DC coupling of battery	18 double pole fused (36 single pole fused) for PV, 6 double pole fused for batteries	
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²	
Integrated zone monitoring	○	
Available PV fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Available DC-DC converter fuse size (per input)	750 A	
Output (AC)		
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2933 kVA / 2640 kVA	3067 kVA / 2760 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	2346 kW / 2112 kW	2454 kW / 2208 kW
Nominal AC current $I_{AC, nom}$ (at 35°C / at 50°C)	2566 A / 2309 A	
Max. total harmonic distortion	< 3% at nominal power	
Nominal AC voltage / nominal AC voltage range[1) 8)]	660 V / 528 V to 759 V	690 V / 552 V to 759 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9)]	> 2	
Power factor at rated power / displacement power factor adjustable[8) 10)]	1 / 0.8 overexcited to 0.8 underexcited	
Efficiency		
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.7%* / 98.6%* / 98.5%*	98.7%* / 98.6%* / 98.5%*
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection	NEMA 3R	
General Data		
Dimensions (W / H / D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	
Weight	< 3400 kg / < 7500 lb	
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer	
Operating temperature range[8)]	−25°C to 60°C / −13°F to 140°F	
Noise emission[7)]	67.0 dB(A)*	
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Temperature range (storage)	−40°C to 70°C / −40°F to 158°F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8)] 1000 m / 2000 m	● / ○ (earlier temperature-dependent derating)	
Fresh air consumption	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	UL 62109-1, UL 1741 (Chapter 31, CDR 6I), UL 1741-SA, UL 1998 IEEE 1547, MIL-STD-810G	
EMC standards	FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
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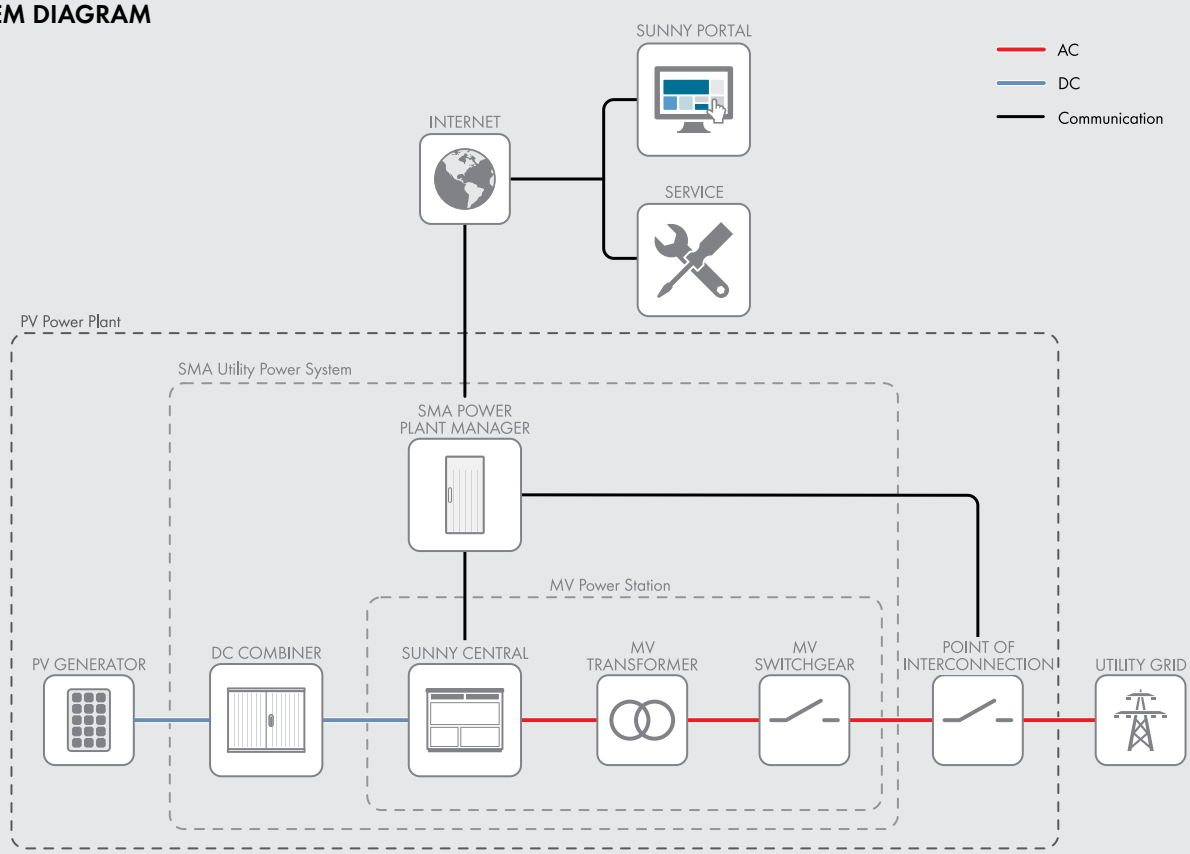
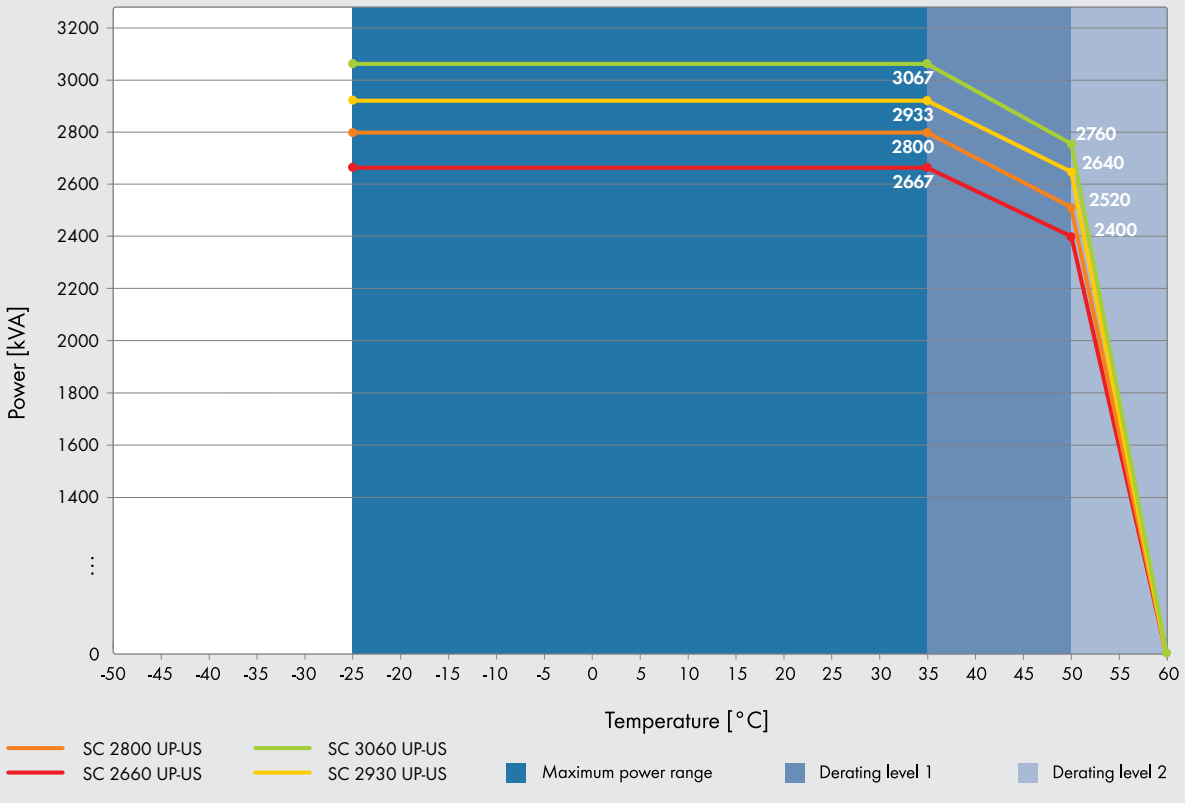
10) Depending on the DC voltage

SYSTEM DIAGRAM



TEMPERATURE BEHAVIOR (at 1000 m)



Toll Free +1 888 4 SMA USA
www.SMA-America.com

SMA America, LLC

SITE USE PERMIT SET

7755 OAK ORCHARD RD, BATAVIA, NY 14020
5.00 MWAC RATED SOLAR ELECTRIC SYSTEM

GENERAL NOTES

1. AS CONTAINED HEREIN, "CONTRACTOR" IS ASSUMED TO BE THE EPC PROVIDER HIRED BY THE SYSTEM/PROJECT OWNER.
2. WHEN THERE IS A CONFLICT BETWEEN THESE GENERAL NOTES AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
3. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS.
4. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A CONSTRUCTION LEVEL DESIGN AND ASSOCIATED DRAWINGS AND DETAILS.
5. COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS.
6. UNLESS OTHERWISE NOTED, THE DESIGN REPRESENTED ON THESE PLANS IS BASED ON THE INFORMATION AND CRITERIA LISTED IN THE "BASIS OF DESIGN" SECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH INFORMATION IN PREPARATION OF THE CONSTRUCTION DESIGN.
7. THE EXISTING CONDITIONS REPRESENTED ON THESE PLANS ARE BASED ON PUBLICLY AVAILABLE INFORMATION AND THE SITE DISCOVERY SUMMARIZED IN THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF SUCH INFORMATION AND SUPPLEMENT WITH ANY ADDITIONAL REQUIRED INFORMATION.
8. UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT SHALL BE CONSIDERED TO BE NEW.
9. ALL EQUIPMENT AND COMPONENTS SHALL BE MOUNTED IN COMPLIANCE WITH THE MANUFACTURER'S REQUIREMENTS, CONSTRUCTION DETAILS, AND/OR PRUDENT INDUSTRY STANDARDS.
10. TO THE EXTENT THAT TREES AND OTHER FEATURES AFFECT THE SYSTEM'S PRODUCTION, SUCH PRODUCTION MODELING IS BASED ON THE EXISTING APPROXIMATE HEIGHTS AND LOCATIONS RELATIVE TO THE SYSTEM AND MAY BE IMPACTED AS TREES GROW AND OTHER FEATURES CHANGE.

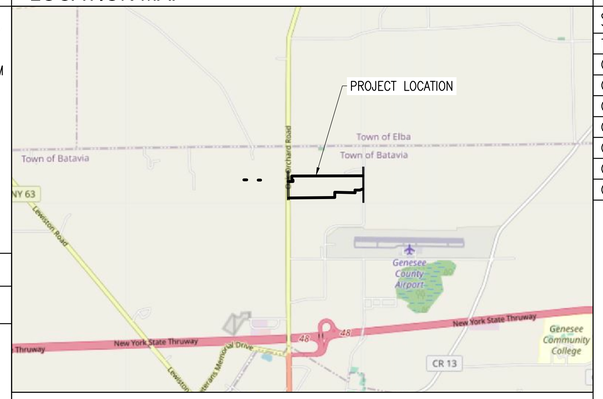
PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A GROUND MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTER(S), WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRICAL CODE AND NGRID REQUIREMENTS.

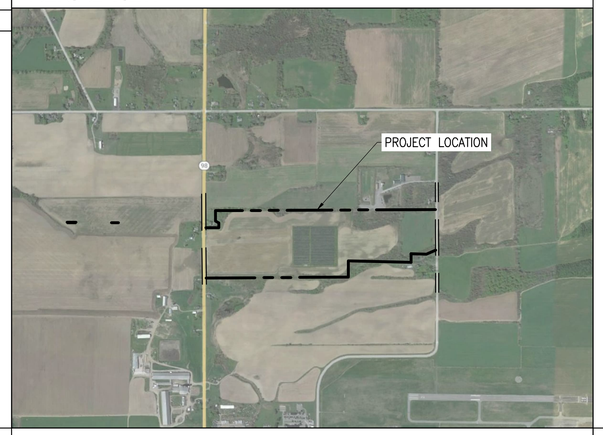
SYSTEM DESCRIPTION

MODULES	BFM610-M10 2024	SYSTEM SIZE (KWAC)	5,000 kWAC
STC RATING (W)	610 WDC	INVERTER(S)	(2) SMA SC 2660-UP-US
RACKING	TERRASMART TGP	CEC EFFICIENCY	98 %
AZIMUTH	180°	TILT ANGLE	25°

LOCATION MAP



AERIAL VIEW



DRAWING LIST

SHEET NUMBER	SHEET TITLE
T-1	TITLE PAGE
CIVIL	
C-0.1	BOUNDARY SURVEY MAP
C-1.0	EXISTING CONDITIONS PLAN
C-3.0	LAYOUT AND MATERIALS PLAN
C-4.0	GRADING AND EROSION CONTROL PLAN
C-5.0	CIVIL DETAILS
C-6.0	LANDSCAPING PLAN

APPLICABLE CODES AND STANDARDS

2008 NATIONAL ELECTRICAL CODE
2006 INTERNATIONAL BUILDING CODE
UL-1703 – SOLAR MODULES
UL-1741 – INVERTERS, COMBINER BOXES
UL-2703 – RACKING MOUNTING SYSTEMS AND CLAMPING DEVICES FOR PV MODULES
UL-1642 – STANDARD FOR LITHIUM BATTERIES
UL-1973 – STANDARD FOR BATTERIES FOR USE IN LIGHT ELECTRIC RAIL (LER) APPLICATIONS AND STATIONARY APPLICATION
UL-9540 – STANDARD FOR ENERGY STORAGE SYSTEM AND EQUIPMENT

PROJECT DIRECTORY

SYSTEM / PROJECT OWNER
OAK ORCHARD SOLAR 3, LLC.
C/O NEW LEAF ENERGY, INC.
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249

LAND OWNER / HOST
CALL FARMS, INC
CONTACT: TIM CALL
(716) 560-1822
8127 LEWISTON RD
BATAVIA, NY 14020

AUTHORITY HAVING JURISDICTION
TOWN OF BATAVIA
3833 WEST MAIN STREET RD
BATAVIA, NY 14020
(585) 343-1729

UTILITY
NGRID

DESIGN ENGINEER
FIRM: NEW LEAF ENERGY, INC
CONTACT: AARON MILLER
PHONE: (978) 935-2056

CIVIL ENGINEER
FIRM: ERDMAN ANTHONY & ASSOCIATES
CONTACT: MARC D. KENWARD, P.E.
PHONE: (585) 427-8888

GENERAL ABBREVIATIONS

(E)	EXISTING
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
APPROX	APPROXIMATE
ARY	ARRAY
BLDG	BUILDING
NLE	NEW LEAF ENERGY
CL	CENTERLINE
DAS	DATA ACQUISITION SYSTEM
DIA	DIAMETER
DO	DITTO
EW	EAST-WEST
FBO	FURNISHED BY OTHERS
FF	FORWARD FACING
GALV	GALVANIZED
HDG	HOT DIP GALVANIZED
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
MFR	MANUFACTURER
MOD	SOLAR MODULE
NS	NORTH-SOUTH
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PV	PHOTOVOLTAIC
PVC	POLY VINYL CHLORIDE
SCH	SCHEDULE
SS	STAINLESS STEEL
SSS	SOLAR SUPPORT STRUCTURE
STC	STANDARD TEST CONDITIONS
TBD	TO BE DETERMINED
TP	TAMPER PROOF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WP	WEATHER PROOF

REV 1.0

new leaf energy
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WWW.NEWLEAFENERGY.COM

NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENWARD
070261
PROFESSIONAL ENGINEER
12/12/22

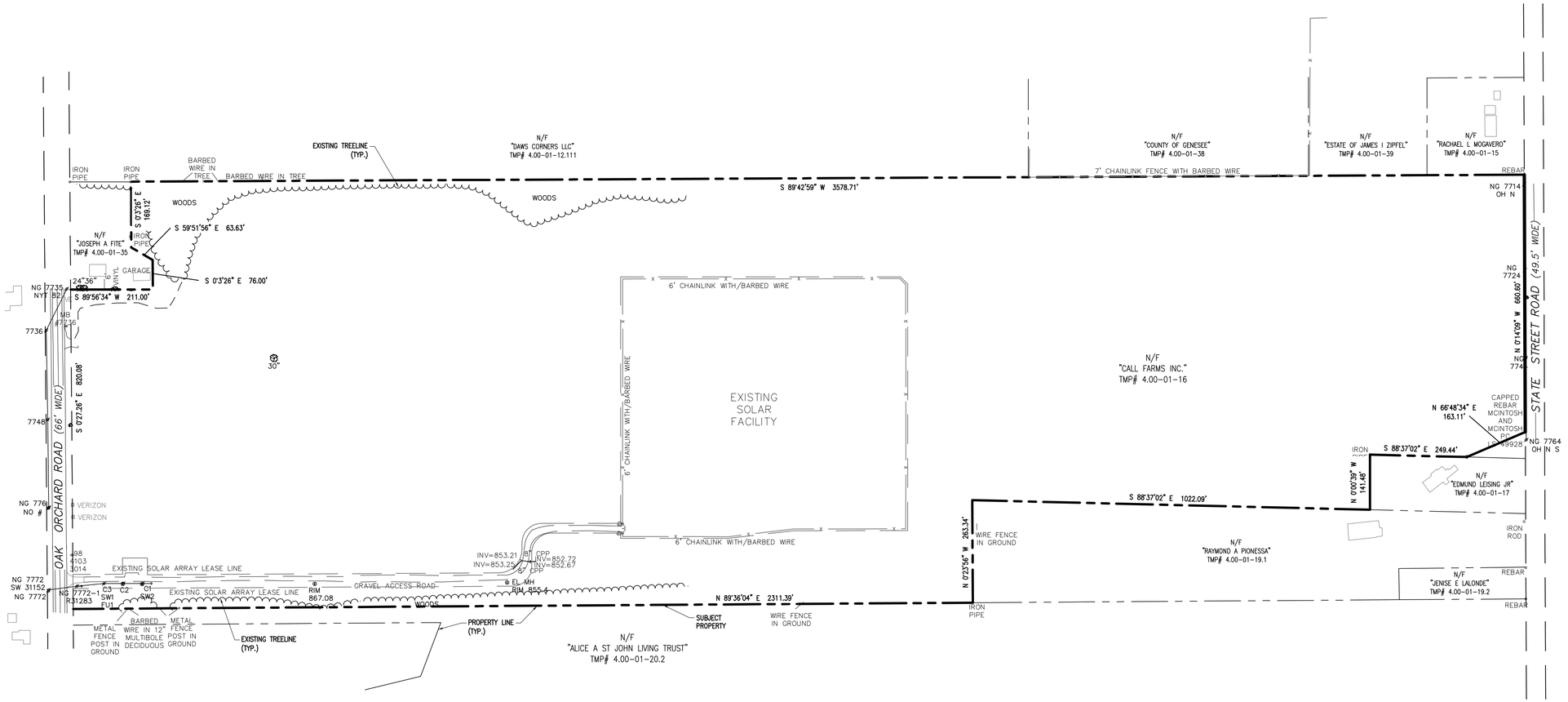
OAK ORCHARD RD - BATAVIA
7755 OAK ORCHARD RD
BATAVIA, NY 14020

PROJECT NUMBER:
108-4673

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	12/12/22	AM/DK	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

T-1
TITLE PAGE



LEGEND

- SUBJECT PARCEL PROPERTY LINE
- RIGHT-OF-WAY/STREET LINE
- ABUTTING PROPERTY LINE
- EXISTING EASEMENT LINE
- INDEX CONTOUR LINE
- INTERMEDIATE CONTOUR LINE
- WOODS/BRUSH LINE
- FENCE LINE
- EDGE OF WATER/CENTERLINE OF DITCH
- GAS LINE PER MARKERS
- OVERHEAD UTILITY LINE
- SIGN
- UTILITY POLE (WITH GUY ANCHOR)
- HYDRANT
- WATER VALVE
- INDIVIDUAL TREE
- FOUND* REBAR — PROPERTY MARKERS

REFERENCES:

1. CERTIFICATE AND REPORT OF TITLE ISSUED BY STEWART TITLE INSURANCE COMPANY. (SUBJECT PARCEL). TITLE NUMBER 71175844, EFFECTIVE DATE OCTOBER 20, 2022.
2. TAX/DEED INFORMATION AVAILABLE FROM GENESEE COUNTY CLERK'S OFFICE AND SHOWN HEREON.

SURVEY NOTES:

1. MAPPING PREPARED FROM FIELDWORK PERFORMED BY ERDMAN ANTHONY DATED OCTOBER 2022, REFERENCING FIELD BOOK #2022-07, P.52.
2. NORTH ORIENTATION AND COORDINATES SHOWN HEREON BASED ON GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELDWORK. HORIZONTAL DATUM REFERENCES NAD83(2011), NYSP WEST ZONE, EXPRESSED IN US SURVEY FEET.
3. VERTICAL INFORMATION SHOWN HEREON BASED ON GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELDWORK. VERTICAL DATUM REFERENCES NAVD88, EXPRESSED IN US SURVEY FEET.
4. UTILITIES SHOWN BASED ON VISIBLE SURFACE EVIDENCE GATHERED AT THE TIME OF THE SURVEY ONLY, AND OTHERS MAY EXIST.
5. TITLE INFORMATION WAS PROVIDED BY THE CLIENT FOR THIS SURVEY (REF. #1).

I, AS AN AGENT OF ERDMAN, ANTHONY AND ASSOCIATES, INC., HEREBY CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECTION, USING NOTES, REFERENCES AND SURVEY DATA. THIS PLAN PREPARED TO DEPICT PROPOSED IMPROVEMENTS, LEASE AND EASEMENT WITHIN THE PARENT PROPERTY (SEE REFERENCE No.4).

PRELIMINARY 12/12/22

DAVID L. STANDINGER, NYSPLS No. 050107 — DATE

BOUNDARY SURVEY MAP

SCALE: 1" = 150'

0 150' 300'

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
WWW.NEWLEAFENERGY.COM

NOT FOR CONSTRUCTION

12/12/22

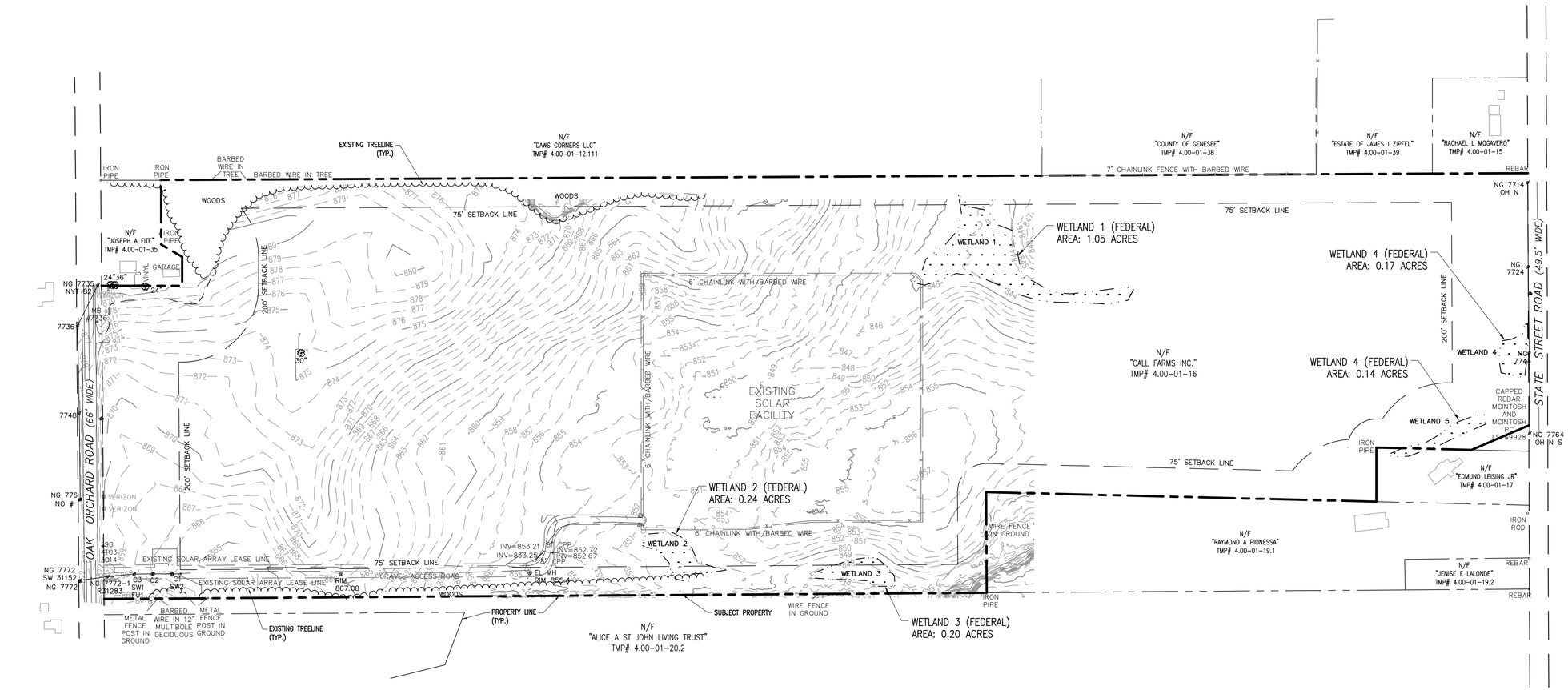
OAK ORCHARD RD - BATAVIA
7755 OAK ORCHARD RD
BATAVIA, NY 14020

PROJECT NUMBER: 108-4673

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	12/12/22	AM/DK	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-0.1
BOUNDARY SURVEY MAP



LEGEND

- SUBJECT PARCEL PROPERTY LINE
- RIGHT-OF-WAY/STREET LINE
- ABUTTING PROPERTY LINE
- EXISTING EASEMENT LINE
- INDEX CONTOUR LINE
- INTERMEDIATE CONTOUR LINE
- WOODS/BRUSH LINE
- FENCE LINE
- EDGE OF WATER/CENTERLINE OF DITCH
- GAS LINE PER MARKERS
- OVERHEAD UTILITY LINE
- SIGN
- UTILITY POLE (WITH GUY ANCHOR)
- HYDRANT
- WATER VALVE
- INDIVIDUAL TREE
- FOUND ⌖ REBAR — PROPERTY MARKERS

EXISTING CONDITIONS PLAN

SCALE: 1" = 150'

0 150' 300'

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NOT FOR CONSTRUCTION

STATE OF NEW YORK — MARC DAVID KENNEDY — 070261 — PROFESSIONAL ENGINEER
12/12/22

OAK ORCHARD RD - BATAVIA
7755 OAK ORCHARD RD
BATAVIA, NY 14020

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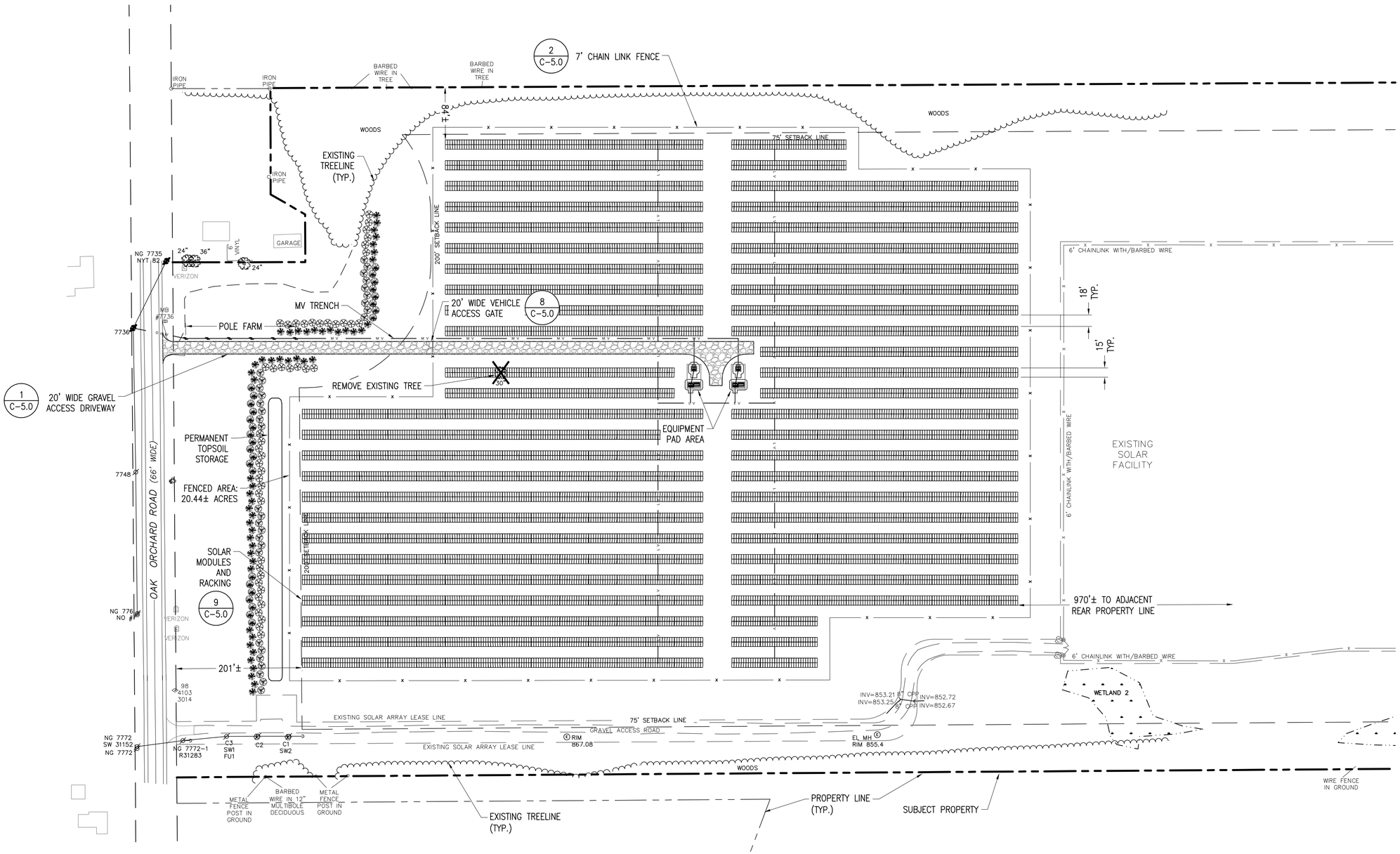
SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-1.0
EXISTING CONDITIONS PLAN

ZONING SUMMARY			
ASSESSORS PARCEL: 14.-1-93.21	ZONED: AGRICULTURAL/RESIDENTIAL & MEDIUM RESIDENTIAL		
SETBACKS:	REQUIRED:	PROVIDED:	NOTES:
FRONT	200'	201'±	FROM THE MODULE
SIDE	75'	84'±	FROM THE MODULE
REAR	N/A	N/A	FROM THE MODULE
MAX. HEIGHT	15'	10.0'±	TOP OF RACK
MAXIMUM LOT COVERAGE (50%):	< 41.75 AC.	33.03 AC.	39.6% (INCLUDES EXISTING SOLAR ARRAY LEASE AREA, PROPOSED FENCE & PROPOSED DRIVEWAY)
EXISTING SOLAR ARRY AREA:	N/A	N/A	12.4 AC. (LEASE AREA)
PROPOSED FENCED ARRAY & DRIVEWAY OUTSIDE OF FENCED ARRAY	N/A	20.6 AC.	20.4 AC. (FENCED ARRAY) 0.2 AC. (DRIVEWAY OUTSIDE FENCED ARRAY)



LAYOUT AND MATERIALS PLAN

SCALE: 1" = 80'

0 80' 160'

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LOWELL, MA 01851
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STATE OF NEW YORK MARC DAVID KEMPSKI 070261 PROFESSIONAL ENGINEER
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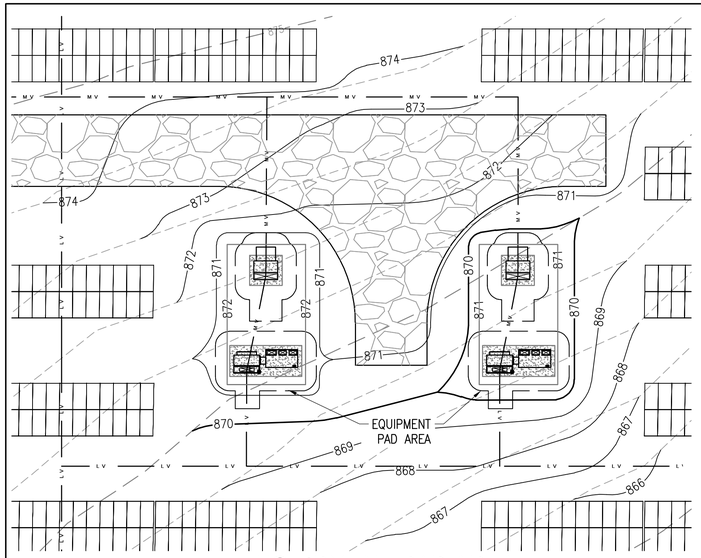
SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-3.0
LAYOUT AND MATERIALS PLAN

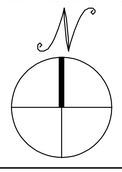


EQUIPMENT PAD AREA

SCALE: 1" = 20'

EROSION AND SEDIMENT CONTROL NOTES:

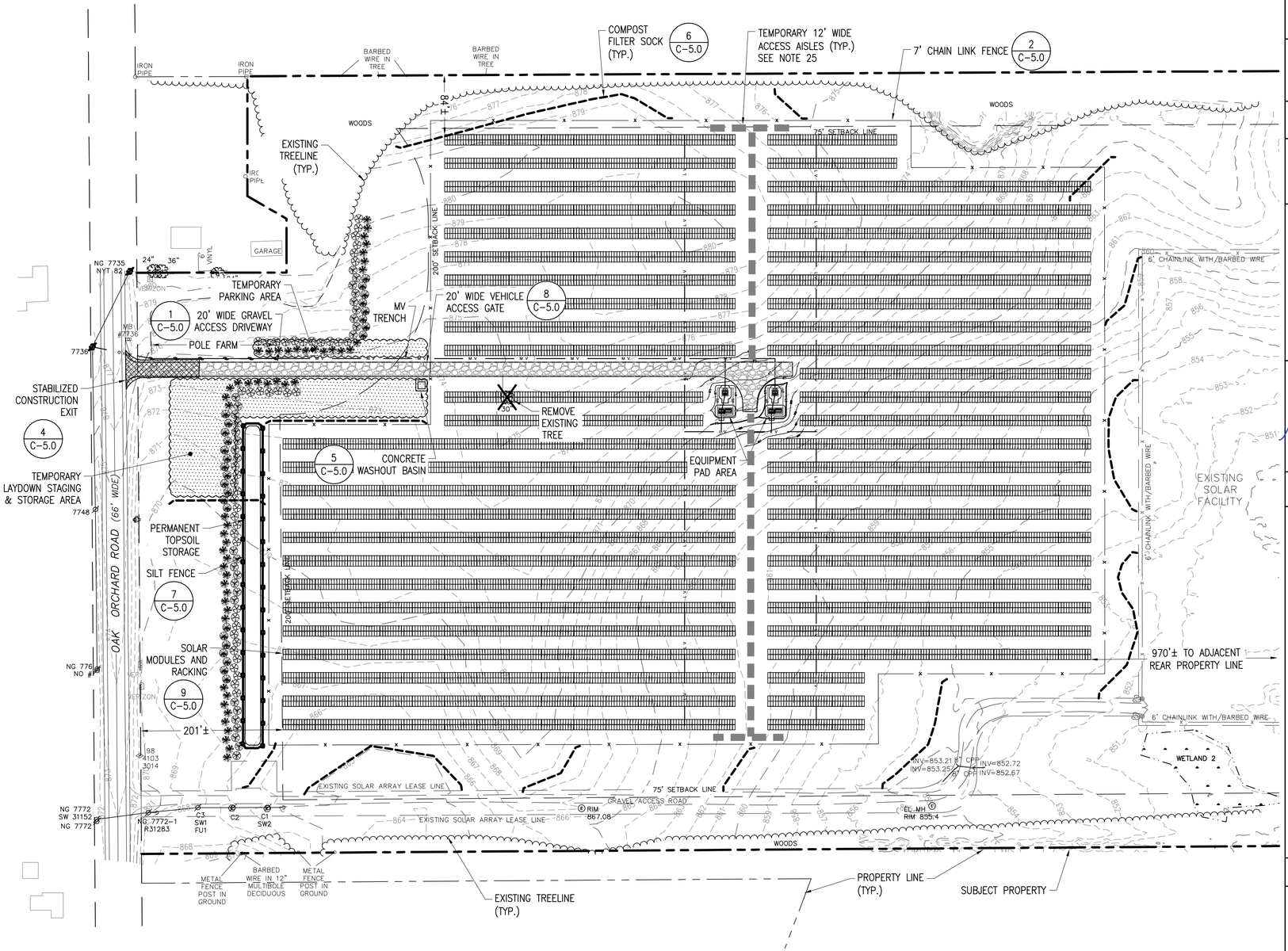
1. A SPDES PERMIT SHALL BE IN PLACE PRIOR TO COMMENCING ANY EARTH DISTURBANCE. THE SPDES PERMIT # IS (TBD), AND WAS ISSUED ON (DD/MM/20YY).
2. EROSION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE SEQUENCE OF STAGED CONSTRUCTION PROVIDED IN THE SWPPP. A COPY OF THE APPROVED SWPPP SHALL BE MAINTAINED ON THE SITE.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
4. SEDIMENT BARRIERS SHALL BE INSPECTED AND APPROVED BY THE CEOR BEFORE CONSTRUCTION CAN START.
5. STRAW AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY WHEN INSTALLED.
6. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED.
7. SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL SOIL STOCKPILE AREAS.
8. CLEAN OUT PROJECT DRAINAGE FEATURES AND STRUCTURES (I.E. CULVERTS, BASINS, SWALES, ETC.) AFTER COMPLETION OF CONSTRUCTION AND AS REQUESTED BY THE CEOR.
9. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE SEDIMENT CONTROL MEASURE OR IN ACCORDANCE WITH SYSTEMS STANDARD SPECIFICATION.
10. THE "TRAINED CONTRACTOR" IS RESPONSIBLE FOR DAILY INSPECTIONS, MAINTENANCE, AND DIRECTING REPAIR ACTIVITIES.
11. DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION OR AS DIRECTED BY THE CONTRACTOR/CEOR.
12. PIPE OUTLETS (IF ANY) SHALL BE STABILIZED WITH STONE. REFER TO DETAILS.
13. TEMPORARY SEEDING (perennial RYE gRASS) SHALL BE AT A RATE OF 45 LBS PER ACRE. DISTURBED AREAS OUTSIDE AND DOWN SLOPE FROM THE CONSTRUCTION LIMITS SHALL BE SIMILARLY SEEDED.
14. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. A DEWATERING PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTOR TO THE CEOR AND ADDED TO THE SWPPP.
15. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION/SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE CEOR AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. A STABILIZED CONSTRUCTION EXIT SHALL BE PROVIDED. A VEHICLE WASH DOWN FACILITIES SHALL BE PROVIDED IF THE STABILIZED CONSTRUCTION ENTRANCE IS INEFFECTIVE IN PREVENTING SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED IMMEDIATELY.
17. NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. NO RE-FUELING SHALL OCCUR WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA AND 200 FEET FROM RIVERFRONT. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
18. THE COST OF REPAIRING EROSION CONTROL MEASURES OR REMOVING SEDIMENT FROM EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE EROSION CONTROL ITEM.



GRADING AND EROSION CONTROL PLAN

SCALE: #" = ##'

0 ##' ###'



19. EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
20. CONTRACTOR SHALL SPRAY WATER FROM A WATER TRUCK ON DRY AND WINDY DAYS TO PREVENT DUST FROM FORMING. OTHER ALLOWED FORMS OF DUST CONTROL INCLUDE: CALCIUM CHLORIDE.
21. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.
22. AFTER ALL DISTURBED AREAS HAVE REACHED FINAL STABILIZATION, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AT THE DIRECTION OF THE CEOR.
23. AFTER THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES, THE CONTRACTOR SHALL HAND RAKE AND SEED THE AREA OF THE TEMPORARY EROSION CONTROL MEASURE.
24. EROSION CONTROL MEASURES AS SHOWN ON THESE DRAWINGS IS INTENDED TO CONVEY MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO PREVENT SOIL EROSION AND TO ACCOMPLISH THE PROJECT'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OBJECTIVES.
25. TEMPORARY ACCESS ROADS/AISLES TO BE USED FOR DELIVERY & DISTRIBUTION OF MATERIALS THROUGH THE SITE. CONTRACTOR SHALL NOT PLACE ACCESS AISLES THROUGH WETLAND AREAS. TEMPORARY ACCESS AISLES AND TEMPORARY STAGING, STORAGE & PARKING AREAS ARE TO BE DE-COMPACTED AND RESTORED PER SWPPP.
26. ALL EXCESS TOPSOIL IS TO REMAIN ON-SITE, STOCKPILED AND PERMANENTLY STABILIZED WITH SEEDING.

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12/12/22

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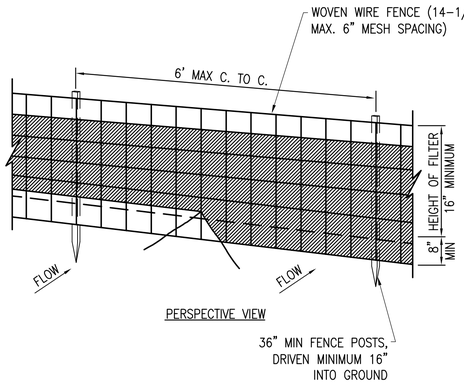
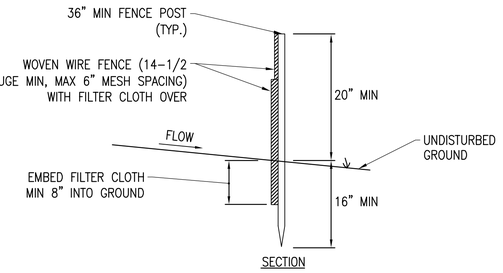
C-4.0
GRADING AND EROSION CONTROL PLAN



PERSPECTIVE VIEW



SECTION

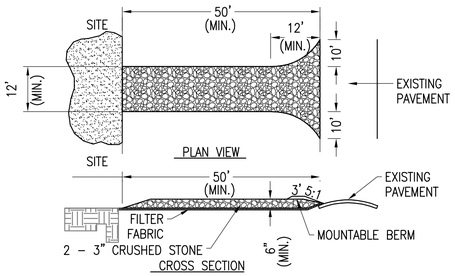
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

POSTS: STEEL, EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 GAUGE 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

7 SILT FENCE DETAIL

SCALE: NTS



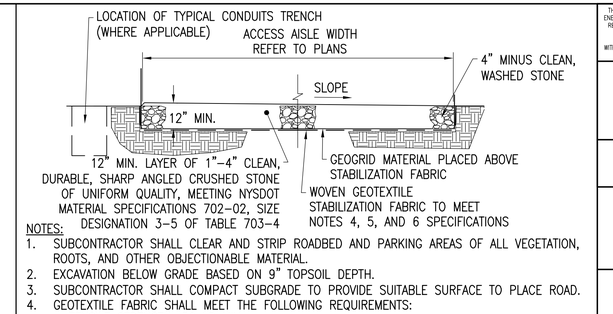
NOTES:

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50 FEET.
3. THICKNESS-NOT LESS THAN 6 INCHES.
4. WIDTH-NOT LESS THAN 12 FEET WHERE MORE THAN ONE (1) ACCESS POINT TO THE SITE. WHERE ONE (1) ACCESS POINT A MINIMUM OF 24 FEET IS REQUIRED.
5. GEOTEXTILE-SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER-SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH 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 TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE DONE ON AN 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.

4 STABILIZED CONSTRUCTION EXIT

SCALE: NTS

XD_CIVIL_TEMPORARY CONSTRUCTION_STABILIZED CONSTRUCTION EXIT_NY 2016-03-14



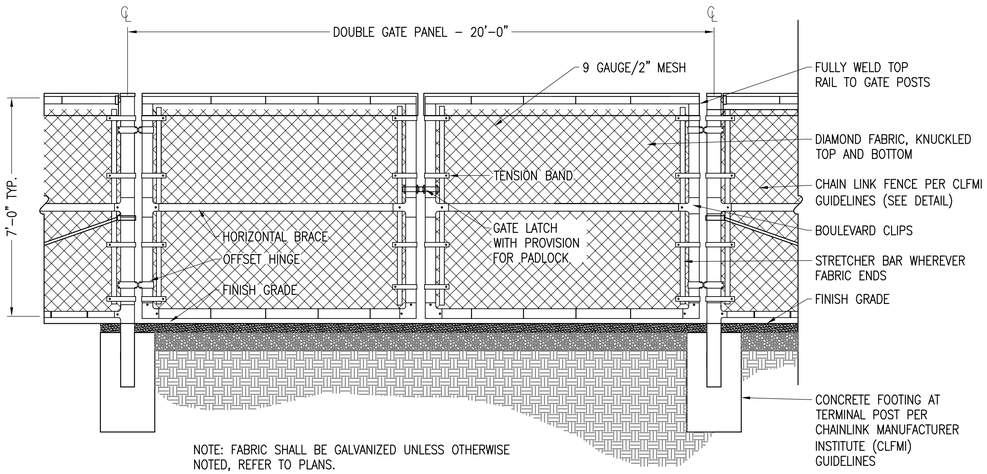
NOTES:

1. SUBCONTRACTOR SHALL CLEAR AND STRIP ROADBED AND PARKING AREAS OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
2. EXCAVATION BELOW GRADE BASED ON 9" TOPSOIL DEPTH.
3. SUBCONTRACTOR SHALL COMPACT SUBGRADE TO PROVIDE SUITABLE SURFACE TO PLACE ROAD.
4. GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:
   - TENSILE STRENGTH: 56 LB MIN.
   - ELONGATION: 50%
   - CBR PUNCTURE: 309 LB MIN.
   - MINIMUM PERMITTIVITY: 0.1 SEC.
5. SUBCONTRACTOR SHALL FOLLOW GEOTEXTILE FABRIC MANUFACTURER INSTALLATION PROCEDURES.
6. WHERE OVERLAPPING OF GEOTEXTILE FABRIC IS REQUIRED, SUBCONTRACTOR SHALL OVERLAP A MINIMUM OF 24".
7. GEOGRID SHALL BE MIRAFI BXG110 OR APPROVED EQUAL. GEOGRID SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
6. SUBCONTRACTOR SHALL INSTALL CONDUITS FOR ALL ELECTRICAL CONDUIT CROSSINGS PRIOR TO INSTALLATION OF THE GEOGRID MATERIAL. THE GEOGRID SHALL NOT BE HORIZONTALLY CUT ONCE INSTALLED.

1 GRAVEL ACCESS ROAD

SCALE: NTS

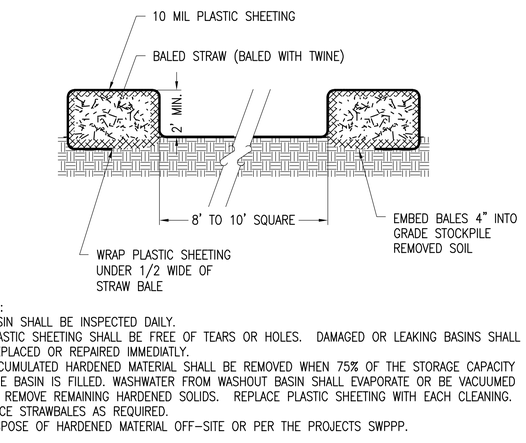
XD_CIVIL_GRAVEL_ROAD_NY 07-24-2017



NOTE: FABRIC SHALL BE GALVANIZED UNLESS OTHERWISE NOTED, REFER TO PLANS.

8 VEHICLE GATE

SCALE: NTS



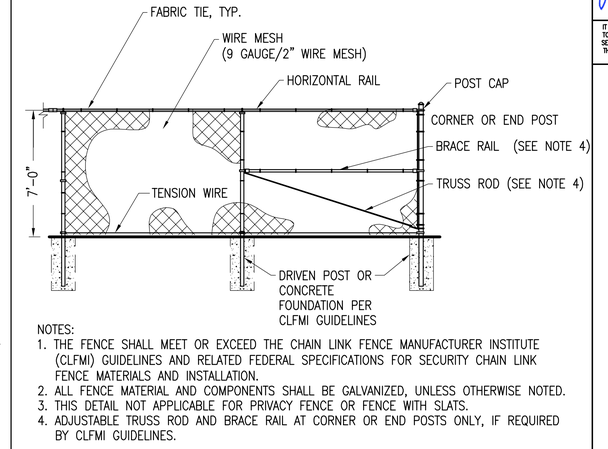
NOTES:

1. BASIN SHALL BE INSPECTED DAILY.
2 .PLASTIC SHEETING SHALL BE FREE OF TEARS OR HOLES. DAMAGED OR LEAKING BASINS SHALL BE REPLACED OR REPAIRED IMMEDIATLY.
3. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE BASIN IS FILLED. WASHWATER FROM WASHOUT BASIN SHALL EVAPORATE OR BE VACUUMED OUT. REMOVE REMAINING HARDENED SOLIDS. REPLACE PLASTIC SHEETING WITH EACH CLEANING. REPLACE STRAWBALES AS REQUIRED.
4. DISPOSE OF HARDENED MATERIAL OFF-SITE OR PER THE PROJECTS SWPPP.

5 CONCRETE WASHOUT BASINS

SCALE: NTS

XD_CIVIL_CONCRETE WASHOUT BASINS 07-26-2017



NOTES:

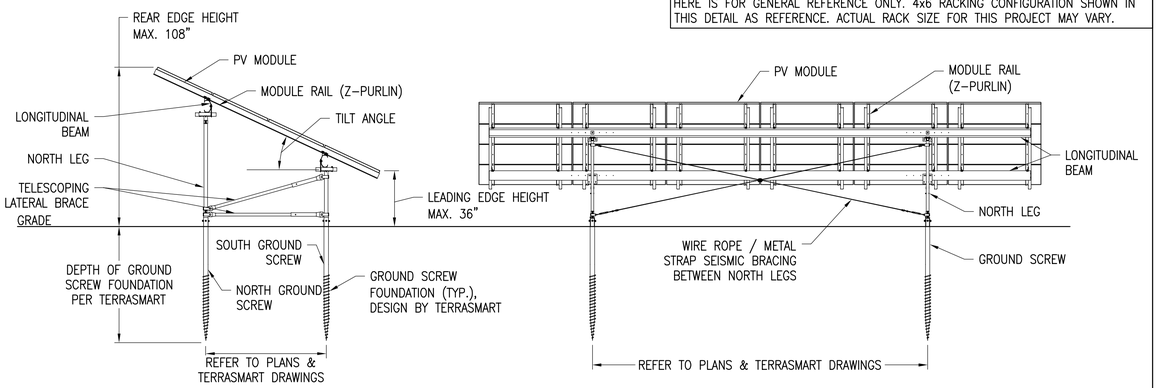
1. THE FENCE SHALL MEET OR EXCEED THE CHAIN LINK FENCE MANUFACTURER INSTITUTE (CLFMI) GUIDELINES AND RELATED FEDERAL SPECIFICATIONS FOR SECURITY CHAIN LINK FENCE MATERIALS AND INSTALLATION.
2. ALL FENCE MATERIAL AND COMPONENTS SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
3. THIS DETAIL NOT APPLICABLE FOR PRIVACY FENCE OR FENCE WITH SLATS.
4. ADJUSTABLE TRUSS ROD AND BRACE RAIL AT CORNER OR END POSTS ONLY, IF REQUIRED BY CLFMI GUIDELINES.

2 CHAIN LINK FENCE

SCALE: NTS

XD_CIVIL_FENCE_7'_CHAIN_LINK 06-10-2016

NOTE: THE "TERRAFARM" RACKING AND GROUND SCREW FOUNDATIONS ARE DESIGNED BY TERRASMART AND WILL BE A SUBMITTAL TO BORREGO. THE INFORMATION SHOWN HERE IS FOR GENERAL REFERENCE ONLY. 4x6 RACKING CONFIGURATION SHOWN IN THIS DETAIL AS REFERENCE. ACTUAL RACK SIZE FOR THIS PROJECT MAY VARY.

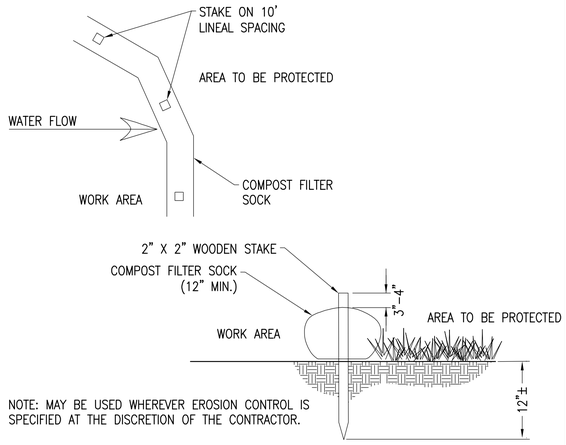


9 TYPICAL RACK SECTION & REAR ELEVATION

TERRASMART TF3L

SCALE: NTS

XD_STRUC_TERRASMART_TF3L_RACK SECT & REAR ELEV 2018-04-05

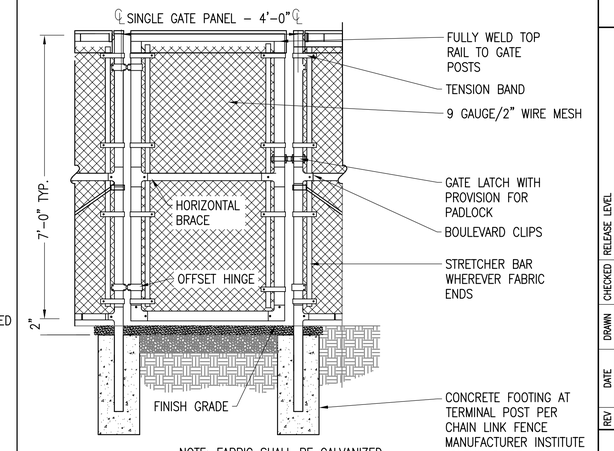


NOTE: MAY BE USED WHEREVER EROSION CONTROL IS SPECIFIED AT THE DISCRETION OF THE CONTRACTOR.

6 COMPOST FILTER SOCK

SCALE: NTS

XD_CIVIL_FILTREXX_FILTER_SOCK 03-29-2016



NOTE: FABRIC SHALL BE GALVANIZED

3 4' MAN GATE (LOCATIONS T.B.D.)

SCALE: NTS

XD_CIVIL_SITE CONSTRUCTION_4' WALK THROUGH GATE 07-25-2017

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55 TECHNOLOGY DRIVE, SUITE 102
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C-5.0
CIVIL DETAILS

LANDSCAPING NOTES:

1. QUALITY ASSURANCE
   - A. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
   - B. SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (AAN), UNLESS OTHERWISE SPECIFIED.
   - C. NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, VIGOROUS, PLANTS NURSERY GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED, AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.
   - D. SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL. WHEN AUTHORIZED, ADJUSTMENTS OF CONTRACT AMOUNT (IF ANY) WILL BE MADE BY CHANGE ORDER.
2. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:
   - A. UNLESS OTHERWISE DIRECTED IN WRITING, SEED LAWNS FROM MARCH 15 TO MAY 15, AND FROM AUGUST 15 TO NOVEMBER 15.
   - B. UNLESS OTHERWISE DIRECTED IN WRITING THE PLANTING OF TREES AND SHRUBS SHALL BE FROM MARCH 15 TO JUNE 1, AND FROM SEPTEMBER 1 TO DECEMBER 15.
   - C. PROCEED WITH AND COMPLETE SEEDING WORK AS RAPIDLY AS PORTIONS OF THE SITE BECOME AVAILABLE, WORKING WITHIN THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.
   - D. PROVIDE TEMPORARY ANNUAL RYEGRASS COVER FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.
3. PRODUCTS:
   - A. IMPORTED TOPSOIL: PROVIDE TOPSOIL CONFORMING TO THE FOLLOWING:
     - A.1. ORIGINAL LOAM TOPSOIL, WELL DRAINED HOMOGENOUS TEXTURE AND OF UNIFORM GRADE, WITHOUT THE ADMIXTURE OF SUBSOIL MATERIAL AND FREE OF DENSE MATERIAL, HARDPAN, CLAY, STONES, SOD OR OTHER OBJECTIONABLE FOREIGN MATERIAL.
     - A.2. CONTAINING NOT LESS THAN 5% NOR MORE THAN 20% ORGANIC MATTER IN THAT PORTION OF A SAMPLE PASSING A 1/4" SIEVE WHEN DETERMINED BY THE WET COMBUSTION METHOD ON A SAMPLE DRIED AT 105° C.
     - A.3. CONTAINING A pH VALUE WITHIN THE RANGE OF 6.5-7.5 ON THAT PORTION OF THE SAMPLE WHICH PASSES A 1/4" SIEVE.
     - A.4. CONTAINING THE FOLLOWNG WASHED GRADATIONS:

SIEVE DESIGNATION	% PASSING
1"	100
100 1/4"	97 – 100
NO. 200	20 – 65 (OF THE 1/4" SIEVE)

   - B. SEED MIXTURE:SEE SEED MIXTURE TABLE, THIS SHEET. PROVIDE FRESH, CLEAN, NEW-CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFIRMING TO FEDERAL AND STATE STANDARDS.
   - C. LIME: NATURAL LIMESTONE CONTAINING AT LEAST 85% OF TOTAL CARBONATES, GROUND TO SUCH FINENESS THAT AT LEAST 90% PASSES A 10-MESH SIEVE AND AT LEAST 50% PASSES A 100- MESH SIEVE.
   - D. FERTILIZER:
     - D.1. FOR SPRING SEEDING: COMMERCIAL STARTER FERTILIZER, GRANULAR, NONBURNING PRODUCT CONTAINING 10% NITROGEN, 6% AVAILABLE PHOSPHORUS, AND 4% WATER SOLUBLE POTASH (10-6-4).
     - D.2. FOR FALL SEEDING: COMMERCIAL STARTER FERTILIZER, GRANULAR, NONBURNING PRODUCT, CONTAINING 5% NITROGEN, 10% AVAILABLE PHOSPHORUS, AND 5% WATER SOLUBLE POTASH (5-10-5).
     - D.3. FOR FINAL FERTILIZING: IF APPLIED IN SPRING SEASON, SHALL BE A SLOW RELEASE COMMERCIAL FERTILIZER, GRANULAR, WITH HIGH NITROGEN, 38% URAMITE OR APPROVED EQUAL. IF APPLIED IN FALL SEASON, SHALL BE AS SPECIFIED IN (3.D.2) ABOVE.
   - E. TREES AND SHRUBS:
     - E.1. PLANTING SOIL MIXTURE: SHALL BE PREMIXED IN BULK, AND CONTAIN THE FOLLOWING BY VOLUME:
       - 20 PARTS TOPSOIL
       - 10 PARTS PEAT
       - 1 PART BONE MEAL
     - E.2. PEAT: BROWN TO BLACK IN COLOR, WEED AND SEED FREE, DRIED SPHAGNUM PEAT, CONTAINING NOT MORE THAN 9% MINERAL ON A DRY BASIS AND CONFORMING TO NYSDOT 713-20.
     - E.3. BONE MEAL: FINELY GROUND, RAW, MINIMUM 4% NITROGEN AND 20% PHOSPHORIC ACID. IT SHALL BE DELIVERED IN SEALED BAGS SHOWING THE MANUFACTURER'S GUARANTIED ANALYSIS.
     - E.4. STAKES: 8 FT LONG, 2 IN WIDE WOOD STAKES.
     - E.5. HOSE: NEW, 2-PLY GARDEN HOSE NOT LESS THAN 1/2 INCH IN DIAMETER.
     - E.6. MULCH: GROUND OR SHREDDED BARK, MEDIUM SIZE FROM HARDWOOD TREES. NO PIECES OVER 2 INCHES GREATEST DIMENSION. FREE FROM SAWDUST, STONES, DEBRIS, AND DELETERIOUS MATERIALS. APPLIED TO A DEPTH OF 3 INCHES.
4. EXECUTION
   - A. LANDSCAPE WORK SHALL BE UNDERTAKEN AS SOON AS SITE AREAS ARE AVAILABLE.
   - B. TOPSOIL SHALL BE SPREAD NO LESS THAN 4" OVER SOIL AREAS AND A MINIMUM OF 8" THICK OVER GRAVEL. SOIL AMENDMENTS SHALL BE THOROUGHLY MIXED INTO THE TOP 4" OF TOPSOIL, FOLLOWING THE SPECIFICATIONS STATED BELOW.
   - C. PERFORM FINE GRADING TO FINISHED ELEVATION ONLY IMMEDIATELY PRIOR TO PLANTING. PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN SURFACE, FREE OF DEPRESSIONS OR RIDGES WITH A UNIFORM LOOSE, FINE TEXTURE.
   - D. THE SOIL SHALL BE TESTED FOR pH AND LIME ADDED IF NECESSARY TO AMOUNT RECOMMENDED FOR EACH PLANT SPECIES. ALL AMENDMENTS SHALL BE CHECKED AND APPROVED BY LANDSCAPE ARCHITECT BEFORE AMENDMENTS ARE MADE.
   - E. LAWN:
     - E.1. PRIMARY SEED MIX: SEED AT THE RATES SPECIFIED, SEE SEEDING TABLE ON THIS SHEET.
     - E.2. TEMPORARY COVER SEED MIX: SEED AT THE RATE OF 4 TO 5 LBS PER 1,000 SF.
     - E.3. TEMPORARY COVER SEED MIX TO BE APPLIED ONLY FOR WINTER OR SUMMER SOIL STABILIZATION OUTSIDE ALLOWED SEEDING PERIODS.
   - F. ALL SEEDED AREAS SHALL BE PROTECTED FROM EROSION BY A UNIFORM BLANKET OF STRAW OR HYDROMULCH, PER MANUFACTURE'S RECOMMENDATION.
   - G. ALL SEEDED SLOPES GREATER THAN 3:1 SHALL BE PROTECTED FROM EROSION WITH JUTE MESH OR APPROVED EQUAL.
   - H. ALL NEWLY PLANTED AREAS SHALL BE KEPT MOIST BY WATERING UNTIL GRASSES ARE WELL ESTABLISHED. THE LANDSCAPE CONTRACTOR MUST WATER TREES WHEN NECESSARY FOR 60 DAYS AFTER COMPLETION.
   - I. LAWNS ARE TO BE WARRANTED UNTIL THEY HAVE BECOME ESTABLISHED, UNTIL FINAL ACCEPTANCE, AND NOT LESS THAN 60 DAYS AFTER COMPLETION OF ALL WORK. TREES AND SHRUBS SHALL BE WARRANTED AGAINST DEFECTS INCLUDING POOR GROWTH AND DEATH, EXCEPT WHEN RESULTING FROM OWNER NEGLECT, INCIDENTS THAT ARE BEYOND THE CONTROL OF THE LANDSCAPE INSTALLER AND DAMAGE OR ABUSE BY OTHERS, FOR AT LEAST ONE FULL YEAR AFTER PROJECT COMPLETION.

GENERAL NOTES:

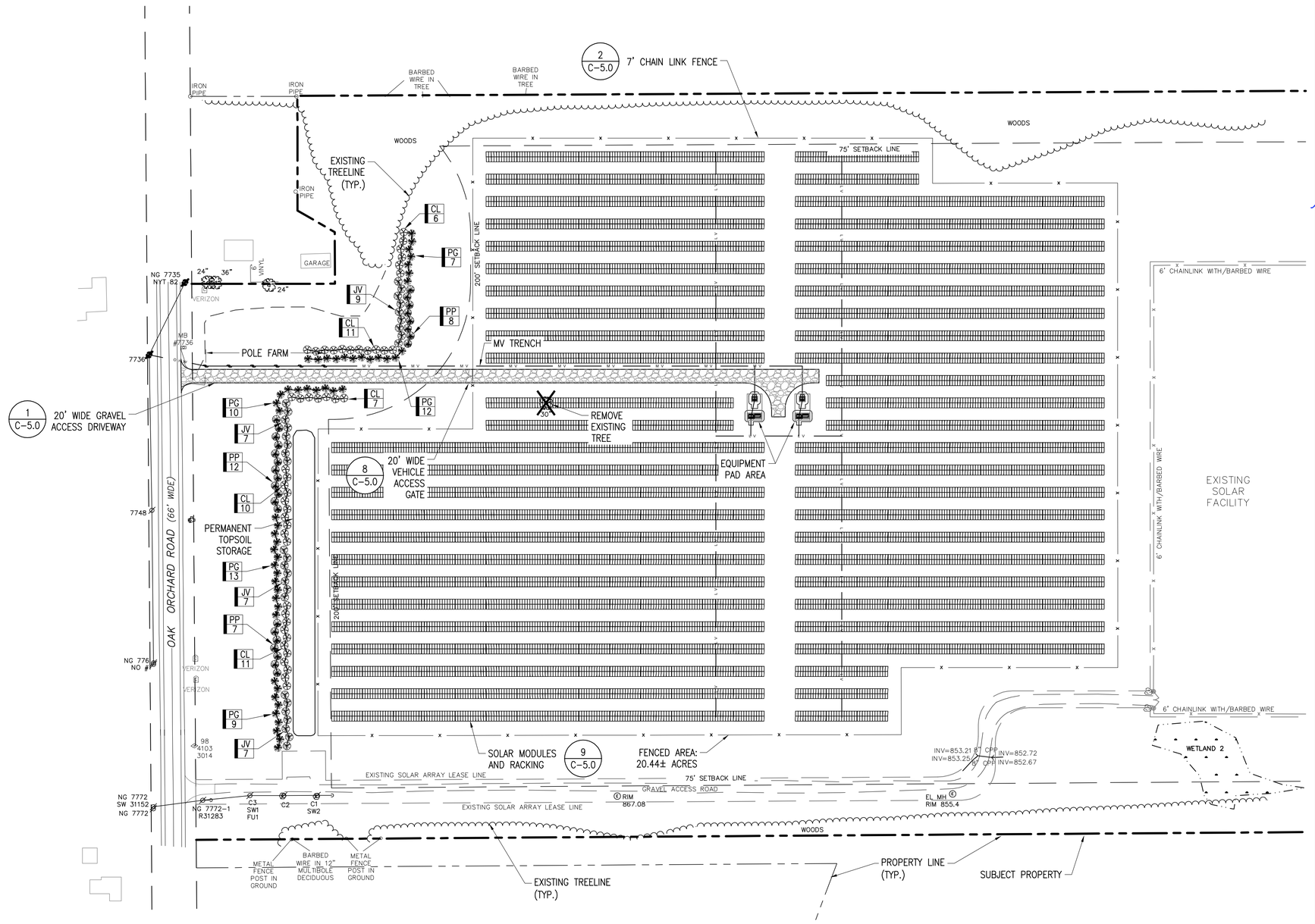
1. TREES SHALL NOT BE PLANTED IN WETLANDS. TREES TO BE PLANTED IN WETLAND BUFFER SHALL BE PLANTED BY HAND AND NOT WITH HEAVY EQUIPMENT.
2. MAINTAIN 20' CLEAR ZONE BETWEEN THE LANDSCAPE PLANTINGS AND THE FENCING UNLESS NOTED OTHERWISE.
3. GAPS SHOWN BETWEEN PLANTING GROUPS SHALL BE NO WIDER THAN 30'.
4. TREES SHALL BE TRIMMED AS NEEDED TO AVOID SHADING/PRODUCTION IMPACTS.

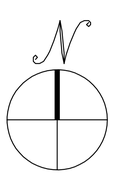
SEEDING SPECIFICATIONS:				
AREA	LOCATION	NAME/SPECIES	SUPPLIER	SEEDING RATE
A/B	UNDER SOLAR PANELS	ERNST SOLAR FARM MIX; ERNMX-186 (SEE NOTE 1 BELOW)	ERNST SEEDS	6#/1,000 SF
	BETWEEN PANEL ROWS & AREA WITHIN FENCE	BUTTERFLY & HUMMINGBIRD GARDEN MIX; ERNMX-157	ERNST SEEDS	20#/ACRE
		ANNUAL RYE GRASS AS A NURSE/COVER CROP	N/A	6#/ACRE
C	DISTURBED AREA OUTSIDE FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS	10#/ACRE
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYE GRASS OR GRAIN RYE GRASS SEED INCLUDED.				
2. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE DURATION OF THE PROJECT'S CONSTRUCTION.				

PLANT LIST

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS	SPACING	MATURE HT/SPREAD	GROWTH RATE
EVERGREEN TREES									
PG	51	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE	6-7' TALL	B&B		12' O.C.*	40'HT/20'SP	12"/YR
PP	27	PICEA PUNGENS 'BABY BLUE'	BABY BLUE BLUE SPRUCE	6-7' TALL	B&B		12' O.C.*	40'HT/20'SP	2-3'/YR
JV	30	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6-7' TALL	B&B		12' O.C.*	65'HT/25'SP	1-2'/YR
CL	45	X CUPRESSOCYPARIS LEYLANDII	LEYLAND CYPRESS	6-7' TALL	B&B		12' O.C.*	50'HT/20'SP	3-4'/YR

* = TO BE PLANTED IN STAGGERED ROWS AT THE SPACING INDICATED





LANDSCAPING PLAN

SCALE: 1" = 80'

0 80' 160'

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
WWW.NEWLEAFENERGY.COM

NOT FOR CONSTRUCTION

12/12/22

OAK ORCHARD RD - BATAVIA
7755 OAK ORCHARD RD
BATAVIA, NY 14020

PROJECT NUMBER: 108-4673

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	12/12/22	AM/DK	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-6.0
LANDSCAPING PLAN

T-01-BAT-01-23

03/22/2021