Appendix 15-3

Agricultural Plan

Highest standards

RIVERSIDE SOLAR, LLC

Matter No. 21-00752

Towns of Lyme and Brownville

Jefferson County, NY

Appendix 15-3

Agricultural Plan

July 2021

Contents

Figures

Attachment

1.0 Introduction

The Riverside Solar Project ("Project") will comply with the New York State Department of Agriculture (NYSAGM) Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands requirements, dated October 18, 2019 ("Guidelines"), and other applicable NYSAGM guidance documents that are in effect during construction.

The Project will hire an Environmental Monitor (EM) to oversee construction and restoration work on agricultural land. The EM will coordinate with the NYSAGM Division of Land and Water Resources as necessary to ensure the guidelines are being met to the maximum extent practicable. The EM will contact the NYSAGM Division of Land and Water Resources if a farm resource concern, management matter pertinent to the agricultural operation, and/or site-specific implementation conditions, cannot be resolved.

The Riverside Solar Project will comply, to the maximum extent practicable, with the guideline requirements for construction, restoration, monitoring and remediation, and decommissioning as detailed below.

2.0 Facility Description

The Riverside Solar Project is a solar energy generation facility located in the Towns of Lyme and Brownville in Jefferson County, New York. The Facility Site totals 1,168 acres land that is leased or purchased from private landowners. However, the total acreage that will be utilized for Facility Components is limited to 933 acres and the Facility's proposed Limit of Disturbance (LOD) consists of approximately 655 acres. The Facility has been sited on 1,012 acres of agricultural land, 148 acres of residential land and 2 acres of vacant land as defined the New York State Office of Real Property Services (NYSORPTS).

The Facility will have a generating capacity of 100 megawatts (MW) alternating current (AC), with Facility components including solar arrays, access roads, inverters, fencing, underground collection lines, and electrical interconnection facilities. The Facility will utilize approximately 245,440 solar modules in order to achieve the 100 MW AC generating capacity. The Facility will utilize a solar module similar to the Jinko Solar Tiger Pro 72M 520-540-Watt mono-facial module with 3.2 mm Anti-Reflection Coating. The Facility proposes to install solar modules on a tracker racking system similar to the ArrayTech DuraTrack® HZ v3 system. The maximum height of the solar array panels is anticipated to be 8 feet, 11 inches from finished grade, inclusive of the racking system. The 34.5 kV collection lines within the Facility Site will gather power from the solar arrays and transport it to a new collection substation that will step up the voltage to 115 kV. The collection substation is approximately 0.7 acres in size and will be located adjacent to solar panels in the central portion of the Facility Site. Access to the collection substation will be via a new access road from Case Road. Power from the collection substation will be connected to the existing National Grid Thousand Islands – Coffeen St. #4 Lyme Tap 115 kV transmission line via a new interconnection line. This interconnection line will consist of three adjacent overhead 115 kV lines spanning 330 linear feet each, extending off the Facility Site.

Section 3.0, below, includes details for construction, post-construction restoration, monitoring and remediation, and decommissioning, that the Project will comply with, to the maximum extent practicable, to reduce impacts to agricultural land.

2.1 Agricultural Land Uses

Figure 1 depicts mapping of agricultural uses in the Facility Site. This figure has been prepared utilizing data from the United States Department of Agriculture (USDA) National Agricultural Statistics Service and includes agricultural use based on the USDA Cropland Data Layer, as well as field verified data collected during the 2020 growing season. Based on these findings, primary agricultural land cover within the Facility Site consists of approximately 334 acres of hay production, 6.9 acres of corn, and 40 acres of soybeans. Farmers often rotate their crops so acreages may differ from year to year. Portions of the Facility Site, outside the fence line as show on Figure 1, will continue to be utilized for agricultural operations at the landowner's discretion. During the useful life of the Facility (approximately 30 years) land within the Facility fence line will be taken out of agricultural production and will be utilized for solar energy generation. Following decommissioning at the Facility, land will be restored to its preconstruction condition and may again be utilized for agricultural uses. Further discussion regarding the decommissioning procedures for agricultural land can be found in Section 3.4 below.

2.2 Soils

Approximately 292 acres of disturbance to agricultural land is anticipated to occur within the Facility's proposed LOD. This includes temporary and permanent disturbance and also includes areas outside of the fence line. The temporary disturbance will be caused by grading and laydown areas. Of these 292 acres, only 4.7 acres will comprise permanent soil disturbance. The remaining 287 acres will be restored after construction. Additionally, within the Facility Site, approximately 366 acres (31.3 percent) of agricultural soils are classified as NYS Agriculture Land Classification's Mineral Soil Groups (MSGs) 1-4. Of the 366 acres of soil within the Facility Site that are classified in MSGs 1-4, only 1.3 percent (4.7 acres) will be permanently impacted. The Riverside

Solar Project has made significant efforts to site Facility components to minimize impacts to the maximum extent practicable for existing and future use of agricultural lands within the Facility Site. Agricultural soils in the Facility Site can be seen on Figure 2.

2.3 Existing Water Management

Existing drain tiles will be identified and located before construction as much as is reasonably possible based primarily on consultation with the landowner. During and after construction operations, any existing drain tiles within the area of disturbance will be checked for damage, and damaged drain tiles will be repaired or replaced as specified in landowner lease agreements. Drain tiles must meet or exceed the AASHTO M-252 specifications. Repair of subsurface drain tiles should be consistent with the NYSAGM's details for "Repair of Severed Tile Line." Riverside Solar Project will coordinate with the landowner to continue to monitor drain tiles post-construction to ensure repairs are properly functioning. The Drainage Remediation Plan, provided as Appendix 15-4 of the Section 94-c Application, will be adhered to and will include a detailed description of identification of surface and subsurface drainage features, the likelihood of impacts, as well as anticipated repair methods.

3.0 AGM Guidelines

The NYSAGM Guidelines have been included in Attachment A to this document. Riverside Solar Project will comply with the Guidelines, to the maximum extent practicable and will contact AGM and DPS to discuss alternatives where compliance is impracticable. Riverside Solar Project will hire an EM familiar with agricultural practices to oversee construction and restoration work on agricultural land. The EM will coordinate with the AGM Division of Land and Water Resources as necessary so the Guidelines are being met to the maximum extent practicable. The EM will contact the AGM Division of Land and Water Resources if a farm resource concern, management matter pertinent to the agricultural operation, and/or site-specific implementation conditions cannot be resolved. Riverside Solar Project intends to comply with the Guidelines for construction, restoration, monitoring and remediation, and decommissioning.

Some of the Guidelines are detailed below.

3.1 Construction

The measures described below will be followed for the construction of the Riverside Solar Project to comply, to the maximum extent practicable, with the NYSAGM's Guidelines are detailed as follows.

- Before any topsoil is stripped, representative soil samples will be obtained from the areas to be disturbed. The soil sampling will be consistent with Cornell University's soil testing guidelines, and samples should be submitted to a laboratory for testing PH, percent organic material, cation exchange capacity, Phosphorus/Phosphate (P), and Potassium/Potash (K). The results are to establish a benchmark that the soil's PH, Nitrogen (N), Phosphorus/Phosphate (P), and Potassium/Potash (K) are to be measured again upon restoration. Should soil sampling not be performed, Riverside Solar Project will obtain fertilizer and lime application recommendations for disturbed areas at:

https://www.agriculture.ny.gov/ap/agservices/Fertilizer_Lime_and_Seeding_Recommendations.pdf.

- Stripped topsoil will be stockpiled from work areas (e.g. parking areas, electric conductor trenches, along access roads, equipment pads) and kept separate from other excavated material (rock and/or sub-soil) until the completion of the Facility for final restoration. For proper topsoil segregation, at least 25 feet of additional temporary workspace (ATWS) will be provided along "open-cut" underground utility trenches. All topsoil will be stockpiled as close as is reasonably practical to the area where stripped/removed and will be used for restoration on that particular area. Any topsoil removed from permanently converted agricultural areas (e.g. permanent roads, etc.) will be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the Facility's LOD; however not to significantly alter the hydrology of the area. Topsoil stockpile areas and topsoil disposal areas will be clearly designated in the field and on construction drawings; changes or additions to the designated stockpile areas may be needed based on field conditions in consultation with the EM. Sufficient LOD (as designated on the site plan or by the EM) area will be allotted to allow adequate access to the stockpile for topsoil replacement during restoration.
    - Topsoil stockpiles on agricultural areas left in place prior to October 31st will be seeded with Aroostook Winter Rye or equivalent at an application rate of three bushels (168 lbs.) per acre and mulched with straw mulch at rate of two to three bales per 1000 square feet.
    - Topsoil stockpiles left in place between October 31st and May 31st will be mulched with straw at a rate of two to three bales per 1000 square feet to prevent soil loss.
- The surface of access roads located outside of the Facility's security fence and constructed through agricultural fields will be level with the adjacent field surface. If a level road design is not feasible, all access roads should be constructed to

allow a farm crossing (for specific equipment and livestock) and to restore/ maintain original surface drainage patterns.

- Culverts and waterbars will be installed to maintain the natural drainage patterns.
- Vehicles or equipment will not be allowed outside the planned LOD without the EM seeking prior approval from the landowner (and/or agricultural producer), and associated permit amendments as necessary. All vehicle and equipment traffic, parking, and material storage will be limited to the access road and/or designated work areas, such as laydown areas, with exception the use of low ground pressure equipment. Where repeated temporary access is necessary across portions of agricultural areas outside of the security fence, preparation for such access will consist of either stripping / stockpiling all topsoil linearly along the access road, or the use of timber matting.
- Proposed permanent access will be established as soon as possible by removing topsoil according to the depth of topsoil as directed by the EM. Any extra topsoil removed from permanently converted areas (e.g. permanent roads, equipment pads, etc.) will be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the Facility's LOD; however not to significantly alter the hydrology of the area.
- For open-cut trenching, topsoil will be stripped from the work area adjacent to the trench (including segregated stockpile areas and equipment access). Trencher or road saw like equipment will not be allowed for trench excavation in agricultural areas, as the equipment does not segregate topsoil from subsoil. HDD installations, primarily designed to avoid impacts to wetlands and an existing pipeline, will also help to minimize agricultural ground disturbances. Any HDD drilling fluid inadvertently discharged will be removed from agricultural areas. Narrow open trenches less than 25 feet long involving a single directly buried conductor or conduit (as required) to connect short rows within the array, will be considered exempt from topsoil segregation.

- Electric collection, communication and transmission lines installed above ground can create long term interference with mechanized farming on agricultural land. Thus, interconnect conductors outside of the security fence are proposed to be buried in agricultural fields wherever practicable. Where overhead utility lines are required, (e.g., from the switchyard to the POI) installation will be located outside field boundaries or along permanent access road(s) wherever possible. Should overhead utilities cross farmland, agricultural impacts will be minimized by using taller structures that provide longer spanning distances and locate poles on field edges to the greatest extent practicable.
- All buried utilities located within the Facility's security fence will have a minimum depth of 18-inches of cover if buried in a conduit or a minimum depth of twenty-four inches of cover if directly buried (e.g. not routed in conduit).
    - The following requirements will apply to all buried utilities located outside of the generation facility security fence:
    - In cropland, hayland, and improved pasture buried electric conductors will have a minimum depth of 48 inches of cover. In areas where the depth of soil over bedrock is less than 48 inches, the electric conductors will be buried below the surface of the bedrock if friable/rippable, or as near as possible to the surface of the bedrock.
    - In unimproved grazing areas or on land permanently devoted to pasture the minimum depth of cover will be 36 inches.
    - Where electrical conductors are buried directly below the Facility's access road or immediately adjacent (at road edge) to the access road, the minimum depth of cover will be 24 inches. Conductors will be close enough to the road edge as to be not subject to agricultural cultivation/subsoiling.
- Should buried utilities alter the natural stratification of soil horizons and natural soil drainage patterns, Riverside Solar Project will rectify the effects with measures such as subsurface intercept drain lines. Riverside Solar Project will

consult the Jefferson County Soil and Water Conservation District concerning the type of intercept drain lines to install to prevent surface seeps and the seasonally prolonged saturation of the conductor installation zone and adjacent areas. Riverside Solar Project will install and/or repair all drain lines according to NRCS conservation practice standards and specifications. Drain tiles will meet or exceed the AASHTO M-252 specifications. Repair of subsurface drains tiles will be consistent with the NYSAGM's details for "Repair of Severed Tile Line" found in the pipeline drawing A- 52.

- In pasture areas, it may be necessary to construct temporary fencing (in addition to the Facility's permanent security fences) around work areas to prevent livestock access to active construction areas and areas undergoing restoration. For areas returning to pasture, temporary fencing will be erected to delay the pasturing of livestock within the restored portion of the LOD until pasture areas are appropriately revegetated. Temporary fencing including the Facility's required temporary access for the associated fence installations will be included within the LOD as well as noted on the construction drawings. Riverside Solar Project will be responsible for maintaining the temporary fencing until the EM determines that the vegetation in the restored area is established and able to accommodate grazing. At such time, Riverside Solar Project will be responsible for removal of the temporary fences.

3.2 Post-Construction Restoration

Agricultural areas temporarily disturbed during construction will be de-compacted to a depth of 18 inches to a level no more than 250 pounds per square inch when measured with a soil penetrometer. In areas where topsoil was stripped, soil decompaction will be conducted prior to replacing the topsoil. Rocks four inches and larger will be removed from the subsoil surface prior to topsoil replacement. The topsoil will be replaced to the original depth and contours where possible.

Rocks four inches and larger will be removed from the surface of the topsoil. Subsoil decompaction and topsoil replacement will be avoided after October 1. If areas are restored after October 1, provisions will be made to restore and reseed eroded and exposed areas the following spring to establish proper vegetative cover.

Access roads will be re-graded as needed to allow farm equipment crossing and to restore the original drainage patterns or incorporate the newly designed drainage pattern. Existing drain tiles will be identified and located before construction as much as is reasonably possible based primarily on consultation with the landowner. During and after construction operations, any existing drain tiles within the area of disturbance will be checked for damage, and damaged drain tiles will be repaired or replaced consistent with the NYSAGM's details for "Repair of Severed Tile Line" to the maximum extent practicable. Riverside Solar Project will coordinate with the landowner to continue to monitor drain tiles post-construction to ensure repairs are properly functioning.

Restored agricultural areas will be seeded as specified by the landowner to maintain consistency with the surrounding areas.

Restoration practices will be postponed until favorable soil conditions exist. Restoration will not occur when soils are in a wet or plastic state of consistency. Regrading stockpiled topsoil and de-compacting subsoils will not occur until the plasticity, as determined by the Atterberg field test, is adequately reduced. Restoration activities will not occur on agricultural fields between October and May unless favorable soil conditions exist.

Construction debris will be removed from the Riverside Solar Project following restoration efforts and disposed of in a licensed facility.

3.3 Monitoring and Remediation

Riverside Solar Project will provide monitoring and remediation for a period no less than 365 days following the date upon which the solar arrays are in commercial operations.

The monitoring and remediation will identify remaining agricultural impacts associated with construction that need mitigation and follow-up restoration.

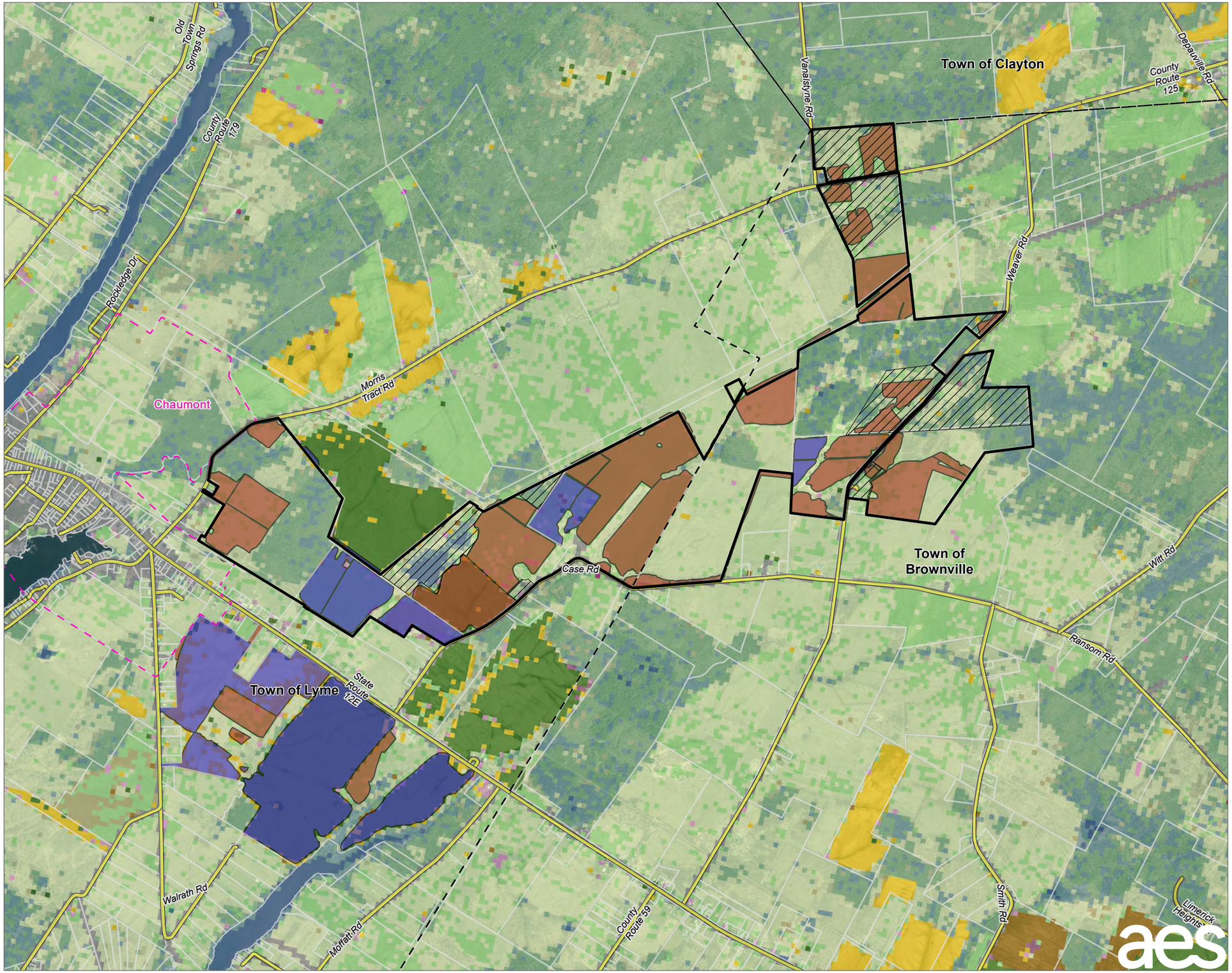
The EM will assess the topsoil thickness, relative content of rock and large stones, trench settling, crop production, drainage and repair/replacement of severed subsurface drain line, fences, etc. If necessary, topsoil will be imported to repair trench settling and topsoil deficiency issues. Visual inspection conducted by the EM will determine the presence of excessive amounts of rock and oversized stone material. Excess rocks and large stones will be removed as appropriate.

Should the subsequent crop productivity within affected areas fall to less than half that of adjacent unaffected agricultural land, Riverside Solar Project and other associated parties must determine the appropriate rehabilitation measures to be implemented.

3.4 Decommissioning

The Riverside Solar Project will be decommissioned following the useful life of the solar array. The Decommissioning Plan, provided as Appendix 23-1 of the Section 94-c Application, will be adhered to and will include a detailed description of the decommissioning procedures, site restoration procedures, and a timeframe for decommissioning activities. When the solar arrays are decommissioned, all above ground structures will be removed from the area. Concrete piers, footer, and other supports will be removed to a depth of 48 inches below the soil surface and underground electrical lines will be abandoned in place. The land will be restored to as close as practicable to the previous condition. Previous agricultural lands will be restored with recommendations from the landowner, the Soil and Water Conservation District, and the Department of Agriculture and Markets. Access roads and landscaping in agricultural areas will be removed unless specified otherwise by the landowner.

FIGURES



NON-LEASED PORTION OF FACILITY PARCEL
FACILTY SITE (SURVEYED BOUNDARY)
PARCELS IN STUDY AREA
VILLAGE BOUNDARY
FIELD-VERIFIED ACTIVE HAY/PASTURE
FIELD-VERIFIED ACTIVE ROW CROP

NASS CROPLAND DATA LAYER (2020)

- CORN
- SOYBEANS
- SWEET CORN
- WINTER WHEAT
- RYE
- OATS
- ALFALFA
- OTHER HAY/NON ALFALFA
- BUCKWHEAT
- SOD/GRASS SEED
- FALLOW/IDLE CROPLAND
- CHERRIES
- APPLES
- OPEN WATER
- DEVELOPED/OPEN SPACE
- DEVELOPED/LOW INTENSITY
- DEVELOPED/MED INTENSITY
- DEVELOPED/HIGH INTENSITY
- BARREN
- DECIDUOUS FOREST
- EVERGREEN FOREST
- MIXED FOREST
- SHRUBLAND
- GRASSLAND/PASTURE
- WOODY WETLANDS
- HERBACEOUS WETLANDS
- TRITICALE

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER, IMAGERY DATE 2020.
DATA SOURCES: TRC, NYSGIS, NASS.

1:24,000
1" = 2,000'
0 1,000 2,000 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

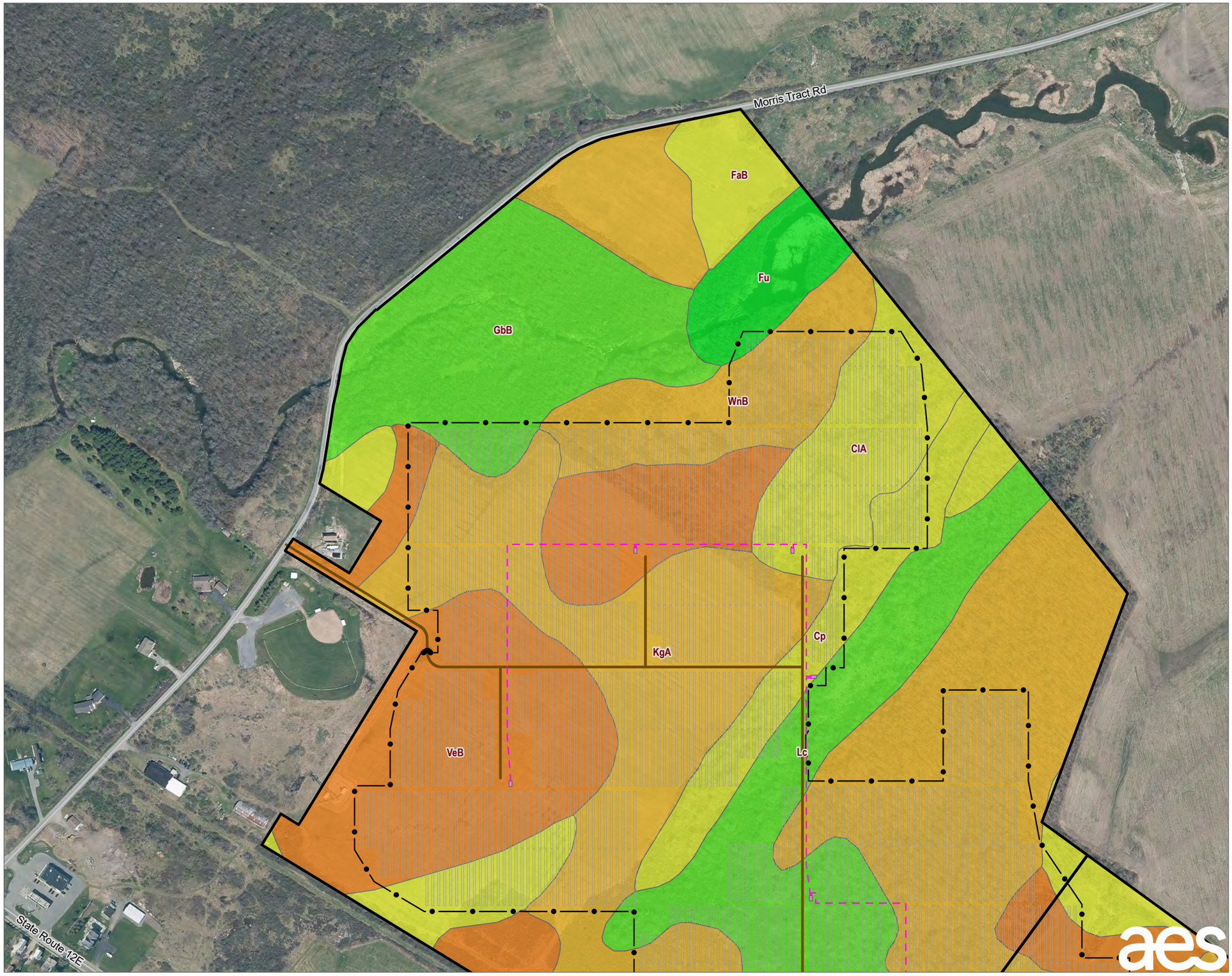
TITLE:
AGRICULTURAL USE IN THE FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER		
APPROVED BY:	S. KRANES		**FIGURE 1**
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

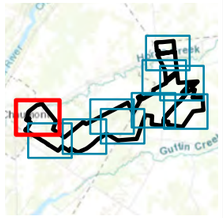
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet Map Rotation: 0
Saved By: AKAILAS on 9/14/2021, 12:27:00 PM Layout Name: Riverside_Agriculture_Figure_1_AgUse11x17



- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 9
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

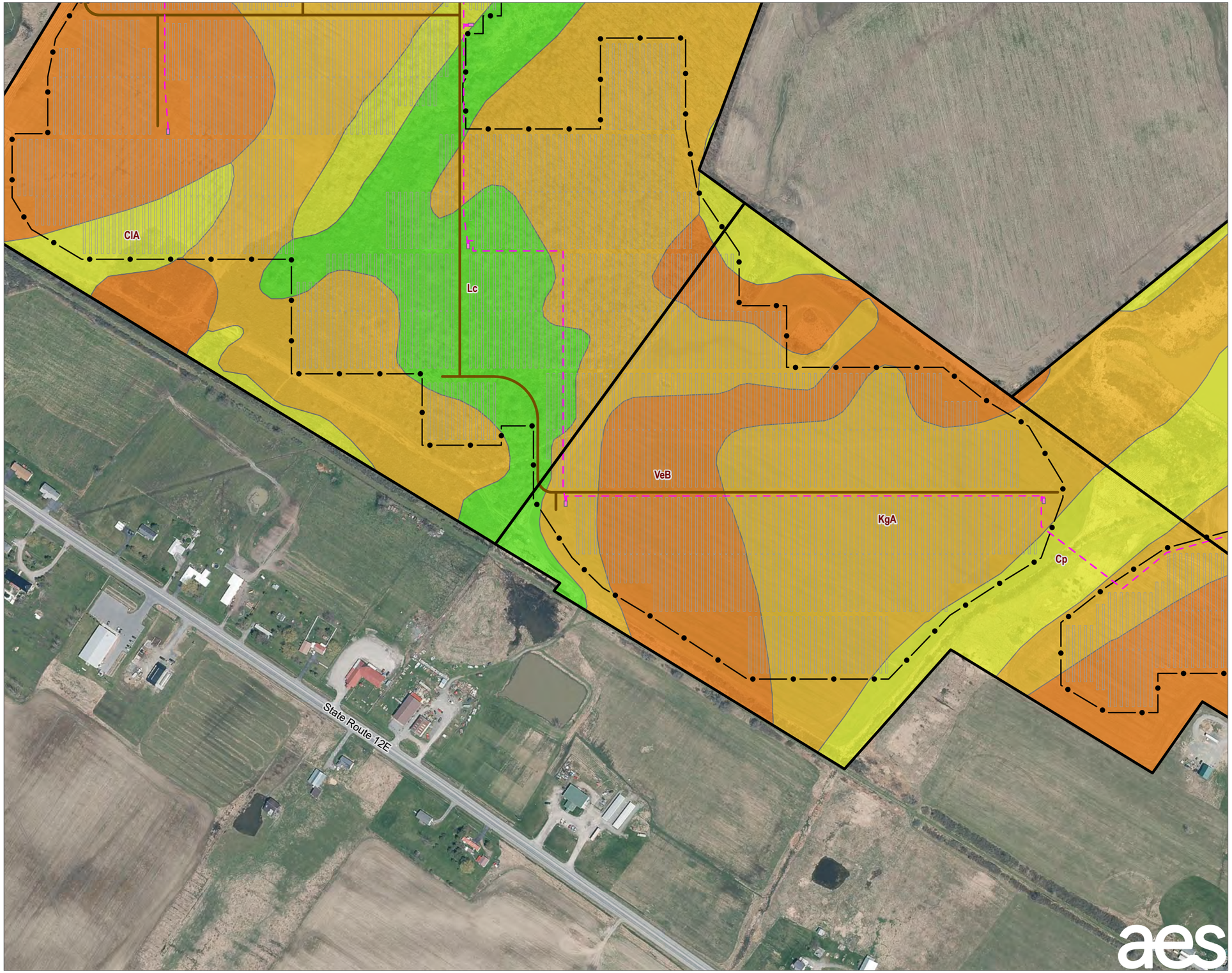
TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	***Sheet 1 of 10***	
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

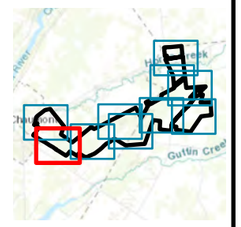
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet Map Rotation: 0
Saved By: AKAILAS on 9/24/2021 - 09:40:34 AM Layout Name: Riverside_Figure2_FacilityAgriculturalSoils_11x17



- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

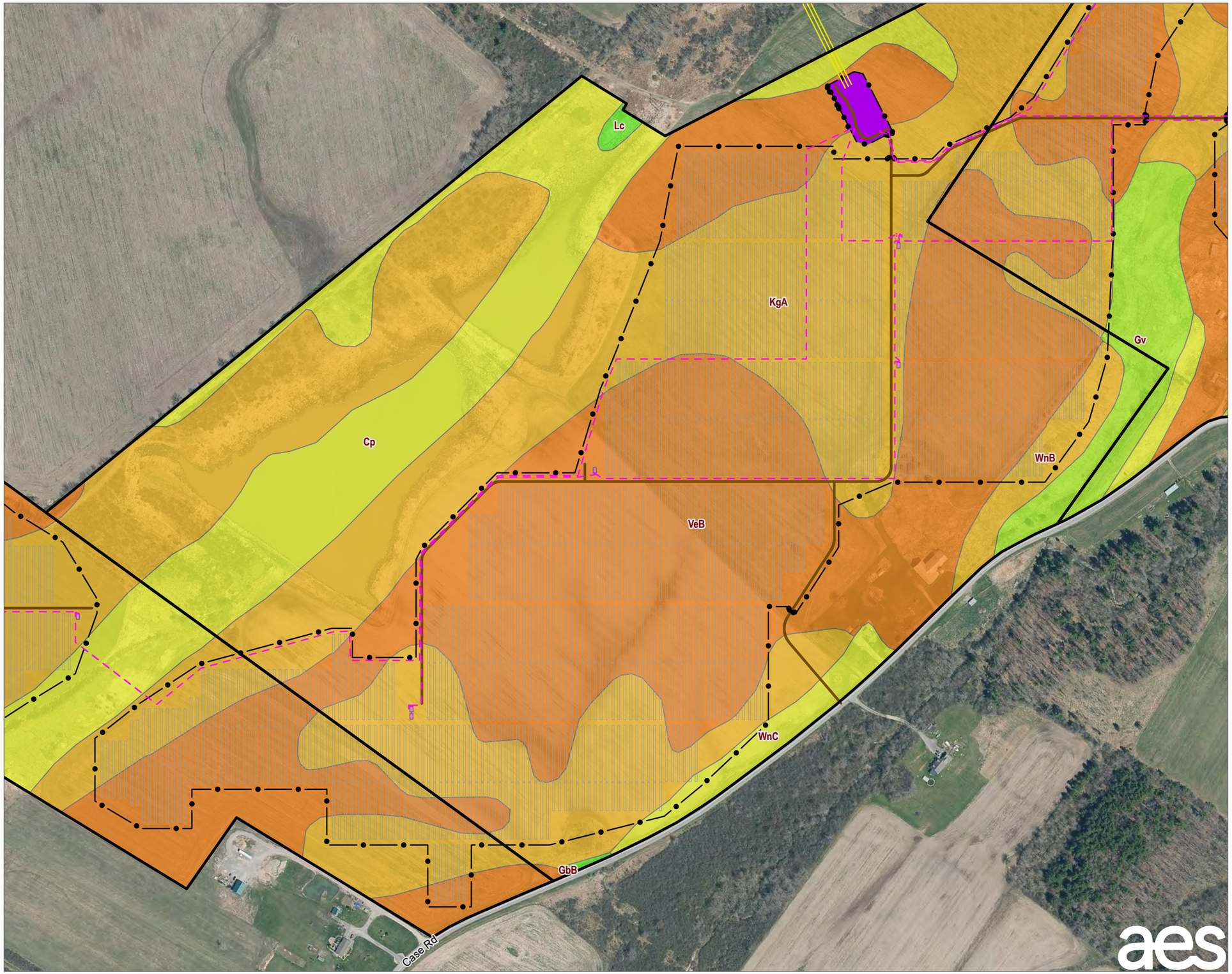
DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER		
APPROVED BY:	S. KRANES		
DATE:	SEPTEMBER 2021		

FIGURE 2
Sheet 2 of 10

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

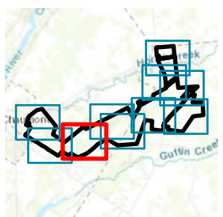
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
Saved By AKAILAS on 9/24/2021, 09:43:24 AM. Layout Name: Riverside_Agricultural_Soils_11x17. Path: C:\Users\akailas\Desktop\Riverside_Agricultural_Soils_11x17_FacilityAgriculturalSoils_Figure2_



- PROPOSED BURIED COLLECTION LINE
- PROPOSED OVERHEAD INTERCONNECT LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- PROPOSED COLLECTION SUBSTATION
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

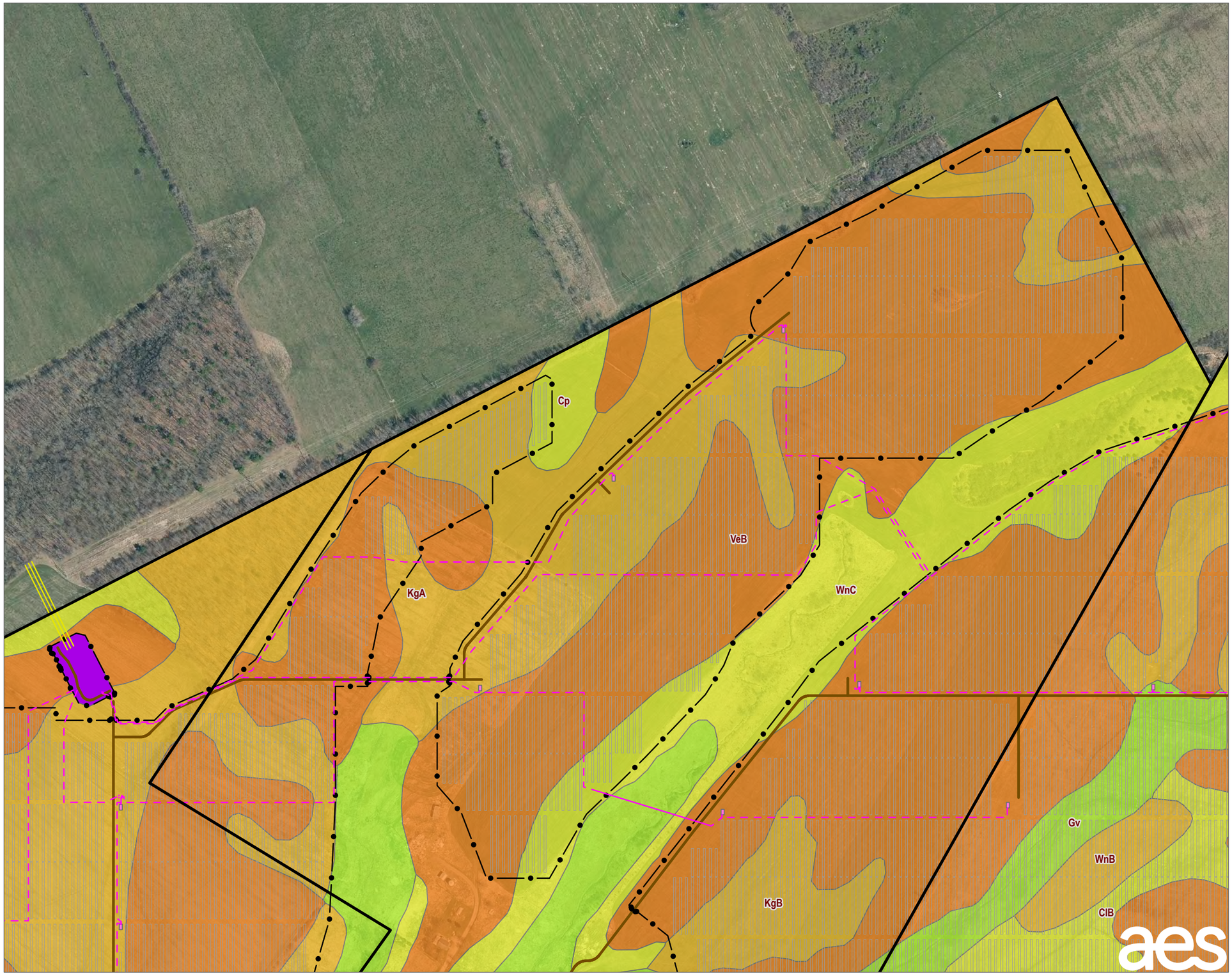
TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	*Sheet 3 of 10*	
DATE:	SEPTEMBER 2021		

215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

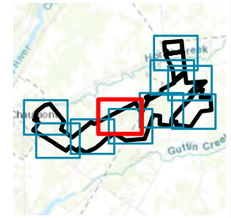
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
Saved By: AKAILAS on 9/24/2021 - 09:40:34 AM. Layout Name: Riverside_Agsoils_Figure2_FacilityAgriculturalSoils_11x17



- PROPOSED BURIED COLLECTION LINE
- PROPOSED OVERHEAD INTERCONNECT LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- PROPOSED COLLECTION SUBSTATION
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER		
APPROVED BY:	S. KRANES		
DATE:	SEPTEMBER 2021		

FIGURE 2
Sheet 4 of 10

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

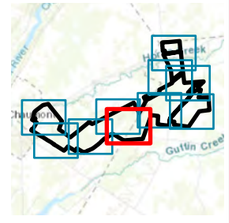
FILE: Riverside_Exhibit_Figures_Sept2021.aprx

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet Map Rotation: 0
Saved By: AKAILAS on 9/24/2021 - 09:40:54 AM Layout Name: Riverside_Figure2_FacilityAgriculturalSoils_11x17

- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

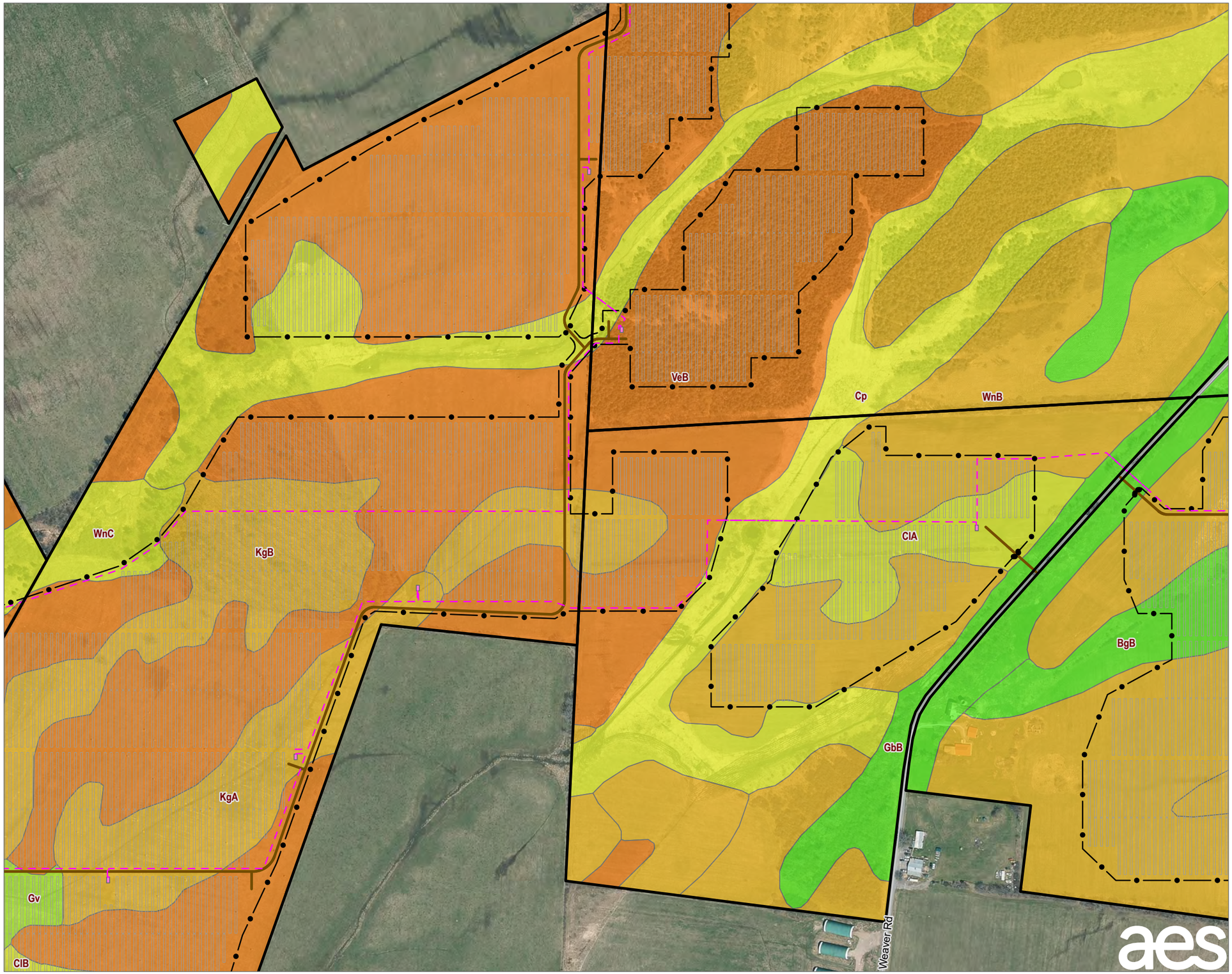
TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	***Sheet 5 of 10***	
DATE:	SEPTEMBER 2021		

215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

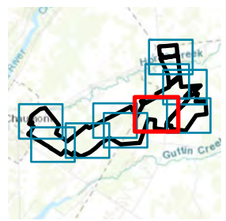
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
Saved By AKAILAS on 9/24/2021 - 09:43:24 AM - Layout Name - Riverside_AgArea_Figure2 - FacilityAgriculturalSoils_11x17



- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

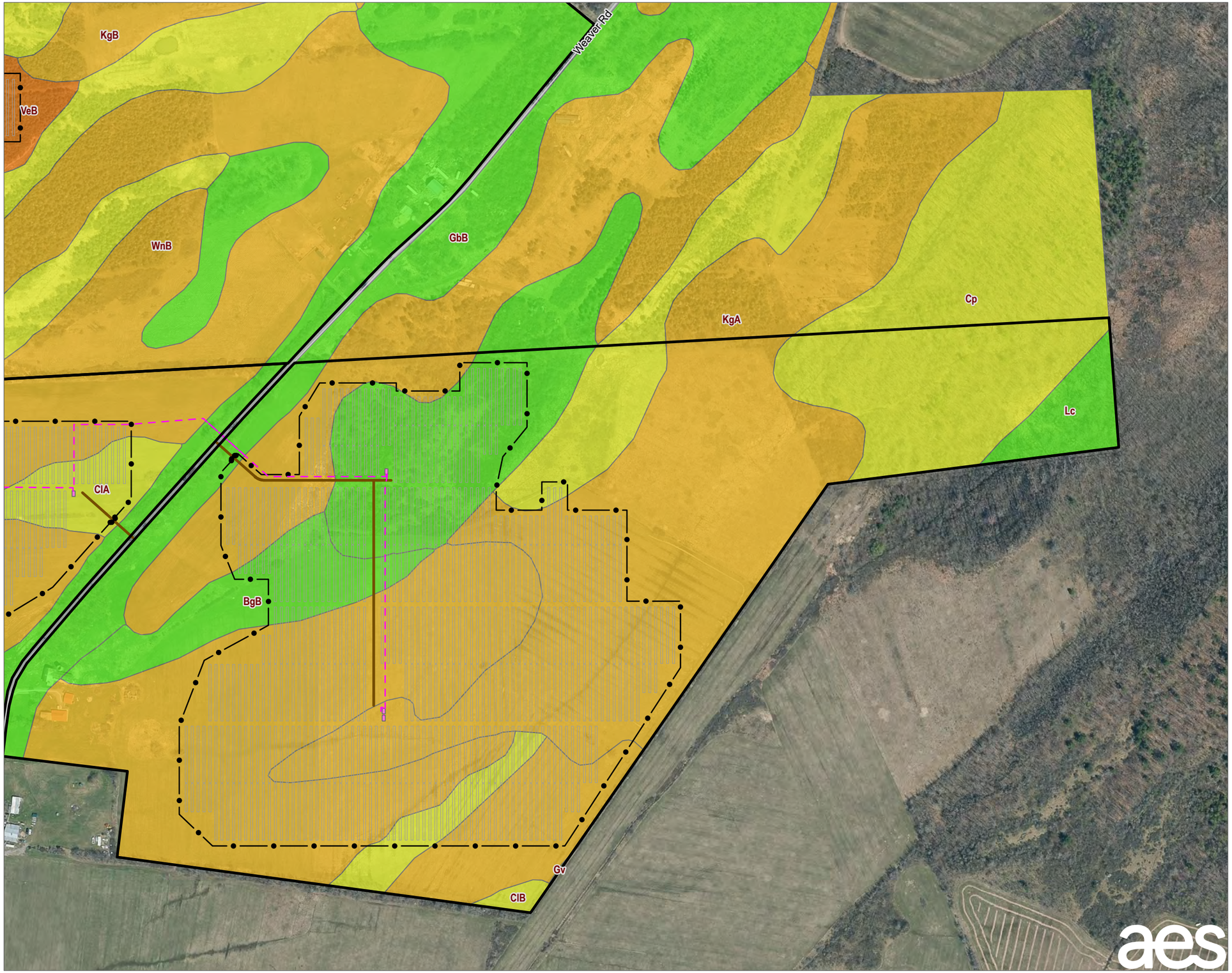
PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	*Sheet 6 of 10*	
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

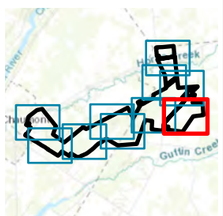
FILE: Riverside_Exhibit_Figures_Sept2021.aprx



- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

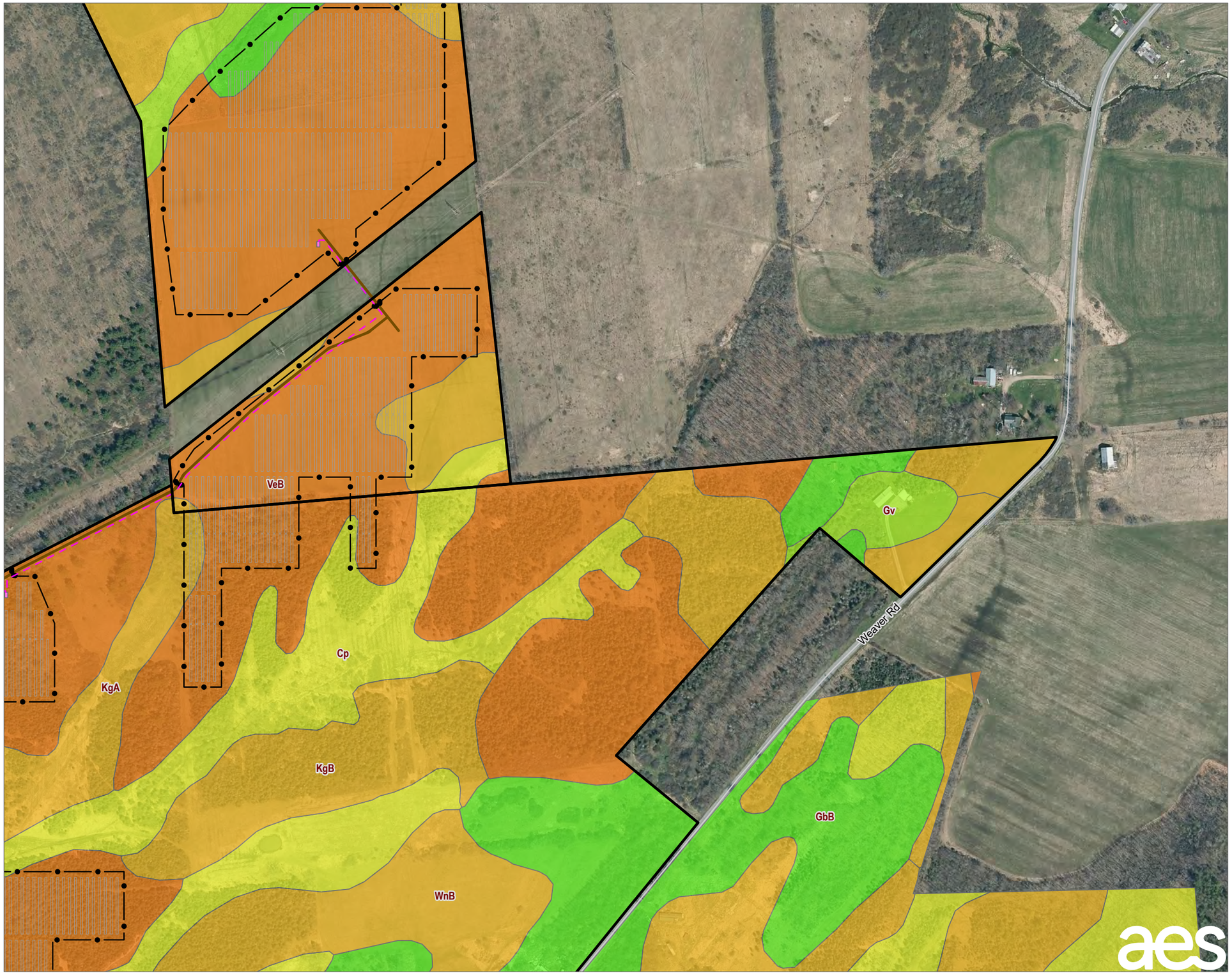
TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	*Sheet 7 of 10*	
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

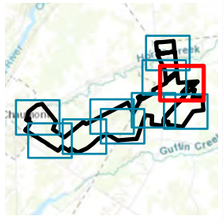
Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
Saved By: AKAILAS on 9/24/2021, 9:40:34 AM Layout Name: Riverside_Agland_Figure2_FacilityAgriculturalSoils_11x17



- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER		
APPROVED BY:	S. KRANES		
DATE:	SEPTEMBER 2021		

FIGURE 2
Sheet 8 of 10

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

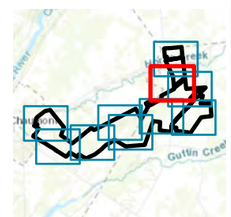
FILE: Riverside_Exhibit_Figures_Sept2021.aprx

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
Saved By AKAILAS on 9/24/2021 - 09:43:24 AM Layout Name: Riverside_AgArea_Figure2_FacilityAgriculturalSoils_11x17

- PROPOSED BURIED COLLECTION LINE
- PROPOSED FENCE
- PROPOSED ACCESS ROADS
- PROPOSED INVERTERS
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 9
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

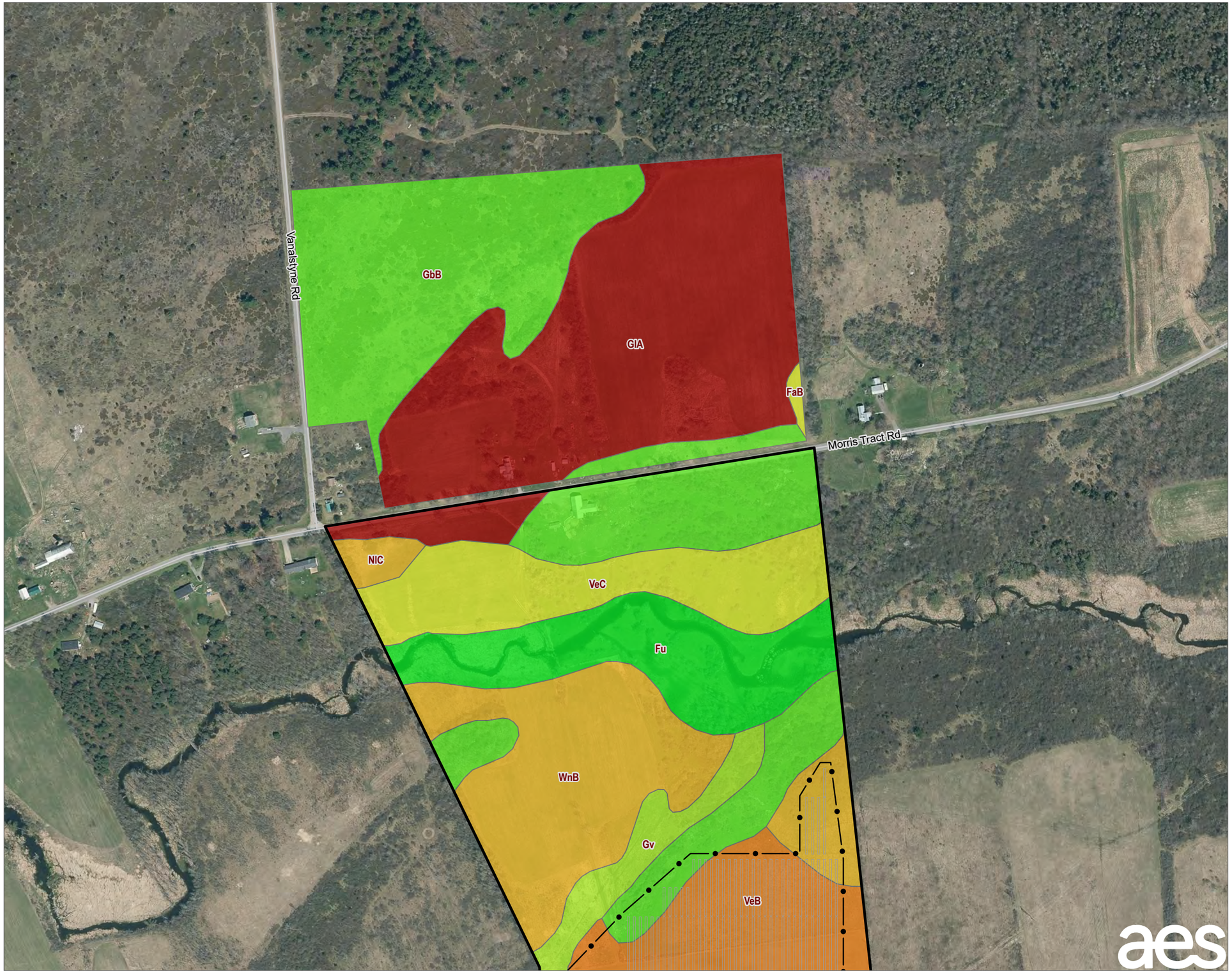
PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	***Sheet 9 of 10***	
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

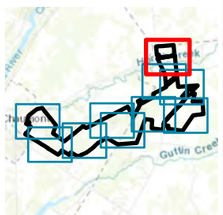
FILE: Riverside_Exhibit_Figures_Sept2021.aprx



- PROPOSED FENCE
- PROPOSED PV ARRAY
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 2
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 4
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 5
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 6
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 7
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 8
- SOIL IDENTIFIED AS MINERAL SOIL GROUP 9
- SURVEYED BOUNDARY OF FACILITY PARCELS

NOTES:
1. THIS FIGURE IS DESIGNED TO BE VIEWED OR PRINTED IN COLOR AT 11X17.

BASE MAP: NYSGIS "LATEST ORTHOIMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC, NYSGIS, NYSDAM/NYSERDA, USDA SSURGO.



1:4,000
1" = 333'

0 350 700 FEET

PROJECT:
RIVERSIDE SOLAR LLC
TOWNS OF LYME & BROWNVILLE
JEFFERSON COUNTY, NY

TITLE:
AGRICULTURAL SOILS ON FACILITY SITE

DRAWN BY:	A. KAILAS	PROJ. NO.:	373222
CHECKED BY:	A. HESSLER	**FIGURE 2**	
APPROVED BY:	S. KRANES	***Sheet 10 of 10***	
DATE:	SEPTEMBER 2021		

TRC
215 GREENFIELD PKWY, STE 102
LIVERPOOL, NY 13088

FILE: Riverside_Exhibit_Figures_Sept2021.aprx

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet, Map Rotation: 0
Saved By: AKAILAS on 9/24/2021, 9:40:34 AM, Layout Name: Riverside_Agtest_Figure 2_FacilityAgriculturalSoils_11x17

ATTACHMENT A

New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Land (Revised 10/18/2019)

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands (Revision 10/18/2019)

The following are guidelines for mitigating construction impacts on agricultural land during the following stages of a solar energy project: Construction, Post-Construction Restoration, Monitoring and Remediation, and Decommissioning. These guidelines apply to project areas subject to ground disturbance[1] within agricultural lands including:

- Lands where agriculture use will continue or resume following the completion of construction (typically those lands outside of the developed project's security fence);
- Lands where the proposed solar development will be returning to agricultural use upon decommissioning, (typically those lands inside of the developed project's security fence);
- Applicable Area under review pursuant to Public Service Law Article 10 Siting of Major Electric Facilities.

The Project Company will incorporate these Guidelines into the development plans and applications for permitting and approval for solar projects that impact agricultural lands. If the Environmental Monitor, hereafter referred to as EM, determines that there is any conflict between these Guidelines and the requirements for project construction that arise out of the project permitting process, the Project Company and its EM, will notify the New York State Department of Agriculture and Markets (NYSDAM), Division of Land and Water Resources, and seek a reasonable alternative.

Environmental Monitor (EM)

The Project Company (or its contractor) shall hire or designate an EM to oversee the construction, restoration and follow-up monitoring in agricultural areas. The EM shall be an individual with a confident understanding of normal agriculture practices[2] (such as cultivation, crop rotation, nutrient management, drainage (subsurface and/or surface), chemical application, agricultural equipment operation, fencing, soils, plant identification, etc.) and able to identify how the project may affect the site and the applicable agricultural practices. The EM should also have experience with or understanding of the use of a soil penetrometer for compaction testing and record keeping. The EM may serve dual inspection roles associated with other Project permits and/or construction duties, if the agricultural workload allows. The EM should be available to provide site-specific agricultural information as necessary for project development through field review and direct contact with both the affected farm operators and NYSDAM. The EM should maintain regular contact with appropriate onsite project construction supervision and inspectors throughout the construction phase. The EM should maintain regular contact with the affected farm operator(s) concerning agricultural land impacted, management matters pertinent to the agricultural operations and the site-specific implementation of agricultural resource mitigation measures. The EM will serve as the agricultural point of contact.

[1]Ground Disturbance is defined as an activity that contributes to measurable soil compaction, alters the soil profile or removes vegetative cover. Construction activities that utilize low ground pressure vehicles that do not result in a visible rut that alters soil compaction, is not considered a Ground Disturbance. Soil compaction should be tested using an appropriate soil penetrometer or other soil compaction measuring device. The soil compaction test results within the affected area will be compared with those of the adjacent unaffected portion of the agricultural area.

[2] An EM is not expected to have knowledge regarding all of the listed agricultural practices, but rather a general understanding such that the EM is able to perform the EM function.

1. For projects involving less than 50 acres of agricultural land within the limits of disturbance (LOD),[3] the EM shall be available for consultation and/or on-site whenever construction or restoration work that causes Ground Disturbance is occurring on agricultural land.

2. For projects involving 50 acres or more of agricultural land within the (LOD) (including projects involving the same parent company whether phased or contiguous projects), the EM shall be on site whenever construction or restoration work requiring or involving Ground Disturbance is occurring on agricultural land and shall notify NYSDAM of Project activity. The purpose of the agency coordination would be to assure that the mitigation measures of these guidelines are being met to the fullest extent practicable. The Project Company and the NYSDAM will agree to schedule inspections in a manner that avoids delay in the work. NYSDAM requires the opportunity to review and will approve the proposed EM based on qualifications or capacities.

Construction Requirements

- Before any topsoil is stripped, representative soil samples should be obtained from the areas to be disturbed. The soil sampling should be consistent with Cornell University's soil testing guidelines, and samples should be submitted to a laboratory for testing PH, percent organic material, cation exchange capacity, Phosphorus/Phosphate (P), and Potassium/Potash (K). The results are to establish a benchmark that the soil's PH, Nitrogen (N), Phosphorus/Phosphate (P), and Potassium/Potash (K) are to be measured against upon restoration. If soil sampling is not performed, fertilizer and lime application recommendations for disturbed areas can be found at https://www.agriculture.ny.gov/ap/agservices/Fertilizer_Lime_and_Seeding_Recommendations.pdf .

- Stripped topsoil should be stockpiled from work areas (e.g. parking areas, electric conductor trenches, along access roads, equipment pads) and kept separate from other excavated material (rock and/or sub-soil) until the completion of the facility for final restoration. For proper topsoil segregation, at least 25 feet of additional temporary workspace (ATWS) may be needed along "open-cut" underground utility trenches. All topsoil will be stockpiled as close as is reasonably practical to the area where stripped/removed and shall be used for restoration on that particular area. Any topsoil removed from permanently converted agricultural areas (e.g. permanent roads, etc.) should be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the project Limits of Disturbance (LOD) ; however not to significantly alter the hydrology of the area. Clearly designate topsoil stockpile areas and topsoil disposal areas in the field and on construction drawings; changes or additions to the designated stockpile areas may be needed based on field conditions in consultation with the EM. Sufficient LOD (as designated on the site plan or by the EM) area should be allotted to allow adequate access to the stockpile for topsoil replacement during restoration.

    - Topsoil stockpiles on agricultural areas left in place prior to October 31st should he seeded with Aroostook Winter Rye or equivalent at an application rate of three bushels (168 lbs.) per acre and mulched with straw mulch at rate of two to three bales per 1000 Sq. Ft.

    - Topsoil stockpiles left in place between October 31st and May 31st should be mulched with straw at a rate of two to three bales per 1000 Sq. Ft. to prevent soil loss.

- The surface of access roads located outside of the generation facility's security fence and constructed through agricultural fields shall be level with the adjacent field surface. If a level road design is not

[3] The Limits of Disturbance (LOD) includes all project related ground disturbances and all areas within the project's security fencing.

feasible, all access roads should be constructed to allow a farm crossing (for specific equipment and livestock) and to restore/ maintain original surface drainage patterns.

- Install culverts and/or waterbars to maintain or improve site specific natural drainage patterns.

- Do not allow vehicles or equipment outside the planned LOD without the EM seeking prior approval from the landowner (and/or agricultural producer), and associated permit amendments as necessary. Limit all vehicle and equipment traffic, parking, and material storage to the access road and/or designated work areas, such as laydown areas, with exception the use of low ground pressure equipment.[4] Where repeated temporary access is necessary across portions of agricultural areas outside of the security fence, preparation for such access should consist of either stripping / stockpiling all topsoil linearly along the access road, or the use of timber matting.

- Proposed permanent access should be established as soon as possible by removing topsoil according to the depth of topsoil as directed by the EM. Any extra topsoil removed from permanently converted areas (e.g. permanent roads, equipment pads, etc.) should be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the project Limits of Disturbance (LOD); however not to significantly alter the hydrology of the area.

- When open-cut trenching is proposed, topsoil stripping is required from the work area adjacent to the trench (including segregated stockpile areas and equipment access). Trencher or road saw like equipment are not allowed for trench excavation in agricultural areas, as the equipment does not segregate topsoil from subsoil. Horizontal Directional Drilling (HDD) or equivalent installation that does not disrupt the soil profile, may limit agricultural ground disturbances. Any HDD drilling fluid inadvertently discharged must be removed from agricultural areas. Narrow open trenches less than 25 feet long involving a single directly buried conductor or conduit (as required) to connect short rows within the array, are exempt from topsoil segregation.

- Electric collection, communication and transmission lines installed above ground can create long term interference with mechanized farming on agricultural land. Thus, interconnect conductors outside of the security fence must be buried in agricultural fields wherever practicable. Where overhead utility lines are required, (including Point(s) of Interconnection) installation must be located outside field boundaries or along permanent access road(s) wherever possible. When overhead utilities must cross farmland, minimize agricultural impacts by using taller structures that provide longer spanning distances and locate poles on field edges to the greatest extent practicable.

- All buried utilities located **within** the generation facility's security fence must have a minimum depth of 18-inches of cover if buried in a conduit and a minimum depth of twenty-four inches of cover if directly buried (e.g. not routed in conduit).[5]

- The following requirements apply to all buried utilities located **outside** of the generation facility security fence:

    - In cropland, hayland, and improved pasture buried electric conductors must have a minimum depth of 48-inches of cover. In areas where the depth of soil over bedrock is less than 48-inches, the

[4] low ground pressure vehicles that do not result in a visible rut that alters soil compaction.
[5] Burial of electrical conductors located within the energy generation facility may be superseded by more stringent updated electrical code or applicable governing code.

electric conductors must be buried below the surface of the bedrock if friable/rippable, or as near as possible to the surface of the bedrock.

- In unimproved grazing areas or on land permanently devoted to pasture the minimum depth of cover must be 36-inches.

- Where electrical conductors are buried directly below the generation facility's access road or immediately adjacent (at road edge) to the access road, the minimum depth of cover must be 24-inches. Conductors must be close enough to the road edge as to be not subject to agricultural cultivation / sub-soiling.

- When buried utilities alter the natural stratification of soil horizons and natural soil drainage patterns, rectify the effects with measures such as subsurface intercept drain lines. Consult the local Soil and Water Conservation District concerning the type of intercept drain lines to install to prevent surface seeps and the seasonally prolonged saturation of the conductor installation zone and adjacent areas. Install and/or repair all drain lines according to Natural Resources Conservation Service conservation practice standards and specifications. Drain tile must meet or exceed the AASHTO M-252 specifications. Repair of subsurface drains tiles should be consistent with the NYSDAM's details for *"Repair of Severed Tile Line"* found in the pipeline drawing A-5 (http://www.agriculture.ny.gov/ap/agservices/Pipeline-Drawings.pdf).

- In pasture areas, it may be necessary to construct temporary fencing (in addition to the Project's permanent security fences) around work areas to prevent livestock access to active construction areas and areas undergoing restoration. For areas returning to pasture, temporary fencing will be required to delay the pasturing of livestock within the restored portion of the LOD until pasture areas are appropriately revegetated. Temporary fencing including the project's required temporary access for the associated fence installations should be included within the LOD as well as noted on the construction drawings. The Project Company will be responsible for maintaining the temporary fencing until the EM determines that the vegetation in the restored area is established and able to accommodate grazing. At such time, the Project Company should be responsible for removal of the temporary fences.

Post-Construction restoration requirements applicable to continued use agricultural areas that suffered ground disturbance due to construction activities (typically lands outside of the developed project's security fence).

- All construction debris in active agriculture areas including pieces of wire, bolts, and other unused metal objects will need to be removed and properly disposed of as soon as practical to prevent mixing with any topsoil.

- Excess concrete will not be buried or left on the surface in active agricultural areas. Concrete trucks will be washed outside of active agricultural areas. Remove all excess subsoil and rock unearthed from construction related activities occurring in areas intended to return to agricultural use. On-site disposal of such material is not permissible in active agricultural lands. Designated spoil disposal locations should be specified in the associated construction plans. If landowner agreements, LOD boundary, or Project's land use approvals do not allow for on-site disposal, material must be removed from the site.[6]

[6] Any permits necessary for disposal under local, State and/or federal laws and regulations must be obtained by the facility operator, with the cooperation of the landowner when required.

- Excess stripped topsoil shall not be utilized for fill within the project area. Any extra topsoil removed from permanently impacted areas (e.g. roads, equipment pads, etc.) should be evenly spread in adjacent agricultural project areas, however not to significantly alter the hydrology of the area.

- Regrade all access roads outside of the security fencing (as determined necessary by the EM), to allow for farm equipment crossing and restore original surface drainage patterns, or other drainage pattern incorporated into the design.

- Repair all surface or subsurface drainage structures damaged during construction as close to preconstruction conditions as possible, unless said structures are to be removed as part of the project design. Correct any surface or subsurface drainage problems resulting from construction of the solar energy project with the appropriate mitigation as determined by the Environmental Monitor, Soil and Water Conservation District and the Landowner.

- On agricultural land needing restoration because of ground disturbance, postpone any restoration practices until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration must not be conducted while soils are in a wet or plastic state of consistency. Stockpiled topsoil must not be regraded, and subsoil must not be decompacted until plasticity, as determined by the Atterberg field test, is adequately reduced. No permanent project restoration activities shall occur in agricultural areas between the months of October through May unless favorable soil moisture conditions exist.

- In all continued use agricultural land where the topsoil was stripped, subsoil decompaction shall be conducted prior to topsoil replacement. Following construction, all such areas will be decompacted to a depth of 18 inches with a tractor mounted deep ripper or heavy-duty chisel plow. Soil compaction results shall be no more than 250 pounds per square inch (PSI) throughout the decompacted 18 inches as measured with a soil penetrometer. Following decompaction, all rocks 4 inches and larger in size unearthed from decompaction will be removed from the surface of the subsoil prior to replacement of the topsoil. The topsoil will be replaced to original depth and the original contours will be reestablished where possible. All rocks 4 inches and larger from topsoil shall be removed from the surface of the topsoil. Subsoil decompaction and topsoil replacement must be avoided after October 1, unless approved on a site-specific basis by the landowner in consultation with NYSDAM. All parties involved must be cognizant that areas restored after October 1st may not obtain sufficient growth for stabilization[7] to prevent erosion over the winter months. If areas are to be restored after October 1st, necessary provisions must be made to prevent potential springtime erosion, as well as restore any eroded areas in the springtime, to establish proper growth. Excess stripped topsoil shall be evenly spread in the adjacent project areas, or adjacent agricultural areas (within the LOD), however, not to significantly alter the hydrology of the area.

- In all continued use agricultural areas where the topsoil was not stripped, including timber matted areas, the EM shall determine appropriate activities to return the area to agricultural use. These activities may include decompaction, rock removal, and revegetation. Soil compaction should be tested in the affected areas and the affected area's adjacent undisturbed areas using an appropriate soil penetrometer or other soil compaction measuring device as soon as soils achieve moisture equilibrium with adjacent unaffected areas. Compaction tests will be made at regular intervals of distance throughout the affected areas, including each soil type identified within the affected areas. Soil compaction results shall be measured with a soil penetrometer not exceeding more than 250 pounds per square inch (PSI), by

[7] Sufficient growth for stabilization should be determined by comparison with unaffected crop production. Annual crops restored after normal planting window (as determined by the landowner or associated producer) should be stabilized with Aroostook Winter Rye at the rate of 150/100 lbs. per acre (broad cast/drill seeder).

comparing probing depths of both the affected and unaffected areas. Where representative soil density of the affected area's collective depth measurements present compaction restrictions exceeding an acceptable deviation of no more than 20% from the adjacent undisturbed area's mean soil density, additional decompaction may be required to a depth of 18-inches with a tractor mounted deep ripper or heavy-duty chisel plow. Following decompaction, remove all rocks unearthed from decompaction activities 4 inches and larger in size from the surface. Revegetation shall be performed in accordance with the instructions below.

- Seed all agricultural areas from which the vegetation was removed or destroyed with the seed mix specified by the landowner/agriculture producer or as otherwise recommended in the Department's fertilizer, lime and seeding guideline: [https://www.agriculture.ny.gov/ap/agservices/Fertilizer_Lime_and_Seeding_Recommendations.pdf]. Soil amendments should be applied as necessary so that restored agricultural areas' soil properties, at minimum, reasonably reflect the pre-construction soil test results or as otherwise agreed to by the involved parties to ensure continued agricultural use. All parties must be cognizant that areas restored after October 1st may not obtain sufficient growth to prevent erosion over the winter months. If areas are to be restored after October 1st, necessary provisions must be made to restore and/or re-seed any eroded or poorly germinated areas in the springtime, to establish proper growth.

Monitoring and Remediation

Project Companies shall provide a monitoring and remediation period of one complete growing season following the date upon which the desired crop is planted. All projects subject to NYS Public Service Law Article 10 will provide a monitoring period of two complete growing seasons following the date upon which the project achieves the establishment of the desired crop.

On site monitoring shall be conducted seasonally at least three times during the growing season (Spring, Summer, Fall). Monitoring is required to identify any remaining impacts directly associated with the construction of the project on agricultural lands proposed to remain or resume agriculture production, including the effects of climatic cycles such as frost action, precipitation and growing seasons to occur, from which various monitoring observations can be made. NYSDAM expects the Project Company (or its contractor) to retain the EM for follow-up monitoring and remediation (as needed) in agricultural areas. Monitoring is limited to the restored agricultural area. Non-project related impacts affecting the restored project area will be discussed with NYSDAM staff and considered for omission from future monitoring and remediation. The EM is expected to record the following observations from onsite inspections:[8]

- **Topsoil Thickness and Trench Settling** – The EM observations may require small hand dug holes to observe the percentage of settled topsoil in areas where the topsoil was stripped, or trenching was performed without stripping topsoil. Observations concerning depth of topsoil deficiencies shall require further remediation by re-appropriating additional topsoil. Acceptable materials for remediation are: known areas of native excess topsoil (according to records of project specific excess topsoil disposal spread within the original LOD) or imported topsoil free of invasive species that is consistent with the quality of topsoil on the affected site.

[8] The activities that follow are not necessary for restored agricultural lands on which the farmer or landowner has commenced activities, including agricultural activities or other use that tend to reverse restoration or create conditions that would otherwise trigger restoration. Should NYSDAM contend upon inspection that conditions indicate that post-construction restoration activities were improperly performed or insufficient, NYSDAM may inform the project company and NYSERDA for further investigation and remediation.

- **Excessive Rock (>4-inches)** - Determined by a visual inspection of disturbed areas as compared to unaffected portions of the same field located outside the construction area. Observations concerning excess stone material in comparison to off-site conditions shall require further remediation including removal and disposal of all excess rocks and large stones.

- **Soil Compaction** - Project affected agricultural soils should be tested using an appropriate soil penetrometer or other soil compaction measuring device. Compaction tests will be made at regular intervals of distance throughout the access or work areas, including each soil type identified on the affected agricultural areas. Where representative soil density of the affected area exceeds the representative soil density of the unaffected areas, additional decompaction may be required. Consultation with NYSDAM staff and the agricultural producer(s) should be conducted prior to scheduling additional decompaction. If warranted, decompaction to a depth of 18-inches with a tractor mounted deep ripper or heavy-duty chisel plow. Restoration of displaced topsoil to original depth and re-establish original contours where possible. Decompaction deep shattering will be applied during periods of relatively low soil moisture to ensure the desired mitigation and to prevent additional soil compaction. Oversized stone/rock (Four-inches) material that is uplifted/unearthed to the surface as a result of the deep shattering will be removed.

- **Drainage** – The EM shall visually inspect the restored agricultural areas in search of pervasive stunted crop growth due to seasonal saturation, not previously experienced at the site and not resulting from the agricultural producer's irrigation management or due to excessive rainfall. Identified areas of stunted crop growth shall be compared to the nearest undisturbed adjacent areas under a substantially equivalent terrain and crop management plan. Drainage observations should be evaluated to determine if the project affected surface or sub-surface drainage during construction or restoration. Project caused drainage issues affecting or likely to reduce crop productivity of the adjacent areas will have to be remediated via a positive surface drainage, sub-surface drainage repair or an equivalent.

- **Agriculture Fencing and Gates** – The EM shall inspect Project associated fencing and gates (installed, altered or repaired) within the Project's LOD associated with agricultural activities for function and longevity. The Project Company is responsible during the Monitoring and Remediation Phase for maintaining the integrity of Project associated fencing and gates.

The Project Company (or its contractor) shall consolidate each applicable growing season's observations into an annual report during the monitoring period and shall be provided upon request to NYSDAM. Annual reports should include date stamped photographs illustrating crop growth in comparison with unaffected portions the agricultural areas.

The EM shall record observations of the establishment of the desired crop and subsequent crop productivity within restored agricultural areas and shall be evaluated by comparing its productivity to that of the nearest adjacent undisturbed agricultural land of similar crop type within the same field. If a decline in crop productivity is apparent the Project Company as well as other appropriate parties must determine whether the decline is due to project activities. If project activities are determined to be the primary detrimental factor, the project EM will notify NYSDAM concerning unsuccessful restoration and to potentially schedule a NYSDAM staff field visit. If project restoration is determined to be insufficient, the Project Company will develop a plan for appropriate rehabilitation measures to be implemented. NYSDAM staff will review and approve said plan prior to implementation. Additional monitoring may be required depending on additional restoration activities needed.

The Project Company is not responsible for site conditions and/or potential damages attributable to the agricultural producer's land use management or others' land use management.

Decommissioning

If the operation of the generation facility is permanently discontinued, remove all above ground structures (including panels, racking, signage, equipment pad, security fencing) and underground utilities if less than 48-inches deep. All concrete piers, footers, or other supports must be removed to a minimum depth of 48-inches below the soil surface. The following requirements apply to electric conductors located at the respective range of depth below the surface:

- 48-inches plus: All underground electric conduits and direct buried conductors may be abandoned in place. Applicable conduit risers must be removed, and abandoned conduit must be sealed or capped to avoid a potential to direct subsurface drainage onto neighboring land uses.

- Less than 48-inches: All underground direct buried electric conductors and conductors in conduit and associated conduit with less than 48-inches of cover must be removed, by means of causing the least amount of disturbance as possible.

Access roads in agricultural areas must be removed, unless otherwise specified by the landowner. If access is to be removed, topsoil will have to be returned from recorded project excess native topsoil disposal areas, if present, or imported topsoil free of invasive species that is consistent with the quality of topsoil on the affected site. Restore all areas intended for agricultural production, according to recommendations by the current landowner or leasing agricultural producer, and as required by any applicable permit, the Soil and Water Conservation District, and NYSDAM.

Monitoring and restoration requirements in accordance to the prior sections of these guidelines, will be required for the decommissioning restoration. NYSDAM requires notice before the Project Company undertakes decommissioning.