*Full Environmental Assessment Form*
*Part 1 - Project and Setting*

## 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:<br>Albany County Solar Installation - Radar Site | | |
| Project Location (describe, and attach a general location map):<br>897 Watervliet Shaker Rd. - Town of Colonie, NY | | |
| Brief Description of Proposed Action (include purpose or need):<br>Lease of approximately 5 +/- acres of county-owned property at 897 Watervliet Shaker Rd. in the Town of Colonie to Siemens Industry, Inc. for design and installation of a 1.872mw solar farm with associated transmission equipment, a perimeter fence and maintenance access road. | | |
| Name of Applicant/Sponsor:<br>Lucas Rogers | Telephone: 518-447-7040<br>E-Mail: lucas.rogers@albanycountyny.gov | |
| Address: 112 State St. Room 1200 | | |
| City/PO: Albany | State: NY | Zip Code: 12207 |
| Project Contact (if not same as sponsor; give name and title/role): | Telephone:<br>E-Mail: | |
| Address: | | |
| City/PO: | State: | Zip Code: |
| Property Owner (if not same as sponsor):<br>County of Albany | Telephone: 518-447-7040<br>E-Mail: | |
| Address:<br>112 State St. Room 1200 | | |
| City/PO: Albany | State: NY | Zip Code: 12207 |

**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 | | |
| c. City, Town or Village Zoning Board of Appeals ☐Yes☑No | | |
| d. Other local agencies ☐Yes☑No | | |
| e. County agencies ☑Yes☐No | Albany County Legislature - Lease and funding | 2022 |
| f. Regional agencies ☐Yes☑No | | |
| g. State agencies ☑Yes☐No | OPRHP SHPO - Historic/Archaeologic<br>NYS DEC - SPDES Construction General Permit | 2022 |
| h. Federal agencies ☐Yes☑No | | |
| i. Coastal Resources.<br>*i.* Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No<br>*ii.* Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No<br>*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<br>• **If Yes,** complete sections C, F and G.<br>• **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<br>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<br>If Yes, identify the plan(s):<br>Mohawk Valley Heritage Corridor |
| 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<br>If Yes, identify the plan(s): |

**C.3. Zoning**

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Commercial Office - Historic Overlay

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? South Colonie School District

b. What police or other public protection forces serve the project site?
Town of Colonie Police and Albany County Sheriff

c. Which fire protection and emergency medical services serve the project site?
Verdoy Fire District, Colonie EMS

d. What parks serve the project site?
Ann Lee Pond Nature and Historic Preserve, multi-use path

**D. Project Details**

**D.1. Proposed and Potential Development**

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

b. a. Total acreage of the site of the proposed action? 4.95 acres
b. Total acreage to be physically disturbed? 5.74 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 33.90 acres

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? ☐Yes ☑No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

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.

_____

_____

iv. 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? ☐Yes☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes☐No

If Yes:

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

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

If Yes:

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

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

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

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

If Yes:

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

_____ Square feet or <1 acres (impervious surface)

_____ Square feet or 33.9 acres (parcel size)

*ii.* Describe types of new point sources. N/A

*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)?

on-site management

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes☑No

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

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

If Yes, identify:

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

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

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

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

If Yes:

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

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

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

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

If Yes:

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

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

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

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

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

If Yes:

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

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

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

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

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

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

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

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

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

If Yes:

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

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

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

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

*i.* During Construction:

- Monday - Friday: 8:00-5:00
- Saturday: _____
- Sunday: _____
- Holidays: _____

*ii.* During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

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): BOCES, Historic Site,Radar tower, office park

*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 | .18 | .32 | +.14 |
| • Forested | 2.98 | .27 | -2.71 |
| • Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural) | 4.48 | 2.25 | -2.23 |
| • Agricultural (includes active orchards, field, greenhouse etc.) | | | |
| • Surface water features (lakes, ponds, streams, rivers, etc.) | | | |
| • Wetlands (freshwater or tidal) | | | |
| • Non-vegetated (bare rock, earth or fill) | | | |
| • Other Describe: Fenced solar array area (panels with grass underneath, excluding impervious surface) | | 4.80 | +4.80 |

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:

Shaker Place Nursing and Rehabilitation Center

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? >7 feet 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:

| | |
|---|---|
| St - Stafford loamy fine sand | 37.8 % |
| NuB - Nunda Silt Loam | 21.4 % |
| RkA - Riverhead fine sandy loam | 15.9 % |

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

e. Drainage status of project site soils:
☑ Well Drained: 36 % of site
☐ Moderately Well Drained: _____ % of site
☑ Poorly Drained 63 % 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 US Army Corps of Engineers Approximate Size approx 1-acre
- 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: Schenetady-Niskayuna Sole Source Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:
migratory and non-migratory birds
small mammals
deer

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:

b. Are agricultural lands consisting of highly productive soils present? ☑Yes ☐No
*i.* If Yes: acreage(s) on project site? Approx. 1- acres
*ii.* Source(s) of soil rating(s): NRCS

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: Watervliet Shaker Historic District, Waterbliet Shaker Historic District (Boundary Increase)

*iii.* Brief description of attributes on which listing is based:
Part of the first Shaker settlement in the U.S.

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: _____

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

*iii.* Distance between project and resource: _____ 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 Lucas T Rogers Date 6/15/2022

Signature _____ Title Economic Development and Sustainability Coordinator

PRINT FORM

# *Full Environmental Assessment Form*
## *Part 2 - Identification of Potential Project Impacts*

**Part 2 is to be completed by the lead agency.** Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

**Tips for completing Part 2:**

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes**" to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No**" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

**1. Impact on Land**
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
*If "Yes", answer questions a - j. If "No", move on to Section 2.*

☐ NO ☑ YES

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may involve construction on land where depth to water table is less than 3 feet. | E2d | ☑ | ☐ |
| b. The proposed action may involve construction on slopes of 15% or greater. | E2f | ☑ | ☐ |
| c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface. | E2a | ☑ | ☐ |
| d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material. | D2a | ☑ | ☐ |
| e. The proposed action may involve construction that continues for more than one year or in multiple phases. | D1e | ☑ | ☐ |
| f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides). | D2e, D2q | ☑ | ☐ |
| g. The proposed action is, or may be, located within a Coastal Erosion hazard area. | B1i | ☑ | ☐ |
| h. Other impacts: _____ _____ | | ☐ | ☐ |

**2. Impact on Geological Features**

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑NO ☐YES

*If "Yes", answer questions a - c. If "No", move on to Section 3.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. Identify the specific land form(s) attached: _____ _____ | E2g | ☐ | ☐ |
| b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____ | E3c | ☐ | ☐ |
| c. Other impacts: _____ _____ | | ☐ | ☐ |

**3. Impacts on Surface Water**

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑NO ☐YES

*If "Yes", answer questions a - l. If "No", move on to Section 4.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may create a new water body. | D2b, D1h | ☐ | ☐ |
| b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water. | D2b | ☐ | ☐ |
| c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body. | D2a | ☐ | ☐ |
| d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body. | E2h | ☐ | ☐ |
| e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments. | D2a, D2h | ☐ | ☐ |
| f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water. | D2c | ☐ | ☐ |
| g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s). | D2d | ☐ | ☐ |
| h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies. | D2e | ☐ | ☐ |
| i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action. | E2h | ☐ | ☐ |
| j. The proposed action may involve the application of pesticides or herbicides in or around any water body. | D2q, E2h | ☐ | ☐ |
| k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities. | D1a, D2d | ☐ | ☐ |

| | | | |
|---|---|---|---|
| l. Other impacts: _____ _____ | | ☐ | ☐ |

**4. Impact on groundwater**

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

*If "Yes", answer questions a - h. If "No", move on to Section 5.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells. | D2c | ☐ | ☐ |
| b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____ | D2c | ☐ | ☐ |
| c. The proposed action may allow or result in residential uses in areas without water and sewer services. | D1a, D2c | ☐ | ☐ |
| d. The proposed action may include or require wastewater discharged to groundwater. | D2d, E2l | ☐ | ☐ |
| e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated. | D2c, E1f, E1g, E1h | ☐ | ☐ |
| f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer. | D2p, E2l | ☐ | ☐ |
| g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources. | E2h, D2q, E2l, D2c | ☐ | ☐ |
| h. Other impacts: _____ _____ | | ☐ | ☐ |

**5. Impact on Flooding**

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

*If "Yes", answer questions a - g. If "No", move on to Section 6.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may result in development in a designated floodway. | E2i | ☐ | ☐ |
| b. The proposed action may result in development within a 100 year floodplain. | E2j | ☐ | ☐ |
| c. The proposed action may result in development within a 500 year floodplain. | E2k | ☐ | ☐ |
| d. The proposed action may result in, or require, modification of existing drainage patterns. | D2b, D2e | ☐ | ☐ |
| e. The proposed action may change flood water flows that contribute to flooding. | D2b, E2i, E2j, E2k | ☐ | ☐ |
| f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade? | E1e | ☐ | ☐ |

| | | | |
|---|---|---|---|
| g. Other impacts: _____ _____ | | ☐ | ☐ |

**6. Impacts on Air**

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑NO ☐YES

*If "Yes", answer questions a - f. If "No", move on to Section 7.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: | | | |
| i. More than 1000 tons/year of carbon dioxide ($CO_2$) | D2g | ☐ | ☐ |
| ii. More than 3.5 tons/year of nitrous oxide ($N_2O$) | D2g | ☐ | ☐ |
| iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) | D2g | ☐ | ☐ |
| iv. More than .045 tons/year of sulfur hexafluoride ($SF_6$) | D2g | ☐ | ☐ |
| v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions | D2g | ☐ | ☐ |
| vi. 43 tons/year or more of methane | D2h | ☐ | ☐ |
| b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants. | D2g | ☐ | ☐ |
| c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour. | D2f, D2g | ☐ | ☐ |
| d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above. | D2g | ☐ | ☐ |
| e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour. | D2s | ☐ | ☐ |
| f. Other impacts: _____ _____ | | ☐ | ☐ |

**7. Impact on Plants and Animals**

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐NO ☑YES

*If "Yes", answer questions a - j. If "No", move on to Section 8.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site. | E2o | ☑ | ☐ |
| b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government. | E2o | ☑ | ☐ |
| c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site. | E2p | ☑ | ☐ |
| d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government. | E2p | ☑ | ☐ |

| | | | |
|---|---|---|---|
| e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect. | E3c | ☑ | ☐ |
| f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____ | E2n | ☑ | ☐ |
| g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site. | E2m | ☑ | ☐ |
| h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____ | E1b | ☑ | ☐ |
| i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides. | D2q | ☑ | ☐ |
| j. Other impacts: _____ _____ | | ☐ | ☐ |

**8. Impact on Agricultural Resources**

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

*If "Yes", answer questions a - h. If "No", move on to Section 9.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System. | E2c, E3b | ☐ | ☐ |
| b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc). | E1a, E1b | ☐ | ☐ |
| c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land. | E3b | ☐ | ☐ |
| d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District. | E1b, E3a | ☐ | ☐ |
| e. The proposed action may disrupt or prevent installation of an agricultural land management system. | E1 a, E1b | ☐ | ☐ |
| f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland. | C2c, C3, D2c, D2d | ☐ | ☐ |
| g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan. | C2c | ☐ | ☐ |
| h. Other impacts: _____ | | ☐ | ☐ |

**9. Impact on Aesthetic Resources**

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☐ NO ☑ YES

*If "Yes", answer questions a - g. If "No", go to Section 10.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource. | E3h | ☑ | ☐ |
| b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views. | E3h, C2b | ☑ | ☐ |
| c. The proposed action may be visible from publicly accessible vantage points:<br>i. Seasonally (e.g., screened by summer foliage, but visible during other seasons)<br>ii. Year round | E3h | ☐<br>☑ | ☐<br>☐ |
| d. The situation or activity in which viewers are engaged while viewing the proposed action is:<br>i. Routine travel by residents, including travel to and from work<br>ii. Recreational or tourism based activities | E3h<br>E2q,<br>E1c | ☑<br>☑ | ☐<br>☐ |
| e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource. | E3h | ☑ | ☐ |
| f. There are similar projects visible within the following distance of the proposed project:<br>0-1/2 mile<br>½ -3 mile<br>3-5 mile<br>5+ mile | D1a, E1a, D1f, D1g | ☑ | ☐ |
| g. Other impacts: _____ | | ☐ | ☐ |

**10. Impact on Historic and Archeological Resources**

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☐ NO ☑ YES

*If "Yes", answer questions a - e. If "No", go to Section 11.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical 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. | E3e | ☑ | ☐ |
| b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory. | E3f | ☑ | ☐ |
| c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory.<br>Source: _____ | E3g | ☑ | ☐ |

| | | | |
|---|---|---|---|
| d. Other impacts: _____ _____ | | ☐ | ☐ |
| e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3: | | | |
| i. The proposed action may result in the destruction or alteration of all or part of the site or property. | E3e, E3g, E3f | ☐ | ☐ |
| ii. The proposed action may result in the alteration of the property's setting or integrity. | E3e, E3f, E3g, E1a, E1b | ☐ | ☐ |
| iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting. | E3e, E3f, E3g, E3h, C2, C3 | ☐ | ☐ |

**11. Impact on Open Space and Recreation**

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
*If "Yes", answer questions a - e. If "No", go to Section 12.*

☑ NO ☐ YES

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat. | D2e, E1b E2h, E2m, E2o, E2n, E2p | ☐ | ☐ |
| b. The proposed action may result in the loss of a current or future recreational resource. | C2a, E1c, C2c, E2q | ☐ | ☐ |
| c. The proposed action may eliminate open space or recreational resource in an area with few such resources. | C2a, C2c E1c, E2q | ☐ | ☐ |
| d. The proposed action may result in loss of an area now used informally by the community as an open space resource. | C2c, E1c | ☐ | ☐ |
| e. Other impacts: _____ _____ | | ☐ | ☐ |

**12. Impact on Critical Environmental Areas**

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
*If "Yes", answer questions a - c. If "No", go to Section 13.*

☑ NO ☐ YES

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA. | E3d | ☐ | ☐ |
| b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA. | E3d | ☐ | ☐ |
| c. Other impacts: _____ _____ | | ☐ | ☐ |

**13. Impact on Transportation**
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
*If "Yes", answer questions a - f. If "No", go to Section 14.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. Projected traffic increase may exceed capacity of existing road network. | D2j | ☐ | ☐ |
| b. The proposed action may result in the construction of paved parking area for 500 or more vehicles. | D2j | ☐ | ☐ |
| c. The proposed action will degrade existing transit access. | D2j | ☐ | ☐ |
| d. The proposed action will degrade existing pedestrian or bicycle accommodations. | D2j | ☐ | ☐ |
| e. The proposed action may alter the present pattern of movement of people or goods. | D2j | ☐ | ☐ |
| f. Other impacts: _____ | | ☐ | ☐ |

**14. Impact on Energy**
The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
*If "Yes", answer questions a - e. If "No", go to Section 15.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action will require a new, or an upgrade to an existing, substation. | D2k | ☐ | ☐ |
| b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use. | D1f, D1q, D2k | ☐ | ☐ |
| c. The proposed action may utilize more than 2,500 MWhrs per year of electricity. | D2k | ☐ | ☐ |
| d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed. | D1g | ☐ | ☐ |
| e. Other Impacts: _____ | | | |

**15. Impact on Noise, Odor, and Light**
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
*If "Yes", answer questions a - f. If "No", go to Section 16.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may produce sound above noise levels established by local regulation. | D2m | ☐ | ☐ |
| b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home. | D2m, E1d | ☐ | ☐ |
| c. The proposed action may result in routine odors for more than one hour per day. | D2o | ☐ | ☐ |

| | | | |
|---|---|---|---|
| d. The proposed action may result in light shining onto adjoining properties. | D2n | ☐ | ☐ |
| e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions. | D2n, E1a | ☐ | ☐ |
| f. Other impacts: _____ _____ | | ☐ | ☐ |

**16. Impact on Human Health**

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

*If "Yes", answer questions a - m. If "No", go to Section 17.*

| | Relevant Part I Question(s) | No,or small impact may cccur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community. | E1d | ☐ | ☐ |
| b. The site of the proposed action is currently undergoing remediation. | E1g, E1h | ☐ | ☐ |
| c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action. | E1g, E1h | ☐ | ☐ |
| d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction). | E1g, E1h | ☐ | ☐ |
| e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health. | E1g, E1h | ☐ | ☐ |
| f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health. | D2t | ☐ | ☐ |
| g. The proposed action involves construction or modification of a solid waste management facility. | D2q, E1f | ☐ | ☐ |
| h. The proposed action may result in the unearthing of solid or hazardous waste. | D2q, E1f | ☐ | ☐ |
| i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste. | D2r, D2s | ☐ | ☐ |
| j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste. | E1f, E1g E1h | ☐ | ☐ |
| k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures. | E1f, E1g | ☐ | ☐ |
| l. The proposed action may result in the release of contaminated leachate from the project site. | D2s, E1f, D2r | ☐ | ☐ |
| m. Other impacts: _____ _____ | | | |

**17. Consistency with Community Plans**

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☐ NO ☑ YES

*If "Yes", answer questions a - h. If "No", go to Section 18.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s). | C2, C3, D1a E1a, E1b | ☑ | ☐ |
| b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%. | C2 | ☑ | ☐ |
| c. The proposed action is inconsistent with local land use plans or zoning regulations. | C2, C2, C3 | ☑ | ☐ |
| d. The proposed action is inconsistent with any County plans, or other regional land use plans. | C2, C2 | ☑ | ☐ |
| e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure. | C3, D1c, D1d, D1f, D1d, E1b | ☑ | ☐ |
| f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure. | C4, D2c, D2d D2j | ☑ | ☐ |
| g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action) | C2a | ☑ | ☐ |
| h. Other: _____ _____ | | ☐ | ☐ |

**18. Consistency with Community Character**

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☐ NO ☑ YES

*If "Yes", answer questions a - g. If "No", proceed to Part 3.*

| | Relevant Part I Question(s) | No, or small impact may occur | Moderate to large impact may occur |
|---|---|---|---|
| a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community. | E3e, E3f, E3g | ☑ | ☐ |
| b. The proposed action may create a demand for additional community services (e.g. schools, police and fire) | C4 | ☑ | ☐ |
| c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing. | C2, C3, D1f D1g, E1a | ☑ | ☐ |
| d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources. | C2, E3 | ☑ | ☐ |
| e. The proposed action is inconsistent with the predominant architectural scale and character. | C2, C3 | ☑ | ☐ |
| f. Proposed action is inconsistent with the character of the existing natural landscape. | C2, C3 E1a, E1b E2g, E2h | ☐ | ☑ |
| g. Other impacts: _____ _____ | | ☐ | ☐ |

**PRINT FULL FORM**

Project :
Date :

## *Full Environmental Assessment Form*
## *Part 3 - Evaluation of the Magnitude and Importance of Project Impacts*
## *and*
## *Determination of Significance*

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

**Reasons Supporting This Determination:**
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See Attached

### Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
Viewshed Analysis , Phase 1 Archaeological Investigation, Landscape Plan, tree inventory, Carbon sequestration analysis, draft site plan

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
Albany County Legislature as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Albany County Solar Installation - Radar Site

Name of Lead Agency: Albany County Legislature

Name of Responsible Officer in Lead Agency: Andrew Joyce

Title of Responsible Officer: Chairman

Signature of Responsible Officer in Lead Agency: Andrew Joyce Date: 6/15/2022

Signature of Preparer (if different from Responsible Officer) Laura R. DeGaetano Date: 5/16/22

**For Further Information:**

Contact Person: Lucas Rogers

Address: 112 State St. Room 1200

Telephone Number: 518-447-7040

E-mail: lucas.rogers@albanycountyny.gov

**For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:**

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

**PRINT FULL FORM**

**Full Environmental Assessment Form**
**Part 3 – Evaluation of the Magnitude and Importance of Project Impacts and Determination of Significance**

Part 3 provides an analysis of the significance of adverse environmental impacts and support of the determination of significance.

**Brief Description of the Action:**
Albany County will lease approximately 5 acres of land located at 897 Watervliet Shaker Rd. in the Albany County Town of Colonie to Siemens Industry, Inc. for design and installation of a 1.872mw solar farm. The action area includes the installation of solar panels and associated transmission equipment, a perimeter fence, and maintenance access road.

**Reasons Supporting this Determination:**
The lead agency has reviewed Part 1 of the Full Environmental Assessment Form, comments from the State Historic Preservation Office (SHPO), a viewshed analysis, Phase 1 Archaeological Investigation, landscape plan, tree inventory, carbon sequestration analysis and draft site plan, and prepared Part 2 of the Full EAF. The following discussion is based on this review.

1.**Impact on Land**
The project involves clearing and grading of 2.71 acres of trees and 2.23 acres of meadow and brushlands for solar panels and mounts, and associated equipment. The potential for erosion and sedimentation during construction will be addressed in a Stormwater Pollution Prevention Plan that will be implemented during construction. Post-construction grading, drainage, and soil stabilization will prevent soil erosion and uncontrolled surface water drainage. The amount of added impervious surface on the site will be minimal and the site vegetation will be restored using native and pollinator plants. A decommissioning plan will outlines steps to remove the system, dispose of or recycle its components, and restore the land to its original state.

On this basis, it appears that the project will not have a significant impact on the environment related to land resources.

**7. Impact on Plants and Animals**
Review of NYS Department of Environmental Conservation, Natural Heritage Program and U.S. Fish and Wildlife Databases found no known record of endangered or threatened species on the site and no critical habitats at this location. It is likely given the habitat, that there are a variety of birds and mammals on the site.

Northern Long Eared Bat is not listed by NYS DEC as occurring in the geographic area of the project therefore, it is unlikely that the project will harm NLEB.

The U.S. Fish and Wildlife Information Planning and Consultation (IPaC) Resource identified no critical habitats at this location. There were a number of priority bird species identified to have varying probability of presence on or near the site. In order to minimize impact to birds, the range of dates that the identified species is present and nesting will be considered so that the site

clearing activities correspond to the period that will have the least impact on both ground and tree nesting bird species. The planting and management plan for within the solar array will actually restore much-needed habitat for ground nesting bird species. Fencing options will also be considered to allow for continued use of the habitat by small mammals.

Plants – The project plans to remove a mix of early successional scrub growth, which is a mix of native and invasive plants and replace with native pollinator flowers and grasses within the array. The perimeter of the site will be planted with native pollinator trees and shrubs. Mowing of the site will be timed to encourage and protect use by ground nesting birds and small mammals.

Trees – A tree inventory and carbon sequestration analysis was completed by a licensed landscape architect on the original project area of 4.8 acres. The inventory identified the dominant species, average tree size (DBH), and the average canopy height for each vegetation area. Seventy three percent of trees in this study area were under 6" diameter.

The current area of solar panels has been reduced. Two areas of more mature trees are now excluded from the project area. In the current project area, the dominant species is black locust and the majority of trees are less than 6" diameter. An updated report is being finalized to reflect the tree inventory in the updated project area and to calculate the current vegetation function and value in terms of carbon sequestration. If the updated tree inventory finds that more than one-half acre of non-invasive trees of four inches or greater will be removed, saplings will be replaced on a county-owned parcel consistent with resolution 137 of 2022.

Removal of trees greater than 4" and native, non-invasive trees will be avoided to the maximum extent possible. The array will be replanted with a variety of native and pollinator flowers, grasses, and shrubs that will contribute carbon sequestration and stormwater management function to the site.

On this basis, it appears that the project will have not have a significant impact on the environment related to plants and animals.

**9. Impact on Aesthetic Resources**
The project area is relatively small and on a site currently occupied by a visible radar tower and the surrounding land uses are primarily commercial/office. A landscape plan was developed to provide screening and to improve the aesthetics of the project from the road and the limited other areas from which the site is visible.

On this basis, it appears that the project will not have a significant impact on the environment related to aesthetic resources.

**10. Impact on Archaeological and Historic Resources**
NYS Historic Preservation Office (SHPO) was consulted to assess the impact to archaeologic and historic resources.

Because the project is an archaeologically sensitive area, a Phase 1A/B survey was completed by Hartgen Archeological Associates Inc. Following review of this investigation, SHPO

determined that no archaeological sites were identified in the survey and no additional archaeological work is necessary.

Given the location in the Watervliet Shaker Historic District, SHPO requested a site plan and Visual Impact Assessment to analyze the impact Historic/Cultural resources. Based on these documents, it was determined that the undertaking could have substantial visual impacts on the Historic District as it would potentially be visible from the West and South Family Farms (developed), the Shaker Cemetery and the Church Family Property and are incongruous with the Historic District setting. Field visits by County staff both in leaf-off and leaf-on conditions documented that existing elevations and existing vegetation significantly screen the site from the areas of Historic/Cultural concern.

In consultation with SHPO, an historic preservation mitigation plan was developed to offset the potential visual impacts of this project. The measures were incorporated into the project and included in a Letter of Resolution (LOR). These measures include:

- Document the site in its current condition
- Fund the replacement of the roof of the Meeting House on the Church Family site at a cost of up to $35,000 to be paid by Siemens Industry Inc.
- Use pollinator plants and native grasses in and around the perimeter fence of the solar array.

On this basis, it appears that the project will not have a significant impact on the environment related to archaeological and historic resources.

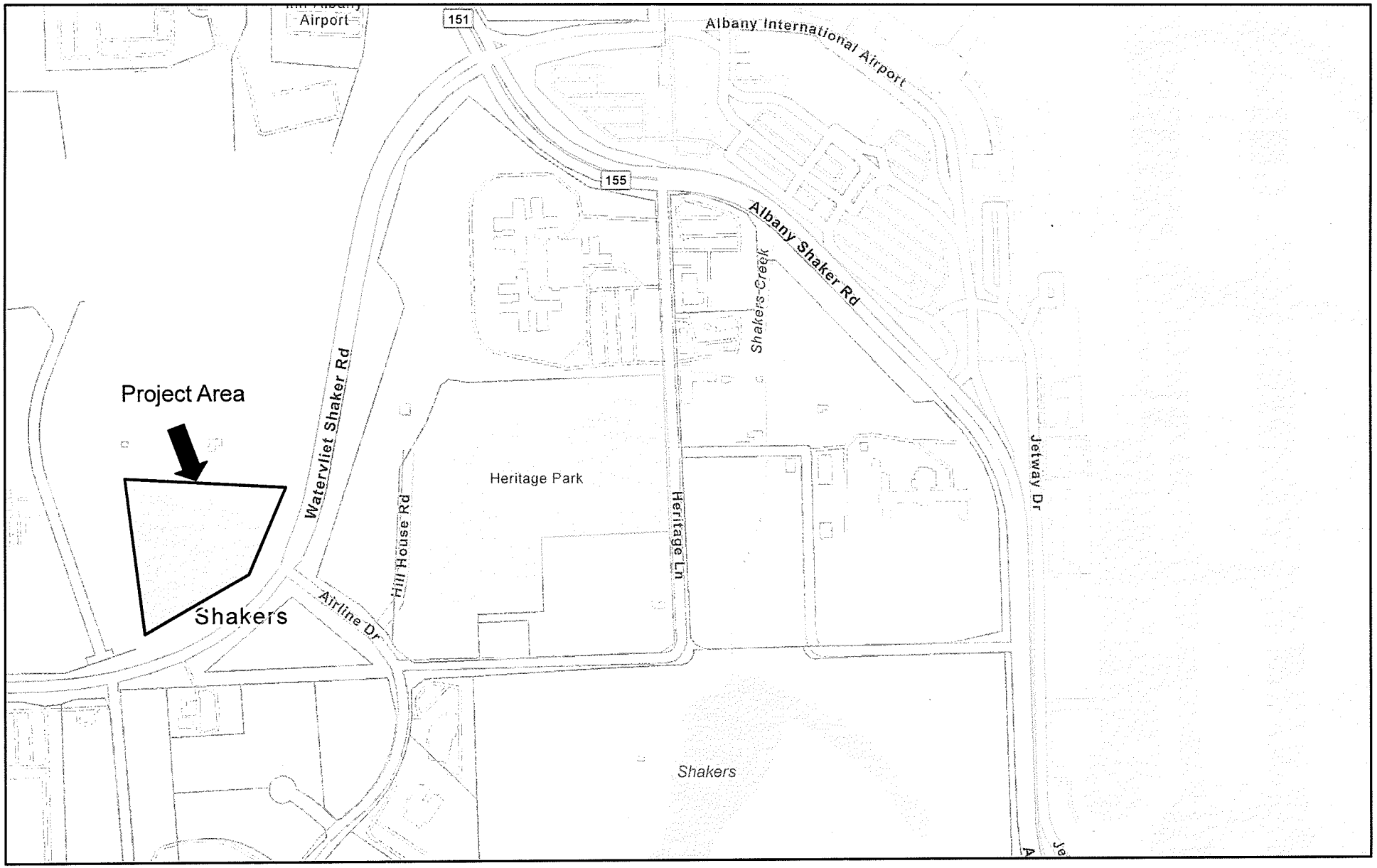
**17. Consistency with Community Plans** - Solar farms are not currently allowed in Commercial Office Zones in the Town of Colonie; however, the County Executive's Office has consulted with the Town of Colonie and made the Town aware of the proposed project on County property. The project is consistent with the Town's 2019 Comprehensive Plan goal of evaluating renewable energy projects to address climate change.

On this basis, it appears that the project will have no significant impact on community plans.

**18. Consistency with Community Character** – The land uses immediately adjacent to the project site are offices, open field and forest, and Shaker era structures. There are no other solar installations in the vicinity. A desktop Visual Impact Analysis was completed and site visits were made at different times of year to assess the visual impact. There will be limited impact on the community character as the panels will not be visible from a large area. The majority of visibility will be from a small section of roadway. There is also currently a radar tower and associated building on the site. Native plantings along the perimeter will help screen the array from drivers on Watervliet Shaker Rd. and multi-use path users.

On this basis, it appears that the project will not have a significant impact on the environment related to community character.

# Albany County




5/12/2022, 12:50:38 PM

Tax Parcels (2021)

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

In Cooperation with CHA, Inc.

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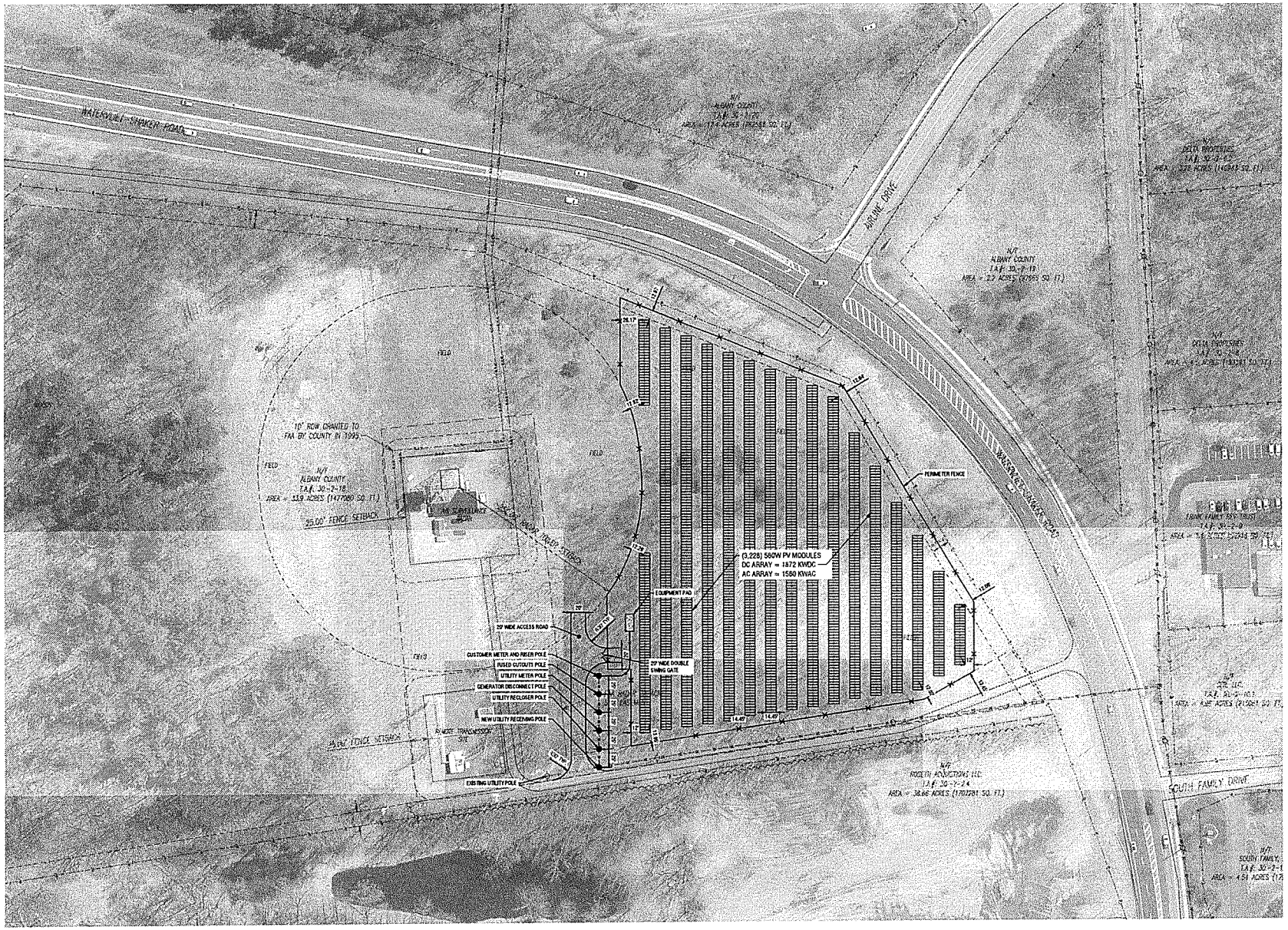


1 / C201 CONCEPT PLAN
SCALE: 1" = 60'

0 60' 120' 180'

VERSION 19.5
6/3/2019 8:47:54 AM

LaBella
Powered by partnership.
25 Delaware Avenue
Delmar, NY 12054
518-439-8235
labellapc.com

NOT FOR CONSTRUCTION



**SIEMENS**
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

| NO | DATE | DESCRIPTION |
|---|---|---|
| REVISIONS | | |

PROJECT NUMBER: 2212336
DRAWN BY: CEC
REVIEWED BY: RFH
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

**CONCEPT PLAN**

DRAWING NUMBER:

**C201**

DANIEL P. MCCOY
COUNTY EXECUTIVE

DANIEL C. LYNCH
DEPUTY COUNTY EXECUTIVE

COUNTY OF ALBANY
ECONOMIC DEVELOPMENT, CONSERVATION AND PLANNING
112 STATE STREET – ROOM 1310
ALBANY, NEW YORK 12207-2021
(518) 447-5670

May 4, 2021

Dear Interested/Involved Party:

The purpose of this letter is to initiate the review process in compliance with State Environmental Quality Review (SEQR) for a project to design and install a 3.21 megawatt solar farm on county-owned property at 897 Watervliet Shaker Rd. in the Town of Colonie.

The County has determined that:
-The proposed action is subject to SEQR
-The action is classified as a Type I action pursuant to 6 NYCRR Part 617.4
-The action will involve multiple agencies for permits and approvals

Enclosed please find Part 1 of the Full Environmental Assessment Form for your review and consideration. At this time, we ask that you confirm your jurisdiction in this action and provide any preliminary feedback on issues of concern that you believe should be evaluated.

It is the intent of the Albany County Legislature to assume Lead Agency status under SEQR pursuant to 6 NYCRR Part 617.6. Please note your concurrence with the Lead Agency request by signing below. We ask that you respond by June 4, 2021 (30 days from the date of this letter) in compliance with the SEQR timeline.

Should you have any questions regarding this letter or the project in general, please contact Lucas Rogers at 447-7040.

I concur with the Lead Agency Request

| |
|---|
| Agency: |
| Name : |
| Title: |
| Signature: |

**Involved Agencies**

Albany County Department of Public Works
Attn: Lisa Ramundo
449 New Salem Rd.
Voorheesville, NY 12186

Albany County Legislature
112 State St. Room 700
Albany, NY 12207

NYS Department of Environmental Conservation Region 4
1130 North Westcott Road
Schenectady, NY 12306-2014

NYS Office of Parks, Recreation and Historic Preservation
Attn: Erik Kulleseid
Peebles Island State Park
P.O. Box 189
Waterford, NY 12188

**Interested Agencies**

Albany County Airport Authority
Attn: Philp Calderone
Cc: Steve Iachetta
Administration Building, Suite 205
Albany International Airport
Albany, New York 12212-1057

Albany County Planning Board
449 New Scotland Rd.
Voorheesville, NY 12186

Town of Colonie Department of Planning and Economic Development
Attn: Sean Maguire
Public Operations Center
347 Old Niskayuna Road
Latham, NY 12110

DANIEL P. MCCOY
COUNTY EXECUTIVE

DANIEL C. LYNCH
DEPUTY COUNTY EXECUTIVE

COUNTY OF ALBANY
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Should you have any questions regarding this letter or the project in general, please contact Lucas Rogers at 447-7040.

I concur with the Lead Agency Request

| | |
|---|---|
| Agency: | ALBANY CO. DPW |
| Name : | LISA RAMUNDO |
| Title: | COMMISSIONER |
| Signature: | |

NEW YORK STATE OF OPPORTUNITY.
Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

May 3, 2021

Laura DeGaetano
Albany County Office of Natural Resource Conservation
112 State St. Room 1013
Albany, NY 12207

Re: DEC
Albany County Solar Installation - Radar Site/3.21MW/8 of 33.9 Acres
Town of Colonie, Albany County, NY
21PR01812

Dear Laura DeGaetano:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

We note that the proposed 8 acre/ 3.2 MW solar installation is located within the State and National Register listed Watervliet Shaker Historic District. The Shakers likely used the proposed solar site for farming or other agricultural purposes.

We are concerned with potential direct and visual impacts to the Watervliet Shaker Historic District and related historic resources. In addition to the former farm field and the adjacent West Family property, there may be additional Shaker resources impacted by the project. In order for our office to more fully assess potential impacts to historic resources, please provide the following additional documentation:

1. Detailed site plan illustrating locations of solar panels and other equipment, access roads, and any existing or proposed vegetative buffers or other site features.
2. A Visual Impact Assessment (VIA) in the form of a Visual Envelope Map (VEM) using GIS viewshed analysis to indicate the Zone of Theoretical Visibility (ZTV) within a .75 (three quarter) mile buffer around the proposed project area. The analysis should be performed using bare-earth Digital Elevation Models (DEM) but if Digital Surface Models (DSM) including accurate foliage elevation modelling are easily accessible to you, a second separate VEM using the DSM may also be included in the submission. The data should be presented to us over an orthorectified aerial basemap with the buffer boundary and project

area indicated. This will allow us to identify buildings within the .75 mile buffer (which includes the buildings in the West and South family farmsteads) for evaluation."

3. Details illustrating the type, size, operability (fixed or tilting) and height of the solar panels.

For archaeological concerns, please see the archaeological survey request from Jessica Schreyer issued 3/24/21 in response to the initial project submission.

Documentation requested in this letter should be provided via our Cultural Resource Information System (CRIS) at https://cris.parks.ny.gov/. Once on the CRIS site, you can log in as a guest and choose "submit" at the very top menu. Go to "Other Options" and choose "submit new information for an existing project". You will need this project number and your e-mail address.

If you have any questions, I can be reached at (518) 268-2164.

Sincerely,

Weston Davey
Historic Site Restoration Coordinator
Weston.davey@parks.ny.gov

DANIEL P. MCCOY
COUNTY EXECUTIVE

DANIEL C. LYNCH
DEPUTY COUNTY EXECUTIVE

COUNTY OF ALBANY
ECONOMIC DEVELOPMENT, CONSERVATION AND PLANNING
112 STATE STREET – ROOM 1310
ALBANY, NEW YORK 12207-2021
(518) 447-5670

May 4, 2021

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Should you have any questions regarding this letter or the project in general, please contact Lucas Rogers at 447-7040.

I concur with the Lead Agency Request

| | |
|---|---|
| Agency: | COLONIE PEDD |
| Name : | SEAN MAGUIRE |
| Title: | DIRECTOR |
| Signature: | |

RECEIVED
Town of Colonie
MAY 07 2021
Planning & Economic

DANIEL P. MCCOY
COUNTY EXECUTIVE

DANIEL C. LYNCH
DEPUTY COUNTY EXECUTIVE

COUNTY OF ALBANY
ECONOMIC DEVELOPMENT, CONSERVATION AND PLANNING
112 STATE STREET – ROOM 1310
ALBANY, NEW YORK 12207-2021
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May 4, 2021

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Should you have any questions regarding this letter or the project in general, please contact Lucas Rogers at 447-7040.

I concur with the Lead Agency Request

| | |
|---|---|
| Agency: | Albany County Airport Authority |
| Name : | Philip F. Calderone, Esq. |
| Title: | Chief Executive Officer |
| Signature: | Date: 7/15/21 |

Please note address update: Albany International Airport-Main Terminal Suite 300

737 Albany Shaker Road; Albany, NY 12211-1057

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Environmental Permits, Region 4**
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

*Transmitted electronically to: lucas.rogers@albanycountyny.gov*

May 28, 2021

Lucas Rogers
Albany County Economic Development,
Conservation and Planning
112 State St., Rm. 1310
Albany, NY 12207-2021

**Re: Lead Agency Coordination Response**
Albany County Proposed Solar Farm
897 Watervliet Shaker Rd
Town of Colonie, Albany County

Dear Lucas Rogers,

This letter responds to your correspondence received by the Department on May 10, 2021 regarding lead agency coordination for the project referenced herein, under Article 8 (State Environmental Quality Review – SEQR) of the Environmental Conservation Law and 6 NYCRR Part 617. The New York State Department of Environmental Conservation ("DEC" or "Department") has the following interest in this project:

**Name of Action:** 3.21 MW Solar Farm at 897 Watervliet Shaker Rd
**DEC Contact:Person:** Trish Gabriel, Environmental Analyst
**SEQR Classification:** ☒ Type I ☐ Unlisted ☐ Type II

**DEC Position:** Based on the information provided:

- ☒ DEC has no objection to your agency assuming lead agency status for this action.
- ☐ DEC wishes to assume lead agency status for this action.
- ☐ DEC needs additional information in order to respond (see comments).
- ☐ DEC cannot be lead agency because it has no jurisdiction in this action.

***The Department must be notified immediately if the project/proposed action scope changes, or the EAF is revised.***

**Possible DEC Permitting Requirements:**

A review of NYS protected resources near or within the project site was performed using existing GIS data (see enclosed NYS Resources Map). Please note that jurisdictional maps are meant to provide approximate sizes and locations of resources. Actual field conditions may vary from

those depicted on the maps. The following provides a summary of potential State permitting requirements for the project based on the results of the protected resources review and project information submitted with your correspondence.

***Water Quality Certification***

It appears that federally-regulated wetlands and/or waterbodies may be located on the subject property. Work within certain wetlands and other waters of the United States may require a permit from the U.S. Army Corps of Engineers (USACE). A Water Quality Certification, pursuant to Section 401 of the Federal Clean Water Act, may be required from the DEC when a USACE permit is issued. The DEC recommends you contact the USACE directly regarding federal wetlands and waters of the U.S. regulatory jurisdictions and permitting requirements. The USACE NY District regulatory program for this area is handled out the USACE Upstate Regulatory Field Office in Watervliet NY. The Regulatory Field Office general phone number is (518) 266-6351 and the general email address is cenan.rfo@usace.army.mil. For more information on Water Quality Certifications, please refer to the following DEC Website link: https://www.dec.ny.gov/permits/6546.html.

***Stormwater State Pollutant Discharge Eliminations System Permit For Construction Activities***

Any project which results in a disturbance of one acre or more of land, must be in compliance with the State Pollutant Discharge Elimination System (SPDES) Phase II regulations for Stormwater Discharges Associated with Construction Activities. Information regarding the SPDES General Permit for Stormwater Discharges can be found on the Department's website at https://www.dec.ny.gov/chemical/8468.html.

***Cultural Resources***

Your project site appears to be located within an area of potential historical or archeological significance. If approvals/permits are ultimately needed from this Department, consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) will likely be required in order to better evaluate this project's impact on these resources. To initiate consultation with OPRHP, please visit their project submission website at https://cris.parks.ny.gov/. Please add Trish Gabriel at trish.gabriel@dec.ny.gov to the list of contacts for your project.

Please note that construction activities that have the potential to affect historic and/or archeological resources are not eligible for coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) unless documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act is received from OPRHP for the project site.

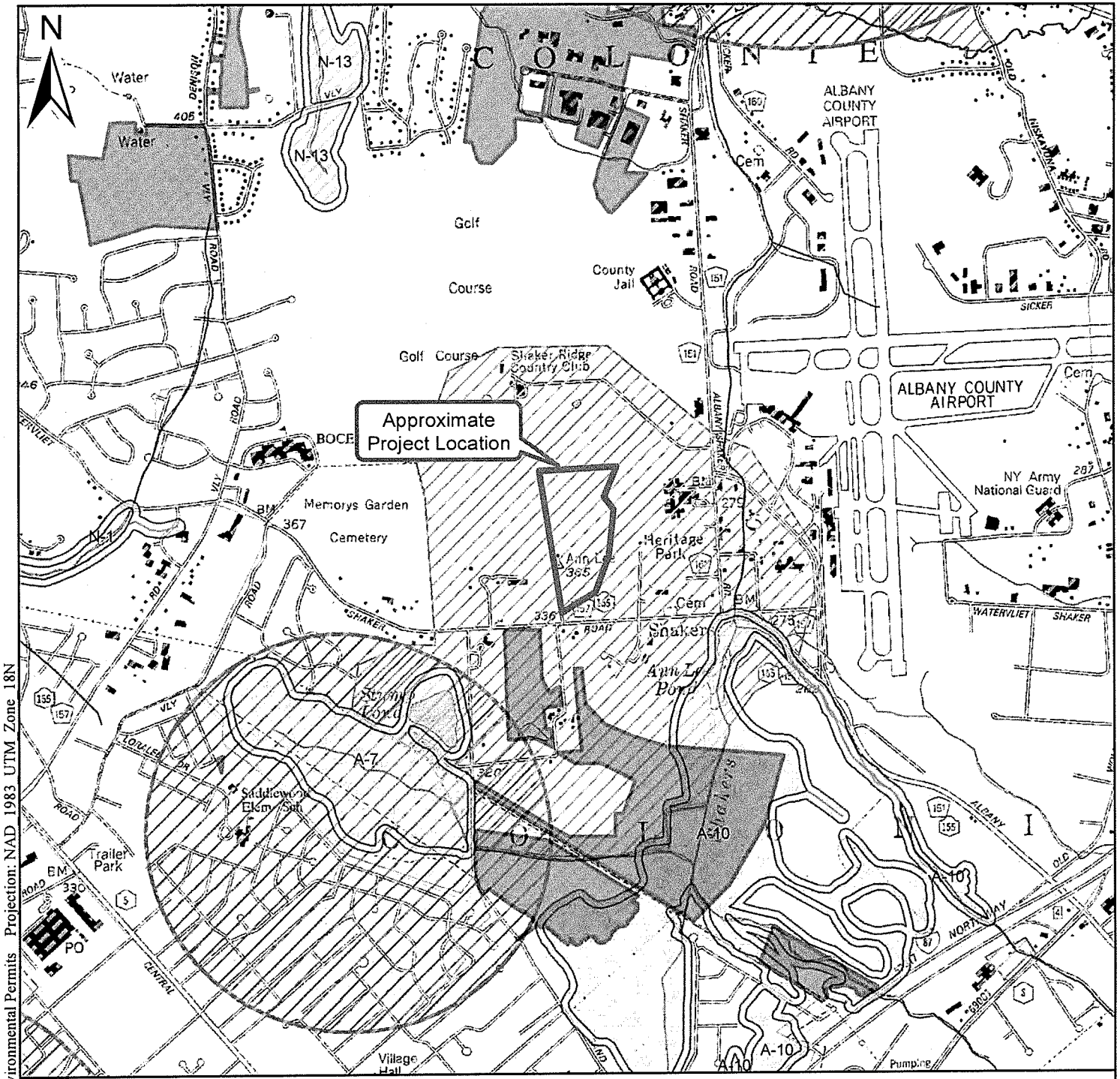
Please feel free to contact me by e-mail at trish.gabriel@dec.ny.gov or by telephone at (518) 357-2445 if you have any questions.

Sincerely,

Patricia M. Gabriel
Environmental Analyst

Encl: NYS Resources Map

ecc: Laura DeGaetano, Albany County Planning
Sean Maguire, Town of Colonie




Division of Environmental Permits Projection: NAD 1983 UTM Zone 18N

NEW YORK STATE OF OPPORTUNITY

Department of Environmental Conservation

*Disclaimer: This map was prepared by Region 4 NYSDEC Division of Environmental Permits using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited. Additional resources may be present but not depicted on this map.*

## NYS RESOURCES MAP

# ALBANY COUNTY PROPOSED SOLAR FARM (RADAR SITE)
## 897 Watervliet Shaker Road
## Town of Colonie
## Albany County

May 19, 2021

Feet
0 1,000 2,000 3,000 4,000

**1 inch equals 2,000 feet**

### Legend

- Regulated Adjacent Area Boundary
- Freshwater Wetland Class 1
- Freshwater Wetland Class 2
- Freshwater Wetland Class 3
- Freshwater Wetland Class 4
- Freshwater Wetland Separation Line
- Freshwater Wetland (linear)
- Deed Restrictions
- Unprotected Streams
- Protected Streams
- Archeological Sensitivity
- National/State Historic Register Site
- Threatened or Endangered Mussels
- S1 or S2 Freshwater Mussels
- Not an EJ area
- Potential EJ area
- All E&T species, except fish
- E&T Freshwater Mussels
- E&T Fish
- Critical Environmental Areas

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

## ARCHAEOLOGY COMMENTS

### Phase IA/IB Archaeological Survey Recommendation for Solar Facilities

**Project: Albany County Solar Installation - Radar Site**
**PR#: 21PR01812**
**Date: 3/24/2021**

Your project is in an archaeologically sensitive area. Therefore, the State Historic Preservation Office/New York State Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends that a Phase IA/B archaeological survey is warranted and offers the following survey guidance. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

Phase IB archaeological testing is not recommended for panel arrays; perimeter fencing and utility poles, if their associated posts are driven or drilled into the ground and no grubbing or grading is involved, and for excavations and grading less than six inches in depth. Phase IB testing is also not recommended for trenches less than three feet wide. However, if the installation of the panel array supports, fencing or utility poles requires grubbing and grading exceeding six inches in depth, then Phase IB archaeological testing is recommended.

Phase IB archaeological testing is recommended for areas of substantial proposed ground disturbance, which includes areas of grading and excavation more than six inches deep, grubbing, tree and stump removal, and trenches more than three feet wide.

If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

If you have any questions concerning archaeology, please contact Jessica Schreyer at Jessica.Schreyer@parks.ny.gov.

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

October 05, 2021

Laura DeGaetano
Albany County Office of Natural Resource Conservation
112 State St. Room 1013
Albany, NY 12207

Re: DEC
Albany County Solar Installation - Radar Site/3.21MW/8 of 33.9 Acres
Town of Colonie, Albany County, NY
21PR01812

Dear Laura DeGaetano:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

The Archaeology Unit has reviewed the Phase I Archaeological Survey report submitted for this project entitled "Phase I Archeological Investigation, Albany Radar Tower Site Solar, Watervliet Shaker Road and Airline Drive, Town of Colonie, Albany County, New York" prepared by Hartgen Archeological Associates, Inc (21SR00616; September 2021). No archaeological sites were identified by the survey and the OPRHP concurs with the report recommendation that no additional archaeological work is necessary.

Please note that these comments pertain only to archaeological resources. Please continue to consult with Weston Davey in the Technical Preservation Services Unit at Weston.Davey@parks.ny.gov. If you have any questions concerning archaeology, I can be reached at Jessica.Schreyer@parks.ny.gov

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Scientist Archaeology

HARTGEN
archeological associates inc

# PHASE I ARCHEOLOGICAL INVESTIGATION

## Albany Radar Tower Site Solar

Watervliet Shaker Road and Airline Drive
Town of Colonie
Albany County, New York

HAA 5715-31
SHPO Not Yet Assigned

**Submitted to:**
LaBella Associates
4 British American Blvd.
Latham NY 12110

**Prepared by:**
Hartgen Archeological Associates, Inc.

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www.hartgen.com

An ACRA Member Firm
www.acra-crm.org

September 2021

## MANAGEMENT SUMMARY

| | |
|---|---|
| SHPO Number: | *Not Yet Assigned* |
| Involved Agencies: | *NYSDEC* |
| Phase of survey: | *Phase I archeological investigation* |

## LOCATION INFORMATION

| | |
|---|---|
| Municipality: | *Town of Colonie* |
| County: | *Albany County* |

## ARCHEOLOGICAL SURVEY OVERVIEW

| | |
|---|---|
| Survey Area: | *11.4 acres* |
| Shovel Tests: | 75 *tests at 15-meter intervals* |

## RESULTS OF ARCHEOLOGICAL SURVEY

| | |
|---|---|
| Precontact sites identified: | *None* |
| Historic sites identified: | *None* |

## RECOMMENDATIONS

*Given the paucity of archeological materials encountered and the lack of any sites identified, no additional investigation is recommended for this project.*

| | |
|---|---|
| Report Authors: | *Bradley W. Russell, Ph.D.* |
| Date of Report: | *September 2021* |

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## Map List



## Photograph List

# PHASE I ARCHEOLOGICAL INVESTIGATION

## 1 Introduction

Hartgen Archeological Associates, Inc. (Hartgen) conducted a Phase I Archeological Investigation for the proposed Albany Radar Tower Site Solar (Project) located in the Town of Colonie, Albany County, New York. The Project requires approvals by New York State Department of Environmental Conservation (NYSDEC).

This investigation was conducted to comply with Section 14.09 of the State Historic Preservation Act and will be reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The investigation was conducted according to the New York Archaeological Council's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* (1994), which are endorsed by OPRHP. This report has been prepared according to OPRHP's *State Historic Preservation Office (SHPO) Phase I Archaeological Report Format Requirements* (2005).

## 2 Project Information

### 2.1 Project Location

The Project is located along the north side of Watervliet Shaker Road directly across from its intersection with Airline Drive (Map 1).

### 2.2 Description of the Project

The project entails the installation of ground mounted solar arrays. It will involve tree removal across most of the APE.

### 2.3 Description of the Area of Potential Effects (APE)

The area of potential effects (APE) includes all portions of the property that will be directly altered by the proposed undertaking. The APE encompasses 11.4 acres (Map 2).

## 3 Environmental Background

The environment of an area is significant for determining the sensitivity of the APE for archeological resources. Precontact and historic groups often favored level, well-drained areas near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the APE that are more likely to contain archeological resources. In addition, bedrock formations may contain chert or other resources that may have been quarried by precontact groups. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrography.

### 3.1 Soils

Soil surveys provide a general characterization of the types and depth of soils that are found in an area. This information is an important factor in determining the appropriate methodology if and when a field study is recommended. The source of this data is the Soil Survey Geographic (SSURGO) Database, maintained by the Natural Resources Conservation Service, United States Department of Agriculture (2018). The soil types present within the APE are shown on Map 3. Our field observations confirmed the general accuracy of the soils database. For the most part we encountered well drained, fairly level soils that would be suitable for habitation.

Table 1. Soils in the APE

| Symbol | Name | Depth | Textures | Slope | Drainage | Landform |
|---|---|---|---|---|---|---|
| BuB | Burdett silt loam (BuB) | 0-51 cm (0-20 in) | Si lo | 3-8% | Somewhat poorly drained | drumlinoid ridges, hills, till plains |
| | | 51-84 cm (20-33 in) | Channery Si lo, Si lo, very fine Sa lo | | | |
| | | 84-277 cm (33-109 in) | Channery Cl lo, channery Lo, Gra si cl lo | | | |
| | | 277-439 cm (109-173 in) | Cl lo, Channery Lo, channery Si lo, Gra si cl lo | | | |
| ChB | Chenango gravelly silt loam, loamy substratum (ChB) | 0-71 cm (0-28 in) | Gra si lo | 3-8% | Well drained | terraces, valley trains |
| ChB CoC | Chenango gravelly silt loam, loamy substratum (ChB) Colonie loamy fine sand, rolling (CoC) | 71-368 cm (28-145 in) | Very channery fine Sa lo, Gra si lo, very Gra lo | 3-8% 8-15% | Well drained Somewhat excessively drained | terraces, valley trains beach ridges, deltas |
| | | 368-478 cm (145-188 in) | Very channery Lo, very channery Si lo, very gravelly Si lo, extremely Gra sa lo | | | |
| | | 0-46 cm (0-18 in) | Lo fine sa | | | |
| CoC | Colonie loamy fine sand, rolling (CoC) | 46-439 cm (18-173 in) | Fine Sa, Lo fine sa | 8-15% | Somewhat excessively drained | beach ridges, deltas |
| | | 439-478 cm (173-188 in) | Fine Sa, Lo fine sa | | | |
| NuB | Nunda silt loam (NuB) | 0-64 cm (0-25 in) | Si lo | 3-8% | Moderately well drained | drumlinoid ridges, hills, till plains |
| | | 64-130 cm (25-51 in) | Channery very fine Sa lo, Gra lo, Si lo | | | |
| | | 130-180 cm (51-71 in) | Gra cl lo, Si cl lo, Si lo | | | |
| | | 180-284 cm (71-112 in | Cl lo, Gra si cl lo, Si cl lo | | | |
| | | 284-414 cm (112-163 in) | Cl lo, Gra si cl lo, Si cl lo | | | |
| RkA | Riverhead fine sandy loam (RkA) | 0-71 cm (0-28 in) | Fine Sa lo | 0-3% | Well drained | deltas, terraces |
| | | 71-163 cm (28-64 in) | Fine Sa lo, Gra sa lo, Sa lo | | | |
| | | 163-201 cm (64-79 in) | Fine Sa lo, Gra lo sa, Lo fine sa, Lo sa | | | |
| | | 201-419 cm (79-165 in) | Gra fine sa, stratified Gra to sa | | | |
| RkB | Riverhead fine sandy loam (RkB) | 0-71 cm (0-28 in) | Fine Sa lo | 3-8% | Well drained | deltas, terraces |
| | | 71-163 cm (28-64 in) | Fine Sa lo, Gra sa lo, Sa lo | | | |
| | | 163-201 cm (64-79 in) | Fine Sa lo, Gra lo sa, Lo fine sa, Lo sa | | | |
| | | 201-419 cm (79-165 in) | Gra fine sa, stratified Gra to sa | | | |

### 3.2 Bedrock Geology

According to the Geologic Map of New York, the bedrock within the APE is Normanskill Shale (On) (Fisher, et al. 1970). The formation consists of minor mudstone and sandstone laid down in the Middle Ordovician. It is not chert bearing. There are no known bedrock outcrops within the APE.

### 3.3 Topography and Hydrography

The relatively level APE sits atop a low ridge with good drainage. A reasonably large, unnamed pond runs north/south along the west side of the ridge, just 30 meters away from the APE. Several other water sources are located in the vicinity of the APE. These include Stump Pond located ~600 meters to the southwest and Shaker's Creek/Ann Lee Pond located 575 meters to the southeast. The creek flows north where it enters the Mohawk River, itself located 3.4 kilometers north of the APE. This could have provided a convenient travel route west up the river and east to the Hudson along with various aquatic resources.

## 4 Documentary Research

Hartgen conducted research using the New York State Cultural Resource Information System (CRIS), which is maintained by the New York SHPO and the Division for Historic Preservation DHP within OPRHP. CRIS contains a comprehensive inventory of archeological sites, State and National Register (NR) properties, properties determined eligible for the NR (NRE), and previous cultural resource surveys.

### 4.1 Archeological Sites

An examination of CRIS identified 21 reported archeological sites within one mile radius of the APE (Table 2). Previously reported archeological sites provide an overview of both the types of sites that may be present in the APE and relation of sites throughout the surrounding region. The presence of few reported sites, however, may result from a lack of previous systematic survey and does not necessarily indicate a decreased archeological sensitivity within the APE. Prehistoric sites in the area ranged in complexity from simple isolated finds to camps with numerous artifacts, fire cracked rock and possible features. Several of the historic sites in the area are linked to the Shaker occupations surrounding the current APE. These will be discussed in more detail below.

Table 2. Archeological sites within one mile (1.6 km) of the APE

| Site No. | Site Identifier | Description | Status | Proximity to the APE |
|---|---|---|---|---|
| 00104.000351/ NYSM 5624 | Unnamed Site | Precontact site | Undetermined | 1600 feet southeast of APE. |
| 00104.000392 | Albany County Airport Site | Precontact site; stray find, surface evidence; found Adena Points and Normanskill Points | Not eligible | 100 feet southeast of APE. |
| 00104.000395 | Shaker Run #1 Plowed Field C | Precontact site; surface evidence, material in plow zone; found 5 flakes. | Eligible | 3200 feet southwest of APE. |
| 00104.000396 | Shaker Run #2 Plowed Field A | Precontact site; surface evidence, material in plow zone; found 6 flakes. | Eligible | 2800 feet southwest of APE. |
| 00104.000397 | Shaker Run #3 Subsurface Tests | Historic Site; buried evidence; shovel testing - 7 units; found 1 core, 5 flakes, 6 calcined bone fragments, 1 pitted stone. | Undetermined | 3700 feet south of APE. |
| 00104.000398 | Shaker Run #4 Subsurface Tests | Precontact Site; buried evidence; shovel testing -5 units; found 1 quartzite biface, 7 flakes, 1 scraper. | Eligible | 4100 feet south of APE. |
| 00104.000403 | Airline 2 Precontact Site | Precontact site; material in plow zone; 12 shovel tests and 2 units; found chert scraper, chert core, chert flake. | Not Eligible | 2900 feet south-southwest of APE. |

| Site No. | Site Identifier | Description | Status | Proximity to the APE |
|---|---|---|---|---|
| 00104.000404 | 800 Albany Shaker Road Site 1 | Precontact site; camp, buried evidence, evidence of features, material in plow zone; found 55 pieces of cracked rock and one possible feature. | Undetermined | 1200 feet north-northeast of APE. |
| 00104.000405 | 800 Albany Shaker Road Site 2 | Precontact site; camp, buried evidence, evidence of features (possible), material in plow zone; found 5 chert flakes and 23 pieces of cracked rock. | Undetermined | 900 feet north of APE. |
| 00104.000456 | Watervilet Shaker Church Family Seed House Site | Historic site; site was part of a Phase III survey; no visible evidence. | Not Eligible | 2300 feet east of APE. |
| 00104.000492 | Areas E & G Historic Features (Shaker Drainage Ditches) | Historic site; remains of a network of shallow drainage canals, superstructures is partially collapsed. | Undetermined | 1300 feet northeast of APE. |
| 00104.000493 | Area I Historic Site | Historic site with Human Remains; probable Pauper's Cemetery location. | Undetermined | 1800 feet northeast of APE. |
| 00104.000494 | Area L Prehistoric Site | Precontact site; buried evidence; found 6 lithic artifacts. | Undetermined | 4000 feet north-northeast of APE. |
| 00104.000495 | Area E Prehistoric Site | Precontact site; buried evidence; found 6 chert flakes. | Undetermined | 400 feet southeast of APE. |
| 00104.000497 | Area G Prehistoric Site, Find Spot | Precontact site; buried evidence; found 1 chert flake. | Undetermined | 500 feet east-northeast of APE. |
| 00104.000499 | Southern Terminal Parking Area Prehistoric Scatter | Precontact site; stray find, material below plow zone. | Undetermined | 4900 feet east-southeast of APE. |
| 00104.000531 | Watervilet Church Family First Dwelling House Site | Historic site; 21 shovel tests, three-course brick wall and a parged, poured concrete floor, ouse was built between 1783 and 1790, but has later additions; both machine-made and hand-molded bricks were encountered, as well as wire and hand-wrought iron nails; evidence of continuous maintenance on the building; very little domestic artifacts encounters or collected; house demolished in 1927. | Undetermined | 1900 feet east of APE. |
| 00104.000542 | 798-800 Albany Shaker Road Site 3 | Precontact site; material in and below plow zone, single component; only lithic artifacts, no features or other finds. | Eligible | 1300 feet north of APE. |
| 00104.000547 | Watervilet Shaker Church Family Garden Barn Site | Historic site; part of a Phase II survey. | Eligible | 2400 feet east of APE. |
| 00104.000716 | Watervilet Shaker West Family Farm | Historic site; 265 entries of artifacts catalogued, including a multitude of glass, ceramics, and more; date site constructed 1810 +. | Eligible | 1400 feet west of APE. |
| 00104.000808 | Airline Drive 1 Precontact Site | Precontact site; stray find, material in plow zone; found chert flake, not diagnostic. | Not Eligible | 2400 feet southwest of APE. |

| Site No. | Site Identifier | Description | Status | Proximity to the APE |
|---|---|---|---|---|
| NYSM # 7073 | No info | High spot in wetland; 1 deb in test pit at c. 30cm, Other test pits at c. 10-15ft distance; isolated find (1 deb). | No info | 3300 feet southwest of APE. |
| NYSM # 7074 | No info | High spot at wetland; 1 deb.; test pits at c. 30 cm. other tests pits at c. 10-15ft distances; isolated find (1 deb). | No info | 3400 feet southwest of APE. |
| NYSM # 7075 | No info | No info available. | Eligible | 3700 feet south of APE. |
| NYSM #7076 | No info | No info available | Eligible | 3900 feet south of APE. |

### 4.2 Historic Properties

An examination of CRIS identified one National Register Listed (NRL) Historic District, zero inventoried properties within the APE, including zero properties listed on the NR, and zero NRE properties (Table 3).

Table 3. Inventoried properties within the APE

| USN | Property Name | Status | Description | Proximity to APE |
|---|---|---|---|---|
| 00104.000638 | Watervliet Shaker Historic District | National Register Listed (NRL) | National Register Listed Historic District within the town of Colonie. | APE is within the Historic District. |

### 4.3 Previous Surveys

A review of CRIS identified three previous surveys within the immediate vicinity of the Project (Table 4). The main information of interest provided by these studies again relates to the Shaker Village community that once surrounded the current APE. The Ravage 2021 report provides a detailed history of the community and the landscape from 1775 to the present. Four distinct but closely linked enclaves of settlement once surrounded the current Project. Despite this, neither the 1998 Collamer & Associates study nor the 2020 study immediately to the west of the current APE produced significant remains from that occupation suggesting that their remains were closely clustered around the structures in the four smaller settlements.

Table 4. Relevant previous surveys within or adjacent to the APE

| Project/Phase | Summary | Citation |
|---|---|---|
| A Cultural Resources Survey, Airline Drive, Town of Colonie, Albany County, New York/ Phase IA/IB | The site identified as Airline 2 consists of 2 grey Onondaga chert flakes, one core and one scraper. These are located within an area of approximately 25 feet. No stains, features, nor other indications of prehistoric occupation were identified. No diagnostic artifacts were found. These finds were surprising because this area is especially wet and poorly drained, A drainage ditch is seen 200 feet north and another drainage ditch is 400 feet south of these finds.<br><br>Airline 1 appears to be a stray find.<br><br>No evidence of Shaker buildings or midden were found and no additional investigation was recommended. | (Collamer & Associates Inc. 1988) |

| Project/Phase | Summary | Citation |
|---|---|---|
| Phase I Archaeological Reconnaissance Survey Shaker Farms Development Project/ Phase IA/IB | The limited historic-era assemblage recovered from shovel tests throughout the APE represents random, scattered field refuse of unknown provenience. Radial testing was conducted around all finds deemed potentially significant, but further analysis of materials did not produce any artifacts capable of linking the material with the historic Shaker settlement. Two fragments of whiteware (1850–present) represent the only artifacts with an open date range. It is probable that the historic material found throughout the APE is associated with the later occupation of West Shaker Farm.<br><br>No further archeological investigation was recommended. | (WSP USA Inc. 2020) |
| Review of Watervliet Shaker Site NRHD, listed 1973/ Building Survey | This survey sponsored by Shaker Heritage Society originated with the recommendation by the State Historic Preservation Office to review and update the NRHD nomination of the Watervliet Shaker Historic District located in the Town of Colonie, Albany County, New York. It contains a detailed history of the Shaker community which began in 1775 and lasted until 1938 along with information on how the remaining structures and landscape have changed since the end of the settlement. | (Ravage 2021) |

## 5 Historical Map Review

Maps depicting the APE between 1779 and the present were examined. Selected maps are reproduced in Map 4. Again, the most significant information that we gather from these maps concerns the Shaker Village communities surrounding the Current APE. The earliest maps of the area (DeWitt 1802; Sauthier 1779) do not specifically reference the community despite its having been established within what was then Watervliet in 1775. However, by the 19th century, the community was significant enough to begin appearing on maps, first simply as a marked location (Burr 1829, 1840). However more detailed maps started being published in the middle of the century that give us a great deal of detail about the community (Beers and Beers 1866; Gould 1854; Sidney 1851). These maps depict four distinct communities (called "families") clustered around today's Watervliet Shaker Road, The Church Family, The Second Family, The North Family, and the South Family. These maps, especially Gould's, identify a mix of structures withing these four enclaves, including residences, a church (within the Church Family that all four communities shared), shops and numerous industrial operations (mills, carpentry shops, textile operations, etc.). The current APE sits roughly in the center of these four settlement clusters. No maps show any structures within the APE.

Later topographic maps continue to show the four clusters through the end of the 19th and the early years of the 20th centuries (United States Geological Survey (USGS) 1893, 1895, 1898, 1927). The community was shrinking by this time and a large fire destroyed much of the North Family compound in the late 1920's, leading to an end of the four settlement clusters in 1938. Shortly thereafter, the land was parceled out and development of some began. Most obvious was the construction of what is todays Albany International Airport immediately to the northeast of what was once the Church Family (United States Geological Survey (USGS) 1947). The Airport continued to expand and various roads were rerouted in the coming decades. Watervliet Road was recently rerouted curving around the current APE toward the north and Airline Drive was constructed, creating an intersection along the southeast side of the current Project Area.

No map-documented structures exist within the APE boundaries.

## 6 Present Land Use and Current Conditions

A site visit was conducted by Bradley Russell on August 13, 2021 to observe and photograph existing conditions within the APE. The property is bounded along its west side by a small access road providing access to the radar tower complex consisting of two fenced in areas containing various equipment and structures (Photo 1 and Photo 2). This road runs north from Watervliet Shaker Road, turning 90 degrees to the east roughly 2/3rds of the way along the APE, cutting across it. To the south of this division the APE is largely wooded with a dense understory (Photo 3 and Photo 4)that made movement difficult. North of the roadway, an "L" shaped portion of the Project ran across more open field with some bushes and low vegetation (Photo 5) which wrapped around the northwest corner of the radar tower and associated structures. A portion of the south end of the APE was an open grass field.

## 7 Archeological Sensitivity Assessment

The New York Archaeological Council provides the following description of archeological sensitivity:

> Archaeologically sensitive areas contain one or more variables that make them likely locations for evidence of past human activities. Sensitive areas can include places near known prehistoric sites that share the same valley or that occupy a similar landform (e.g., terrace above a river), areas where historic maps or photographs show that a building once stood but is now gone as well as the areas within the former yards around such structures, an environmental setting similar to settings that tend to contain cultural resources, and locations where Native Americans and published sources note sacred places, such as cemeteries or spots of spiritual importance (NYAC 1994:9).

Table 5. Factors influencing precontact and historic archeological sensitivity of the APE

| Precontact | | Historic | |
|---|---|---|---|
| Water sources: wetlands, ponds, streams, lakes, bays and ocean | ☒ | Water sources: wetlands, ponds, streams, lakes, bays and ocean | ☒ |
| Nearby chert sources | ☐ | Nearby natural resources (iron, limestone, building stone, etc.) | ☐ |
| Well-drained soils for habitation | ☒ | Well-drained soils for habitation | ☒ |
| Favorable landforms (level, good solar exposure, leeward facing) | ☒ | Proximity to transportation systems (road, canals, rivers, railroads, etc.) | ☒ |
| Known archeological sites in the vicinity | ☒ | Known archeological sites in the vicinity | ☒ |
| Other documentary sources | ☐ | Map-documented structures | ☒ |
| | | Other documentary evidence | ☐ |
| Overall assessment: High sensitivity | | Overall assessment: High sensitivity | |

## 8 Archeological Potential

Archeological potential is the likelihood of locating intact archeological remains within an area. The consideration of archeological potential takes into account subsequent uses of an area and the impact those uses would likely have on archeological remains.

Table 6. Factors influencing archeological potential within the APE

| Precontact | | Historic | |
|---|---|---|---|
| Undisturbed soils | ☒ | Lack of modern development | ☒ |
| No erosion or cutting of sediments | ☒ | Limited historical re-use of landscape | ☒ |
| Alluvial deposits (cap and preserve deposits) | ☐ | Alluvial deposits (cap and preserve deposits) | ☐ |

| Precontact | | Historic | |
|---|---|---|---|
| Abundance of nearby stone tool ores | ☐ | Historic fill (cap and preserve deposits) | ☐ |
| Relatively deep soils (features) | ☒ | Relatively deep soils (features) | ☒ |
| Overall assessment: Moderate potential | | Overall assessment: High potential | |

# 9 Survey Methodology

Given the archeological sensitivity, especially for historic remains associated with the Shaker Village, it was determined that a shovel test survey would be the optimal method for characterizing any archeological deposits present.

## 9.1 Shovel Testing

Shovel tests were excavated at a standard interval of 15 meters. Each shovel test was 40 centimeters in diameter. All excavated soil was passed through 0.25-inch hardware mesh and examined for both precontact (Native American) and historic artifacts. The stratigraphy of each test was recorded including the depth, Munsell color, soil description, and artifact content (Munsell Color 2000). The location of each shovel test was plotted on the project map.

## 9.2 Artifacts and Laboratory

As general procedure, all precontact (Native American) cultural material identified during the fieldwork are collected. Significant historic artifacts such as glass, ceramics, food remains, hardware, and miscellaneous items are collected. Coal, ash, cinder, brick, and modern materials are noted. Any artifacts collected are placed in paper or plastic bags labeled by provenience and inventoried in a bag list. Bags are numbered in the field and transported to the Hartgen laboratory in the Town of North Greenbush, Rensselaer County, New York, for processing.

Shovel test records and other provenience information were entered into a Microsoft *Access* database (Appendix 1). Artifacts were cleaned and cataloged. Cataloging entailed entering artifact provenience information, counts, weights, and descriptive information into the database (Appendix 2).

# 10 Survey Results

The Phase IB archeological field reconnaissance was conducted on August 13 and August 16, 2021. The field crew consisted of Alexandra DeCarlo, Megan Eigan, Madeline Illenberg, Cynthia Jackson, Eiryn Sheades, Loretta Tucker and Amy Wilson under direction of Bradley Russell, PhD, the project's Principal Investigator. The weather was favorable for fieldwork. We excavated a total of 85 shovel tests to an average depth of 48 centimeters. The soils were largely natural with a small amount of disturbance documented toward the south end of the APE.

Only one artifact was encountered during the survey, a single piece of whiteware recovered from STP 15. No structures or other evidence of the nearby Shaker settlements were encountered, suggesting that the remains from the four enclaves must be fairly tightly restricted to the occupied areas.

# 11 Recommendations

Given the paucity of archeological materials encountered and the lack of any sites identified, no additional investigation is recommended for this project.

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1927 Albany, 15-Minute Topographic Quadrangle. U.S. Government Printing Office, Washington D.C.

1947 Albany, 15-Minute Topographic Quadrangle. U.S. Government Printing Office, Washington D.C.

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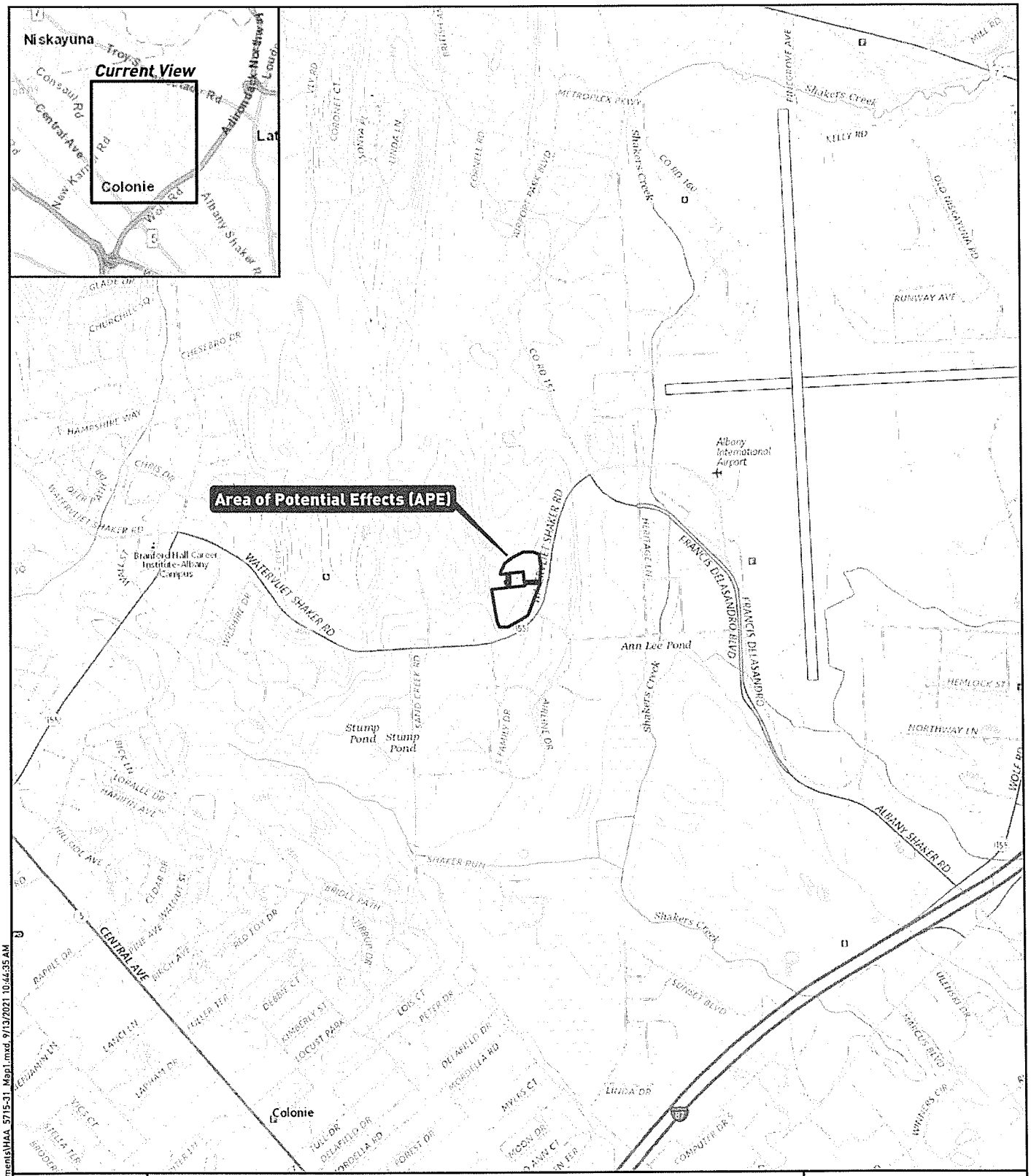
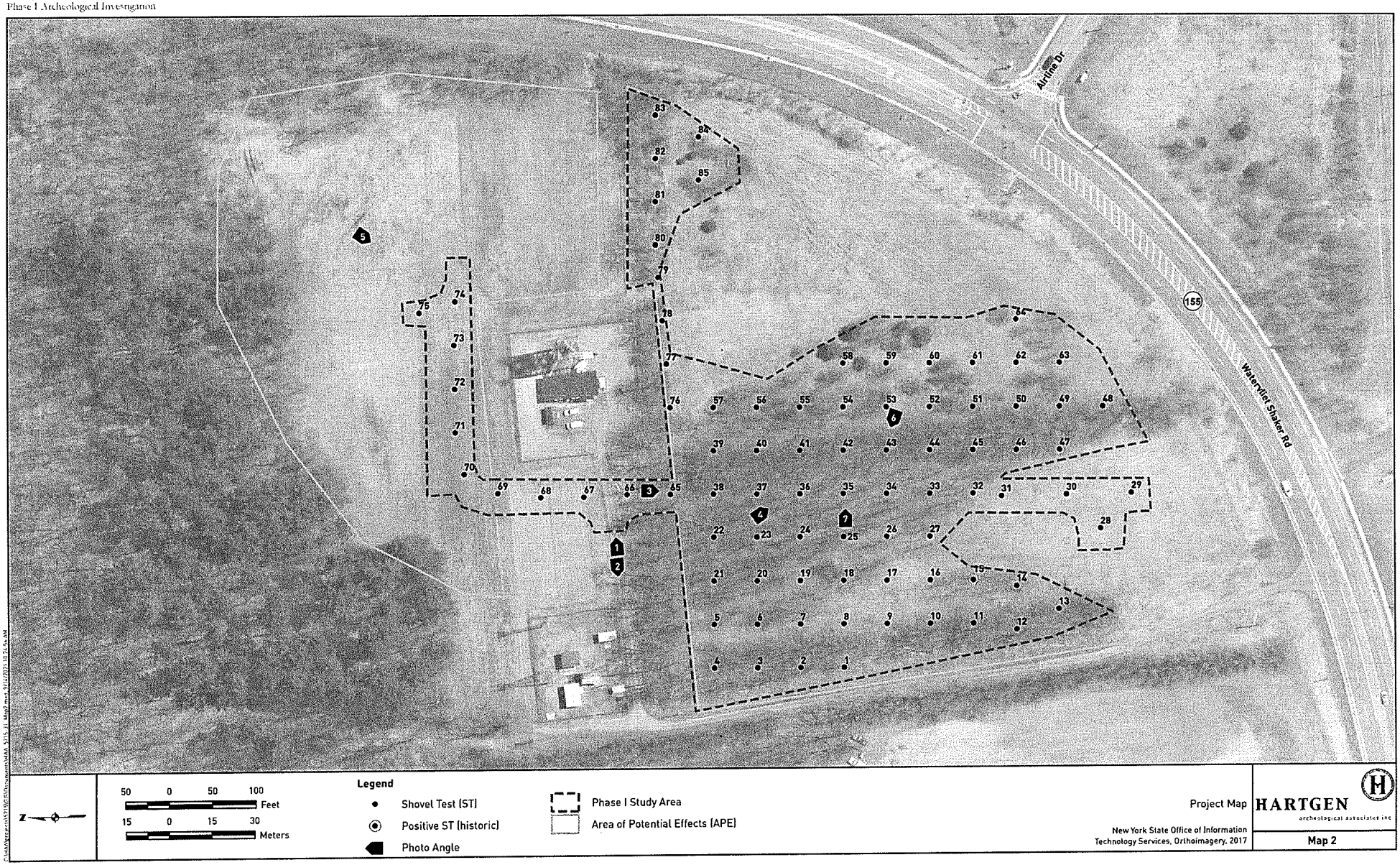
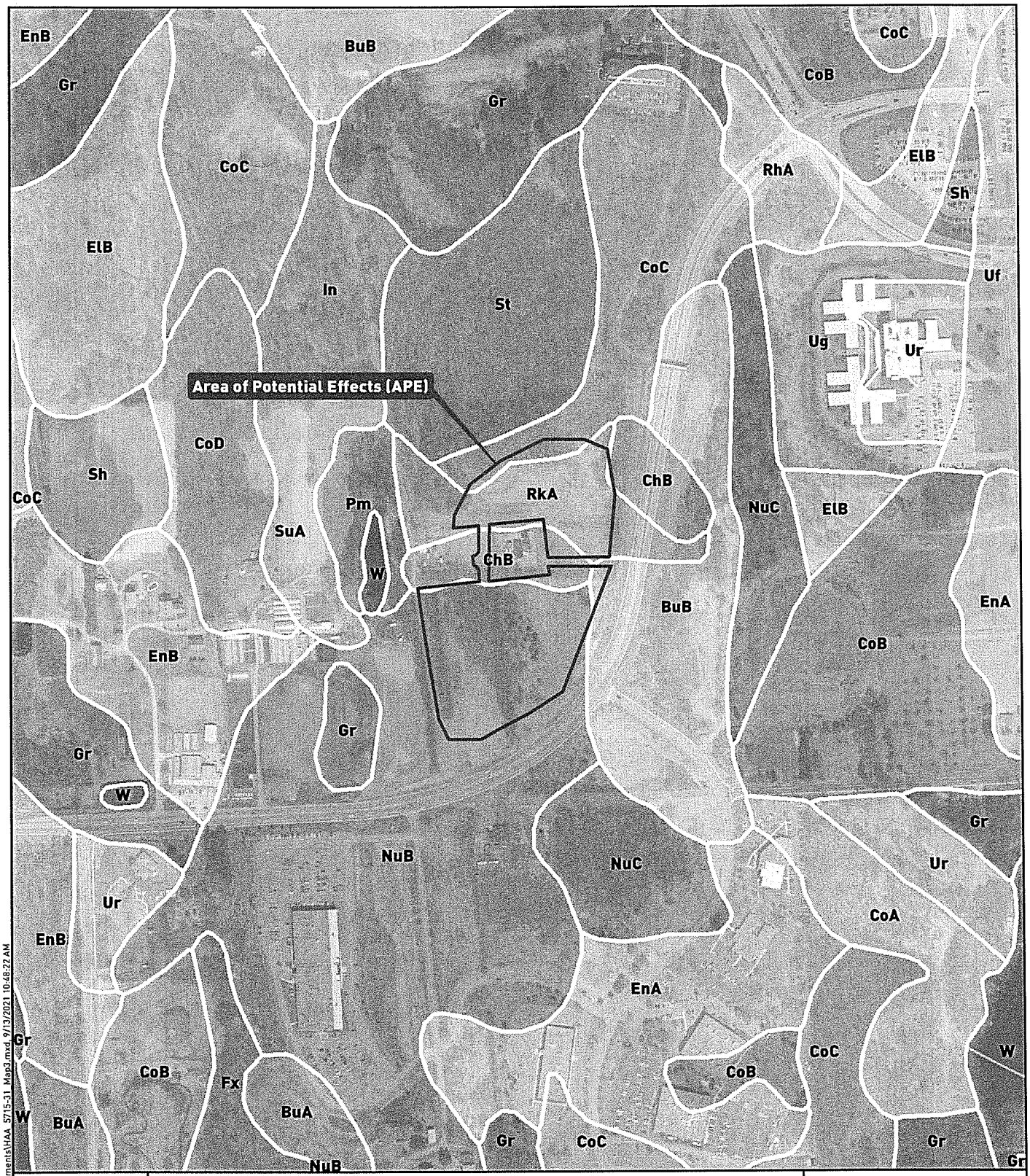
# Maps


Niskayuna
Current View
Colonie
Area of Potential Effects (APE)
WATERVLIET SHAKER RD
ALBANY SHAKER RD
Albany International Airport
Ann Lee Pond
Stump Pond
Stump Pond
Shakers Creek
CENTRAL AVE
Colonie
1,000 0 1,000 2,000 Feet
300 0 300 600 Meters
Note: Contour interval is 10 feet.
Project Location
GIS Services Accessed 9/13/2021: Environmental Systems Research Institute, Inc., World Street Map; USGS The National Map
HARTGEN archeological associates inc
Map 1
C:\HAA\projects\5715\GIS\Documents\HAA_5715-31_Map1.mxd, 9/13/2021 10:44:35 AM

Albany County Solar Installation - Radar Site, Town of Colonie, Albany County, New York
Phase I Archeological Investigation






N

250 0 250 500 Feet

75 0 75 150 Meters

Soil Map

New York State Office of Information Technology Services, Orthoimagery, 2017; U.S. Department of Agriculture, Natural Resources Conservation Service Soil Survey Geographic Database 2017

HARTGEN archeological associates inc

Map 3

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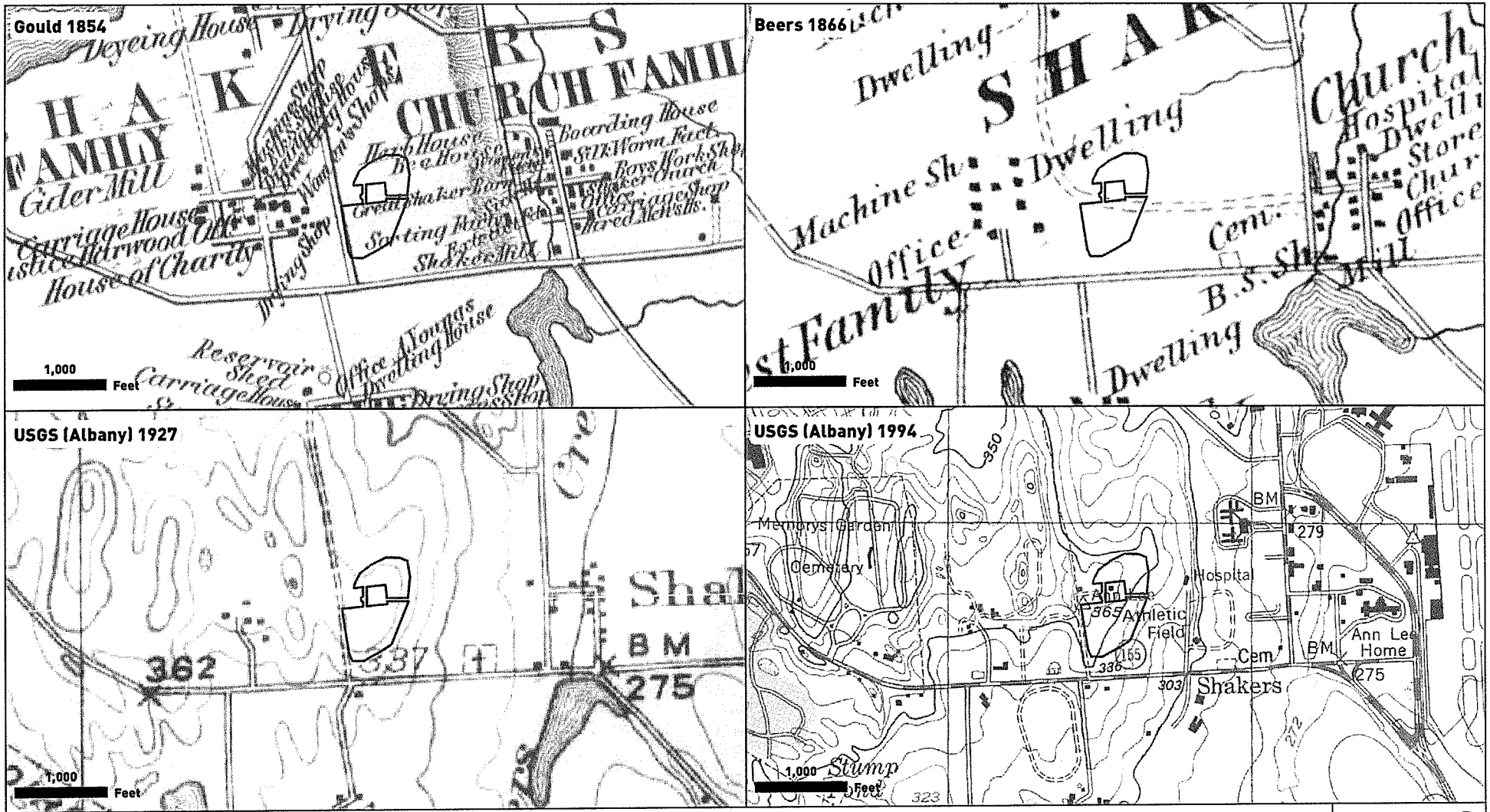


C:\HA\projects\LM1150\GIS\Documents\HAA_5716-31_Map4.mxd 9/17/2021 11:54:42 AM

# Photographs

Photo 1. View facing east along roadway showing wooded aera to the south (right) and more open area to the north (left) with the radar tower in the background.

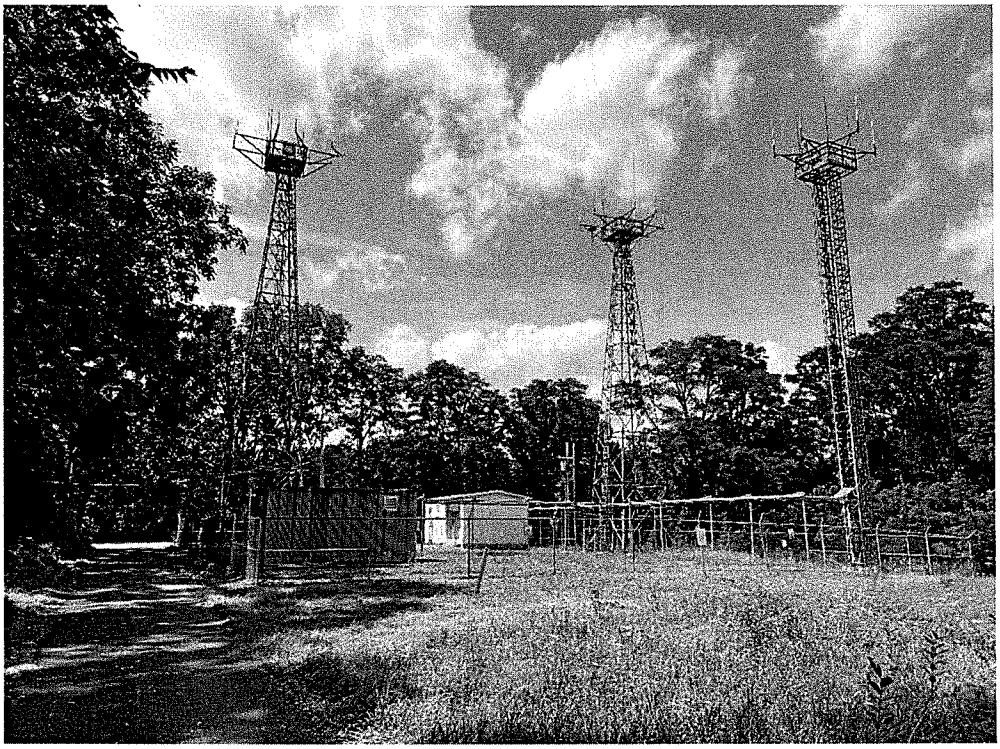

Photo 2. View facing to the west along the roadway showing second fenced complex. The road turns to the south (left) just past the fence.

Photo 3. View facing south showing conditions in the wooded southern portion of the APE.

Photo 4. View facing southeast showing conditions in the wooded southern portion of the APE.

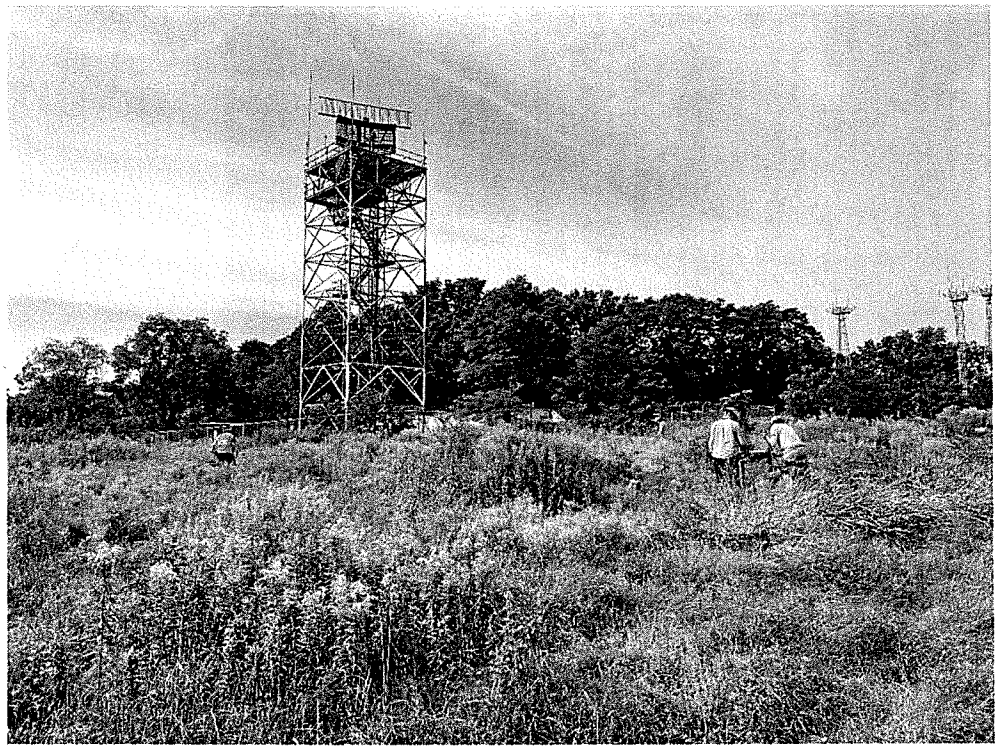

Photo 5. View facing southwest showing conditions in more open northern portion of the APE. Hartgen archeologists are excavating TP's 74 and 75.

Photo 6. Archeologist Megan Eigen excavating STP 43. View to the west.

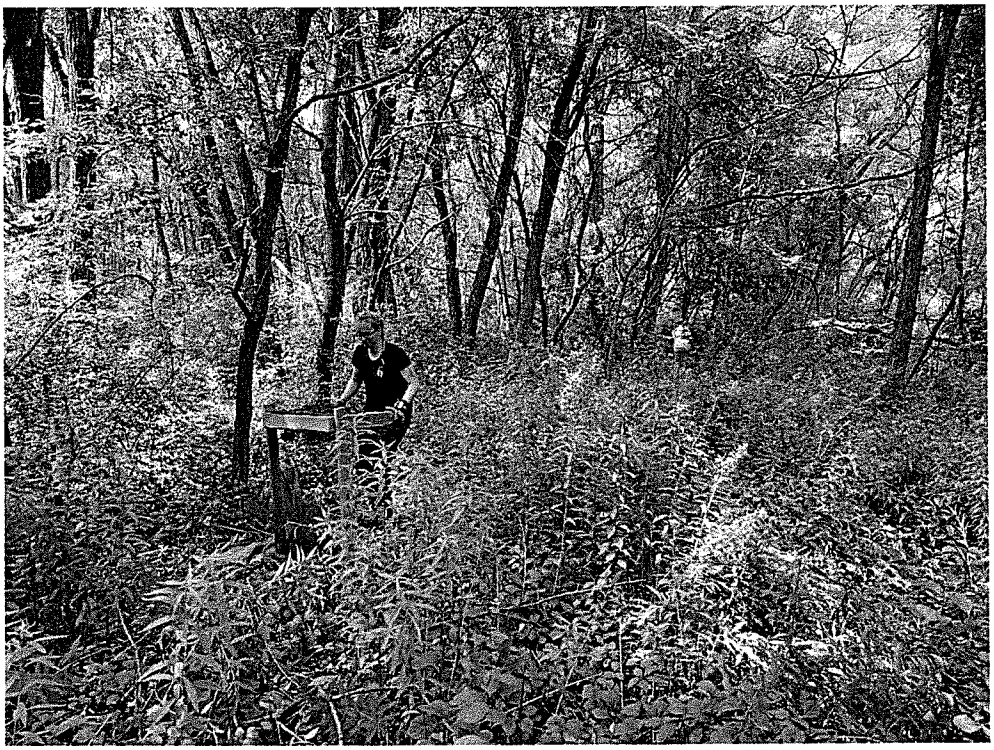

Photo 7.
Archeologist Amy Wilson excavating STP 35. View to the east.

# Appendix 1: Shovel Test Records

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 1 | 37 | 1 | 2.5y 4/3 olive brown | silt loam | roots | | |
| | 57 | 2 | 2.5y 5/6 light olive brown | silt loam | | subsoil | |
| 2 | 25 | 1 | 2.5y 4/2 dark grayish brown | silt clay | gravel, roots | | |
| | 52 | 2 | 2.5y 5/4 light olive brown | silt clay | gravel | subsoil | |
| 3 | 38 | 1 | 10yr 3/3 dark brown | silt clay | roots | | |
| | 58 | 2 | 10yr 6/4 light yellowish brown | sand clay | cobbles, roots | subsoil | |
| 4 | 20 | 1 | 10yr 3/3 dark brown | silt sand | | | |
| | 40 | 2 | 10yr 4/6 dark yellowish brown | sand | gravel, cobbles, roots | subsoil | |
| 5 | 30 | 1 | 10yr 4/3 brown | silt sand | gravel, roots | | |
| | 53 | 2 | 10yr 5/4 yellowish brown | silt sand | gravel | subsoil | |
| 6 | 25 | 1 | 10yr 3/3 dark brown | sand | roots | | |
| | 45 | 2 | 10yr 4/6 dark yellowish brown | sand | gravel | subsoil | |
| 7 | 24 | 1 | 10yr 3/4 dark yellowish brown | silt sand | roots, rocks | | |
| | 45 | 2 | 10yr 5/4 yellowish brown | sand clay | roots | subsoil | |
| 8 | 7 | 1 | 2.5y 2.5/1 black | silt sand loam | | | |
| | 35 | 2 | 2.5y 4/3 olive brown | silt sand | roots | | Chert nodules |
| | 47 | 3 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 9 | 30 | 1 | 10yr 3/3 dark brown | sand | gravel, cobbles, roots | | |
| | 50 | 2 | 10yr 4/6 dark yellowish brown | sand | gravel | subsoil | |
| 10 | 23 | 1 | 2.5y 4/3 olive brown | silt sand | | | |
| | 45 | 2 | 2.5y 5/6 light olive brown | silt sand | | subsoil | |
| 11 | 8 | 1 | 10yr 4/3 brown | silt sand | gravel, roots | | |
| | 24 | 2 | 10yr 5/4 yellowish brown | silt sand | gravel, roots | impasse (roots) | |
| 12 | 26 | 1 | 10yr 3/4 dark yellowish brown | sand loam | roots | | |
| | 54 | 2 | 10yr 5/8 yellowish brown | sand loam | roots | subsoil | |
| 13 | 30 | 1 | 2.5y 4/3 olive brown | silt sand | | | |
| | 48 | 2 | 2.5y 5/6 light olive brown | silt sand | gravel | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 14 | 35 | 1 | 10yr 4/6 dark yellowish brown | sand | roots | | |
| | 55 | 2 | 10yr 6/8 brownish yellow | sand | | subsoil | |
| 15 | 32 | 1 | 10yr 4/4 dark yellowish brown | sand | gravel, charcoal, roots | | |
| | 62 | 2 | 10yr 5/6 yellowish brown | sand | gravel, roots | subsoil | |
| 16 | 34 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 63 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 17 | 48 | 1 | 10yr 4/6 dark yellowish brown | sand | | | |
| | 68 | 2 | 10yr 6/6 brownish yellow | loam | small pebbles | subsoil | |
| 18 | 32 | 1 | 10yr 4/3 brown | silt sand | roots | | |
| | 54 | 2 | 10yr 5/6 yellowish brown | silt sand | roots | subsoil | |
| 19 | 30 | 1 | 10yr 4/4 dark yellowish brown | silt clay | gravel, roots | | |
| | 61 | 2 | 10yr 4/6 dark yellowish brown | silt clay | gravel | subsoil | |
| 20 | 37 | 1 | 10yr 4/3 brown | silt sand | | | Chert nodules |
| | 57 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 21 | 35 | 1 | 10yr 3/3 dark brown | sand | roots | | |
| | 60 | 2 | 10yr 6/8 brownish yellow | sand | | subsoil | |
| 22 | 32 | 1 | 10yr 4/4 dark yellowish brown | silt sand | | | |
| | 60 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 23 | 29 | 1 | 10yr 4/4 dark yellowish brown | sand | gravel, charcoal, roots | | |
| | 63 | 2 | 10yr 5/6 yellowish brown | sand | gravel, roots | subsoil | |
| 24 | 42 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 65 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 25 | 34 | 1 | 10yr 5/3 brown | silt sand | gravel, roots | | |
| | 55 | 2 | 10yr 5/6 yellowish brown | sand | gravel, small pebbles | subsoil | |
| 26 | 48 | 1 | 10yr 4/3 brown | silt sand | roots, rocks | impasse (roots) | |
| 27 | 40 | 1 | 10yr 3/3 dark brown | sand | | | |
| | 60 | 2 | 10yr 4/6 dark yellowish brown | sand | gravel | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 28 | 13 | 1 | 10yr 4/1 dark gray | loam clay | | | |
| | 35 | 2 | 10yr 5/3 brown | loam clay | | impasse (compact soil) | |
| 29 | 7 | 1 | 10yr 4/1 dark gray | clay | gravel, cobbles | | |
| | 26 | 2 | 10yr 4/4 dark yellowish brown | sand clay | gravel, cobbles | impasse (compact soil) | |
| | | | 2Gley 3/10B dark bluish gray | | | | |
| 30 | 23 | 1 | 10yr 3/2 very dark grayish brown | silt clay | gravel | impasse (compact soil) | |
| 31 | 32 | 1 | 10yr 3/3 dark brown | sand | gravel, cobbles, roots | | |
| | 52 | 2 | 10yr 5/8 yellowish brown | sand | gravel, cobbles | subsoil | |
| 32 | 26 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 52 | 2 | 10yr 5/4 yellowish brown | sand | | subsoil | |
| 33 | 34 | 1 | 10yr 4/4 dark yellowish brown | sand | gravel, roots | | |
| | 58 | 2 | 10yr 4/6 dark yellowish brown | sand | gravel, roots | subsoil | |
| 34 | 34 | 1 | 10yr 3/3 dark brown | silt sand | roots | | |
| | 55 | 2 | 10yr 4/6 dark yellowish brown | silt sand | | subsoil | |
| 35 | 35 | 1 | 10yr 5/3 brown | sand | gravel, cobbles, roots | | |
| | 57 | 2 | 10yr 5/4 yellowish brown | sand | gravel | subsoil | |
| 36 | 36 | 1 | 10yr 4/3 brown | silt sand | roots | | |
| | 55 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel | subsoil | |
| 37 | 31 | 1 | 10yr 3/4 dark yellowish brown | silt sand | roots | | |
| | 52 | 2 | 10yr 4/6 dark yellowish brown | silt sand | gravel | subsoil | |
| 38 | 25 | 1 | 10yr 5/3 brown | sand loam | gravel, roots | | |
| | 40 | 2 | 10yr 6/4 light yellowish brown | sand loam | gravel, cobbles | subsoil | |
| 39 | 22 | 1 | 10yr 4/3 brown | silt clay | gravel, roots | | Shotgun shell |
| | 40 | 2 | 10yr 5/4 yellowish brown | silt clay | gravel, roots | subsoil | |
| 40 | 25 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 55 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 41 | 30 | 1 | 10yr 3/3 dark brown | sand loam | gravel, cobbles, roots | | |
| | 40 | 2 | 10yr 5/6 yellowish brown | sand loam | cobbles | impasse (roots) | |
| 42 | 33 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 53 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel | subsoil | |
| 43 | 30 | 1 | 10yr 3/3 dark brown | silt sand | roots | | |
| | 50 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel, roots | subsoil | |
| 44 | 21 | 1 | 10yr 4/3 brown | silt sand loam | gravel, roots | impasse (roots) | |
| 45 | 10 | 1 | 10yr 3/3 dark brown | sand | gravel, cobbles, roots | | |
| | 30 | 2 | 10yr 5/8 yellowish brown | sand | gravel, cobbles, roots | subsoil | |
| 46 | 30 | 1 | 10r 4/3 weak red | sand | roots | | |
| | 50 | 2 | 10r 5/6 red | sand | | subsoil | |
| 47 | 24 | 1 | 10yr 3/2 very dark grayish brown | silt sand loam | | | |
| | 47 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 48 | 31 | 1 | 10yr 5/4 yellowish brown | silt clay | gravel | impasse (compact soil) | |
| | | | 2Gley 5/5B bluish gray | | | | |
| 49 | 42 | 1 | 10yr 3/4 dark yellowish brown | silt sand | | | |
| | 62 | 2 | 10yr 5/6 yellowish brown | sand loam | | subsoil | |
| 50 | 35 | 1 | 10yr 4/4 dark yellowish brown | sand loam | roots | | |
| | 55 | 2 | 10yr 6/6 brownish yellow | sand | | subsoil | |
| 51 | 30 | 1 | 10yr 4/6 dark yellowish brown | sand | roots | | |
| | 54 | 2 | 10yr 5/8 yellowish brown | sand | | subsoil | |
| 52 | 44 | 1 | 10yr 4/3 brown | silt sand | roots | | |
| | 60 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 53 | 40 | 1 | 10yr 4/4 dark yellowish brown | sand loam | gravel, cobbles | | |
| | 55 | 2 | 10yr 6/6 brownish yellow | sand | gravel | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 54 | 36 | 1 | 10yr 4/6 dark yellowish brown | sand | gravel, roots | | |
| | 54 | 2 | 10yr 6/8 brownish yellow | sand | gravel | subsoil | |
| 55 | 32 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 49 | 2 | 10yr 5/6 yellowish brown | silt sand | | subsoil | |
| 56 | 29 | 1 | 10yr 3/4 dark yellowish brown | silt sand | roots, rocks | | |
| | 51 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel, rocks | subsoil | |
| 57 | 19 | 1 | 10yr 4/4 dark yellowish brown | sand loam | gravel, roots | impasse (roots) | |
| 58 | 31 | 1 | 10yr 4/6 dark yellowish brown | sand | roots | | |
| | 52 | 2 | 10yr 6/8 brownish yellow | sand | | subsoil | |
| 59 | 34 | 1 | 10yr 4/3 brown | silt sand | | | |
| | 58 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel | subsoil | |
| 60 | 45 | 1 | 10yr 4/4 dark yellowish brown | sand loam | gravel, roots | | |
| | 60 | 2 | 10yr 6/6 brownish yellow | sand | | subsoil | |
| 61 | 44 | 1 | 10yr 3/4 dark yellowish brown | silt sand | roots | | |
| | 64 | 2 | 10yr 5/8 yellowish brown | silt sand | | subsoil | |
| 62 | 29 | 1 | 10yr 4/4 dark yellowish brown | sand loam | | | |
| | 60 | 2 | 10yr 5/6 yellowish brown | silt clay | | subsoil | |
| 63 | 47 | 1 | 10yr 3/2 very dark grayish brown | sand clay | gravel | | |
| | 66 | 2 | 10yr 5/6 yellowish brown | sand loam | | subsoil | |
| 64 | 64 | 1 | 10yr 4/6 dark yellowish brown | sand | roots | | |
| | 49 | 2 | 10yr 6/8 brownish yellow | sand | | subsoil | |
| 65 | 15 | 1 | 10yr 3/3 dark brown | silt sand | roots | impasse (roots) | |
| 66 | 9 | 1 | 10yr 4/3 brown | silt loam | | | |
| | 32 | 2 | 10yr 5/4 yellowish brown | silt loam other | | subsoil | |
| 67 | 20 | 1 | 10yr 4/2 dark grayish brown | sand clay | gravel, cobbles | impasse (rocks) | |
| 68 | 35 | 1 | 10yr 4/3 brown | sand clay | gravel, crushed stone | | |
| | 64 | 2 | 10yr 4/6 dark yellowish brown | sand loam | gravel | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 69 | 30 | 1 | 10yr 4/3 brown | sand loam | gravel | | |
| | 51 | 2 | 10yr 5/6 yellowish brown | silt sand | gravel | subsoil | |
| 70 | 36 | 1 | 10yr 3/6 dark yellowish brown | silt | gravel, cobbles, roots | impasse (compact soil) | |
| 71 | 30 | 1 | 10yr 5/3 brown | sand loam | gravel, cobbles, roots | | |
| | 45 | 2 | 10yr 6/6 brownish yellow | sand | gravel, cobbles | subsoil | |
| 72 | 39 | 1 | 2.5y 3/3 dark olive brown | silt sand loam | cobbles | | |
| | 59 | 2 | 2.5y 5/4 light olive brown | silt loam other | | subsoil | |
| 73 | 42 | 1 | 10yr 5/3 brown | silt clay | gravel, cobbles | | |
| | 64 | 2 | 10yr 6/6 brownish yellow | sand clay | gravel, cobbles | subsoil | |
| 74 | 30 | 1 | 10yr 3/4 dark yellowish brown | silt sand | gravel, cobbles | | |
| | 50 | 2 | 10yr 4/6 dark yellowish brown | silt sand | gravel | subsoil | |
| 75 | 35 | 1 | 10yr 4/4 dark yellowish brown | sand loam | gravel, cobbles | | |
| | 50 | 2 | 10yr 5/4 yellowish brown | sand | gravel, cobbles | subsoil | |
| 76 | 36 | 1 | 10yr 4/4 dark yellowish brown | silt loam | gravel, cobbles, roots | impasse (compact soil) | |
| 77 | 37 | 1 | 10yr 5/3 brown | loam | gravel, roots | | |
| | 58 | 2 | 10yr 5/4 yellowish brown | silt loam | gravel | subsoil | |
| 78 | 14 | 1 | 10yr 4/3 brown | silt loam other | | | Chert nodule |
| | 35 | 2 | 10yr 5/4 yellowish brown | silt loam other | | subsoil | |
| 79 | 41 | 1 | 10yr 3/1 very dark gray | silt clay | exfoliating bedrock | impasse (compact soil) | |
| | | | 10yr 4/1 dark gray | | | | |
| 80 | 28 | 1 | 10yr 4/4 dark yellowish brown | silt loam | gravel, cobbles, roots | | |
| | 50 | 2 | 10yr 4/6 dark yellowish brown | silt loam | gravel | subsoil | |
| 81 | 30 | 1 | 10yr 4/3 brown | silt loam other | | | |
| | 45 | 2 | 10yr 5/4 yellowish brown<br>10yr 5/6 yellowish brown | silt loam other | | subsoil | |
| 82 | 30 | 1 | 10yr 4/2 dark grayish brown | loam clay | gravel, cobbles | | |
| | 45 | 2 | 10yr 5/6 yellowish brown | clay | gravel, cobbles | subsoil | |

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Shovel Test Records

| Test | Ending Depth (cm) | Level | Munsell Color | Soil Type | Soil Inclusions | Termination Reason | Not Collected |
|---|---|---|---|---|---|---|---|
| 83 | 39 | 1 | 2.5y 3/2 very dark grayish brown<br>10yr 5/8 yellowish brown | loam clay | cobbles, roots, rocks | impasse (rocks) | |
| 84 | 30 | 1 | 10yr 4/2 dark grayish brown | loam clay | gravel, cobbles | | |
| | 40 | 2 | 7.5yr 5/4 brown | clay | gravel | impasse (rocks) | |
| 85 | 28 | 1 | 10yr 4/3 brown | silt sand loam | | | Chert nodule |
| | 48 | 2 | 10yr 5/4 yellowish brown<br>10yr 5/6 yellowish brown | silt sand | | subsoil | |

# Appendix 2: Artifact Inventory

# 571531: Phase I Archeological Investigation, Albany Radar Tower Solar Site

## Artifact Inventory

| Provenience | Level | Feature | Bag | Item | Count | Artifact Description | Material | Material Not Collected | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| STP 15 | 1 | | 1 | 1 | 1 | whiteware | refined earthenware | | 0.6 |

NEW YORK STATE OF OPPORTUNITY.
Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

September 14, 2021

Laura DeGaetano
Albany County Office of Natural Resource Conservation
112 State St. Room 1013
Albany, NY 12207

Re: DEC
Albany County Solar Installation - Radar Site/3.21MW/8 of 33.9 Acres
Town of Colonie, Albany County, NY
21PR01812

Dear Laura DeGaetano:

Thank you for continuing to consult with the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed your recent submissions, dated August 25 and August 31, 2021, for this project. The submissions include viewshed analysis maps in response to our previous information request and our concerns with impacts to the State and National Register listed Watervliet Shaker Historic District (Historic District).

The proposed undertaking is centrally located within the Historic District in one of the few remaining undeveloped areas in this part of the district. Since being listed in the National Register in 1973, the Historic District has been subject to numerous commercial development projects, especially along this section of Watervleit Shaker Road. Taken together, these developments have diminished the rural setting that once characterized the district. Though diminished, the historic rural setting remains as an important character-defining feature associated with the Historic District.

The proposed undertaking will have substantial visual impacts on the Historic District. The facility will be potentially visible from the West Family, South Family, and Church Family properties as well as the Shaker Cemetery (Ann Lee Cemetery). The solar arrays with their industrial form and scale will be incongruous with the Historic District's setting, historic buildings, landscapes, cemeteries, and other resources. In addition, potential glare and reflectivity at various times of the day, albeit minor, are of concern.

As such, our office has found that the undertaking will have adverse impacts on historic resources within the project's area of potential impact.

In this instance we believe that, other than a do nothing alternative, there may be few viable options that might avoid or minimize visual impacts associated with the scale and industrial character of the solar arrays. As such, we recommend that the involved parties

proceed with the development of an appropriate historic preservation mitigation plan. The plan should establish specific preservation/history projects and/or funding intended to offset what this office believes will be significant visual impacts associated with this undertaking. Once a mitigation plan is developed and agreed upon with this office and the lead state agency, it would then be memorialized in a Letter of Resolution as required by Section 14.09.

At this point in our review, the assessment of potential archeological impacts associated with the development of the solar facility are ongoing. Once this assessment is completed our office will issue a formal recommended finding under Section 14.09 to the involved State Agencies.

If you have any questions, please contact me at Weston.davey@parks.ny.gov or (518) 268-2164.

Sincerely,

Weston Davey
Historic Site Restoration Coordinator
Weston.davey@parks.ny.gov

Cc: Charles Vandrei, DEC (via CRIS email)

Prepared For:
**Siemens Smart Infrastructure**
**6 British American Boulevard**
**Latham, NY 12110**
**(585)-613-8967**

Submitted by:
**LaBella Associates**
**4 British American Blvd**
**Latham, NY 12110**
**(518) 439-8235**

LaBella
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# Albany Radar Tower
# Solar Visual Assessment

MARCH 02, 2022
PROJECT NO. 2212336

# Contents

## INTRODUCTION

LaBella Associates, DPC (LaBella) was contracted by Siemens Smart Infrastructure to produce visual simulations for a proposed solar array located at 925 Watervliet Shaker Road in the Town of Brunswick, New York. The simulations presented in this report were developed from four (4) vantage points in the vicinity of the project site. The simulations are based on preliminary engineering for the proposed solar array and interconnection submitted with this package. Some dimensions of the proposed improvements have been provided below:

- Solar Panel = 9' +/- maximum height from ground based on included sketch (in renderings) at 25 Degrees
- Electrical Equipment = 6'0" tall box
- Fencing = 7' 0" tall
- Utility Poles = 40'0" tall

The simulations were performed through the combination of field work and various computer programs. An outline of the programs and tools used can be found below.

Equipment

- Field Cones
- iPhone
- Arrow Unit Gold GNSS GPS device & Rod Setup

Programs/Software

- AutoDesk:
  - 3DS Max
  - Civil 3D
  - InfraWorks
  - ReCap
- ESRI:
  - ArcMap/ArcGIS Pro
  - ArcGIS Online
  - Collector Application
- Google Earth

It is LaBella Associates understanding that there are no codes or requirements for process of creating visual simulations in the Hamlet of Latham.

## DATA GATHERING

To create the proposed 3D model, LaBella Associates used the following:

- Aerial Imagery – NYS GIS Clearinghouse – 2021
  - https://orthos.dhses.ny.gov/content/metadata/2021/2021-06-inch-4-Band-Orthoimagery-East-Zone.xml
- Supplemental Ground Surface – DEM generated from NYS GIS clearinghouse Lidar
  - http://gis.ny.gov/elevation/metadata/2008-Capital-District-LiDAR.xml

## DESKTOP REVIEW

LaBella identified thirteen (13) locations to investigate adjacent the proposed improvements to assess potential visual impact during the field work. These locations were selected as areas that are most likely to be impacted by the proposed improvements or have been noted as a sensitive receptor. While in the field determinations may be made to remove points based on visibility from the flagged locations. The focus of the field work was to capture photos and documentation from potentially impacted views associated with the West and South family sites along Watervliet Shaker Road as well as the Shaker cemetery located on Heritage Lane. The attached Field Photo Location map shows the locations of all recorded photos.

Based on our desktop review, it is expected that there will be some impact to the viewsheds associated with the aforementioned sites. However, there will be a higher impact for residents and drivers and pedestrians along Watervliet Shaker Road from the east.


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# SIEMEN'S SMART INFRASTRUCTURE - ALBANY RADAR TOWER

## FIELD PHOTO LOCATION PLAN

DATE: 03/02/22

SCALE: 1"=500'

N

SIEMENS

## FIELD WORK

Field work began on Saturday January 30th, 2022. While on-site the weather was sunny with a light breeze.

The existing conditions were captured in photos to be used as the base for the simulations. Field photos were captured with a rear facing GPS enabled Phone. Each photo location was recorded through the use of an Arrow Gold GNSS GPS unit. At each photo, a vantage point was created recording location, altitude and documented field notes.

While at each vantage, cones are placed within the line of site and recorded as a registration marker. These cones can be seen inside of both the existing and simulated photos. Below is an example of the cones for coordination between existing and modeled environment.

Photo Location 1

## VISUAL SIMULATIONS

The following visual simulations provide the intent of the proposed solar array at installed conditions. The elements used in the simulation are for representation of intent of massing and appearance but may vary from installed materials.

Photo 01 was taken adjacent to the West Family Laundry House (USN number: 00104.000026) looking northeast into the proposed site. This view represents the potential impacts to the residents of the apartments within both the laundry house as well as that of the other West Family buildings.

As shown in the prepared visual simulation, even during leaf-off conditions, existing vegetation (comprised of old growth vegetation with trees reaching roughly 60 feet in height) provides roughly 1300 linear feet of buffer along the western perimeter of the proposed site to shield vehicles and residences from the proposed array behind it.

See Figure 1.1 for the existing conditions and 1.2 for the proposed visual simulations

Photo 02 was taken at the intersection of Watervliet Shaker Road (Ny-155) and Airline Drive looking northwest into the proposed site. This view represents the potential impact to vehicles and pedestrians looking northwest into the site. The view is primarily unobstructed with minor vegetation along the east side of Watervliet Shaker Road (Ny-22).

As shown in the prepared simulation, the proposed site improvements are visible from this location.

See Figure 2.1 for the existing conditions and 2.2 for the proposed visual simulations.

Photo 03 was taken along the existing asphalt pedestrian pathway (northeast of the existing radio tower) looking southwest into the proposed site. This view represents the potential impact to pedestrians who use this path. The view is relatively unobstructed with light screening vegetation along the eastern border of the proposed site.

As shown in the prepared visual simulation, the proposed site improvements will be visible from this location. However, even during leaf-off conditions, existing vegetation along the eastern border of the proposed site provides moderate screening for pedestrians from the array behind it.

See Figure 3.1 for the existing conditions and 3.2 for the proposed visual simulations.

Photo 04 was also taken along Heritage Lane to the east of the proposed site. This view represents the potential impact to the Church Family barns (USN number: 0104.000010) as well as members of the Shaker Heritage Society who frequent this area.

As shown in the prepared visual simulation, even during leaf-off conditions, existing vegetation along the eastern side of Watervliet Shaker Road as well as natural variations in topography will shield members and users from the proposed improvements. The proposed simulation has been prepared showing a red hatched area simulating the proposed array behind the existing tree line.

See Figure 4.1 for the existing conditions and 4.2 for the proposed visual simulations

Simulated Photo Descriptions

- Figure X.1 – Existing Conditions field photos
- Figure X.2 – Proposed Simulations


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# SIEMEN'S SMART INFRASTRUCTURE - ALBANY RADAR TOWER

## VISUAL SIMULATION LOCATION PLAN

DATE: 03/02/22

SCALE: 1"=300'

N

SIEMENS

Figure 1.1

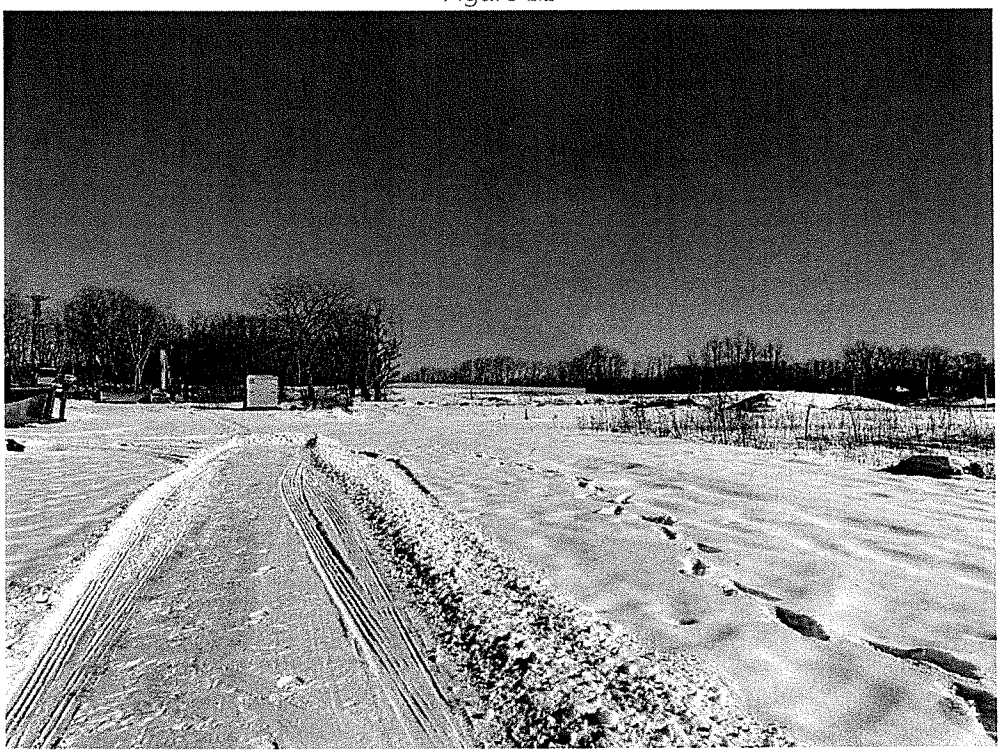


Figure 1.2

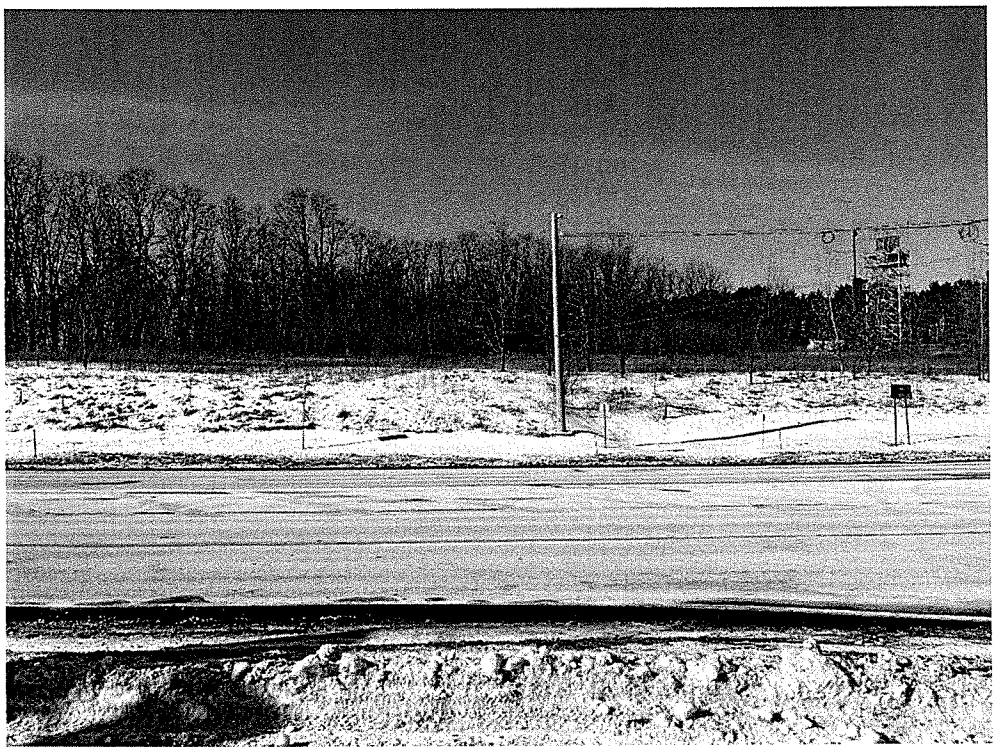


Figure 2.1

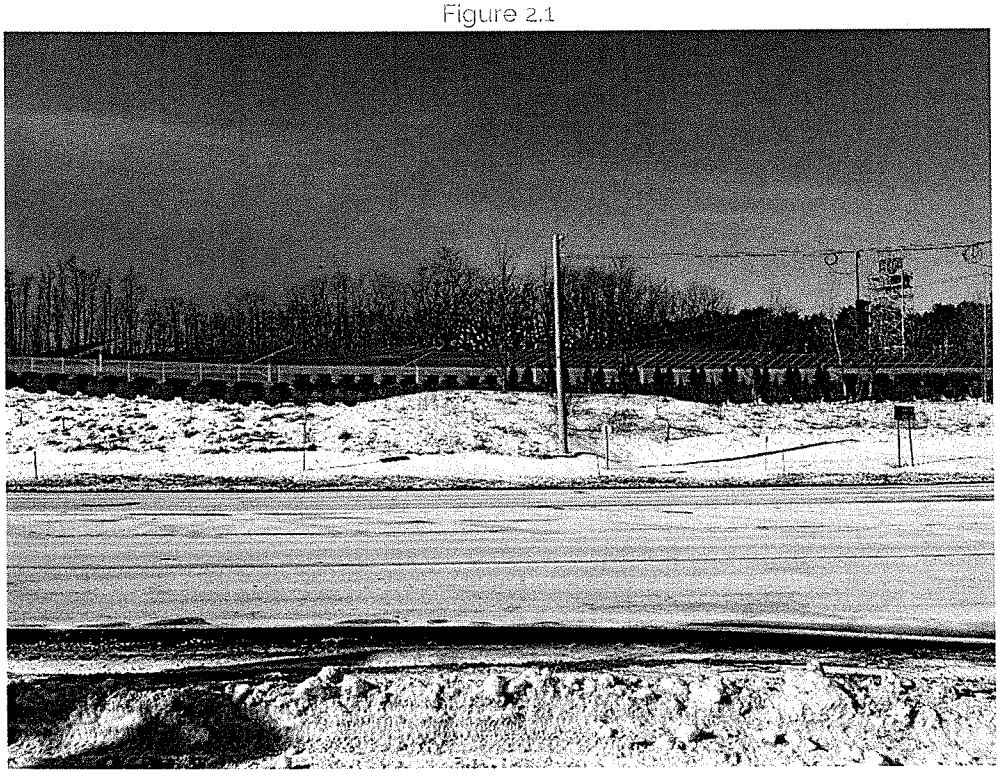


Figure 2.2

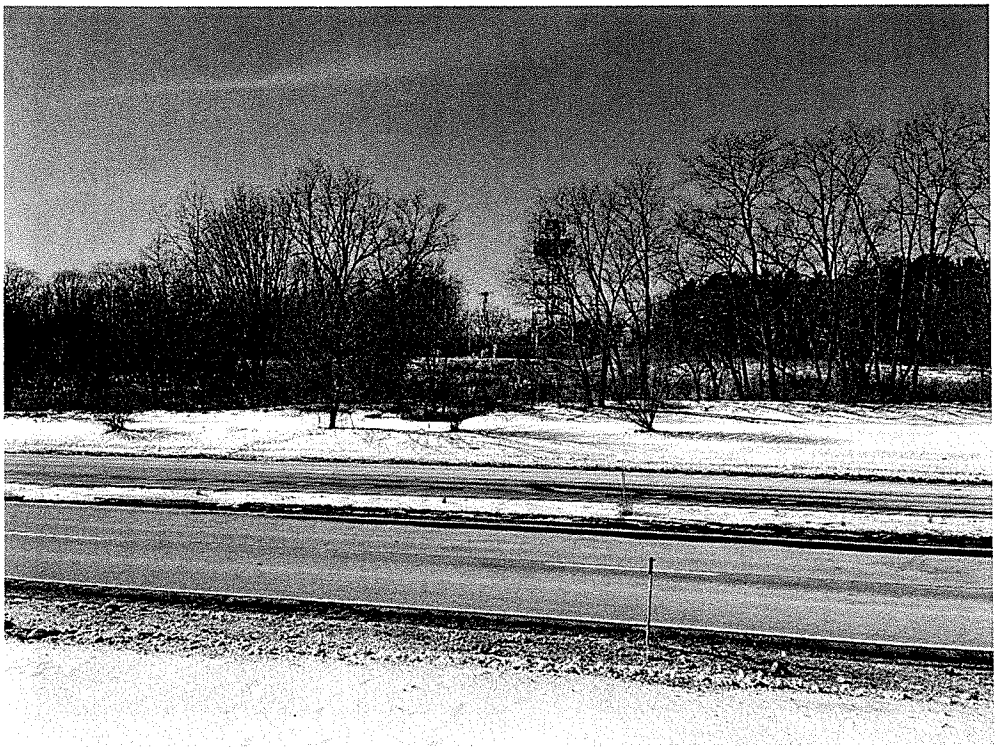


Figure 3.1

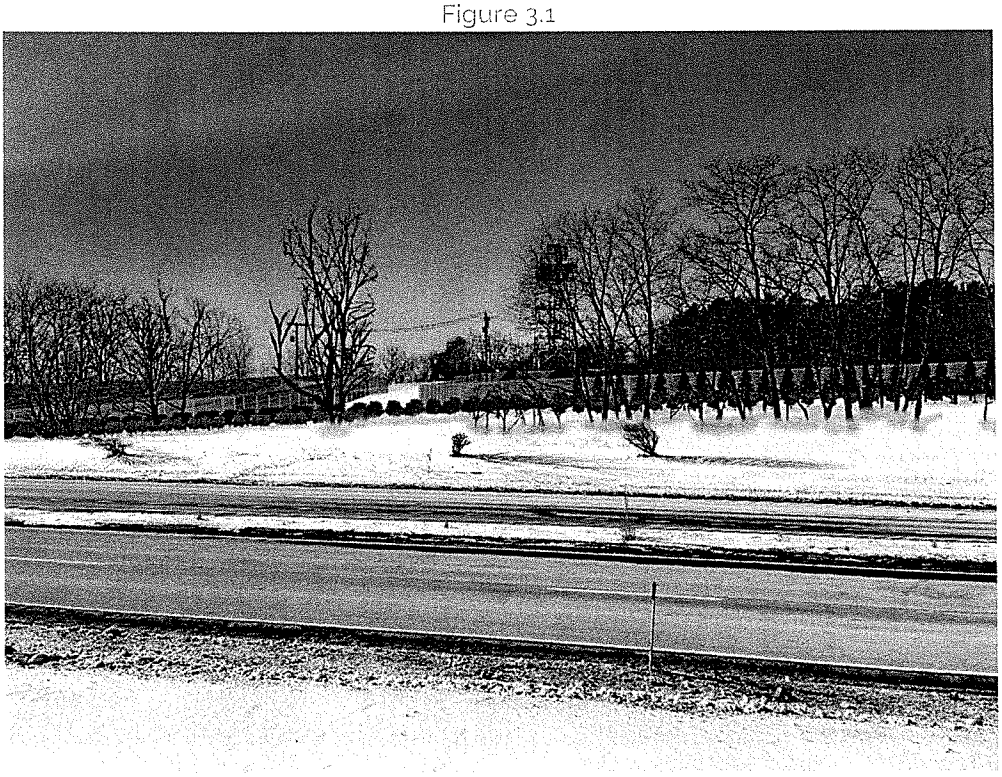


Figure 3.2

Figure 4.1

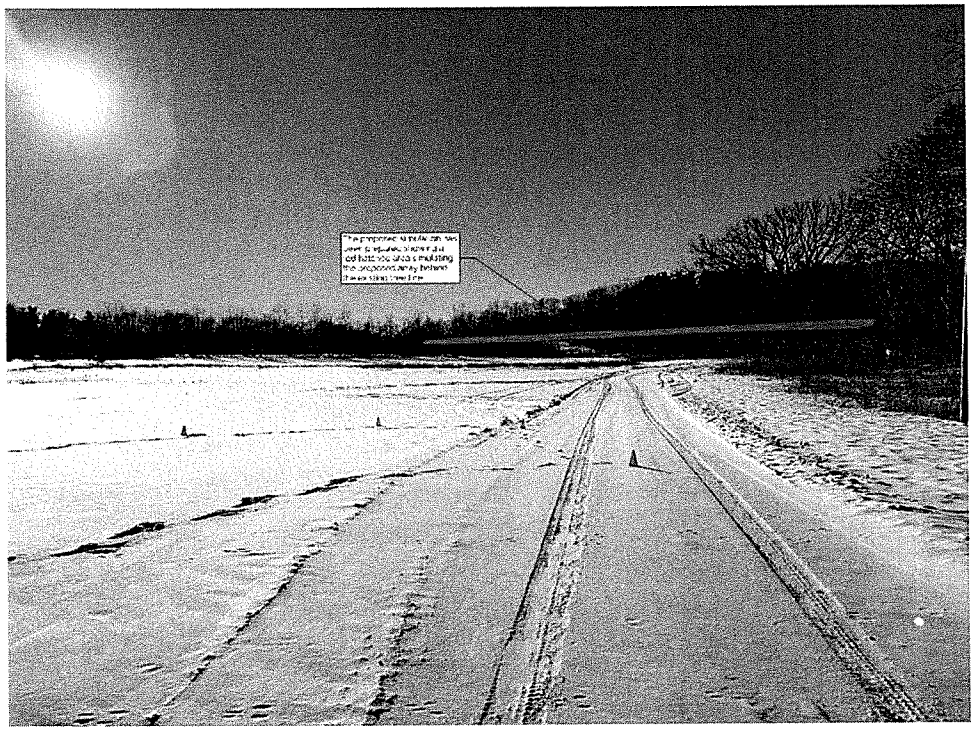


Figure 4.2

# VISUAL SIMULATION PROCESS

## 3D Model, View Orientation and Visual Simulation

LaBella generated a geospatially accurate three-dimensional (3D) model depicting the proposed improvements using all of the gathered data. The proposed site improvements include chain link fence and gates, electrical equipment and pads, gravel access drive, utility poles, solar modules and racking and a vegetative buffer. The submitted simulations include all of the proposed improvements discussed above.

The geospatially accurate model allows us to import in the Field Photo Locations recorded during the field work completed on January 30th, 2022. The imported points were used to create model viewports and align the proposed 3D model with existing conditions captured in the photos. The recorded GPS unit elevation, approximate surface grades and +/- 5.5-6.0' eye height were used to align the vantage of the field photo to the model photo. After the elevation and direction of the photo locations are established, the views are adjusted to align with the rotation and physical location of the field photos.

LaBella modeled existing features as location markers for the final integration of the proposed improvements into the field photos. After the existing features were modeled the proposed features were added and cameras were set to mimic the locations in the field. The cameras positions were determined by GPS coordinate data and their orientations were recorded using the theodolite application. The photos of the model were then exported from 3DS MAX and imported into Adobe Photoshop. To create the final simulations, the proposed model view was layered between a foreground and background of the existing photo. See example in step-by-step workflow below

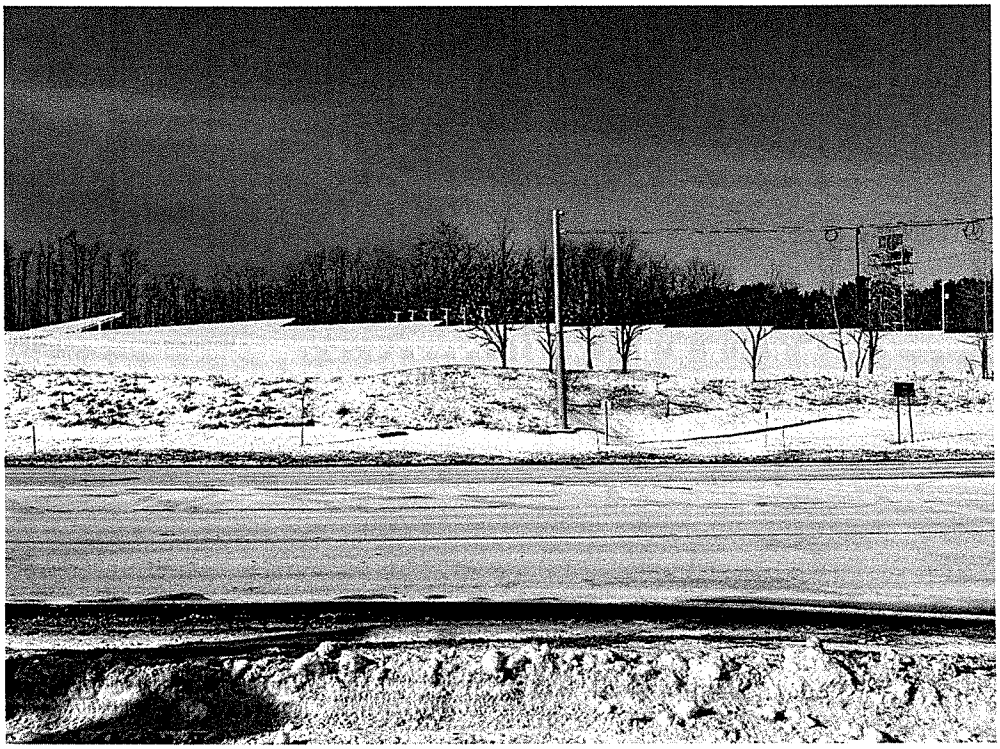
## 3DS Max/Civil3D & Photoshop Step-by-Step

1. Create a new base file using Autodesk Civil 3D
    a. Using the programs surface creation tools the LIDAR is imported as a TIN surface.
2. Create a model with Proposed Design Elements using Civil 3D. The LIDAR surface is used as a basis for the 3D projection of the proposed plan including the following elements:
    a. Fencing
    b. Electrical Equipment
    c. Solar Tables and Supports
    d. Utility Poles & Overhead Wires
    e. Access Road
3. Setting Up Views
    a. Real Photos taken (with GPS coordinates)
    b. Create cameras in Civil 3D model (using Latitude and Longitude from the photo)
        i. Simulate the focal length, declination, altitude, and azimuth using information provided by theodolite application (taken at time of photo)
4. Import the completed model and with cameras into Autodesk 3DS MAX
    a. In 3DS MAX the completed Civil 3D model is imported
    b. Textures are applied to the imported elements
    c. Trees are added at the locations specified by the landscape plan
5. Render Views
    a. Render engine is set to match the field photography resolution
6. Open Site Photo and Rendered View in Photoshop (3 Layers)
    a. Background (Site Photo)
    b. Rendered View (Proposed Improvements Only)
    c. Foreground (Model View Removed)
7. The Rendered View of the Proposed Solar Array is superimposed onto the Site Photo
8. Blend the edges of the Site Photo and Rendered View to create a seamless transplant (clarify foreground and background elements)
9. Export the Final View as a PDF and JPG and add into submission.

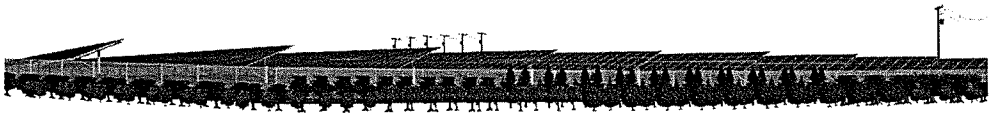
## Example of Photo Layering

The following images represent the several layers that are created during the visual simulation process. Through analyzing the photo locations to surrounding existing features we identify portions of the photo that will remain as foreground and leave the remaining features to compose the background. One the separation is made the export of the proposed improvements is placed in between the two layers allowing the future foreground to screen the proposed improvements as expected.

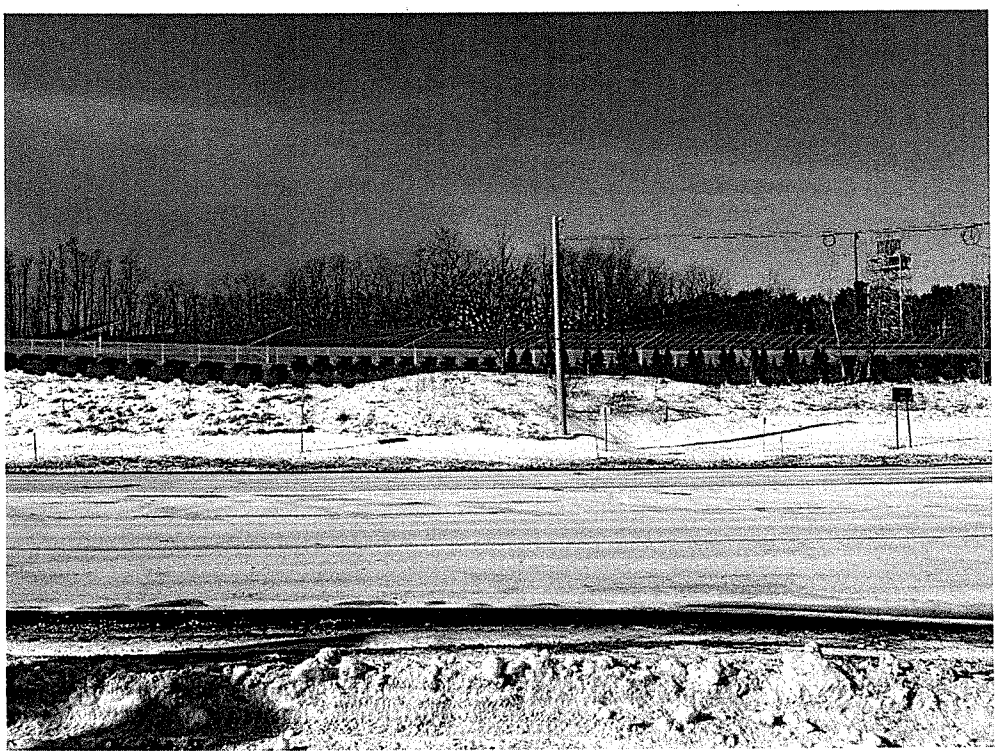
Existing Photo



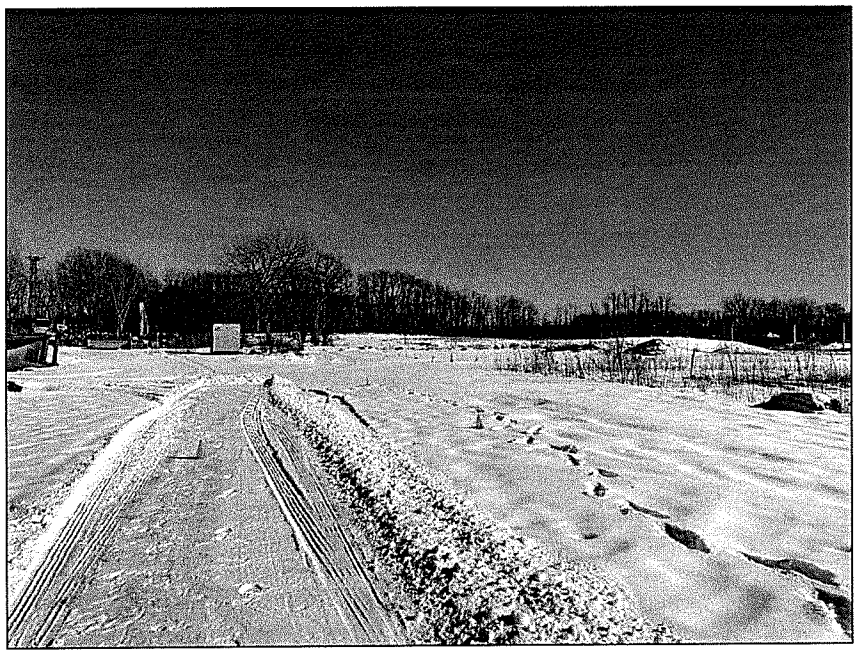
Proposed Foreground



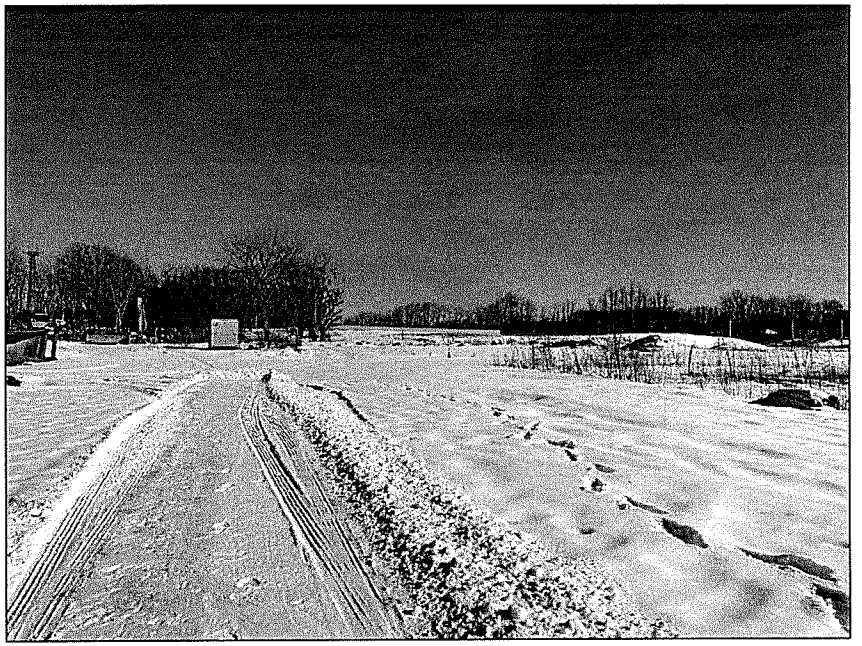
Proposed Model



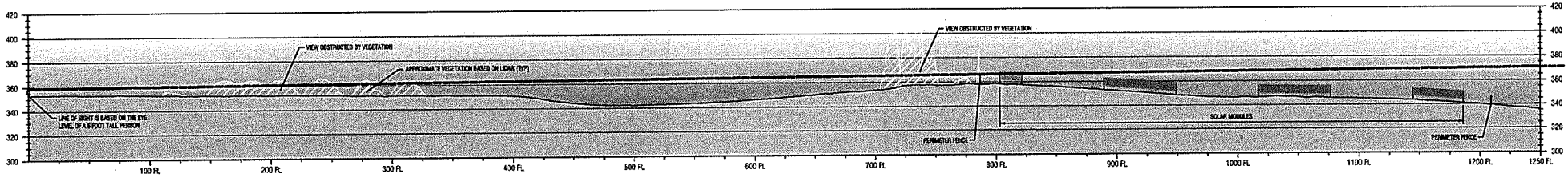
Final Simulation



EXISTING CONDITIONS (FIELD PHOTO)
PHOTO TAKEN: SATURDAY, JANUARY 30TH, 2022



PROPOSED CONDITIONS (VISUAL SIMULATION)
SIMULATION DEPICTS IMMEDIATE POST CONSTRUCTION AND RESTORATION




LINE OF SIGHT PROFILE FROM THE PHOTO LOCATION
SCALE 1" = 40' (HORIZONTAL AND VERTICAL)

LaBella
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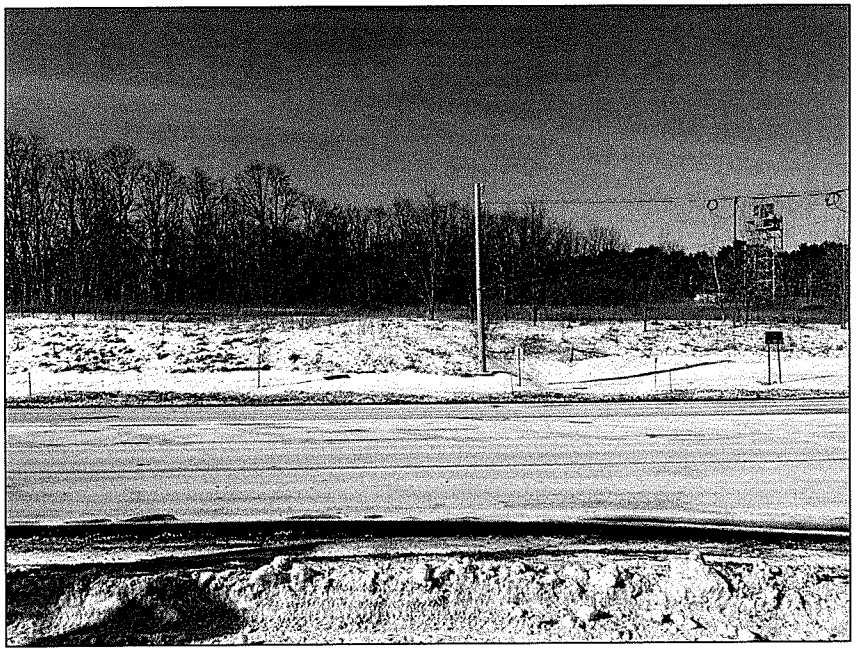
# SIEMENS - ALBANY RADAR TOWER SOLAR

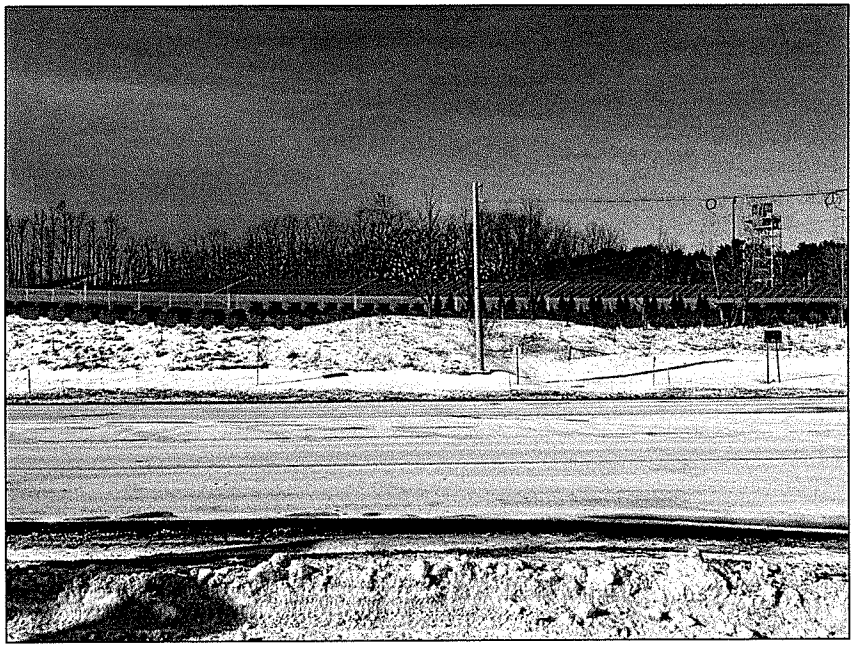
## PHOTO LOCATION 01: VISUAL SIMULATION & LINE OF SIGHT

(22X34)

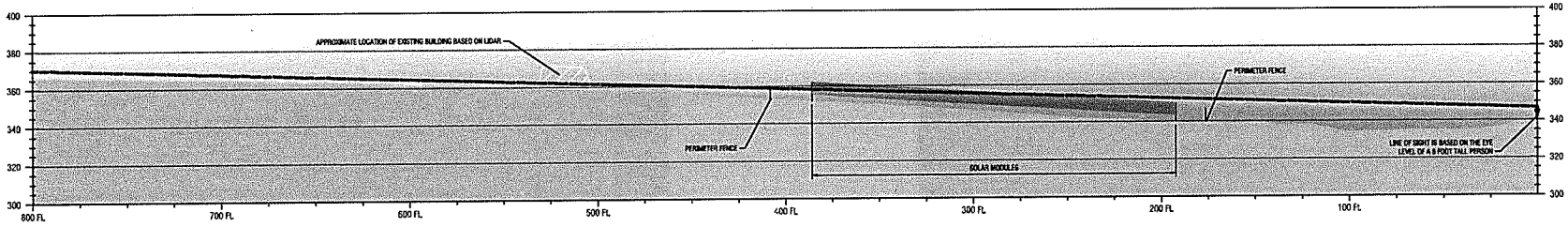
SIEMENS



EXISTING CONDITIONS (FIELD PHOTO)
PHOTO TAKEN: SATURDAY, JANUARY 30TH, 2022



PROPOSED CONDITIONS (VISUAL SIMULATION)
SIMULATION DEPICTS IMMEDIATE POST CONSTRUCTION AND RESTORATION




LINE OF SIGHT PROFILE FROM THE PHOTO LOCATION
SCALE 1" = 30' (HORIZONTAL AND VERTICAL)

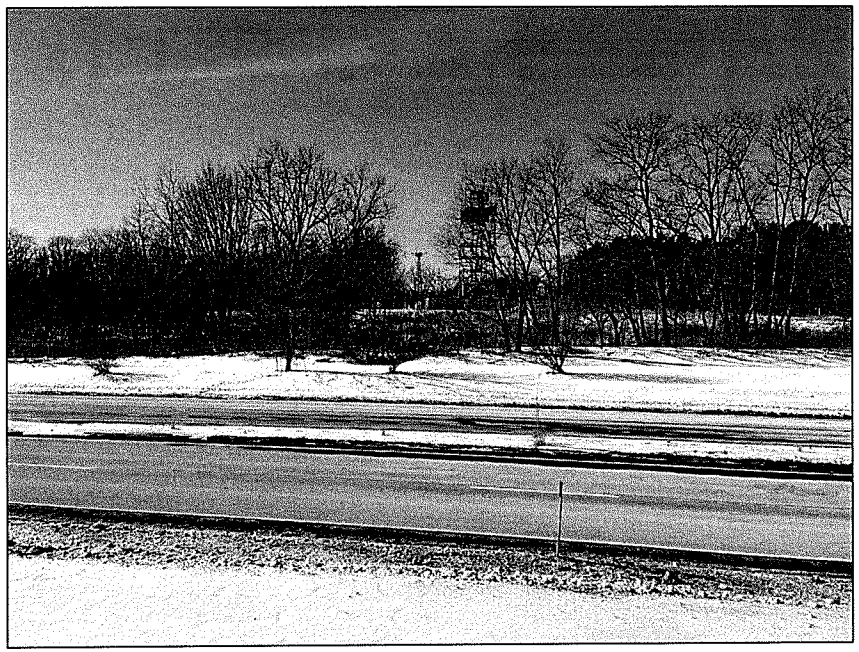
LaBella
Powered by partnership.

# SIEMENS - ALBANY RADAR TOWER SOLAR

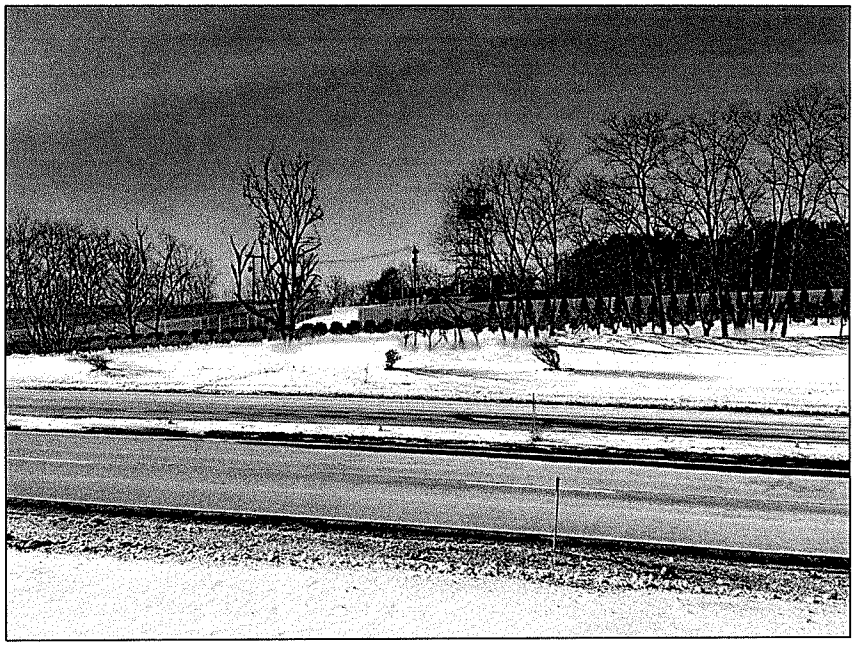
## PHOTO LOCATION 02: VISUAL SIMULATION & LINE OF SIGHT

(22X34)

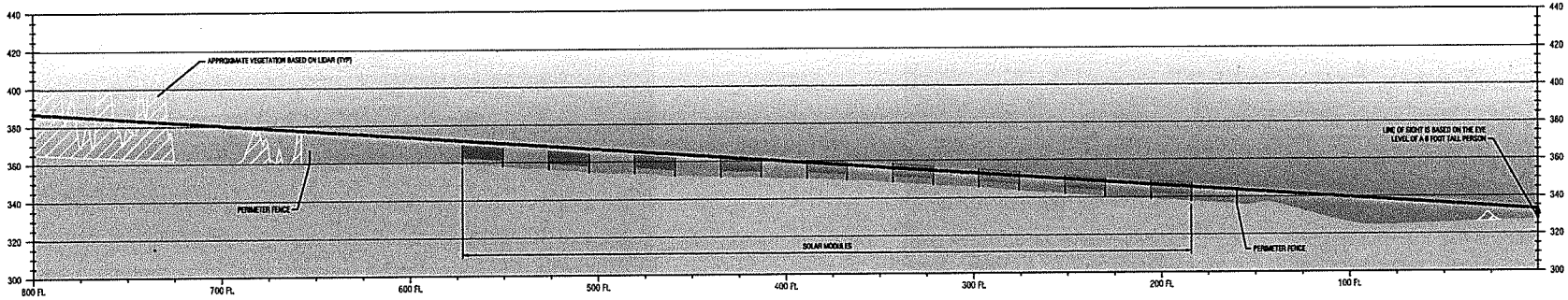
SIEMENS



EXISTING CONDITIONS (FIELD PHOTO)
PHOTO TAKEN: SATURDAY, JANUARY 30TH, 2022



PROPOSED CONDITIONS (VISUAL SIMULATION)
SIMULATION DEPICTS IMMEDIATE POST CONSTRUCTION AND RESTORATION




LINE OF SIGHT PROFILE FROM THE PHOTO LOCATION
SCALE 1" = 30' (HORIZONTAL AND VERTICAL)

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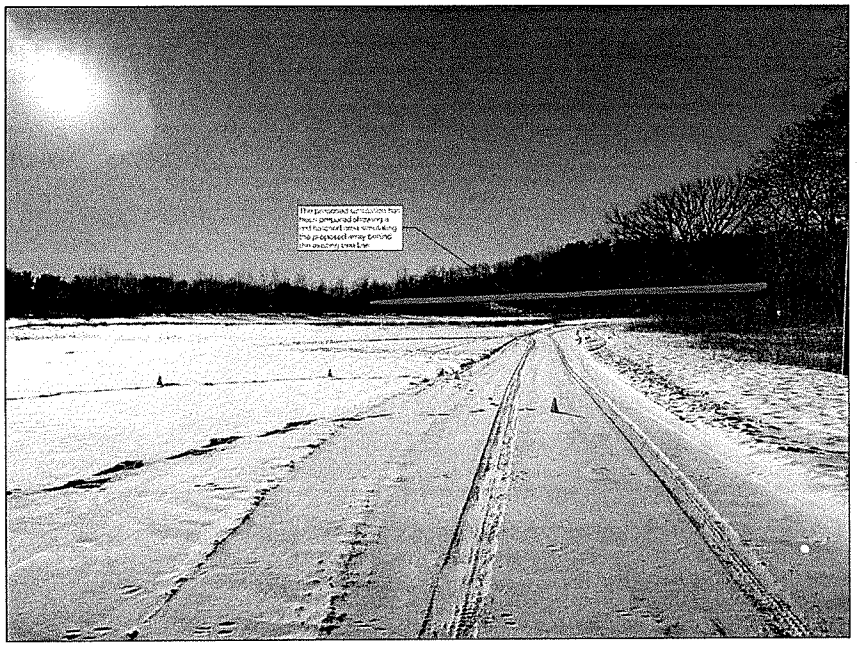
# SIEMENS - ALBANY RADAR TOWER SOLAR

## PHOTO LOCATION 03: VISUAL SIMULATION & LINE OF SIGHT

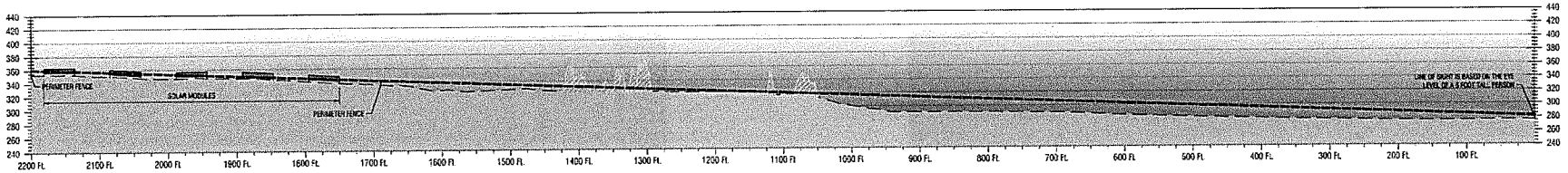
(22X34)

SIEMENS

EXISTING CONDITIONS (FIELD PHOTO)
PHOTO TAKEN: SATURDAY, JANUARY 30TH, 2022



PROPOSED CONDITIONS (VISUAL SIMULATION)
SIMULATION DEPICTS IMMEDIATE POST CONSTRUCTION AND RESTORATION




LINE OF SIGHT PROFILE FROM THE PHOTO LOCATION
SCALE 1" = 80' (HORIZONTAL AND VERTICAL)

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# SIEMENS - ALBANY RADAR TOWER SOLAR

## PHOTO LOCATION 04: VISUAL SIMULATION & LINE OF SIGHT

(22X34)

SIEMENS

**LETTER OF RESOLUTION FOR**
**MITIGATION OF ADVERSE IMPACTS ON CULTURAL RESOURCES ASSOCIATED WITH THE DEVELOPMENT OF THE ALBANY COUNTY SOLAR PROJECT**
**AMONG**
**New York State Department of Environmental Conservation;**
**New York State Office of Parks, Recreation, and Historic Preservation; and**
**Albany County; and Siemens Industry, Inc.**

**21PR01812**

WHEREAS, Siemens Industry, Inc. intends to build the ("Project") a 1.872 MW DC solar project on approximately five-acres of a 33.90-acre parcel located at 897 Watervliet shaker Rd. ; and

WHEREAS, the Project requires coverage under a State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) issued by the New York State Department of Environmental Conservation (Department) for the Project; and

WHEREAS, the Department has consulted with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) in accordance with Section 14.09 of the New York State Parks Law of 1980, 9 NYCRR Part 428 and the existing intra-agency Letter of Resolution; and

WHEREAS, Siemens Industry, Inc. has completed historic, prehistoric and archeological reviews, surveys, and investigations throughout the project impact area (PIA) for the Project; and

WHEREAS, The NYS OPRHP Division for Historic Preservation ("Division") Archaeology Unit has reviewed the Phase I Archaeological Survey report submitted for this project entitled "Phase I Archeological Investigation, Albany Radar Tower Site Solar, Watervliet Shaker Road and Airline Drive, Town of Colonie, Albany County, New York" prepared by Hartgen Archeological Associates, Inc (21SR00616; September 2021). and concurs with the report recommendation that no additional archaeological work is necessary.

WHEREAS, the proposed Project is sited in the Watervliet Shaker Historic District which is listed on the New York State and National Registers of Historic Places (Historic District); and

WHEREAS, it has been determined that the introduction of the solar array will have an Adverse Impact on the historic district; and the Department, OPRHP, Siemens Industry Inc. and the County all seek to avoid said impact; and

WHEREAS, avoidance of impacts to the Watervliet Shaker Historic District is unavoidable; and

NOW, THEREFORE, in accordance with the NEW YORK STATE PARKS, RECREATION AND HISTORIC PRESERVATION LAW, the Department, OPRHP, and Siemens Industry Inc. and the County agree that the Project may proceed subject to the stipulations set forth below:

STIPULATIONS

1. The site will be documented in its current condition

2. Siemens Industry Inc. Shall fund replacement of the roof on the Shaker Meeting House at the Church Family Site at a cost of up to $35,000 (Attachment B map, photo, estimate)

3. Siemens Industry Inc. will use pollinator plants and native grasses in and around the solar array (Attachment C Landscape Plan)

4. Other Terms and Conditions:

   - Modifications, amendments, or termination of this agreement as necessary shall be accomplished by the signatories in the same manner as the original agreement.

   - Disputes regarding the completion of the terms of this agreement shall be resolved by the signatories.

The signatories agree that by execution of this Letter of Resolution the Department has satisfied its requirements for compliance with Section 14.09 of the New York State Parks Law of 1980 and 9 NYCRR part 428.

NYS Department for Environmental Conservation

_____ Date: _____

Charles E. Vandrei
Agency Historic Preservation Officer

NYS Office of Parks Recreation and Historic Preservation

_____ Date: _____

Daniel Mackay
Deputy Commissioner

Siemens Industry Inc.

_____ Date: _____

Name: _____

Title: _____

County of Albany

_____ Date: _____

Name: _____

Title: _____

**Attachment A**

# State Historic Preservation Office/ New York State Office of Parks, Recreation and Historic Preservation Human Remains Discovery Protocol

(August 2018)

If human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented:

Human remains must be treated with dignity and respect at all times. Should human remains or suspected human remains be encountered, work in the general area of the discovery will stop immediately and the location will be secured and protected from damage and disturbance.

If skeletal remains are identified and the archaeologist is not able to conclusively determine whether they are human, the remains and any associated materials must be left in place. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist will assess the remains in situ to help determine if they are human.

No skeletal remains or associated materials will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

The SHPO, the appropriate Indian Nations, the involved state and federal agencies, the coroner, and local law enforcement will be notified immediately. Requirements of the corner and local law enforcement will be adhered to. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist will assess the remains in situ to help determine if the remains are Native American or non-Native American.

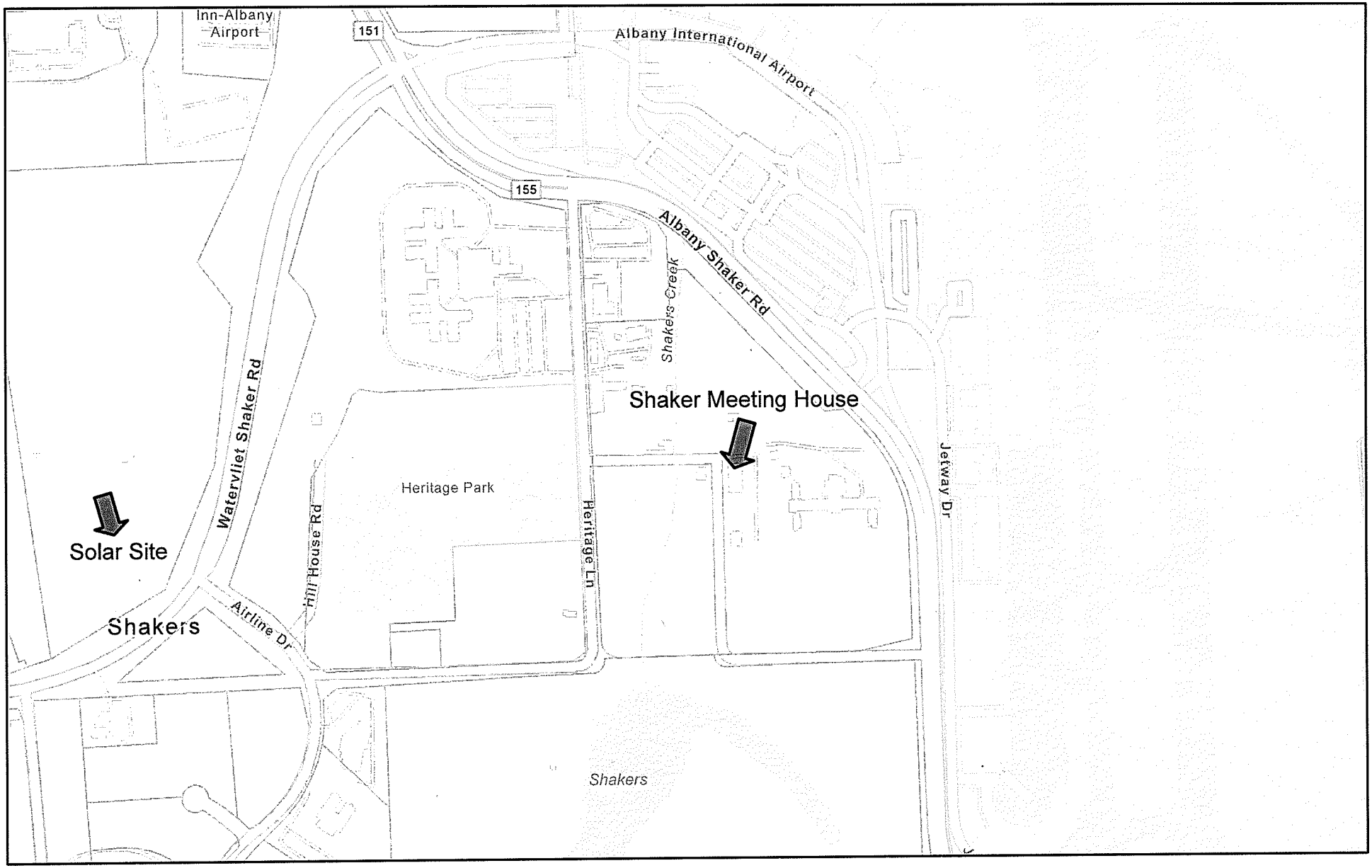
If human remains are determined to be Native American, they will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred option of the SHPO and the Indian Nations. The involved agency will consult SHPO and the appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance. Photographs of Native American human remains and associated funerary objects should not be taken without consulting with the involved Indian Nations.

If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred option of the SHPO. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

To protect human remains from possible damage, the SHPO recommends that burial information not to be released to the public.

Siemens Industry Inc. shall submit this documentation to Albany County for submission to OPRHP through the CRIS website at: https://cris.parks.ny.gov for review and approval. The material should be submitted to the existing CRIS project file 21PR01812.

# Shaker Meeting House Map




5/12/2022, 11:36:06 AM

Tax Parcels (2021)

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

In Cooperation with CHA, Inc.

Attachment B

# Proposal

**STAR ROOFING and RESTORATION**

**www.starroofing.net**

**20 Colvin Ave.**
**Albany, NY 12206**
**(518) 449-3422**
**Fax: (518) 449-3426**

| | | |
|---|---|---|
| **To: Shaker Heritage Society**<br>**25 Meeting House Road**<br>**Albany, NY 12211**<br><br>**Contact: Johanna Batman**<br>**johanna.batman@gmail.com** | **Phone:** () | **Date:** 7/17/20 |
| | **Project Name/Location:** Shaker Heritage Society,<br>25 Meeting House Road, Albany, NY 12211<br><br>**Shaker Heritage 25 Meeting House Rd Albany Shingle Roof** | |
| | **Project Number- 24209** | |

1. Remove existing one layer of shingles/roofing and drip edge from roof surface. Should additional layer(s) of shingles exist, there will be an additional cost of $3995.00 for each layer removed and disposed of.
2. Install ice and water leak barrier on first Six (6) feet of roof, in valley areas and around penetrations and chimneys.
3. Install synthetic underlayment or equal felt paper on remainder of roof surface.
4. Install new drip edge on all edges.
5. Repair existing flashing as needed and install new pipe boots (flanges).
6. Install new shingles. Owners to select color.
   Manufacturer: CertainTeed Style: Landmark Architectural Color: _____
7. Remove all debris from job site. Clean up on a daily basis.
8. Replace any bad roof decking only as needed. PER SQUARE FOOT replacement costs as follows; $1.65 for 1/2" OSB plywood, $1.90 for 1/2" CDX plywood, $2.00 for 5/8" CDX plywood and $2.25 for 3/4" CDX plywood.

Other:

* Price is for the entire shingle roof. * Shingle installation includes a limited "Lifetime" manufacturer's warranty. * Replace three (3) power vents with new solar powered GAF Green Machine vents. * Install shingled over ridge vent(s) on the ridges of the roof. * Remove and dispose of lighting rod brackets and cable. * No lower roofs included. * Deduct $899.00 from price to use Owens Corning Oakridge Shingles in place of CertainTeed. * Star is not responsible for any interior work as/if needed. 8 This job is tax Exempt and Prevailing wages do not apply. * Note: Temporary emergency repairs will be performed as needed on site, not to exceed $750.00.

FIVE YEAR WORKMANSHIP GUARANTY - MANUFACTURERS GUARANTY ON MATERIALS

**We Propose** hereby to furnish material and labor – complete in accordance with the above specifications, for the sum of :
**TWENTY EIGHT THOUSAND FOUR HUNDRED NINETY NINE** **Dollars:** **$28,499.00**

Payment to be made as follows:
**$14,000.00 upon delivery of materials, balance in full upon completion.**

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from the above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owners to carry fire and other necessary insurance. Our workers are fully covered by Workers Compensation Insurance.

Authorized Signature: _____
**Authorized by: Eric Proctor**

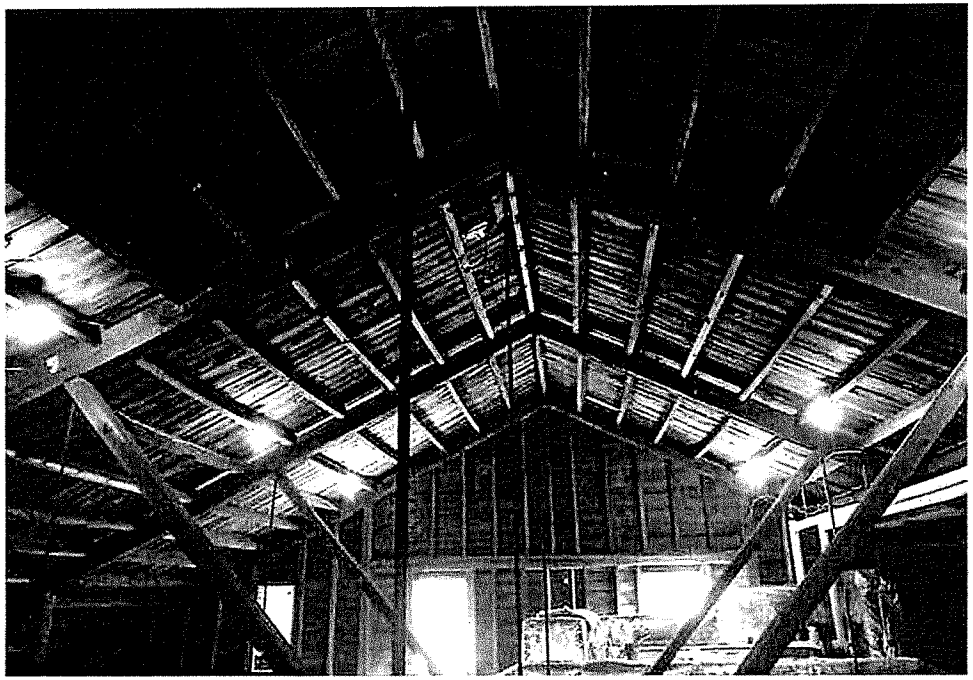
Note: This proposal may be withdrawn by us if not accepted within **21** days.

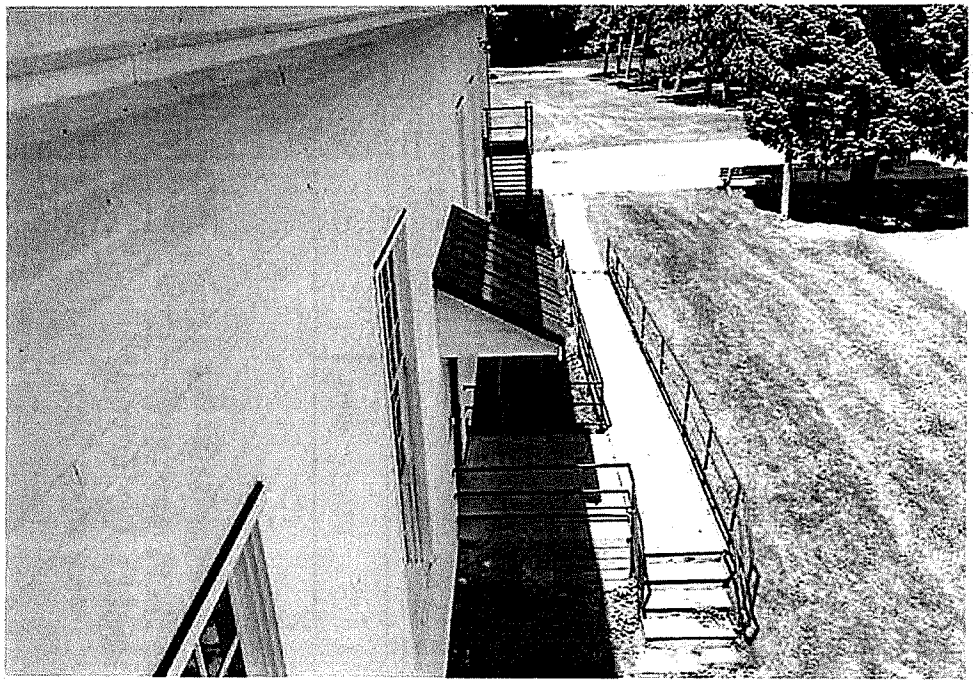
**ACCEPTANCE OF PROPOSAL** – The above process, specifications and conditions are satisfactory and hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above. In the event of default (non-payment) I agree that I will be responsible for all reasonable collection, court and attorney costs incurred in collecting this debt. I also agree a finance charge of 18% will be assessed on all delinquent balances.

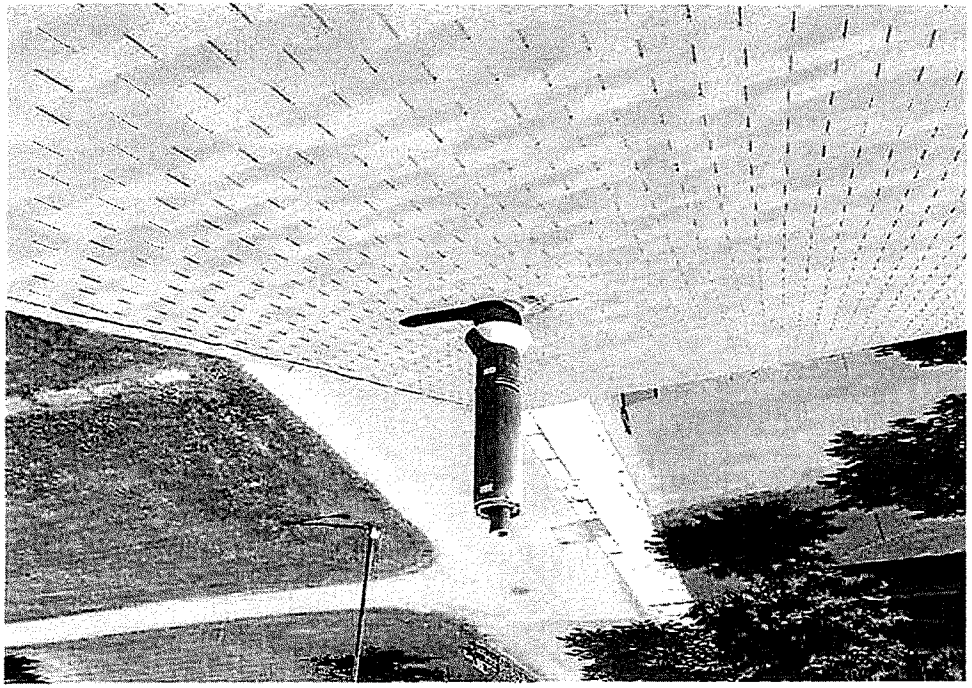
**Date of Acceptance:**

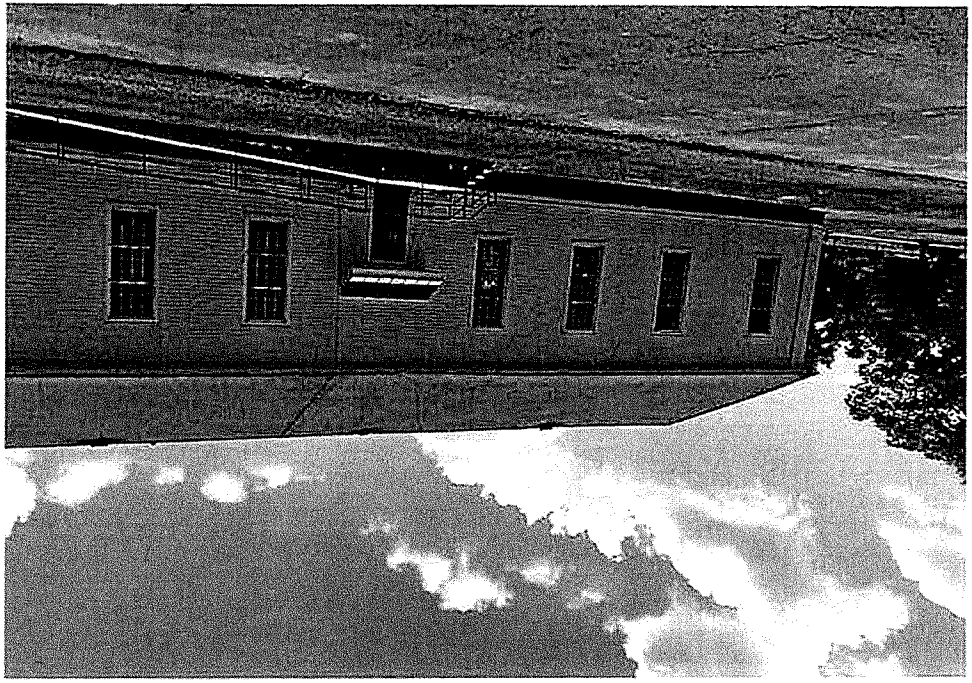
Signature: _____

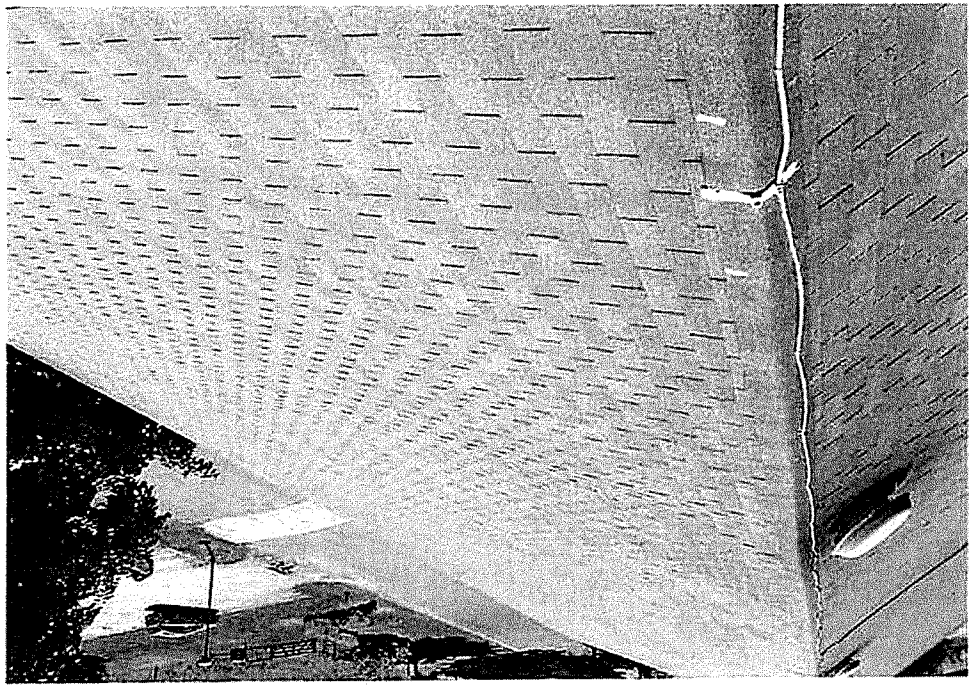
Signature: _____

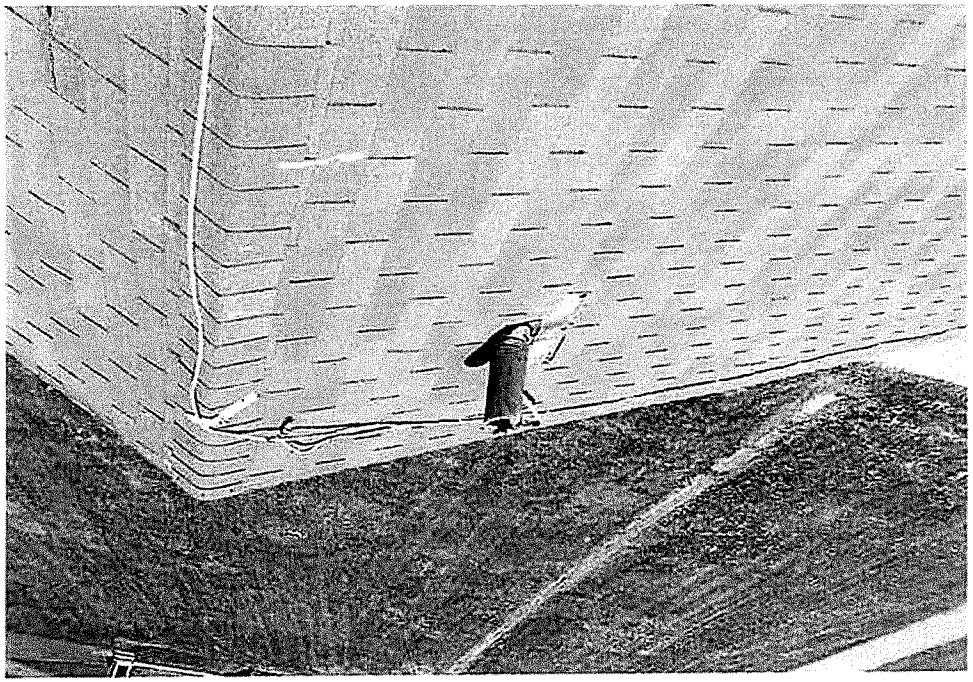


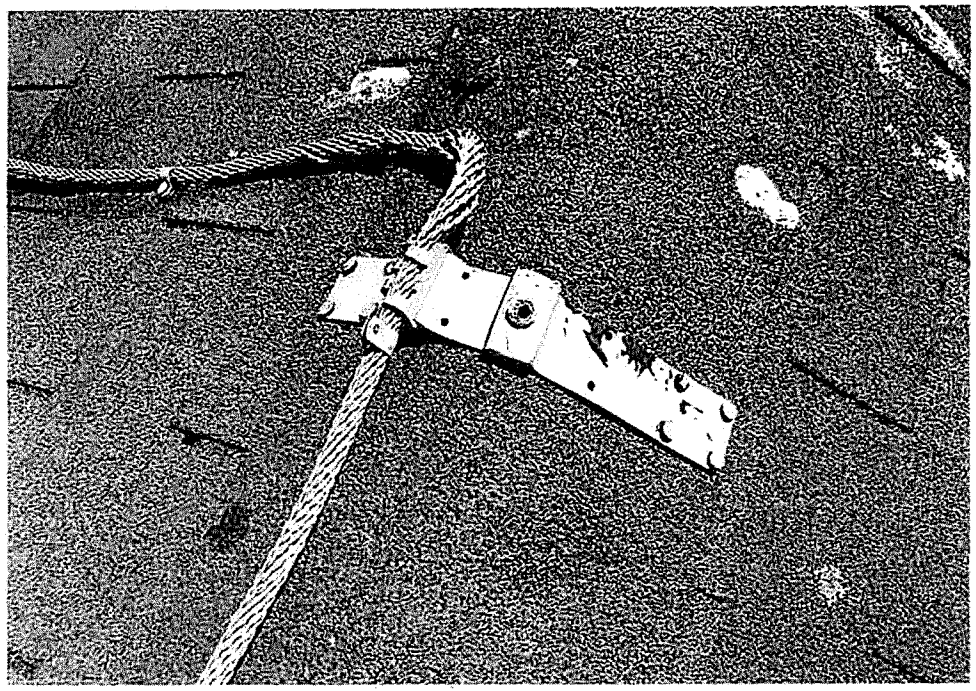


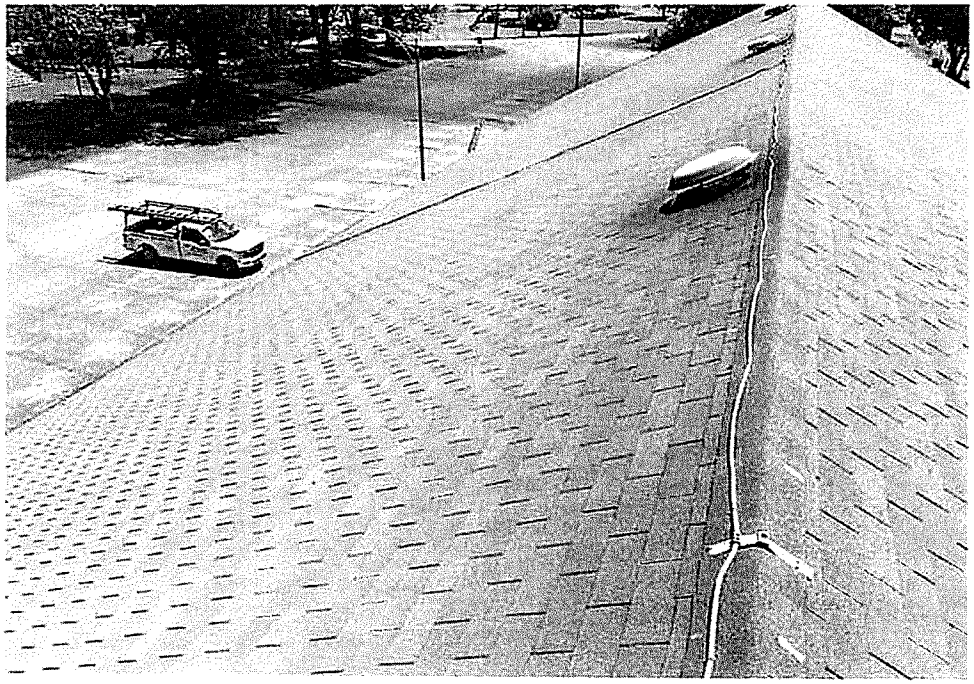


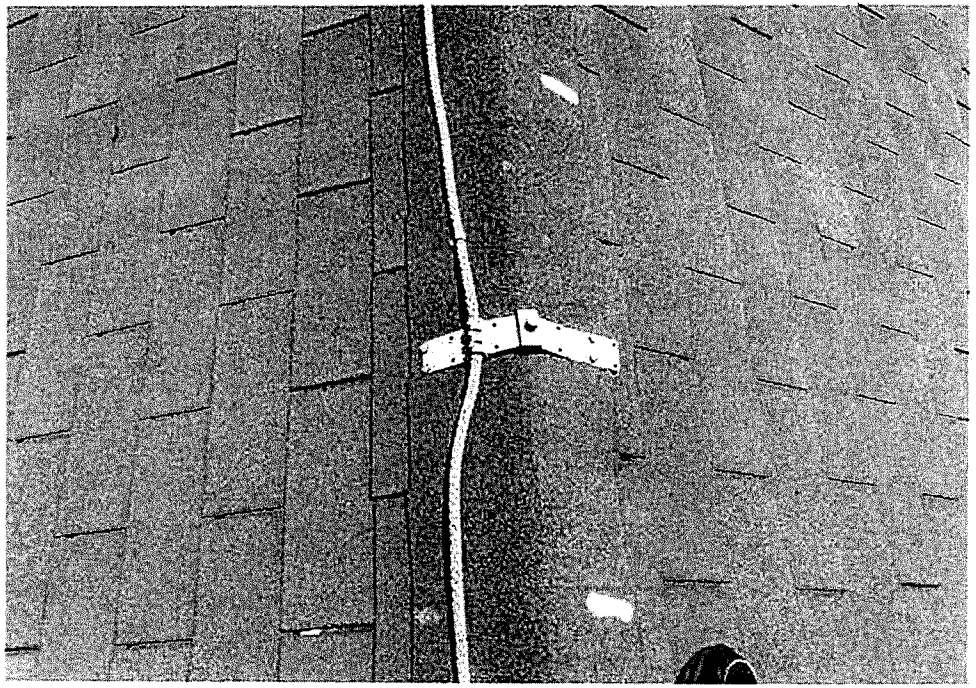




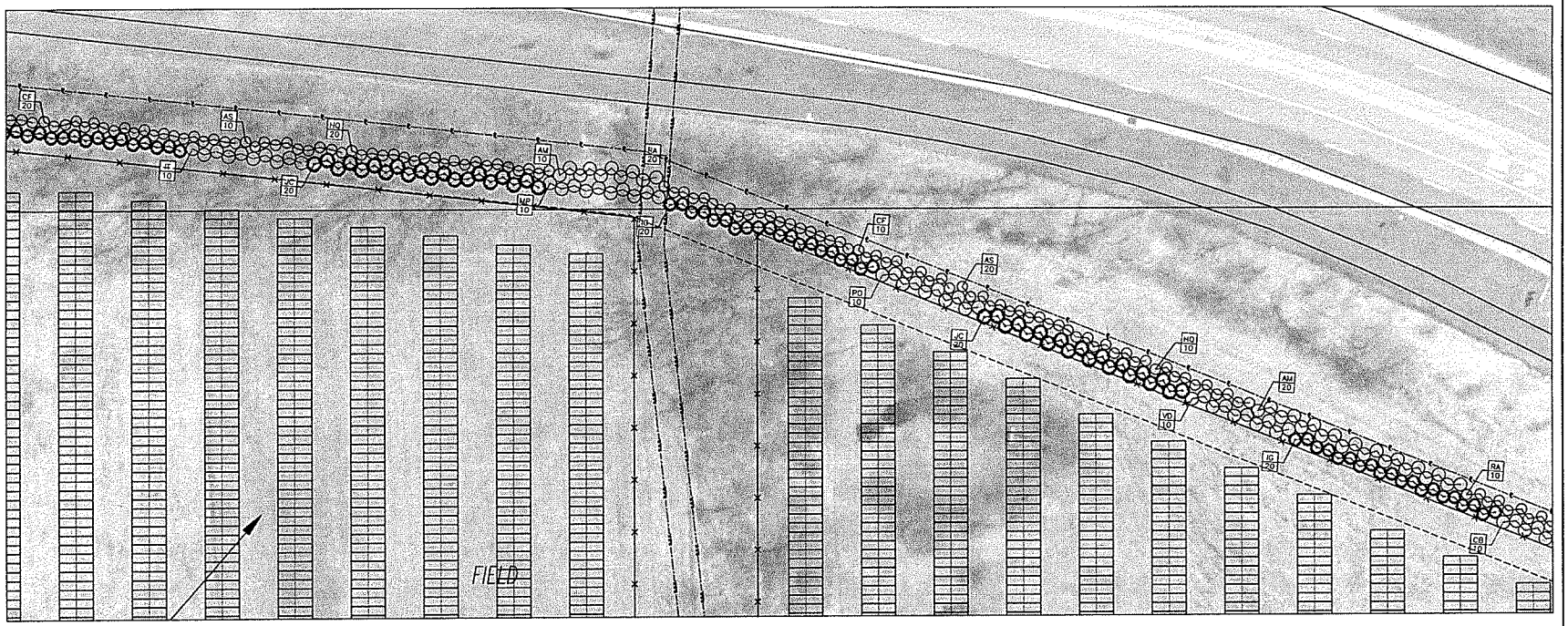




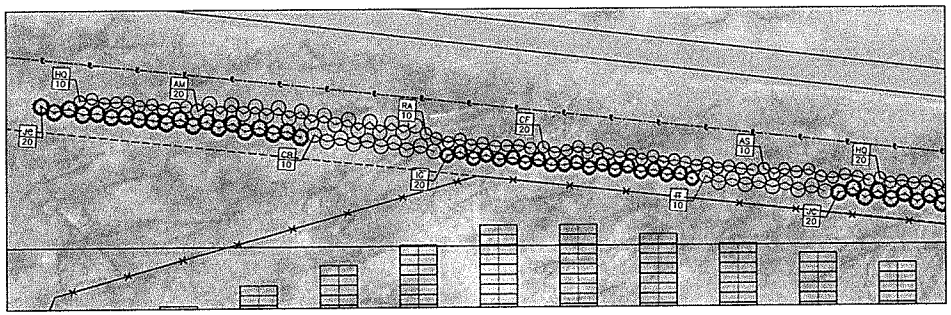




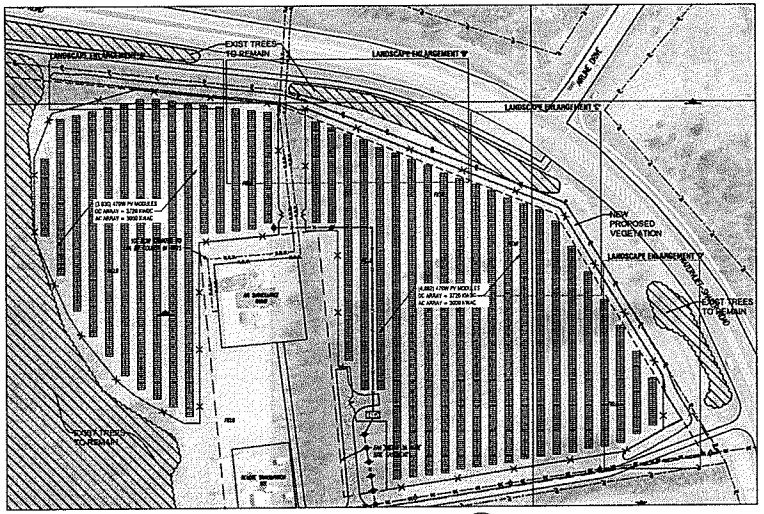
Attachment C




3 / L100 LANDSCAPE PLAN ENLARGEMENT 'B'
SCALE: 1" = 20'



2 / L100 LANDSCAPE PLAN ENLARGEMENT 'A'
SCALE: 1" = 20'




1 / L100 OVREALL LANDSCAPE PLAN
SCALE: 1" = 100'

0' 20' 40' 60'

PLANT LIST

| QUANT | KEY | LATIN NAME | COMMON NAME | CAL. | ROOTS | HT. OR SP. | REMARKS |
|---|---|---|---|---|---|---|---|
| 100 | JC | Juniperus chinensis | Juniper | | B&B | 24" | 5' O.C. |
| 100 | JC | Juniperus communis | Common Juniper | | B&B | 5'-10' | 6' O.C. |
| 60 | AM | Amelanchier canadensis | Black Chokeberry | | #3 cont. | 24" | 5' O.C. |
| 60 | AS | Amelanchier spicata/obovalis | Running Serviceberry | | B&B | 5'-10' | 4' O.C. |
| 20 | CB | Cornus sericea 'Baileyi' | Redtwig Dogwood | | B&B | 24" | 5' O.C. |
| 60 | CF | Cornus sericea 'Flaviramea' | Yellowtwig Dogwood | | B&B | 24" | 4' O.C. |
| 65 | HQ | Hydrangea quercifolia | Oakleaf Hydrangea | | #5 cont. | 24" | 4' O.C. |
| 70 | IT | Ilex verticillata | Virginia Sweetspire | | #3 cont. | 24" | 5' O.C. |
| 20 | MP | Morica pensylvanica | Northern Bayberry | | B&B | 30" | 5' O.C. |
| 20 | PO | Physocarpus opulifolius | Eastern Ninebark | | B&B | 24" | 5' O.C. |
| 60 | RA | Rhus aromatica | Fragrant Sumac | | #3 cont. | 24" | 6' O.C. |
| 10 | VD | Viburnum dentatum | Arrowwood Viburnum | | #2 cont. | 24" | 5' O.C. |

LEGEND: B&B Balled & Burlapped Sp. Spread #2 2 Gallon Container Spr. Spring Planting Only
BR Bare Root Ht. Height Cal. Caliper O.C. On Center

VERSION 19.0
6/4/2019 8:17:56 AM

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Delmar, NY 12054
518-439-8235
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NOT FOR CONSTRUCTION



SIEMENS
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

ALBANY RADAR TOWER SOLAR
925 WATERVLIET SHAKER ROAD

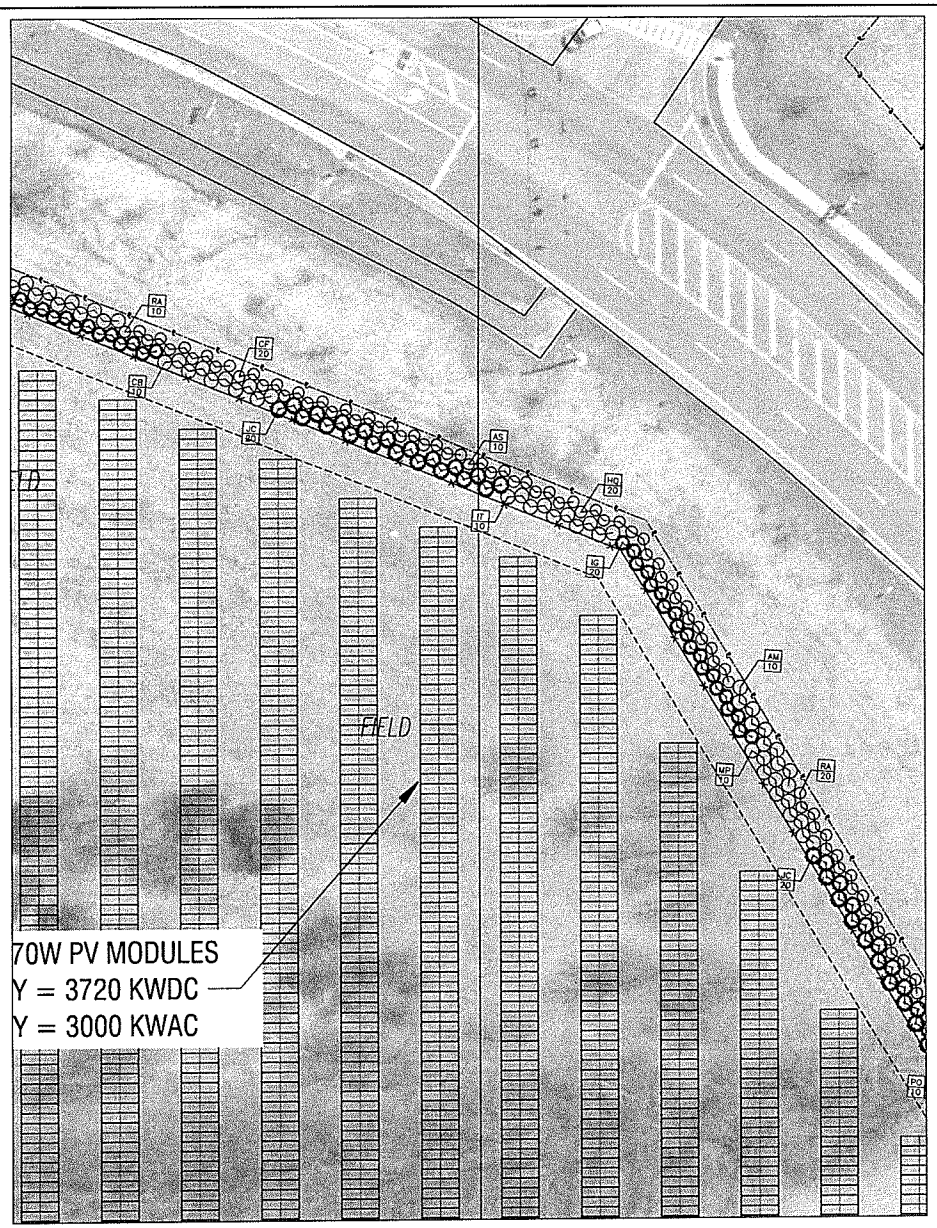
| NO | DATE | DESCRIPTION |
|---|---|---|
| Revisions | | |

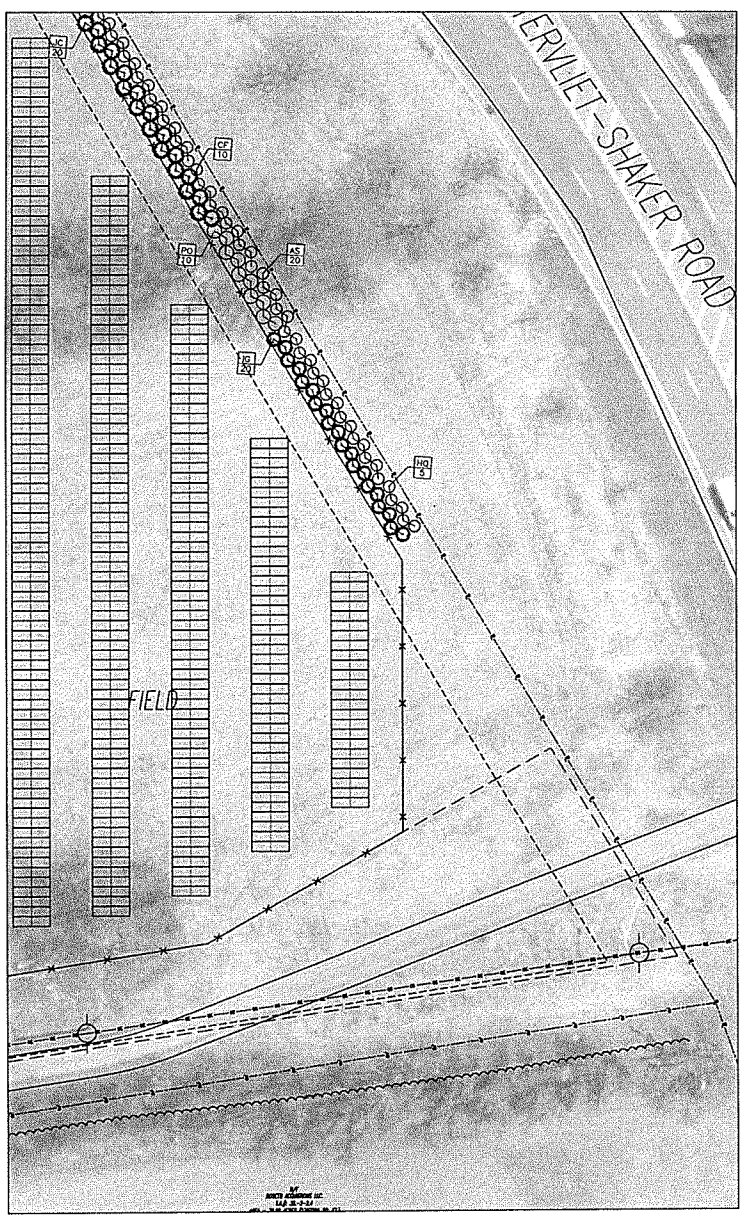
PROJECT NUMBER: 2212336
DRAWN BY: LAH
REVIEWED BY: DCM
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

LANDSCAPE PLAN

DRAWING NUMBER:

L100




70W PV MODULES
Y = 3720 KWDC
Y = 3000 KWAC

1 / L101 LANDSCAPE PLAN ENLARGEMENT 'C&D'
SCALE: 1" = 20'

0' 20' 40' 60'

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**SIEMENS**
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

| NO | DATE | DESCRIPTION |
|---|---|---|
| Revisions | | |

| | |
|---|---|
| PROJECT NUMBER: | 2212336 |
| DRAWN BY: | LAH |
| REVIEWED BY: | DCM |
| ISSUED FOR: | REVIEW |
| DATE: | 01/25/2022 |
| DRAWING NAME: | |

**LANDSCAPE PLAN**

DRAWING NUMBER:

**L101**

VERSION 19.0
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## LANDSCAPE NOTES

1. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK BY AMERICAN ASSOCIATION OF NURSERYMEN, ANSI Z60.1. ALL PLANTS AND MATERIALS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 611 OF THE NYSDOT STANDARD SPECIFICATIONS. ALL LAWNS, GROUND VEGETATION INCLUDING PREPARATION, ESTABLISHMENT AND MANAGEMENT MATERIALS AND METHODS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 610 OF THE NYSDOT STANDARD SPECIFICATIONS. PRUNING AND REMOVING OF VEGETATION MATERIALS AND METHODS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 610 OF THE NYSDOT STANDARD SPECIFICATIONS.

2. REPLACE, IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ALL PLANTS THAT ARE MISSING, DEAD, OR DO NOT DEVELOP FROM PLANTING STOCK, OR AS DETERMINED BY THE CLIENT ARE IN UNHEALTHY OR UNSIGHTLY CONDITION, AND HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES OR OTHER CAUSES DUE TO THE CONTRACTORS NEGLIGENCE. CONTRACTOR SHALL BEAR THE COST OF COMPLETE REPLACEMENT(S). IN CASE OF ANY QUESTION REGARDING THE CONDITION AND SATISFACTORY ESTABLISHMENT OF A REJECTED PLANT, THE LANDSCAPE ARCHITECTS DECISION IS FINAL. PROVIDE A GUARANTEE FOR ALL REPLACEMENT PLANTS FOR AT LEAST ONE FULL GROWING SEASON.

3. REMOVE AND IMMEDIATELY REPLACE ALL PLANTS, AS DETERMINED BY THE CLIENT TO BE UNSATISFACTORY DURING THE INITIAL PLANTING INSTALLATION.

4. CONTRACTOR SHALL RETAIN FOR INSPECTION ALL RECEIPTS FOR PLANTING MATERIAL. PLANTING STOCK IS TO BE MADE AVAILABLE IN ORIGINAL PACKAGING AND LABELING FOR INSPECTION BY THE CLIENT PRIOR TO INSTALLATION.

5. SHRUBS SHALL MEET THE REQUIREMENTS FOR HEIGHT INDICATED IN THE PLANT LIST. THE MEASUREMENTS FOR HEIGHT SHALL BE TAKEN FROM THE GROUND LEVEL TO THE AVERAGE HEIGHT OF THE TOP BRANCHES OF THE PLANT, AND NOT THE LONGEST BRANCH. SINGLE STEMMED OR THIN PLANTS WILL NOT BE ACCEPTED. SIDE BRANCHES SHALL BE GENEROUS, WELL TWIGGED, AND THE PLANT AS A WHOLE WELL SEATED IN THE GROUND. PLANTS SHALL BE IN A MOIST, VIGOROUS CONDITION, FREE FROM DEAD WOOD, BRUISES, OR OTHER ROOT OR BRANCH INJURIES.

6. PLANTED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION AND ACCEPTED SUBJECT TO COMPLIANCE WITH SPECIFIED MATERIALS AND INSTALLATION REQUIREMENTS. INSPECTION TO DETERMINE FINAL ACCEPTANCE OF PLANTED AREAS WILL BE MADE BY THE CLIENT UPON CONTRACTORS REQUEST. PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE. PLANTED AREAS WILL BE ACCEPTED PROVIDED ALL MATERIALS ARE ALIVE AND IN A HEALTHY, VIGOROUS CONDITION, UPON FINAL ACCEPTANCE, THE OWNER WILL ASSUME MAINTENANCE.

7. ONE YEAR GUARANTEE SHALL BE PROPERTY ON ALL NEW AND RELOCATED PLANT MATERIALS FROM DATE OF FINAL ACCEPTANCE TO THE OWNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF.

9. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKE OUT OF ALL PLANT MATERIAL AND SHRUB BEDS. CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION AND APPROVAL. LOCATIONS SHOWN ON THE PLAN CONVEY DESIGN INTENT ONLY. ACTUAL LOCATIONS WILL BE AS DIRECTED BY THE LANDSCAPE ARCHITECT AT THE TIME OF INSTALLATION.

10. NAMES OF WOODY PLANT MATERIAL MUST COMPLY WITH "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE LATEST EDITION OF THE AMERICAN JOINT COMMITTEE OF HORTICULTURAL NOMENCLATURE. PROVIDE STOCK TRUE TO BOTANICAL NAME AND LEGIBLY TAGGED.

11. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDERGROUND UTILITIES EXIST AND HE SHOULD OBTAIN CURRENT UTILITY RECORD MAPS AND NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK.

12. SHOULD LOCATION OF TREES BE WITHIN 5' OF UNDERGROUND UTILITIES, RELOCATE SAID TREES TO MIN. OF 5' FROM ROOT BALL TO UTILITIES.

13. SHOULD LOCATIONS OF TREES BE WITHIN 20' OF OVERHEAD WIRES, RELOCATE SAID TREES TO MIN. OF 20' TO WIRES.

14. STAKE AND WRAP TREES IMMEDIATELY AFTER PLANTING. STAKES AND WRAPPING ARE TO BE REMOVED BY THE CONTRACTOR AT THE END OF THE GUARANTEE PERIOD.

15. MULCH ALL BEDS WITH 3 INCHES DOUBLE GROUND HARDWOOD BARK MULCH, COLOR: BLACK UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT.

16. PLANTING BACK FILL MIXTURE: 4 PARTS TOP SOIL: 1 PART APPROVED ORGANIC MATERIAL: 1/2 PART WELL ROTTED MANURE; 10 LBS. 10-10-10 PLANTING FERTILIZER THOROUGHLY MIXED PER CUBIC YARD.

17. TOPSOIL SHALL BE FURNISHED FROM THE STOCKPILED ON-SITE MATERIAL IF AN INSUFFICIENT QUANTITY EXISTS, FURNISH FROM OFF-SITE SOURCES IN QUANTITIES SUFFICIENT TO COMPLETE THE REQUIREMENTS AS SPECIFIED. TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE SOIL, CHARACTERISTIC OF PRODUCTIVE SOIL IN THE VICINITY, REASONABLE FREE FROM STONES, CLAY LUMPS, ROOTS AND OTHER FOREIGN MATTER WITH AN ACIDITY BETWEEN 6.0 AND 6.8 PH. PROPOSED TOPSOIL MATERIAL FROM OFF-SITE SOURCES SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. SUBMIT A 1 GALLON SAMPLE WITH LABORATORY RESULTS (SIEVE, PH, ORGANIC) FOR APPROVAL.

18. A MINIMUM OF 18" OF PREPARED TOPSOIL SHALL BE PROVIDED IN ALL PROPOSED SHRUB BEDS. ALL EXISTING SOIL AND OTHER MINATERIAL WITHIN THE SHRUB BED AREA IS TO BE REMOVED COMPLETELY FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.

19. ANTIDESICANT: PROTECTIVE FILM EMULSION PROVIDING A PROTECTIVE FILM OVER PLANT SURFACES, BUT PERMEABLE TO PERMIT TRANSPIRATION, MIXED AND APPLIED IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS. APPLY TO ALL BROADLEAF EVERGREEN SHRUBS PER MANUFACTURER'S RECOMMENDATIONS.

20. LANDSCAPE MATERIALS SHALL BE INSTALLED BY LOCAL COMPANIES FAMILIAR WITH THE CONDITIONS IN THIS AREA THAT EMPLOY NYS CERTIFIED NURSERY PROFESSIONALS.

21. STAKE PLANTS AS INDICATED OR AS APPROVED IN THE FIELD. IF OBSTRUCTIONS ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, DO NOT PROCEED PLANTING OPERATIONS UNTIL ALTERNATIVE PLANT LOCATIONS HAVE BEEN SELECTED.

22. MAINTAIN PLANTS UNTIL COMPLETION AND FINAL ACCEPTANCE OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PRUNING, CULTIVATING, EDGING, REMULCHING, FERTILIZING, WEEDING, WATERING AS REQUIRED FOR HEALTHY GROWTH, AND APPLICATION OF APPROPRIATE INSECTICIDES AND FUNGICIDES NECESSARY TO MAINTAIN PLANTS FREE OF INSECT AND DISEASE. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION. RESTORE PLANTING SAUCER AND REMOVE DEAD MATERIAL. TIGHTEN AND REPAIR GUIDE WIRES AND DEFICIENCIES WITHIN THE FIRST 24 HOURS OF INITIAL PLANTING, AND NOT LESS THAN TWICE PER WEEK UNTIL FINAL ACCEPTANCE.

23. A MINIMUM OF 6" OF TOPSOIL SHALL BE PROVIDED ON ALL AREAS TO BE SEEDED.

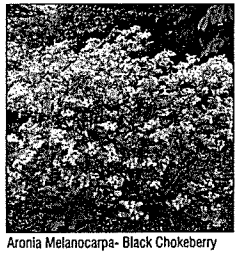
24. LAWN SEED MIXTURE- APPLY TO ALL DISTURBED AREAS NOT PAVED, PLANTED, DESIGNATED TO REMAIN NATURAL OR OTHERWISE SEEDED. MIX SHALL CONSIST OF THE FOLLOWING:

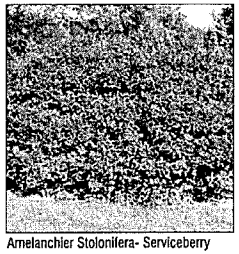
| | % WEIGHT | % PURITY | % GERMINATION |
|---|---|---|---|
| KEYSTONE PERENNIAL RYE GRASS | 25 | 85 | 85 |
| CHARISMATIC PERENNIAL RYE GRASS | 25 | 85 | 85 |
| CINDY LOU CREEPING RED FESCUE | 20 | 85 | 80 |
| COMMON KENTUCKY BLUEGRASS | 30 | 97 | 80 |

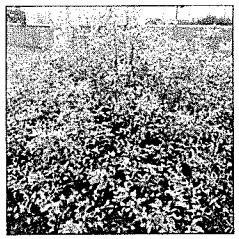
SEEDING RATE: 200 LBS. PER ACRE
FERTILIZER: 18.24.3 GRANULAR RATE: 1,000 LBS. PER ACRE
MULCH ALL SEEDED AREAS WITH APPROVED STRAW AT A RATE OF 4,000 LBS. PER ACRE.

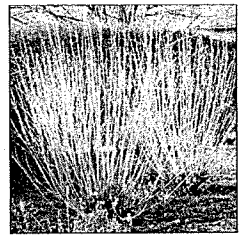

Ilex Glabra- Inkberry

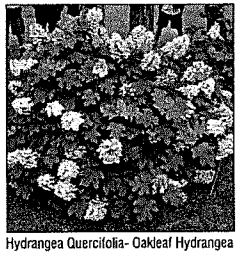

Juniperus communis- Common Juniper


Aronia Melanocarpa- Black Chokeberry

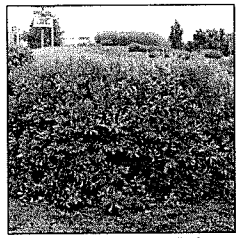

Amelanchier Stolonifera- Serviceberry

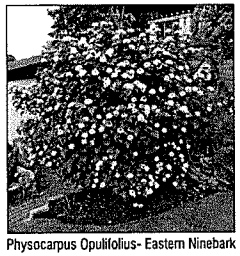

Cornus Sericea 'Baileyi'- Red-Twig Dogwood

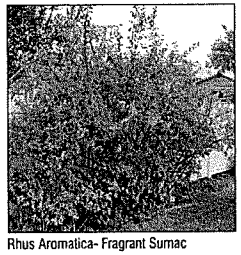

Cornus Sericea 'Flaviramea'- Yellow-Twig Dogwood

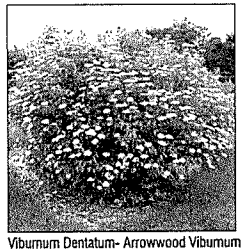

Hydrangea Quercifolia- Oakleaf Hydrangea

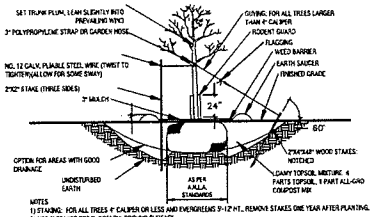

Itea Virginica- Virginia Sweetspire


Myrica Pensylvanica- Northern Bayberry


Physocarpus Opulifolius- Eastern Ninebark

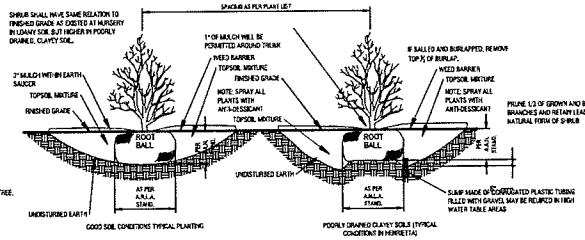

Rhus Aromatica- Fragrant Sumac


Viburnum Dentatum- Arrowwood Viburnum

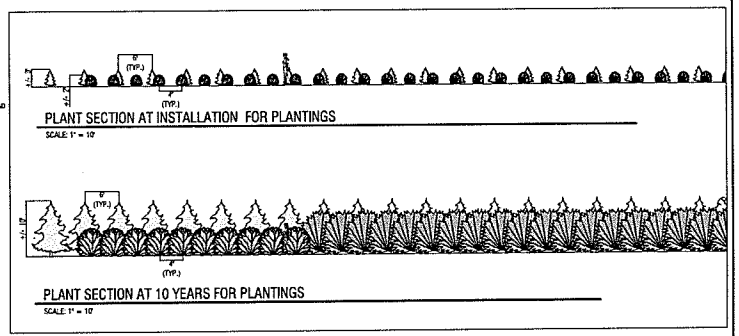



NOTES
1) STAKING: FOR ALL TREES 4" CALIPER OR LESS AND EVERGREENS 9'-12' HT., REMOVE STAKES ONE YEAR AFTER PLANTING.
2) USE 8' STAKES DRIVE 4' BELOW GROUND SURFACE.
3) GUYING: FOR ALL EVERGREEN TREES AND ALL TREES TALLER THAN 12', USE SAME WIRE AS FOR STAKING, USE THREE PER TREE, EQUALLY SPACED. DO NOT TWIST WIRE TO TIGHTEN. USE 1.5"OD TURNBUCKLE.
4) ROOT COLLAR TO BE SLIGHTLY ABOVE SURROUNDING GRADE.
5) MULCH CAN NOT BE MORE THAN 1" THICK AT ROOT COLLAR EXTENDING OUT AT LEAST 6" FROM THE BARK, THEN IT CAN BE THICKENED.
6) MULCH IS TO BE PLACED 3 TO 6 INCHES AWAY FROM THE TRUNK.
7) KRAFT WRAP PAPER SHALL NOT BE PERMITTED FOR INCIDENT GUARD.

1 / L-102 TREE PLANTING DETAIL
N.T.S.




2 / L-102 SHRUB PLANTING DETAIL
N.T.S.

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**SIEMENS**
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

| NO | DATE | DESCRIPTION |
|---|---|---|
| Revisions | | |

PROJECT NUMBER: 2212336
DRAWN BY: LAH
REVIEWED BY: DCM
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

**LANDSCAPE DETAILS**

DRAWING NUMBER:

# L102

LaBella
Powered by partnership.

January 27, 2022

Jeffrey Eisenhauer, CEM
Project Developer, Distributed Energy Systems
SIEMENS Smart Infrastructure

**Albany Radar Tower Site Carbon Sequestration Analysis**

LaBella performed an existing tree inventory on January 12 and 13, 2022 to determine the effects and conduct a carbon sequestration analysis for the Albany Radar Tower Site located in the Town of Colonie, Albany County, New York. The Study Area consisted of 4.8 acres (See Appendix 1 for a map of the Study Area).

The Study Area was broken into 12 prevalent vegetation areas. LaBella had a licensed landscape architect conduct a field inventory of existing vegetation, identifying the dominant species, determining the approximate average tree size (DBH), and estimating the average canopy height for each of the prevalent vegetation areas (See Appendix 2 for a table of the existing tree inventory). There was a total of 1,729 trees identified within the Study Area. The most common species identified were black locust (*Robinia pseudoacacia*), oak spp. (*Quercus spp.*), and maple spp. (*Acer spp.*). 72.3 percent of the trees were less than six inches in diameter.

LaBella utilized the U.S. Department of Agriculture's Forest Service i-Tree Eco tool to conduct the carbon sequestration analysis, which is commonly accepted by NYS Department of Environmental Conservation for community forest management. This analysis attempts to approximate the flux in CO2 sequestration capacity that is due to the anticipated tree clearing and new plantings from the proposed solar array project.

The following table provides an assessment of the current vegetation function and value within the Study Area:

| Function | Value |
|---|---|
| Carbon Sequestration | 6.5 tons ($1.1 thousand/year) |
| Pollution Removal | 346.5 pounds/year ($495/year) |
| Carbon Storage | 200.7 tons ($34.2 thousand) |
| Oxygen Production | 17.3 tons/year |
| Avoided Runoff | 12.9 thousand cubic feet/year ($863/year) |

Respectfully submitted,
LaBella Associates

Jay Kaminski, MS
Environmental Renewable Analyst

# APPENDIX 1:
# EXISTING TREE INVENTORY STUDY AREA


LaBella
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# SIEMENS

## Albany Radar Tower Site

## Town of Colonie Albany County, NY

N

0 75 150 Feet

1 inch = 150 feet

**Legend**

Study Area

Vegetation Areas

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and GIS User Community 2020.

## Existing Tree Inventory

# APPENDIX 1

LaBella Project No: 2212326
Date: January 2022

# APPENDIX 2:
# EXISTING TREE INVENTORY TABLE

Date 1/12 and 1/13/22 Project: 2212336

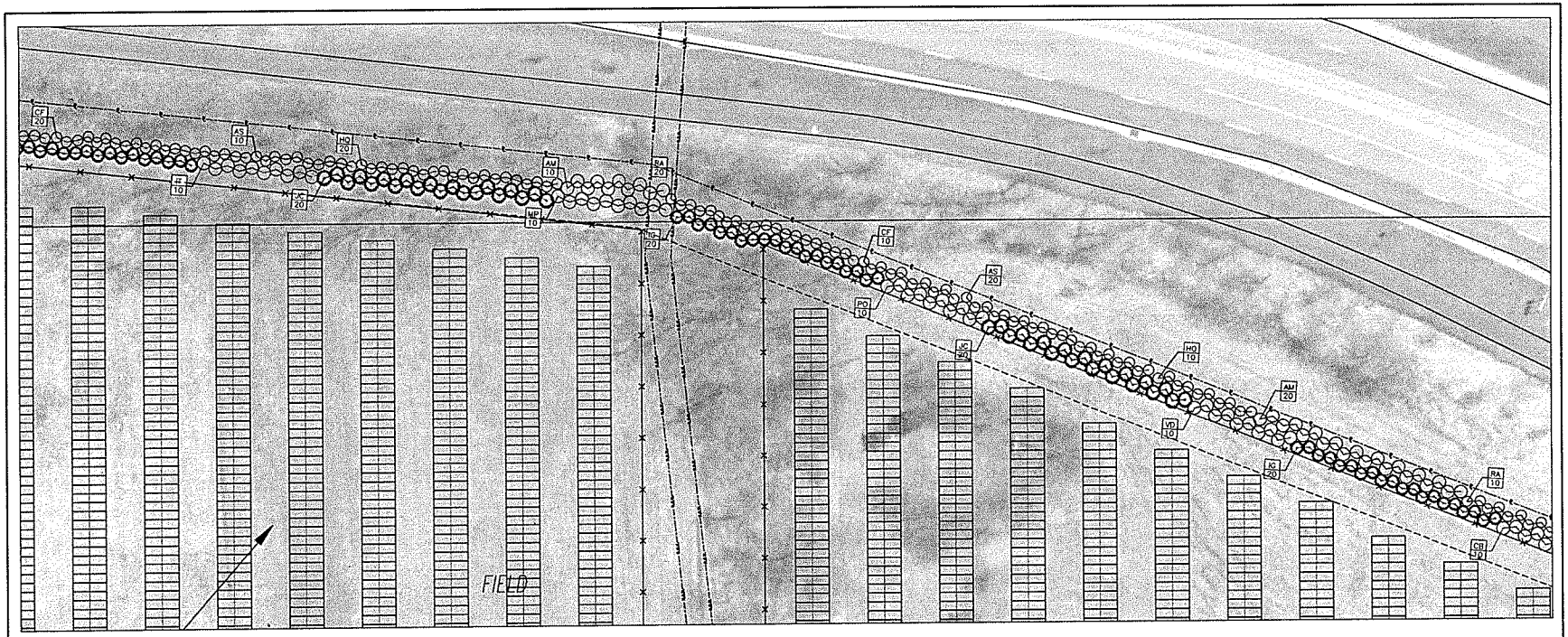
Area covered: 4.8 ac. S, E, N of Albany Radar at Rt 155

| tree size | 1 | | tree size | 2 | | tree size | 3 | type | tree size | 4 | type | tree size | 5 | | tree size | 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1" | 5 | locust | 1" | 14 | locust | 1" | 42 | locust | 1" | 19 | locust | 1" | 2 | locust | 1" | 1 | locust |
| 2" | 12 | locust | 2" | 8 | locust | 2" | 34 | locust | 2" | 21 | locust | 2" | 13 | locust | 2" | 5 | locust |
| | | | 2" | 2 | ash | 2" | | | 2" | 2 | ash | 2" | 4 | ash | 2" | 2 | ash |
| 3" | 10 | locust | 3" | 10 | locust | 3" | 19 | locust | 3" | 27 | locust | 3" | 15 | locust | 3" | 8 | locust |
| 4" | 6 | locust | 4" | 15 | locust | 4" | 12 | locust | 4" | 23 | locust | 4" | 18 | locust | 4" | 12 | locust |
| 4" | 1 | apple | 4" | 2 | ash | 4" | | | 4" | 3 | ash | 4" | 3 | apple | 4" | 2 | birch |
| 4" | 4 | cherry | 4" | | | 4" | | | 4" | 3 | cherry | 4" | 4 | birch | 4" | | |
| 5" | 12 | locust | 5" | 14 | locust | 5" | | | 5" | 22 | locust | 5" | 11 | locust | 5" | 8 | locust |
| 5" | 2 | cherry | 5" | | | 5" | | | 5" | 2 | cherry | 5" | | | 5" | 2 | maple |
| 6" | 8 | locust | 6" | 10 | locust | 6" | | | 6" | 22 | locust | 6" | 16 | locust | 6" | 11 | locust |
| 6" | 3 | ash | 6" | 2 | ash | 6" | | | 6" | 3 | cherry | 6" | 2 | birch | 6" | 6 | maple |
| 7" | 11 | locust | 7" | 2 | locust | 7" | | | 7" | 15 | locust | 7" | 7 | locust | 7" | 7 | locust |
| 7" | 1 | cherry | 7" | | | 7" | | | 7" | 2 | cherry | 7" | 2 | birch | 7" | 3 | pine |
| 8" | 7 | locust | 8" | 12 | locust | 8" | | | 8" | 16 | locust | 8" | 7 | locust | 8" | 12 | locust |
| 8" | 4 | ash | 8" | | | 8" | | | 8" | 1 | birch | 8" | 2 | cherry | 8" | 6 | maple |
| | | | | | | | | | 8 | 4 | cherry | 8 | | | 8 | | |
| 9" | 10 | locust | 9" | 9 | locust | 9" | | | 9" | 8 | locust | 9" | 12 | locust | 9" | 5 | locust |
| 10" | 14 | locust | 10" | 17 | locust | 10" | | | 10" | 11 | locust | 10" | 9 | locust | 10" | 6 | locust |
| 10" | 1 | cherry | 10" | | | 10" | | | 10" | 3 | maple | 10" | 2 | maple | 10" | 5 | maple |
| 12" | 14 | | 12" | 10 | locust | 12" | | | 12" | 2 | maple | 12" | 13 | locust | 12" | 3 | locust |
| | | | | | | | | | | | | | | | 12" | 3 | birch |
| 14" | 11 | | 14" | 1 | locust | 14" | | | 14" | 2 | locust | 14" | 12 | locust | 14" | 4 | birch |
| 16" | 4 | | 16" | | | 16" | | | 16" | | | 14" | 2 | maple | 16" | 5 | locust |
| 18" | 5 | | 18" | | | 18" | | | 18" | | | 16" | 6 | locust | 18" | 1 | pine |
| 20" | 6 | | 20" | | | 20" | | | 20" | 1 | locust | 20" | 5 | locust | 20" | | |
| | | | | | | | | | | | | 20" | 2 | cherry | | | |
| 24" | 2 | | 24" | 1 | locust | 24" | | | 24" | 1 | locust | 24" | 4 | locust | 24" | | |
| 26" | | | 26" | | | 26" | | | 26" | | | 26" | 2 | locust | 26" | | |
| 28" | 1 | | 28" | | | 28" | | | 28" | | | 28" | 2 | locust | 28" | | |
| 30" | | | 30" | | | 30" | | | 30" | | | 30" | | | 30" | | |
| 34" | | | 34" | | | 34" | | | 34" | | | 34" | | | 34" | | |
| 36" | | | 36" | | | 36" | | | 36" | | | 36" | 1 | | 36" | | |
| 42 | | | 42 | | | 42 | | | 42 | | | 42 | | | 42 | | |
| 48 | | | 48 | | | 48 | | | 48 | | | 48 | 2 | | 48 | | |
| | 154 | | | 129 | | | 107 | | | 213 | | | 180 | | | 117 | |
| primary type | locust | | | locust/ash | | | locust | | | ash/maple/locust | | | locust | | | locust/ash | |
| avg. hgt | 50' | | | 40' | | | 15' | | | 40' | | | 60' | | | 30' | |

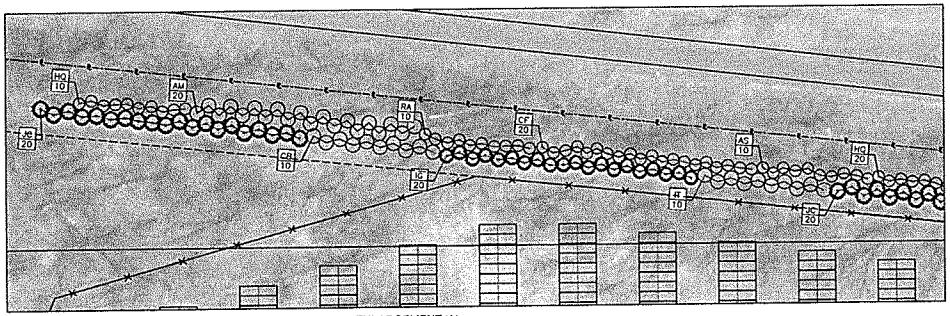
Date 1/12 and 1/13/22 Project: 2212336

Area covered: 4.8 ac. S, E, N of Albany Radar at Rt 155

| tree size | 7 | | tree size | 8 | | tree size | 9 | | tree size | 10 | | tree size | 11 | | tree size | 12 | | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1" | 41 | locust | 1" | | | 1" | 5 | locust | 1" | 5 | locust | 1" | | | 1" | 6 | locust | |
| 2" | 245 | locust | 2" | 11 | locust | 2" | 6 | oak | 2" | 20 | locust | 2" | 1 | beech | 2" | 68 | locust | |
| 2" | | | 2" | | | 2" | 3 | locust | 2" | 18 | oak | 2" | | | 2" | | | |
| 3" | 88 | locust | 3" | 30 | shad | 3" | | | 3" | 17 | locust | 3" | | | 3" | 60 | locust | |
| 4" | 6 | locust | 4" | 15 | locust | 4" | 1 | locust | 4" | 15 | oak | 4" | | | 4" | | | |
| 4" | | | 4" | | | 4" | | | 4" | 5 | locust | 4" | | | 4" | | | |
| 4" | | | 4" | | | 4" | | | 4" | | | 4" | | | 4" | | | |
| 5" | 4 | locust | 5" | | | 5" | 1 | locust | 5" | 8 | locust | 5" | 2 | cherry | 5" | | | |
| 5" | | | 5" | | | 5" | | | 5" | 12 | oak | 5" | | | 5" | | | |
| 6" | 1 | locust | 6" | 2 | maple | 6" | 1 | maple | 6" | 7 | maple | 6" | 1 | oak | 6" | | | |
| 6" | | | 6" | | | 6" | | | 6" | 5 | locust | 6" | | | 6" | | | |
| 7" | 1 | locust | 7" | | | 7" | 2 | oak | 7" | 6 | locust | 7" | 2 | oak | 7" | | | |
| 7" | | | 7" | | | 7" | | | 7" | 3 | oak | 7" | 1 | pine | 7" | | | |
| 8" | | | 8" | 2 | pine | 8" | 4 | oak | 8" | 9 | locust | 8" | 2 | pine | 8" | | | |
| 8" | | | 8" | | | 8" | | | 8" | 12 | oak | 8" | | | 8" | | | |
| 8 | | | 8 | | | 8 | | | 8 | 5 | maple | 8 | | | 8 | | | |
| 9" | 2 | cherry | 9" | 1 | maple | 9" | 2 | maple | 9" | 8 | oak | 9" | | | 9" | | | |
| 10" | | | 10" | 1 | pine | 10" | 1 | poplar | 10" | 6 | oak | 10" | 1 | oak | 10" | | | |
| 10" | | | 10" | | | 10" | | | 10" | 4 | maple | 10" | | | 10" | | | |
| 12" | 1 | apple | 12" | | | 12" | 1 | | 12" | 4 | locust | 12" | 1 | pine | 12" | | | |
| | | | | | | | | | 12 | 2 | oak | | | | | | | |
| 14" | | | 14" | | | 14" | 2 | | 14" | 8 | oak | 14" | 1 | pine | 14" | | | |
| 16" | | | 16" | | | 16" | | | 16" | 3 | oak | 16" | | | 16" | | | |
| 18" | 1 | pine | 18" | | | 18" | | | 18" | 6 | oak | 18" | | | 18" | | | |
| 20" | | | 20" | | | 20" | | | 20" | 1 | maple | 20" | | | 20" | | | |
| | | | | | | | | | | | | | | | | | | |
| 24" | | | 24" | | | 24" | | | 24" | 2 | oak | 24" | 1 | pine | 24" | | | |
| 26" | | | 26" | | | 26" | | | 26" | 2 | oak | 26" | | | 26" | | | |
| 28" | | | 28" | | | 28" | | | 28" | | | 28" | | | 28" | | | |
| 30" | | | 30" | | | 30" | 1 | | 30" | | | 30" | | | 30" | | | |
| 34" | | | 34" | | | 34" | 2 | | 34" | | | 34" | 1 | oak | 34" | | | |
| 36" | | | 36" | | | 36" | | | 36" | 1 | pine | 36" | | | 36" | | | |
| 42 | | | 42 | | | 42 | | | 42 | 1 | pine | 42 | | | 42 | | | |
| 48 | | | 48 | | | 48 | | | 48 | | | 48 | 2 | pine | 48 | | | |
| | 390 | | | 62 | | | 32 | | | 195 | | | 16 | | | 134 | | 1729 |
| | locust | | | shad/pine | | | oak | | | oak | | | pine | | | locust | | |
| | 15' | | | 30' | | | 50' | | | 50' | | | 80' | | | 15' | | |




3 L100 LANDSCAPE PLAN ENLARGEMENT 'B'
SCALE: 1" = 20'



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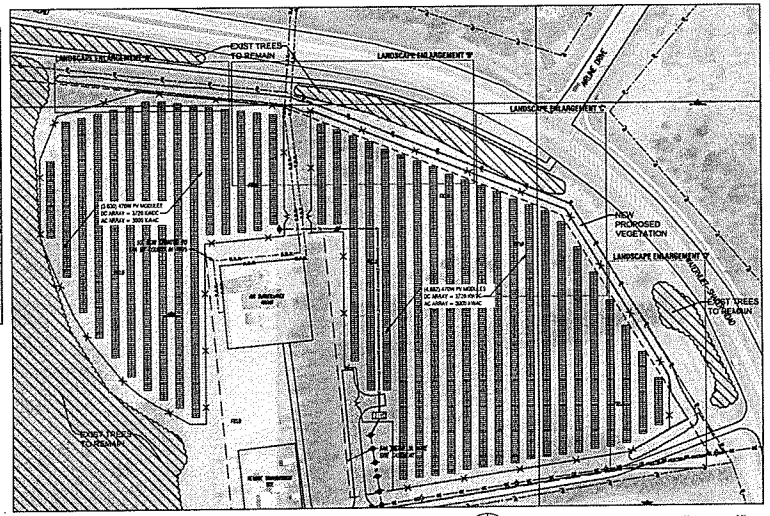
SCALE: 1" = 20'




1 L100 OVREALL LANDSCAPE PLAN
SCALE: 1" = 100'

0' 20' 40' 60'

## PLANT LIST

| QUANT. | KEY | LATIN NAME | COMMON NAME | CAL. | ROOTS | HT. OR SP. | REMARKS |
|---|---|---|---|---|---|---|---|
| 100 | IG | Ilex glabra | Inkberry | | B&B | 24" | 5' O.C. |
| 100 | JC | Juniperus conus cus | Common Juniper | | B&B | 2' Ht. | 6' O.C. |
| 60 | AM | Amelanchier canadensis | Black Chokeberry | | #3 cont. | 24" | 5' O.C. |
| 60 | AS | Amelanchier x laevis | Running Serviceberry | | B&B | 2' Ht. | 4' O.C. |
| 20 | CB | Cornus sericea 'Baileyi' | Redosier Dogwood | | B&B | 24" | 5' O.C. |
| 60 | CF | Cornus sericea 'Flaviramea' | Yellowtwig Dogwood | | B&B | 24" | 5' O.C. |
| 65 | HQ | Hydrangea quercifolia | Oakleaf Hydrangea | | #5 cont. | 24" | 5' O.C. |
| 20 | IT | Ilex x meserveae | Virginia Sweetspire | | #3 cont. | 24" | 5' O.C. |
| 20 | MP | Morella pensylvanica | Northern Bayberry | | B&B | 30" | 5' O.C. |
| 20 | PO | Physocarpus opulifolius | Eastern Ninebark | | B&B | 24" | 5' O.C. |
| 60 | RA | Rhus aromatica | Fragrant Sumac | | #3 cont. | 24" | 5' O.C. |
| 10 | VD | Viburnum dentatum | Arrowwood Viburnum | | #3 cont. | 24" | 5' O.C. |

LEGEND: B&B Balled & Burlapped Sp. Spread #2 2 Gallon Container Spr. Spring Planting Only
BR Bare Root Ht. Height Cal. Caliper O.C. On Center

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LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

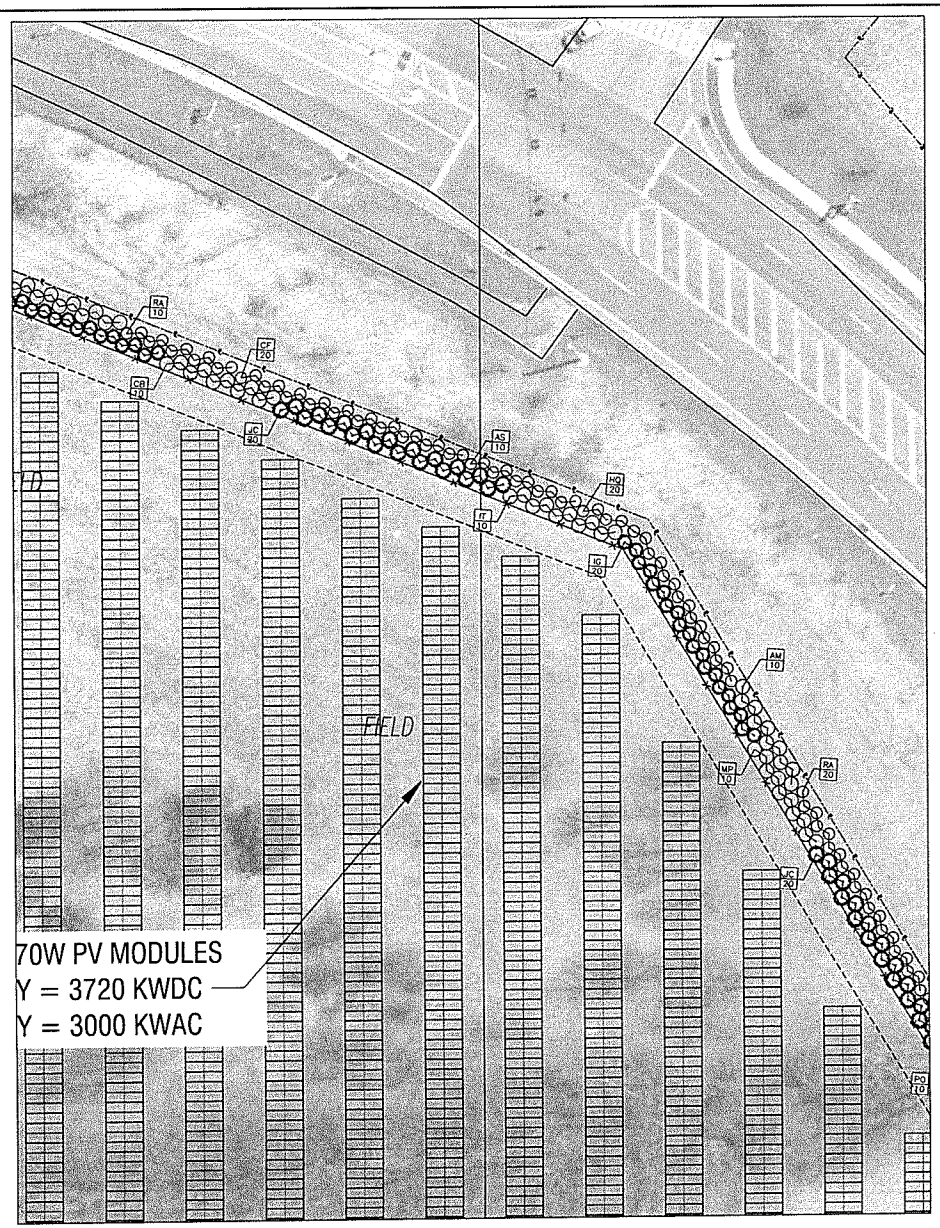
| NO | DATE: | DESCRIPTION |
|---|---|---|
| Revisions | | |

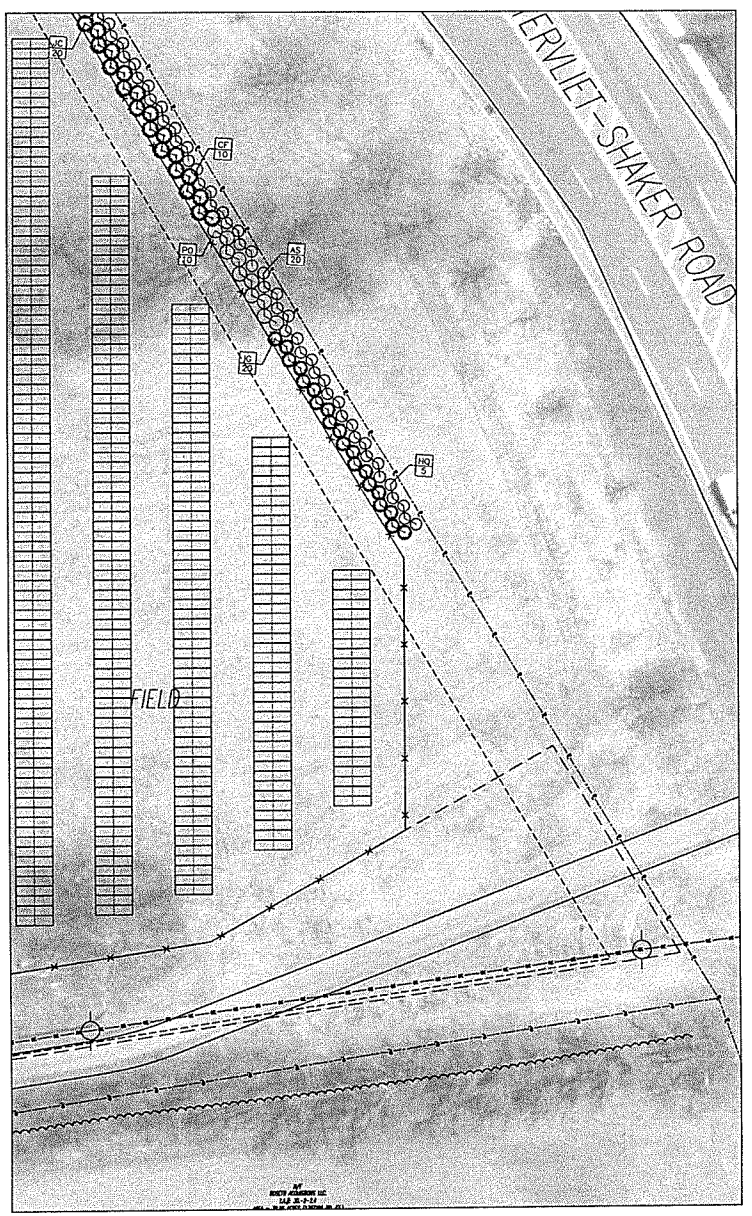
PROJECT NUMBER: 2212336
DRAWN BY: LAH
REVIEWED BY: DCM
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

**LANDSCAPE PLAN**

DRAWING NUMBER:

**L100**




1 L101 LANDSCAPE PLAN ENLARGEMENT 'C&D'
SCALE: 1" = 20'

0' 20' 40' 60'

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**SIEMENS**
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

| NO. | DATE: | DESCRIPTION |
|---|---|---|
| Revisions | | |

PROJECT NUMBER: 2212336
DRAWN BY: LAH
REVIEWED BY: DCM
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

**LANDSCAPE PLAN**

DRAWING NUMBER:

# L101

VERSION 19.0
1/27/2010 8:47:56 AM

## LANDSCAPE NOTES

1. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK BY AMERICAN ASSOCIATION OF NURSERYMEN, ANSI Z60.1. ALL PLANTS AND MATERIALS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 611 OF THE NYSDOT STANDARD SPECIFICATIONS. ALL LAWNS, GROUND VEGETATION INCLUDING PREPARATION, ESTABLISHMENT AND MANAGEMENT MATERIALS AND METHODS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 713 OF THE NYSDOT STANDARD SPECIFICATIONS. PRUNING AND REMOVING OF VEGETATION MATERIALS AND METHODS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF SECTION 610 OF THE NYSDOT STANDARD SPECIFICATIONS.

2. REPLACE, IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ALL PLANTS THAT ARE MISSING, DEAD, OR DO NOT DEVELOP FROM PLANTING STOCK, OR AS DETERMINED BY THE CLIENT ARE IN UNHEALTHY OR UNSIGHTLY CONDITION, AND HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES OR OTHER CAUSES DUE TO THE CONTRACTORS' NEGLIGENCE, CONTRACTOR SHALL BEAR THE COST OF COMPLETE REPLACEMENT(S). IN CASE OF ANY QUESTIONS REGARDING THE CONDITION AND SATISFACTORY ESTABLISHMENT OF A REJECTED PLANT, THE LANDSCAPE ARCHITECTS DECISION IS FINAL. PROVIDE A GUARANTEE FOR ALL REPLACEMENT PLANTS FOR AT LEAST ONE FULL GROWING SEASON.

3. REMOVE AND IMMEDIATELY REPLACE ALL PLANTS, AS DETERMINED BY THE CLIENT TO BE UNSATISFACTORY DURING THE INITIAL PLANTING INSTALLATION.

4. CONTRACTOR SHALL RETAIN FOR INSPECTION ALL RECEIPTS FOR PLANTING MATERIAL. PLANTING STOCK IS TO BE MADE AVAILABLE IN ORIGINAL PACKAGING AND LABELING FOR INSPECTION BY THE CLIENT PRIOR TO INSTALLATION.

5. SHRUBS SHALL MEET THE REQUIREMENTS FOR HEIGHT INDICATED IN THE PLANT LIST. THE MEASUREMENTS FOR HEIGHT SHALL BE TAKEN FROM THE GROUND LEVEL TO THE AVERAGE HEIGHT OF THE TOP BRANCHES OF THE PLANT, AND NOT THE LONGEST BRANCH. SINGLE STEMMED OR THIN PLANTS WILL NOT BE ACCEPTED. SIDE BRANCHES SHALL BE GENEROUS, WELL TWIGGED, AND THE PLANT AS A WHOLE WELL SEATED IN THE GROUND. PLANTS SHALL BE IN A MOIST, VIGOROUS CONDITION, FREE FROM DEAD WOOD, BRUISES, OR OTHER ROOT OR BRANCH INJURIES.

6. PLANTED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION AND ACCEPTED SUBJECT TO COMPLIANCE WITH SPECIFIED MATERIALS AND INSTALLATION REQUIREMENTS. INSPECTION TO DETERMINE FINAL ACCEPTANCE OF PLANTED AREAS WILL BE MADE BY THE CLIENT UPON CONTRACTORS REQUEST, PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE. PLANTED AREAS WILL BE ACCEPTED PROVIDED ALL MATERIALS ARE ALIVE AND IN A HEALTHY, VIGOROUS CONDITION, UPON FINAL ACCEPTANCE, THE OWNER WILL ASSUME MAINTENANCE.

7. ONE YEAR GUARANTEE SHALL BE PROPERTY OF ALL NEW AND RELOCATED PLANT MATERIALS FROM DATE OF FINAL ACCEPTANCE TO THE OWNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF.

9. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKE OUT OF ALL PLANT MATERIAL AND SHRUB BEDS. CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION AND APPROVAL. LOCATIONS SHOWN ON THE PLAN CONVEY DESIGN INTENT ONLY. ACTUAL LOCATIONS WILL BE AS DIRECTED BY THE LANDSCAPE ARCHITECT AT THE TIME OF INSTALLATION.

10. NAMES OF WOODY PLANT MATERIAL MUST COMPLY WITH "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE LATEST EDITION OF THE AMERICAN JOINT COMMITTEE OF HORTICULTURAL NOMENCLATURE. PROVIDE STOCK TRUE TO BOTANICAL NAME AND LEGIBLY TAGGED.

11. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDERGROUND UTILITIES EXIST AND HE SHOULD OBTAIN CURRENT UTILITY RECORD MAPS AND NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK.

12. SHOULD LOCATION OF TREES BE WITHIN 5' OF UNDERGROUND UTILITIES, RELOCATE SAID TREES TO MIN. OF 5' FROM ROOT BALL TO UTILITIES.

13. SHOULD LOCATIONS OF TREES BE WITHIN 20' OF OVERHEAD WIRES, RELOCATE SAID TREES TO MIN. OF 20' TO WIRES.

14. STAKE AND WRAP TREES IMMEDIATELY AFTER PLANTING. STAKES AND WRAPPING ARE TO BE REMOVED BY THE CONTRACTOR AT THE END OF THE GUARANTEE PERIOD.

15. MULCH ALL BEDS WITH 3 INCHES DOUBLE GROUND HARDWOOD BARK MULCH, COLOR: BLACK UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT.

16. PLANTING BACK FILL MIXTURE: 4 PARTS TOP SOIL; 1 PART APPROVED ORGANIC MATERIAL; 1/2 PART WELL ROTTED MANURE; 10 LBS. 10-10-10 PLANTING FERTILIZER THOROUGHLY MIXED PER CUBIC YARD.

17. TOPSOIL SHALL BE FURNISHED FROM THE STOCKPILED ON-SITE MATERIAL. IF AN INSUFFICIENT QUANTITY EXISTS, FURNISH FROM OFF-SITE SOURCES IN QUANTITIES SUFFICIENT TO COMPLETE THE REQUIREMENTS AS SPECIFIED. TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE SOIL, CHARACTERISTIC OF PRODUCTIVE SOIL IN THE VICINITY, REASONABLE FREE FROM STONES, CLAY LUMPS, ROOTS AND OTHER FOREIGN MATTER WITH AN ACIDITY BETWEEN 6.0 AND 6.8 PH. PROPOSED TOPSOIL MATERIAL FROM OFF-SITE SOURCES SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. SUBMIT A 1 GALLON SAMPLE WITH LABORATORY RESULTS (SIEVE, PH, ORGANIC) FOR APPROVAL.

18. A MINIMUM OF 18" OF PREPARED TOPSOIL SHALL BE PROVIDED IN ALL PROPOSED SHRUB BEDS. ALL EXISTING SOIL AND OTHER MATERIAL WITHIN THE SHRUB BED AREA IS TO BE REMOVED COMPLETELY FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.

19. ANTIDESICCANT: PROTECTIVE FILM EMULSION, PROVIDING A PROTECTIVE FILM OVER PLANT SURFACES, BUT PERMEABLE TO PERMIT TRANSPIRATION. MIXED AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. APPLY TO ALL BROADLEAF EVERGREEN SHRUBS PER MANUFACTURER'S RECOMMENDATIONS.

20. LANDSCAPE MATERIALS SHALL BE INSTALLED BY LOCAL COMPANIES FAMILIAR WITH THE CONDITIONS IN THIS AREA THAT EMPLOY NYS CERTIFIED NURSERY PROFESSIONALS.

21. STAKE PLANTS AS INDICATED OR AS APPROVED IN THE FIELD. IF OBSTRUCTIONS ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, DO NOT PROCEED PLANTING OPERATIONS UNTIL ALTERNATIVE PLANT LOCATIONS HAVE BEEN SELECTED.

22. MAINTAIN PLANTS UNTIL COMPLETION AND FINAL ACCEPTANCE OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PRUNING, CULTIVATING, EDGING, REMULCHING, FERTILIZING, WEEDING, WATERING AS REQUIRED FOR HEALTHY GROWTH, AND APPLICATION OF APPROPRIATE INSECTICIDES AND FUNGICIDES NECESSARY TO MAINTAIN PLANTS FREE OF INSECT AND DISEASE. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION. RESTORE PLANTING SAUCER AND REMOVE DEAD MATERIAL. TIGHTEN AND REPAIR GUIDE WIRES AND DEFICIENCIES WITHIN THE FIRST 24 HOURS OF INITIAL PLANTING, AND NOT LESS THAN TWICE PER WEEK UNTIL FINAL ACCEPTANCE.

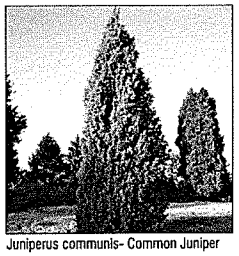
23. A MINIMUM OF 6" OF TOPSOIL SHALL BE PROVIDED ON ALL AREAS TO BE SEEDED.

24. LAWN SEED MIXTURE- APPLY TO ALL DISTURBED AREAS NOT PAVED, PLANTED, DESIGNATED TO REMAIN NATURAL OR OTHERWISE SEEDED. MIX SHALL CONSIST OF THE FOLLOWING:

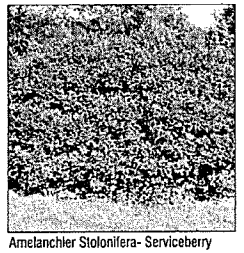
| | % WEIGHT | % PURITY | % GERMINATION |
|---|---|---|---|
| KEYSTONE PERENNIAL RYE GRASS | 25 | 85 | 85 |
| CHARISMATIC PERENNIAL RYE GRASS | 25 | 85 | 85 |
| CINDY LOU CREEPING RED FESCUE | 20 | 85 | 80 |
| DOMINION KENTUCKY BLUEGRASS | 30 | 97 | 80 |

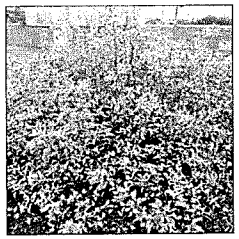
SEEDING RATE: 200 LBS. PER ACRE
FERTILIZER: 18.24.3 GRANULAR RATE: 1,000 LBS. PER ACRE
MULCH ALL SEEDED AREAS WITH APPROVED STRAW AT A RATE OF 4,000 LBS. PER ACRE.

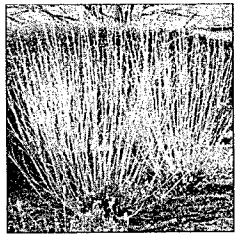

Ilex Glabra- Inkberry

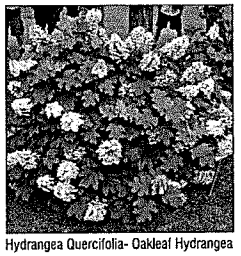

Juniperus communis- Common Juniper


Aronia Melanocarpa- Black Chokeberry

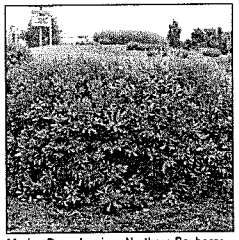

Amelanchier Stolonifera- Serviceberry


Cornus Sericea 'Baileyi'- Red-Twig Dogwood


Cornus Sericea 'Flaviramea'- Yellow-Twig Dogwood

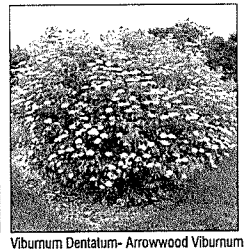

Hydrangea Quercifolia- Oakleaf Hydrangea

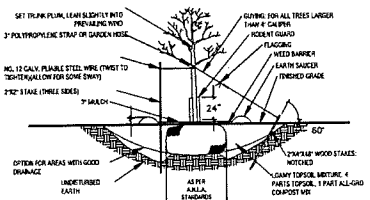

Itea Virginica- Virginia Sweetspire


Myrica Pensylvanica- Northern Bayberry


Physocarpus Opulifolius- Eastern Ninebark

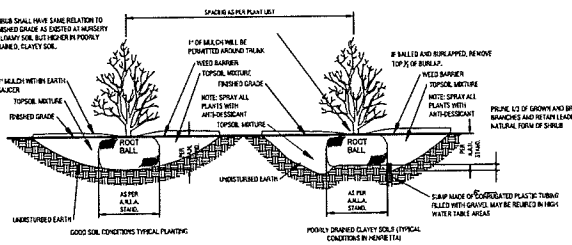

Rhus Aromatica- Fragrant Sumac


Viburnum Dentatum- Arrowwood Viburnum

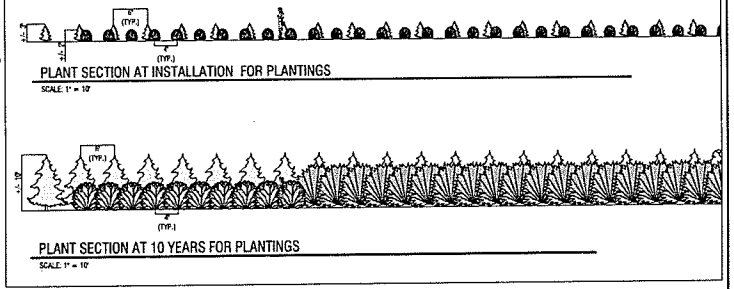



NOTES
1) STAKING: FOR ALL TREES 4" CALIPER OR LESS AND EVERGREENS 9'-12' HT., REMOVE STAKES ONE YEAR AFTER PLANTING.
2) USE 8' STAKES DRIVE 4' BELOW GROUND SURFACE.
3) GUYING: FOR ALL EVERGREEN TREES AND ALL TREES TALLER THAN 12', USE SAME WIRE AS FOR STAKING. USE THREE PER TREE, EQUALLY SPACED. DO NOT TWIST WIRE TO TIGHTEN. USE 1.5"X9" TURNBUCKLE.
4) ROOT COLLAR TO BE SLIGHTLY ABOVE SURROUNDING GRADE.
5) MULCH CAN NOT BE MORE THAN 1" THICK AT ROOT COLLAR EXTENDING OUT AT LEAST 6" FROM THE BANK, THEN IT CAN BE THICKENED.
6) MULCH TO BE PLACED 3 TO 6 INCHES AWAY FROM THE TRUNK.
7) GRAFT WRAP PAPER SHALL NOT BE PERMITTED FOR HOOP NET GUARD.

1 L-102 TREE PLANTING DETAIL
N.T.S.




2 L-102 SHRUB PLANTING DETAIL
N.T.S.

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Delmar, NY 12054
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NOT FOR CONSTRUCTION



**SIEMENS**
6 BRITISH AMERICAN BLVD
LATHAM, NY 12110

SIEMENS

**ALBANY RADAR TOWER SOLAR**
925 WATERVLIET SHAKER ROAD

| NO | DATE | DESCRIPTION |
|---|---|---|
| Revisions | | |

PROJECT NUMBER: 2212336
DRAWN BY: LAH
REVIEWED BY: DCM
ISSUED FOR: REVIEW
DATE: 01/25/2022
DRAWING NAME:

**LANDSCAPE DETAILS**

DRAWING NUMBER:

# L102

**IPaC** **U.S. Fish & Wildlife Service**

# IPaC resource list

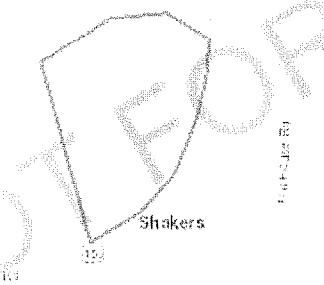
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.



## Location

Albany County, New York




## Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

# Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

| NAME | STATUS |
|---|---|

Northern Long-eared Bat Myotis septentrionalis Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

# Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| **Bald Eagle** *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Dec 1 to Aug 31 |
| **Black-billed Cuckoo** *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| **Bobolink** *Dolichonyx oryzivorus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| **Canada Warbler** *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| **Cerulean Warbler** *Dendroica cerulea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/2974 | Breeds Apr 20 to Jul 20 |
| **Dunlin** *Calidris alpina arcticola*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |

| | |
|---|---|
| Eastern Whip-poor-will Antrostomus vociferus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Lesser Yellowlegs Tringa flavipes<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Prairie Warbler Dendroica discolor<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Red-headed Woodpecker Melanerpes erythrocephalus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Semipalmated Sandpiper Calidris pusilla<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Short-billed Dowitcher Limnodromus griseus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Snowy Owl Bubo scandiacus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Wood Thrush Hylocichla mustelina<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence ( )**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be

used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season ( )**
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (–)**
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

probability of presence  breeding season  | survey effort  – no data

| SPECIES | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

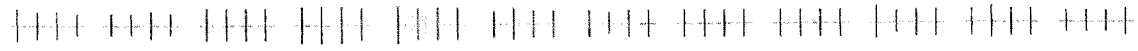
Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Black-billed Cuckoo
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

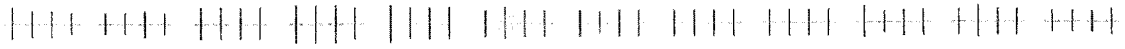
Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Cerulean Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

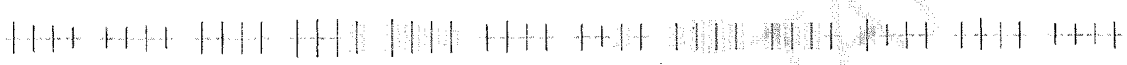


Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

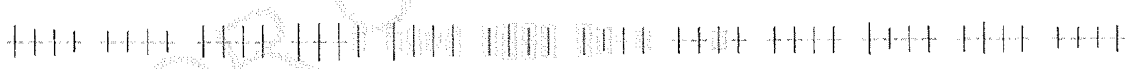
Eastern Whip-poor-will
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prairie Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Red-headed Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Semipalmated Sandpiper BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)


Snowy Owl BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

### What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

#### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

# Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.