



August 30, 2023

Town of Carmel Planning Board  
60 McAlpin Avenue  
Mahopac, New York 10541

RE: Union Energy Center, LLC  
24 Miller Road  
Mahopac, NY 10541  
TM#s: 86.11-1-14

Dear Chairman Paepre and Members of the Board:

Please find enclosed the following plans and documents in support of an application for site plan and subdivision approval for the above referenced project:

- Site Plan Set, dated August 30, 2023.
- Sketch Subdivision Plat, dated August 30, 2023.
- Project Narrative, from East Point Energy, dated August 30, 2023.
- Site Plan Application, dated August 1, 2023.
- Subdivision Application, dated August 24, 2023.
- Substation and Battery Storage Area schematic plans, elevations & site renderings, from East Point Energy.
- Battery Energy Storage System Fire Safety Information, from East Point Energy.
- Full EAF and attachments, dated August 30, 2023.
- List of adjoining within 500'.
- Zoning Interpretation Letter from Michael Carnazza, Code Enforcement Director, dated February 3, 2020.
- (3) Recorded Easements.

The applicant is seeking to construct a 116-megawatt battery energy storage system. The project includes the construction of a system of gravel driveways, two pads for battery storage, two substations, and the associated landscaping and stormwater management practices. The batteries would be stored in enclosures similar to shipping containers and the project would connect to NYSEG transmission lines that currently traverse an easement on the site. The 93.5 acre site, where the proposed development would occur is currently undeveloped.

The applicant is also seeking to modify an existing property line between the proposed development site, and the neighboring site to the north which contains a New York State Electric and Gas (NYSEG) substation. One of the two proposed substations would be owned and controlled by NYSEG. The proposed lot line adjustment would allow NYSEG ownership of this substation. The proposed development lot contains 93.5 acres and the NYSEG lot is currently 1.6 acres. The proposed subdivision

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3 Garrett Place, Carmel, New York 10512 (845) 225-9690 Fax (845) 225-9717  
[www.insite-eng.com](http://www.insite-eng.com)

would add 10.7 acres to the NYSEG lot, and deduct the same from the development lot. There are no water or wastewater improvements proposed on either site.

Please place the project on the September 14, 2023 Planning Board agenda for discussion of the project with the Board. Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By:   
\_\_\_\_\_  
Jeffrey J. Contelmo, PE  
Senior Principal Engineer

JJC/adt

Enclosures

cc: (All via email only)

Scott Connuck

Compton Donohue

Frank Smith, Esq

William Shilling, Esq

Mahopac Volunteer Fire Dept



TOWN OF CARMEL  
**SITE PLAN APPLICATION  
 INSTRUCTIONS**



*Union Energy Center LLC*

The Town of Carmel Planning Board meetings are held twice a month, on the second **Thursday** and fourth **Wednesday**, at 7:00 PM at Carmel Town Hall, 60 McAlpin Avenue, Carmel

The submission deadline is 10 days prior to the Planning Board meeting. New site plan applications that have been deemed complete will be placed on the agenda in the order they are received.

**No application will be placed on the agenda that is incomplete**

**Pre-Submission:**

Prior to the formal submission of the site plan, a pre-submission conference may be requested by the applicant to be conducted with representatives from the Town, which may include the Town Planner, Town Engineer, Director of Code Enforcement and/or the Planning Board Attorney. This conference will serve to educate the applicant on the process he/she must follow, clarify the information required to submit a complete site plan application, and to highlight any specific areas of concern. You may arrange a pre-submission conference through the Planning Board Secretary at (845) 628-1500 extension 190.

**Submission Requirements:**

At least 10 days prior to the Planning Board meeting, the site plan application shall be submitted to the Planning Board Secretary as follows:

All site plans shall be signed, sealed and folded with the title box legible. The application package shall include:

- 5 copies of the Site Plan Application Form, signed and notarized.
- 5 copies of the SEQR Environmental Assessment Form (use of short form or long form shall be determined at pre-submission conference).
- 5 full size sets of the Site Plan (including floor plans and elevations)
- 1 CD (in pdf. format) containing an electronic version of the Site Plan
- 2 copies of the Disclosure Statement
- 5 copies of the Site Plan Completeness Certification Form
- All supplemental studies, reports, plans and renderings.
- 2 copies of the current deed.
- 2 copies of all easements, covenants and restrictions.
- The appropriate fee, determined from the attached fee schedule. Make checks payable to the *Town of Carmel*.

*Rose Trumbetta* 9/7/23  
 Planning Board Secretary; Date

*Richard M* 9/7/23  
 Town Engineer; Date





# TOWN OF CARMEL SITE PLAN APPLICATION



Per Town of Carmel Code – Section 156 - Zoning

SITE IDENTIFICATION INFORMATION		
<b>Application Name:</b> Union Energy Center LLC	<b>Application #</b> 23-0006	<b>Date Submitted:</b> 8/30/23
<b>Site Address:</b> No. 24      Street: Miller Road      Hamlet: Mahopac		
<b>Property Location:</b> (Identify landmarks, distance from intersections, etc.) Miller Road at border with Town of Somers		
<b>Town of Carmel Tax Map Designation:</b> Section 86.11    Block 1    Lot(s) 14	<b>Zoning Designation of Site:</b> C/BP-Commercial/Business Park	
<b>Property Deed Recorded in County Clerk's Office</b> Date 2/22/01    Liber 1912    Page 91	<b>Liens, Mortgages or other Encumbrances</b> <input checked="" type="radio"/> Yes <input type="radio"/> No	
<b>Existing Easements Relating to the Site</b> <input type="radio"/> No <input checked="" type="radio"/> Yes    Describe and attach copies:	<b>Are Easements Proposed?</b> <input checked="" type="radio"/> No <input type="radio"/> Yes    Describe and attach copies:	
<b>Have Property Owners within a 500' Radius of the Site Been Identified?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No    Attached List to this Application Form		
APPLICANT/OWNER INFORMATION		
<b>Property Owner:</b> Miller Road, LLC c/o Nicole Stern	<b>Phone #:</b> <b>Fax#:</b>	<b>Email:</b>
<b>Owners Address:</b> No. 888    Street: Route 6      Town: Mahopac      State: NY Zip: 10541		
<b>Applicant (if different than owner):</b> East Point Energy c/o Scott Connuck	<b>Phone #:</b> 434-465-6211 <b>Fax#:</b>	<b>Email:</b> sconnuck@eastpointenergy.com
<b>Applicant Address (if different than owner):</b> No. 200    Street: Garrett Street, Suite J      Town: Charlottesville      State: VA Zip: 22902		
<b>Individual/ Firm Responsible for Preparing Site Plan:</b> Jeffrey J. Contelmo, P.E., Insite Engineering, Surveying & Landscape Architecture, P.C.	<b>Phone #:</b> 845-225-9690 <b>Fax#:</b> 845-225-9717	<b>Email:</b> jcontelmo@insite-eng.com
<b>Address:</b> No. 3    Street: Garrett Place      Town: Carmel      State: NY Zip: 10512		
<b>Other Representatives:</b>	<b>Phone #:</b> <b>Fax#:</b>	<b>Email:</b>
<b>Owners Address:</b> No.    Street:      Town:      State:    Zip:		
PROJECT DESCRIPTION		
<b>Describe the project, proposed use and operation thereof:</b> The applicant is seeking to construct a 116-megawatt battery energy storage system. The project includes the construction of a system of gravel driveways, two pads for battery storage, two substations, and the associated landscaping and stormwater management practices. The batteries would be stored in enclosures similar to shipping containers and the project would connect to NYSEG transmission lines that currently traverse an easement on the site. The 93.5 acre site, where the proposed development would occur is currently undeveloped. There are no proposed water or wastewater facilities for this project.		



# TOWN OF CARMEL SITE PLAN APPLICATION

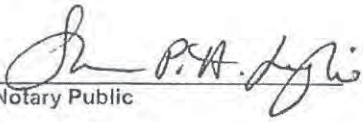
PROJECT INFORMATION			
Lot size: Proposed combined lots Acres: 93.5 ac      Square Feet: 4,072,011		Square footage of all existing structures (by floor): 0	
# of existing parking spaces: 0		# of proposed parking spaces: 2	
# of existing dwelling units: N/A		# of proposed dwelling units: N/A	
Is the site served by the following public utility infrastructure:			
<ul style="list-style-type: none"> <li>▪ Is project in sewer district or will private septic system(s) be installed? <u>N/A</u></li> <li>▪ If yes to Sanitary Sewer answer the following:                             <ul style="list-style-type: none"> <li>▶ Does approval exist to connect to sewer main? Yes: <input type="checkbox"/> No: <input type="checkbox"/></li> <li>▶ Is this an in-district connection? _____ Out-of district connection? _____</li> <li>▶ What is the total sewer capacity at time of application? _____</li> <li>▶ What is your anticipated average and maximum daily flow _____</li> </ul> </li> </ul>			
For Town of Carmel Town Engineer			
▶ What is the sewer capacity _____			
▪ Water Supply		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
If Yes:		▶ Does approval exist to connect to water main? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
		▶ What is the total water capacity at time of application? _____	
		▶ What is your anticipated average and maximum daily demand _____	
▪ Storm Sewer		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
▪ Electric Service		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
▪ Gas Service		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
▪ Telephone/Cable Lines		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
For Town of Carmel Town Engineer			
Water Flows		<u>NOT APPLICABLE AS P 9/15/23</u>	
Sewer Flows			
Town Engineer; Date _____			
What is the predominant soil type(s) on the site? RsB, PnB, WdB		What is the approximate depth to water table? 0-6'+	
Site slope categories:		15-25% <sup>5</sup> %	>35% <sup>2</sup> %
Estimated quantity of excavation:		Cut (C.Y.) <sup>TBD</sup>	Fill (C.Y.) <sup>TBD</sup>
Is Blasting Proposed		Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/> Unknown: <input type="checkbox"/>
Is the site located in a designated Critical Environmental Area?		Yes: <input checked="" type="checkbox"/>	No: <input type="checkbox"/>
Does a curb cut exist on the site? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	Are new curb cuts proposed? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	What is the sight distance? Left _____ Right _____	
Is the site located within 500' of:			
• The boundary of an adjoining city, town or village		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
• The boundary of a state or county park, recreation area or road right-of-way		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
• A county drainage channel line.		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
• The boundary of state or county owned land on which a building is located		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	

## TOWN OF CARMEL SITE PLAN APPLICATION

Is the site listed on the State or Federal Register of Historic Place (or substantially contiguous) Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Is the site located in a designated floodplain? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Will the project require coverage under the Current NYSDEC Stormwater Regulations <div style="text-align: right;">Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></div>			
Will the project require coverage under the Current NYCDEP Stormwater Regulations <div style="text-align: right;">Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></div>			
Does the site disturb more than 5,000 sq ft		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Does the site disturb more than 1 acre		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Does the site contain freshwater wetlands? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>			
Jurisdiction: NYSDEC: <input type="checkbox"/> Town of Carmel: <input checked="" type="checkbox"/>			
<i>If present, the wetlands must be delineated in the field by a Wetland Professional, and survey located on the Site Plan.</i>			
Are encroachments in regulated wetlands or wetland buffers proposed?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Does this application require a referral to the Environmental Conservation Board?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Does the site contain waterbodies, streams or watercourses?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Are any encroachments, crossings or alterations proposed?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Is the site located adjacent to New York City watershed lands?		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Is the project funded, partially or in total, by grants or loans from a public source? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Will municipal or private solid waste disposal be utilized? Public: <input type="checkbox"/> Private: <input checked="" type="checkbox"/>			
Has this application been referred to the Fire Department?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
What is the estimated time of construction for the project? 12 to 18 months			
ZONING COMPLIANCE INFORMATION			
Zoning Provision	Required	Existing	Proposed
Lot Area	3 ac	82.8 ac	
Lot Coverage	40 %	1.3%	
Lot Width	200'	888'	
Lot Depth	200'		
Front Yard	50'	626'	
Side Yard	40'	43'	
Rear Yard	40'	1,710'	
Minimum Required Floor Area	5,000 sf	0	
Floor Area Ratio	None		
Height	40'	<40'	
Off-Street Parking			
Off-Street Loading			



## TOWN OF CARMEL SITE PLAN APPLICATION

Will variances be required? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	If yes, identify variances:
<b>PROPOSED BUILDING MATERIALS</b>	
Foundation	N/A
Structural System	N/A
Roof	N/A
Exterior Walls	N/A
<b>APPLICANT'S ACKNOWLEDGEMENT</b>	
I hereby depose and certify that all the above statements and information, and all statements and information contained in the supporting documents and drawings attached hereto are true and correct.	
Scott Connuck _____ Applicants Name	Scott Connuck <small>Digitally signed by Scott Connuck Date: 2023.08.01 10:31:06 -0400</small> _____ Applicants Signature
Sworn before me this <u>1<sup>st</sup></u> day of <u>August</u> 20 <u>23</u>	
 Notary Public	Shanna Paige Hogberg Lovaglio NOTARY PUBLIC REGISTRATION # 7941928 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES May 31, 2025





## TOWN OF CARMEL SITE PLAN COMPLETENESS CERTIFICATION FORM



All Site Plans submitted to the Planning Board for review shall include the following information and details, as set forth in Section 156-61 B of the Town of Carmel Zoning Ordinance.

This form shall be included with the site plan submission

	<i>Requirement Data</i>	<i>To Be Completed by the Applicant</i>	<i>Waived by the Town</i>
1	Name and title of person preparing the site plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Name of the applicant and owner (if different from applicant)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Original drawing date, revision dates, scale and north arrow	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Tax map, block and lot number(s), zoning district	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	All existing property lines, name of owner of each property within a 500' radius of the site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Contour lines at two-foot intervals, grades of all roads, driveways, sanitary and storm sewers	<input type="checkbox"/>	<input type="checkbox"/>
7	The location of all water bodies, streams, watercourses, wetland areas, wooded areas, rights-of-way, streets, roads, highways, railroads, buildings, structures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	The location of all existing and proposed easements	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	The location of all existing and proposed structures, their use, setback dimensions, floor plans, front, side and rear elevations, buildable area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	On site circulation systems, access, egress ways and service roads, emergency service access and traffic mitigation measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	Sidewalks, paths and other means of pedestrian circulation	<input type="checkbox"/> N/A	<input type="checkbox"/>
12	On-site parking and loading spaces and travel aisles with dimensions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	The location, height and type of exterior lighting fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	Proposed signage	<input type="checkbox"/> N/A	<input type="checkbox"/>
15	For non-residential uses, an estimate of the number of employees who will be using the site, description of the operation, types of products sold, types of machinery and equipment used	<input checked="" type="checkbox"/>	<input type="checkbox"/>



TOWN OF CARMEL  
**SITE PLAN COMPLETENESS  
 CERTIFICATION FORM**



Requirement Data	To Be Completed by the Applicant	Waived by the Town
16 The location of clubhouses, swimming pools, open spaces, parks or other recreational areas, and identification of who is responsible for maintenance	<input type="checkbox"/> N/A	<input type="checkbox"/>
17 The location and design of buffer areas, screening or other landscaping, including grading and water management. A comprehensive landscaping plan in accordance with the Tree Conservation Law	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18 The location of public and private utilities, maintenance responsibilities, trash and garbage areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19 A list, certified by the Town Assessor, of all property owners within 500 feet of the site boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20 Any other information required by the Planning Board which is reasonably necessary to ascertain compliance with this chapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Applicants Certification (to be completed by the licensed professional preparing the site plan:

I Jeffrey J. Conielmo, P.E. hereby certify that the site plan to which I have attached my seal and signature, meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:

[Signature]  
 Signature - Applicant

7/10/23  
 Date

[Signature]  
 Signature - Owner

7/6/23  
 Date







TOWN OF CARMEL  
SITE PLAN COMPLETENESS  
CERTIFICATION FORM



Town Certification (to be completed by the Town)

I \_\_\_\_\_ hereby confirm that the site plan meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:

Rose Tomelitta  
Signature - Planning Board Secretary

9/7/23  
Date

Ruey H.  
Signature - Town Engineer

9/7/23  
Date



**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 1 is accurate and complete.

**A. Project and Applicant/Sponsor Information.**

Name of Action or Project: Union Energy Center, LLC		
Project Location (describe, and attach a general location map): Union Valley Road and Miller Road		
Brief Description of Proposed Action (include purpose or need): The applicant is seeking to construct a 116-megawatt battery energy storage system. The project includes the construction of a system of gravel driveways, two pads for battery storage, two substations, and the associated landscaping and stormwater management practices. The batteries would be stored in enclosures similar to shipping containers and the project would connect to NYSEG transmission lines that currently traverse an easement on the site. The 93.5 acre site, where the proposed development would occur is currently undeveloped.  The applicant is also seeking to modify an existing property line between the proposed development site, and the neighboring site to the north which contains a New York State Electric and Gas (NYSEG) substation. Of the two proposed substations would be owned and controlled by NYSEG. The proposed lot line adjustment would allow NYSEG ownership of this substation. The proposed development lot contains 93.5 acres and the NYSEG lot is currently 1.6 acres. The proposed subdivision would add 10.7 acres to the NYSEG lot, and deduct the same from the development lot. There are no water or wastewater improvements proposed on either site.		
Name of Applicant/Sponsor: East Point Energy c/o Scott Connuck	Telephone:	E-Mail: sconnuck@eastpointenergy.com
Address: 310 4th Street NE, 3rd Floor		
City/PO: Charlottesville	State: VA	Zip Code: 22902
Project Contact (if not same as sponsor; give name and title/role): Jeffrey J. Contelmo, P.E., Insite Engineering, Surveying & Landscape Architecture, P.C.	Telephone: 845-225-9690	E-Mail: jcontelmo@insite-eng.com
Address: 3 Garrett Place		
City/PO: Carmel	State: NY	Zip Code: 10512
Property Owner (if not same as sponsor): Miller Road, LLC c/o Nicole Stern	Telephone:	E-Mail:
Address: 888 Route 6		
City/PO: Mahopac	State: NY	Zip Code: 10541



**B. Government Approvals**

<b>B. Government Approvals, Funding, or Sponsorship.</b> ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
<b>Government Entity</b>	<b>If Yes: Identify Agency and Approval(s) Required</b>	<b>Application Date (Actual or projected)</b>
a. City Counsel, Town Board, <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No or Village Board of Trustees		
b. City, Town or Village Planning Board or Commission <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Planning Board - Site Plan Approval, Subdivision approval	
c. City, Town or Village Zoning Board of Appeals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
d. Other local agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Building Permit Town Wetland Permit	
e. County agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
f. Regional agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NYCDEP SWPPP Acceptance	
g. State agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NYSDEC GP-0-20-001 Coverage NYSDEC Freshwater Wetlands Permit	
h. Federal agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ACOE Permitting Wetland Fill Permit	
i. Coastal Resources.		
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
iii. Is the project site within a Coastal Erosion Hazard Area?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**C. Planning and Zoning**

<b>C.1. Planning and zoning actions.</b>	
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> <li>• If Yes, complete sections C, F and G.</li> <li>• If No, proceed to question C.2 and complete all remaining sections and questions in Part 1</li> </ul>	
<b>C.2. Adopted land use plans.</b>	
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, identify the plan(s): NYC Watershed Boundary	
_____	
_____	
_____	
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes, identify the plan(s):	
_____	
_____	
_____	



**C.3. Zoning**

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance.  Yes  No  
If Yes, what is the zoning classification(s) including any applicable overlay district?  
Commercial / Business Park

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? Carmel Central School District

b. What police or other public protection forces serve the project site?  
Carmel Police Department

c. Which fire protection and emergency medical services serve the project site?  
Mahopac Fire District

d. What parks serve the project site?  
Empire State Trail, Donald J. Trump State Park, Baldwin Meadows Park

**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)? Industrial / Utility

b. a. Total acreage of the site of the proposed action? 1.6± & 93.5± acres  
b. Total acreage to be physically disturbed? 18.0± acres  
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 95.1± 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)  
Lot line adjustment for industrial / utility use.  
ii. Is a cluster/conservation layout proposed?  Yes  No  
iii. Number of lots proposed? 2  
iv. Minimum and maximum proposed lot sizes? Minimum 82.8 Maximum 12.3

e. Will the proposed action be constructed in multiple phases?  Yes  No  
i. If No, anticipated period of construction: 12-18 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.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
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 180

ii. Dimensions (in feet) of largest proposed structure: 10.7' height; 10' width; and 60' length

iii. Approximate extent of building space to be heated or cooled: 108,000 square feet

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

i. Purpose of the impoundment: \_\_\_\_\_

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

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

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

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

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

**D.2. Project Operations**

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

i. What is the purpose of the excavation or dredging? \_\_\_\_\_

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

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

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

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): Crossing over NYSDEC Wetland F-26 and associated watercourse for access to the site.



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:  
 A culvert and headwall would be constructed to allow for access to the site from Miller Road. The action would result in disturbance of about 3,000 sf of the wetland. ACOE permitting will be sought for this part of the project. Other portions of the site would create some disturbance within the 100 adjacent area, but these disturbances would primarily be for the construction of stormwater management practices. A NYSDEC Freshwater Wetlands Permit will be sought for these disturbances.

iii. Will the proposed action cause or result in disturbance to bottom sediments?  Yes  No  
 If Yes, describe: Culvert and headwalls to be constructed.

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: 3,000 sf±
- expected acreage of aquatic vegetation remaining after project completion: 42.8±ac
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Crossing for access to the site.
- proposed method of plant removal: Mechanical
- if chemical/herbicide treatment will be used, specify product(s): N/A

v. Describe any proposed reclamation/mitigation following disturbance: Wetland Mitigation will be provided per ACOE.

---

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

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

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

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

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

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

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

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

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

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

---

d. Will the proposed action generate liquid wastes?  Yes  No  
 If Yes:

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

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

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

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



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

 If Yes:
 

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

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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:
 

- How much impervious surface will the project create in relation to total size of project parcel?  
 56,120 Square feet or 1.3 acres (impervious surface)  
 4,142,137 Square feet or 95.1 acres (parcel size)
- Describe types of new point sources. Battery enclosure structures.
- 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)?  
Proposed stormwater management practices  
 \_\_\_\_\_  
  - 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:
 

- Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)  
 \_\_\_\_\_
- Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)  
 \_\_\_\_\_
- 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:
 

- 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
- In addition to emissions as calculated in the application, the project will generate:
  - \_\_\_\_\_ Tons/year (short tons) of Carbon Dioxide (CO<sub>2</sub>)
  - \_\_\_\_\_ Tons/year (short tons) of Nitrous Oxide (N<sub>2</sub>O)
  - \_\_\_\_\_ Tons/year (short tons) of Perfluorocarbons (PFCs)
  - \_\_\_\_\_ Tons/year (short tons) of Sulfur Hexafluoride (SF<sub>6</sub>)
  - \_\_\_\_\_ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (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 1/2 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 am - 6:00 pm \_\_\_\_\_
- Saturday: \_\_\_\_\_ 8:00 am - 5:00 pm \_\_\_\_\_
- Sunday: \_\_\_\_\_ None \_\_\_\_\_
- Holidays: \_\_\_\_\_ None \_\_\_\_\_

ii. During Operations:

- Monday - Friday: \_\_\_\_\_ Occasional \_\_\_\_\_
- Saturday: \_\_\_\_\_ Onsite Employee (1-3) present through the week \_\_\_\_\_
- 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:  
 During construction: Typical construction and earthwork noise.  
 During Operation: Sound from HVAC system.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen?  Yes  No  
 Describe: Tree removal as needed. Developed area to receive evergreen plantings to mitigate sound.

---

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:  
Downward facing site lighting, provided for security and safety. Lighting will be limited, motion sensor operated, and dark sky compliant.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen?  Yes  No  
 Describe: Tree removal as needed. Developed area to receive evergreen plantings to mitigate light.

---

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): Public Trail

ii. If mix of uses, generally describe: \_\_\_\_\_

---

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0 ac	8.8 ac±	+8.8 ac
• Forested	51.2 ac±	42.4 ac±	-8.8 ac
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0 ac	0 ac	No Change
• Agricultural (includes active orchards, field, greenhouse etc.)	0 ac	0 ac	No Change
• Surface water features (lakes, ponds, streams, rivers, etc.)	0 ac	0 ac	No Change
• Wetlands (freshwater or tidal)	42.3± ac	42.3± ac	Less than 0.1ac change
• Non-vegetated (bare rock, earth or fill)	0 ac	0 ac	No Change
• Other Describe: _____			

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:  
Creative Kids Childcare 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): 360023  
 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: \_\_\_\_\_

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**E.2. Natural Resources On or Near Project Site**

a. What is the average depth to bedrock on the project site? \_\_\_\_\_ 6.5 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:

Paxton Fine Sandy Loam, 3-8% slopes	_____	33 %
Ridgebury Complex, 0-8% slopes	_____	35 %
Woodbridge Loam, 3-8% slopes	_____	11 %

d. What is the average depth to the water table on the project site? Average: \_\_\_\_\_ 2 feet

e. Drainage status of project site soils:

<input checked="" type="checkbox"/> Well Drained:	_____	35 % of site
<input checked="" type="checkbox"/> Moderately Well Drained:	_____	11 % of site
<input checked="" type="checkbox"/> Poorly Drained	_____	54 % of site

f. Approximate proportion of proposed action site with slopes:

<input checked="" type="checkbox"/> 0-10%:	_____	73 % of site
<input checked="" type="checkbox"/> 10-15%:	_____	15 % of site
<input checked="" type="checkbox"/> 15% or greater:	_____	12 % of site

g. Are there any unique geologic features on the project site?  Yes  No  
 If Yes, describe: \_\_\_\_\_

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h. Surface water features.

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

ii. Do any wetlands or other waterbodies adjoin the project site?  Yes  No  
 If Yes to either i or ii, continue. If No, skip to E.2.i.

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

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

• Streams:	Name _____	Classification _____
• Lakes or Ponds:	Name _____	Classification _____
• Wetlands:	Name Federal Waters, NYS Wetland, Federal Waters	Approximate Size NYS Wetland (in a...
• Wetland No. (if regulated by DEC) F-26	_____	_____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies?  Yes  No  
 If yes, name of impaired water body/bodies and basis for listing as impaired: \_\_\_\_\_

---

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

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

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

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer?  Yes  No  
 If Yes:  
 i. Name of aquifer: \_\_\_\_\_

m. Identify the predominant wildlife species that occupy or use the project site:  
 Fauna typical to northeast forest and wetlands. \_\_\_\_\_  
 \_\_\_\_\_

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):  
 Northern Long-eared Bat

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? \_\_\_\_\_  
 ii. Source(s) of soil rating(s): \_\_\_\_\_

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: Baldwin Place Area  
 ii. Basis for designation: Difficulties w/ portable water source  
 iii. Designating agency and date: Agency: Somers, Town of, Date: 9-26-90



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

If Yes:

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

ii. Name: \_\_\_\_\_

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

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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: \_\_\_\_\_

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

If Yes:

i. Identify resource: Empire Trail

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

iii. Distance between project and resource: \_\_\_\_\_ 0 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**

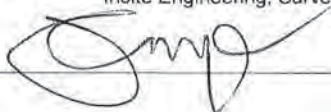
Attach any additional information which may be needed to clarify your project.

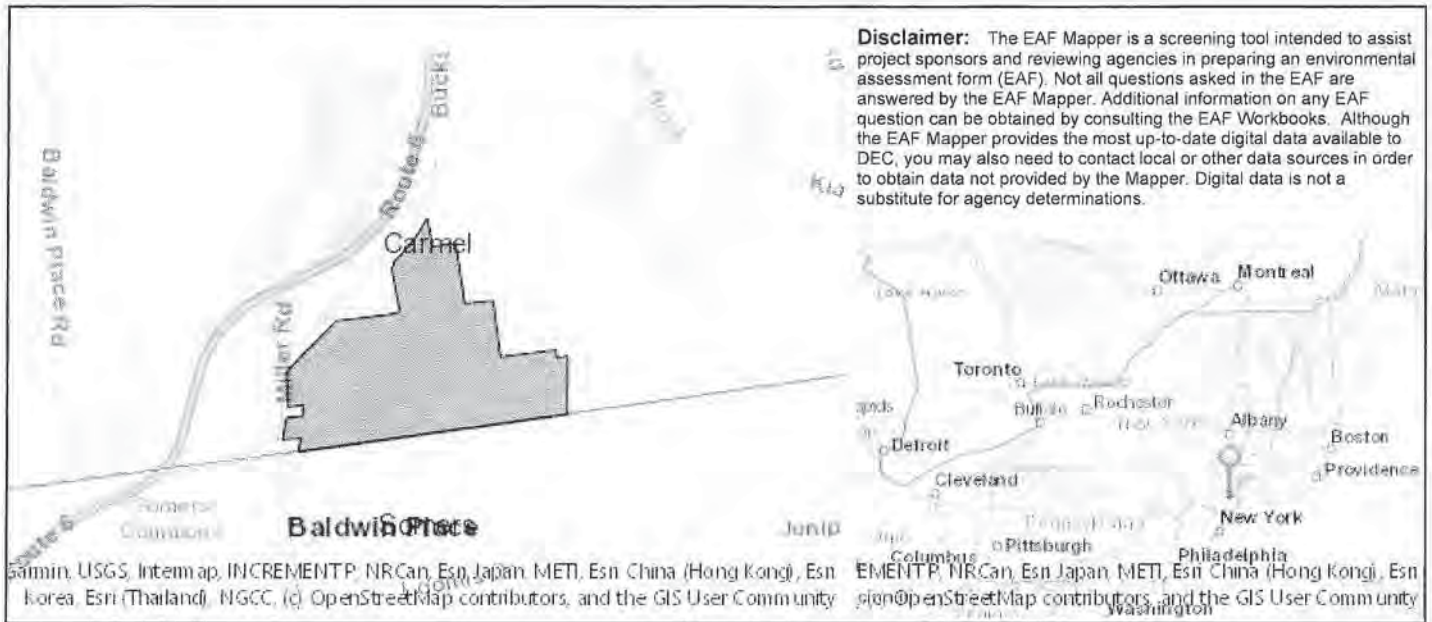
If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

**G. Verification**

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

Applicant/Sponsor Name Jeffrey J. Contelmo, P.E. Date 8/28/23  
Insite Engineering, Surveying & Landscape Architecture, P.C.

Signature  Title Senior Principal Engineer



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	360023
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):322.1, NYS Wetland (in acres):42.8
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	F-26
E.2.h.v [Impaired Water Bodies]	No



E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Baldwin Place Area
E.3.d.ii [Critical Environmental Area - Reason]	Difficulties w/ portable water source
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency: Somers, Town of, Date: 9-26-90
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Michael G. Carnazza  
Director of Code Enforcement

(845)628-1500  
Ext. 170



60 McAlpin Avenue  
Mahopac, New York 10541

February 3, 2020

East Point Energy, LLC  
200 Garrett Street, Suite J  
Charlottesville, VA 22902

To whom it may concern:

I received your request as to whether or not a grid-scale battery project is permitted in the Town of Carmel.

A grid-scale battery project is a large energy storage system connected directly to an electric utility. The project would enable the utility to, among other things, store electricity during "off-peak" hours and dispatch electricity during "peak" demand hours. The project would make the grid more reliable, resilient, clean, and affordable. A grid-scale battery project would be an installation used by a public utility to supply and transmit electric power. This is not a public utility but is a General Business or a Commercial Establishment.

The Town of Carmel Schedule of District Regulations (§156-15) allows General Business as a permitted use in the C-Commercial zoning district and Commercial Establishments as a permitted use in the Commercial/Business Park zoning district.

All commercial developments in the Town of Carmel require Site Plan Approval from the Planning Board.

Very truly yours,

Michael Carnazza





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## Site Plan Application

**Union Energy Center**  
Putnam County, New York  
unionbess.com

Town of Carmel Planning Board  
60 McAlpin Avenue  
Mahopac, NY 10541

**Submission Date:** August 30, 2023

**Applicant Information**

Union Energy Center, LLC  
C/O East Point Energy, LLC  
310 4th Street NE, 3rd Floor  
Charlottesville, VA 22902

**East Point Energy Point of Contact**

Scott Connuck  
Sr. Project Developer  
(434) 465-6211  
sconnuck@eastpointenergy.com

August 30, 2023

Honorable Members of the Carmel Planning Board:

This document contains the Union Energy Center LLC's site plan approval application narrative. The application is submitted in accordance with Section 156-62 of the Town of Carmel zoning code and site plan application.

The Director of Code Enforcement has classified the project as "General Business or a Commercial Establishment," meaning it is permitted in the Commercial/Business Park zone subject to site plan approval.

East Point Energy and the Union Energy Center LLC look forward to presenting our application to the Town of Carmel Planning Board and are excited to answer any questions regarding the proposed development. Please do not hesitate to reach out at any point during the permitting proceedings.

Respectfully,

A handwritten signature in blue ink, appearing to read "Scott Connuck", with a long horizontal flourish extending to the right.

Scott Connuck  
Sr. Project Developer  
(434) 465-6211  
sconnuck@eastpointenergy.com



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## 1 Company Introduction

East Point Energy is a Charlottesville, VA based development firm focused on the origination, construction, and operation of utility scale energy storage systems. Our team is developing a risk-adjusted pipeline of 3.4 gigawatt (GW) of energy storage capacity across 14 states. We are technology and contractor agnostic, allowing us to find the best solution for each project. The firm's executive team founded East Point in 2018, bringing decades of combined energy development experience and over 1.8 GWs of solar, wind, and energy storage projects currently in operation across the United States. A detailed statement of qualifications for East Point and the individuals involved in this project can be found in Appendix A.

East Point Energy is a wholly owned subsidiary of Equinor, a broad international energy company committed to long-term value creation in a low-carbon future. An international energy company headquartered in Norway with 22,000 employees in over 30 countries, Equinor's renewable business will be one of the fastest growing segments in the company in the coming years. By 2030, Equinor will devote at least 50% of its capital to renewable and low-carbon projects on a corporate level. East Point is transitioning our company into a market-leading independent power producer with the backing of the financial strength and renewable energy expertise of Equinor.

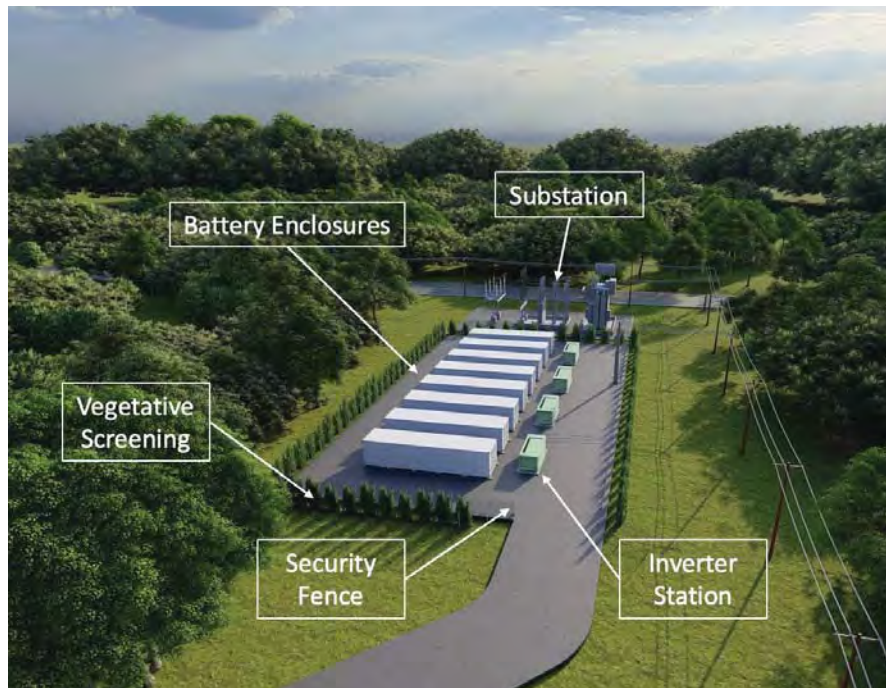


## 2 Background on Grid-Scale Energy Storage

Grid-scale energy storage projects (“BESS”) are large battery-storage systems that connect to utility infrastructure and provide a host of benefits to the grid and communities. The State of New York has set a 6-gigawatt energy storage goal by 2030, the largest such goal in the U.S., because it recognizes that BESS projects are essential for keeping electrical grid clean, reliable, and affordable. To that end, energy storage is instrumental in the State’s ability to fulfill the goals of the Climate Leadership and Community Protection Act.

Grid-scale battery storage projects operate by charging from the electrical grid when energy is least needed and by returning energy to the grid during peak demand. Electricity stored by these projects can come from all sources, though projects are especially adept at facilitating the deployment of intermittent resources like wind and solar. Projects participate in NY’s wholesale market for electricity, called the NY Independent Service Operator (“NYISO”), and provide capacity, energy, and ancillary services such as frequency regulation.

BESS projects primarily consist of metal enclosures that resemble a chain of cabinets. The battery cells are kept within the enclosures, which are accompanied by other electrical equipment such as inverters, transformer, and substations. A rendering of a generic project is pictured below:



### 3 Project Overview

Union Energy Center, LLC ("Applicant") proposes to develop and construct the Union Energy Center, which will provide battery energy storage system for up to 116-megawatts (MW) of Alternating Current (AC) ("the Project"). The project is located at 24 Miller Road within the Town of Carmel's unincorporated hamlet of Mahopac, Putnam County, New York. The property consists of one irregular-shaped, vacant, and wooded parcel with a utility easement. It is approximately 93.60 acres in size and is identified as Section 86.11 – Block 1 – Lot No. 14 on the Putnam County land and tax maps, of which Applicant will lease 92.60 acres. The subject property is not improved with any buildings and a utility easement traverses the eastern portion of the property from north-northwest to south-southeast. The property's neighbors include a NYSEG utility substation, several commercial and residential properties, vacant land, the Town of Somers in Westchester County, the Putnam Trailway, and Union Valley Road. The parcel is owned by Miller Road, LLC. There is no plan to expand the Project's footprint beyond the parcel. The Project began development in early 2020.

The Project will interconnect to New York State Electric & Gas's (NYSEG) existing 115 kilovolt transmission lines on the property. The primary goal of the proposed Project will be to charge at night or during times of excess renewable energy production and be available to augment the local electric grid during peak load periods (cold mornings and hot afternoons/evenings). In addition, the Project will be capable of providing the local grid with frequency regulation, voltage control and emergency backup power. The Project will be capable of powering tens of thousands of homes.

The BESS will consist of lithium-ion battery containers; heating, ventilation and air conditioning (HVAC) cooling systems (batteries generate heat when charging and discharging); control, instrumentation; and electric grid interconnection switchgear for the 115-kilovolt interconnection, which provides switching and protection to the BESS's electrical systems and point of interconnection. The Project will also include a substation to collect the energy from the BESS and a subdivided substation for NYSEG to own and operate. The entire project will have motion-sensor safety lighting, perimeter security fencing and sufficient maintenance of vegetation to screen from neighboring properties. The Project Site Plans are included as in the application.

The Project is sited in the Commercial/Business Park zone, and will be unseen, unheard, and non-burdensome to neighboring properties. The project has a roughly 10 to 15-acre footprint on the 93.6-acre property. The property does have extensive wetlands, but the design has a minimal impact on any wetlands based on input from top engineering and environmental consultants in the region to reduce impacts.

**Table 1: Site Overview**

<i>Current Property Owner</i>	Miller Road, LLC
<i>Property Address</i>	24 Miller Road, Mahopac
<i>Property Coordinates</i>	41°20'53.82"N 73°44'50.28"W
<i>Parcel IDs (Project Area)</i>	Section 86.11 – Block 1 – Lot No. 14
<i>Property Zoning</i>	Commercial/Business Park



<i>Property Acreage</i>	93.60 acres
<i>Project Acreage</i>	92.60 acres
<i>Disturbed Area</i>	Approximately 18 acres
<i>Contract Structure</i>	Option to Lease

## 4 Project Need and Benefits

In July 2019, former Governor Cuomo signed the Climate Leadership and Community Protection Act (CLCPA), which represents the most ambitious and comprehensive climate and clean energy legislation in the country. The CLCPA sets forth an aggressive schedule for New York State to achieve 100 percent zero-emission electricity by 2040 and 70 percent of electricity from renewable sources by 2030, including a mandate of 3,000 MW of battery energy storage by 2030. In her January 2022 State of the State Address, Governor Hochul called for a doubling of NYS's commitment to energy storage deployment to 6,000 MW by 2030.

Accordingly, BESS will play a crucial significant role in meeting the State's aggressive clean energy goals. BESS will help to integrate clean, renewable energy into New York's electric transmission grid, allow New York to meet peak power needs without relying on its oldest peaker plants and relieve demands on the existing transmission system, thereby reducing dependency on polluting generation and increasing infrastructure efficiency during peak energy demand periods.

Together with stakeholders, New York State Energy Research and Development Authority (NYSERDA) and the New York State Department of Public Service (NYS DPS) developed the New York State Energy Storage Roadmap (Roadmap) identifying the near-term policies, regulations and initiatives needed to meet the BESS development targets.<sup>1</sup>

NYSEG intends to meet its share of New York State's energy storage goals through a variety of opportunities including new projects obtained through its 2019 and 2021 Bulk Energy Storage Request for Proposal ("RFP") issued in Fall 2021. As described in the Roadmap 2.0, RFPs by NYSEDA and NYSEG are anticipated in the future to support the State's efforts to achieve the energy storage goals. In addition, BESS projects may be developed through private commercial arrangements not affiliated directly with state goals.

This Project will help advance the State energy policy objectives, including those announced in Governor Hochul's 2022 State of the State Address and directed in the Roadmap 2.0. In addition, the Project **directly benefit the town** through:

1. **Tax Revenue and Local Economy:** Projects are capital-intensive and can provide significant increases in tax revenues for municipalities. The project we are proposing, described later in this document, could bring at least over \$100 million of investment into the community. Projects can also bring dozens of construction jobs, as well as a small number of long-term, part-time positions. The mitigation or avoidance of just a single major outage can pay massive dividends for the surrounding area.<sup>2</sup> We have had several discussions with the Putnam County Industrial Development Agency and are prepared to advance those discussions further over the coming months.
2. **Clean Energy and Renewables Firming:** BESS projects are a clean, green technology that has been made a priority by the State of NY.<sup>3</sup> These projects combine the

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<sup>1</sup> New York State Energy Storage Roadmap, issued on June 21, 2018 in Case Number 18-E-0130 In the Matter of Energy Storage Deployment Program.

<sup>2</sup> <https://www.keranews.org/texas-news/2022-02-16/cost-of-last-years-winter-storm-could-reach-300-billion-new-report-says>

<sup>3</sup> <https://www.utilitydive.com/news/new-york-to-double-energy-storage-target-to-at-least-6-gw-by-2030/616793/>



- reliability* of dispatchable nuclear or fossil fuel plants with the *clean* components of wind and solar. The grid cannot provide consistent electricity with intermittent energy sources, so battery projects move excess wind and solar to when it is needed most. This helps communities get more “bang for their buck” for wind and solar. BESS projects, unlike traditional fossil fuel plants, do not emit any air and water emissions during normal operation (e.g. nitrous oxide, sulfur oxide, carbon dioxide), yielding a significant health benefit in comparison.
3. **Grid Stability:** Battery projects are exceptionally effective at balancing out the fluctuations of the grid. With the addition of renewables, as well as new demand from electrification of products like electric vehicles, the grid is becoming increasingly more challenging to balance out. Batteries can prevent wild swings in the frequency and voltage of the grid, which protects electrical infrastructure from damage. This is especially acute for manufacturers with sensitive equipment. In effect, BESS help local businesses continue to operate efficiently.
  4. **Electric Reliability:** BESS projects are exceptionally capable at providing electricity during periods of greatest need to the increasingly vulnerable grid, which is largely why storage deployments have ballooned in recent years around the country and world. Our project located in Carmel would create significantly more value because of the retirement of the Indian Point nuclear power plant and the loss of its firm capacity. The project could generate local electricity, giving utility crews precious time to make repairs during storms and other outages.
  5. **Utility Upgrades Deferral:** Utilities frequently need to build new transmission lines and substations in order to keep the lights on. In fact, NY has multiple transmission lines planned to bring electricity from upstate, through the Lower Hudson valley, to NYC.<sup>4</sup> These projects are typically very expensive and controversial to build. Battery projects located in smart locations, like Putnam County, can prevent future upgrades from being required.
  6. **Keeping the Cost of Electricity Down:** Because battery projects create value through energy arbitrage and peak demand reduction, they help reduce energy supply issues during the most expensive times to provide electricity. They also make better use of wind and solar, which are often the least expensive electric generators. These cost savings would primarily benefit the Lower Hudson Valley region.
  7. **Quiet and Safe:** The sounds levels created by BESS projects varies by equipment and layout, but typically resembles that of electrical substations like the one that already exists on Union Valley Road. The layout that we have proposed, which is described below, will be inaudible from structures on neighboring properties. BESS projects are safe to install and operate with fire and environmental concerns at the forefront, elaborated on below.
  8. **Minimal Impact to Local Services:** BESS projects do not put kids in schools, require police, or other social services. After construction, there is essentially no traffic generated. In very rare cases, EMS are required on site. Training will be provided, and Applicant intends to work with the Town of Carmel to ensure their EMS are properly equipped.

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<sup>4</sup> <https://www.thecity.nyc/2022/4/14/23026076/state-approves-electricity-transmission-lines-power-climate-goals>

## 5 Zoning & Permitting Overview

The parcel is zoned “Commercial/Business Park” and in a letter from the Director of Code Enforcement dated February 3, 2020, was classified as “General Business or a Commercial Establishment” (Appendix B). “General Business or a Commercial Establishment” type uses are permitted in the zone subject to site plan approval. C/BP is the most permissive zone in the Town. This parcel was selected for development because of its proximity to electrical infrastructure, downstate New York, the Indian Point Nuclear Power Plant retirement, and favorable site conditions that minimize impacts to the environment and neighbors. Similar uses currently allowed in this zone by the Town Code include light manufacturing, warehouses, and gas stations. The Applicant paid extra money to select the most appropriate possible area to site a project and to have negligible adverse impacts to the community relative to its benefits.

The parcel and Project will meet the following requirements from Schedule A of the Zoning Code, pictured below in Table 2.

**Table 2: Requirements for C/BP Zone**

5	6	7	8			9			10			11			12		13		14		15		16	17	18	19		20		21
Minimum Required Lot Dimensions			Minimum Required Yard Dimensions (See Col. 21.) (feet)									Maximum Permitted Height of Buildings (See Col. 21.)		Minimum Required Floor Area of Buildings (square feet)	Maximum Permitted Coverage of Lot by Buildings (percent)	Maximum Permitted Floor Area Ratio	Off-Street Parking		Off-Street Loading	Exceptions										
Area (square feet)	Width (feet)	Depth (feet)	Applying to Principal Buildings			Applying to Accessory Buildings			Stories	Feet	In Connection with Dwelling Unit	Spaces	Berths																	
3 acres	200	200	50	40	40									40, except research labs, data processing and computer centers, office buildings and hotels, which shall not exceed 60	5,000	40%		(See schedules in § 156-42.)												

In addition to the site plan, the Project will require the following approvals from the Town:

1. Wetlands permit
2. Tree Cutting Permit/Plan
3. Building Permit
4. MS4 General Permit SWPPP Acceptance

### Non-Local Permits

The Project requires federal, state, and local discretionary and ministerial permits and approvals as summarized in Table 1. The Project may also require compliance with other federal, state and local programs that are addressed throughout this document.



**Table 3: Summary of Anticipated Permits, Approvals and Involved Agencies**

<b>Agency</b>	<b>Required Permit</b>	<b>Agency Action</b>	<b>Status</b>
Federal Energy Regulatory Commission (FERC)	Exempt Wholesale Generator Certification	Self-certification as exempt wholesale generator for BESS 10 MW in size or greater.	Expected completion Q4 2026
Federal Aviation Administration (FAA)	Re-up Determination of No Hazard	Confirmation that the project presents no hazards to flights.	Expected completion Q4 2025
U.S. Environmental Protection Agency (USEPA)	Spill Prevention, Control and Countermeasure (SPCC) Plan	Spill Prevention and Response Plan prior to BESS operation.	Expected completion Q4 2025
US Army Corp of Engineers	Jurisdictional Determination & Wetland Permit	Approval of wetland boundaries & impacts to federally-regulated wetlands. Joint wetland permit with NYSDEC.	Expected completion Q3 2024
New York State Independent System Operator (NYISO)	Interconnection Approval from NYISO and NYSEG	Approval to interconnect to NYSEG's 115 kV transmission system.	Expected completion Q4 2024
New York State Public Service Commission (NYSPSC)	Section 68 Certificate of Public Convenience and Necessity (discretionary approval)	Approval to construct an electric facility greater than 80 MW	Expected completion Q1 2025
New York State Department of Environmental Conservation (NYSDEC)	SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) (potential)	Required dependent upon Town Planning Board. Board-approved Final Site Plans including Stormwater Management design for disturbances over one-acre and discharge to surface waters of the State.	Expected completion Q1 2025
NYSDEC	New York Natural Heritage Program (NYNHP), Threatened and Endangered Species Inventory Review Article 11, 6 NYCRR Part 182 (required to support discretionary approvals and SEQRA)	Consultation letter sent to the NYNHP to determine if the Project will impact any protected plant or animal species habitat. Refresh expected in 2023/24.	Underway. Expected completion Q4 2023
NYSDEC	Jurisdiction Determination and freshwater wetland permit	Approval of wetland boundaries & impacts to state-regulated wetlands. Joint permit with USACE.	Expected completion Q3 2024

New York City Department of Environmental Protection (NYCDEP)	Stormwater Pollution Prevention Plan Approval	Approval of SWPPP impacts.	Expected completion Q4 2024
Putnam County	Section 239-M Review	Approval for actions within 500 feet of another municipality.	Expected completion Q2 2025

## 6 Site Plan Overview

The Project site plan is attached with the application. The site plan is the result of extensive surveying and planning on the property. The main component of the project are the metal BESS enclosures that hold the batteries. They are strategically located in the center of the property to minimize impacts to neighboring properties, minimizing grading, and wetland impacts. The site plan also contains substations, fencing, stormwater features, and access roads.

## 7 Safety

BESS projects are safe to install and operate, which is reflected by the exponential growth in deployments in recent years all around the world. The following briefly summarizes the safety of our projects below but would be more than happy to discuss these issues in more detail when we present before the Board(s). It is also worth noting that this technology has improved significantly over the last ten years.

### Fire Safety

Battery projects have a very low probability of fire, akin to that of the six electrical substations already in the Town. Nonetheless, EPE employs the following to A) keep the risk of a fire low and B) mitigate the effects of a fire should one occur:

1. **Proven Technology:** Lithium-ion batteries are safely used in thousands of applications, like cell phones, laptops, and EVs. This project uses the same technologies, just on a larger scale.
2. **Inherently Safe Design:** Batteries are held within spaced apart metal enclosures equipped with fire suppression systems and thermal management. The projects are surrounded by gravel, so nothing flammable nearby can catch fire. In cases where fires have occurred, fires have not spread to surrounding areas.
3. **Industry Standards:** Projects adhere to a long list of local, state, federal, and industry fire standards including NFPA 855 and UL 9540/9540A. NY State has the most advanced and stringent battery storage fire safety code in the country.<sup>5</sup>
4. **Frequent Oversight & 24/7 Monitoring:** Once operational, trained staff will be on-site frequently to conduct visual checks, general maintenance work, and project site landscaping needs. The Project and each enclosure are equipped with monitoring

<sup>5</sup> [https://up.codes/viewer/new\\_york/ny-fire-code-2020/chapter/12/energy-systems#12](https://up.codes/viewer/new_york/ny-fire-code-2020/chapter/12/energy-systems#12)



systems to ensure proper temperatures are maintained and that harmful gases are not detected. Should a problem occur, the system can automatically be shut down.

5. **First Responders:** Applicant would provide firefighter training and provide (if needed) at no cost to the Town, the necessary equipment on site to fight a possible fire. Applicant has already had a lengthy discussion with the Mahopac Volunteer Fire Department and has incorporated the Fire Chief's input into the site plan. Closer to construction, an emergency response plan will be developed in close coordination with the local Fire Departments.

For a more detailed analysis, see the *Battery Energy Storage System Fire Safety Information* overview included with the site plan application.

### Environmental Impacts

Grid-scale energy storage projects are considered a clean energy technology that help protect communities and the climate. They are very effective at making renewable energy more useful and are essential for reducing the use of polluting plants.

1. **No Emissions:** Projects do not have any normal air or water emissions, other than stormwater that occurs with all types of development.
2. **Household Materials:** Lithium-ion batteries are a proven technology that are safe to use in homes. Our project uses the same technology on a larger scale.
3. **Recycling:** Battery cells within the project do not last forever, even if a project's life may be much longer. Old batteries below a certain capacity will be removed and recycled. Then, new cells can be added to enclosures.
4. **Lighting:** Projects require minimal lighting for safety, which is aimed downwards and typically motion-sensing.
5. **Traffic:** After the project is completed, there is essentially no traffic associated with the project as it is primarily operated remotely.
6. **Wetlands and Conditions on Site:** Several wetlands are present on site, and our design makes use of the property while having the least possible impact on wetlands. Exact plans will be fleshed out in the application to the Town. The project will be able to protect the remaining wetlands for decades to come. No threatened species, cultural resources, or contamination are known to be on site, though additional due diligence is ongoing.

## 8 Public Utilities

The Project does not plan to use public water, sewer, or lighting. After construction, the Project will mostly be operated remotely meaning there will be minimal traffic or road impacts.

## 9 Decommissioning

East Point Energy will fully decommission the energy storage facility at the end of its operational life. Operational life is planned for 25 years with an ability to augment the system to further extend the useful life of the system indefinitely. This is driven by both legal and reputational needs. On the legal side, the site lease agreement between East Point Energy and the property owner will ensure the full decommissioning and removal of the facility at the end of the lease period. From a reputation perspective, it is critical for the Applicant to

decommission the project in accordance with the codes, standards, guidelines, and input of the Town. This includes a good faith execution of the following steps:

- Prior to decommissioning, East Point Energy shall prepare a written decommissioning plan that provides the organization, documentation requirements, and methods and tools necessary to indicate how the safety systems and its components will be decommissioned and the BESS removed from the site. Plans will include:
  - An overview of the decommissioning process developed specifically for the BESS that is to be decommissioned.
  - Roles and responsibilities for all those involved in the decommissioning of the BESS and its removal from the site.
  - A description of how any changes to the surrounding areas and other systems adjacent to the BESS, including, but not limited to structural elements, building penetrations, means of egress, and required fire detection and suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed & restoration of developed areas.
- Town of Carmel will be notified prior to the facilities decommissioning conducted by East Point Energy and any designated agent(s) in accordance with the decommissioning plan.
- A decommissioning report shall be prepared to summarize the decommissioning process of the system and associated operational controls and safety systems. This report shall be retained by East Point Energy and provided to Town of Carmel upon request.

## 10 Conclusion

We thank the Town of Carmel Planning Board and supporting staff for considering our application for approval of a site plan. Our application is a product of years of development activities and conversations with local and community members in which we have addressed the items required for an approved permit and gone above those requirements in several instances. This does not constitute the end of conversations as East Point Energy is willing to discuss and comply, as necessary, with further requests and/or requirements of the Town.

Please do not hesitate to reach out with any questions.

Scott Connuck  
Sr. Project Developer  
(434) 465-6211  
sconnuck@eastpointenergy.com

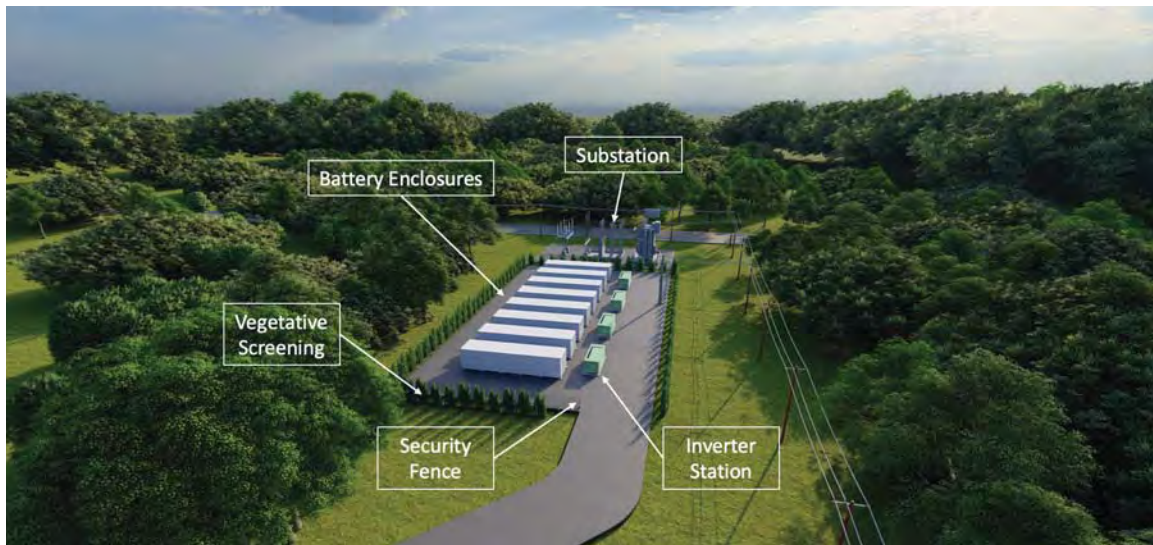




## Battery Energy Storage System Fire Safety Information

Grid-scale battery energy storage systems (“BESS”) are a long-proven technology that brings significant benefits to the rapidly changing landscape of electrical generation and delivery. BESS operate by charging from the electrical grid when energy is least needed and by returning energy to the grid during times of peak energy demand. Electricity stored by these projects can come from all sources, though projects are especially adept at facilitating the deployment of intermittent resources like wind and solar.

BESS projects primarily consist of metal enclosures that resemble shipping containers or metal cabinets. The battery cells are kept within the enclosures, which are accompanied by other electrical equipment such as inverters, transformers, and substations. A rendering of a generic project is pictured below:



BESS projects are safe to install and operate, reflected by the exponential recent growth in deployments all around the world. While these projects do bear some fire risks, the risk of a fire occurring is very low – similar to the fire risk of an electrical substation. Furthermore, in cases where fires do occur, advances in safety systems have made them very containable with minimal short-term or long-term impacts to the surrounding community. The safety of BESS and the strategies for managing them can be summarized by the following:

1. Prevention:
  - a. Implementing the latest and safest design features and standards as the technology continues to improve.
  - b. Performing fire hazard mitigation analyses and fire risk assessments to identify and address gaps, if any, in the safety features of the BESS installation during the design phase.
  - c. Maintenance: Routine and planned updates, inspections, and stress tests.
2. Response and Mitigation:
  - a. Installing the systems necessary to contain and suppress thermal runaway.
  - b. Working early and extensively with local fire officials to ensure their comfort with the system and to include their input on the safety of the design.
  - c. Providing the training and equipment to local responders necessary to respond both now and in the future.

This document outlines these safety measures and strategies in greater detail to inform stakeholders and to secure stage 101 responsibility for deploying these projects in municipalities.

## Background on Fire Risk

Lithium-ion battery failure modes are well understood, and while batteries do not spontaneously combust, poor cell manufacturing quality, cell abuse, or mechanical failure can lead to a thermal runaway and potentially a cascading event. There are well-defined stages to these battery failures, however, early intervention, passive protection, and active protection systems can mitigate and contain a failure.

For BESS, particularly lithium-ion, fire safety discussions center around the potential for thermal runaway. Thermal runaway is a chemical process where self-heating in a

battery exceeds the rate of cooling causing high internal temperatures, melting, off-gassing/venting, and in some cases, fire or explosion. This is a process that can occur in any device that uses a lithium-ion battery cell, including cellphones. Fortunately, as described below, thermal runaway is an issue that can be prevented, addressed when it does occur, and isolated to prevent spread.

There are four main stages of failures that can lead to a fire, all of which can be detected through monitoring:

- Stage 1: Battery abuse leading to cell damage (ex: physical damage like puncture or crushing, overcharging, exposure to extreme heat, etc.).
- Stage 2: Off-gas event which leads to continued heat release and building pressure if unchecked.
- Stage 3: Smoke generation indicating that major failure is imminent.
- Stage 4: Fire generation, dramatically increasing the likelihood of propagation to other cells.

The prioritization of safety in the design, construction, and operation of energy storage systems is paramount to East Point Energy and its parent company Equinor. It is important to note that energy storage technology is constantly improving; therefore, this document is not a commitment to any specific technology, but rather an introduction to common safety designs and considerations. Ultimate design for the project will be completed by a third-party engineering firm following completion of all remaining development efforts. Furthermore, the project's final design will still require local municipal approval of ministerial permits (e.g. building permit, electrical permit, SWPPP, etc.).

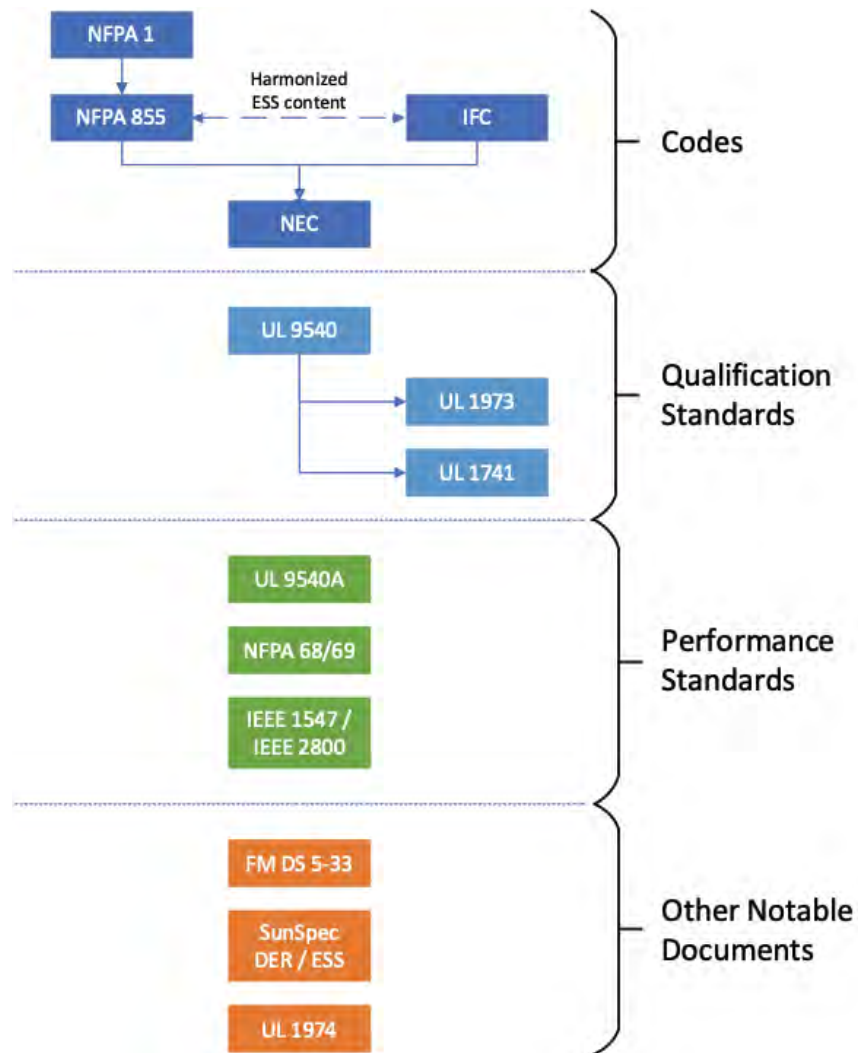


## Prevention Measures

The first tenant of BESS fire safety is to prevent a fire from occurring in the first place. Fortunately, there are a number of actions that, when done in tandem, provide a robust barrier to cascading thermal runaway.

*Reliance on a Proven Technology:* Lithium-ion batteries are safely used in thousands of applications, like cell phones, laptops, e-bikes, and electric vehicles. This project uses the same technologies, just on a larger scale. Furthermore, BESS distinguish themselves from those other technologies because they have constant air-temperature control, are stationary and therefore not subject to normal physical abuse, and uniformly adhere to industry codes (described below).

*Code / Safety Standard Adherence:* Adequate adherence to nationally and internationally recognized codes and standards is perhaps the strongest preventive tool at our disposal. We will work with the Carmel Planning Board to ensure that the appropriate codes are selected and adhered to. An outline of those standards can be found in the following table:



#### Key Terms:

1. NFPA = National Fire Protection Association
2. IFC = International Fire Code
3. NEC = National Electrical Code
4. UL = Underwriters Laboratories
5. IEEE = Institute of Electrical and Electronics Engineers
6. FM = Factory Mutual Insurance Company
7. SunSpec = SunSpec Alliance

Most notably, projects adhere to NFPA 855 and UL9540/UL9540A:

- UL: BESS are required to follow applicable UL safety standards, most notably UL9540 and 9540A. These standards cover safety testing of the battery and protective systems. Code requires full-scale fire and failure testing is conducted on representative cells, modules, and units to the UL 9540A test

method. This ensures that emissions and worst-case scenarios are well understood. Full-scale fire testing is a much higher standard than most fire codes require.

- NFPA: NFPA 855 lays out a range of performance-based requirements, centered around a hazard mitigation analysis (HMA) which ensures that fire risk, ventilation, deflagration protection (per NFPA 68 and 69), spacing, and site layout meet acceptable safety levels. For example, the code requires:
  - Non-remote projects to have a minimum 10 ft buffer from property lines, and remote projects to have a minimum 100 ft buffer. The Project's buffer will far exceed 100 ft to the nearest property line.
  - BESS to have 3 ft spacing between enclosures.
  - That operating battery enclosures cannot be entered by people, removing any need to open systems experiencing a failure.
  - Deflagration panels to be directed upwards, not outwards.

We will continue to work with the Town of Carmel to ensure appropriate code compliance as we initiate more detailed engineering work and select the equipment that will be used on site.

*BESS Maintenance & System Monitoring/Controls – 24/7/365:* Systems are monitored by the Battery Management System (BMS) which actively collects and interprets cell data such as temperature, state of charge, and state of health. Information like the temperature history of battery cells, state of cell ventilation, presence and concentration of gases, systems deployed as prevention measures, and present electrical voltages is obtained from the BMS and relayed to the 24/7 monitoring facility. Cell temperature is regulated through sensors paired with remote controls capable of turning off cells with irregular temperature profiles or activating a thermal management system (described below), if necessary. Data collected from the BMS informs regular and as-needed maintenance from technicians.

*Exhaust Ventilation (Explosion Prevention):* Under normal operating conditions, lithium-ion BESS do not release any flammable or toxic off-gasses or emissions. However, during thermal runaway, the system can pose risks due to gas buildup. Enclosures can incorporate exhaust ventilation systems to prevent dangerous accumulation of gases. Exhaust ventilation is triggered by gas detection and designed to keep flammable off-gassing to below the Lower Flammability Limit (LFL).

***See Arizona case study below to learn more about adopted ventilation systems.***

*Thermal Management Systems:* Thermal management systems are common thermal runaway preventative measures used in battery systems. Upon detection of elevated temperatures within a battery module and potentially as granular as a battery cell, a thermal management system will be activated to prevent the cell from reaching a temperature that could cause the battery cells to ignite and lead to a thermal runaway incident.



## Response and Mitigation

In the event a fire breaks out, these are measures taken to mitigate impacts and ensure the safety of local first responders. It is also important to recognize the track record of fire mitigation: **in cases where BESS fires have occurred, fires have not spread to surrounding properties and real-time air monitoring measurements have indicated no air quality concerns or toxic gases at surrounding properties.**<sup>123</sup>

*Spacing:* BESS enclosures will be spaced apart to allow adequate access to all sides. This spacing also serves to mitigate the spread of a fire from one enclosure to another. Enclosure spacing is validated by full-scale fire test results (UL 9540A) which can show that a failure in an individual enclosure will not cascade to other enclosures on the premises—even in high wind events. Each enclosure has thermal barriers to prevent the spread of heat or fire within the system. The footprint of the project will be gravel so that there are no flammable materials or vegetation nearby. The enclosures themselves are metal and non-flammable.

***See Arizona case study below to read more about thermal barrier advances.***

*System Monitoring – 24/7/365:* The early identification of the source of a problem is critical to the success of mitigation measures and alerting first responders if they are required on scene. Systems are monitored by the BMS, which actively collects and interprets cell data such as temperature, state of charge, and state of health. Information like the temperature history of battery cells, state of cell ventilation, presence and concentration of gases, systems deployed as prevention measures, and present electrical voltages is obtained from the BMS and relayed to the 24/7 monitoring facility. This information can be relayed on site as important information for first responders to know upon arriving at a scene.

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<sup>1</sup> <https://victorianbigbattery.com.au/wp-content/uploads/2022/12/VBB-Fire-Independent-Report-of-Technical-Findings.pdf>

<https://hudsonvalley.news12.com/lithium-ion-batteries-removed-from-warwick-storage-site-following-2-fires>

[https://www.montereycountyweekly.com/blogs/news\\_blog/air-quality-testing-showed-no-hazards-to-human-health-amid-battery-fire-in-moss-landing/article\\_5a0ee07a-4125-11ed-a797-c31048cab7a5.html#:~:text=County%20of%20Monterey-Air%20quality%20testing%20showed%20no%20hazards%20to%20human,battery%20fire%20in%20Moss%20Landing](https://www.montereycountyweekly.com/blogs/news_blog/air-quality-testing-showed-no-hazards-to-human-health-amid-battery-fire-in-moss-landing/article_5a0ee07a-4125-11ed-a797-c31048cab7a5.html#:~:text=County%20of%20Monterey-Air%20quality%20testing%20showed%20no%20hazards%20to%20human,battery%20fire%20in%20Moss%20Landing)

***See California case study below on the value of system monitoring in response planning and action.***

*Fire Suppression:* For many BESS systems, the leading guidance to fire response is to cool enclosures near the fire with water, but to monitor at a safe distance and allow the fire source to burn out. Discussions with the Fire Department prior to construction will provide an avenue for first responders to provide feedback and input on the fire suppression system. The project will not be approved until the Fire Department has signed off on it.

*Exhaust Ventilation (Explosion Prevention):* Exhaust ventilation continues to be important after the initiation of thermal runaway to ensure gases do not accumulate, mitigating the risk of an explosion. An exhaust ventilation system will activate upon detection of flammable gas to reduce the concentration within a system to below flammability limits, thus mitigating a potential explosion. Explosion protection systems are designed to the NFPA 69 standard and deflagration vents are designed to the NFPA 68 standard. Enclosures cannot be entered (i.e. they are not occupiable). Therefore, there's never a reason for a first responder to open the doors to the enclosures during an emergency.

***See California case study below on the value ventilation after cell ignition and the lack of impact to surrounding air quality.***

*Air Pollution:* Gases from all types of fires must be treated carefully. In a study conducted on behalf NYSERDA and ConEd, researchers found that other than initial ignition of the batteries, the off-gasses from the lithium-ion batteries were materially less harmful than a plastics fire and considered to be on par with a burning sofa on a per kilogram basis.<sup>4</sup> In addition, as described previously, in cases where BESS fires have occurred, real-time air monitoring measurements have indicated no air quality concerns or toxic gases at surrounding properties. Firefighters are trained to use PPE when responding to an incident to avoid inhaling gases. Gases dissipate very quickly once released.

*First Responder Planning and Coordination:* Despite the prevention systems built into every utility-scale energy storage system, there is no way to completely mitigate the risk of thermal runaway. In the extremely unlikely event that an incident occurs it is paramount that plans<sup>5</sup> have been developed for first responders to follow and that they are properly equipped and trained for any such response. Training and

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<sup>4</sup> <https://www.nysesda.ny.gov/-/media/Project/Nyserda/files/Publications/Research/Energy-Storage/20170118-ConEd-NYSERDA-Battery-Testing-Report.pdf>

<sup>5</sup> [https://cleanpower.org/wp-content/uploads/2022/11/ACP\\_Energy\\_Storage\\_Emergency\\_Response\\_Plan\\_Template.pdf](https://cleanpower.org/wp-content/uploads/2022/11/ACP_Energy_Storage_Emergency_Response_Plan_Template.pdf)

equipment can be provided at no cost to the municipality. Generally speaking, fire departments already have all or most of the equipment required to respond. A training plan will be determined and executed prior to the project coming online. In the event of a fire, a subject matter expert will be available to consult with the incident commander to provide further guidance, including information relayed from the BMS and system state of health.

In addition to training, Fire Marshal input is solicited early in the development so that safety features, such as turnarounds and access keys are incorporated. If additional needs are identified within the locality to ensure an appropriate response to a thermal runaway event, East Point is more than willing to discuss those needs in greater detail.

## **Conclusion**

Battery projects, while very safe, do pose an extremely low probability for thermal runaway events. Fortunately, there are many steps that can be taken, as outlined in this document, that can prevent, mitigate, and/or minimize any thermal incidents that occur in the future. East Point Energy has already begun a series of positive conversations with the Mahopac Volunteer Fire Department to ensure we meet their needs. It is also worth noting that this application is only part of the safety discussions with the Town, as more definitive conversations on fire and emergency response will be had during the building permit process.

At East Point Energy, energy storage is what we do. Safety is paramount to our success as a company and is an operational pillar for our parent company, Equinor. The project is in some of the most capable hands in the industry.



## Case Studies

### Past Incidents and Industry Developments

**Arizona, 2019** – In April 2019, an Arizona battery system operated by the Arizona Public Service experienced a failure. It was an incident of cascading thermal runaway that led to an explosion and the injury of four firefighters. Initiated by a defected battery cell, the design of this system created an environment for cascading thermal runaway from cell-to-cell and the accumulation of flammable gases within the container. The fire suppression system was not adequately designed and was unsuccessful in preventing a fire from breaking out. Battery cells were unprotected from one another allowing a defect in one to transfer to the others. Additionally, a lack of ventilation of the enclosure created an explosive environment by letting flammable gases accumulate to high concentrations. Designed to allow for one person to be inside of the container, firefighters were forced to open it which introduced oxygen and an ignition source to the highly concentrated gases, leading to an explosion that injured four firefighters.

Significant advances have been made to ensure another event like this will not occur, many of which are highlighted in this document. At the product design level, cell designs have been improved to prevent the defect that led to the failure in the first cell; thermal barriers are now typically installed between units to mitigate the spread of a thermal incident; ventilation systems are installed to prevent the accumulation of flammable gases; and containers are now designed to ensure no individual can enter the enclosure allowing firefighters to let the incident run its course under proper containment measures. This incident and others also utilized Nickel-Magnesium-Cobalt (NMC) chemistries, which have a lower thermal runaway tolerance and greater fire risk, but also increasingly not used in grid-scale BESS applications. At the regulation level, this BESS was designed, installed, commissioned, and operated prior to key product and fire safety standards were published, most notably, UL9540, UL9540A, and NFPA 855. Meaning, it was not a UL9540 listed BESS, nor was it tested at the cell, module, and unit level per UL9540A, and it was not installed in accordance with the fire and life safety requirements of NFPA 855.

**California, 2021 & 2022** – A portion of an indoor BESS rack container at the Moss Landing facility in California was damaged due to the premature activation of a heat suppression system. An off-gas detection device activated the suppression system after detecting trace amounts of gas in the building. Upon arriving at the scene, first responders were able to determine that the gas which activated the system did not come from a battery cell as system monitoring showed no abnormal changes to cell temperatures across the system. Therefore, thermal runaway was not the immediate concern and mitigation plans could be appropriately adjusted.

A second incident occurred at the California Moss Landing facility in September 2022 where a single, outdoor container caught fire. As a precautionary measure, a nearby highway was closed and residents were advised to remain indoors and to turn off

home ventilation systems; both measures were lifted the next day. Air quality monitoring conducted around the site during and after the incident did not record dangerous concentrations of air contaminants. The gases emitted during a failure incident are also found in plastic fires in greater 'time-average' quantities. Gaseous exposure risk of an equal level likely already exists in the current environment around a development. A full analysis of this incident is in progress by the project owner.

**East Hampton, Warwick, and Chaumont, New York, 2023** – A portion of two projects had minor fires in May/July 2023. Notably, no injuries or detectable air pollution were reported and the system failed safely in the way that it was designed to fail. A report on the cause of these events has not yet been released.

**PHASE 1B ARCHAEOLOGICAL FIELD RECONNAISSANCE SURVEY**  
**UNION ENERGY PROJECT**

MILLER ROAD  
TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

PREPARED FOR:

UNION ENERGY CENTER  
310 4<sup>TH</sup> STREET NE, 3RD FLOOR  
CHARLOTTESVILLE, VA 22902



PO Box 124  
LAGRANGEVILLE NEW YORK 12540

AUGUST 2023



## MANAGEMENT SUMMARY

SHPO Project Review Number (if available): **21PR00939**

Involved State and Federal Agencies:

Phase of Survey: **Phase 1B Archaeological Field Reconnaissance Survey**

Location Information:

Location: **24 Miller Road**

Minor Civil Division: **Town of Carmel**

County: **Putnam County**

USGS Quadrangle: **2019 Croton Falls, NY Quadrangle**

Survey Area (English & Metric)

Length: **1,554'/473.7 m**

Width: **769'/234.3 m**

Number of Acres (Project Parcel): **±95.34 acres (38.58 h)**

Number of Acres Impacted (Project APE): **±34.6 acres (14 h)**

Archaeological Survey Overview

Number & Interval of Shovel Tests: **277 @50' (15.24 m) & 100' (30.4 m) intervals**

Number & Size of Units: N/A

Width of Plowed Strips: N/A

Surface Survey Transect Interval: N/A

Results of Archaeological Survey

Number & name of precontact sites identified: 0

Number & name of historic sites identified: 0

Number & name of sites recommended for Phase II/Avoidance: 0

Report Author (s): **Sarah K. Gilleland, MA, RPA, Beth Selig, MA, RPA.**

Date of Report: **August 2, 2023**

**HCS Project: 23-04-683**

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# I. PHASE 1B ARCHAEOLOGICAL FIELD RECONNAISSANCE SURVEY

## A. UNION ENERGY PROJECT DESCRIPTION

In May of 2023 Hudson Cultural Services (HCS) was retained by Union Energy Center to complete a Phase 1B Archeological Field Reconnaissance Survey of the Union Energy Project, located on the eastern side of Miller Road in the Town of Mahopac, Putnam County, New York.

The purpose of the Phase 1 Cultural Resources Survey is to determine whether previously identified cultural resources (historic and archeological sites) are located within the boundaries of the proposed project, and to evaluate the potential for previously unidentified cultural resources to be located within the boundaries of the Project Area of Potential Effect (APE). All work was completed in accordance with the *Standards for Cultural Resource Investigations and the Curation of Archeological Collections published by the New York Archeological Council* (NYAC) and recommended for use by New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The report has been prepared according to New York State OPRHP's *Phase 1 Archeological Report Format Requirements*, established in 2005.

The Union Energy Project (hereafter “the Project”) consists of ±95.34 acres (38.58 h) located on the eastern side of Miller Road. The Parcel is primarily wooded, with open meadows in the southern portion. Wetlands are present throughout the eastern portion of the Project Parcel, with smaller wetlands in the central and western portions. These wetlands drain into Plum Brook, located to the west and southwest of the Parcel, which feeds the Muscoot Reservoir. The elevation within the parcel descends from a central ridge to the wetland areas within the parcel.

The proposed project includes the construction of a battery storage facility to be integrated into the existing electrical grid. The proposed project will impact ±8.59 acres (3.48 h) of the larger parcel (Project APE).

A project site visit was conducted by Sarah K. Gilleland and Franco Zani Jr. on April 19, 2022 to observe and photograph existing conditions within the Project Parcel. The information gathered during the walkover reconnaissance is included in the relevant sections of the report.

## B. SUMMARY OF THE PHASE 1A RESEARCH

The Phase 1A Archeological Sensitivity Assessment was completed in July of 2021 by Hartgen Archeological Associates. The Phase 1A identified areas of low sensitivity, primarily wetland areas within the central portion of the Project. The Phase 1A identified the potential for Map Documented Structure (MDS) dating to the late nineteenth through the mid-twentieth century. Structure 2 (1892-1928) is the only MDS located within the boundaries of the Project APE. This structure which appears rectangle in shape, is likely a barn. HCS completed a review of the USGS topographical maps, which indicate this structure in 1892 through 1930.

The Phase 1A report identified a large portion of Area 4 as having been previously disturbed. The report does not provide any additional details about this disturbance. Additional research was completed by HCS and is included in this report regarding areas of prior disturbance.

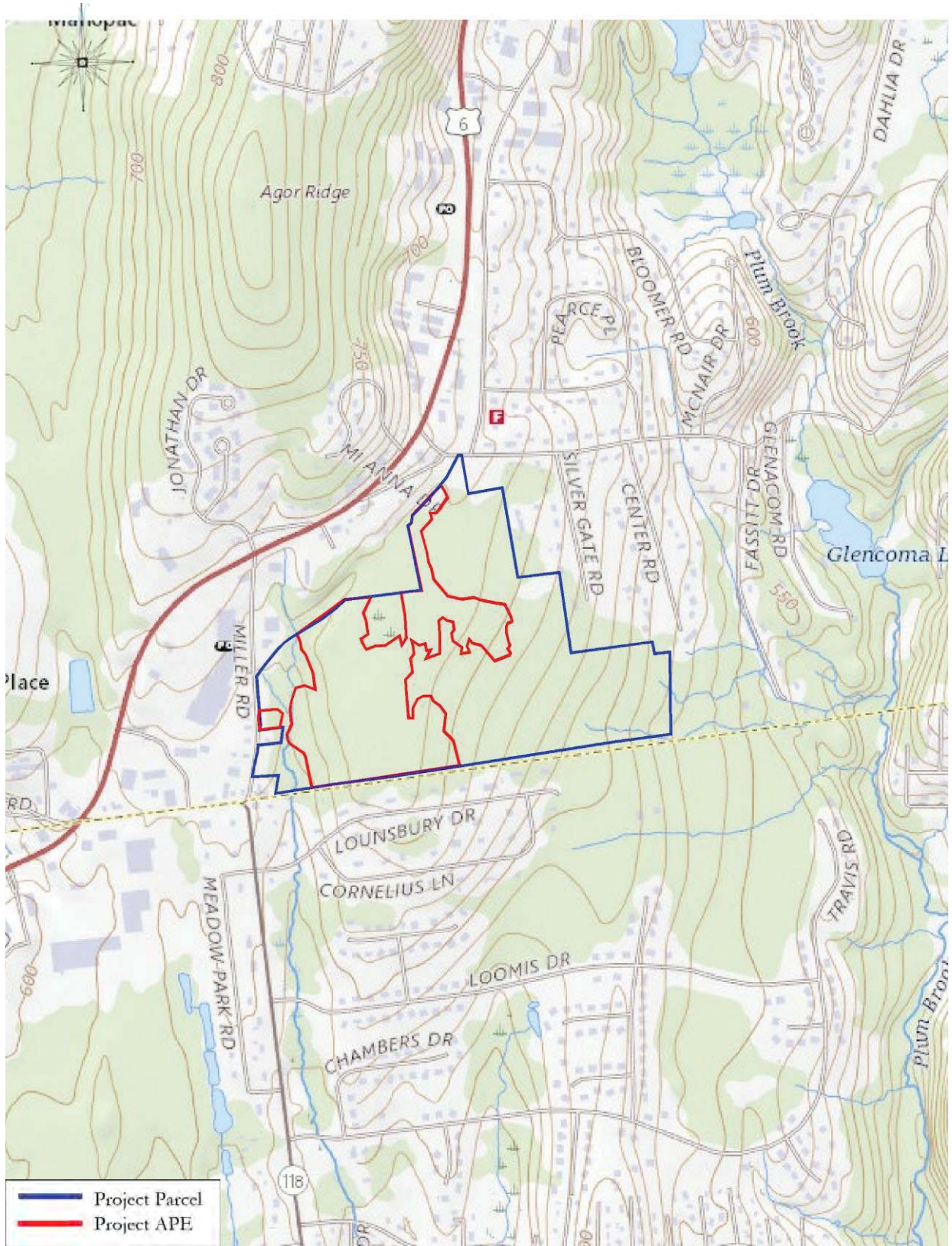


Figure 1: 2019 USGS Topographical Map. Croton Falls and Mohegan Lake NY Quadrangles. 7.5 Minute Series. (Source: USGS.gov.) Scale: 1"=1150'.





Figure 2: 2020 Aerial Image showing the Project APE. (Source: New York GIS Clearinghouse.) Scale: 1" = 575'.





Photo 1: The Project Parcel is mostly wooded. View to the southwest from the northern portion of the APE.



Photo 2: The Project APE is situated on a low rise overlooking several low-lying wetland areas. View to the south.





Photo 3: The landscape descends towards wetlands in the center of the parcel. View to the east.



Photo 4: The southern and western portions of the Project APE was heavily overgrown. View to the southwest.



## C. ARCHAEOLOGICAL TESTING METHODOLOGY

The results of the Phase 1A confirmed that the Project Parcel is located in an area of precontact and historic period activity. In addition, the landscape closely conforms to an ecological model that indicates that the level, undisturbed portions of the Project Parcel are sensitive for cultural materials. In April of 2023 HCS conducted a walkover of the Union Energy Project Area of Potential Effect (APE) to assess the existing conditions of the Project Parcel. The central portions of the Project APE were densely overgrown with impenetrable shrubs, vines and brambles. The field work, which began on April 19, 2023 was suspended until the densely overgrown areas could be sufficiently cleared to allow testing. Phase 1B field investigations took place on April 19, June 26 through July 6, 2023, under the supervision of Beth Selig, MA, RPA.

Areas selected for subsurface testing were identified during an intensive walkover inspection which evaluated the landscape to determine areas of prior disturbance, slopes in excess of 12% grade, saturated or wet soils and document evidence of former land usage. Shovel tests were excavated at intervals of 50' (15m) along transects conforming to the land surface and the boundaries of the Project Parcel. The locations of the tests and disturbed areas were recorded on a large-scale map that shows surveyed borders and the locations of the various structures or features identified (Field Reconnaissance Map).

Shovel tests (STs) approximately 45 cm in diameter, were spaced 50 feet apart and excavated at least 10 cm into sterile subsoil, unless impeded by rocks or other obstructions. This subsurface testing strategy was applied in areas of undisturbed soils and that were well drained and did not contain surface water. All soils excavated from shovel tests were screened through 0.25-inch hardware cloth. Shovel test profiles were recorded on standard field forms which included stratigraphic depths, Munsell soil color, texture and inclusions, disturbances and artifacts (Appendix A). The presence of clearly modern materials, such as plastic fragments, modern bottle glass fragments, or twentieth-century architectural materials were noted on field forms, but HCS does not generally collect these materials for analysis or inclusion in the artifact assemblage. If any precontact period or potentially significant historic-period artifacts had been recovered from shovel tests, then these finds would have been bagged, labeled with standard project provenience information. Following completion of the archaeological fieldwork, all recovered materials would be washed, identified, inventoried and re-bagged in labeled clean 4-mil archival quality plastic bags. All artifacts recovered would then be identified and described based on material type and standard descriptive characteristics and included in an artifact inventory.

## D. ARCHAEOLOGICAL SURVEY RESULTS

Testing began in the northern portion of the Project APE. Transect 1 and TR 10 were placed along a proposed access, between a wetland and the property boundary. The soils were highly variable where the transect abuts the northwestern portion of the Project Parcel. The Parcel boundary is defined in this location by a former railroad grading, that has been converted to a walking trail.

Testing then progressed to the south and east, testing a level area that is surrounded by wetlands (TR 2-9, TR 11-21). The soils varied consisting of brown gravelly loam overlying yellowish brown gravelly loam and dark grayish brown loam or very dark grayish brown silty loam overlying olive brown gravelly loam. Near the boundaries of the wetlands the soils were wet and consisted of very dark grayish brown silty loam and mottled light olive brown and strong brown sandy clay loam with gravel. No cultural material was identified in the northern portion of the Project APE.



Testing moved west and southwest across the Project APE. The western portion contains a level knoll surrounded by slopes and wetland areas. The knoll was densely overgrown and required clearing prior to the completion of testing. Due to the rock, slopes and downed trees, the landscaping team was restricted from clearing straight transect lines in the western portion of the APE. As a result the transects varied in length and location. The shovel testing in this area was completed based on cleared areas, and avoided areas of disturbance, as they were encountered.

The Phase 1A completed by HAA defines this western portion of the APE as previously disturbed with low archaeological sensitivity. The Phase 1A report does not document this disturbance either with images or other documentation. HCS reviewed the aerial images available for the property, and identified small pockets of disturbance that appear to be associated with dirt bike tracks and race courses and soil removal (See figures 3-5). The testing in the western portion of the APE was completed to confirm / rule out disturbance, and determine if archaeological resources were present.

The testing began along the edge of the slope that descends to a wetland area to the west. A series of short transects aligned west to east were placed in this location. Transects were also aligned south to north across the knoll. In the southern central portion of the APE, the landscape includes a level area adjacent to the wetland. These transects were aligned northeast to southwest, to the east of an area of saturated soils. To the west of TR 27, the landscape contained surface water and saturated soils. Transects 45 and 50 began to the northwest of this wet area.

Throughout the western portion of the APE, the soils varied considerably. Near the central wetland the soils consisted of a very dark grayish brown loam overlying a dark yellowish brown loam and a very dark brown silty clay loam overlying a dark yellowish brown silty clay loam. Further to the west on the knoll, and adjacent to the slope the soils consisted of Dark yellowish brown sandy loam over a yellowish brown gravelly silty clay loam and a very dark grayish brown silty loam, brown silty clay loam over a yellowish brown silty clay loam. Along the edge of the slope the soils consisted of brown sandy loam and yellowish brown loam.

Adjacent to the western boundary of the APE the landscape is level, and adjacent to a wetland. The landscape in this area has been stripped, and the portion of the APE that is west of the small stream that flows through the wetland contained large soil and rock piles. The vegetation on either side of this wetland consists of tall phragmites. The shovel tests completed in this area consisted of soils mottled light brownish gray and yellowish brown sandy clay loam and light brownish gray dark yellowish brown sandy clay.

In the northern portion of the APE, two transects (52-53) were aligned on the top of the knoll. The landscape descends to the west, with an area of disturbance to the east.

Of the seventy-one (71) shovel tests planned in the Project APE, sixteen (16) could not be excavated due to piles trash, standing water, surface bedrock, or other obstructions. A total of fifty-five (55) shovel tests were completed within the Project APE.



Figure 3: 1994 Aerial Image showing the Project APE. (Source: Google Earth) Scale: 1" = 730'.

The 1994 aerial image shows areas of soil disturbance in the central and western portions of the APE. In the central portion the disturbance appears as a small dirt bike (or similar) track. To the west, the landscape has been graded.





Figure 4: 2005 Aerial Image showing the Project APE. (Source: New York GIS Clearinghouse.) Scale: 1" =550'.

The 2005 Aerial image shows an additional area of disturbance to the north of the small dirt track. The dirt track is still visible, although the overall shape of the track has changed. To the west, along Miller Road, the landscape is visibly disturbed. The field investigations noted extensive piles of soils and debris in this location.





Figure 5: 2007 Aerial Image showing the Project APE. (Source: Google Earth.) Scale: 1" =575'.

The 2007 aerial shows that the disturbed areas are beginning to revegetate and overgrow. The dirt tracks and disturbed areas are still visible on the landscape.

## E. SUMMARY AND CONCLUSIONS

In August of 2023, Hudson Cultural Services completed a Phase 1B Archaeological Field Reconnaissance Survey of the Union Energy Project in the Town of Carmel, Putnam County New York.

The proposed project includes the construction of a battery storage facility and associated infrastructure that will tie into the existing high-tension electrical corridor within the Project Parcel. The Project APE includes ±34.66 acres (14.03 h) that will be disturbed by construction activities.

The western portion of the Project APE is densely overgrown, and field work was suspended so clearing that could take place. The field team noted areas of prior disturbance in the western portion of the Project APE. These areas consisted of soil disturbance and displacement.

A total of three hundred and twenty – one (321) shovel tests were planned within the boundaries of the Project APE. Due to areas of grading and soil displacement, saturated soils and standing water, and surface bedrock, forty-four (44) tests were not completed.

## F. RECOMMENDATIONS

A thorough review of the existing body of archaeological data relevant to the Project Parcel was undertaken, and the probability of encountering prehistoric and/or historic cultural remains on the site was assessed.

A total of two hundred and seventy-seven (277) shovel tests were excavated within areas of the Union Energy Project APE considered to have the potential to yield evidence of precontact or historic activity on the site. No archaeological (historic or precontact) deposits were identified within the Project APE.

It is the recommendation of HCS that no additional cultural resources investigations are warranted for the proposed Project Parcel.





Photo 5: The landscape is very stony, with rock walls separating large areas of the Project APE. View to the north from the end of TR 1.



Photo 6: View southwest along the baseline from TR 6.





Photo 7: The southeastern portion of the Project APE contains extensive surface rock and steep slopes. View to the northwest.



Photo 8: The western portion of the Project APE is densely overgrown. View to the north.





Photo 9: Large pieces of bedrock form wall foundations in much of the Project APE. View to the northeast.

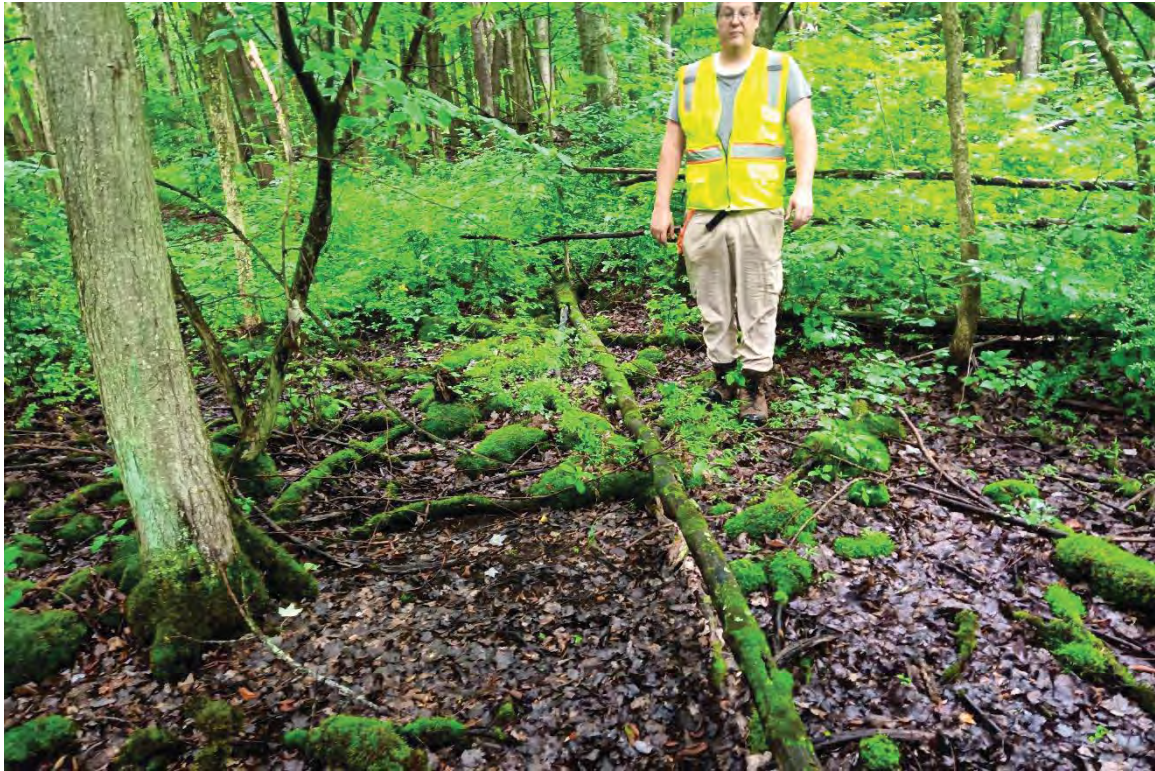


Photo 10: The low lying areas adjacent to the flagged wetlands were saturated at the time of the field investigations. View to the southeast.





Photo 11: Large piles of rock and soil are located in the western portion of the APE. View to the northeast.



Photo 12: The level areas in the western portion of the APE have been leveled and graded. View to the south.



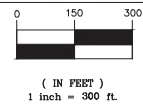
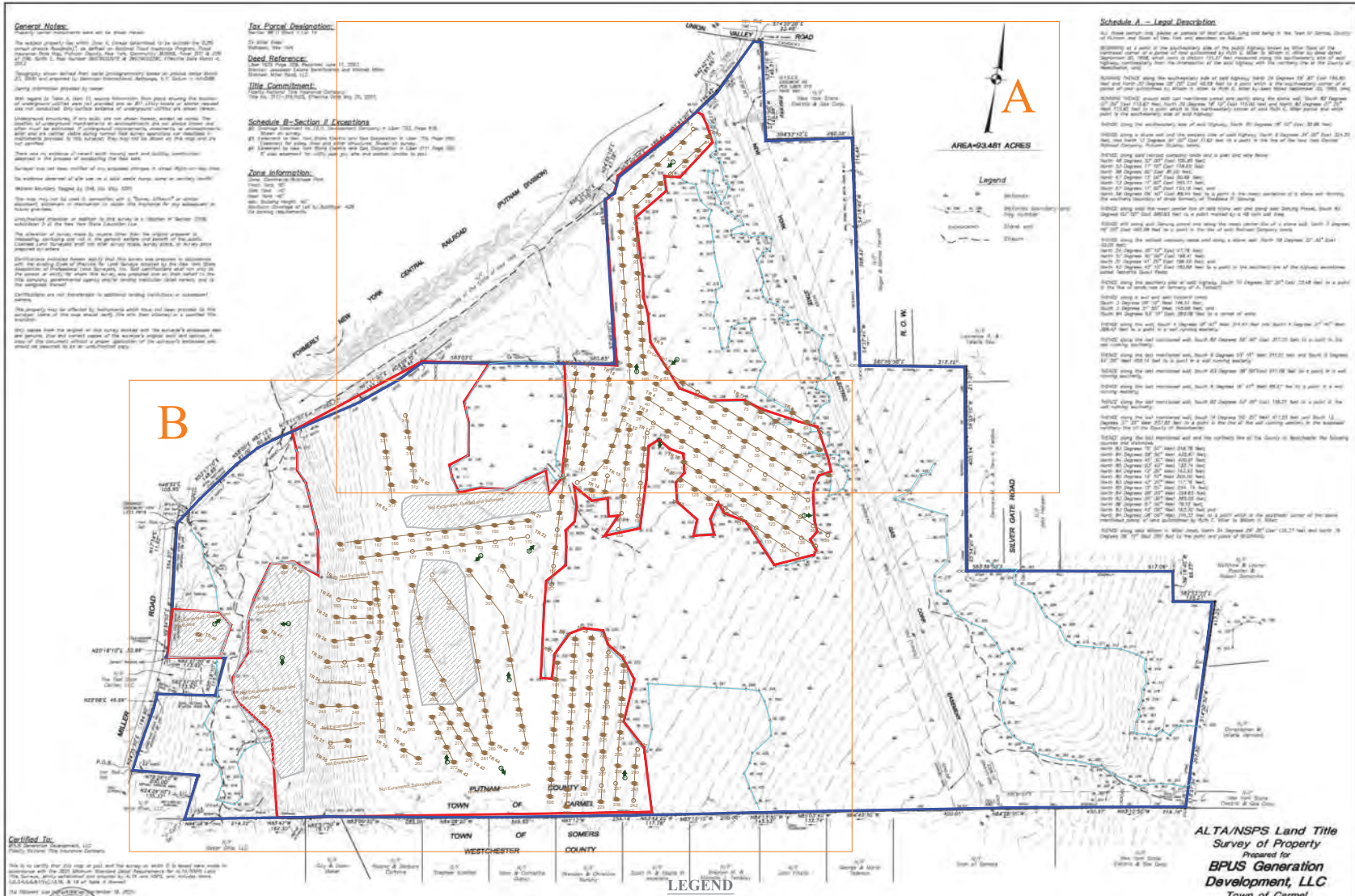


Photo 13: The vegetation near the wetland in the western portion of the APE is overgrown with dense vegetation including phragmites. View to the west.



Photo 14: Portions of the Project APE were cleared to facilitate testing. View to the north.





- Sterile Shovel Test Location
- Planned Shovel Test, Not Excavated
- Photographic View
- Parcel Boundaries
- Project APE
- Disturbed Areas

**Designation:**  
 T 1 Lot 14

**Reference:**  
 29, Recorded June 17, 2003  
 (Estate Beneficiaries and Mitchell Miller  
 & LLC

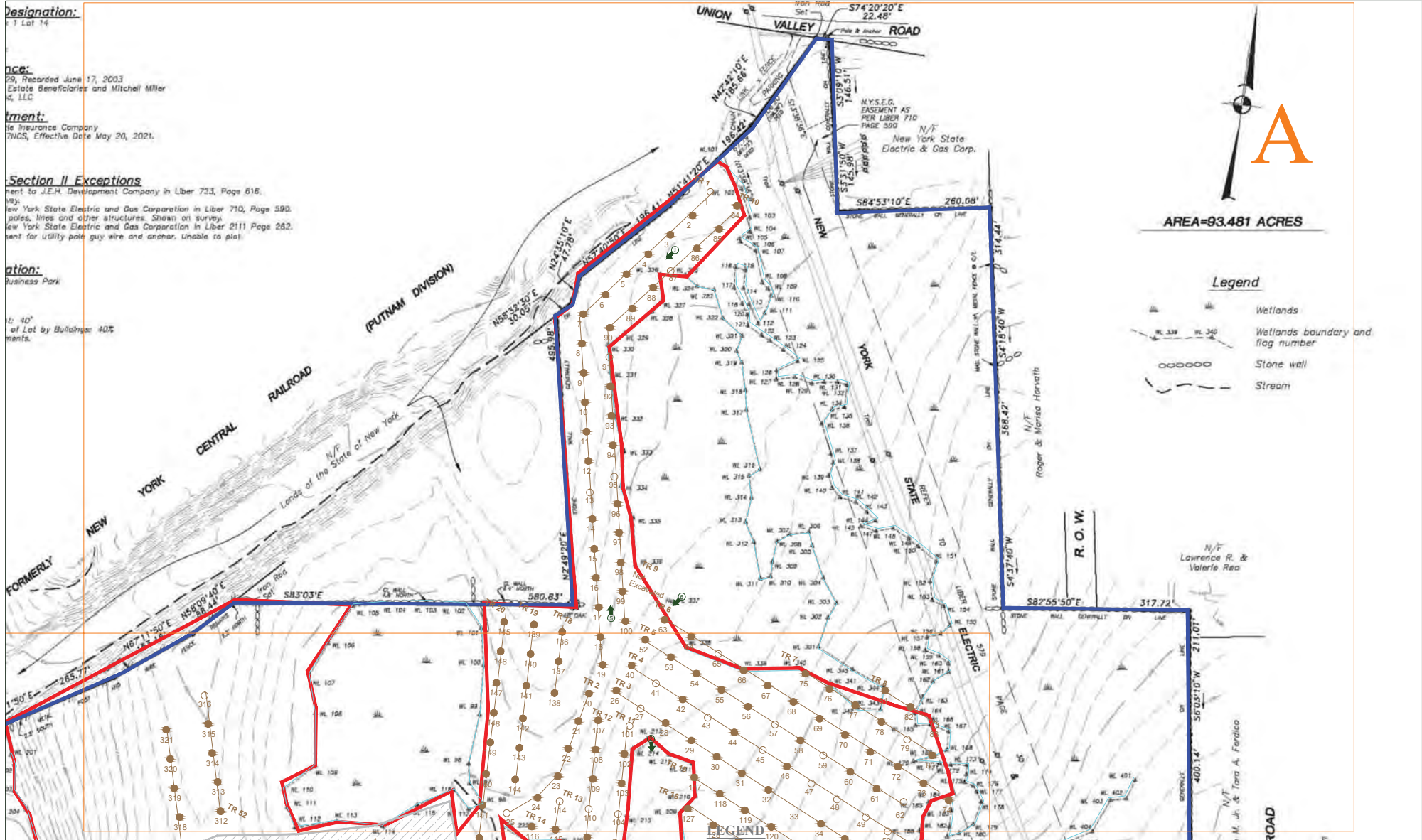
**Instrument:**  
 The Insurance Company  
 7/1/2021, Effective Date May 20, 2021.

**Section II Exceptions**

Grant to J.E.H. Development Company in Liber 723, Page 616.  
 New York State Electric and Gas Corporation in Liber 710, Page 590.  
 New York State Electric and Gas Corporation in Liber 2111 Page 262.  
 Grant for utility pole guy wire and anchor, unable to plot.

**Location:**  
 Business Park

Lot: 40'  
 of Lot by Building: 40%  
 setbacks.

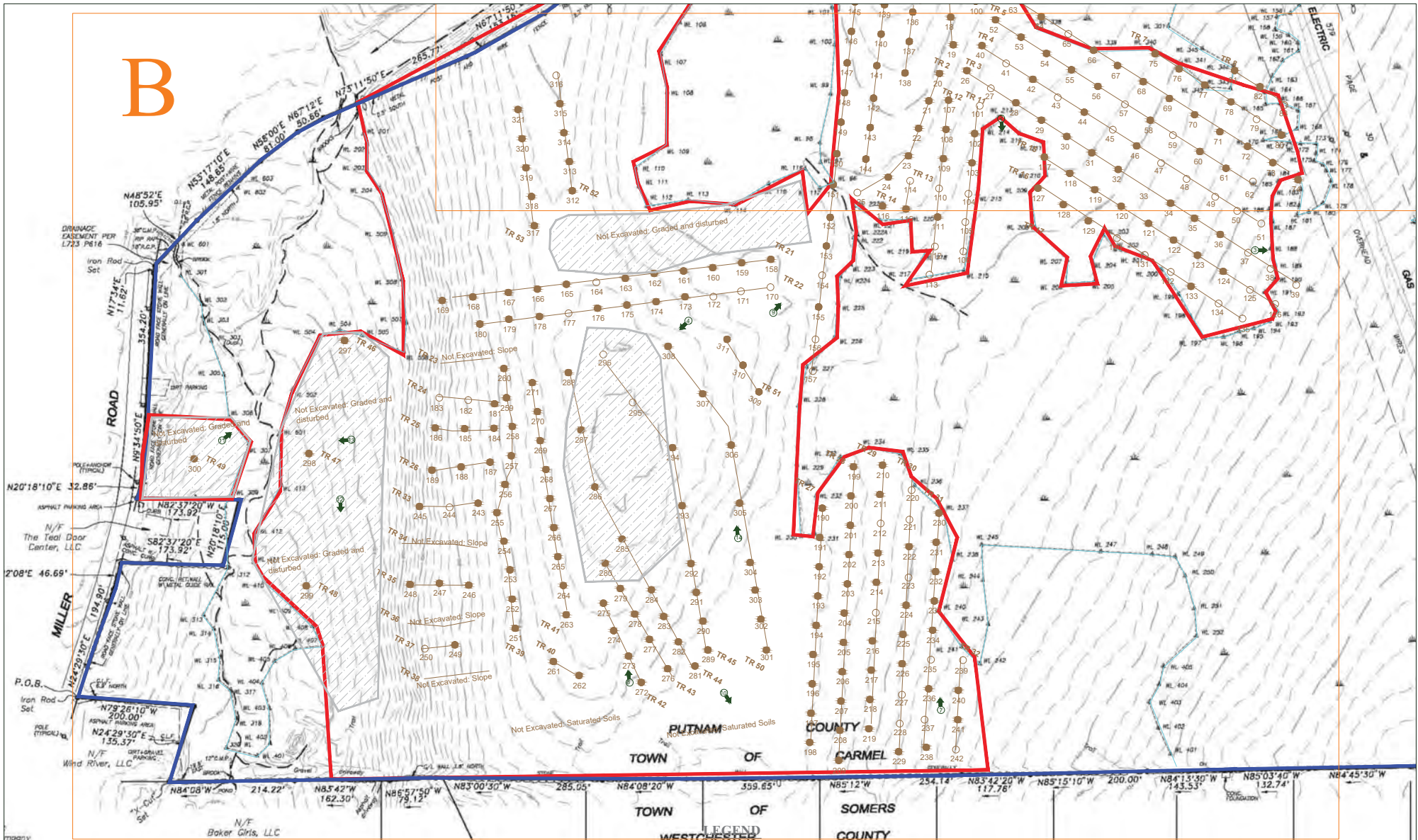


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 Hudson Cultural Services

Figure 6A: Union Energy Project  
 Phase 1B Field Reconnaissance Map  
 Scale 1" = 150'

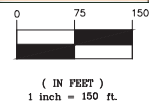
- ST Sterile Shovel Test Location
- ST Planned Shovel Test, Not Excavated
- ➔ (in circle) Photographic View
- (blue) Parcel Boundaries
- (red) Project APE
- ▨ Disturbed Areas





**H·C·S**  
Hudson Cultural Services

Figure 6B: Union Energy Project  
Phase 1B Field Reconnaissance Map  
Scale 1" = 150'



- |    |                                    |  |                   |
|----|------------------------------------|--|-------------------|
| ST | Sterile Shovel Test Location       |  | Parcel Boundaries |
| ST | Planned Shovel Test, Not Excavated |  | Project APE       |
|    | Photographic View                  |  | Disturbed Areas   |

