



**Adirondack
Park Agency**

ELP Ticonderoga Solar, LLC

P2020-0157

**Kathleen Doering
Eric Rafferty
National Grid
ELP Ticonderoga Solar, LLC**

October 14, 2021

Presentation Overview

- Jurisdiction
- Conclusions of Law
- Project Location
- Existing Conditions
- Proposed Project
- Visual Analysis
- Public Comment & Review by Others
- Staff Recommendation
- Q & A

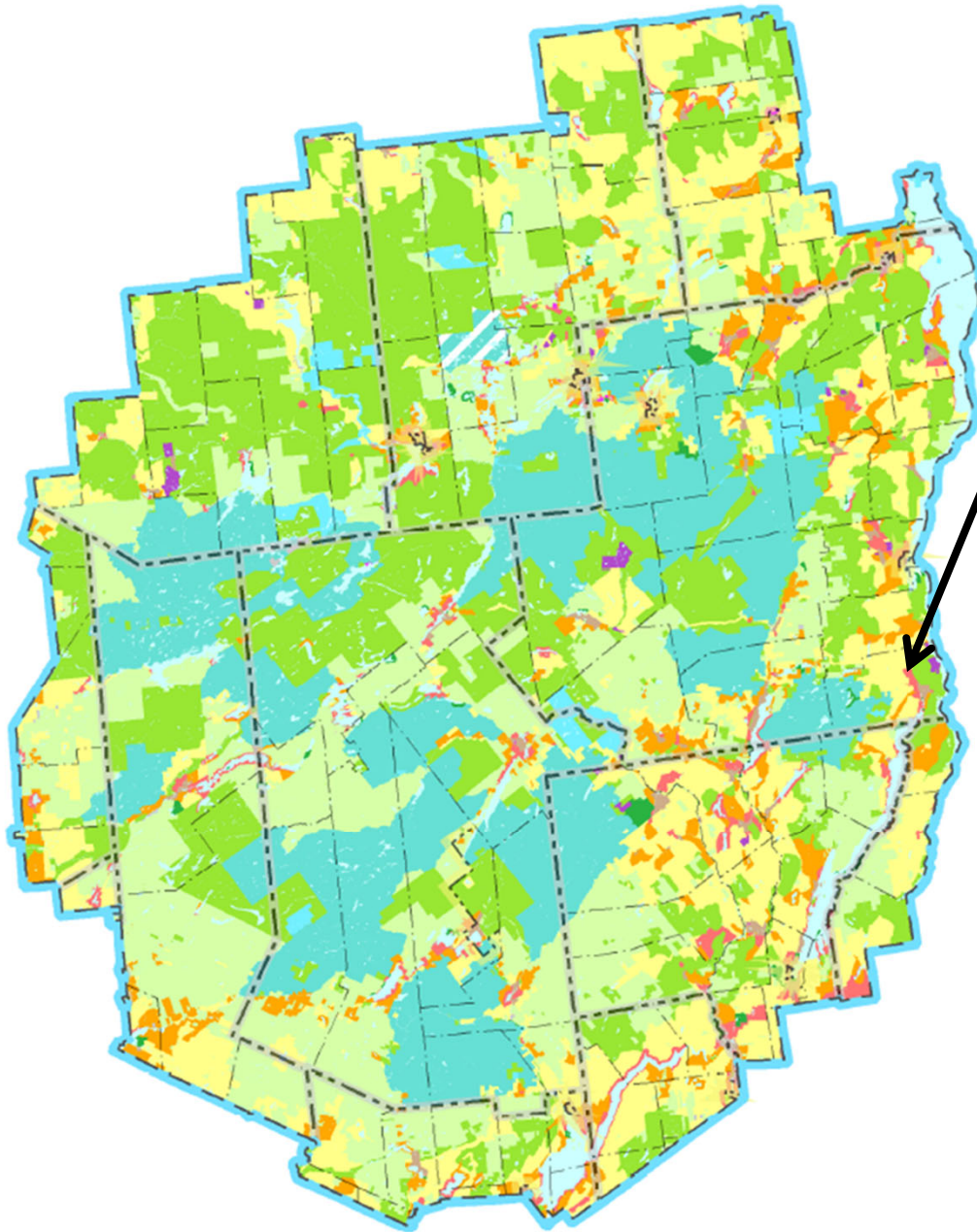
Jurisdiction

- APA Act § 809
 - Class A Regional Project
 - Moderate Intensity Use land use area
 - Major public utility use
 - Land use and development involving wetlands
 - Subdivision involving wetlands
- Regulated Wetland Activity – 9 NYCRR Part 578
 - Subdivision involving wetlands
 - Development in wetlands
 - Fill in wetlands

Conclusions of Law

- Development authorized:
 - Consistent with land use and development plan
 - Compatible with character description and purposes policies, and objectives of each land use area
 - Consistent with overall intensity guidelines
 - Complies with shoreline restrictions
 - No undue adverse impact on resources of the Park
 - Secures natural benefits of wetlands
 - Results in minimal degradation / destruction of the wetland or its associated values

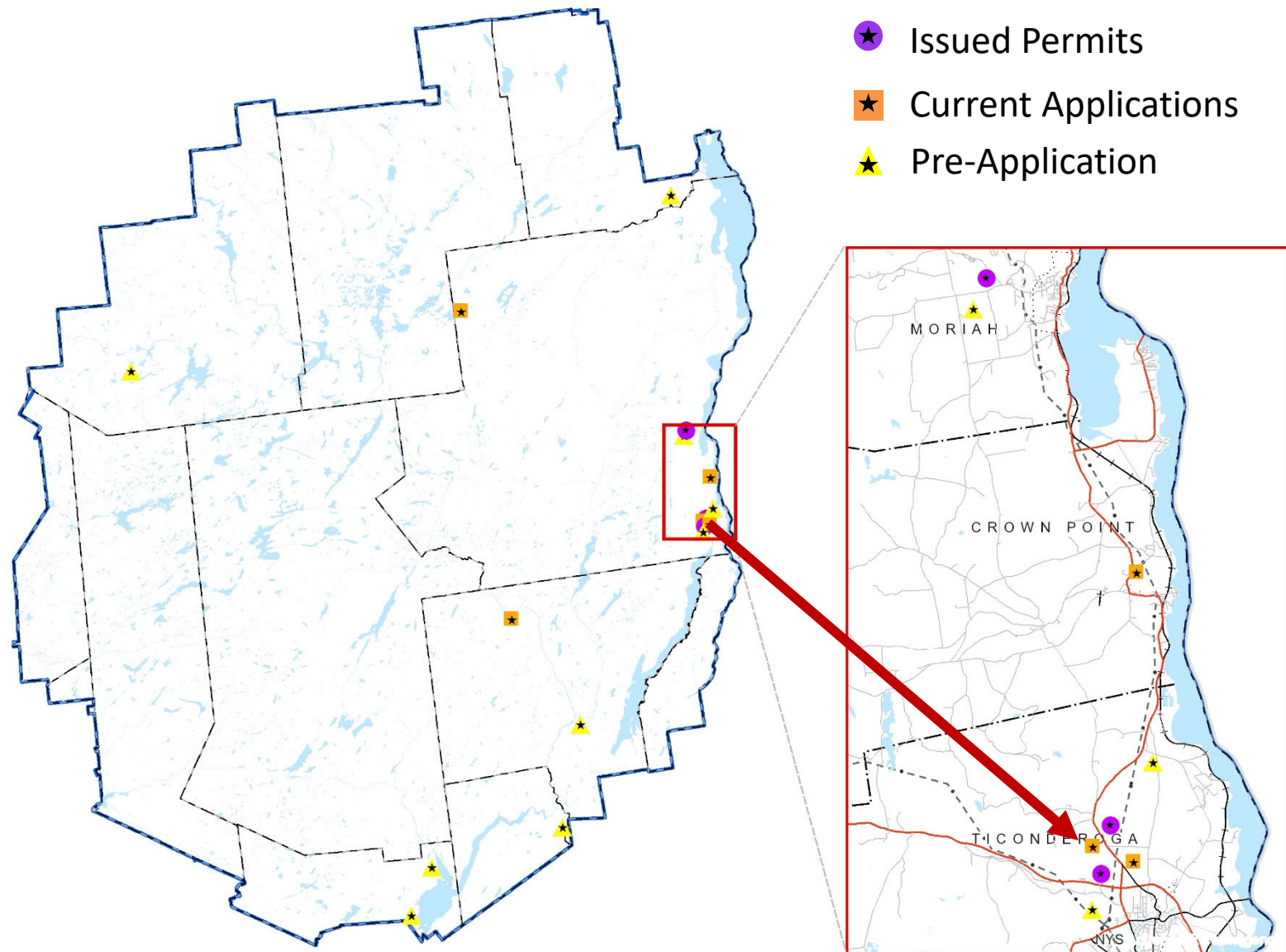
Project Location



Project Location

Town of Ticonderoga
Essex County

Applications for Solar Generating Facilities

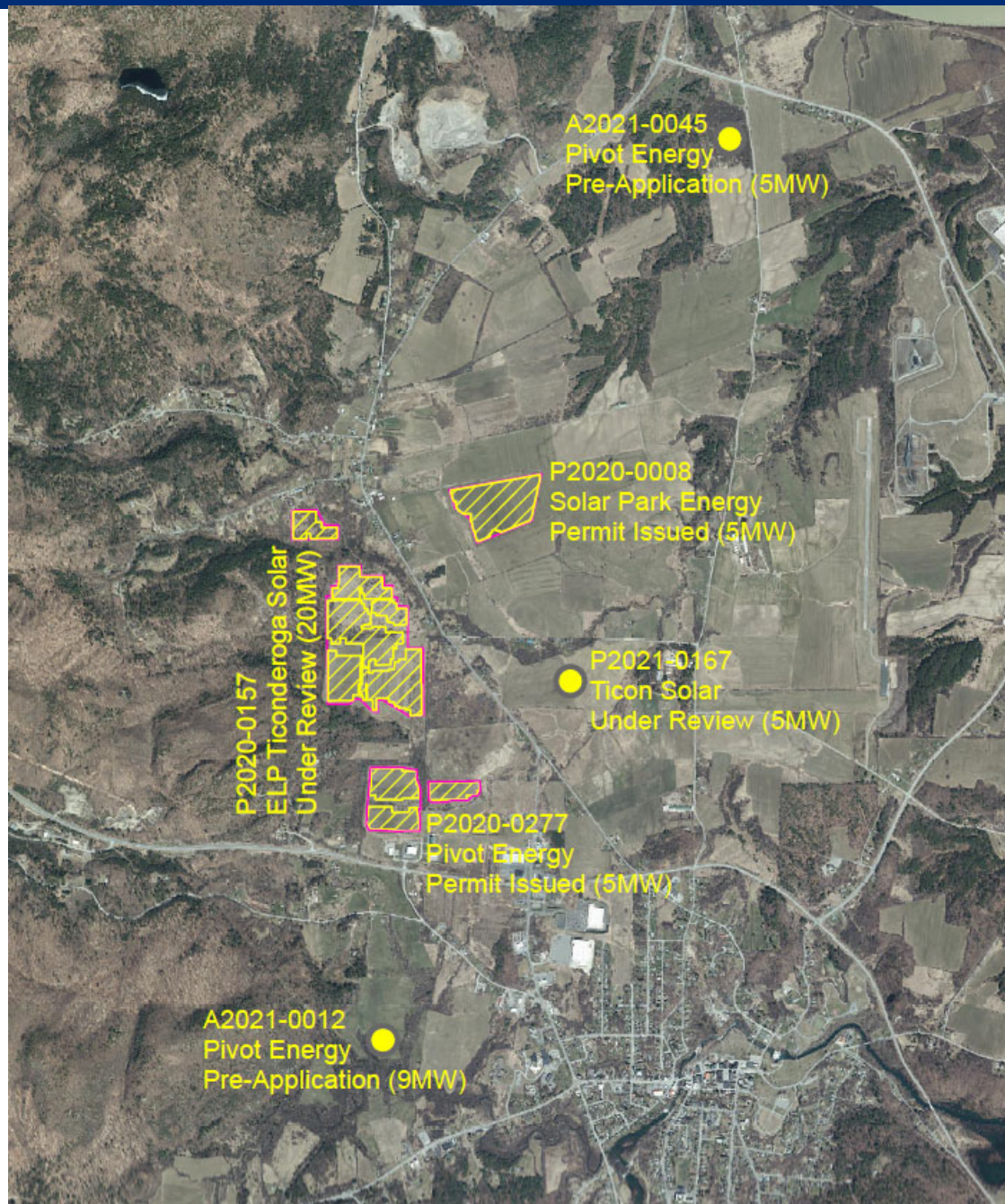


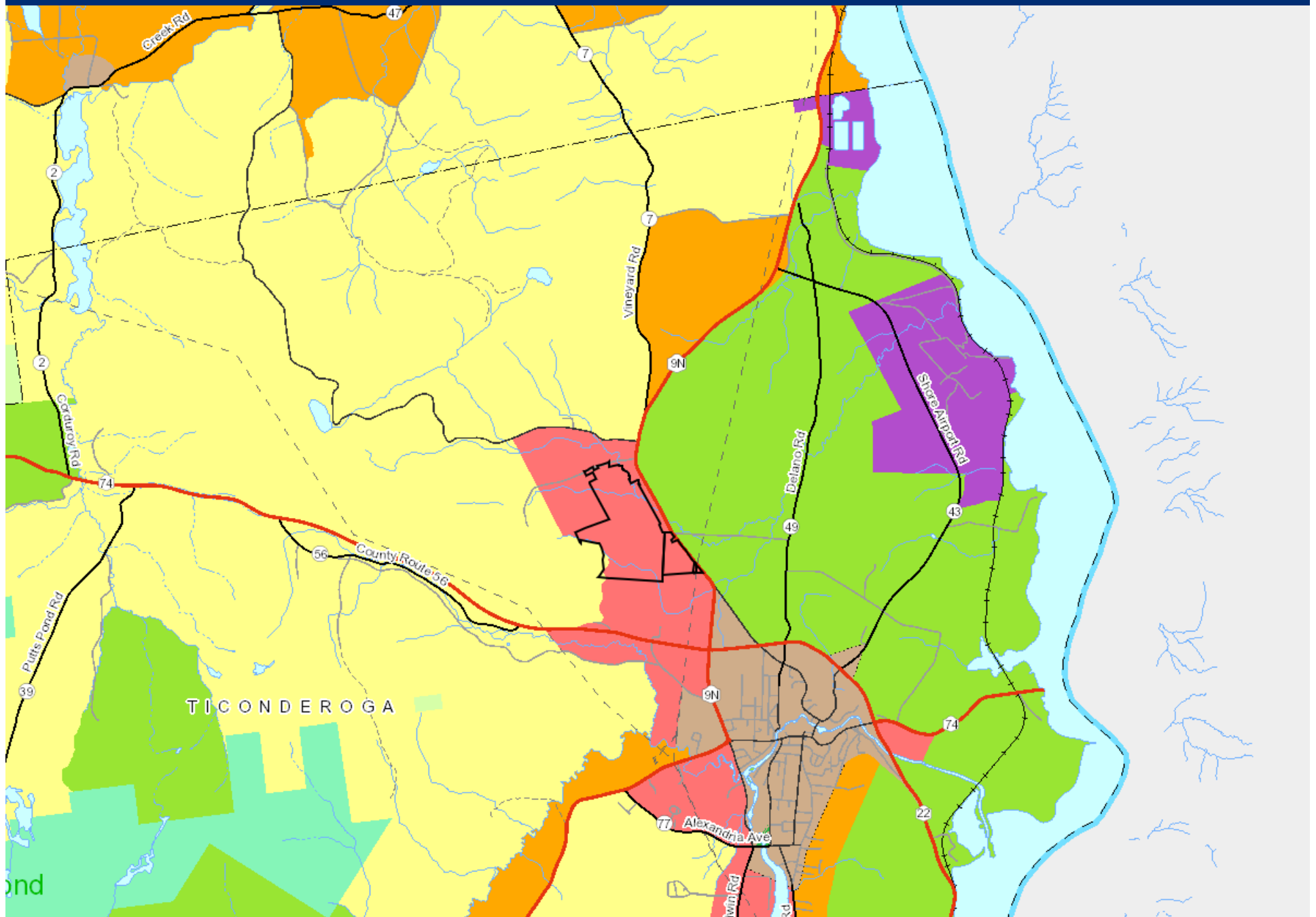
Solar Projects in Ticonderoga

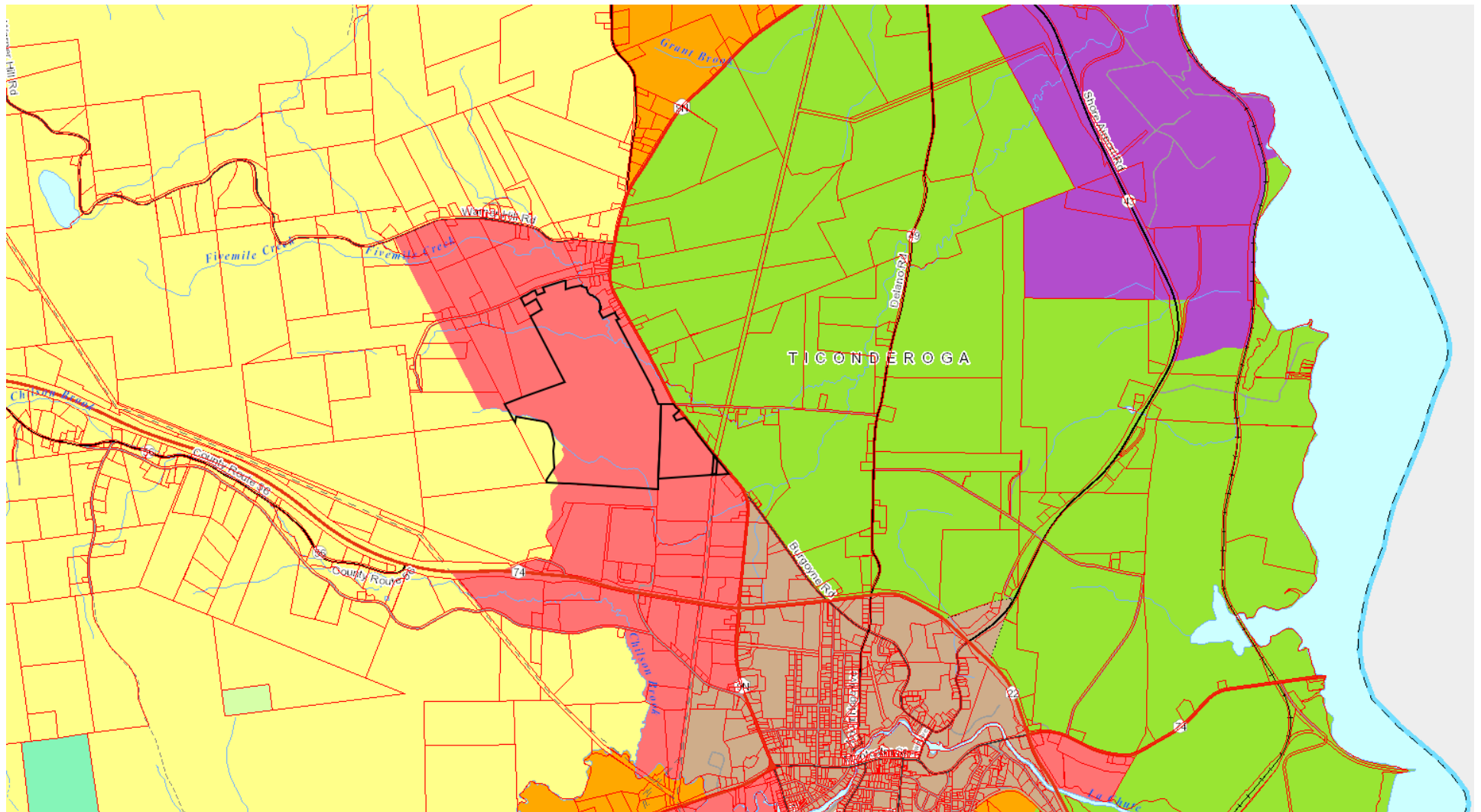
Complete / approved applications

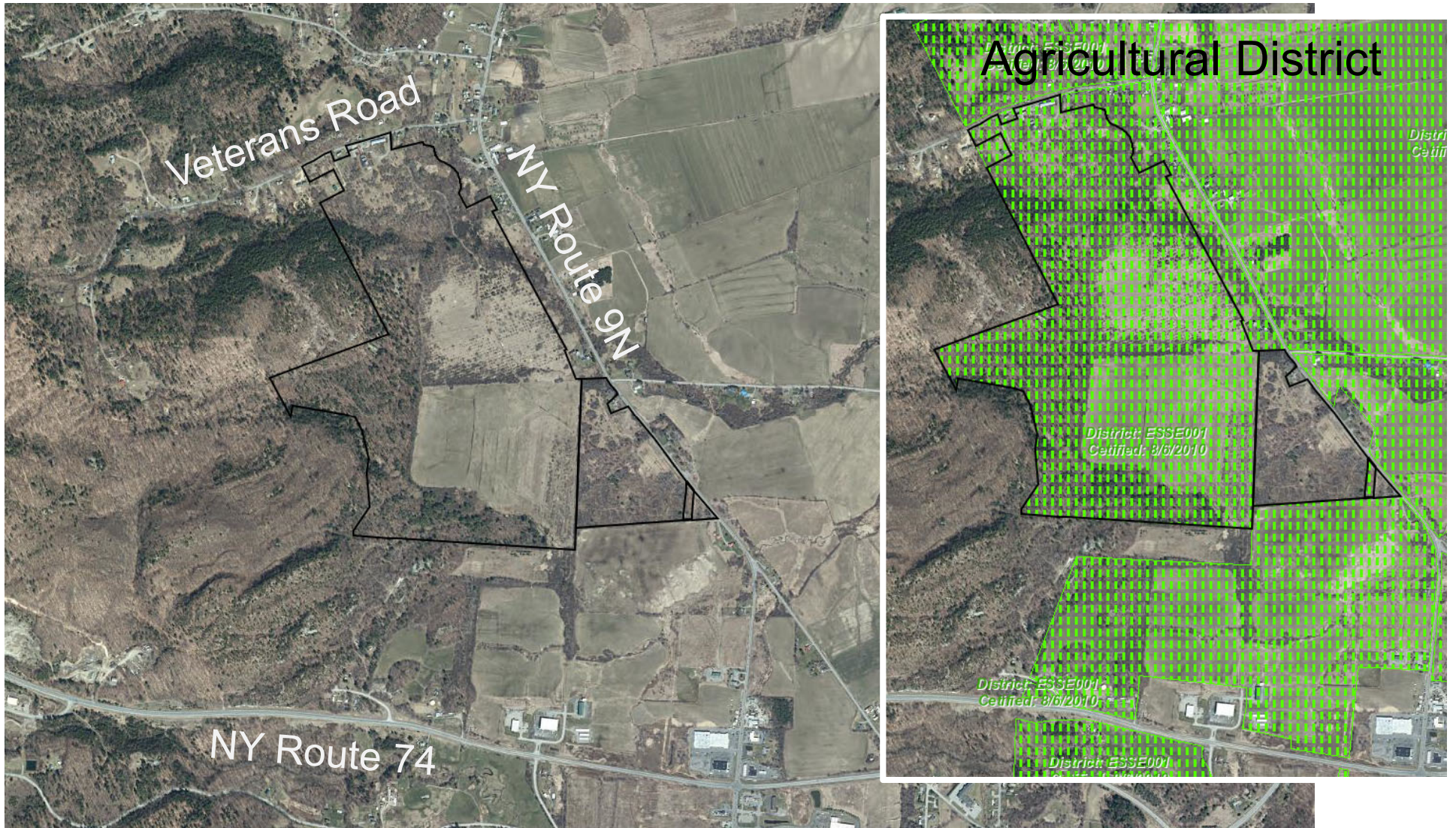


Incomplete applications / pre-applications

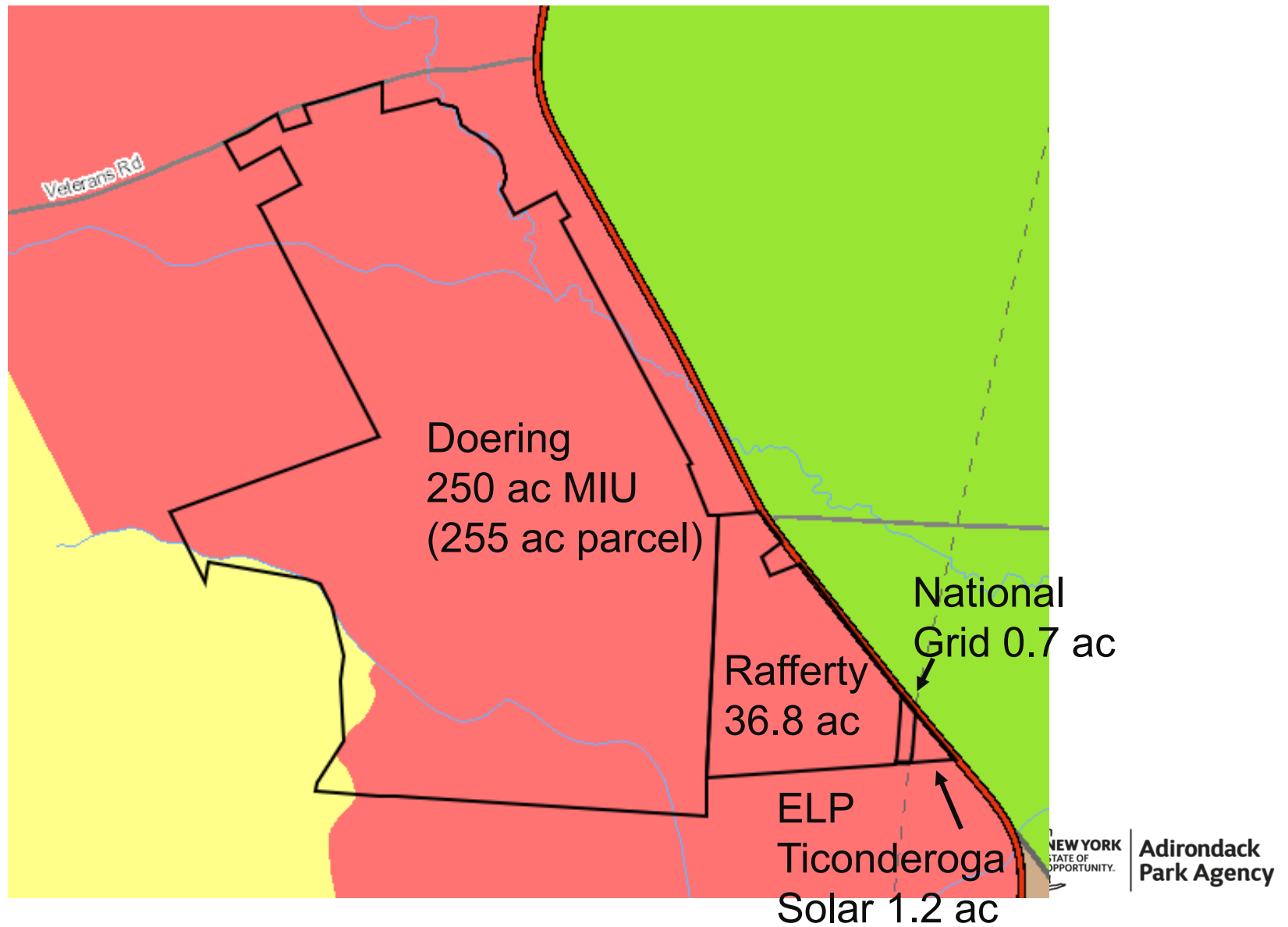






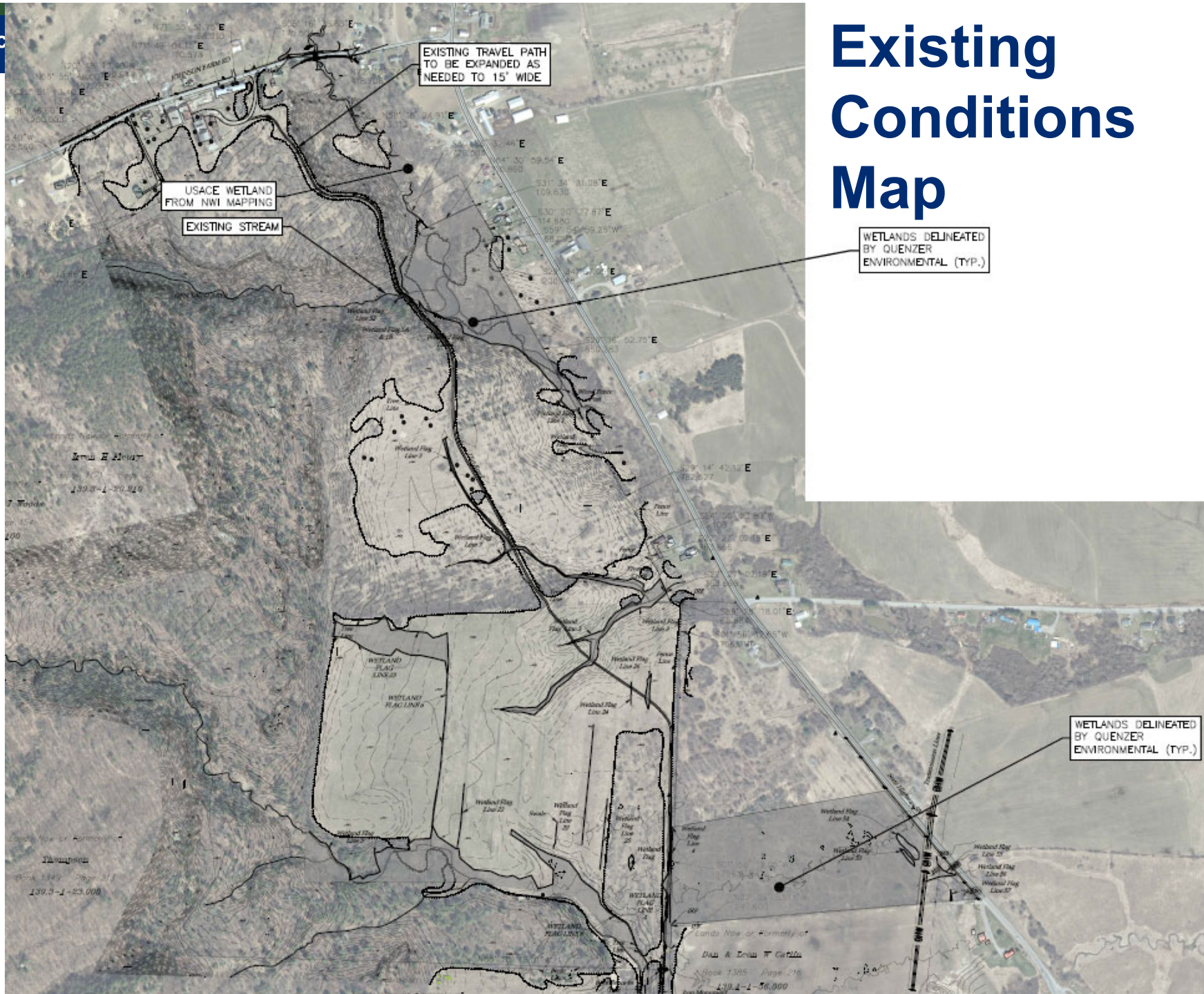


Project site: 288.78± acres



Existing Conditions

Existing Conditions Map



MAP LEGEND



DENOTES USACE WETLAND AREA FROM NATIONAL WETLAND INVENTORY MAPPING



DENOTES WETLAND AREA DELINEATED BY QUENZER ENVIRONMENTAL ON SEPTEMBER 30, 2019



DENOTES ISOLATED WETLANDS



STREAM



AREA OF WETLAND INVESTIGATION

USACE WETLAND FROM NWI MAPPING

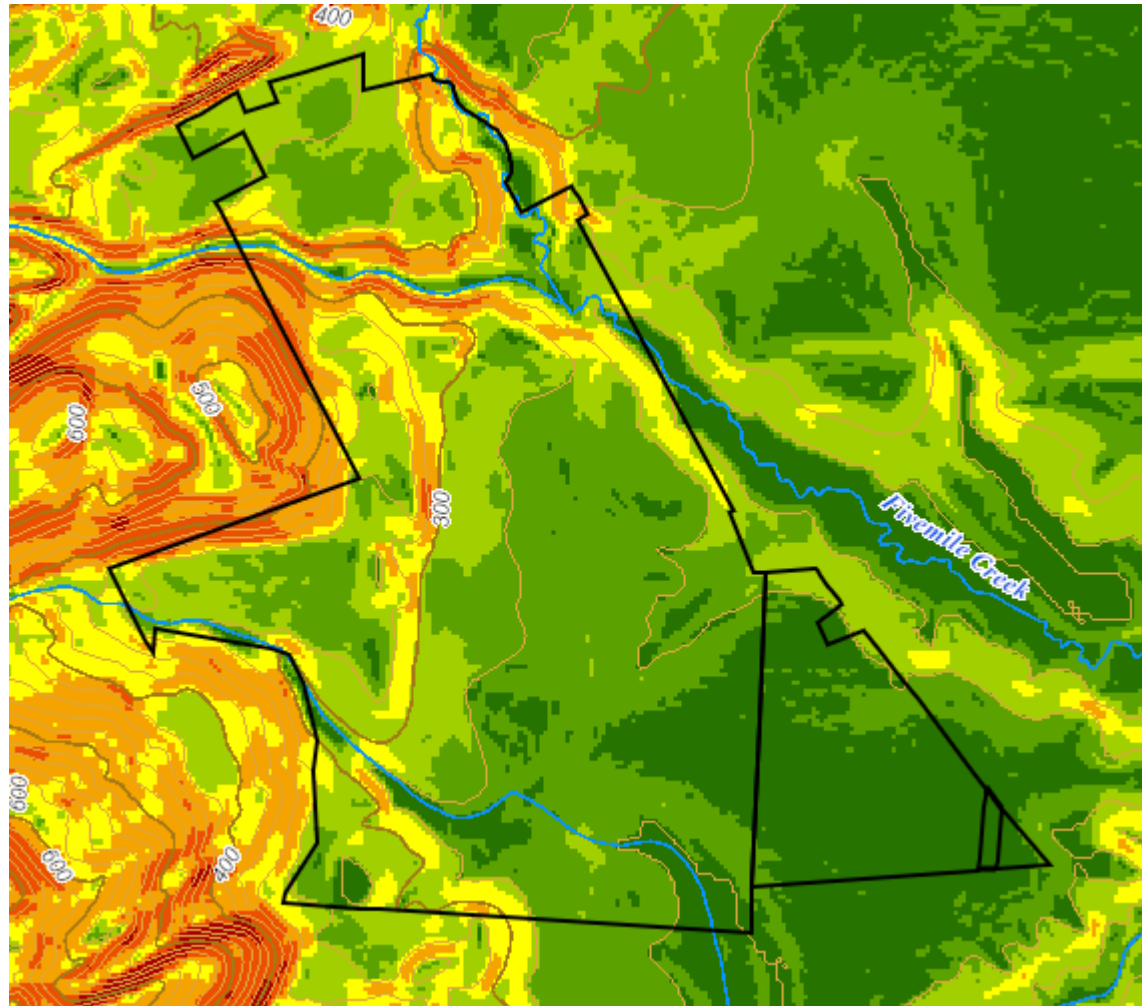
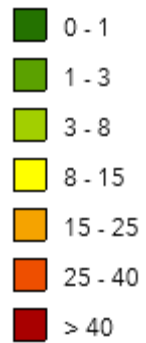
EXISTING STRE

WETLANDS DE
BY QUENZER
ENVIRONMENT

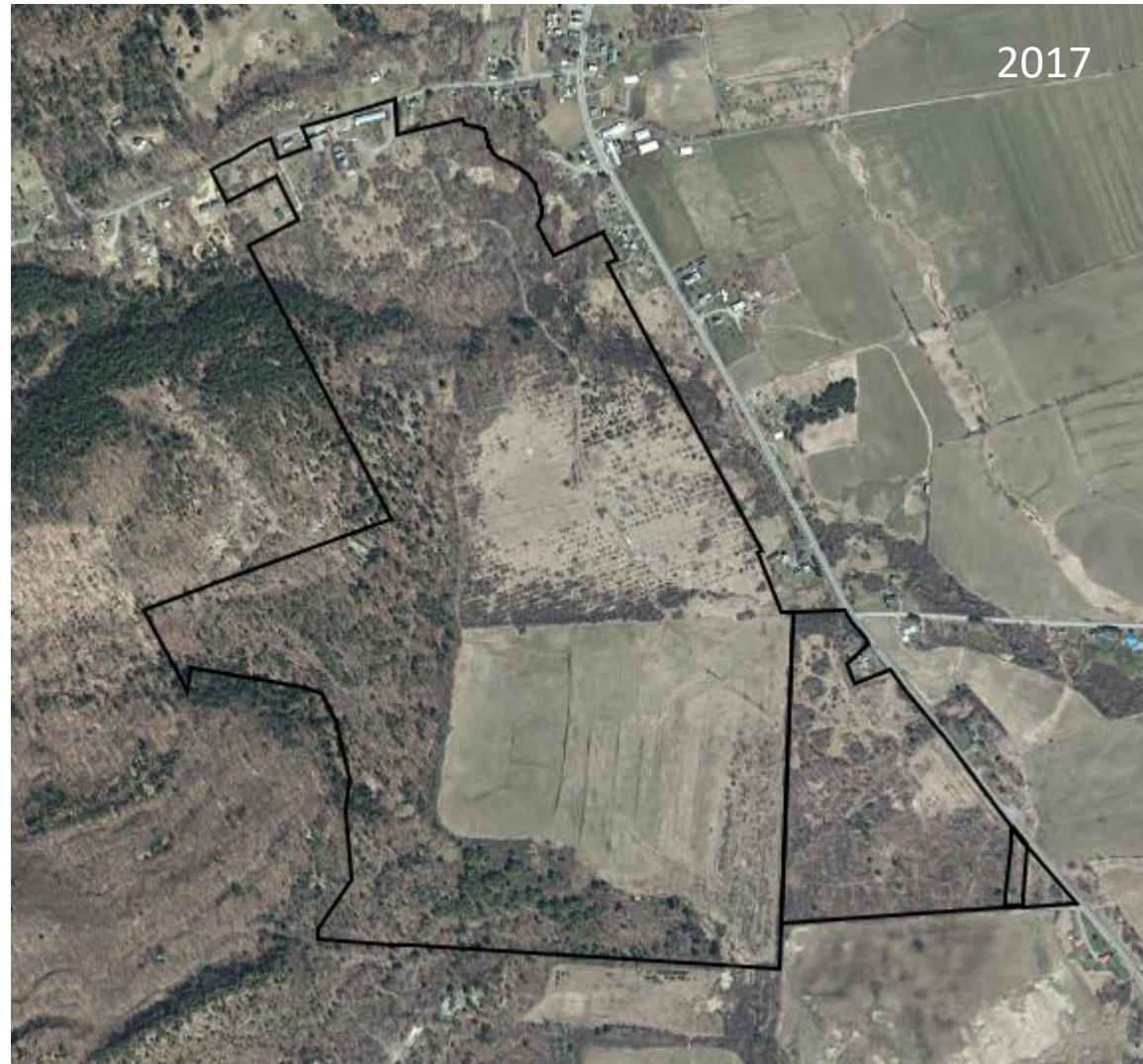
EPIHEMERAL STREAM

Streams and Wetlands

Slopes



Land Use - 2017



Land Use - 2017



Existing Terrain / Vegetation



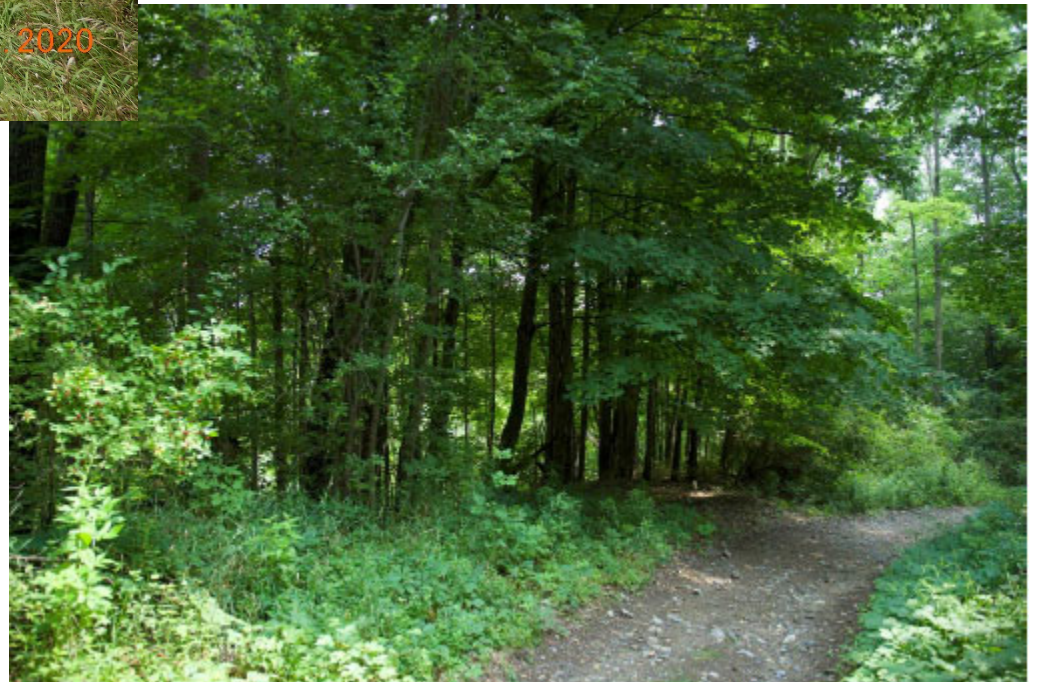
Existing Terrain / Vegetation







**Existing
unimproved road**

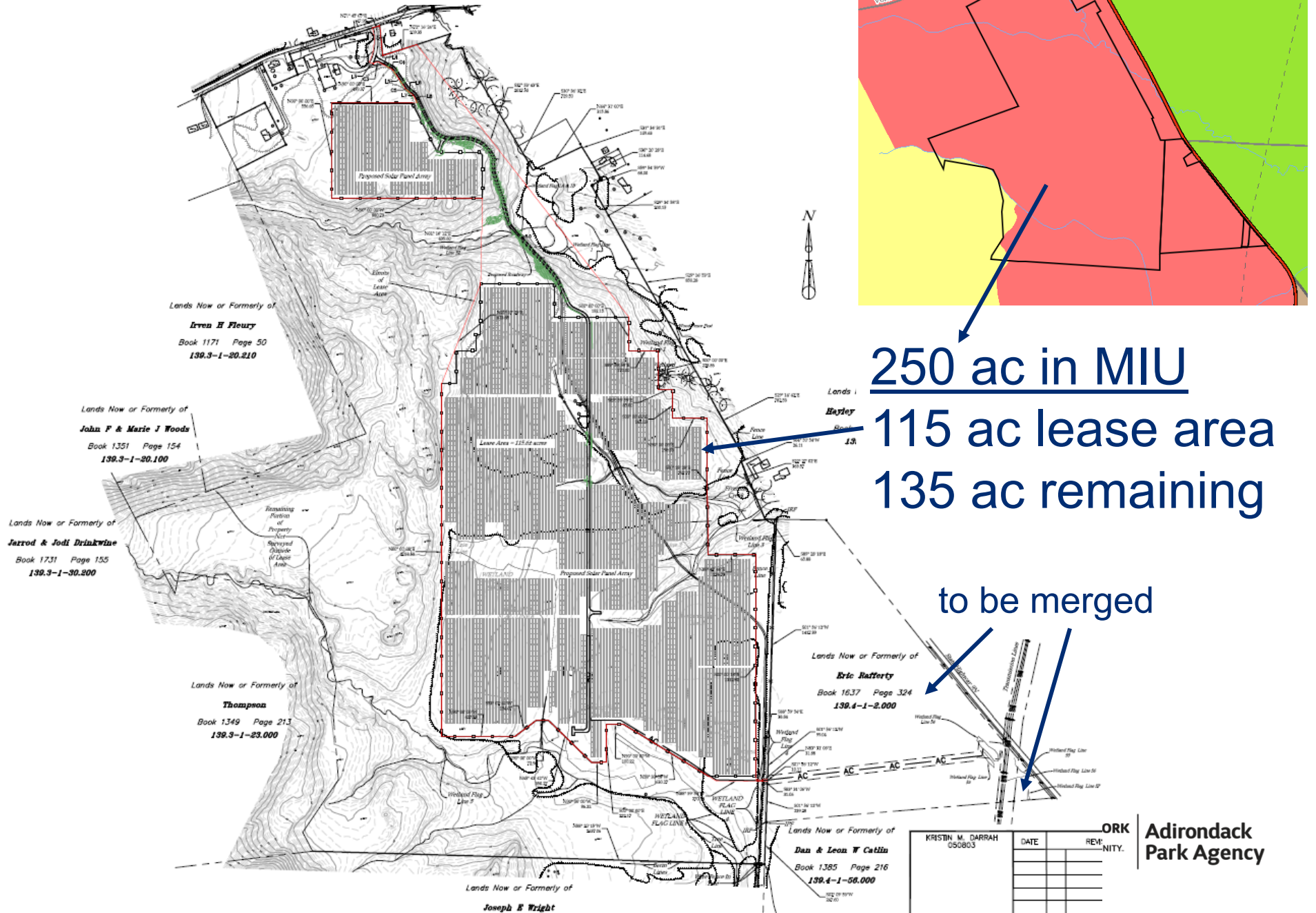


Existing Structures



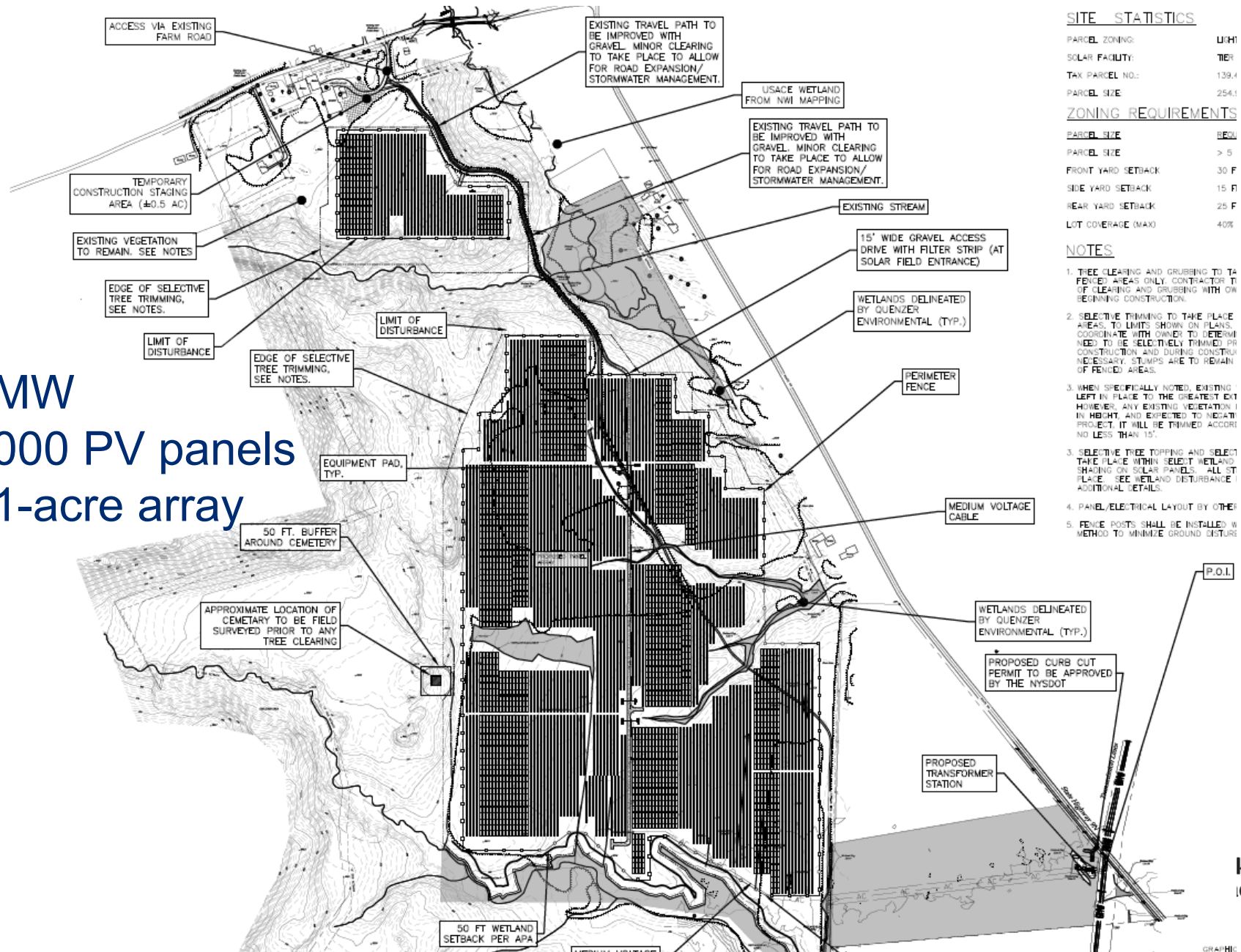
Proposed Project

Subdivision Plan / Lease Area



Site Plan Map – Overall

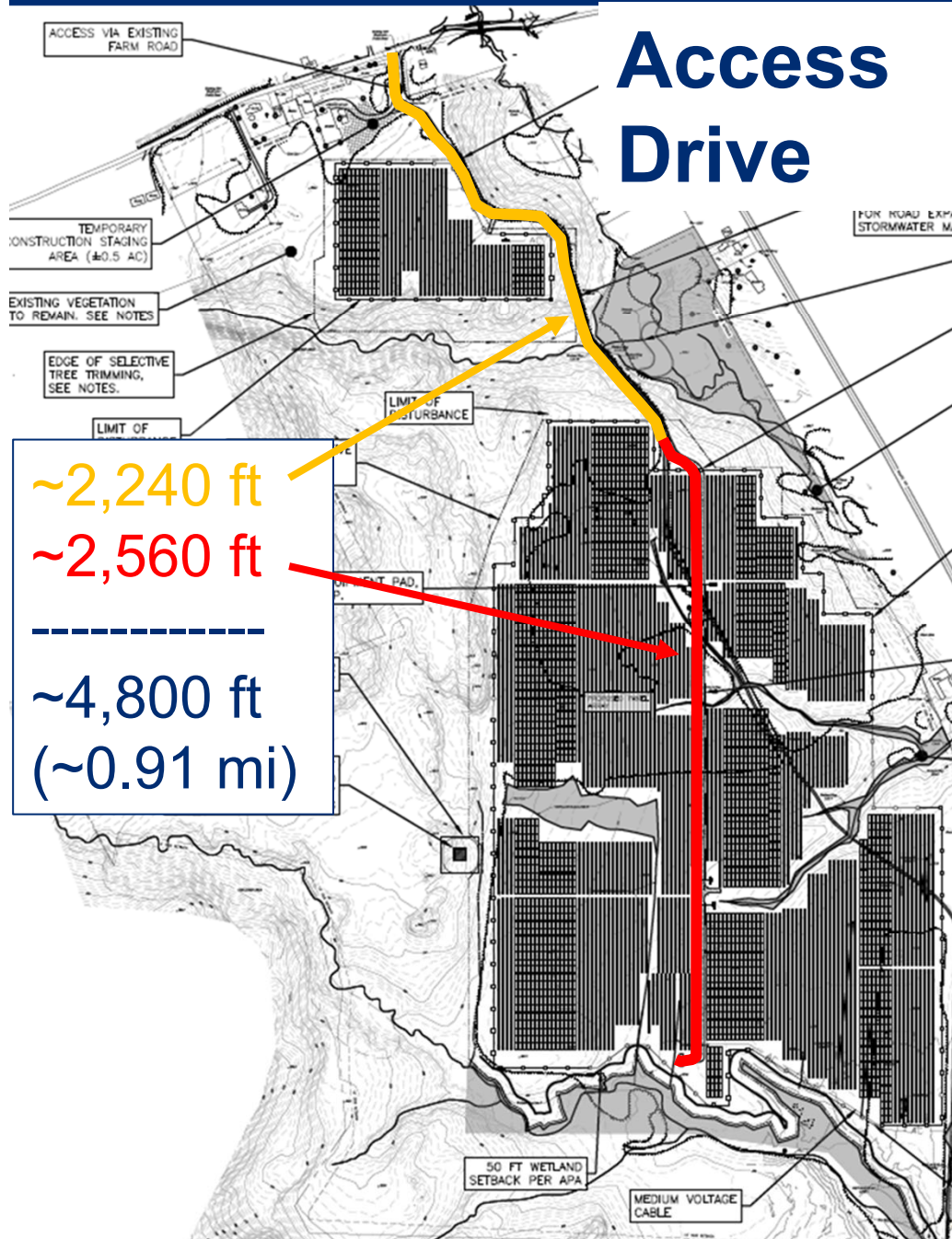
20 MW
46,000 PV panels
77.1-acre array



k
cy

GRAPHIC

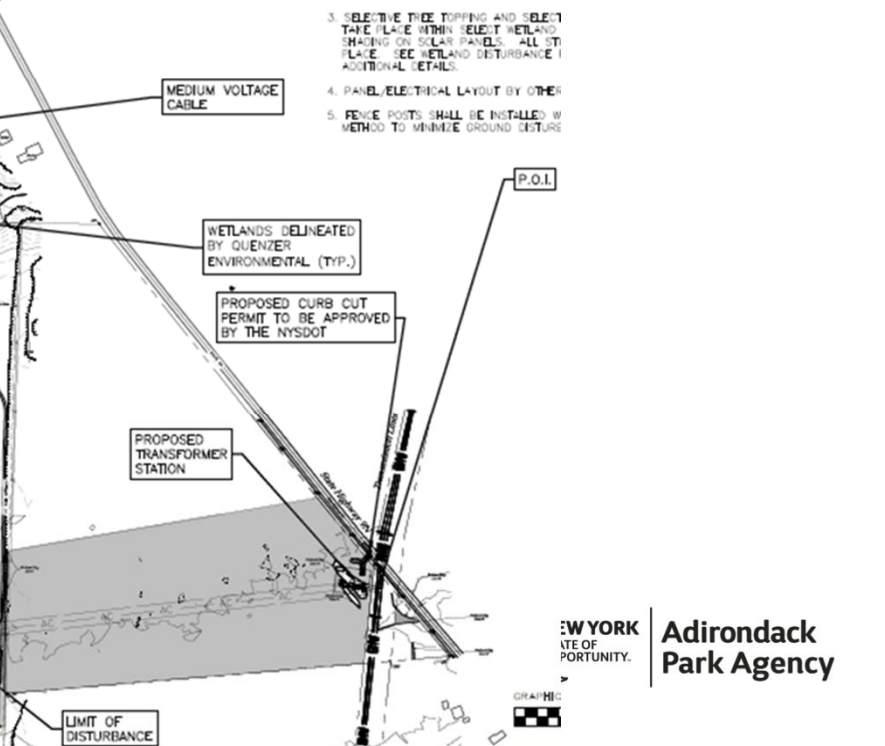
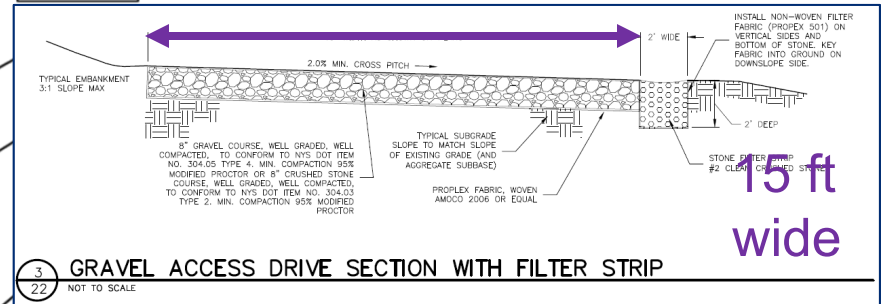
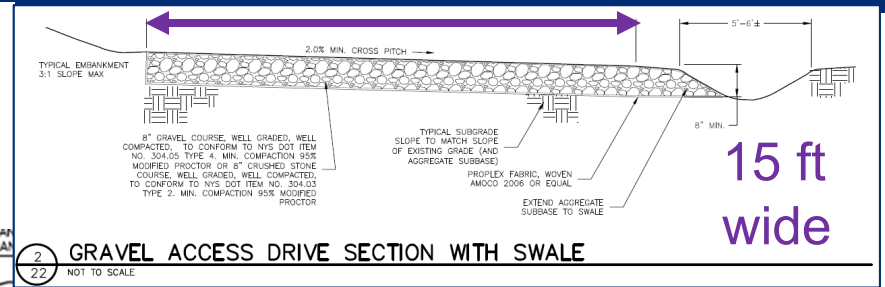
Access Drive



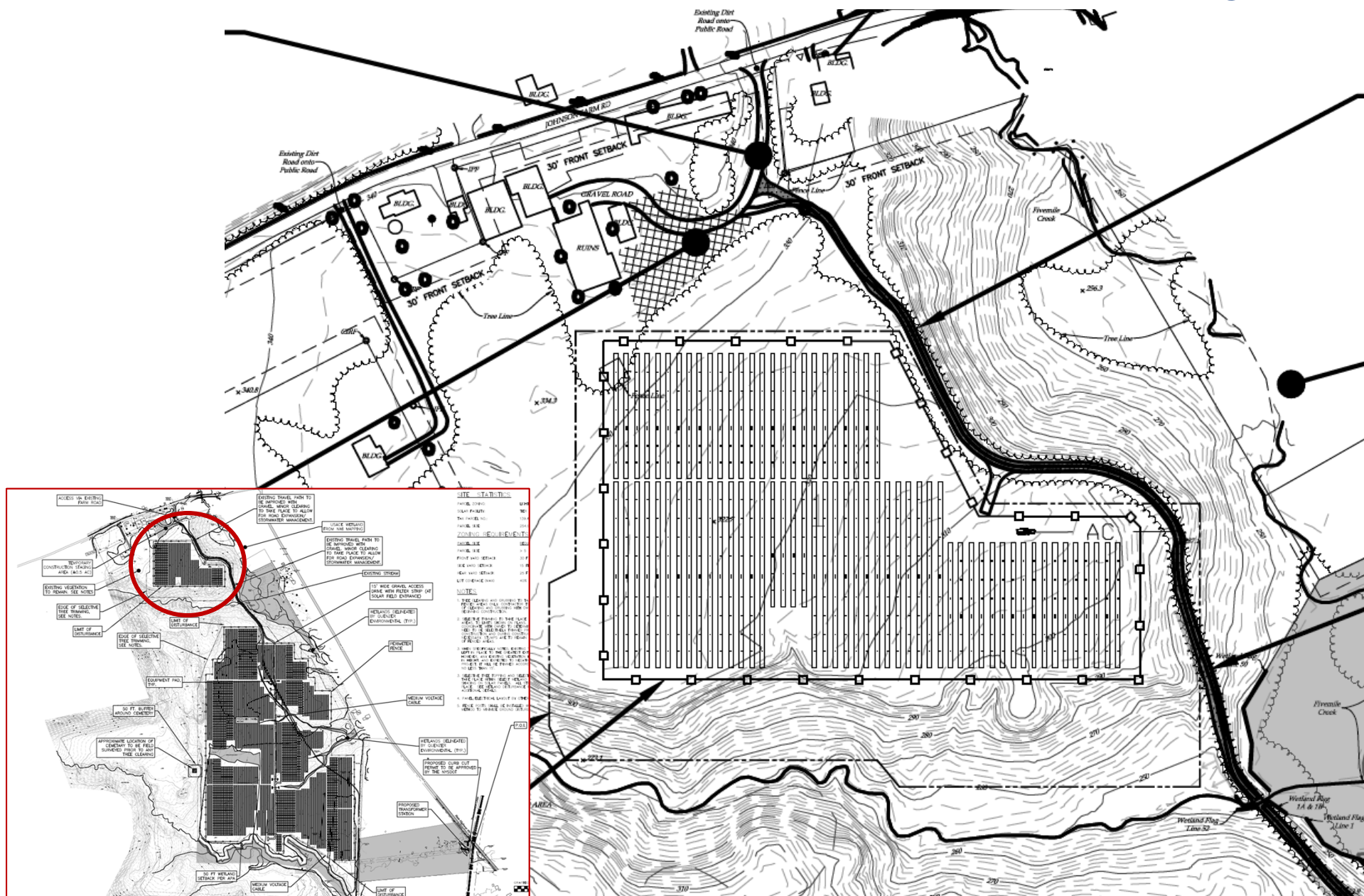
~2,240 ft

~2,560 ft

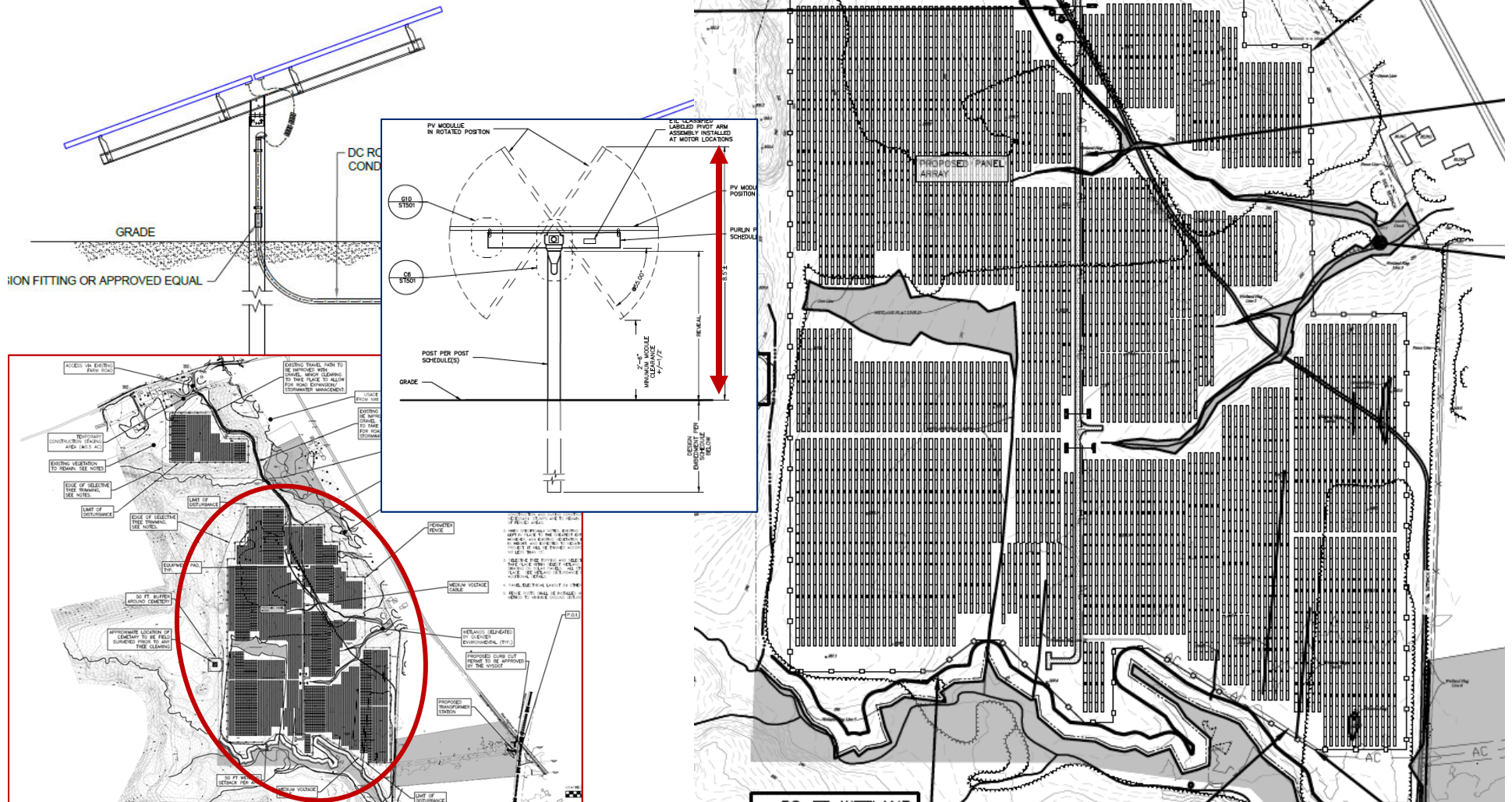
~4,800 ft
(~0.91 mi)



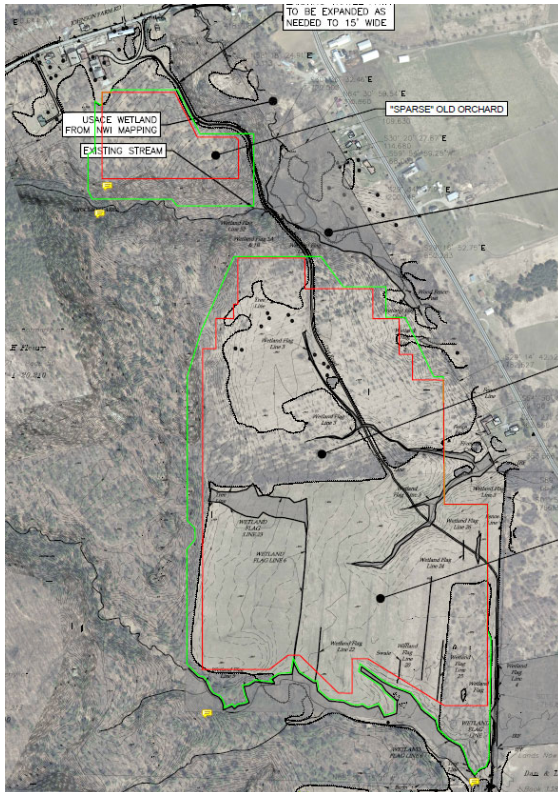
October 14, 2021 28



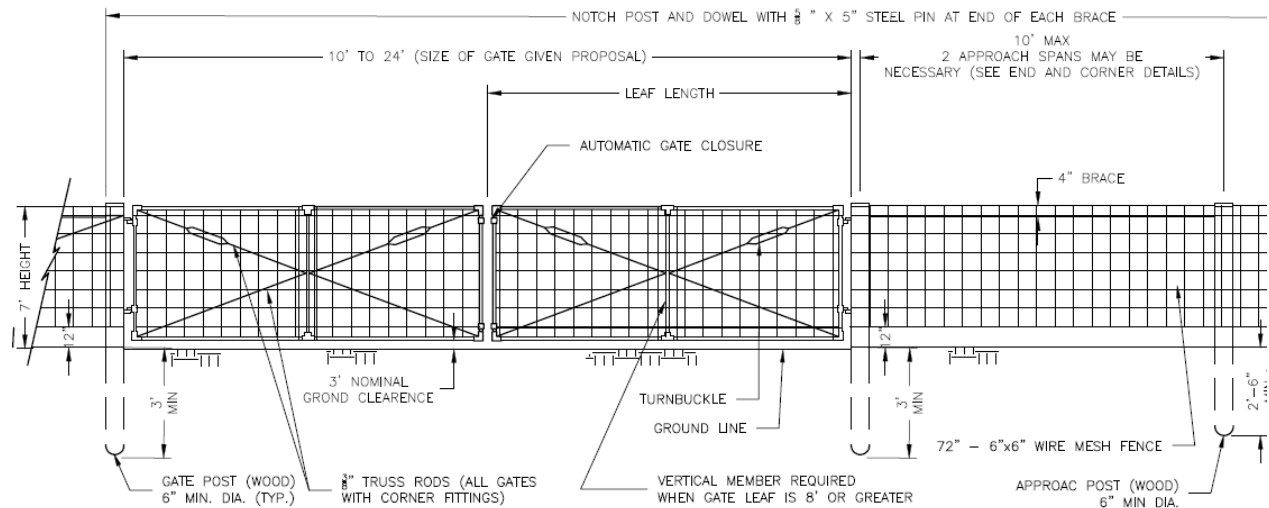
Site Plan Map – Main/Southern Array



Fence



+/- 101.8-acre fenced area
+/- 12,230-foot perimeter

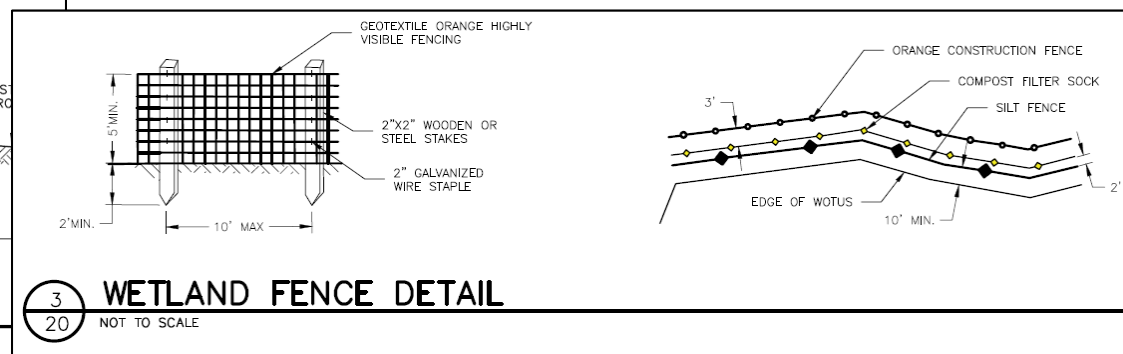
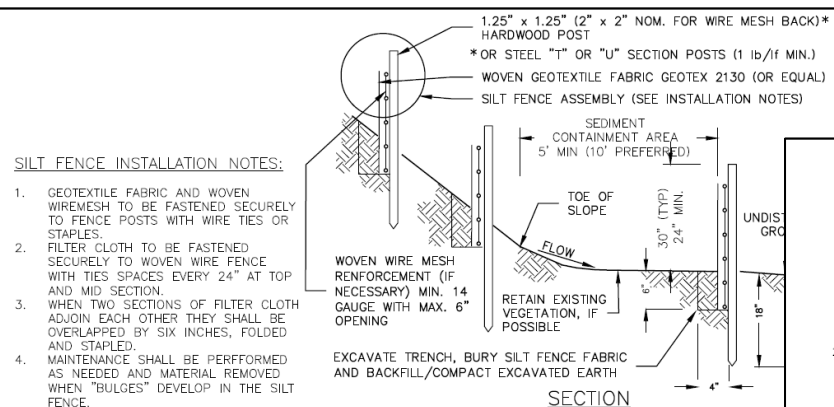
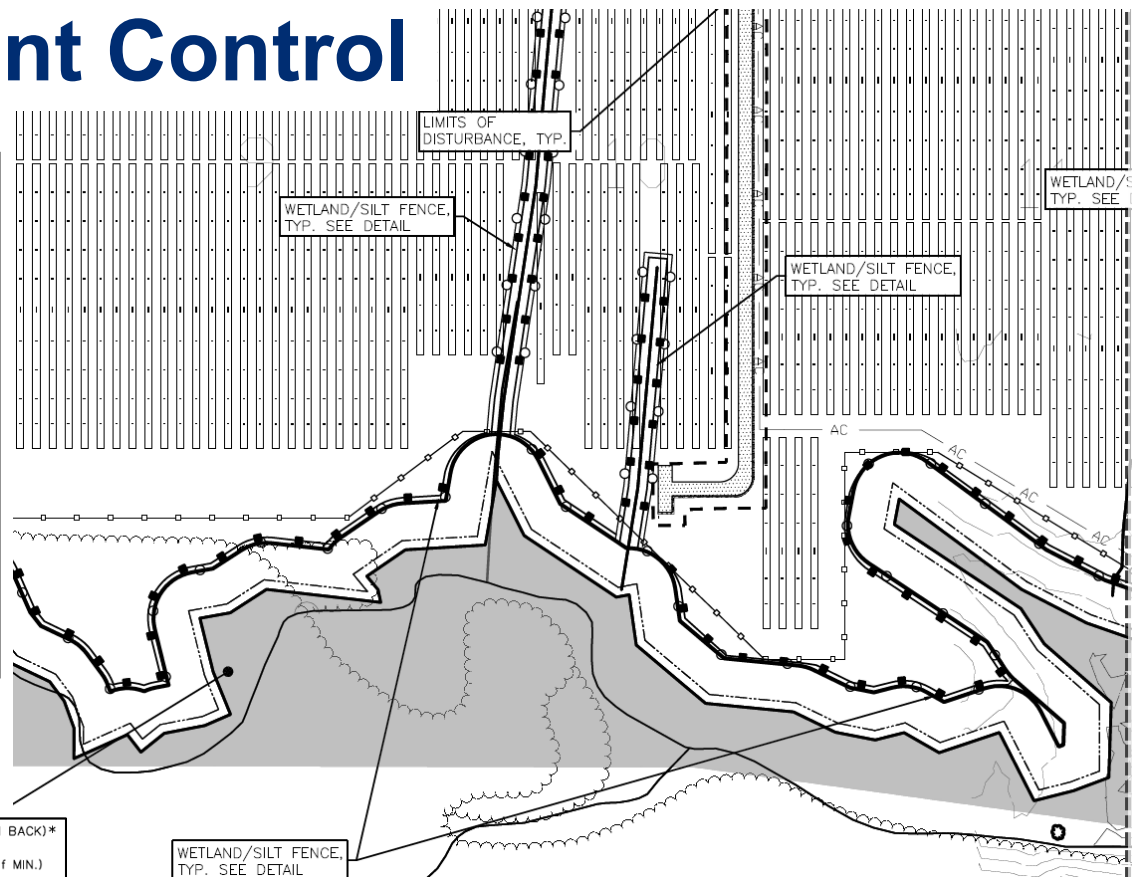
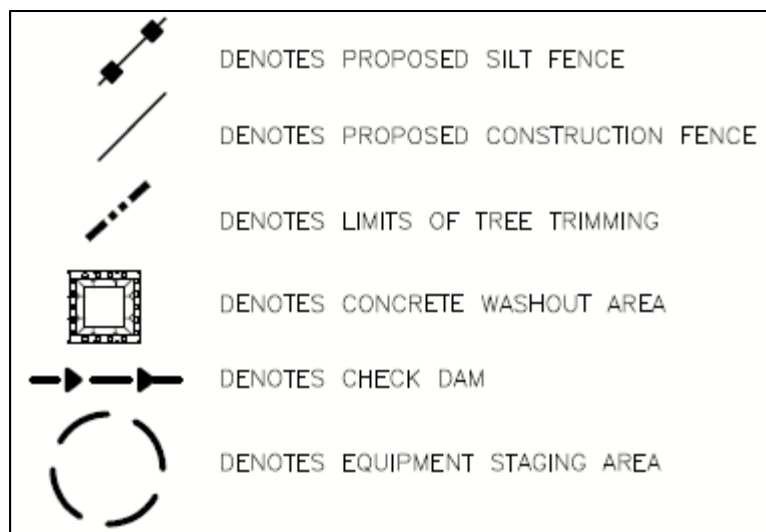


1
22

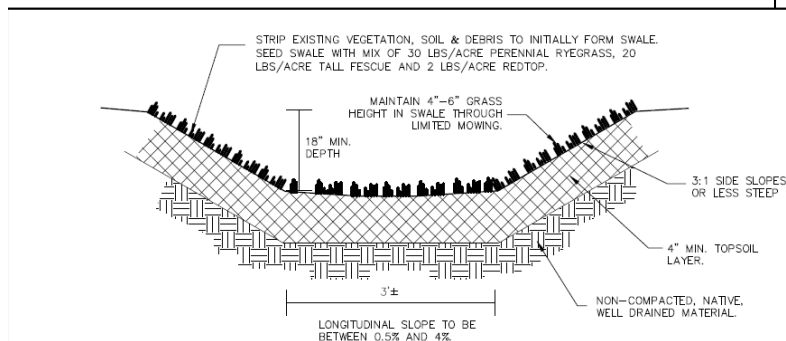
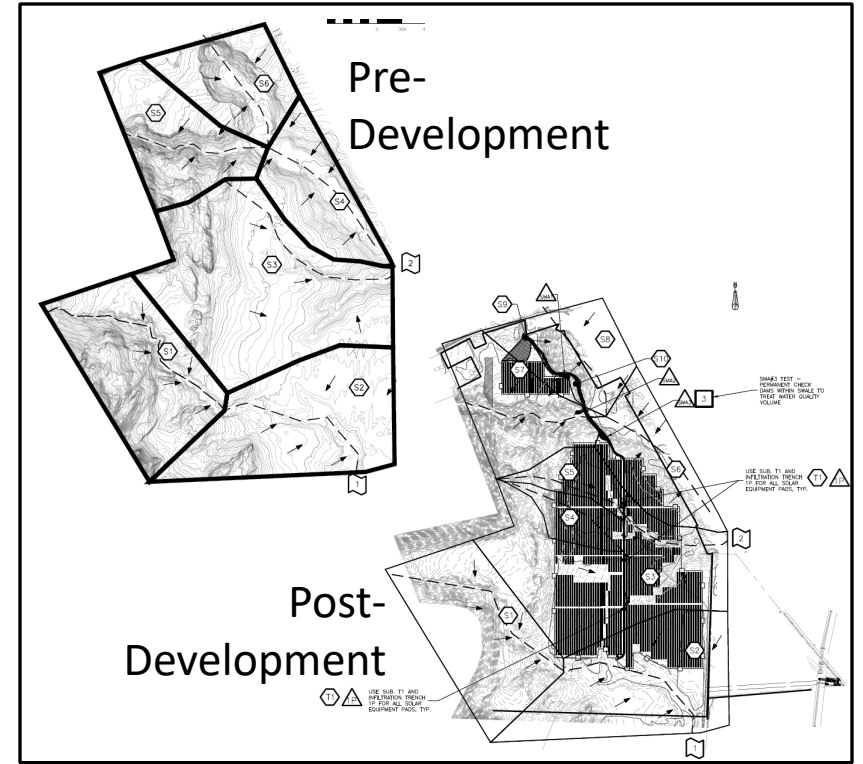
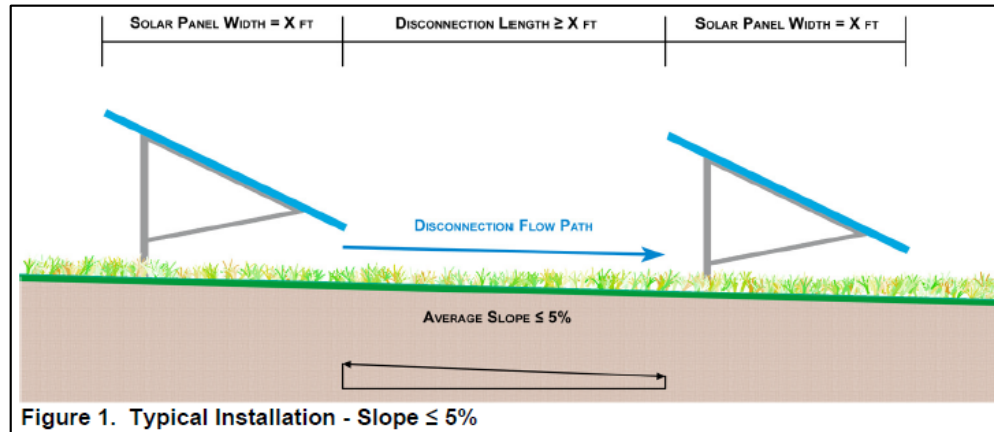
7' HIGH PERIMETER FENCE

NOT TO SCALE

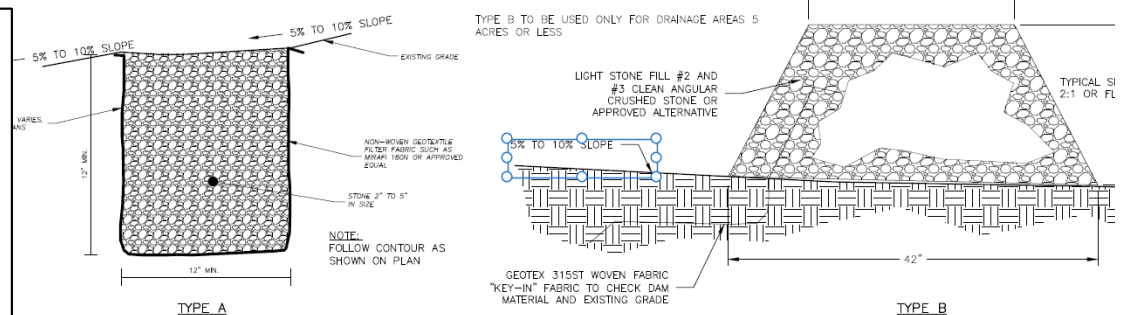
Erosion & Sediment Control



Stormwater Management



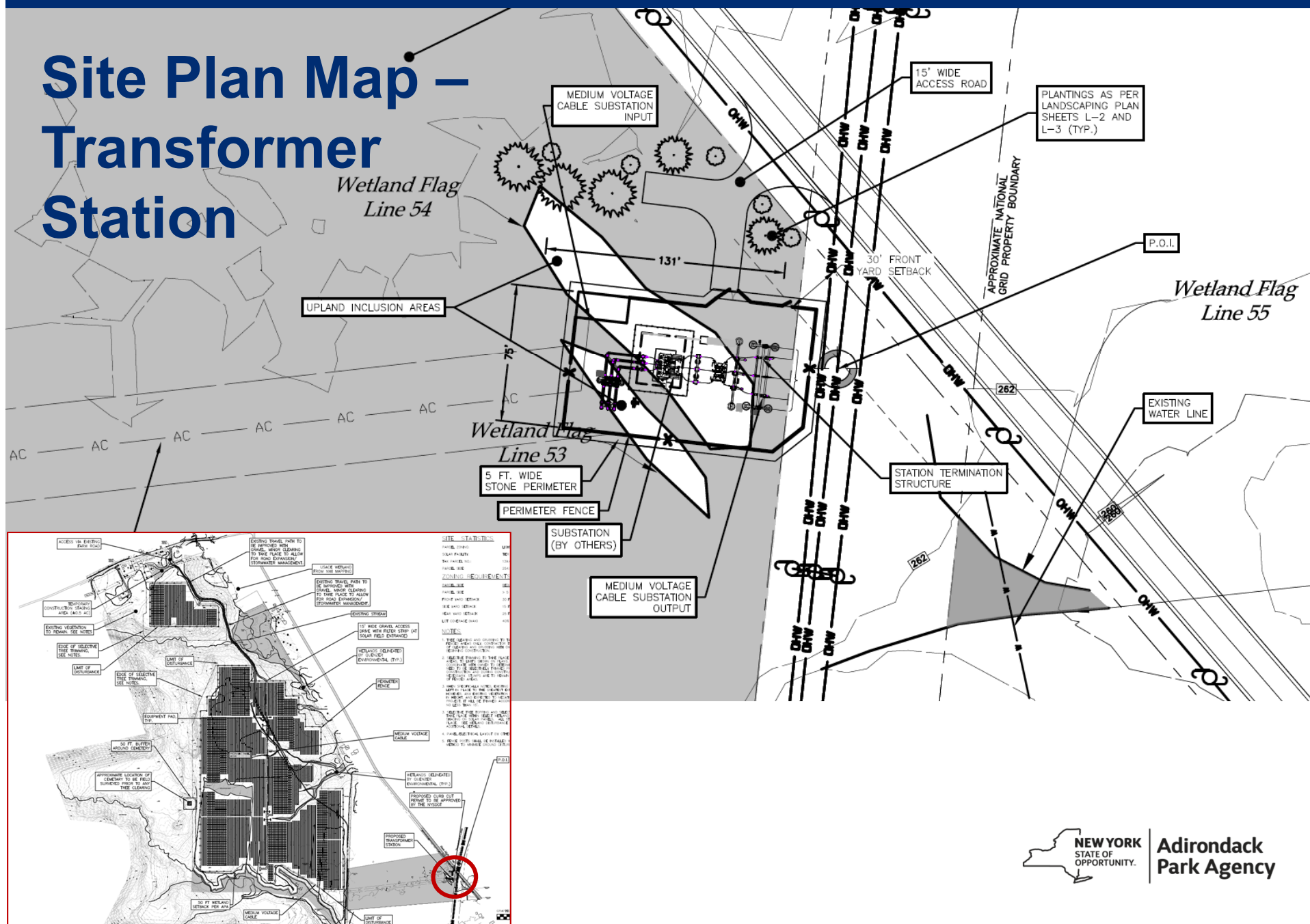
5 VEGETATED SWALE
22 NOT TO SCALE



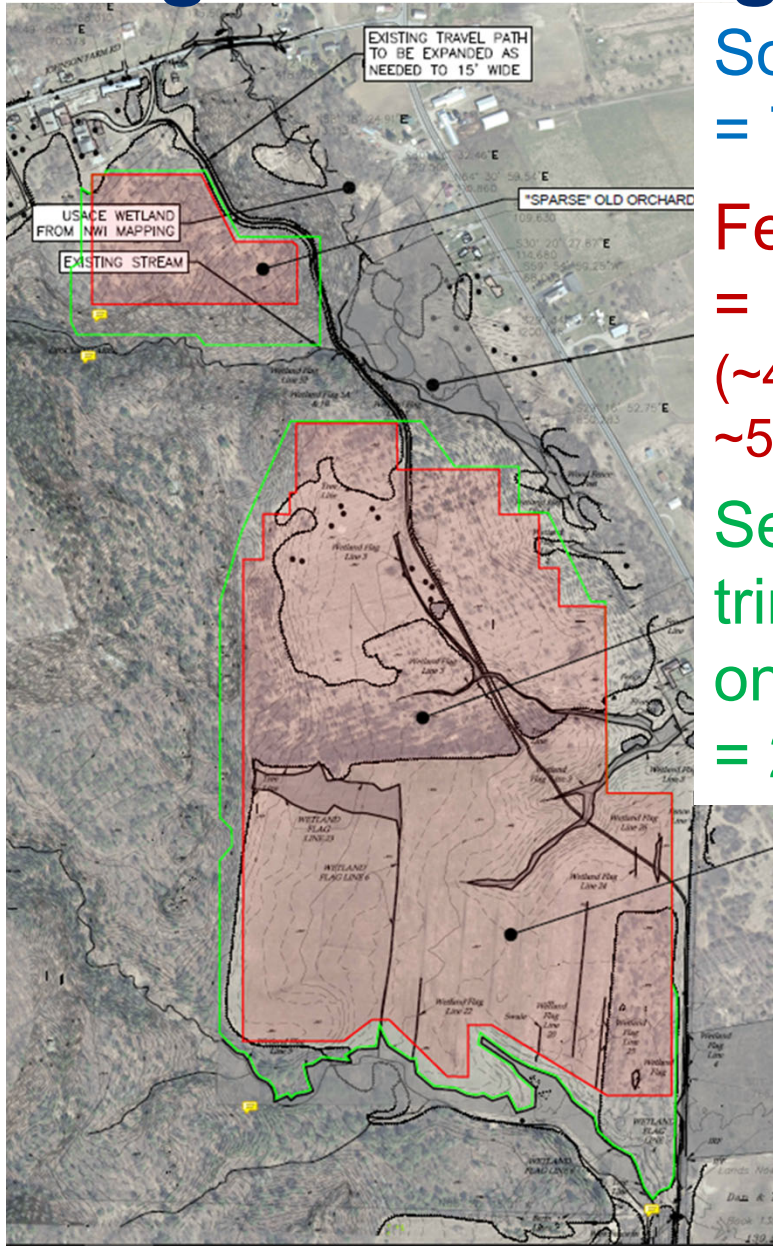
4 FLOW DIFFUSER
22 NOT TO SCALE

Site Plan Map – Transformer Station

*Wetland Flag
Line 54*



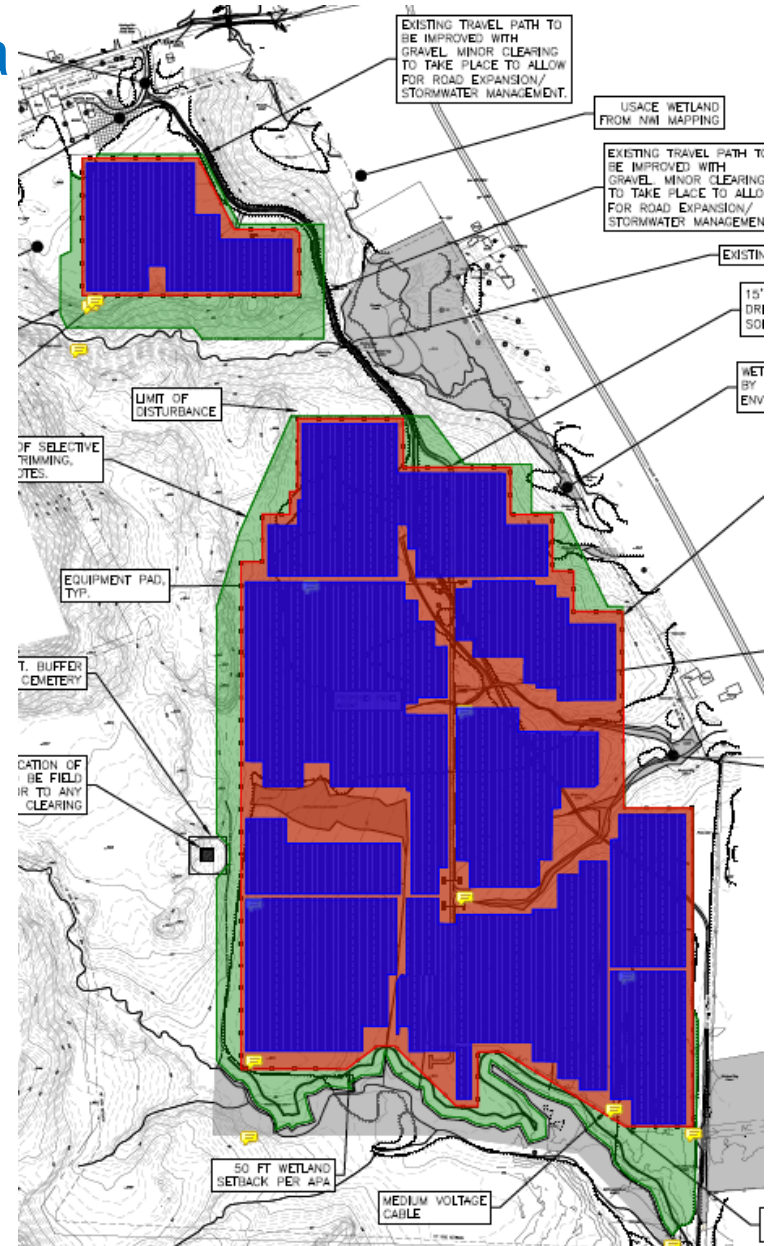
Vegetation Management



Solar array area
= 77.1± acres

Fenced area
= 101.8± acres
(~41% wooded /
~59% open)

Selective
trimming area,
only as needed
= 20.6± acres



Landscaping Plan – Seed Mix / Mowing

| WILDFLOWER/RESTORATION SEED MIXTURE SCHEDULE | | | | | |
|---|--|------------------|----------------------|------------------|---|
| SCIENTIFIC NAME | COMMON NAME | INDICATOR STATUS | % BY NUMBER OF SEEDS | APPLICATION RATE | PLANTING PERIOD |
| NORTHEAST SOLAR POLLINATOR 3' MIX – ERNMX-612 (IN SUNLIGHT AREAS) | | | | | APRIL 15–JUNE 15 SEPTEMBER 15–OCTOBER 15 |
| FESTUCA OVINA | SHEEP FESCUE | N/A | 94.90 | 40 LBS/43,560 SF | |
| ASCLEPIAS TUBEROSA | BUTTERFLY MILKWEED | N/A | 2.5 | 40 LBS/43,560 SF | |
| CHAMAECRISTA, PA ECOTYPE | PARTRIDGE PEA, PA ECOTYPE | N/A | 2.0 | 40 LBS/43,560 SF | |
| OENOTHERA FRUTICOSA VAR. FRUTICOSA | SUNDROPS | N/A | 0.3 | 40 LBS/43,560 SF | |
| TRADESCANTIA VIRGINIANA, SOUTHEASTERN PA / NORTHERN VA | VIRGINIA SPIDERWORT, SOUTHEASTERN PA / NORTHERN VA BLEND | N/A | 0.3 | 40 LBS/43,560 SF | |

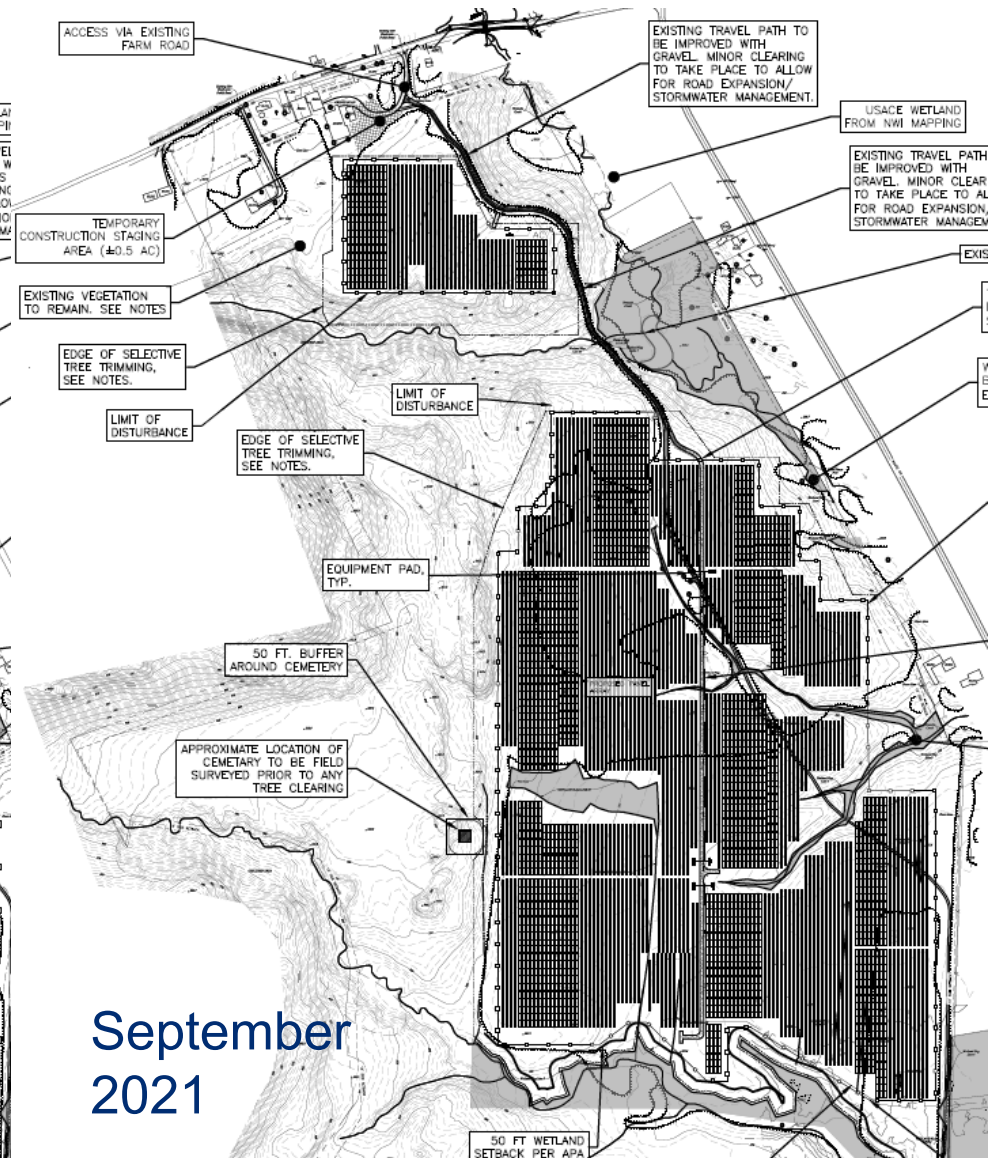
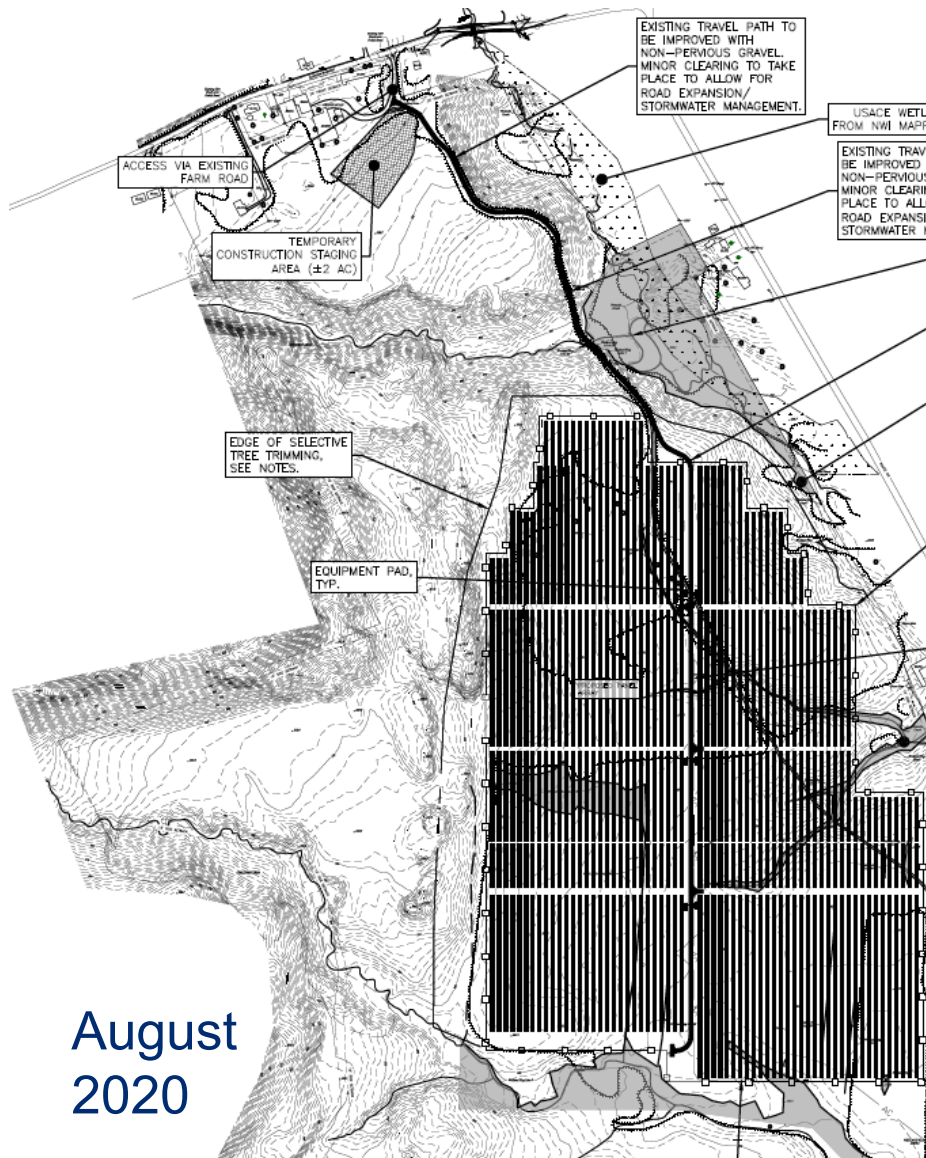
No mowing May 1 – October 31

Except selective trimming if veg > 3 ft tall



Adirondack
Park Agency

Alternative Design / Wetland Avoidance



Wetland Impacts < 0.3 acre

- **Permanent Wetland Disturbance: 12,034± SF (0.276± AC)**
 - Transformer station (all components): 10,500± SF
 - Culverts (3): 245± SF, 594± SF, 437± SF
 - Post-construction stormwater controls for permanent wetland protection (stone check dams): 258± SF

- **Temporary Wetland Disturbance: 1,904± SF (0.004± AC)**
 - Utility trenches (3 crossings): 25± SF, 15± SF, 15± SF
 - Post-construction stormwater controls for permanent wetland protection (2 vegetated swales): 1,370± SF, 478± SF

Wetland Impacts

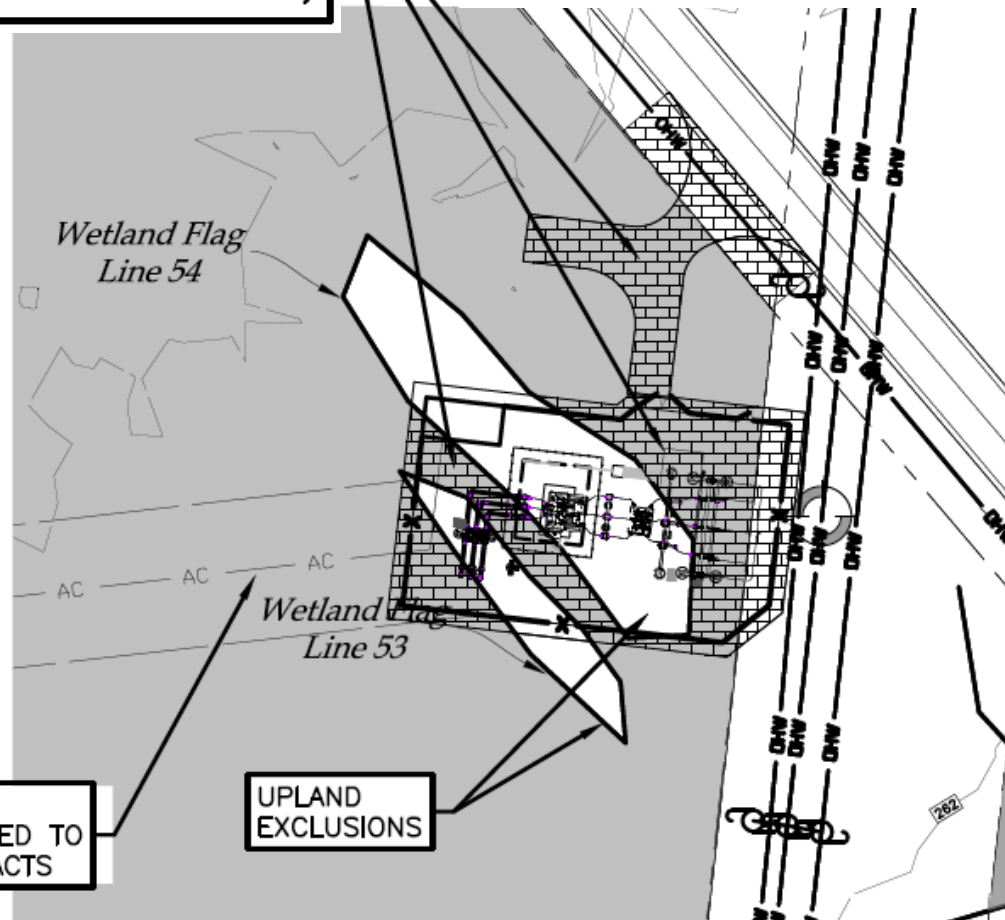
PERMANENT WETLAND DISTURBANCE #4 FOR
INSTALLATION OF SUBSTATION, EQUIPMENT
PAD, ACCESS DRIVE AND CULVERT OUTSIDE
OF UPLAND EXCLUSIONS 10,500± SF (.24±
AC)

DISTURBANCE #2
F CULVERT 594±

DISTURBANCE #3
F CULVERT 437±

AC TRENCH TO BE
DIRECTIONALLY DRILLED TO
AVOID WETLAND IMPACTS

UPLAND
EXCLUSIONS



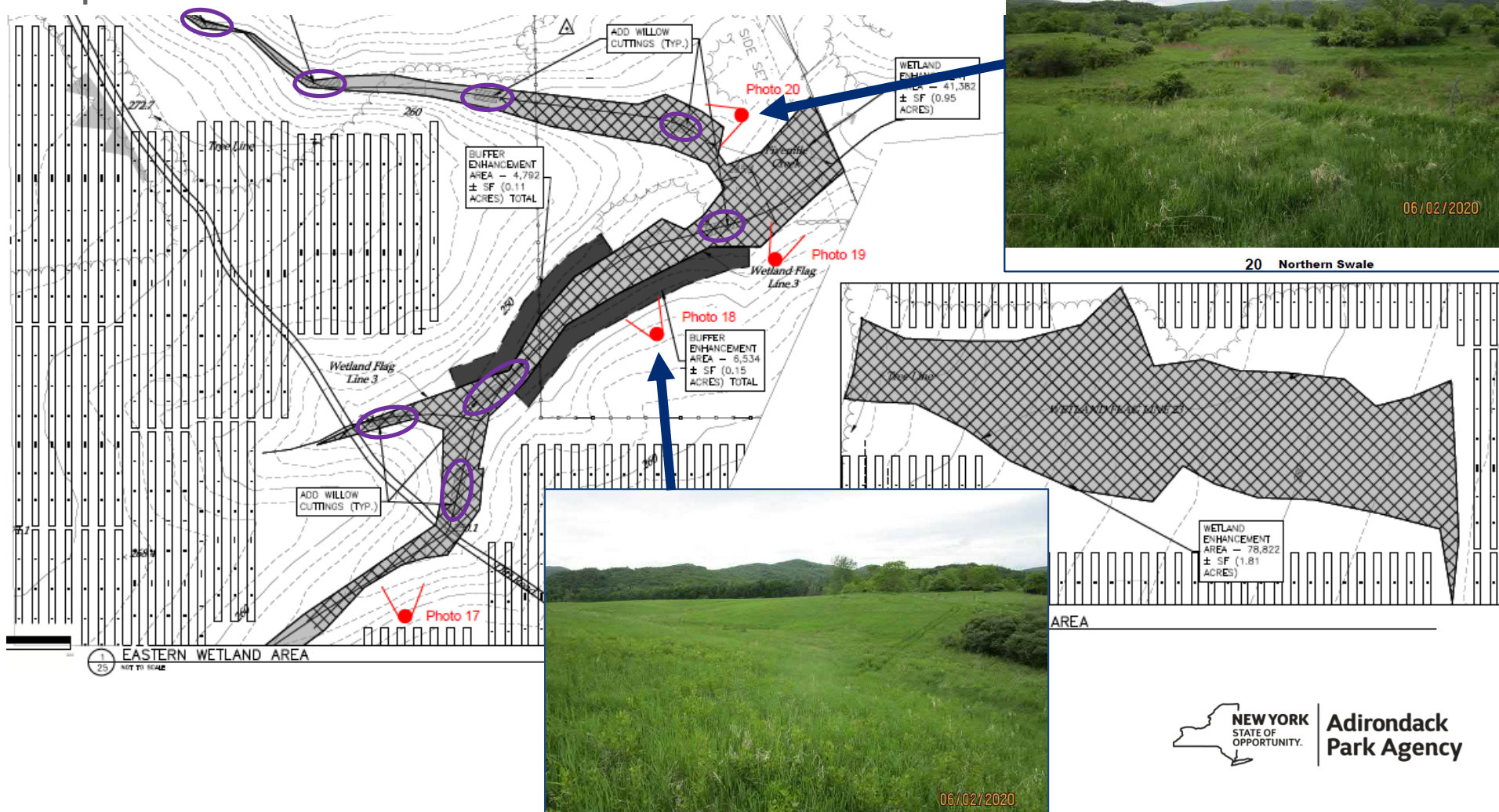
EQUIPMENT PAD DISTURBANCE AREAS

SCALE: 1"=50'

Wetland Mitigation – 10:1

Wetland enhancement: 2.76± acres

Upland buffer enhancement: 0.26± acres

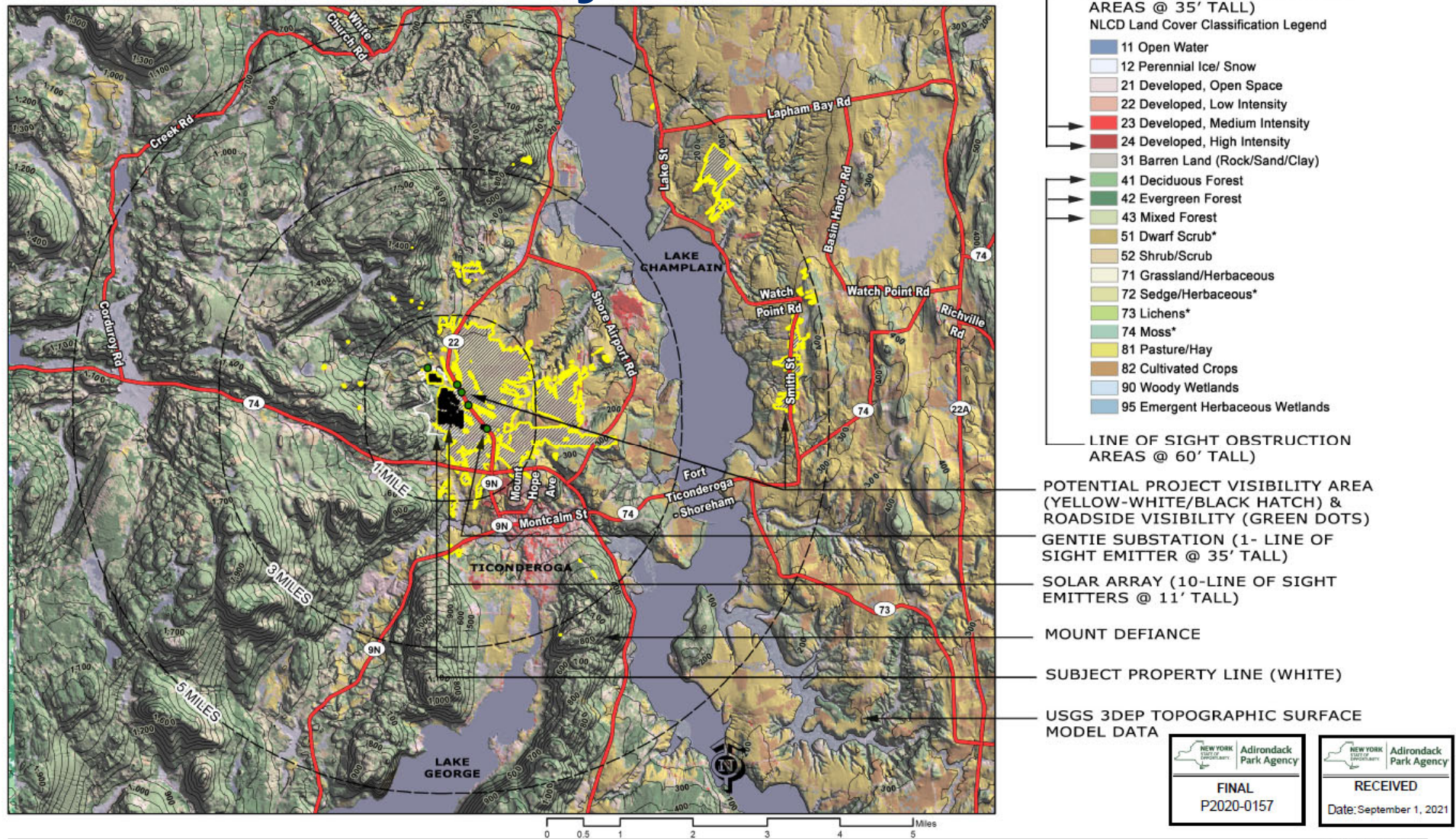


Decommissioning Plan

- Removal of system to 3-foot soil depth
 - Equipment, conduit structures, fencing, roads, foundations
- Disposal/recycling components
- Restoration property
- Security provided to town
 - 125% cost minus salvage value = \$318,499.62

Visual Analysis

Potential Visibility

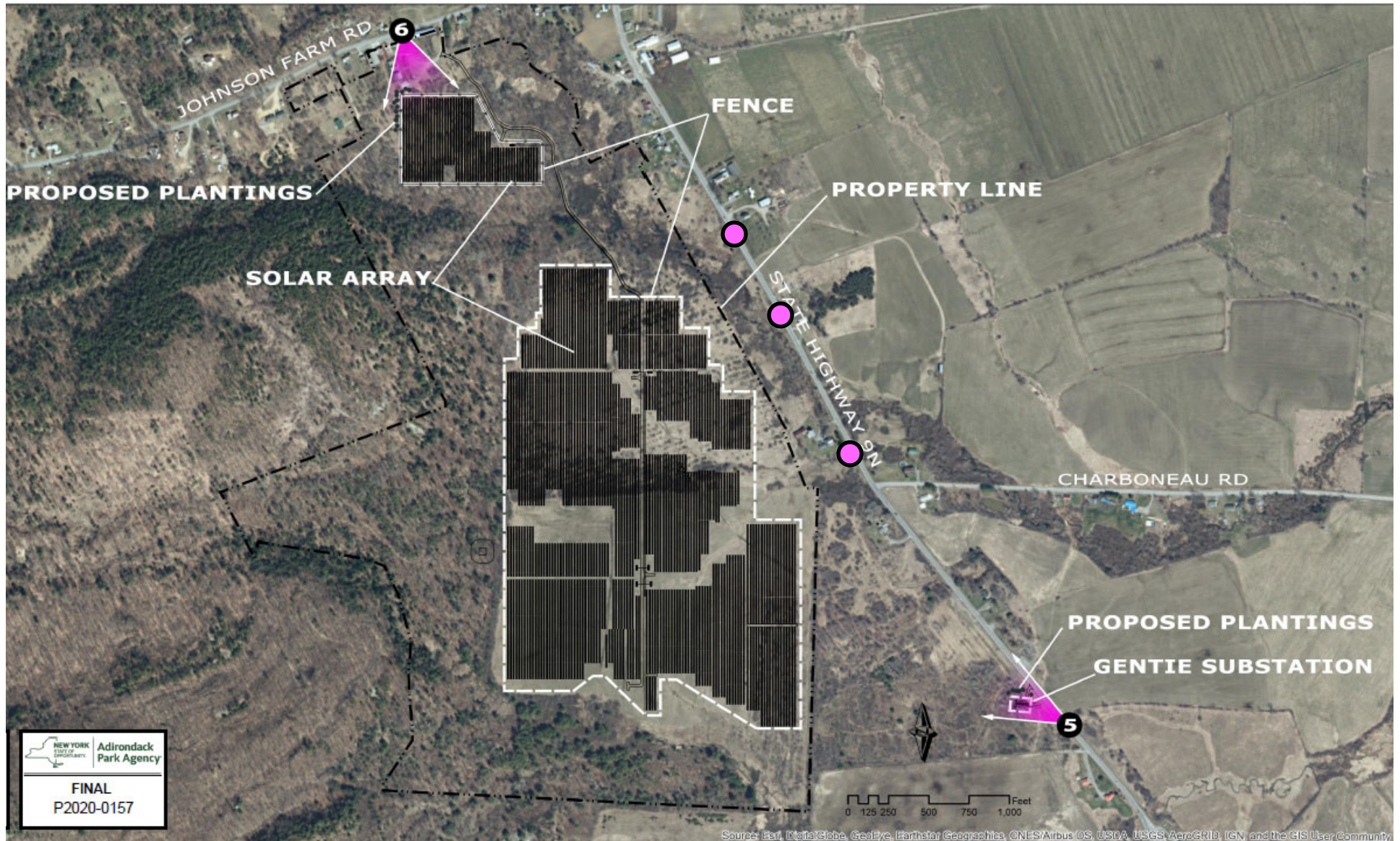


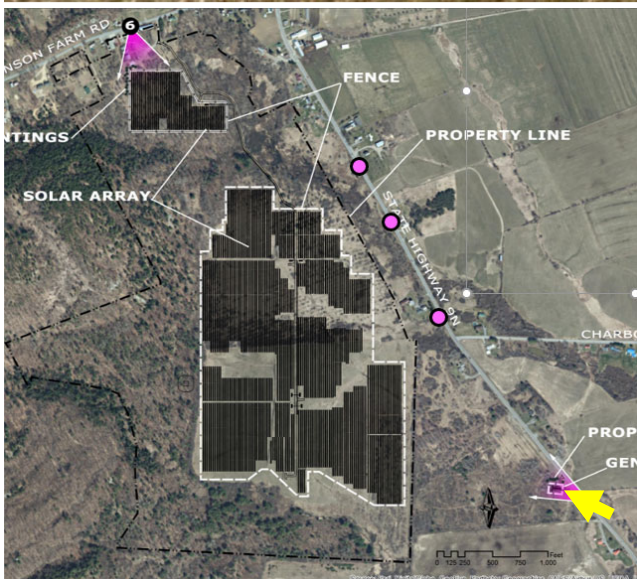
East Light Partners

ELP TICONDEROGA SOLAR PROJECT PROJECT VISIBILITY MAP

THIS MAP IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE. LINE OF SIGHT CALCULATIONS BASED ON PUBLIC DOMAIN TOPOGRAPHIC AND LAND COVER DATA PUBLISHED BY THE US GOVT.

Photo Locations





HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38mm Zoom)

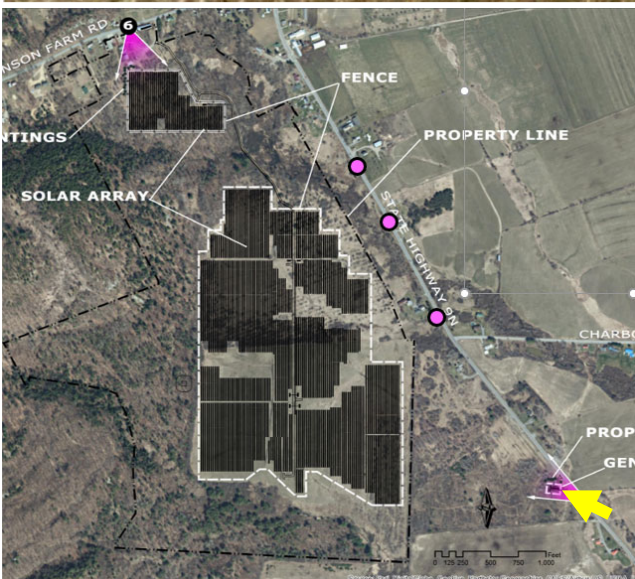
Visual Environments
7/27/21

DEROGA SOLAR PROJECT

LOOKING NORTHWEST - EXISTING VIEW

KOP# 5

Existing Conditions



HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38mm Zoom)

DEROGA SOLAR PROJECT

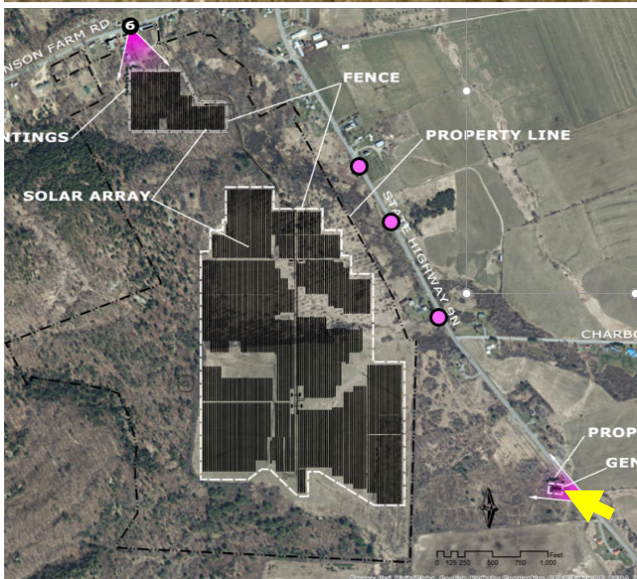
LOOKING NORTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED
ON CURRENT INFORMATION AS OF
THIS DATE AND IS SUBJECT TO
CHANGE. PROPOSED TREES
ARE ILLUSTRATED AT 5 YEARS OF
GROWTH.

Visual Environments
7/27/21

KOP# 5

Proposed Conditions + 5-year trees



HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38mm Zoom)

DEROGA SOLAR PROJECT

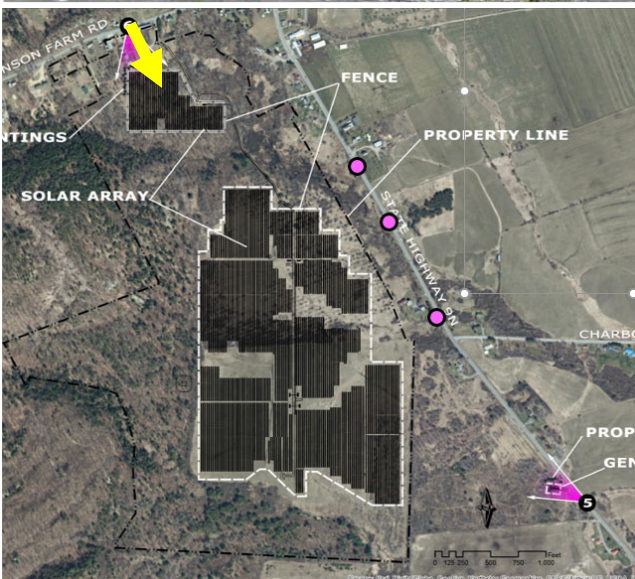
LOOKING NORTHWEST - PROPOSED VIEW

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ARE ILLUSTRATED AT 10 YEARS OF
GROWTH

Visual Environments
7/27/21

KOP# 5

Proposed Conditions + 10-year trees



HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38mm Zoom)

DEROGA SOLAR PROJECT

- LOOKING SOUTH - EXISTING VIEW

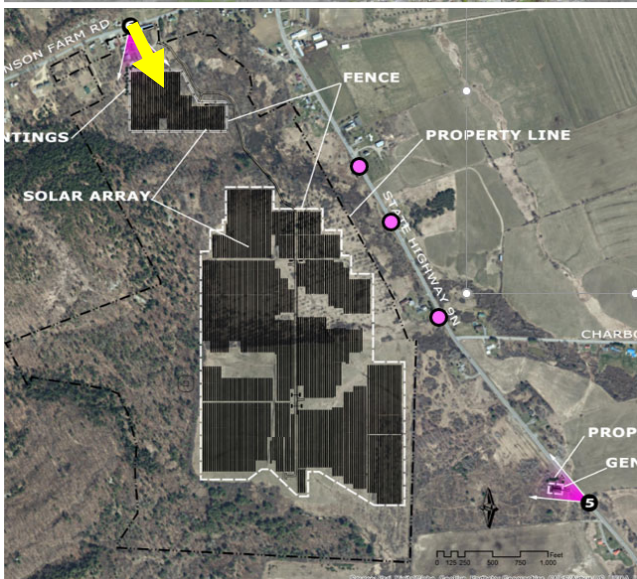
Existing Conditions (38 mm)

THIS RENDERING IS BASED
ON CURRENT INFORMATION AS OF
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CHANGE. PROPOSED TREES
ARE ILLUSTRATED AT 5 & 10 YEARS OF
GROWTH

Visual Environments

7/27/21

KOP# 6



HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38mm Zoom)

DEROGA SOLAR PROJECT

- LOOKING SOUTH - PROPOSED VIEW

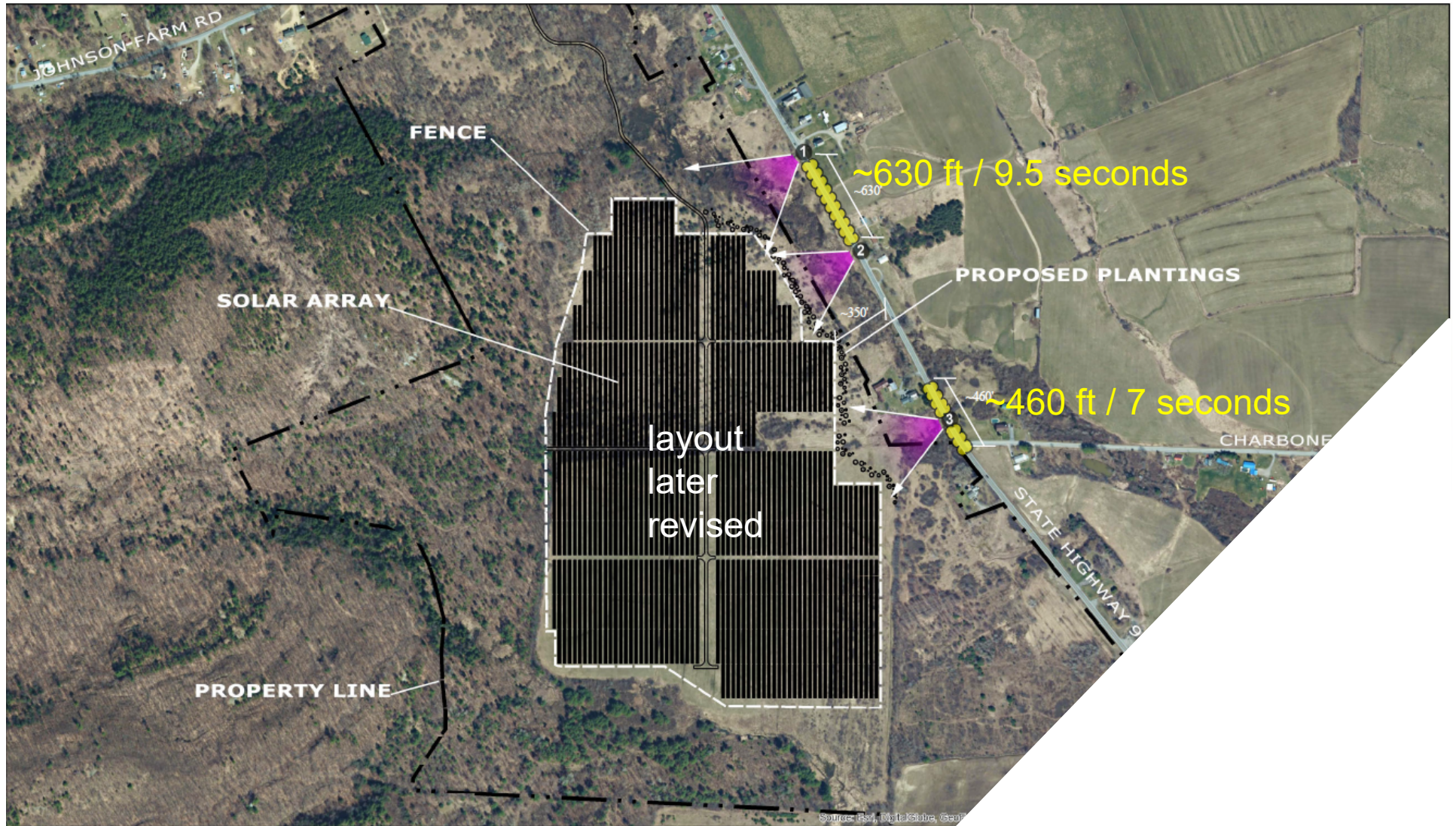
THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE. PROPOSED TREES ARE ILLUSTRATED AT 5 & 10 YEARS OF GROWTH.

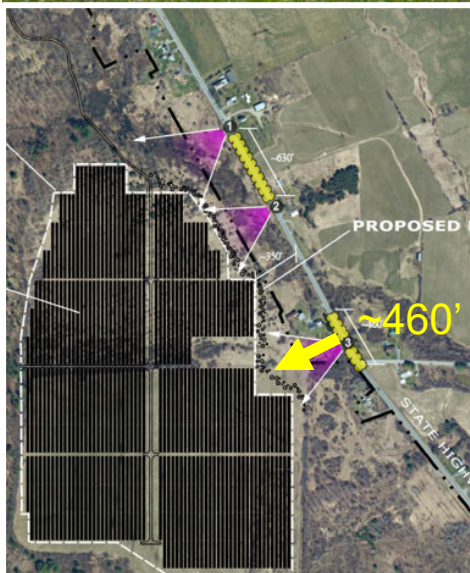
Visual Environments

7/27/21

KOP# 6

Proposed Conditions (38 mm)





WIDE HORIZONTAL FIELD OF VIEW - 52 DEGREES - (35 mm Full Frame Camera with a 38mm Zoom)

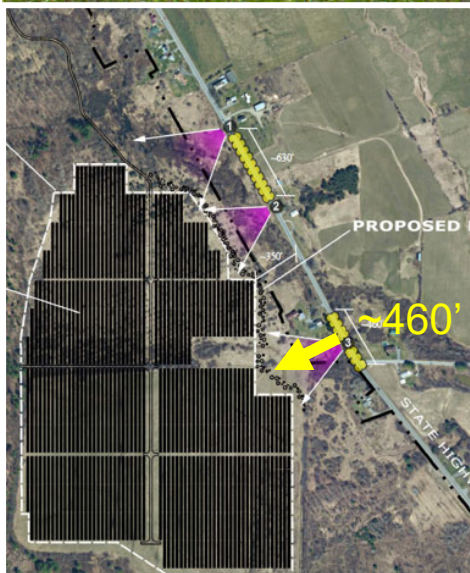
ADIRONDACK SOLAR PROJECT

STATE HIGHWAY 9N - LOOKING SOUTHWEST - EXISTING VIEW

Visual Environments
10/1/20

KOP# **3**

Existing Conditions (38 mm)



WIDE HORIZONTAL FIELD OF VIEW - 52 DEGREES - (35 mm Full Frame Camera with a 38 mm Zoom)

WICONDEROGA SOLAR PROJECT

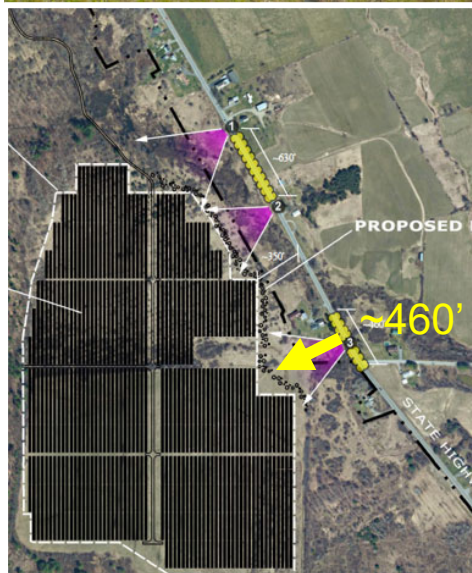
GHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

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ARE ILLUSTRATED AT 5 YEARS OF
GROWTH

Visual Environments
10/1/20

KOP# **3**

Proposed Conditions (38 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES - (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/1/20

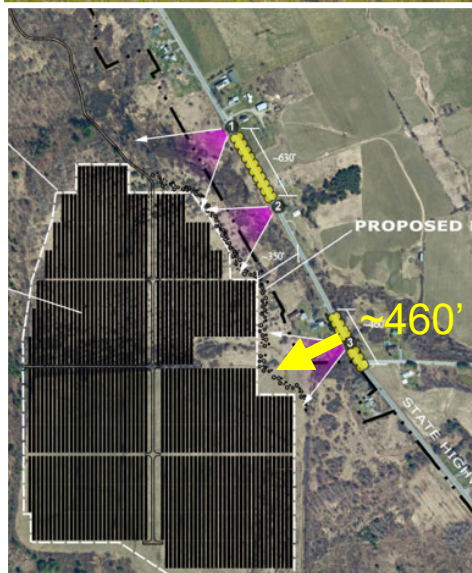
TICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

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KOP# **3**

Proposed Conditions (50 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES - (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/21/20

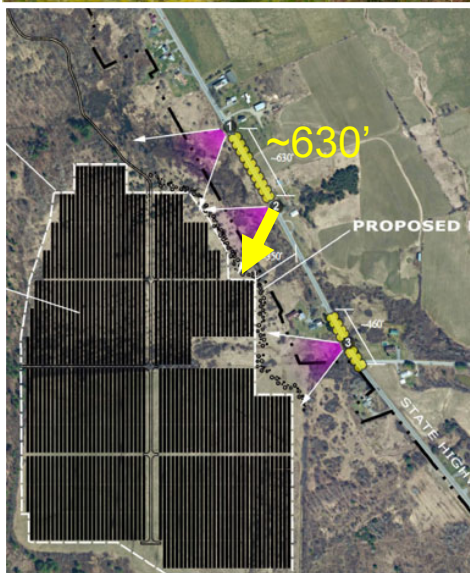
TI CONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

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ARE ILLUSTRATED AT 10 YEARS OF
GROWTH.

KOP# **3**

Proposed Conditions (50 mm) + 10-year trees



WIDE HORIZONTAL FIELD OF VIEW - 63 DEGREES (35 mm Full Frame Camera with a 35mm Zoom)

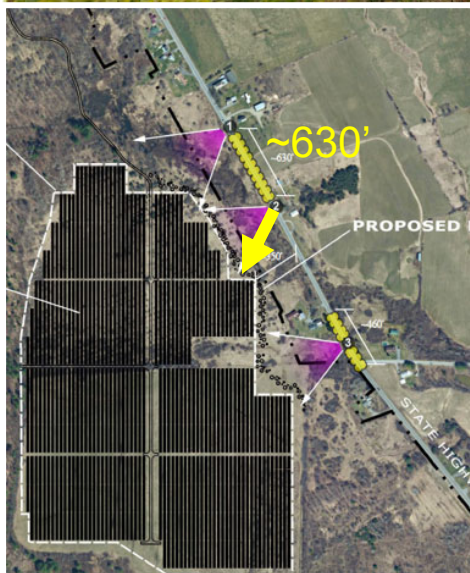
Visual Environments
10/1/20

ADIRONDACK SOLAR PROJECT

GHWAY 9N - LOOKING SOUTH - EXISTING VIEW

KOP# **2a**

Existing Conditions (38 mm)



WIDE HORIZONTAL FIELD OF VIEW - 63 DEGREES (35 mm Full Frame Camera with a 35 mm Zoom)

WICONDEROGA SOLAR PROJECT

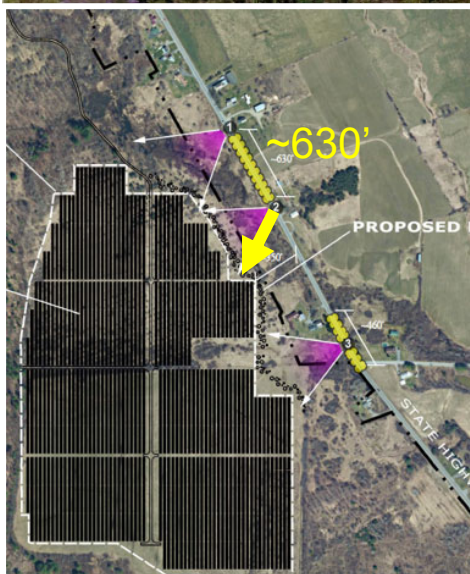
HIGHWAY 9N - LOOKING SOUTH - PROPOSED VIEW

THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE. PROPOSED TREES ARE ILLUSTRATED AT 5 YEARS OF GROWTH.

Visual Environments
10/1/20

KOP# **2a**

Proposed Conditions (38 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/1/20

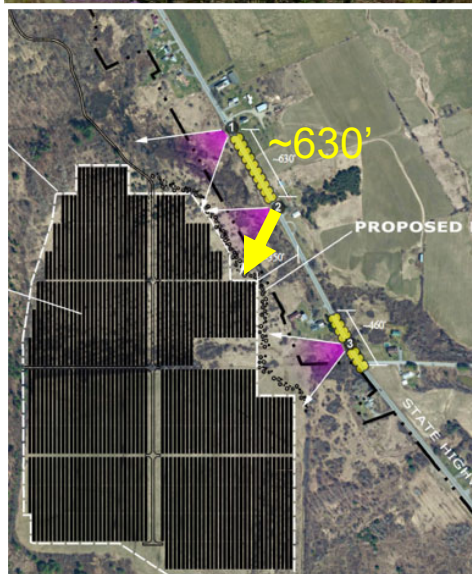
WICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING SOUTH - PROPOSED VIEW

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GROWTH.

KOP# **2a**

Proposed Conditions (50 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES (35 mm Full Frame Camera with a 50 mm Zoom)

WICONDEROGA SOLAR PROJECT

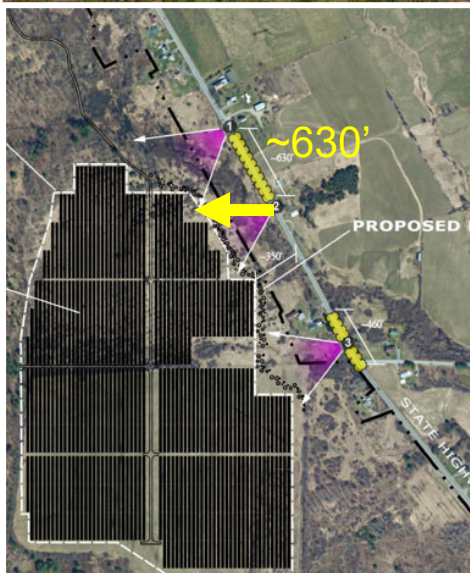
GHWAY 9N - LOOKING SOUTH - PROPOSED VIEW

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Visual Environments
10/21/20

KOP# 2a

Proposed Conditions (50 mm) + 10-year trees



WIDE HORIZONTAL FIELD OF VIEW - 63 DEGREES (35 mm Full Frame Camera with a 35mm Zoom)

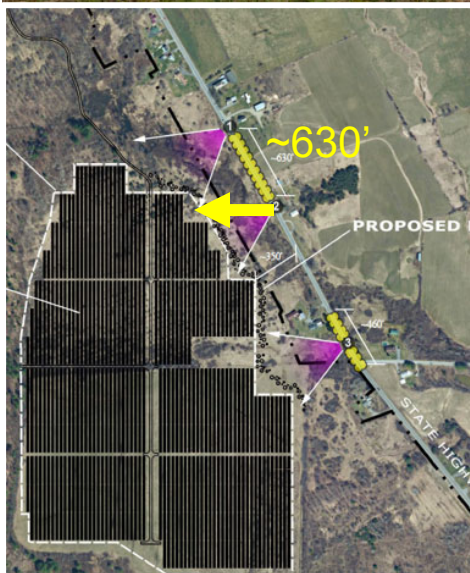
Visual Environments
10/1/20

WICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING WEST - EXISTING VIEW

KOP# **2b**

Existing Conditions (38 mm)



WIDE HORIZONTAL FIELD OF VIEW - 63 DEGREES (35 mm Full Frame Camera with a 35mm Zoom)

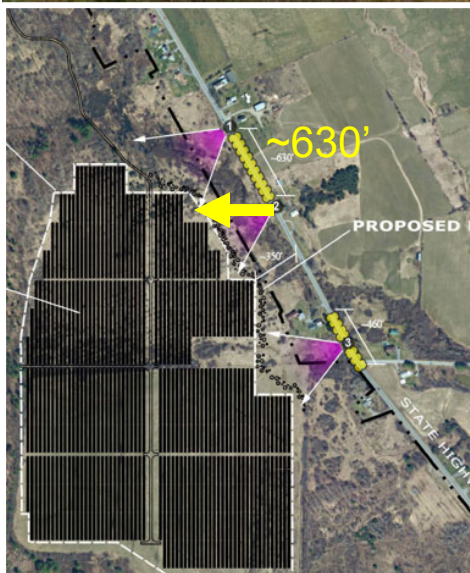
TI CONDEROGA SOLAR PROJECT GHWAY 9N - LOOKING WEST - PROPOSED VIEW

THIS RENDERING IS BASED
 ON CURRENT INFORMATION AS OF
 THIS DATE AND IS SUBJECT TO
 CHANGE. PROPOSED TREES
 ARE ILLUSTRATED AT 5 YEARS OF
 GROWTH.

Visual Environments
 10/1/20

KOP# 2b

Proposed Conditions (38 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/1/20

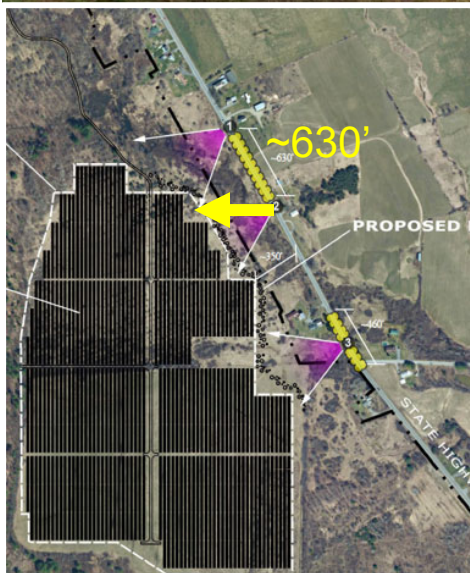
WICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING WEST - PROPOSED VIEW

THIS RENDERING IS BASED
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GROWTH.

KOP# **2b**

Proposed Conditions (50 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES (35 mm Full Frame Camera with a 50 mm Zoom)

WICONDEROGA SOLAR PROJECT

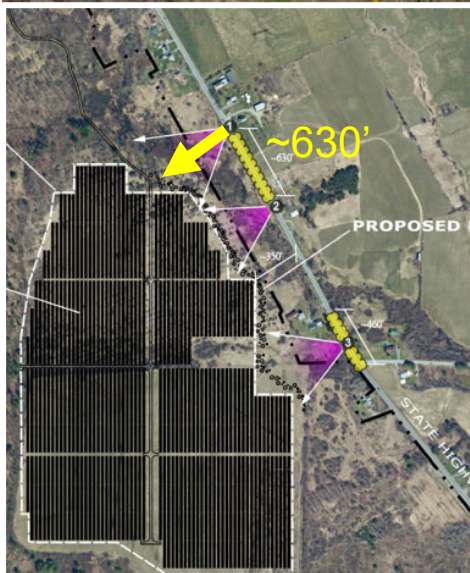
GHWAY 9N - LOOKING WEST - PROPOSED VIEW

THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE. PROPOSED TREES ARE ILLUSTRATED AT 5 YEARS OF GROWTH.

Visual Environments
10/21/20

KOP# 2b

Proposed Conditions (50 mm) + 10-year trees



WIDE HORIZONTAL FIELD OF VIEW - 52 DEGREES (35 mm Full Frame Camera with a 38 mm Zoom)

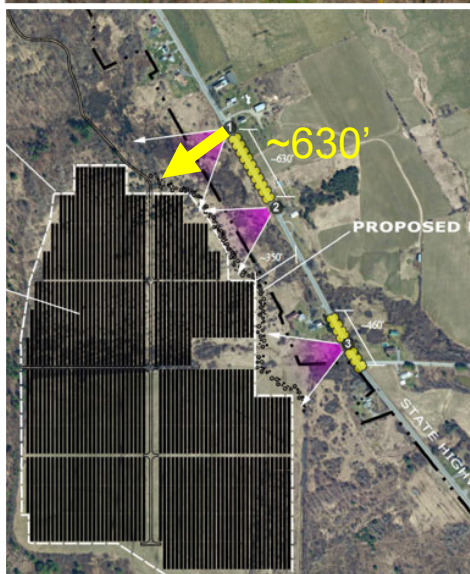
Visual Environments
10/1/20

ADIRONDACK SOLAR PROJECT

GHWAY 9N - LOOKING SOUTHWEST - EXISTING VIEW

KOP# **1**

Existing Conditions (38 mm)



WIDE HORIZONTAL FIELD OF VIEW - 52 DEGREES - (35 mm Full Frame Camera with a 38 mm Zoom)

Visual Environments
10/1/20

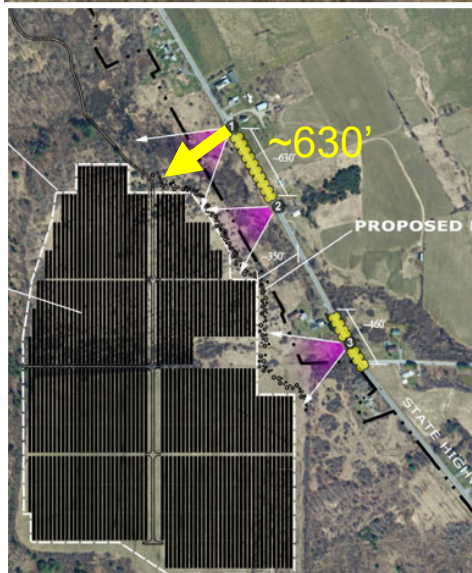
WICONDEROGA SOLAR PROJECT

STATE HIGHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED
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THIS DATE AND IS SUBJECT TO
CHANGE. PROPOSED TREES
ARE ILLUSTRATED AT 5 YEARS OF
GROWTH.

KOP# **1**

Proposed Conditions (38 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES - (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/1/20

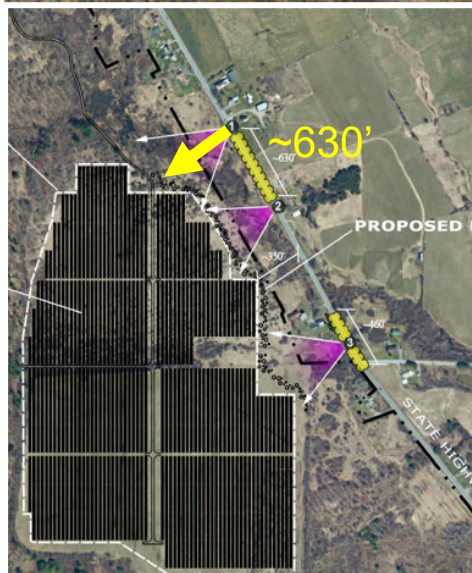
TICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED
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KOP# **1**

Proposed Conditions (50 mm) + 5-year trees



NORMAL HORIZONTAL FIELD OF VIEW - 39 DEGREES - (35 mm Full Frame Camera with a 50 mm Zoom)

Visual Environments
10/21/20

TICONDEROGA SOLAR PROJECT

GHWAY 9N - LOOKING SOUTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED
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KOP# **1**

Proposed Conditions (50 mm) + 10-year trees



Photo 5 – View from 9N West Towards North Array

35 mm Photograph from
Top of Mt. Defiance

ELP Ticonderoga Solar



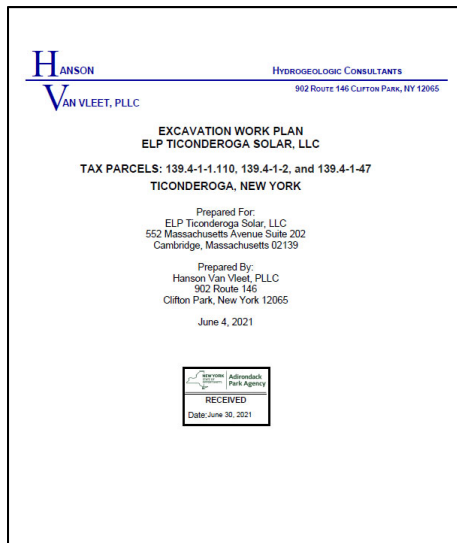
Public Comment and Review by Others

Public Comment

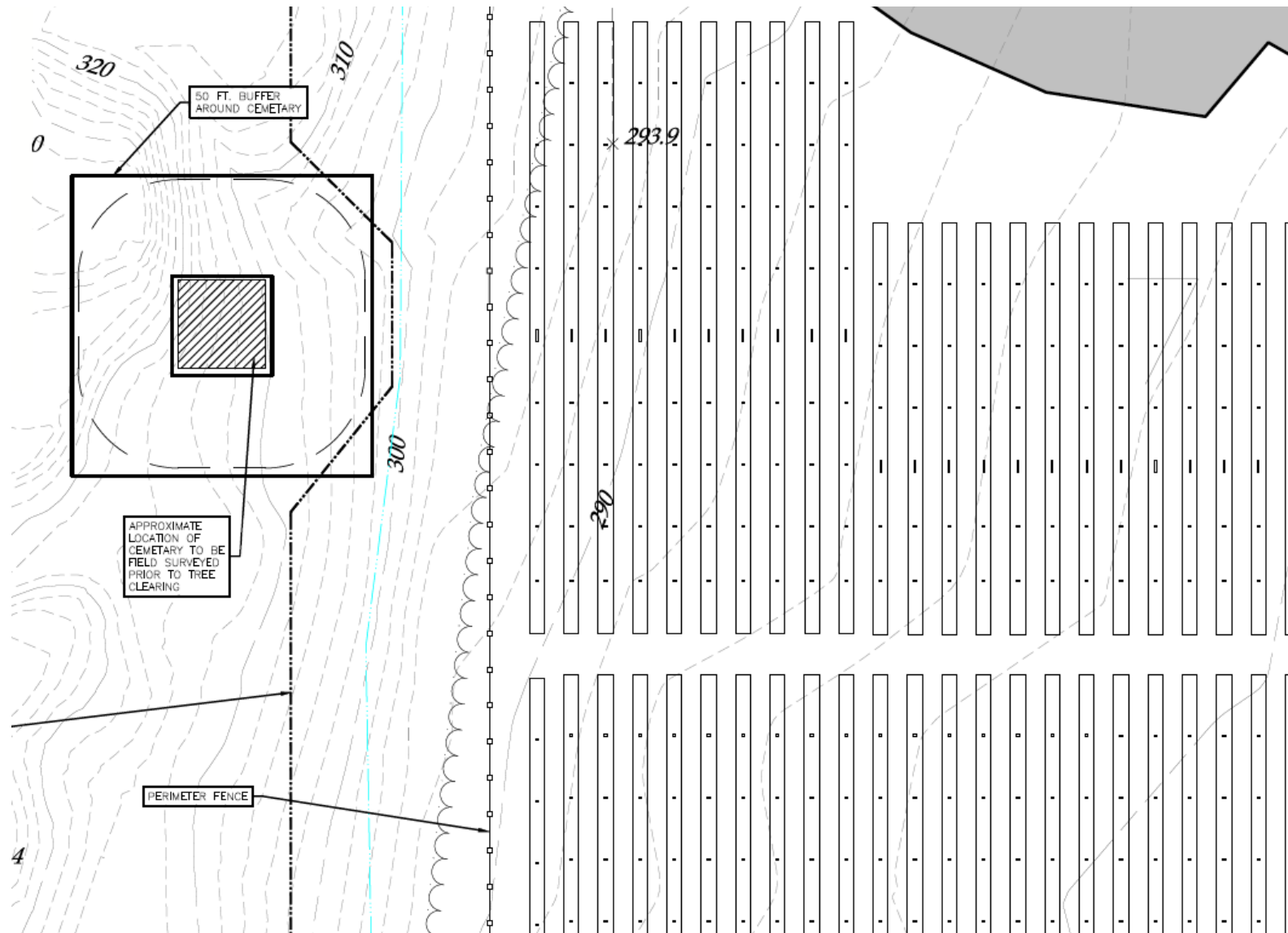
- Public Notice
 - Mailed to adjoining landowners, town, county, LGRB
 - Posted to NYS APA website
 - Posted to NYS DEC's Environmental Notice Bulletin
- Comment Letters – 29 total
 - 2020 – 3 letters with concerns, 1 letter in support
 - 2021 – 25 letters in support
- Concern
 - change to natural environment/neighborhood/wildlife
 - soil contamination
 - family cemetery
- Support
 - renewable energy important
 - good use of site
 - economic benefit

Soils and Work Plan

- Site contains former orchard and related soil contamination
 - Residual pesticides and metals in surficial soils
 - Arsenic exceeds DEC's soil cleanup objective for commercial and industrial uses
 - DEC's solid waste regulations apply to soil excavation
 - Applicant has prepared an Excavation Work Plan
 - Stormwater Management Plan – prevent soil migration



Cemetery Avoidance

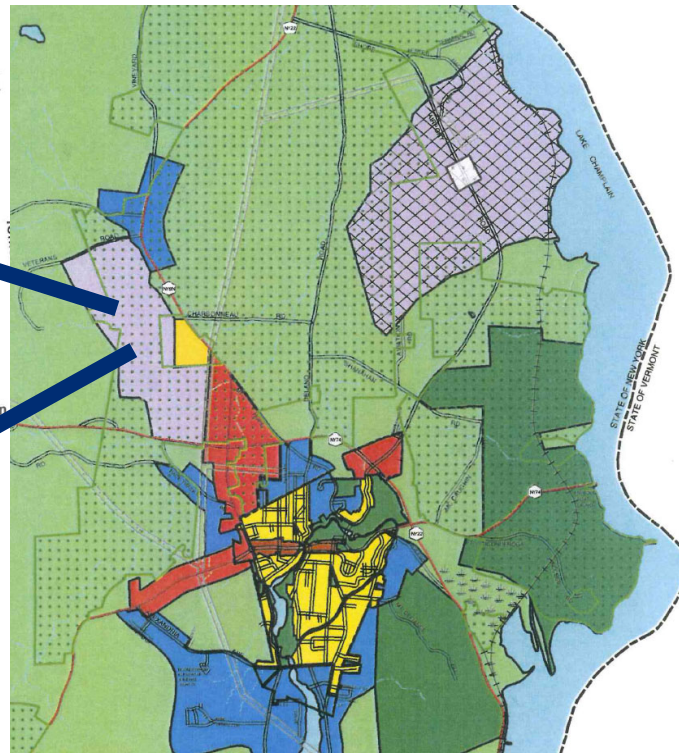
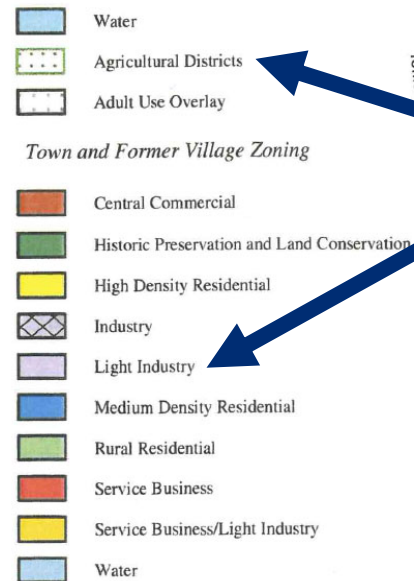


Review by Others

- Town of Ticonderoga
 - Issued Site Plan Approval May 2021
 - Property zoned “Light Industrial”
 - Project is “Tier III Ground Mounted” solar

Town of Ticonderoga Essex County, New York Zoning Map

Adopted: January 15, 2003



Review by Others

- NYS OPRHP
 - September 2020 – no adverse impacts
 - Provided cemetery avoided, 25-ft buffer maintained
- NYS DEC
 - Grassland birds – June 2021 letter of No Jurisdiction
 - Stream disturbance permit required for culvert
 - May require Individual Water Quality Certification
 - Soil excavation: solid waste regulations
 - SPDES / Stormwater Notice of Intent
- US Army Corps
 - Submitted application, under review

Taxes

- PILOT Agreement
 - In progress with town, school, county
 - Current draft framework: \$2,000/MW per year, escalating 2% annually → at least \$40,000 in revenue

**Staff
Recommendation:
Approve with
Conditions**

Conclusions of Law

- Development authorized:
 - ✓ Consistent with land use and development plan
 - ✓ Compatible with character description and purposes policies, and objectives of each land use area
 - ✓ Consistent with overall intensity guidelines
 - ✓ Complies with shoreline restrictions
 - ✓ No undue adverse impact on resources of the Park
 - ✓ Secures natural benefits of wetlands
 - ✓ Results in minimal degradation / destruction of the wetland or its associated values

Draft Permit Conditions

- Construct solar generation facility according to Project Plans
- Change to Point of Interconnection requires prior review
- Retain trees outside fence line, with exceptions / zones
- No tree cutting April 1 – October 31 (bats)
- No mowing May 1 – October 31 (pollinators)
- Plant trees as depicted on Project Plans
- Equipment cleaning (invasive species spread prevention)
- Comply with Stormwater Plan (permanent wetland protection)
- Comply with Erosion and Sediment Control Plan
- Provide Fraction Mitigation Plan prior to directional drilling
- Wetland Mitigation Plan: implement, monitor, report
- Provide photographs after construction
- If/when inoperative, follow Decommissioning Plan within 1 yr



**Adirondack
Park Agency**

ELP Ticonderoga Solar, LLC

P2020-0157

**Kathleen Doering
Eric Rafferty
National Grid
ELP Ticonderoga Solar, LLC**

October 14, 2021