



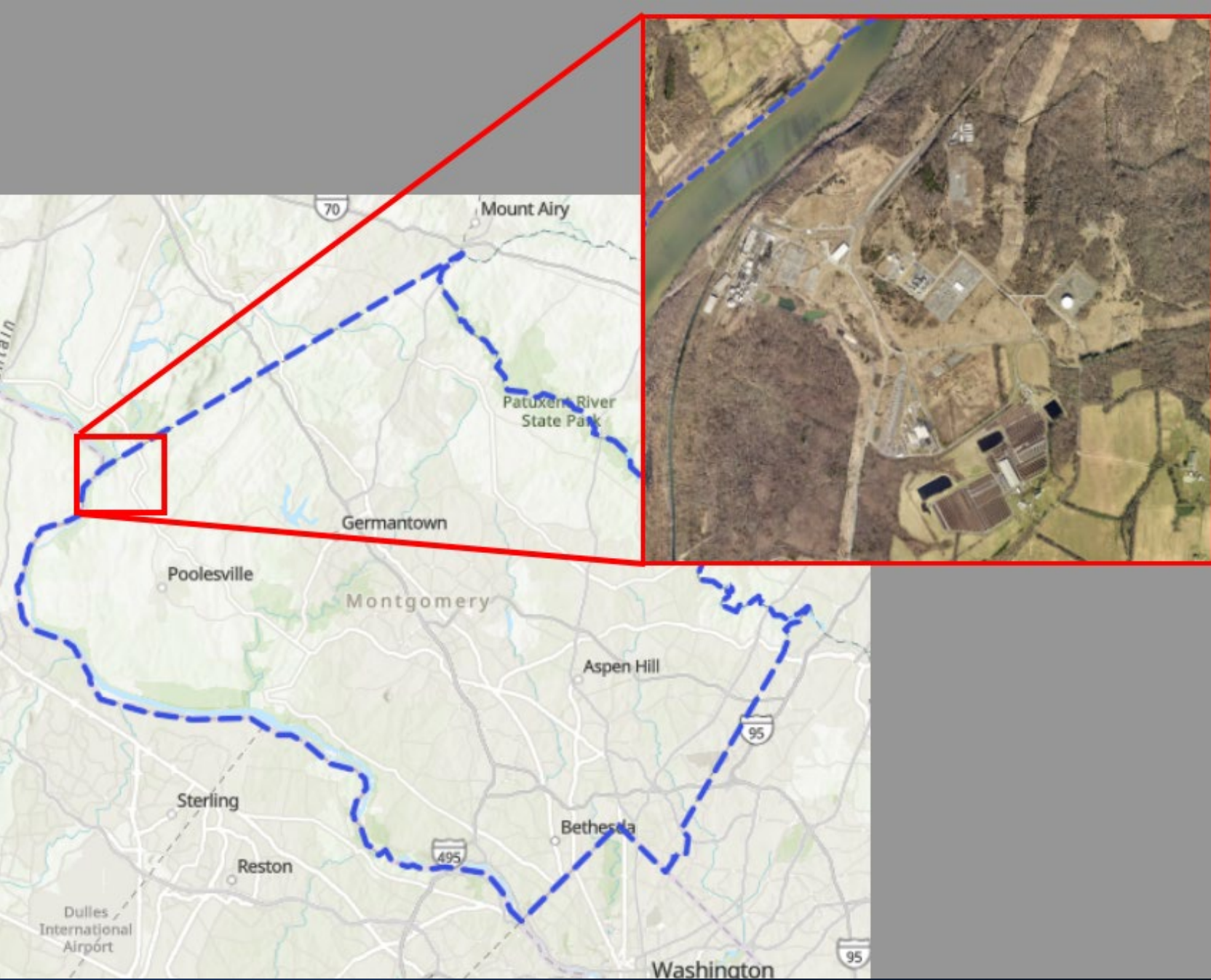
Presentation  
Office of the Zoning Hearing  
Examiner

---

Conditional Use 24-13

Terra Energy, LLC





# Dickerson Maryland







- LEGEND:**
- POTENTIAL STREAM
  - STREAM VALLEY BUFFER
  - EX RAILROAD
  - LIMITS OF DISTURBANCE
  - PROPERTY
  - EXISTING PAVEMENT/ROAD
  - ZONING
  - EXISTING FOREST

**Exhibit # 3**

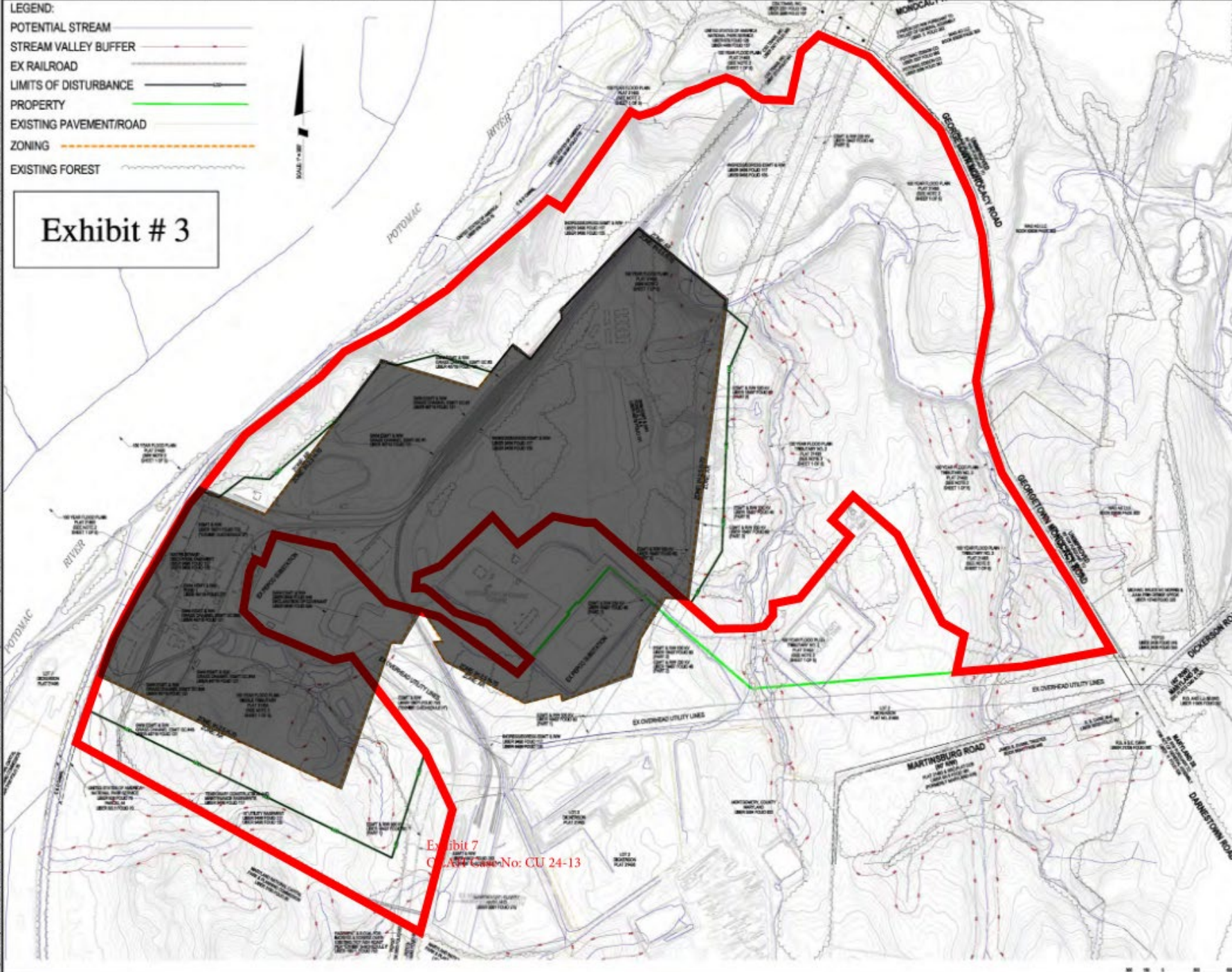


Exhibit 7  
 Case No: CU 24-13

**SOLTESZ, INC.**  
 ROCKVILLE OFFICE  
 7 Rosemont Place, Suite 100  
 Rockville, MD 20850  
 P. 301.546.3750 F. 301.943.9057  
 www.soltesz.com

Engineering  
 Surveying  
 Planning  
 Environmental Science

DATE	DESCRIPTION

**MISCELLANEOUS**

THESE PLANS AND SPECIFICATIONS ARE PREPARED BY SOLTESZ, INC. FOR THE PROJECT DESCRIBED HEREIN. THEY ARE NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF SOLTESZ, INC. ANY CHANGES TO THESE PLANS AND SPECIFICATIONS MUST BE APPROVED BY SOLTESZ, INC. IN WRITING.

**OWNER/DEVELOPER/APPLICANT**

**PROFESSIONAL CERTIFICATION**

**EXISTING CONDITIONS EXHIBIT**

**DICKERSON POWER PLANT**  
 21200 MARTINSBURG RD, DICKERSON, MD 20842  
 LOTS 2, 3, 7, 8 AND 9

DATE	SCALE



- LEGEND:
- POTENTIAL STREAM
  - STREAM VALLEY BUFFER
  - EX RAILROAD
  - LIMITS OF DISTURBANCE
  - PROPERTY
  - EXISTING PAVEMENT/ROAD
  - ZONING
  - EXISTING FOREST



**Exhibit # 3**

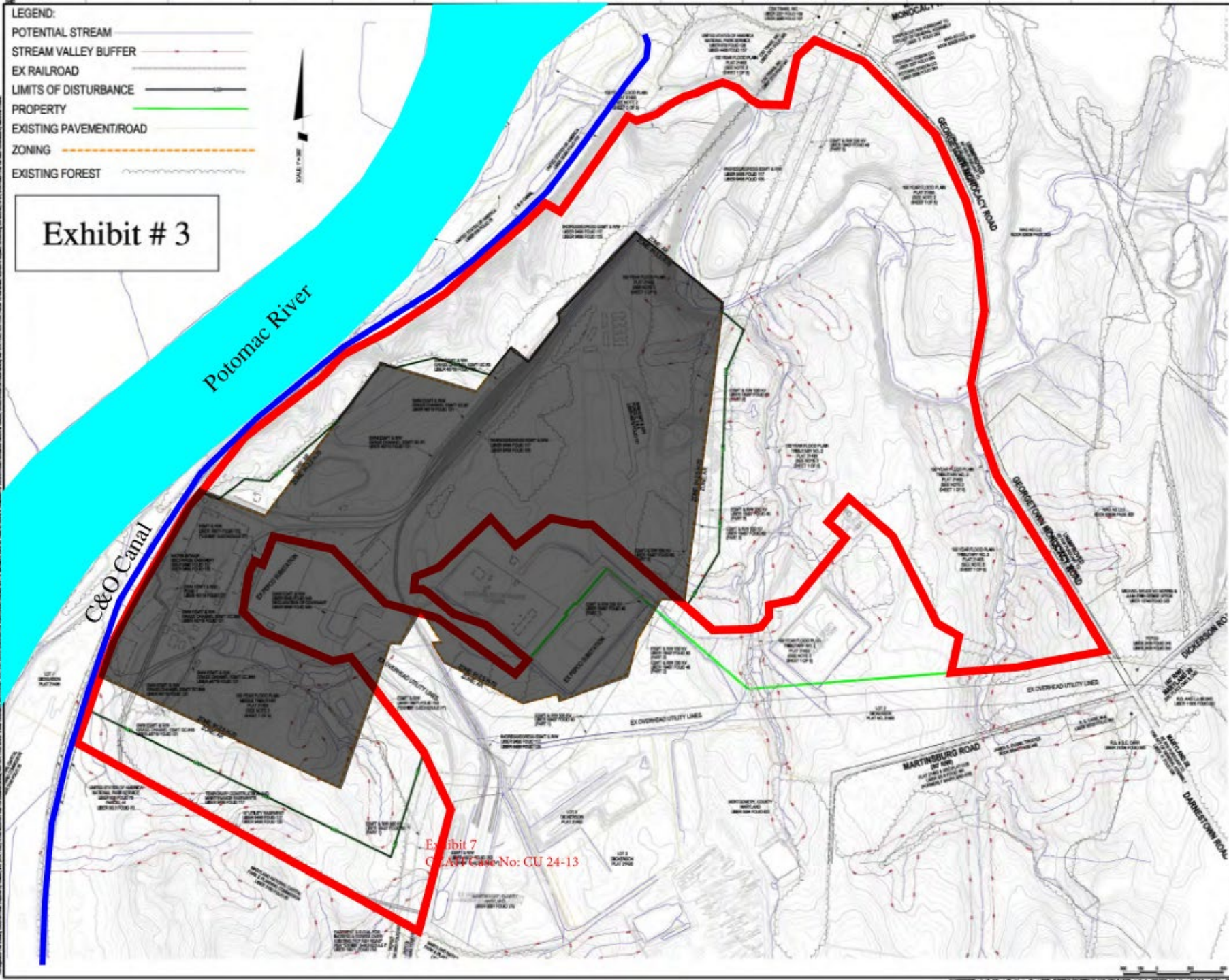


Exhibit 7  
 CEAT Case No: CU 24-13

**SOLTESZ, INC.**  
 ROCKVILLE OFFICE  
 2 Pleasant Place, Suite 100  
 Rockville, MD 20850  
 P. 301.946.5700 F. 301.946.9597  
 www.soltesz.com

Engineering  
 Surveying  
 Planning  
 Environmental Science

NO.	DESCRIPTION	DATE

**MOBILITY NOTE**  
 THIS PLAN AND THE PROJECTS DESCRIBED THEREIN HAVE BEEN PREPARED BY SOLTESZ, INC. FOR THE USE OF THE CLIENT. SOLTESZ, INC. DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, DATA, OR MATERIALS PROVIDED BY THE CLIENT. SOLTESZ, INC. IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS PLAN OR THE PROJECTS DESCRIBED THEREIN. SOLTESZ, INC. IS NOT A PROFESSIONAL ENGINEER OR ARCHITECT IN THE STATE OF MARYLAND.

**OWNER / DEVELOPER / APPLICANT**  
 TOTAL PROJECTS:  
 PROJECTS:  
 APPLICANT'S RESPONSIBILITY:  
 APP. TERMS:

**PROFESSIONAL CERTIFICATION**  
 I, THE ENGINEER, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND AND THAT I AM THE DESIGNER OF THE PROJECTS DESCRIBED IN THIS PLAN AND THE PROJECTS DESCRIBED THEREIN.

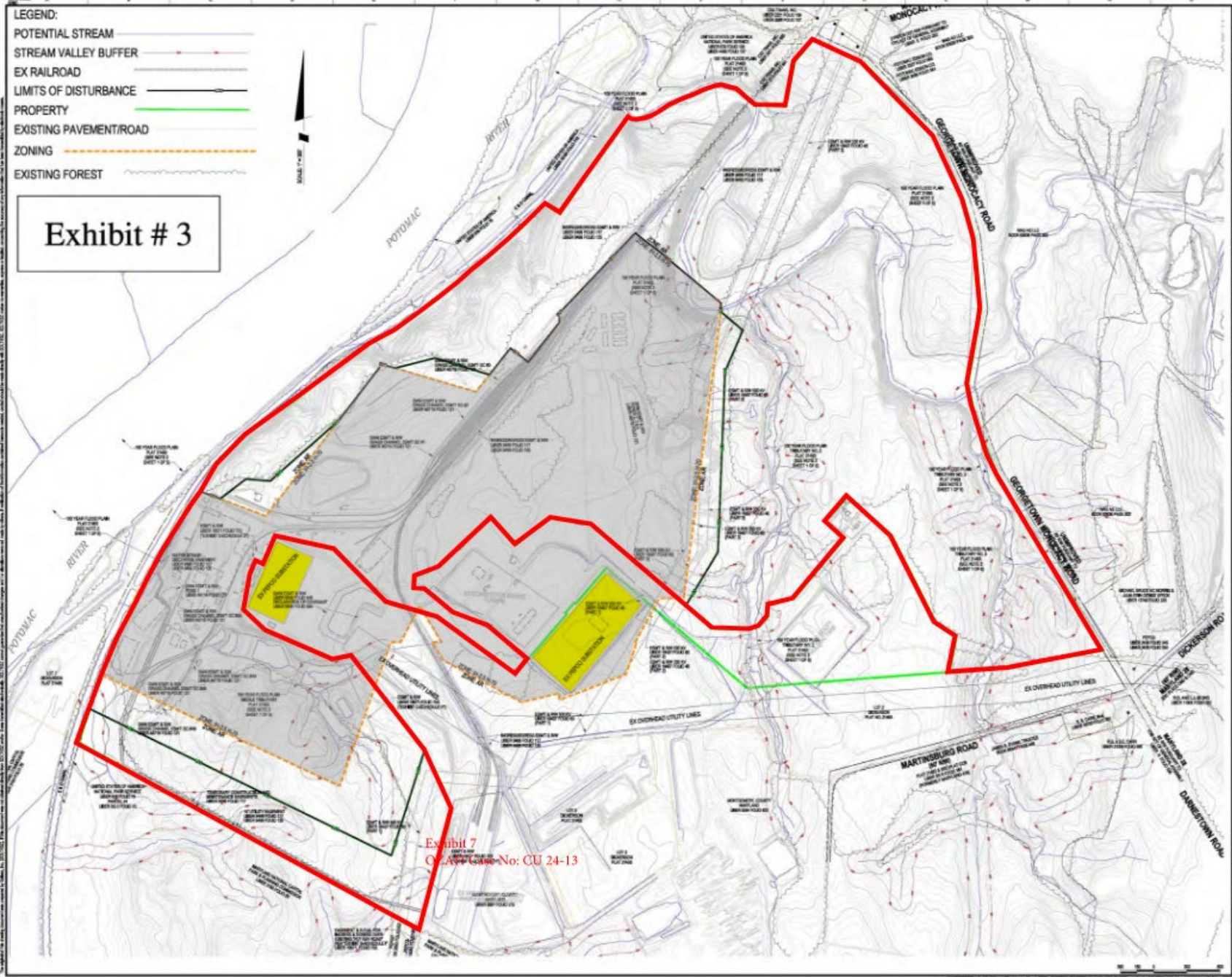
**DATE OF PREPARATION:**  
**DATE OF REVISION:**

**EXISTING CONDITIONS EXHIBIT**  
**DICKERSON POWER PLANT**  
**21200 MARTINSBURG RD, DICKERSON, MD 20842**  
**LOTS 2, 3, 7, 8 AND 9**

DATE	BY	DESCRIPTION

SCALE	DATE





# Substations







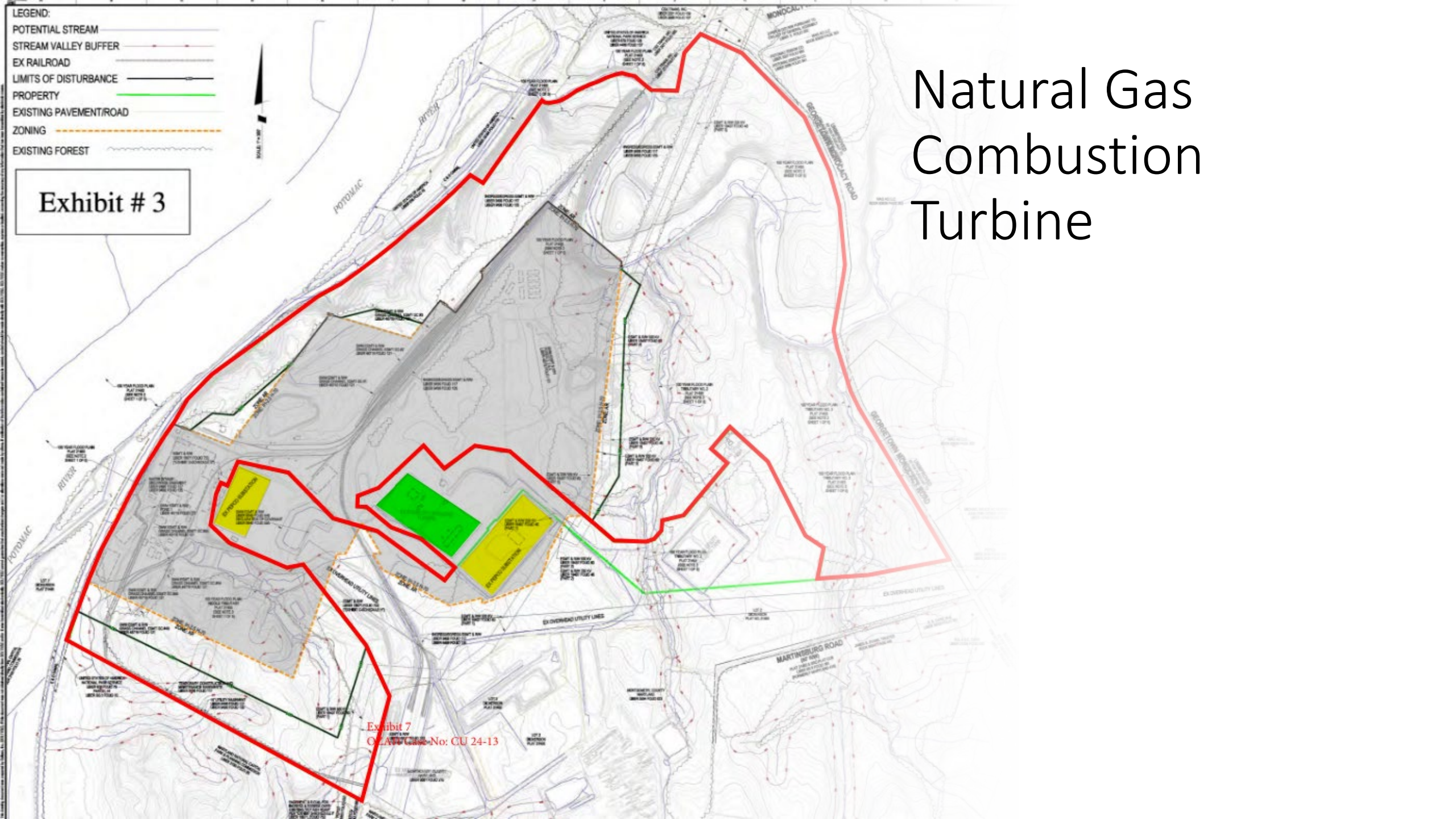




- LEGEND:
- POTENTIAL STREAM
  - STREAM VALLEY BUFFER
  - EX RAILROAD
  - LIMITS OF DISTURBANCE
  - PROPERTY
  - EXISTING PAVEMENT ROAD
  - ZONING
  - EXISTING FOREST

Exhibit # 3

# Natural Gas Combustion Turbine



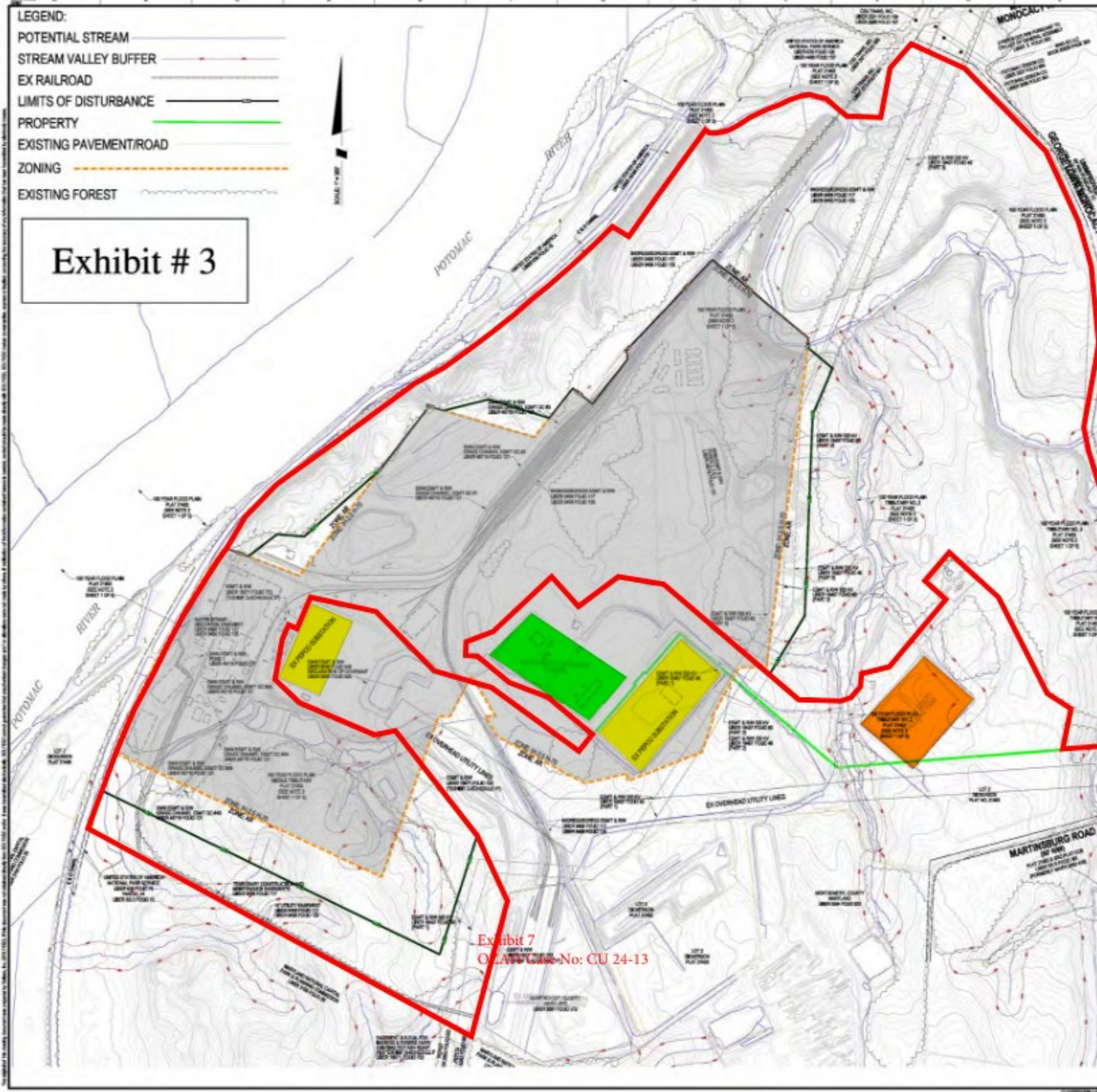












# Natural Gas Facilities and Holding Tank







- POTENTIAL STREAM
- STREAM VALLEY BUFFER
- EX RAILROAD
- LIMITS OF DISTURBANCE
- PROPERTY
- EXISTING PAVEMENT/ROAD
- ZONING
- EXISTING FOREST



Exhibit # 3

# Montgomery County Green Waste Facility

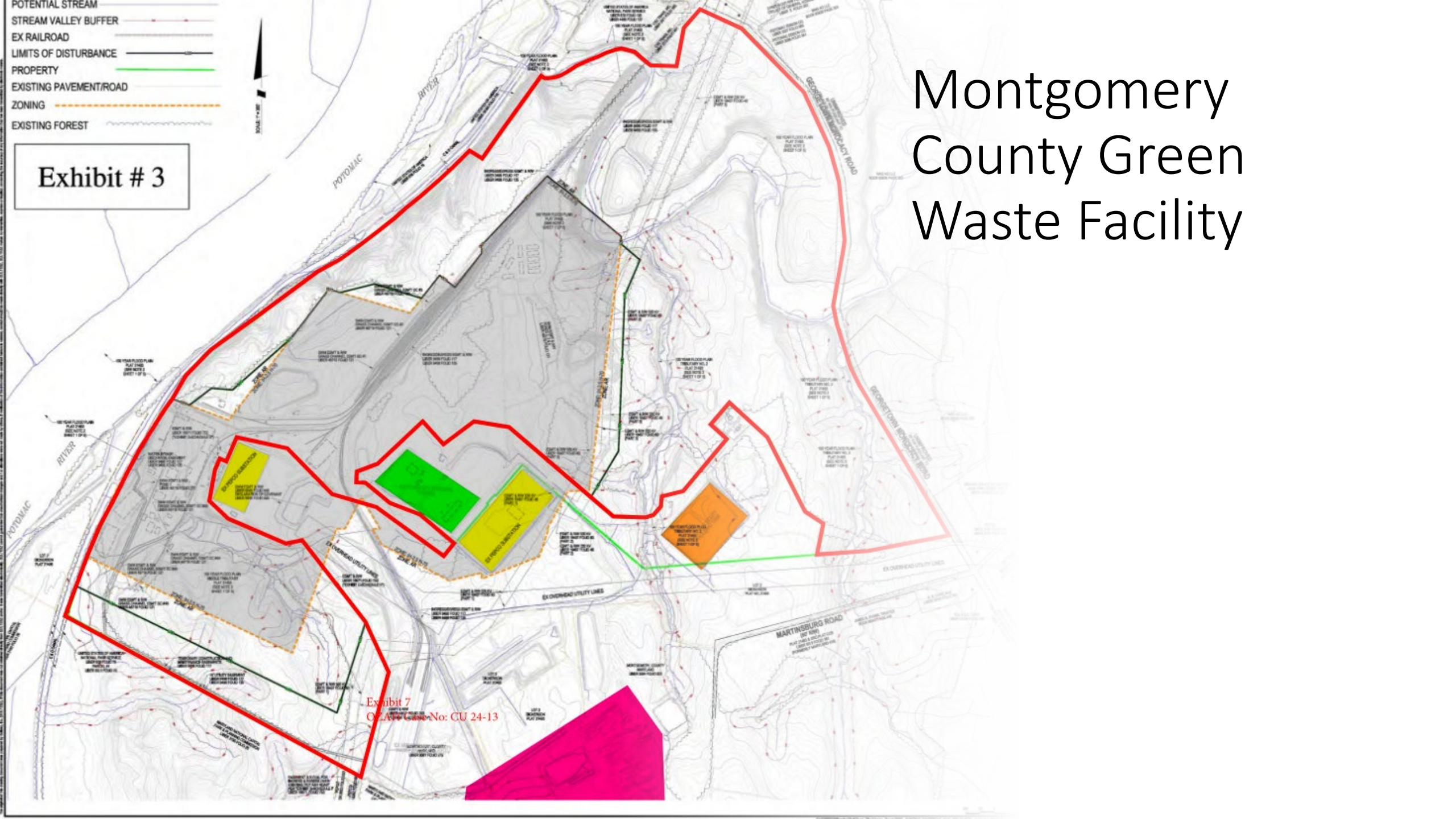


Exhibit 7  
 C.A. Case No: CU 24-13



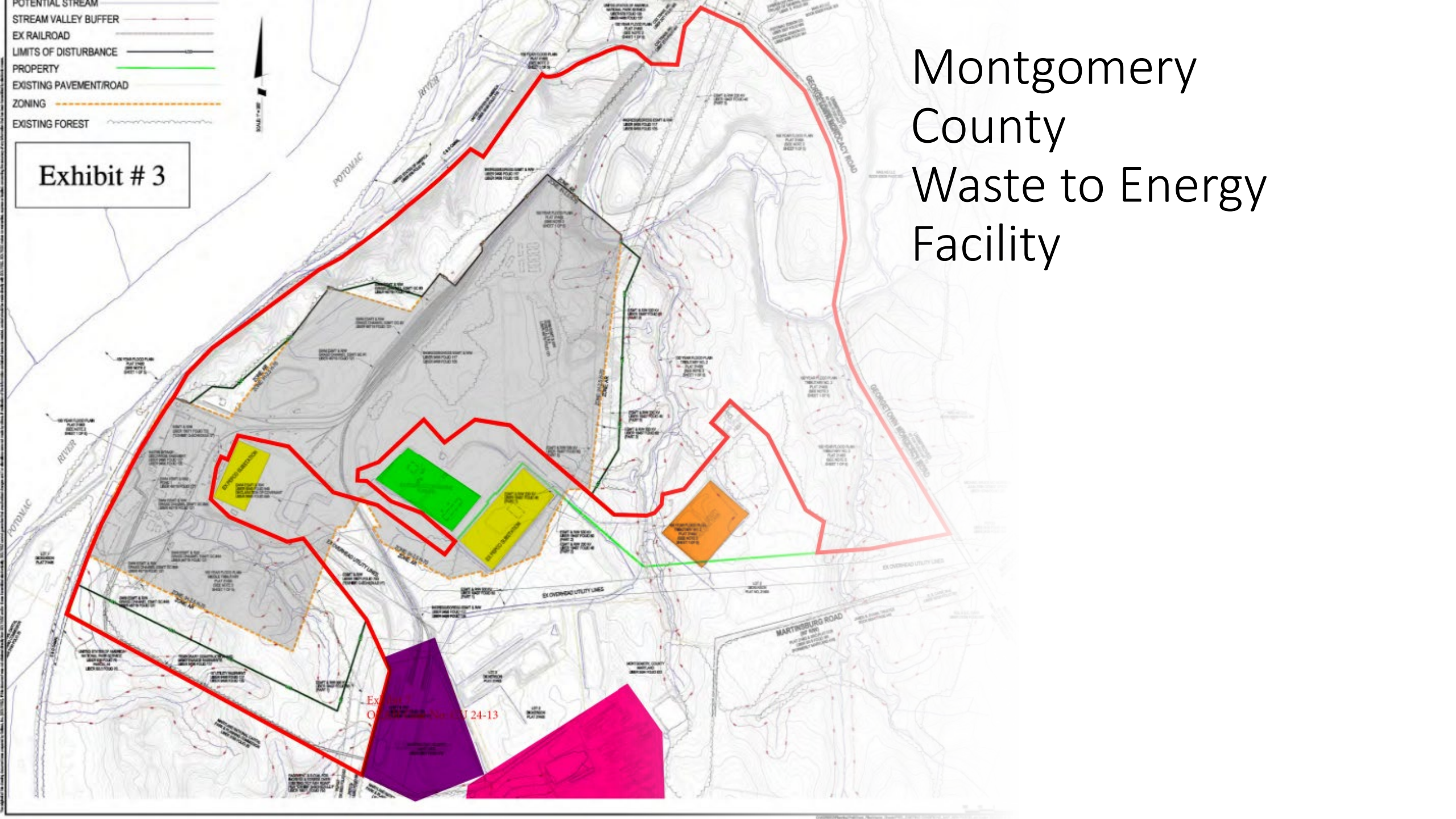




- POTENTIAL STREAM
- STREAM VALLEY BUFFER
- EX RAILROAD
- LIMITS OF DISTURBANCE
- PROPERTY
- EXISTING PAVEMENT/ROAD
- ZONING
- EXISTING FOREST

Exhibit # 3

# Montgomery County Waste to Energy Facility



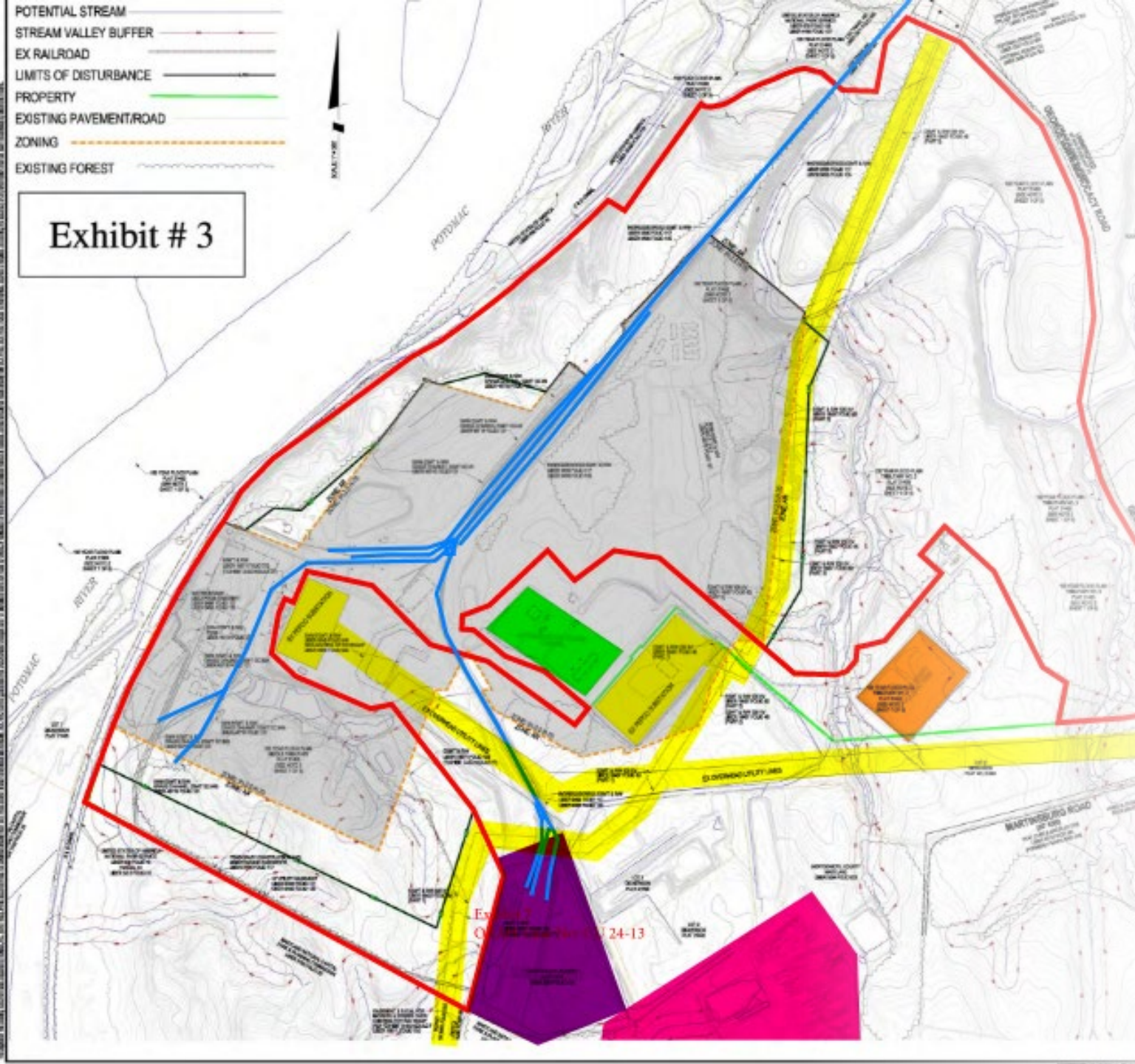






- POTENTIAL STREAM
- STREAM VALLEY BUFFER
- EX RAILROAD
- LIMITS OF DISTURBANCE
- PROPERTY
- EXISTING PAVEMENT/ROAD
- ZONING
- EXISTING FOREST

Exhibit # 3



Rail Lines (Blue)

Electrical  
Transmission line  
(Yellow)









Exhibit # 11  
Site Image



# Exhibit # 3

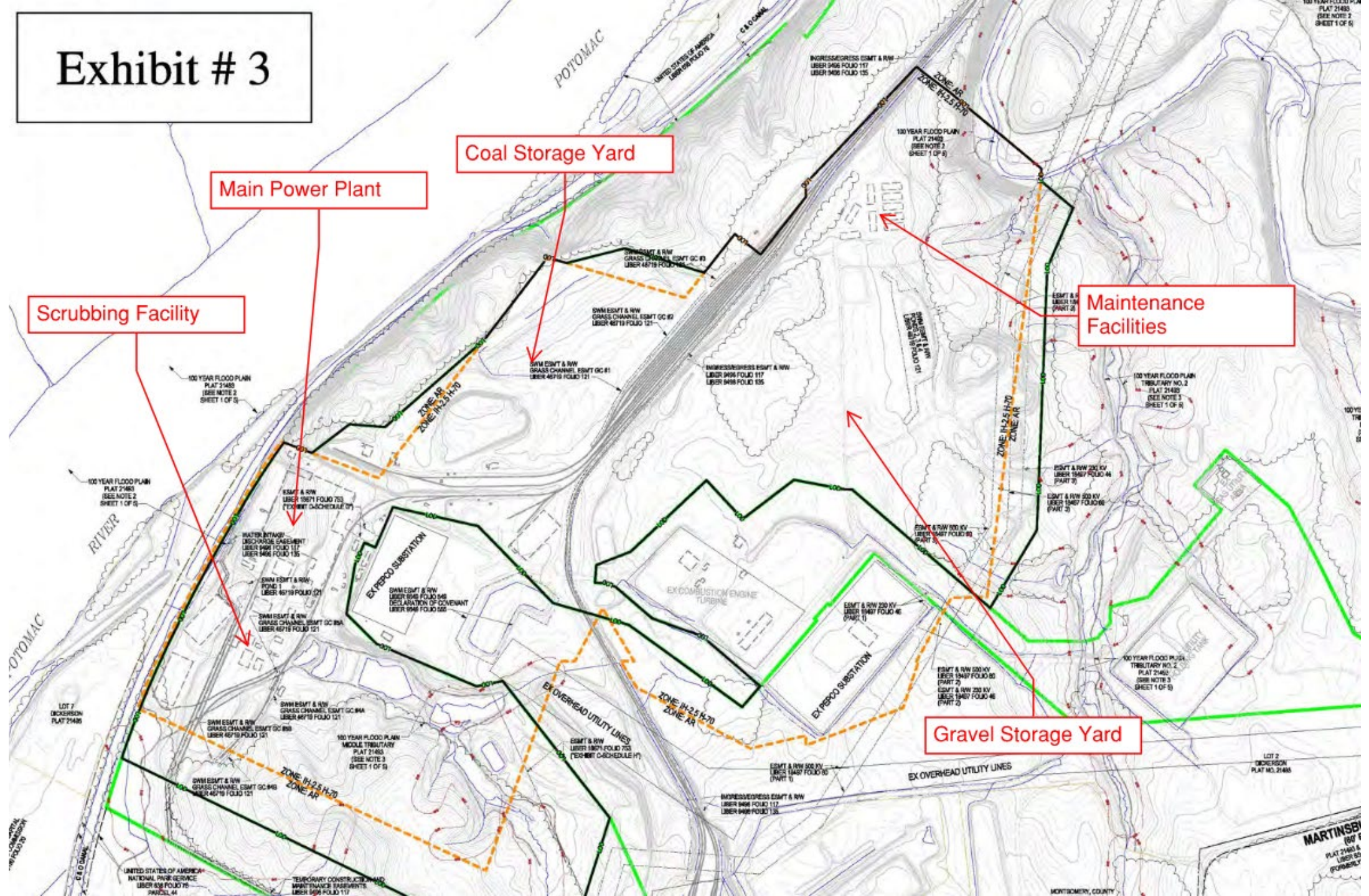






Exhibit # 11  
Site Image





Exhibit # 11  
Site Image



Exhibit # 11  
Site Image - Main Plant  
Facility





Exhibit # 11  
Site Image - Coal Field  
and Adjacent Substation















Exhibit # 11  
Site Image





Exhibit # 11  
Site Image - Water Intake  
Facility

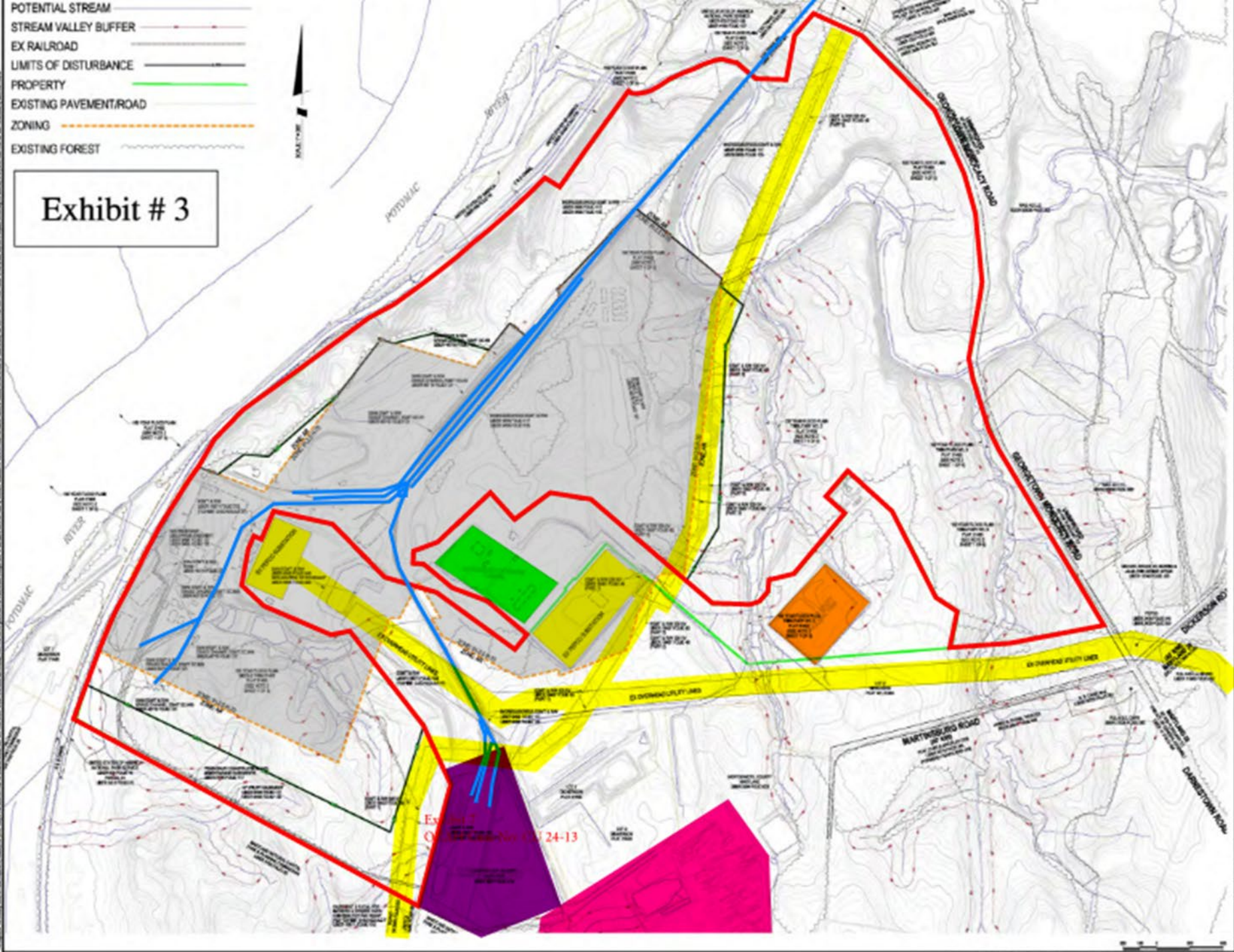






- POTENTIAL STREAM 
- STREAM VALLEY BUFFER 
- EX RAILROAD 
- LIMITS OF DISTURBANCE 
- PROPERTY 
- EXISTING PAVEMENT/ROAD 
- ZONING 
- EXISTING FOREST 

Exhibit # 3



**SULTESS, INC.**  
 ROCKVILLE OFFICE  
 1 Pleasant Plaza, Suite 100  
 Rockville, MD 20850  
 P: 301.461.0700 F: 301.461.0807  
 www.sulteess.com

Engineering  
 Planning  
 Environmental Science

NO. 1	NO. 2
NO. 3	NO. 4
NO. 5	NO. 6
NO. 7	NO. 8
NO. 9	NO. 10

**PROJECT NAME**  
 DICKERSON POWER PLANT

**OWNER / DEVELOPER / APPLICANT**  
 Sulteess, Inc.

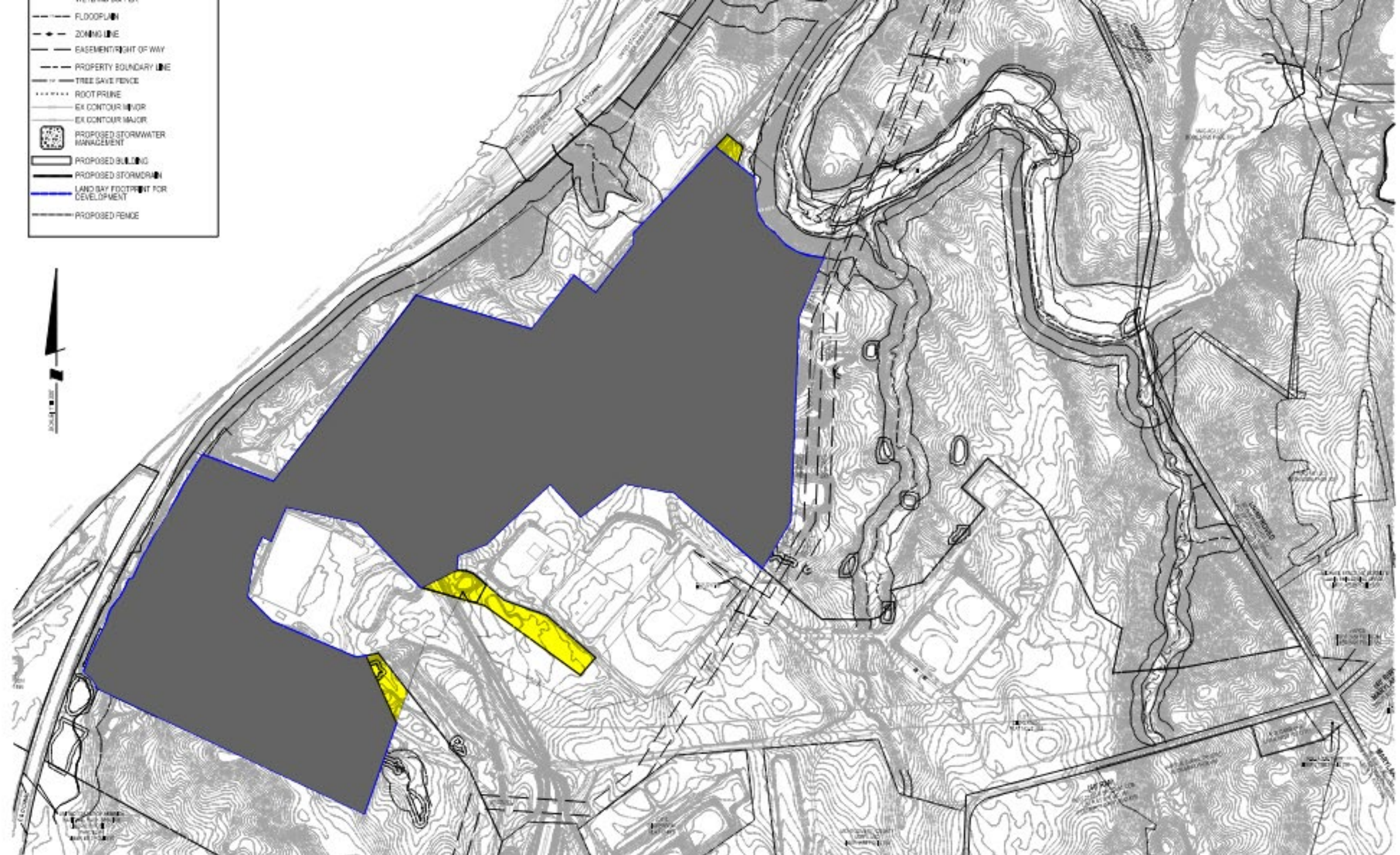
**PROJECT LOCATION**  
 21200 MARTINSBURG RD, DICKERSON, MD 20642  
 LOTS 2, 3, 4, AND 9

**EXISTING CONDITIONS EXHIBIT**

DATE	DRAWN BY
SCALE	CHECKED BY
PROJECT NO.	DATE
SHEET NO.	TOTAL SHEETS



- WETLAND BUFFER
- FLOODPLAIN
- ZONING LINE
- EASEMENT/RIGHT OF WAY
- PROPERTY BOUNDARY LINE
- TREE SAVE FENCE
- ROOT PRINE
- EX CONTOUR MINOR
- EX CONTOUR MAJOR
- PROPOSED STORMWATER MANAGEMENT
- PROPOSED BUILDING
- PROPOSED STORMDRAIN
- LAND BAY FOOTPRINT FOR DEVELOPMENT
- PROPOSED FENCE

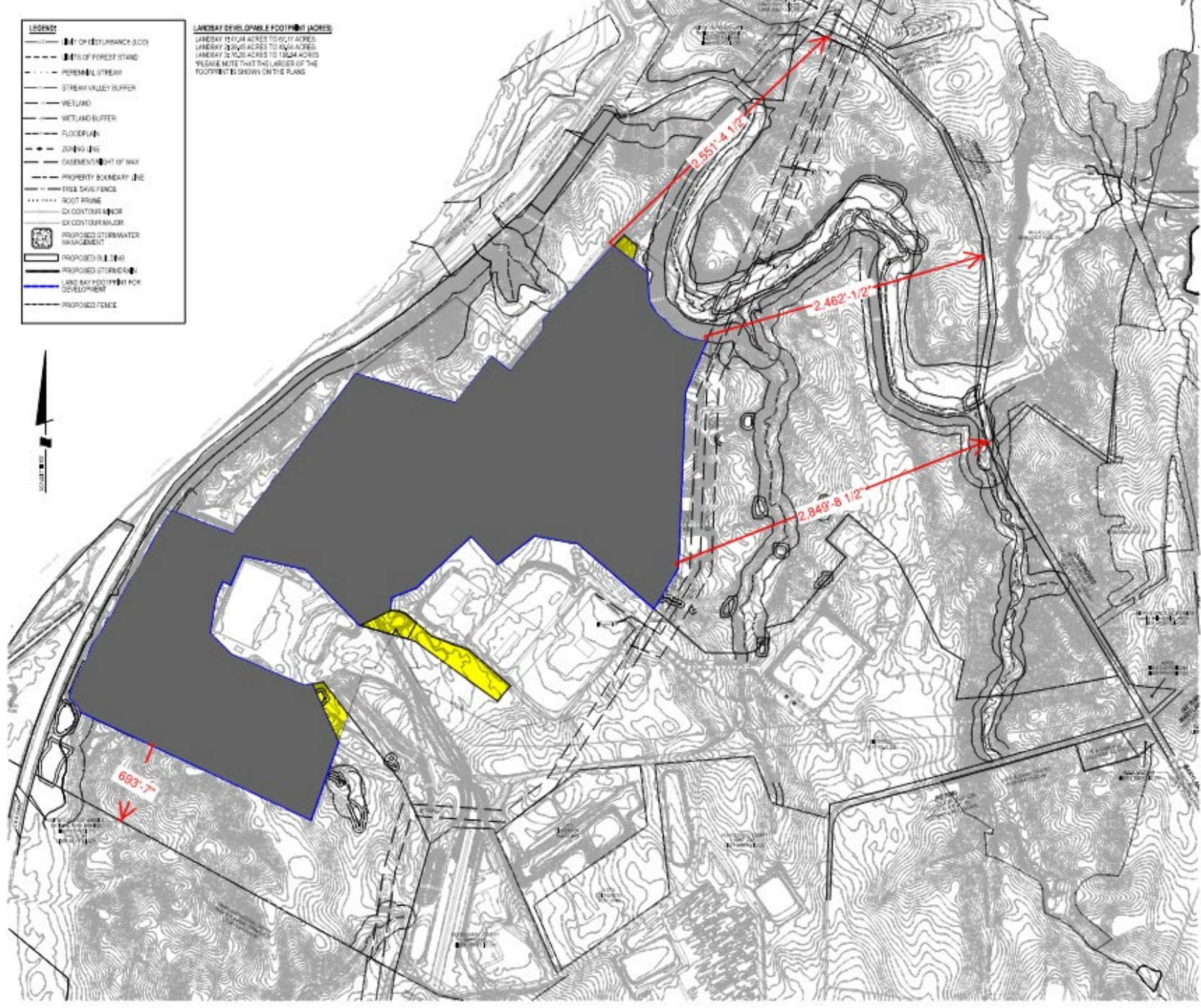




- LEGEND:**
- DISTURBANCE (0.00)
  - FOREST STAND
  - PERENNIAL STREAM
  - STREAM VALLEY BUFFER
  - WETLAND
  - WETLAND BUFFER
  - FLOODPLAIN
  - ZONING LINE
  - EASEMENT/RIGHT OF WAY
  - PROPERTY BOUNDARY LINE
  - TREE SAVE FENCE
  - ROOT PRUNE
  - EX CONTOUR MAJOR
  - EX CONTOUR MINOR
  - PROPOSED STORMWATER MANAGEMENT
  - PROPOSED ROAD
  - PROPOSED STORMCREEK
  - LAND BAY FOOTPRINT FOR DEVELOPMENT
  - PROPOSED FENCE

**LAND BAY DEVELOPABLE FOOTPRINT (ACRES)**

LAND BAY 10 (2.24 ACRES TO 60.71 ACRES)  
 LAND BAY 9 (0.45 ACRES TO 0.48 ACRES)  
 LAND BAY 3 (10.00 ACRES TO 10.04 ACRES)  
 PLEASE NOTE THAT THE LARGER OF THE FOOTPRINT IS SHOWN ON THE PLAN.



**SOLTESZ, INC.**  
 2 Research Plaza, Suite 100  
 Rockville, MD 20850  
 P: 301.424.7510 F: 301.424.8007  
 www.soltesz.com

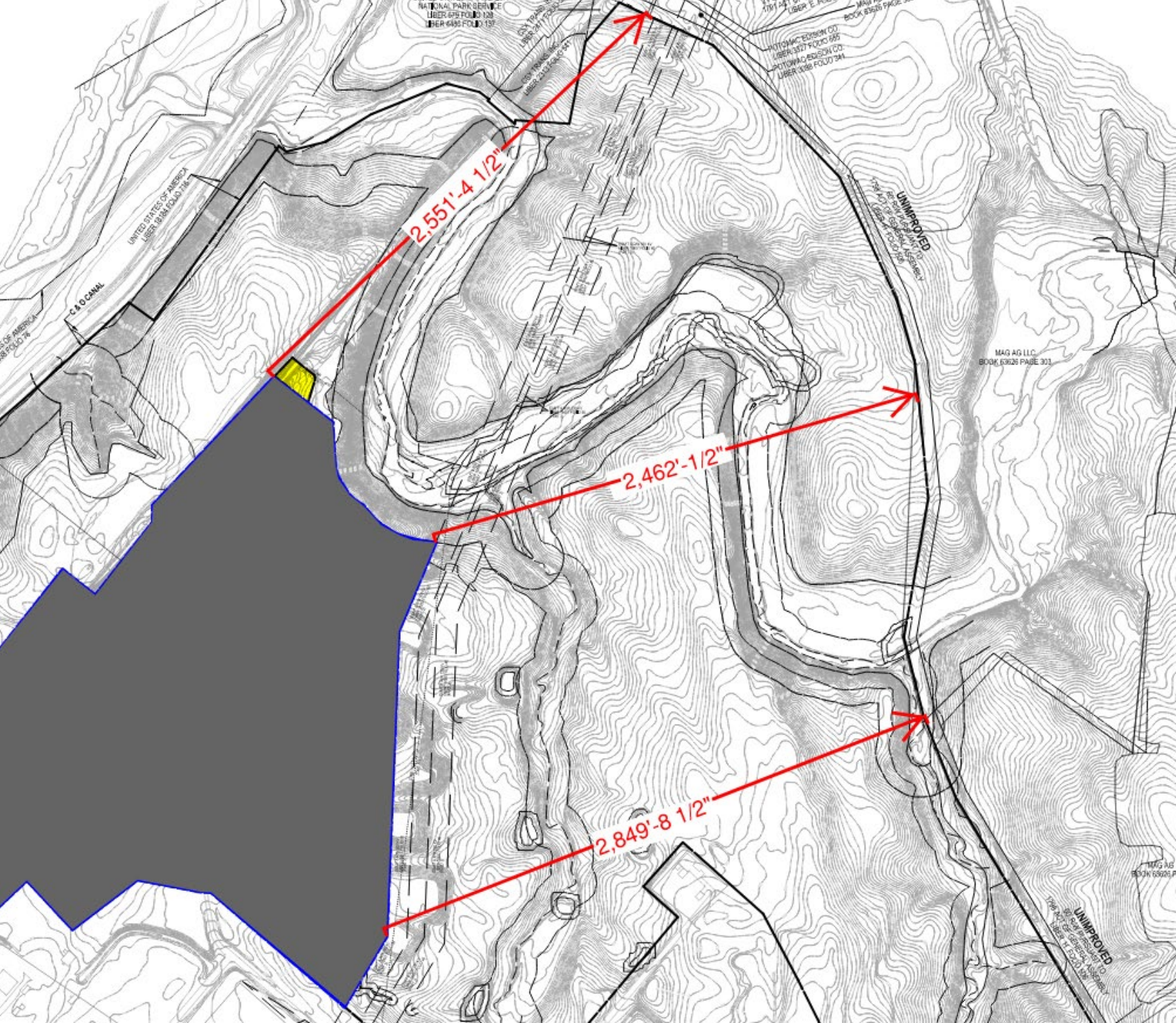
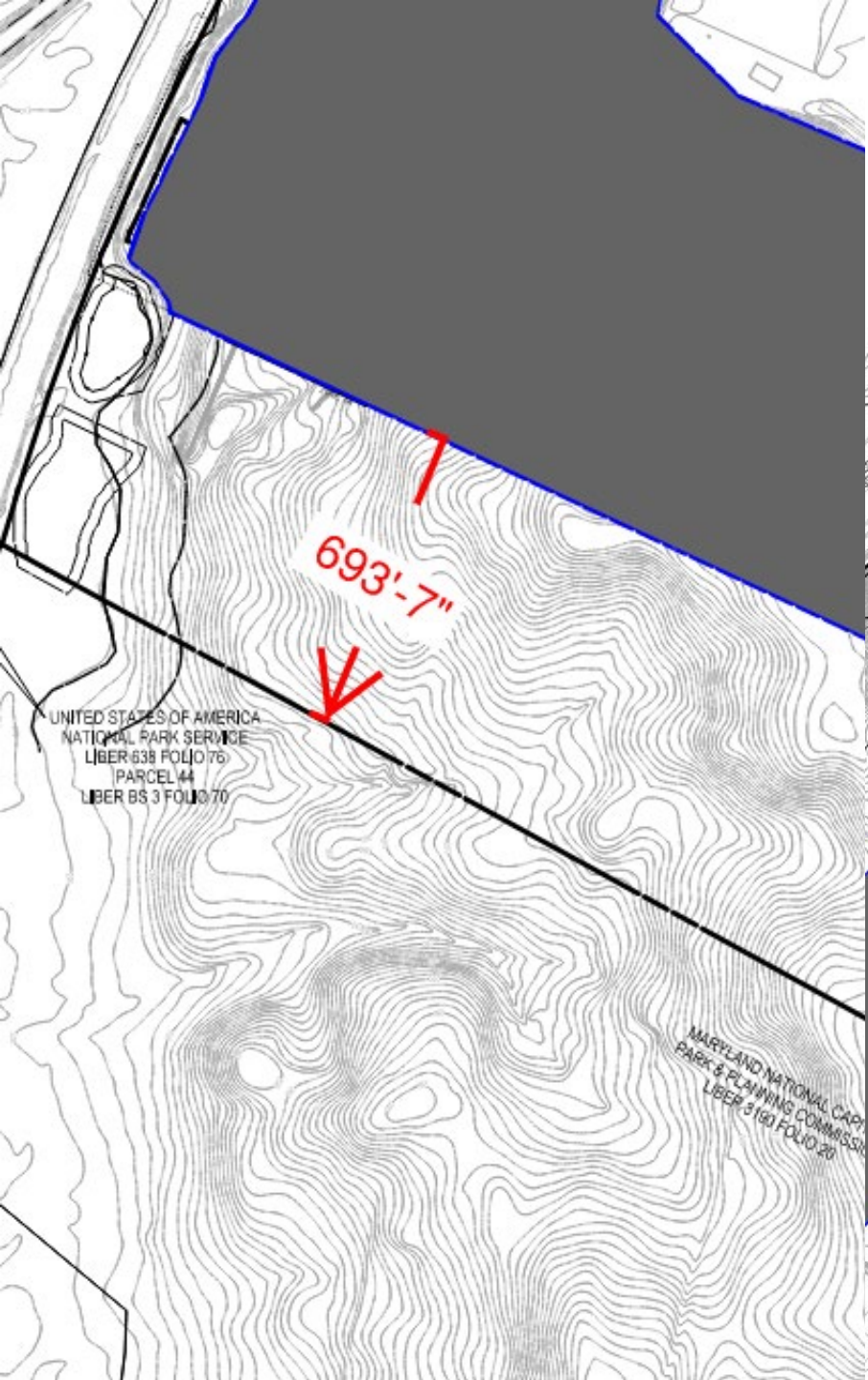
Project No. \_\_\_\_\_  
 Drawing No. \_\_\_\_\_  
 Revision No. \_\_\_\_\_

**PROPOSED SITE EXHIBIT**

**DICKERSON POWER PLANT**  
 21200 MARTINSBURG RD, DICKERSON, MD 20842  
 LOTS 2, 3, 7, 8 AND 9

DATE: \_\_\_\_\_  
 SCALE: \_\_\_\_\_  
 NORTH ARROW: \_\_\_\_\_

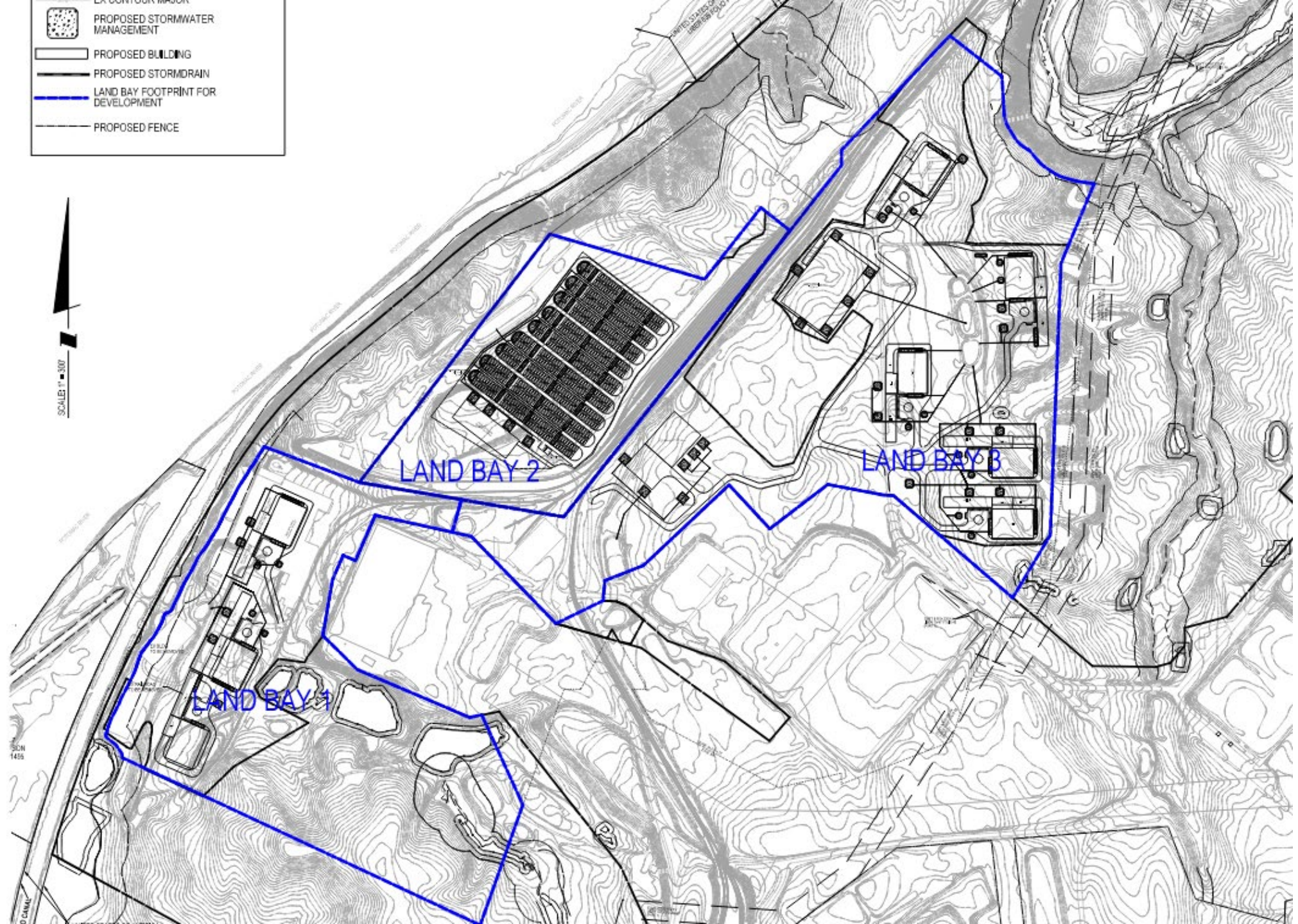






- EX CONTOUR MARK
- PROPOSED STORMWATER MANAGEMENT
- PROPOSED BUILDING
- PROPOSED STORMDRAIN
- LAND BAY FOOTPRINT FOR DEVELOPMENT
- PROPOSED FENCE

SCALE 1" = 30'



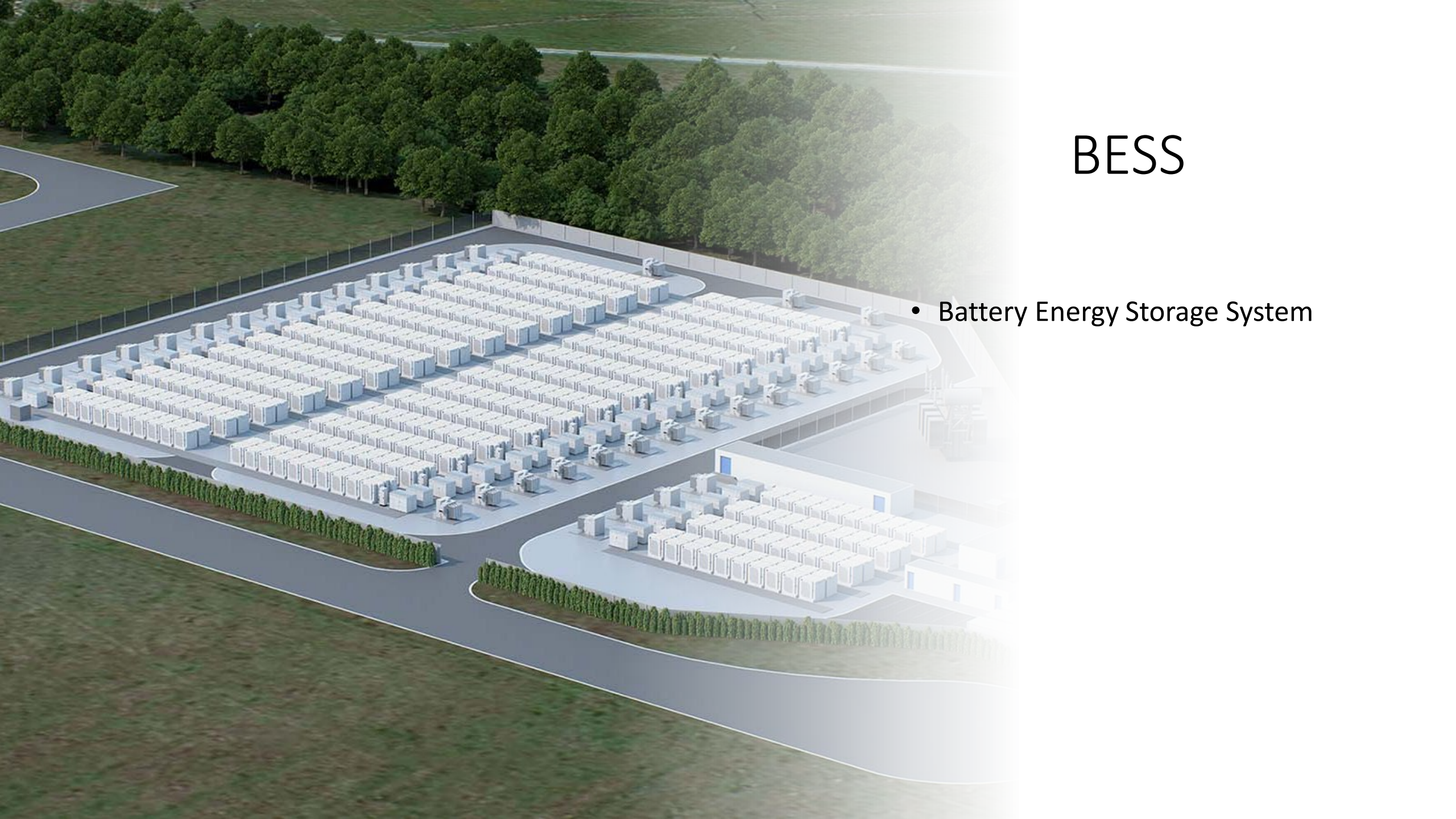
SUN 1405

© 2014



# BESS

- Battery Energy Storage System





# Operation and Use of an Energy Storage System (ESS)

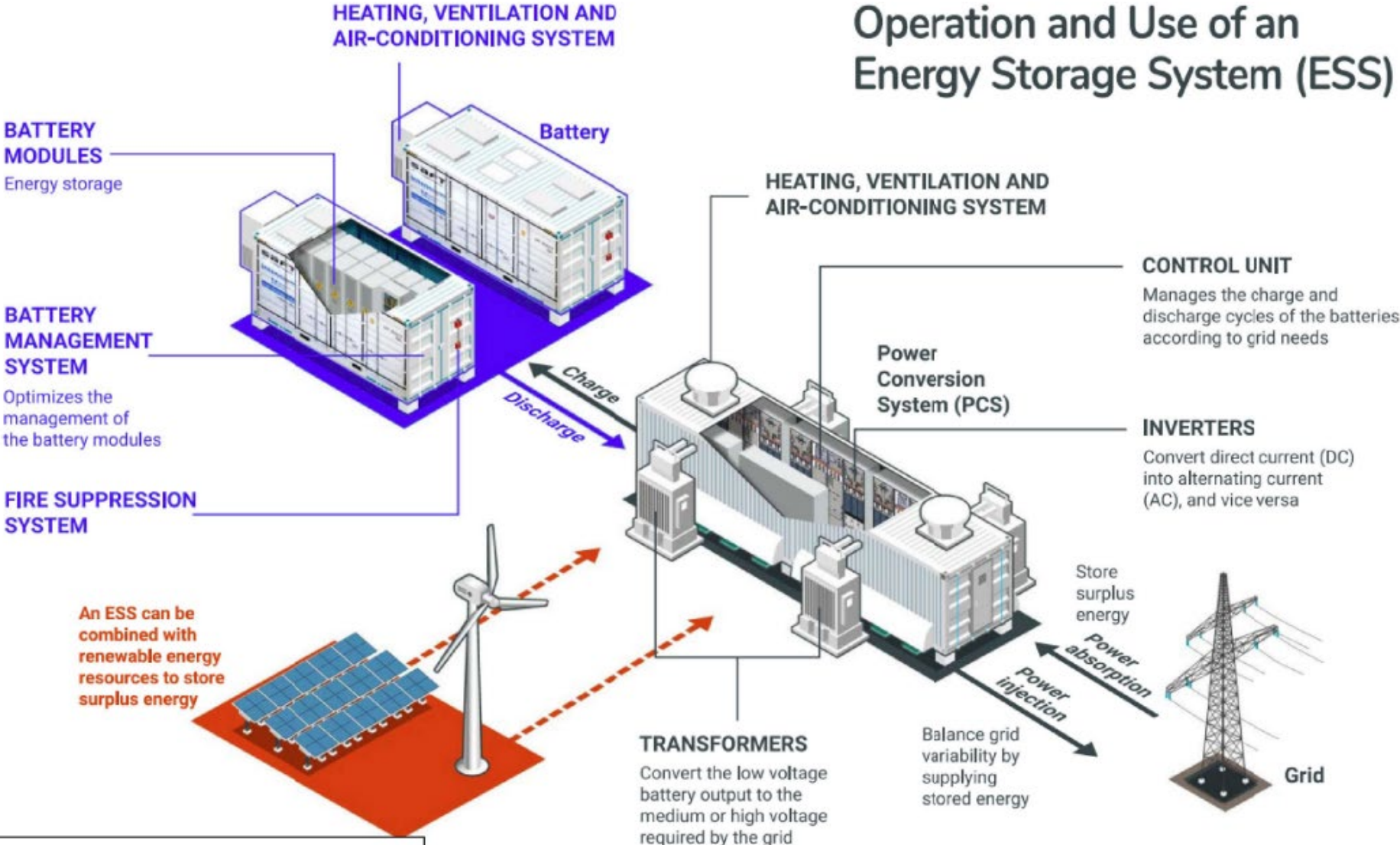
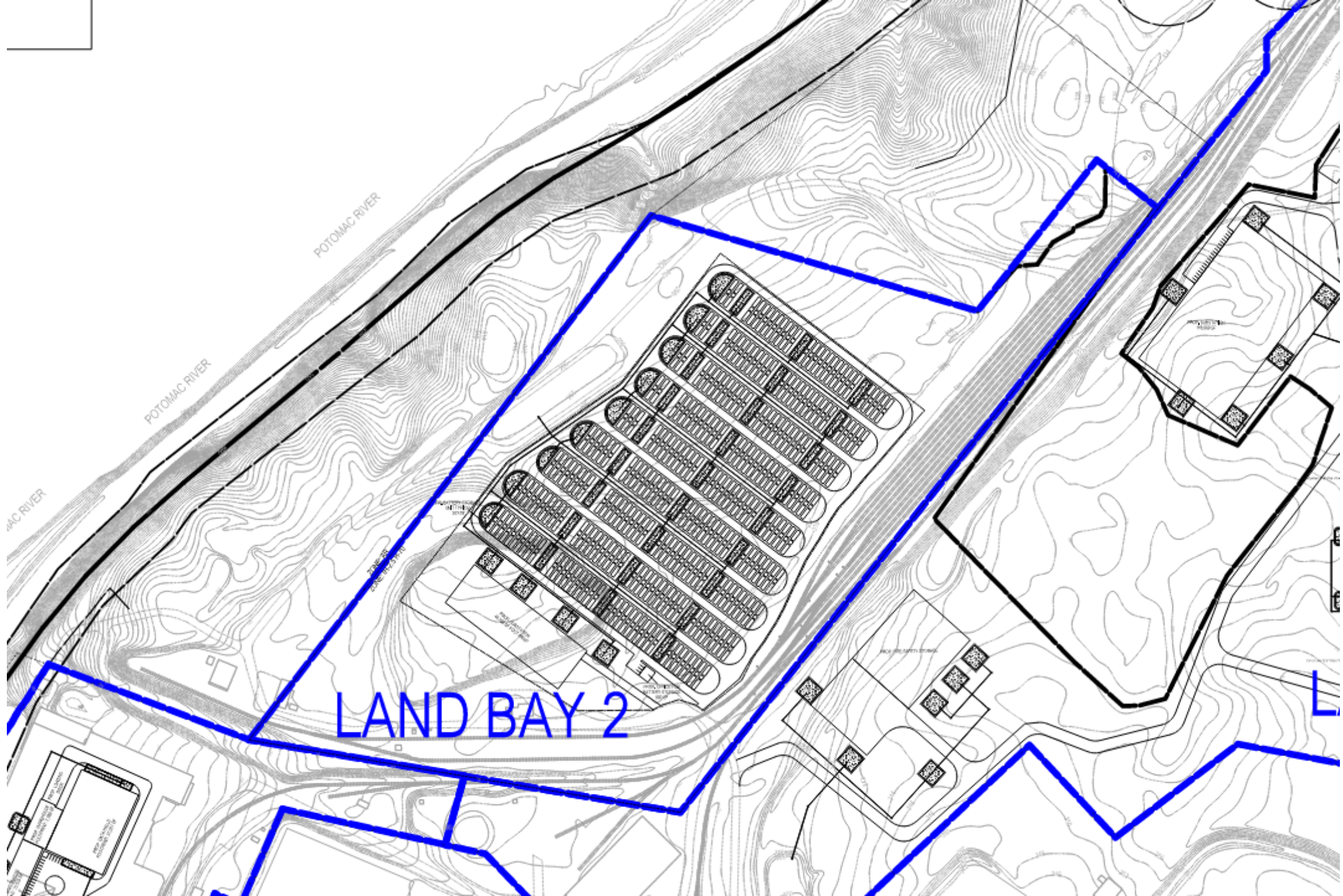


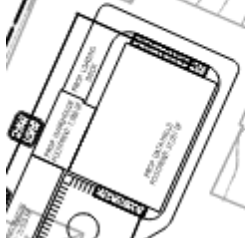
Exhibit # 5





LAND BAY 2

POTOMAC RIVER  
POTOMAC RIVER  
POTOMAC RIVER  
POTOMAC RIVER









- LEGEND:**
- POTENTIAL STREAM
  - STREAM VALLEY BUFFER
  - EX RAILROAD
  - LIMITS OF DISTURBANCE
  - PROPERTY
  - EXISTING PAVEMENT/ROAD
  - ZONING
  - EXISTING FOREST

**Exhibit # 3**

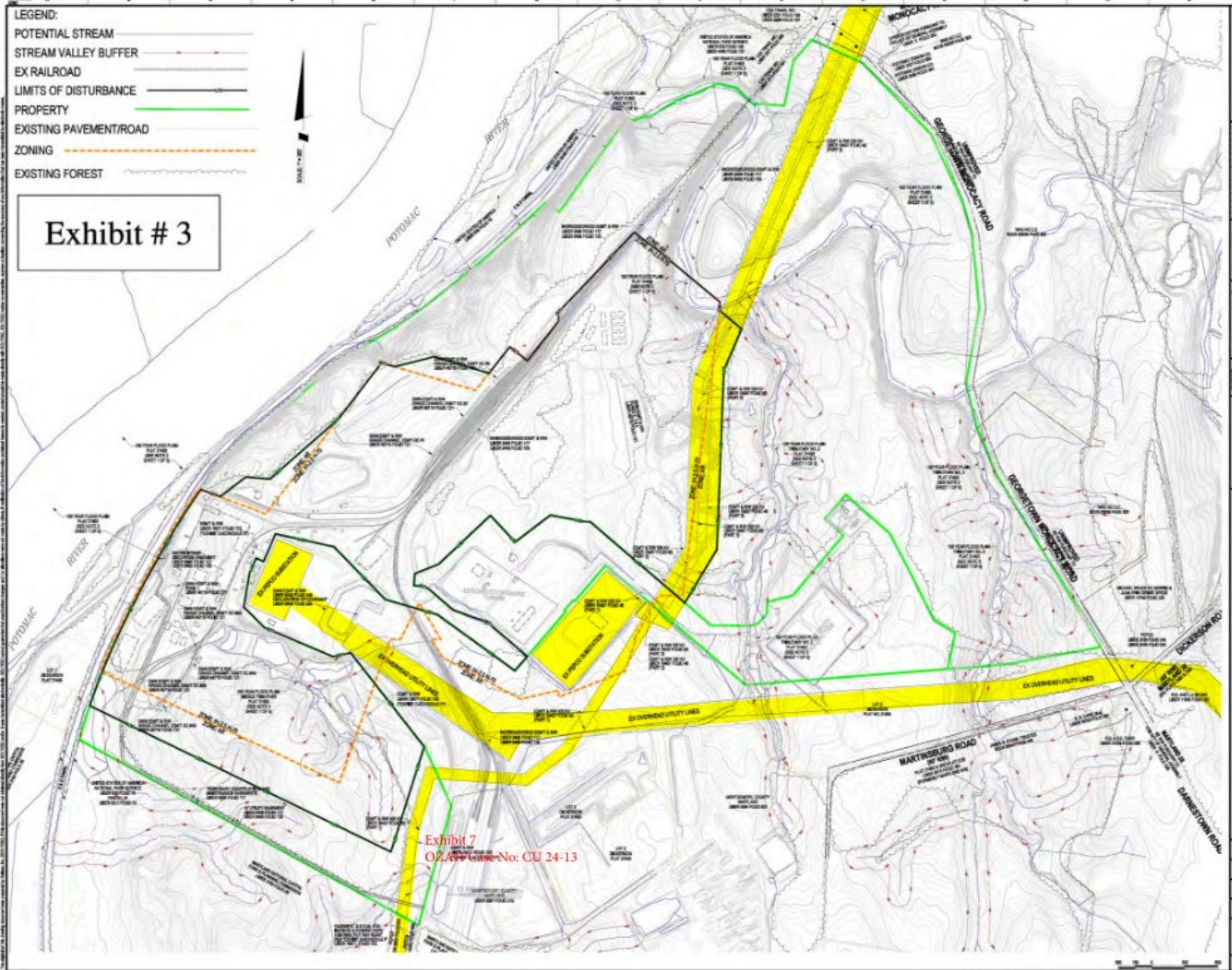


Exhibit 7  
OZAP Case No: CU 24-13

**SOLTESZ, INC.**  
 REGULATORY OFFICE  
 2 Flower Place, Suite 100  
 Rockville, MD 20850  
 P. 301.948.3700 F. 301.948.3857  
 www.soltesz.com  
 Engineering  
 Surveying  
 Planning  
 Environmental Sciences

NO.	REVISION	BY	DATE

**INSURANCE NOTE**  
 THE PROFESSIONAL LIABILITY AND OTHER COVERS UNDER THIS CONTRACT ARE SUBJECT TO THE POLICY WORDING AND EXCLUSIONS THEREOF. THE POLICY IS SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS THEREOF. THE POLICY IS NOT A CONTRACT AND DOES NOT CONSTITUTE AN OFFER OF INSURANCE. THE POLICY IS SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS THEREOF.

**OWNER / DEVELOPER / APPLICANT**  
 INFORMATION:  
 NAME:  
 ADDRESS:  
 CITY/STATE/ZIP:

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND AND AM THE DESIGNER OF THIS PROJECT.

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND AND AM THE DESIGNER OF THIS PROJECT.

**EXISTING CONDITIONS EXHIBIT**  
**DICKERSON POWER PLANT**  
 21200 MARTINSBURG RD, DICKERSON, MD 20842  
 LOTS 2, 3, 7, 8 AND 9

TITLE	DATE
BY	FOR

Scale: 1" = 100'

North Arrow

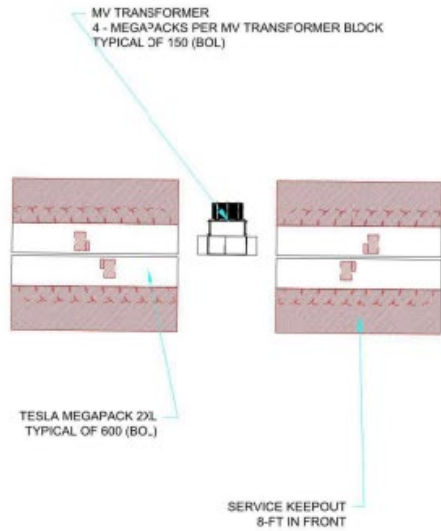








① **SITE OVERVIEW**  
SCALE: 1" = 100'



② **BESS LAYOUT**  
SCALE: 1" = 20'



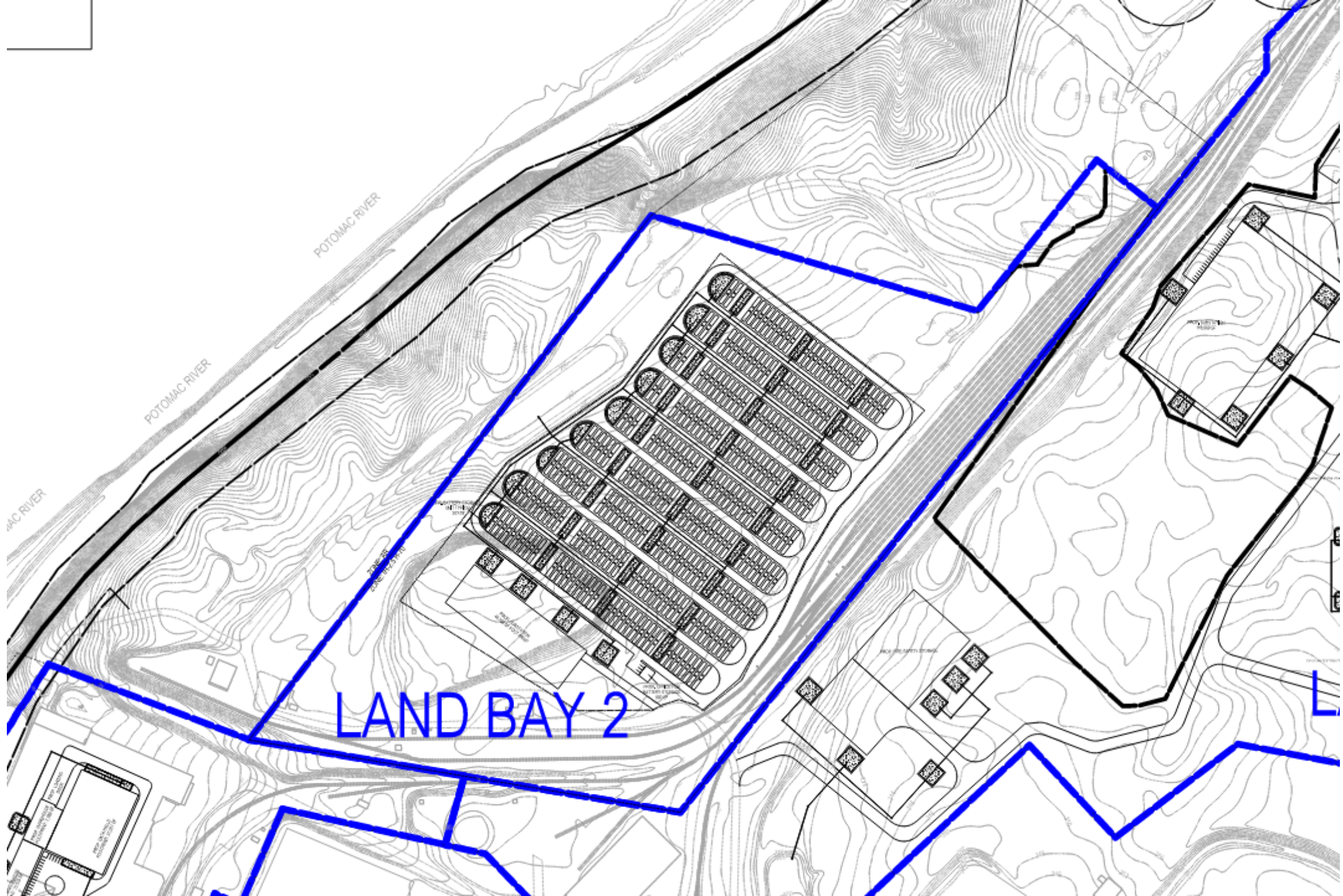
③ **BESS DETAILS**  
SCALE: 1" = 175'

**BESS SYSTEM DESIGN SUMMARY**

INTERCONNECTION VOLTAGE	230 kV
TOTAL SYSTEM CAPACITY (BOL)	587 MW, 2350 MWh
BESS MANUFACTURER	TESLA
INVERTER MANUFACTURER	TESLA
MEGAPACK MODEL NUMBER	1848844-XX-Y
AC POWER PER MEGAPACK	979 kW
AC ENERGY PER MEGAPACK	3916 kWh
INVERTER OUTPUT VOLTAGE	480V
TOTAL # OF BATTERY UNITS (BOL)	600 MEGAPACK 2 XL
BATTERY CELL CHEMISTRY	LFP L-ION
NUMBER OF MV TRANSFORMERS	150 (BOL)

# Exhibit # 6





LAND BAY 2







# Data Center













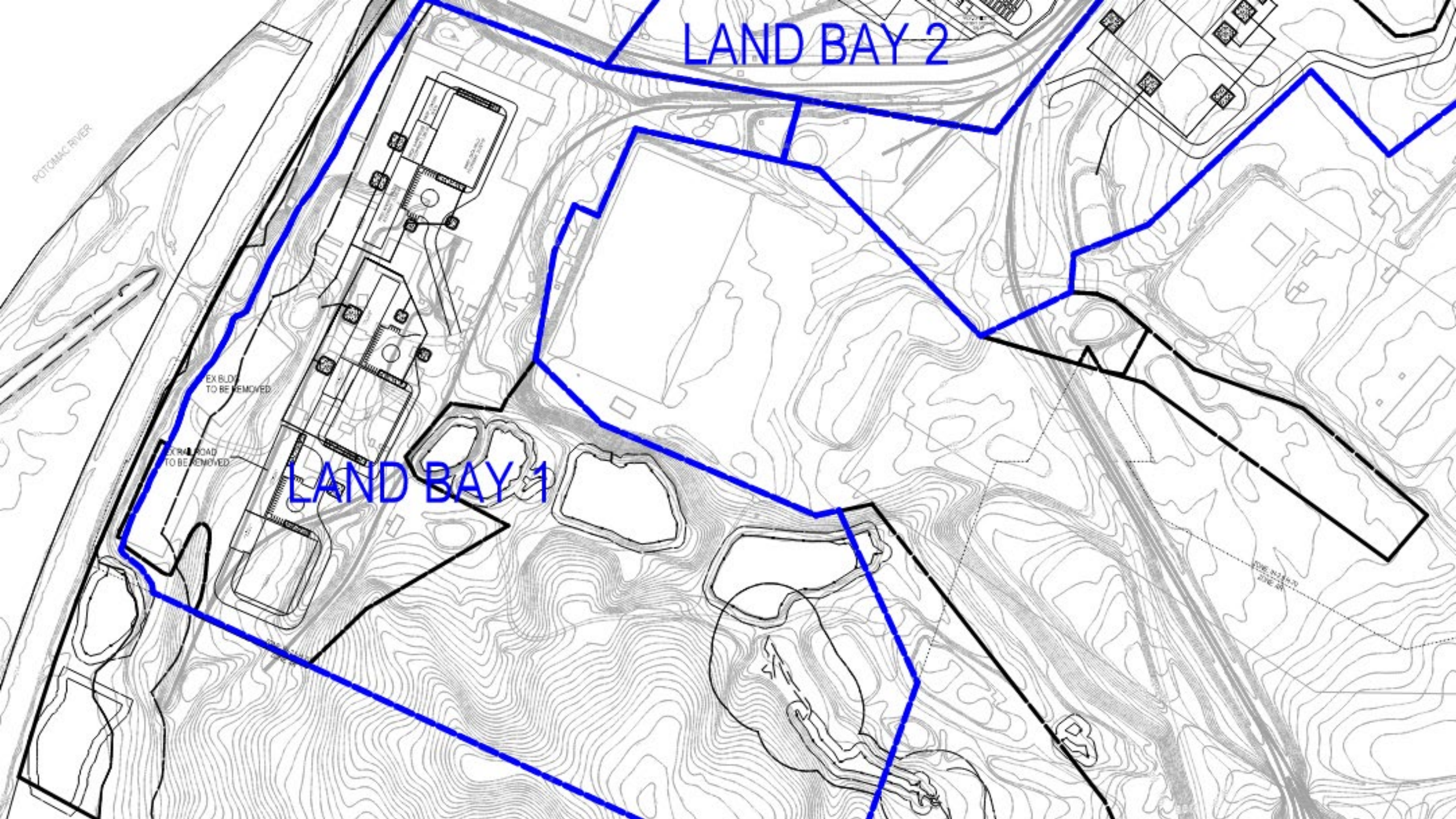
LAND BAY 2

LAND BAY 1

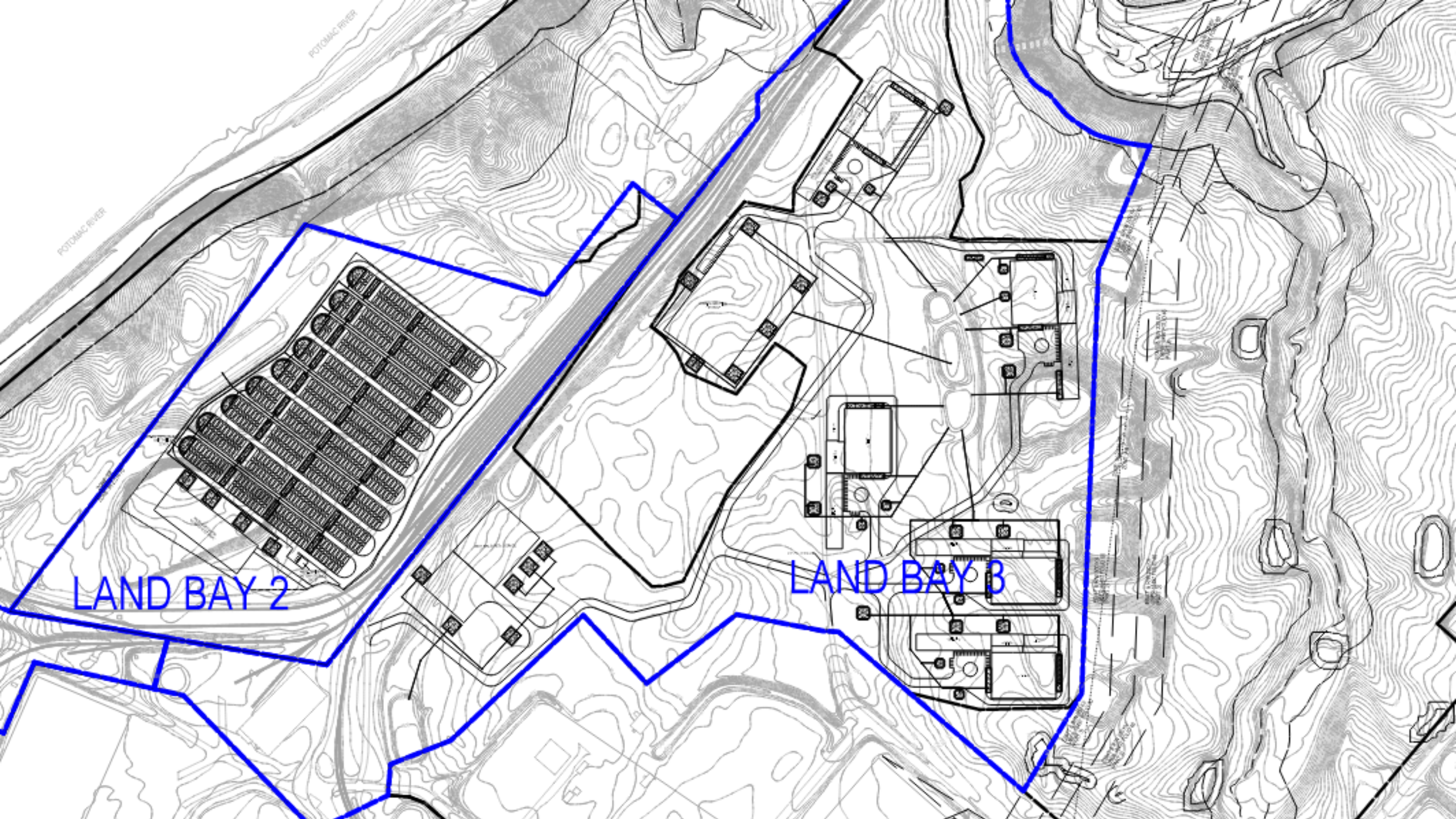
EX BLDG  
TO BE REMOVED

EX RD  
TO BE REMOVED

SEE PLANS  
206-20







LAND BAY 2

LAND BAY 3

POTOMAC RIVER

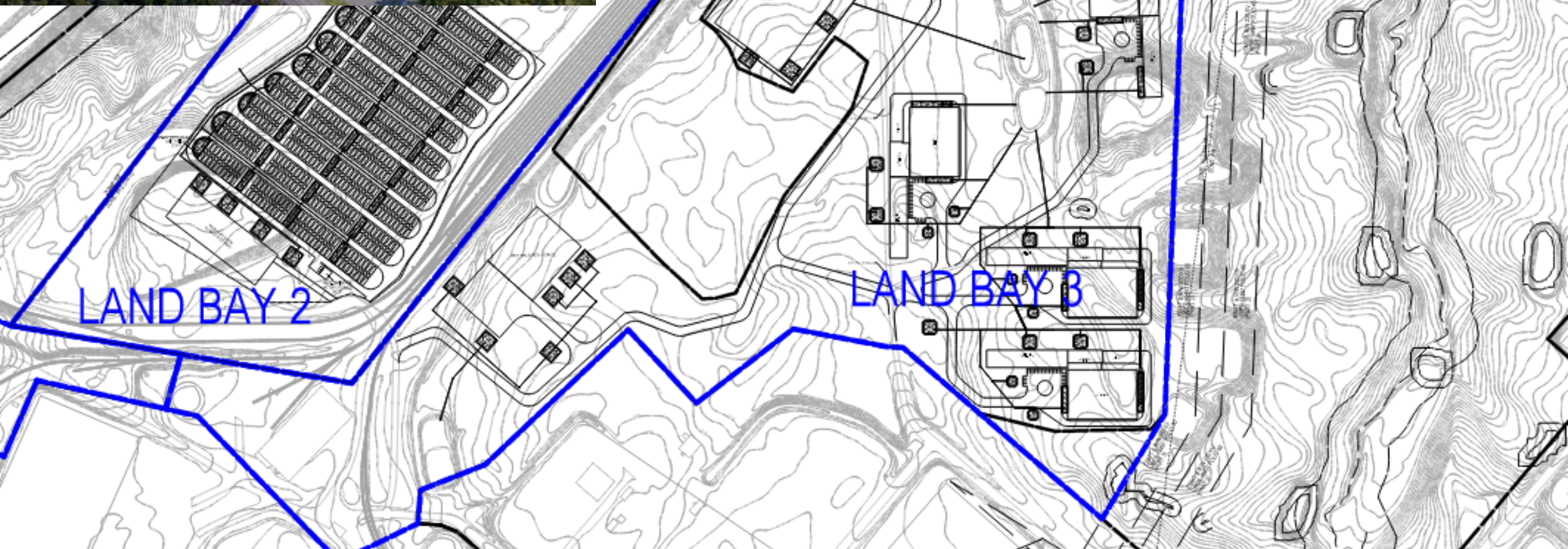
POTOMAC RIVER

POTOMAC RIVER











LAND BAY 2

LAND BAY 1

EX BLDG  
TO BE REMOVED

EXTRA ROAD  
TO BE REMOVED

SEE PLANS  
206-20

POTOMAC RIVER

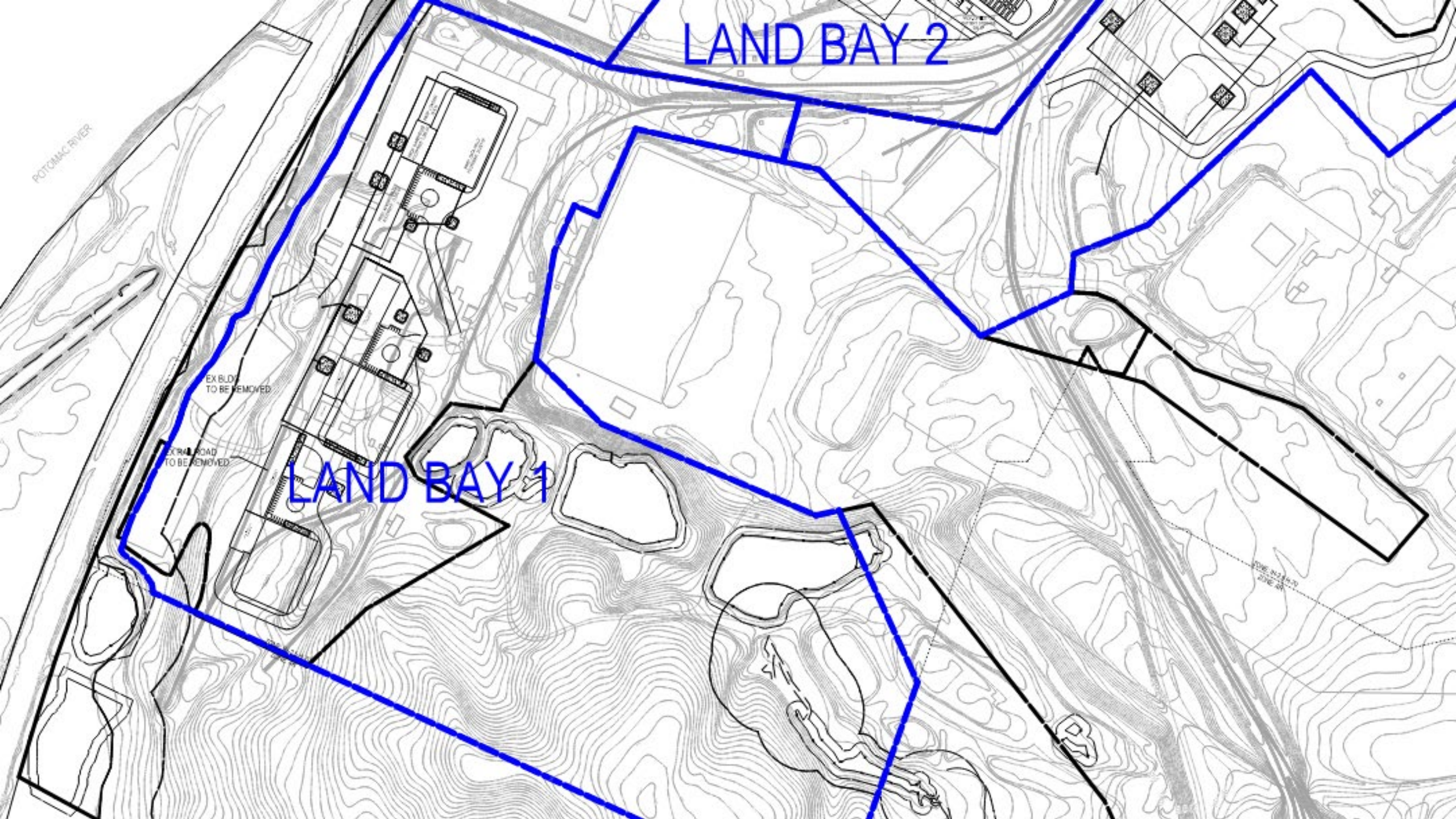






Exhibit # 11  
Site Image



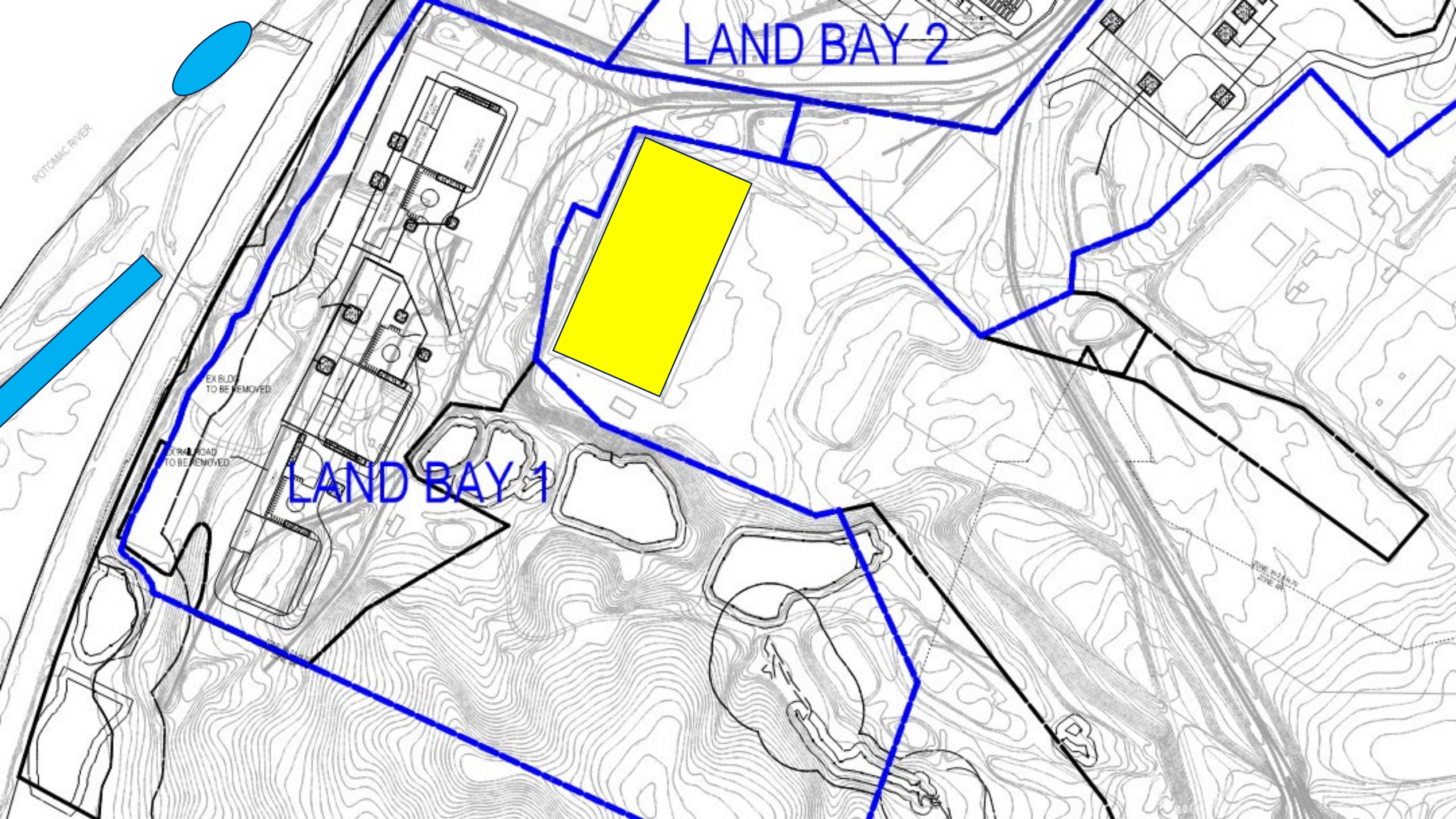






Exhibit # 11  
Site Image

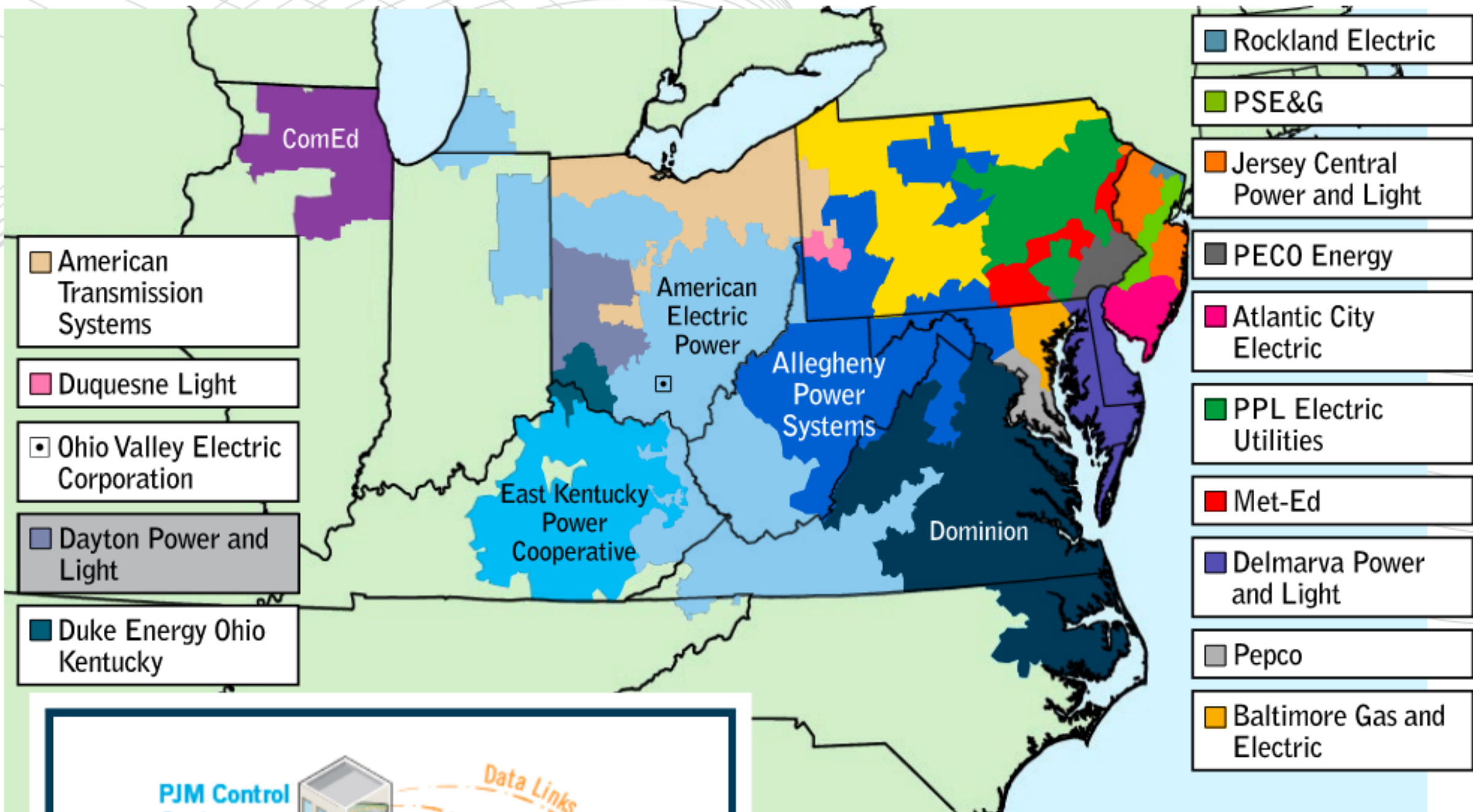












**PJM Control Centers**



*Data Links*













INTRODUCING ECOCORE

Energy Efficient  
Water Wise  
AI Ready

*Patented and award-winning technology proven to exceed the most stringent compliance requirements in the world.*



# ECOCORE

## Powered by the patented water-cooling technology

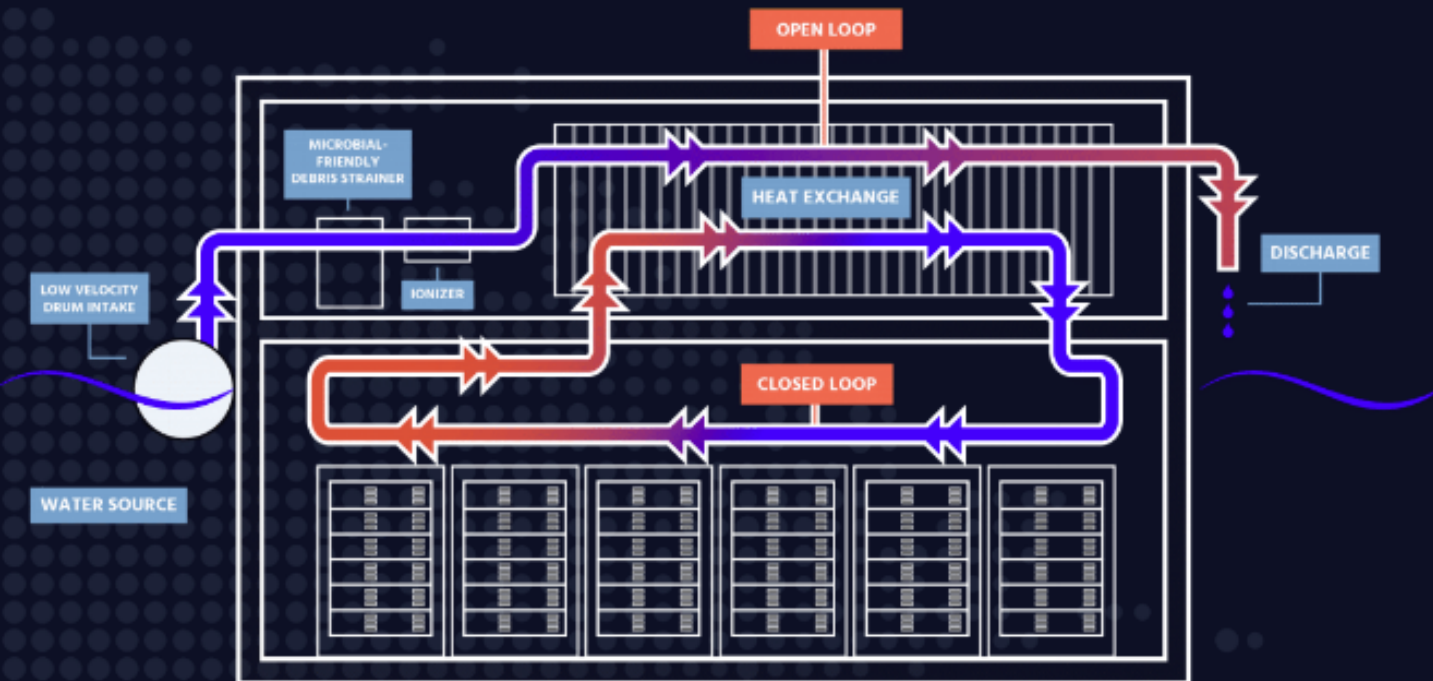
100MW data center using Nautilus technology can conserve approximately 1.45 billion liters of water annually. \*

The system features two loops coupled through a water-to-water heat exchanger. Heat removed from the data hall loop (closed loop) is transferred to the primary or open loop instead of dissipating into the air. The warmer water, typically 5 degrees Celsius above the intake temperature, is then returned to its source.

The process water in the data hall loop is operated under a vacuum as a natural leak prevention system

The primary or open loop can use a wide range of water types, including natural bodies of water, industrial water infrastructure, cooling ponds, or process-chilled water

[Discover more about the technology](#) >

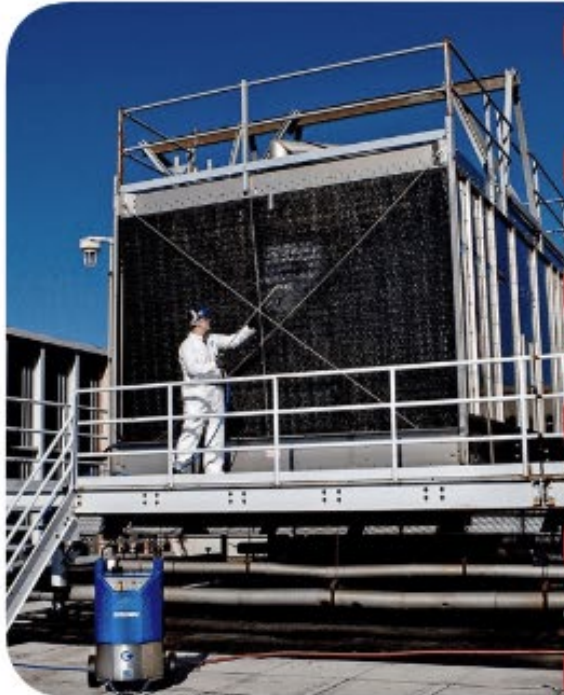






Our superior technology is able to **cool different heat capture methods simultaneously**, uses no chemicals, and doesn't burn away water.

## Chiller



- Large, Bulky Cooling Towers
- Power Inefficient
- Uses Potable Water
- Uses chemicals & refrigerants
- Requires substantial maintenance
- Can't cool methods simultaneously

## NAUTILUS<sup>®</sup> DATA TECHNOLOGIES



- ✓ Small and compact
- ✓ Power Efficient
- ✓ Burns off ZERO water
- ✓ NO chemicals or refrigerants
- ✓ Lower cost of maintenance
- ✓ Can cool methods simultaneously

Nautilus' heat exchanger by scale























