



HAWK ENERGY STORAGE LLC

February 5, 2024

Ms. Elizabeth Runge
Community Development Director
City of Two Rivers
1717 E. Park Street
Two Rivers, WI 54241

Re: Hawk Battery Energy Storage System – Land Development Application Request for Conditional Use

Dear Ms. Runge:

Attached is a Land Development Application and supporting documentation for the proposed Hawk Battery Energy Storage System on Woodland Dr., City of Two Rivers. The application is accompanied by:

1. Project Narrative
2. CUP Application Guideline Checklist (Attachment A)
3. Site Location Map (Attachment B)
4. Conceptual Site Plan (Attachment C)
5. Fencing Detail (Attachment D)

Please let me know if you have questions about this application. We look forward to continuing to work with the City of Two Rivers to advance this most important project.

Regards,

Jarrold Pitts

Jarrold Pitts
Senior Director, Project Development
Tenaska, Inc.



LAND DEVELOPMENT APPLICATION

APPLICANT Hawk Battery Storage LLC TELEPHONE (212) 257-5000

MAILING ADDRESS 412 W. 15th Street , 15th Floor New York NY 10011
(Street) (City) (State) (Zip)

PROPERTY OWNER City of Two Rivers TELEPHONE _____

MAILING ADDRESS 1717 East Park Street Two Rivers WI 54241
(Street) (City) (State) (Zip)

REQUEST FOR:

- Comprehensive Plan Amendment
- Site/Architectural Plan Approval
- Subdivision Plat or CSM Review
- Zoning District Change
- Conditional Use
- Annexation Request
- Variance/Board of Appeals
- Other

STATUS OF APPLICANT: Owner Agent Buyer Other

PROJECT LOCATION Woodland Drive, City of Two Rivers TYPE OF STRUCTURE Battery Energy Storage System

PRESENT ZONING I-2 REQUESTED ZONING I-2

PROPOSED LAND USE Battery Energy Storage System


PARCEL # 053-233-404-010.1 ACREAGE 9.489

LEGAL DESCRIPTION See Project Narrative for full legal description

NOTE: Attach a one-page written description of your proposal or request.

The undersigned certifies that he/she has familiarized himself/herself with the state and local codes and procedures pertaining to this application. The undersigned further hereby certifies that the information contained in this application is true and correct.

February 1, 2024 | 17:53:05 CET

Signed 
~~(Property Owner)~~ (Applicant)

Date _____

Fee Required

Schedule

- \$ 350 Comprehensive Plan Amendment
- \$ t/b/d Site/Architectural Plan Approval (Listed in Sec 1-2-1)
- \$ t/b/d CSM Review (\$10 lot/\$30 min)
- \$ 350 Subdivision Plat (fee to be determined)
- \$ 350 Zoning District Change
- \$ 350 Conditional Use
- \$ t/b/d Annexation Request (State Processing Fees Apply)
- \$ 350 Variance/Board of Appeals
- \$ t/b/d Other

- Application Submittal Date _____
- Date Fee(s) Paid _____
- Plan(s) Submittal Date _____
- Plan Comm Appearance _____

\$ _____ TOTAL FEE PAID APPLICATION, PLANS & FEE RECEIVED BY _____



HAWK ENERGY STORAGE LLC

Hawk Battery Energy Storage System **Project Narrative**

PROJECT OVERVIEW

The Project is a 150-megawatt (MW), 600 megawatt-hour (MWh) Battery Energy Storage System (BESS) located within the City of Two Rivers, Wisconsin (City). The Two Rivers area has been a leader in Wisconsin energy for decades, and the Project is an approximately \$250 million dollar investment to continue that tradition. As a home for this Project, the community will help to lead Wisconsin's transition to emission-free renewable energy, and for good reason. Renewable energy resources like wind and solar reduce air pollution, create local jobs and tax revenues, and make both Wisconsin and the United States more energy independent. However, wind and solar resources only produce electricity when the wind is blowing, and the sun is shining. Energy storage systems like the Project are a critical supplement to wind and solar because they can store electricity generated by these intermittent resources and deliver it to the grid at all times of the day. The Project will aid the region's ongoing transition to renewables, ensure reliable electric service in the area, and provide significant economic benefits to local residents.

PROJECT DESCRIPTION

The Project will be able to store a maximum of 600 MWh of electricity at a given time, with a maximum injection capacity of 150 MW into the electric transmission grid. The Project is located on Parcel Number 053-233-404-010.01 on Woodland Drive, which is zoned I-2 Industrial. The Project's latitude and longitude are 44° 9'24.20"N and 87°37'18.07"W.¹ More detail regarding the Project's characteristics and location are provided as attachments: see the chart attached as **Attachment A**, in the same form as provided in the City's CUP application guidelines, that overviews information provided with this application and highlights certain information not relevant to the Project. Further, a site location map and conceptual site plan are attached as **Attachments B and C**, and a photograph depicting fencing similar to that proposed for the Project is attached as **Attachment D**.

The Project's infrastructure (excluding the gen-tie line and collector substation) will reach a maximum height of approximately 12 feet. The Project will include security fencing that will be approximately seven to eight feet tall. The security fencing will have the required warning signs per the National Electrical Code, and a sign posted on the entry gate providing a 24-hour emergency response number. There will be no occupied building or O&M facility on the site. Please see a more detailed description of the Project's infrastructure in the "Project Components" section below.

The Project also includes an approximately 0.28-mile-long, 138-kilovolt (kV) generation tie (gen-tie) line that will be constructed to the southwest of the Project and will interconnect at the ATC

¹ As requested in the Land Development Application, please see a legal description of the Project parcel: Lots 5, 6, and 7 of Certified Survey No. 151, recorded in the Office of the Register of Deeds for Manitowoc County, Wisconsin, on March 10, 1995, in Volume 9750, Page 524, as Document No. 750524, being part of the NE1/4NW1/4 and the SE1/4SE1/4 of Section 33, T20N, R24E, located in the City of Two Rivers, Manitowoc County, Wisconsin.

Shoto Substation. The gen-tie line is located outside of City limits and is within Manitowoc County's zoning jurisdiction.

The amount of land under option to purchase is approximately 9.489 acres; however, battery equipment will only be placed on a portion of the land. The fenced acreage of the battery storage facility will be approximately 7.73 acres.

PROJECT ENTITY, OWNER, & DEVELOPER

The Project will be owned and operated by Hawk Energy Storage, LLC (Hawk Energy Storage), a wholly owned subsidiary of Copenhagen Infrastructure Partners (CIP), and will be developed by Tenaska, Inc.

CIP is an infrastructure investment firm specializing in renewable energy and other essential infrastructure projects. They are known for their expertise in developing, financing, and managing critical infrastructure, particularly in the field of renewable energy.

CIP has a strong track record of successfully developing and operating renewable energy projects globally. They have been involved in various phases of renewable energy projects, including project development, financing, construction, and long-term operation. Currently, CIP has approximately \$20 billion of assets under management.

Tenaska is a privately held company based in Omaha, Nebraska. Tenaska has been in business for over 35 years and has grown into one of the largest privately held companies in the U.S. Tenaska has been responsible for developing, managing, and/or operating over 22,000 MWs of generation over its 35 years. Tenaska has consistently been recognized in the industry for safety and has a proven track record developing a wide range of energy projects, including natural gas, renewables, and BESS facilities.

PLAN OF OPERATION

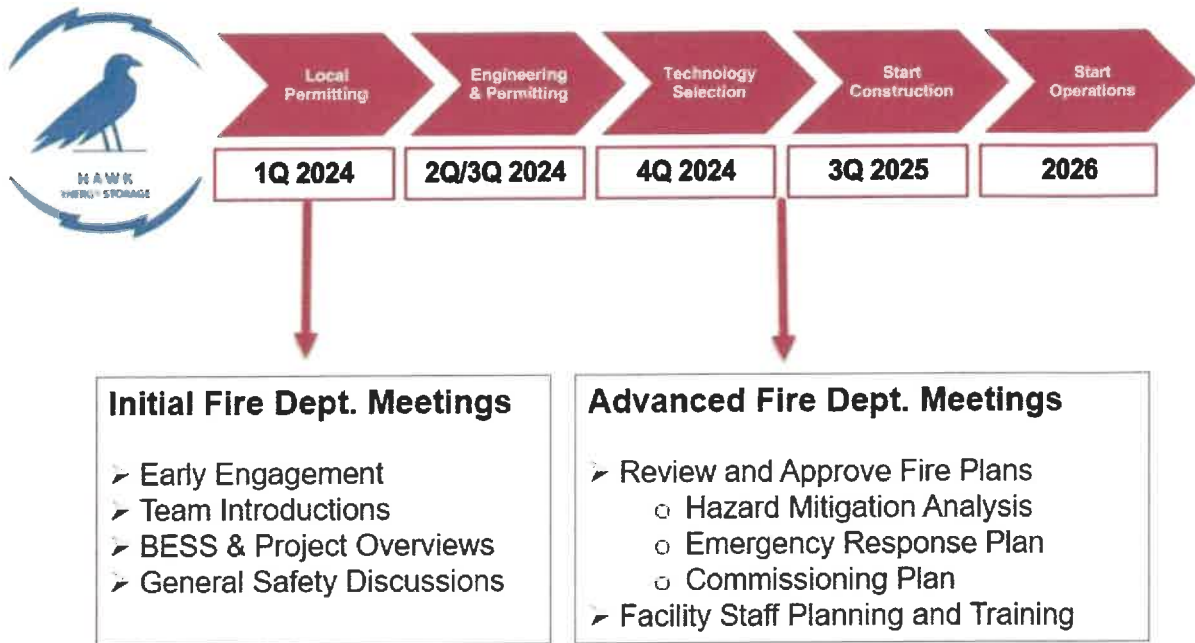
The Project will charge its batteries with energy from the electric transmission grid, store that energy on site, and later deliver that energy back onto the transmission grid through the same point of interconnection. During operation, the Project will be monitored and operational 24 hours a day and 365 days a year.

While the operation of the Project will be performed remotely, site maintenance and periodic security patrols are anticipated to produce one to two full-time equivalent (FTE) positions. During construction, the Project is expected to produce about 75 construction jobs.

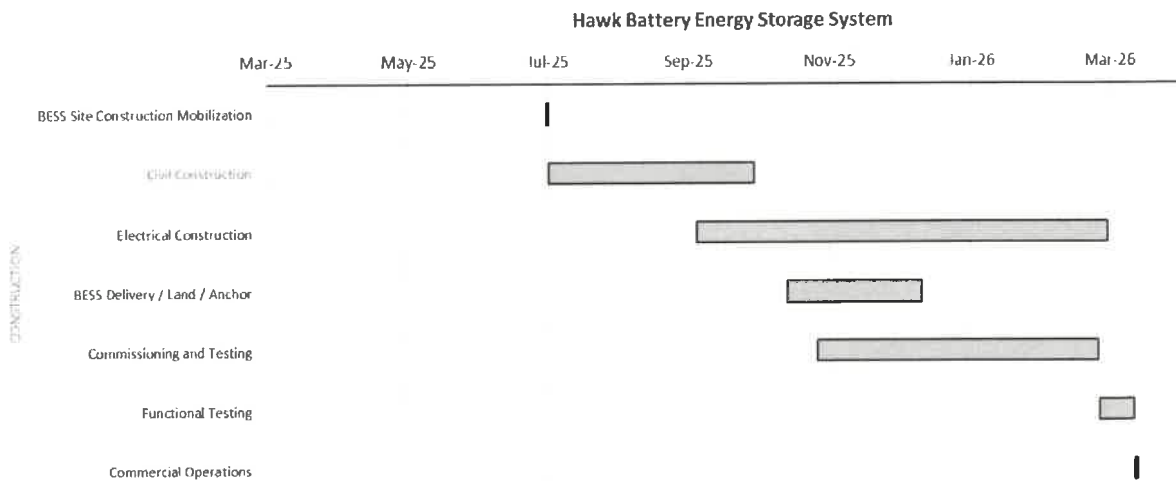
The Project is not expected to significantly impact traffic during construction or operations. Additionally, the Project will not produce any air pollution or odors. The Project will meet the post-development peak stormwater discharge requirements as outlined in the City's Post-Construction Stormwater Management Ordinance.

Hawk Energy Storage plans to commence Project construction in 2025, pending receipt of all required permits and approvals, and availability of key equipment for the Project. Please see below a tentative project timeline, including engagement with the fire department throughout development of the project:

Hawk Energy Storage Timeline



Construction of the Project is expected to take approximately 12 months. Please see below a tentative schedule for the Project's construction:



PROJECT COMPONENTS

The main components of the Project include:

- **Battery Storage Enclosures** – Battery components will be housed in purpose-built enclosures that will be placed on concrete, pier, or other foundation that follows the site-specific geotechnical recommendations. Each battery enclosure will be approximately 10 feet tall, 30 feet wide and 8 feet deep. Lithium-ion battery cells will be configured in modules, which will be arranged in racks, which will be housed in battery enclosures.

HVAC and temperature control systems will be incorporated into the enclosure's design. The enclosures will also house a battery management system that will monitor the batteries and ensure their performance is safe and efficient. To ensure that the Project will be able to maintain its energy capacity, space will be reserved on site for future power augmentation, i.e., the addition of batteries and related facilities.

- **Inverters** – Inverters will be used in charging to convert incoming electricity from alternating current (AC) to direct current (DC), and vice versa upon battery discharge.
- **Transformers** – Transformers will be used to step down the voltage of incoming electricity to enable storage and will be used to step up the voltage to enable transmission back to the grid.
- **Collector Substation** – A collector substation will be constructed on the Project site that will include the Project's electrical transmission equipment such as breakers and main power transformer. The collector substation will have an approximately 0.79-acre footprint within the Project area.
- **Energy Management System (EMS)** – The Project will be run by an onsite EMS. This system will control the charging and discharging of the batteries.
- **Battery Management System (BMS)** – The Project will be monitored 24/7 by the BMS. This includes extensive monitoring of the battery's temperature, voltage, amperage, and off-gassing. The BMS ensures that the Project is operating within normal parameters, and immediately halts operation should it detect anomalous operation.
- **Access/Security** – The Project site will have an access road throughout, security fencing, and night sky friendly lighting around the Project's collector substation. Battery area lighting shall be manually operated and only utilized when needed for maintenance activities after dark.

PUBLIC SAFETY

Hawk Energy Storage is committed to using Tier 1 battery energy storage products which are preferentially differentiated from other products based on the supplier's experience, financial wherewithal, and product quality. The Project will be designed and operated in accordance with the National Fire Protection Association (NFPA) 855 Standard on the Installation of Energy Storage Systems as well as other applicable industry codes and standards. NFPA 855 is considered the gold-standard for battery energy storage fire safety and includes requirements for the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems.

Before construction begins, a location and technology-specific Hazard Mitigation Analysis (HMA) will be shared with local first responders. This analysis will include detailed information about the BESS technology and any potential emissions that can be expected if a failure occurs on-site. Using the HMA as a reference, the Project will provide local first responders an Emergency Response Plan (ERP) and subsequent review of the same to ensure respondents to any incident understand and follow the agreed upon ERP. Please see below a list of typical components of an ERP:

- Contact Info (including emergency response coordinator)

- Preparation & Planning (including alarm response)
- Hazard / Safety Precautions
- Emergency Procedures
- Firefighting
- Emergency Shutdown
- Maintenance (including alarm inspection)
- Decommissioning

Hawk Energy Storage is committed to decommissioning the Project at the end of its useful life. Please see Hawk Energy Storage's proposed conditions below for more detail on decommissioning commitments. When the Project is decommissioned, all infrastructure will be removed, and the site will be restored to as close to its pre-construction condition as practicable.

NOISE IMPACT

Minimal levels of noise from the Project will be generated by the system's HVAC components and inverters. However, offsite noise is minimized by Project design. Hawk Energy Storage will comply with all local sound ordinances. Further, Hawk Energy Storage will conduct a pre-construction noise study to ensure compliance with local sound ordinances.

ECONOMIC IMPACT

As noted above, the Project will create approximately 70 construction jobs during construction and one to two FTE jobs during operations. The Project will also produce tax revenue for the City during its operation, which is expected to be up to 30 years.

The Project offers a critical benefit to local communities by helping bring emission-free firm energy resources to the electric grid. As more companies look to meet sustainability goals, the Project may help attract private business to the City. Further, the Project will support grid stability and reliability, responding quickly to sharp changes in demand for power. Without energy storage resources, black outs and brown outs are more likely, which cost businesses and families significant losses each year. As more intermittent energy resources are added to the grid, the Project will help ensure that power is available when it is needed.

AESTHETICS

The Project will be sited in an industrial area within the City's I-2 Industrial zoning district and is compatible with the use of the adjacent properties. Its industrial aesthetics will blend in with the industrial structures located around it and will not obstruct desirable views for City residents. Hawk Energy Storage will maintain Project equipment and fencing to industry standards to ensure the Project remains a good neighbor. Hawk Energy Storage will not display advertising material or signage other than warning, equipment identification, or ownership information within the Project area. Any complaints related to Project appearance or aesthetics will be reviewed and promptly resolved.



HAWK ENERGY STORAGE LLC

CONDITIONS OF APPROVAL

- Prior to commencement of construction, Hawk Energy Storage shall provide a Hazard Mitigation Analysis (HMA) to the local fire district. "Commencement of construction" means site clearing, excavation, placement of facilities, or any other substantial action adversely affecting the natural environment of the site but does not mean borings necessary to determine foundation conditions or other preconstruction monitoring to establish background information related to site or environmental suitability.
- Prior to commencement of construction, Hawk Energy Storage shall develop an Emergency Response Plan (ERP) and provide it to the local fire district.
- No later than thirty (30) days after the Commercial Operation Date (COD), Hawk Energy Storage will schedule an on-site meeting with local emergency responders to discuss the ERP, including potential site-specific emergency response during operation, emergency response information, locations of emergency equipment, and operation plans. Hawk Energy Storage will review this ERP at least annually with local emergency responders throughout the Project's lifespan and modify it as appropriate to keep it current with good utility safety practice.
- Hawk Energy Storage will perform periodic maintenance of the Project, including diagnostics for all equipment and other assessment methods, to ensure proper functioning and early detection of any abnormal conditions.
- Hawk Energy Storage shall construct, maintain, and operate the Project following good utility safety practices for ensuring battery fire safety. Hawk Energy Storage shall design and construct the Project in compliance with the most current version of the National Fire Protection Association (NFPA) 855 rules in effect on the date of issuance of this Conditional Use Permit.
- Hawk Energy Storage shall comply with the following conditions in support of Project decommissioning:
 - Hawk Energy Storage shall decommission the Project site at the end of the Project's useful life and shall restore the site to as close to pre-construction condition as practicable.
 - Thirty (30) days prior to the issuance of the Project's building permit, Hawk Energy Storage will submit a decommissioning plan to the City. The Plan will be prepared by a third-party engineer. The decommissioning plan will set forth planned steps for decommissioning and restoring the Project site and estimate the cost to decommission the Project, as well as salvage value of the Project's equipment. The financial assurance amount will be calculated based on the decommission cost less the salvage value.
 - Prior to receiving the building permit, the Project will provide a decommissioning commitment and post the required financial assurance for the benefit of the City.

The form of agreement will be either a bond, letter of credit or other means to provide assurance to the City that the decommissioning costs, as established by the third-party engineer, will be covered by the Project owners.

- Every five (5) years beginning on the fifth anniversary of the Project's commercial operation date, Hawk Energy Storage will review and update the costs of decommissioning provided in the Decommissioning Plan and revise the financial assurance accordingly, if necessary.
- Hawk Energy Storage shall perform a pre-construction noise study for the Project. Hawk Energy Storage shall perform the pre-construction noise study using good industry practices. Hawk Energy Storage shall file a copy of the pre-construction noise study with the City promptly after completion.
- Hawk Energy Storage shall reimburse the City for its reasonable expenses incurred in hiring a third-party professional engineering firm to assist the City with the Project's permitting and to review the Project's compliance with applicable codes and standards, to a maximum total amount of \$25,000.00; provided, however, that the third-party professional engineering firm must (i) be neutral to the Project and must not have a direct financial stake in the approval or denial of any local municipal permit required for the Project, and (ii) have reasonable professional expertise with BESS industry standards and in reviewing design and engineering details of BESS projects. The City must receive Hawk Energy Storage's prior written approval for the third-party professional engineering firm it hires, and Hawk Energy Storage shall not unreasonably withhold such approval.



HAWK ENERGY STORAGE LLC

ATTACHMENT A

Facts & Information





TYPES OF FACTS & INFORMATON	APPLICABLE TO THE REQUESTED CUP?		IS IT PROVIDED WITH THE APPLICATION?		IS IT MEASURABLE?	
	YES	NO	YES	NO	YES	NO
INTENSITY OF USE(S)						
Number of Customers		X		X		X
Number of Employees	X	.	X		X	
Building Size	X		X		X	
Hours of Operation	X		X		X	
PHYSICAL FACTORS						
Air Emissions/Odors		X		X	X	
Light Emissions	X		X			X
Noise/Vibration	X		X		X	
PUBLIC SAFETY						
Fire/EMS/Police	X		X			X
Parking		X		X		X
Pedestrian Safety		X		X		X
Traffic Impacts		X		X		X
UTILITIES						
Electric/Gas		X		X	X	
Sanitary Sewer		X		X		X
Stormwater	X		X			X
Water Service	X			X	X	
ECONOMIC IMPACTS						
Job Creation	X		X		X	
Property Values		X		X		X
School Capacity		X		X		X
Tax Base Growth	X		X		X	
AESTHETICS						
Blight Elimination		X		X		X
Indoor/Outdoor Use		X		X		X
View Obstruction	X		X			X

Attachment B

Site Location Map



Legend

-  Project Parcel
-  Gen-Tie Route
-  Parcel
-  City Limit

Attachment C

Conceptual Site Plan

(See attached)



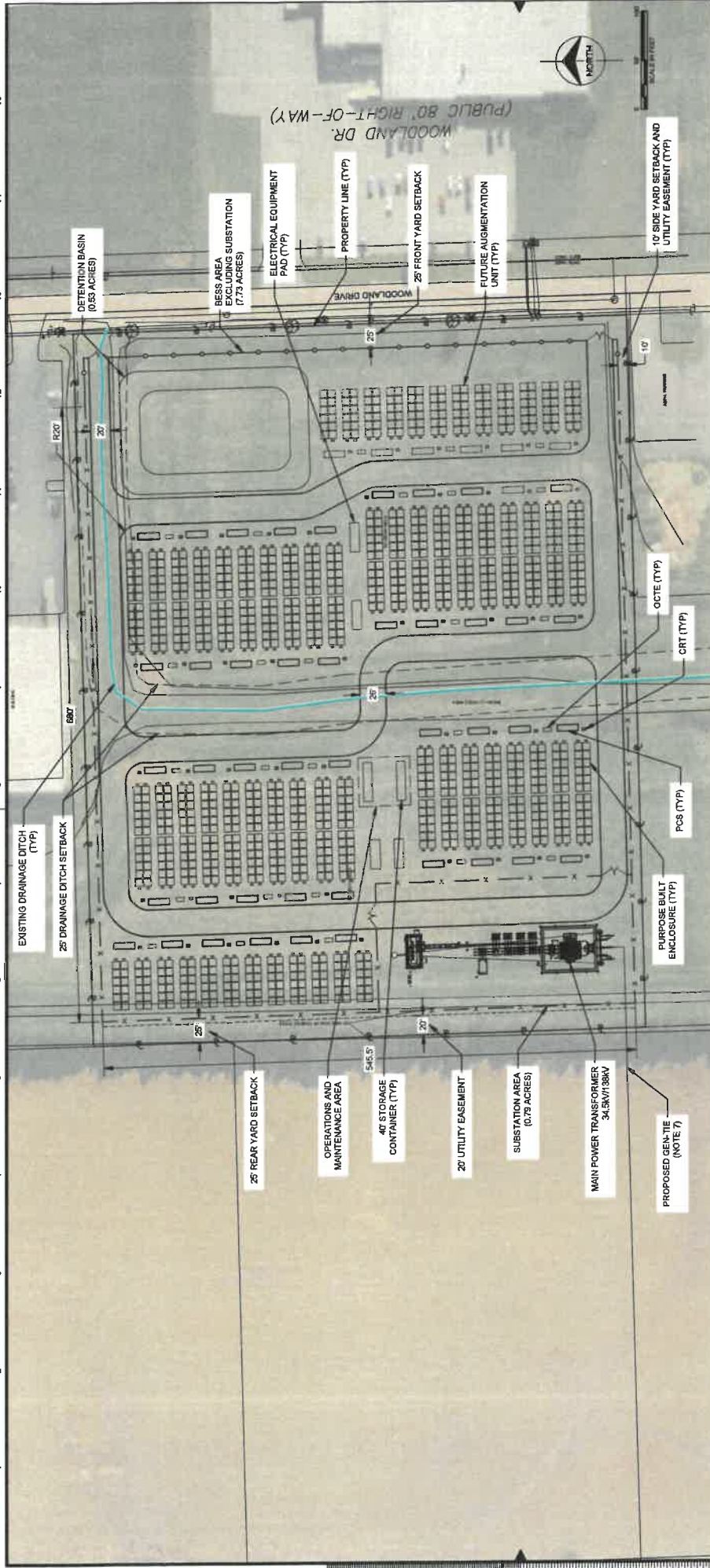
HAWK ENERGY STORAGE LLC

Attachment D

Fencing Depiction

(See attached)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



NOTES:

1. FINAL LAYOUT SUBJECT TO CHANGE BASED ON FINAL ENVIRONMENTAL, CIVIL, GEOTECHNICAL, AND AUTHORITY HAVING JURISDICTION REQUIREMENTS.
2. EQUIPMENT QUANTITIES, CONFIGURATION, AND FOOTPRINT SUBJECT TO CHANGE BASED ON FINAL BESS TECHNOLOGY SELECTION AND ADDITIONAL PROJECT DUE TO CHANGES.
3. CONSTRUCTION LAYOUT, PARKING, ETC. NOT INCLUDED OR CONSIDERED IN DEVELOPMENT OF EQUIPMENT ARRANGEMENT SHOWN.
4. THE CITY OF TWO RIVERS POLICE DEPARTMENT STORMWATER MANAGEMENT ORDINANCE IS INCLUDED OR CONSIDERED IN LAYOUT DEVELOPMENT.
5. WATER SUPPLY, SUCH AS TANKS, FIRE WATER LOOP, AND/OR HYDRANTS NOT INCLUDED OR CONSIDERED IN LAYOUT DEVELOPMENT.
6. OTHER ENVIRONMENTAL CONSTRAINTS WILL BE CONSIDERED IN THE FINAL SITE PLAN.
7. HAWK ENERGY, LLC HAS SECURED A PRIVATE TRANSMISSION LINE EASEMENT WITH THE UNDERLYING LANDOWNER.

PRELIMINARY PROJECT ACREAGE OUTLINE

BESS AREA	7.73 ACRES
SUBSTATION AREA	0.79 ACRES
PARCEL AREA	9.48 ACRES

ABBREVIATION LIST:

- BESS - BATTERY ENERGY STORAGE SYSTEM
- CH - CHAIN LINK FENCE
- CRT - CURB ROW TERMINATION
- EOL - END OF LIFE
- OCTE - OUTDOOR CORE TELCO ENCLOSURE
- POI - POINT OF INTERCONNECTION

LEGEND:

- PROPERTY LINE
- CHAIN LINK FENCE
- SLATED FENCE
- SETBACK
- GATE
- FIRE HYDRANT

ENERGY STORAGE SYSTEM DESCRIPTION

FACILITY RATING @ POI	150 MW / 600 MWh
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MAJOR EQUIPMENT LIST

NUMBER OF PURPOSE BUILT ENCLOSURES (BOL)	1008
NUMBER OF PURPOSE BUILT ENCLOSURES (EOL)	1248
NUMBER OF POWER ELECTRONICS INVERTERS (BOL)	44
NUMBER OF POWER ELECTRONICS INVERTERS (EOL)	52

PRELIMINARY - NOT FOR CONSTRUCTION

TENASKA HAWK BATTERY ENERGY STORAGE SYSTEM SITE PLAN	
Project:	0210124
Drawing:	1000
Sheet:	1 of 1
Rev.:	C
LAYOUT	
File:	TenaskaHawk_BESS.dwg



BURNS MEDONNELL
 9400 WARD PARKWAY
 KANSAS CITY, MO 64114
 Burns & McDonnell Engineering Co., Inc.
 M. KELLEY (designer) M. KELLEY (checker)

no.	date	by	chk	description

no.	date	by	chk	description
C	02/01/24	MDK	AT	ISSUED FOR REVIEW
B	01/30/24	MDK	AT	ISSUED FOR REVIEW
A	01/24/24	MDK	AT	ISSUED FOR REVIEW

MANITOWOC COUNTY, WISCONSIN



¹ Photo is preliminary and for illustrative purposes