

Yankton County Planning Commission
Yankton County Board of Adjustment

Applicant

Swan Lake Wind, LLC

District type: AG R1-Low R2-Moderate R3-High C-Comm.

LC – Lakeside Commercial RT-Rural Transitional

CUP needed:

Section 507 Section 607 Section 707 Section 807

Section 1805 Section 1905

NOTE:

Swan Lake Wind, LLC - Conditional Use Permit

Applicant is requesting a Conditional Use Permit for a Large Wind Energy Conversion System per Article 5 Section 507 and Article 26 Section 2605. Applicant is requesting to place 37 Large Wind Towers in Agriculture Districts throughout Mayfield and Turkey Valley Townships in Yankton County. Said towers will be placed in Sections 1, 2, 3, 4, 9, 11, 13, 14, 22, 23, 24, 25, 27, and 28 of Township 96 North, Range 55 West of the 5th PM and Sections 6, 7, 17, 20, 28, 31, 32, and 33 of Township 96 North, Range 54 west of the 5th PM, Yankton County, South Dakota

PC: Article 18 Section 1805

BOA: Article 19 Section 1905

Planning Commission date:
8/13/2024

Board of Adjustment date:
9/3/2024

Time: 7:05 PM

Time:
6:30
PM

FINDINGS OF FACT – CONDITIONAL USE PERMIT

Swan Lake Wind, LLC– CUP-247

<p>Are the requirements of Section 1723 met? (signed by owner unless there is a binding purchase agreement then signed by applicant, Variance accompanied by building permit (if applicable), site plan included with building permit,</p>	<p>Yes</p>
<p>Are the requirements of Section 1729 met? (all fees paid at time of application)</p>	<p>Yes</p>
<p>Section 1805:</p>	
<p>1. Did you specifically cite, in the application, the section of the Ordinance under which the conditional use is sought and state the grounds on which it is requested</p>	
<p>2. Was notice of public hearing given per Section 1803 (3-5)?</p>	<p>Mailed – Published –</p>
<p>3. Attend the public hearing</p>	
<p>4. Planning Commission: Make a recommendation to include: a. Granting of conditional use; b. Granting with conditions; or c. Denial of conditional use</p>	
<p>5. Planning Commission must make written findings certifying compliance with specific rules including: a. Ingress and Egress to proposed structures thereon with particular reference to automotive and pedestrian safety and convenience, traffic flow and control, and access in case of fire or catastrophe:</p>	
<p>b. Off right-of-way parking and loading areas where required; with particular attention to the items in (A) above and the economic, noise, glare or odor effects of the conditional use on adjoining properties and properties generally in the district;</p>	
<p>c. Refuse and service areas, with particular reference to the items in (A) and (B) above;</p>	
<p>d. Utilities, with reference to locations, availability, and compatibility;</p>	
<p>e. Screening and buffering with reference to type, dimensions, and character;</p>	
<p>f. Signs, if any, and proposed exterior lighting with reference to glare, traffic safety, economic effect;</p>	
<p>g. Required yards and other open spaces; and</p>	
<p>h. General compatibility with adjacent properties and other property in the district and that the granting of the conditional use will not adversely affect the public interest.</p>	

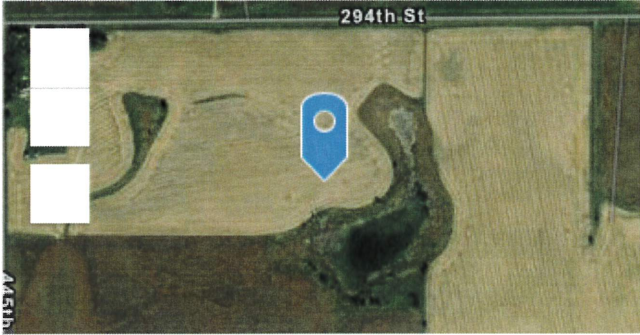
CUP MANAGER

Submitted by: Anonymous user

Submitted time: Jul 8, 2024, 1:08:45 PM

Point

Lat: 43.123315 Lon: -97.290995



Maxar | Esri Community Maps Contributors, South Dakota Game Fish and Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnol... Powered by Esri

Longitude

-97.290995

Latitude

43.123315

Permit Number

CUP247

Parcel Number

08.024.400.010

Permit Status

Approved Active

Permit Fee

300

Total Due

300

Was fee paid?

Yes

Receipt Number

00622078

Planning Commission Action Date

Aug 13, 2024, 7:05:00 PM

Planning Commission Action Time

7:05 PM

Board Adjustment Action Date

Sep 3, 2024, 6:30:00 PM

Board_Adjustment Action Time

6:30 PM

Application Accepted By

Bill Conkling

Checked By

BILL GARY

Existing Zoning

AGRICULTURE

Affected Zoning Ordinance

Article 5 ection507 and Article 26 section 2606

Applicant Name

Swan Lake Wind, LLC

Applicant Phone

605-667-0500

Applicant Address

700 Universe Boulevard Juno Beach, Florida 33408

Applicant Email Address

gokhan.andi@nexteraenergy.com

Owner Name

NextEra Energy Resources, LLC

Owner Phone

605-667-0500

Owner Address

700 Universe Boulevard Juno Beach, Florida 33408

Owner Email Address

gokhan.andi@nexteraenergy.com

Property Address

44505 294 ST

Reason for Request

Swan Lake Wind, LLC, respectfully requests your review and consideration of the enclosed application for a Conditional Use Permit for the proposed Swan Lake Wind Energy Project in Yankton County, South Dakota.

Height of Building

See separate application

Legal Description

NW4

Date of Application Submission

Jul 8, 2024, 12:00:00 PM

Section Township Range

24-96-55

Attachments:



ApplicantSignature-.jpg

signature-2024070813083570.jpg

PDF

SKETCH-.PDF
4MB

Conditional Use Permit Application for the Proposed Swan Lake Wind Energy Project, Yankton County, South Dakota

JULY 2024

PREPARED FOR

Swan Lake Wind, LLC

PREPARED BY

SWCA Environmental Consultants

**CONDITIONAL USE PERMIT APPLICATION FOR THE
PROPOSED SWAN LAKE WIND ENERGY PROJECT,
YANKTON COUNTY, SOUTH DAKOTA**

Swan Lake Wind, LLC
700 Universe Boulevard
Juno Beach, Florida 33408

July 2024

July 8, 2024

Gary Vetter
Development Services Director
Yankton County Planning and Zoning
321 West 3rd Street, Suite 209
Yankton, South Dakota 57078

Re: Yankton County – Conditional Use Permit Application for the Proposed Swan Lake Wind Energy Project

Dear Gary Vetter:

Swan Lake Wind, LLC, respectfully requests your review and consideration of the enclosed application for a Conditional Use Permit for the proposed Swan Lake Wind Energy Project in Yankton County, South Dakota.

Enclosed with this application is a project overview and information required for submittal pursuant to Article 26 Section 2605 of the Yankton County Zoning Ordinance.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

Gokhan Andi
Project Developer
Swan Lake Wind, LLC
gokhan.andi@nexteraenergy.com

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COMPLETENESS CHECKLIST

Authority	Application Section(s)
Yankton County Zoning Ordinance, Article 26, Section 2605. Requirements for Large Wind Energy Conversion Systems (WECS)	
Large or Commercial wind energy conversion systems shall be permitted as a Conditional Use Permit in the Agricultural District (AG) and in the Commercial District (C) only. Certain requirements as set forth below:	–
1. Applicability	–
The requirements of these regulations shall apply to all WECS facilities, including private facilities with a single tower height of greater than eighty (80) feet, rated capacity of more than 100kWh and used primarily for off site consumption of power.	3
2. Federal and State Requirements	–
All WECS shall meet or exceed standards and regulations of the Federal Aviation Administration and South Dakota State Statutes and any other agency of federal or state government with the authority to regulate WECS	4
3. Mitigation Measures	–
(a) Site Clearance. The permittees shall disturb or clear the site only to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the WECS.	4.1.1
(b) Topsoil Protection. The permittees shall implement measures to protect and segregate topsoil from subsoil in cultivated lands unless otherwise negotiated with the affected landowner.	4.1.2
(c) Compaction. The permittees shall implement measures to minimize compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable.	4.1.3
(d) Livestock Protection. The Permittees shall take precautions to protect livestock during all phases of the project's life.	4.1.4
(e) Fences. The Permittees shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner.	4.1.5

Authority	Application Section(s)
<p>(f) <u>Roads: Public Roads.</u> Prior to commencement of construction, the permittees shall identify all state, county or township "haul roads" that will be used for the WECS project and shall notify the state, county or township governing body having jurisdiction over the roads to determine if the haul roads identified are acceptable. The governmental body shall be given adequate time to inspect the haul roads prior to use of these haul roads. Where practical, existing roadways shall be used for all activities associated with the WECS. Where practical, all-weather roads shall be used to deliver concrete, turbines, towers, assemble nacelles and all other heavy components to and from the turbine sites. The permittees shall, prior to the use of approved haul roads, make satisfactory written agreements with the appropriate state, county or township governmental body having jurisdiction over approved haul roads for construction of the WECS for the maintenance and repair of the haul roads that will be subject to extra wear and tear due to transportation of equipment and WECS components. The permittees shall provide the County Zoning Administrator with such written agreements.</p> <p><u>Turbine Access Roads.</u> Construction of turbine access roads shall be minimized. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with material that meets or exceeds South Dakota D.O.T. specifications for aggregate base course. When access roads are constructed across streams and drainage-ways, the access roads shall be designed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed.</p> <p><u>Private Roads.</u> The permittees shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.</p> <p><u>Control of Dust.</u> The permittees shall utilize all reasonable measures and practices of construction to control dust.</p>	4.1.6
(4) Soil Erosion and Sediment Control Plan	

Authority	Application Section(s)
The permittees shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the plan to the County Zoning Administrator. The Soil Erosion and Sediment Control Plan shall address the erosion control measures for each project phase, and shall at a minimum identify plans for grading, construction and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive revegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary project activities; and measures to minimize the area of surface disturbance. Other practices shall include containing excavated material, protecting exposed soil, stabilizing restored material, and removal of silt fences or barriers when the area is stabilized. The plan shall identify methods for disposal or storage of excavated material. A storm water runoff permit, if required, shall be obtained from the South Dakota D.E.N.R.	4.2
(5) Setbacks	—
(a) wind turbines shall meet the following minimum spacing requirements.	
(i) Distance from existing off-site residences, business and public buildings shall be one thousand three hundred and twenty feet (1,320) feet. Distance from on-site or lessor's residence shall be one thousand (1,000) feet.	4.3
(ii) Distance from right-of-way (ROW) of public roads shall be 500 feet or one point one (1.1) times the height of the wind turbines depending upon which is greater, measured from the ground surface to the tip of the blade when in a fully vertical position.	4.3
(iii) Distance from any property line shall be 500 feet or one point one (1.1) times the height of the wind turbines depending upon which is greater, measured from the ground surface to the tip of the blade when in a fully vertical position unless wind easement has been obtained from adjoining property owner.	4.3
(6) Electromagnetic Interference	—
The permittees shall not operate the WECS so as to cause microwave, television, radio, or navigation interference contrary to Federal Communications Commission (FCC) regulations or other law. In the event such interference is caused by the WECS or its operation, the permittees shall take the measures necessary to correct the problem.	4.4
(7) Lighting	—

Authority	Application Section(s)
Towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the monitoring equipment.	4.5
(8) Access	–
Tower climbing apparatus shall be located no closer than twelve (12) feet from the ground unless locking anti-climb device is installed on the tower.	4.6
(9) Turbine Spacing	–
The turbines shall be spaced no closer than three (3)-rotor diameters (RD) measurement of blades tip to tip. If required during final micro siting of the turbines to account for topographic conditions, up to 10 percent of the towers may be sited closer than the above spacing but the permittees shall minimize the need to site the turbines closer.	4.7
(10) Footprint Minimization	–
The permittees shall design and construct the WECS to minimize the amount of land that is impacted by the WECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers, and monitoring systems shall to the greatest extent feasible be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.	4.8
(11) Electrical Cables	–
The permittees shall place electrical lines, known as collectors and communication cables underground when located on private property. Collectors and cables shall also be placed within or immediately adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.	4.9
(12) Feeder Lines	–
The permittees shall place overhead electric lines, known as feeders, on public rights-of-way if a public right-of-way exists. Changes in routes may be made as long as feeders remain on public rights-of-way and approval has been obtained from the governmental unit responsible for the affected right-of-ways. If no public right-of-way exists, the permittees may place feeders on private property. When placing feeders on private property, the permittees shall place the feeder in accordance with the easement negotiated with the affected landowner. The permittees shall submit the site plan and engineering drawings for the feeder lines before commencing construction.	4.10
(13) Decommissioning/Restoration/Abandonment/Removal Bond	–

Authority	Application Section(s)
<p>(a) <u>Decommissioning Plan</u>. Within 120 days of completion of construction, the permittees shall submit to the County Zoning Administrator a decommissioning plan describing the manner in which the permittees anticipate decommissioning the project in accordance with the requirements of paragraph (b) below. The plan shall include a description of the manner in which the permittees will ensure that it has the financial capability to carry out these restoration requirements when they go into effect. The permittees shall ensure that it carries out its obligation to provide for the resources necessary to fulfill these requirements. The County Zoning Administrator may at any time request the permittees to file a report with the County Zoning Administrator describing how the permittees are fulfilling this obligation.</p>	4.11.1
<p>(b) <u>Site Restoration</u>. Upon expiration of this permit, or upon earlier termination of operation of the WECS, the permittees shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings, and ancillary equipment to a depth of four feet. To the extent possible, the permittees shall restore and reclaim the site to its pre-project topography and topsoil quality. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. Any agreement for removal to a lesser depth or for no removal shall be recorded with the County Zoning Administrator which shall show the locations of all such foundations. All such agreements between the permittees and the affected landowner shall be submitted to the County Zoning Administrator prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within eighteen (18) months after expiration.</p>	4.11.2
<p>(c) <u>Abandoned Turbines</u>. The permittees shall advise the County Zoning Administrator of any turbines that are abandoned prior to termination of operation of the WECS. The County Zoning Administrator may require the permittees to decommission any abandoned turbine.</p>	4.11.3

Authority	Application Section(s)
(d) <u>Performance Security</u> . The Applicant and the owner of record of any proposed large or commercial Wind Energy Conversion System property site shall, at its cost and expense, be jointly required to execute and file with the County a bond, or other form of security acceptable to the County as to type of security and the form and manner of execution, in an amount of at least two (2) percent of the cost of the aggregate project for a WECS and with such sureties as are deemed sufficient by the County to assure the faithful performance of the terms and conditions of this Ordinance and conditions of any Conditional Use Permit issued pursuant to this Ordinance. The full amount of the bond or security shall remain in full force and effect throughout the term of the Conditional Use Permit and/or until any necessary site restoration is completed to restore the site pursuant to 9(a) (above.)	4.11.4
(14) Height from Ground Surface	–
The minimum height of blade tips, measured from ground surface when a blade is in fully vertical position, shall be twenty-five (25) feet.	4.12
(15) Towers	–
(a) Color and Finish. The finish of the exterior surface shall be non-reflective and non-gloss.	4.13
(b) All towers shall be singular tubular design.	4.13
(16) Noise	–
Noise level shall not exceed 60dB, including constructive interference effects, measured at the closest point on the closest property line from the base of the system.	4.14
(17) Permit Expiration	–
All permits shall become void if no substantial construction has been completed within three (3) years of issuance	4.15
(18) Required Information for Permit	–
(a) Boundaries of the site proposed for WECS and associated facilities on United States Geological Survey Map or other map as appropriate.	Appendix A
(b) Map of Easements for WECS.	Appendix B
(c) Map of occupied residential structures, businesses, and public buildings within a 2-mile radius.	Appendix C
(d) map of sites for WECS, access roads and utility lines.	Appendix D
(e) Location of other WECS in general area.	Appendix E
(f) Project schedule	1.2
(g) Mitigation Measures	4.1
(19) Technical Issues and Expert Review	

Authority	Application Section(s)
WECS and equipment facilities may involve complex technical issues that require review and input that is beyond the expertise of County staff. The Zoning Administrator, Planning Commission, Board of Adjustment, and/or the County Commission may require the applicant to pay reasonable costs for a third party technical study of a proposed facility. Selection of expert(s) to review will be at the sole discretion of the County.	4.16

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1 INTRODUCTION

Swan Lake Wind, LLC (Swan Lake Wind), is a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC (NEER). NEER, through its affiliates, develops renewable projects throughout the United States and Canada. NEER is an American-owned company headquartered in Juno Beach, Florida. NEER, and its affiliated entities, is the largest generator in North America of renewable energy from the wind and sun. In South Dakota specifically, NEER, through its affiliates, has made approximately \$836 million dollars of capital investments.

Swan Lake Wind is submitting this application for a Conditional Use Permit (CUP) to site, construct, and operate the proposed Swan Lake Wind Energy Project (Project). The proposed Project is in Turner and Yankton Counties, South Dakota, and will have a nameplate capacity of 248 megawatts (MW). The proposed Project will consist of up to 97 wind turbine generators, four temporary meteorological evaluation towers (METs) or sonic detection or ranging (SODAR) systems, a Federal Aviation Administration (FAA) light mitigating system, an Aircraft Detection Lighting System (ADLS), a 230-kilovolt (kV) transmission line, a new collector substation, and an operations and maintenance (O&M) facility. Additional facilities associated with the proposed Project will include access roads, pad-mounted transformers, and an underground electrical collection system. In addition, one permanent MET may be installed within Yankton County; the final location is to be determined.

Power from the proposed Project will be transmitted to Western Area Power Association's (WAPA's) transmission system via an aboveground 230-kV transmission line that will be approximately 0.1 mile in length, originating at the collector substation and terminating at either the Utica V. Fodness 230-kV line in Yankton County, South Dakota, or at a new switchyard to be constructed by WAPA (Appendix A). Swan Lake Wind executed a generator interconnection agreement with WAPA in November 2023. Swan Lake Wind will submit a separate CUP application to Turner County for the portion of the proposed Project that will be located in Turner County.

1.1 Project Area

The proposed Project area identified below describes the proposed Project boundary—the area within which Swan Lake Wind is proposing to site, construct, and operate wind turbines and associated facilities. The proposed Project area was selected to include all areas necessary for Swan Lake Wind to optimize wind resource while avoiding and minimizing impacts to environmental resources. The proposed Project area encompasses approximately 100,518.0 acres: 46,043.0 acres in Yankton County and 54,475.0 acres in Turner County (see Appendix A). Swan Lake Wind has executed voluntary wind easement agreements with approximately 141 landowners (330 parcels), 56 of those landowners (142 parcels) in Yankton County, which is sufficient acreage to construct the proposed Project. All facilities are proposed to be located on private land, except where electrical collection and communication systems cross public road rights-of-way (ROWs). Figure 1.1-1 illustrates an example of a wind turbine. Table 1.1-1 summarizes the legal description of the proposed Project area.



Figure 1.1-1. Example wind turbine.

Table 1.1-1. Legal Description of the Proposed Project Area

County	Township	Range	Sections*
Yankton County	96 North (N)	55 West (W)	1–36
	96 N	54 W	1–36
Turner County	97 N	55 W	1–36
	97 N	54 W	4–10, 15–23, 25–36
	98 N	55 W	4–10, 15–22, 25–36
	98 N	54 W	31

* The Project area may be located within the section but may not encompass the entire section.

1.2 Project Schedule

The proposed Project schedule is estimated as follows:

- **Construction.** Construction is scheduled to begin in May 2027, subject to obtaining necessary preconstruction permits and approvals, road restrictions, and weather. The engineering, procurement, and construction contractor will be responsible for completing all Project construction, including roads, wind turbine assembly, electrical, and communications work. Construction will take approximately 10 months to complete. Restoration activities will be completed as weather allows during the spring of 2028.
- **Testing Operations.** Swan Lake Wind anticipates that testing of the electrical power generating systems will begin in September 2027.
- **Commercial Operation.** Swan Lake Wind anticipates that commercial operation (delivering power to the customer) will begin in December 2027. Ultimately, this date is dependent upon permitting, equipment deliveries, and other development activities.

2 APPLICANTS

The Project developer and applicant for the Yankton County CUP is:

Swan Lake Wind, LLC (duly authorized to do business in South Dakota)
c/o NextEra Energy Resources, LLC
700 Universe Boulevard
Juno Beach, Florida 33408

The developer contact for the proposed Project is:

Gokhan Andi
Project Developer
Swan Lake Wind, LLC
(605) 667-0500
gokhan.andi@nexteraenergy.com

NextEra Energy Resources, LLC (together with its affiliated entities, "NextEra Energy Resources") is a clean energy leader and is one of the largest wholesale generators of electric power in the U.S., with approximately 30,600 megawatts of total net generating capacity, primarily in 41 states and Canada as of year-end 2023.

NextEra Energy Resources' wind portfolio consists of more than 170 projects representing more than 24,970 MW of operating assets with more than 12,000 wind turbines in 23 states and 4 provinces in Canada as of December 2023.

3 PROJECT EQUIPMENT

The proposed Project will consist of up to 97 wind turbine generators, four temporary METs or SODAR systems, a light mitigating system, a 230-kV transmission line, a new collector substation, an ADLS, and an O&M facility. Additional facilities associated with the proposed Project will include up to 42 miles of access roads in Yankton County, pad-mounted transformers, and an underground electrical collection system up to 69 miles long in Yankton County. The proposed Project transmission line will be approximately 0.1 mile long and deliver power to the Utica V. Fodness 230-kV line in Yankton County. Additionally, one permanent MET may be installed within Yankton County; the final location is to be determined. The permanent MET will be built to match the site's turbine hub height of approximately 89.0 meters and contain anemometers and other instruments to measure site conditions, such as wind speed, wind direction, atmospheric pressure, temperature, and humidity.

3.1 Wind Turbine Generators

Swan Lake Wind is proposing to install up to 97 General Electric (GE) 2.82-MW wind generators with 37 of those turbines proposed within Yankton County. Final turbine models are subject to change to ensure selection of a turbine that is both cost effective and optimizes land and wind resources.

The GE 2.82-MW turbine models will have a hub height of approximately 292.0 feet (89.0 meters) with a rotor diameter of approximately 417.0 feet (127.0 meters), a height of approximately 499.0 feet from the base of the tower to the tip of the upright blade, and a swept area of 136,745.0 square feet (12,704.0 square meters). To the extent reasonably possible, Swan Lake Wind will use materials, colors, textures, and locations that will blend the Project into the natural setting and existing environment.

3.1.1 Turbine Rotors

The proposed rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the generator, brake, cooling system, and other electrical and mechanical systems. Rotor speed is regulated by a combination of blade pitch angle adjustment and generator/converter torque control. The rotor spins in a clockwise direction under normal operating conditions when viewed from an upwind location. Figure 3.1.1-1 shows an example of a rotor.



Figure 3.1.1-1. Example rotor.

3.1.2 Turbine Towers

The proposed tower is made of cylindrical, tapered steel and typically consists of sections joined together via factory fabricated welds, which are automatically controlled and ultrasonically inspected during

manufacturing per American National Standards Institute specifications. Surfaces are coated for protection against corrosion and will be painted. Each turbine can be accessed through a lockable steel door at the base of the tower through which the nacelle and turbine blades can be accessed. Inside each tower, platforms are accessible via ladders that are equipped with fall-arresting safety systems. Interior lights are factory installed at interval points from the base of the tower to the tower top. Figure 3.1.2-1 shows an example of a turbine base.



Figure 3.1.2-1. Example of turbine base.

3.2 Turbine Lightning Strike Protection

Each proposed turbine will be grounded and shielded to protect against lightning. The grounding system will be installed during foundation work and designed for local soil conditions in accordance with local utility or code requirements. Lightning receptors will be placed in each rotor blade and in the turbine tower. The electrical components will also be protected.

3.3 Electrical Collection System

The electricity generated by each proposed turbine will be stepped up to a power collection line voltage of 34.5 kV via a pad-mounted transformer at the base of each turbine. The electricity generated at each turbine will be collected by a 69-mile-long system of underground power collection lines in Yankton County within the proposed Project area and brought to the collector substation in Yankton County. The proposed collector substation will have a footprint of approximately 5.0 acres.

At the proposed collector substation, voltage will be stepped up to 230 kV and delivered to WAPA's Utica V. Fodness 230-kV line (Point of Interconnection) via a proposed approximately 0.1-mile overhead transmission line in Yankton County. Communication cables for the turbines will be placed parallel to underground collection lines and terminate at the O&M building.

3.4 Permanent Access Roads

Compacted gravel access roads are proposed to be constructed for each turbine. Proposed access roads will be sited in consultation with the landowner to avoid or minimize impacts to land use and the environment. Up to 42-miles of access roads are proposed for the Project in Yankton County. The proposed access roads will be approximately 16.0 to 18.0 feet wide, constructed with locally sourced gravel, if available, and will support the size and weight of maintenance vehicles.

4 WIND ENERGY CENTER SITING CRITERIA

Swan Lake Wind will comply with the Yankton County Zoning Ordinance (Ordinance), revised on December 19, 2023 (Yankton County Planning and Zoning 2023). The proposed Project area is primarily in an Agricultural District in Yankton County. In Agricultural Districts, a CUP is required for a Wind Energy Facility, per Article 26 Section 2065 of the Ordinance. This section outlines how Swan Lake Wind will comply with the requirements for Large or Commercial Wind Energy Conversion Systems (WECS) in Article 26 Section 2065 of the Ordinance. Swan Lake Wind will also comply with the South Dakota Public Utilities Commission (SDPUC) rules and regulations set forth in South Dakota Administrative Rules Chapter 20:10:22 and South Dakota Codified Law Chapter 49-41B.

4.1 Mitigation Standards

This section outlines how Swan Lake Wind will comply with Article 26 Section 2605:3 of the Ordinance, including requirements related to mitigation measures.

4.1.1 Site Clearance

Swan Lake Wind will disturb or clear the Project area only to the extent necessary to ensure suitable access for construction, safe operation, and maintenance of the proposed Project.

4.1.2 Topsoil Protection

Swan Lake Wind will implement best management practices (e.g., erosion control blankets, staked sod, rip rap) to protect and segregate topsoil from subsoil in cultivated lands.

4.1.3 Compaction

Swan Lake Wind will implement best management practices to minimize compaction of all lands during all phases of the proposed Project's life and will confine compaction to as small of an area as practicable.

4.1.4 Livestock Protection

Swan Lake Wind will take precautions to protect livestock during all phases of the proposed Project's life (e.g., placing cattle guards, fencing infrastructure).

4.1.5 Fences

Swan Lake Wind will promptly repair or replace any fences or gates removed or damaged during all phases of the proposed Project's life unless otherwise negotiated with the affected landowner.

Additionally, Swan Lake Wind will provide for continuity in electric fence circuits when installing gates where electric fences are present. Where necessary or requested by landowners, Swan Lake Wind will construct gates or fences, such as those around the collector substation.

4.1.6 Roads

Prior to construction, Swan Lake Wind will obtain all necessary permits for road use, access roads, intersections, maintenance, and repair of road damages with the governmental jurisdiction with authority over each road. Swan Lake Wind will notify the Yankton County Road Superintendent of such arrangements upon request.

Swan Lake Wind will be responsible for all maintenance associated with the proposed turbines and private roads accessing the turbines during Project operation. Additionally, Swan Lake Wind will enter into a Haul Road Agreement with the Yankton County Highway Department and road maintenance agreements with the Township Road Supervisors to ensure that all county and township roads within the proposed Project area are repaired or restored to a condition at least equal to the condition prior to Project construction. Swan Lake Wind will provide a haul route map and an engineer's report prior to construction. In addition, Swan Lake Wind will contact the County and Township Road Superintendent for a pre-haul and post-haul inspection of the haul routes.

- **Public Roads.** Prior to commencement of construction, Swan Lake Wind will identify all state, county, or township "haul roads" that will be used for the proposed Project and will notify the state, county, or township governing body having jurisdiction over the roads to determine if the haul roads identified are acceptable. The governmental body will be given adequate time to inspect the haul roads prior to their use. Where practical, existing roadways will be used for all activities associated with the proposed Project. Where practical, all-weather roads will be used to deliver concrete, turbines, towers, assemble nacelles and all other heavy components to and from the turbine sites. Prior to the use of approved haul roads, Swan Lake Wind will make satisfactory written agreements with the appropriate state, county, or township governmental body that has jurisdiction over approved haul roads for construction of the proposed Project, as well as maintenance and repair of the haul roads, which will be subject to extra wear and tear due to transportation of equipment and proposed Project components. Swan Lake Wind will provide the Yankton County Zoning Administrator with such written agreements.
- **Turbine Access Roads.** Construction of proposed turbine access roads will be minimized. Proposed access roads will be low profile roads so that farming equipment can cross them, and they will be covered with material that meets or exceeds South Dakota Department of Transportation specifications for aggregate base course. When proposed access roads are constructed across streams and drainage ways, they will be designed so that runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed. The permanent access roads will be maintained during the operation of the proposed Project and will be returned to their original condition upon Project decommissioning, unless otherwise requested by the landowner.
- **Private Roads.** Swan Lake Wind will promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.
- **Control of Dust.** Swan Lake Wind will use all reasonable measures and practices of construction to control dust (e.g., water trucks).

4.2 Soil Erosion and Sediment Control Plan

Swan Lake Wind will develop a soil erosion and sediment control plan prior to construction and submit the plan to the Yankton County Zoning Administrator. The soil erosion and sediment control plan will address the erosion control measures for each proposed Project phase and, at a minimum, identify plans for grading, construction, and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive revegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary Project activities; and measures to minimize the area of surface disturbance. Other control measures include containing excavated material, protecting exposed soil, stabilizing restored material, and removing silt fences or barriers when the area is stabilized. The plan will also identify methods for disposal or storage of excavated material. A stormwater runoff permit, if required, will be obtained from the South Dakota Department of Agriculture and Natural Resources.

4.3 Setbacks

Swan Lake Wind will adhere to the following minimum spacing requirements:

- Distance from existing off-site residences, business, and public buildings will be 1,320.0 feet. Distance from on-site or lessor's residence will be 1,000.0 feet.
- Distance from public road ROWs will be 500.0 feet or 1.1 times the height of the wind turbines, depending upon which is greater, measured from the ground surface to the tip of the blade when in a fully vertical position.
- Distance from any property line will be 500.0 feet or 1.1 times the height of the wind turbines, depending upon which is greater, measured from the ground surface to the tip of the blade when in a fully vertical position, unless a wind easement has been obtained from adjoining property owner.

4.4 Electromagnetic Interference

Swan Lake Wind performed an electromagnetic interference assessment, and it was concluded that the proposed turbine array is not expected to have any significant impact on nearby microwave, AM, FM, cellular, television, or aviation towers.

Telephone and fiber-optic cables within the proposed Project area will be located in the field by the respective utility companies prior to construction and will not be negatively affected during construction. No impacts to Federal Communications Commission-licensed microwave beams have been encountered from the proposed Project turbines.

4.5 Lighting

The wind turbines and METs associated with the proposed Project will have lighting and markings that comply with FAA requirements, and the FAA's review will include the evaluation of any potential interference with air traffic. Determinations of No Hazard to Air Navigation were filed with the FAA for a preliminary array, and Swan Lake Wind will file supplemental Determinations of No Hazard to Air Navigation. Swan Lake Wind will work with local farmers and spray plane operators so that spray planes are able to safely spray agriculture fields within the proposed Project area. Local farmers and spray plane

operators can coordinate with the Swan Lake Wind O&M manager to curtail turbines to accommodate spraying.

4.6 Access

Swan Lake Wind will ensure the tower climbing apparatus is no closer than 12.0 feet from the ground unless a locking anti-climb device is installed on the tower (e.g., behind locked turbine doors or behind barbed-wire fences with locked gates).

4.7 Turbine Spacing

The proposed turbines associated with the Project will not be spaced closer than the length of three rotor diameters measured from blade tip to blade tip. If required during micrositing of turbines to account for topographic conditions, up to 10% of the towers may be sited closer than the aforementioned spacing. Swan Lake Wind will minimize the need to site the turbines closer.

4.8 Footprint Minimization

Swan Lake Wind will design and construct the proposed Project in such a way as to minimize the amount of land that is impacted. Associated proposed Project facilities (e.g., electrical/electronic boxes, transformers, and monitoring systems) will, to the greatest extent feasible, be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.

4.9 Electrical Cables

Swan Lake Wind will place proposed electrical lines, known as collectors, and communication cables underground if they are located on private property. Collectors and cables will also be placed within or immediately adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. For any proposed electrical lines placed in public ROWs, Swan Lake Wind will confer with Yankton County, the township, and the South Dakota Department of Transportation regarding placement of the electrical cable. The description in this section does not apply to feeder lines.

4.10 Feeder Lines

Swan Lake Wind will place overhead electric lines, known as feeders, on public ROWs if a public ROW exists. Changes in routes may be made as long as feeders remain on public ROWs and approval has been obtained from the governmental unit responsible for the affected ROWs. If no public ROW exists, Swan Lake Wind may place feeders on private property. When placing feeders on private property, Swan Lake Wind will place them in accordance with the easement negotiated with the affected landowner. A site plan and engineering drawings for the feeder lines will be submitted before commencing construction.

4.11 Decommissioning/Restoration/Abandonment/Removal Bond

Prior to proposed Project construction, Swan Lake Wind will provide a construction decommissioning financial assurance to the SDPUC in accordance with South Dakota Codified Law 49-41B-39. Prior to

proposed Project operations, Swan Lake Wind will tender financial assurance to the SDPUC for the operational duration of the Project as required under South Dakota Administrative Rule 20:10:22:33.01.

4.11.1 Decommissioning Plan

Within 120 days of completion of construction, Swan Lake Wind will submit to the Yankton County Zoning Administrator a decommissioning plan describing how Swan Lake Wind anticipates decommissioning the proposed Project in accordance with Section 4.11.2 below. The plan will include a description of how Swan Lake Wind will ensure that it has the financial capability to carry out these restoration requirements when they go into effect. Swan Lake Wind will ensure that it carries out its obligation to provide for the resources necessary to fulfill these requirements. The Yankton County Zoning Administrator may at any time request Swan Lake Wind to file a report with the Yankton County Zoning Administrator describing how they are fulfilling this obligation. If requested, Swan Lake Wind will file a report.

4.11.2 Site Restoration

Upon expiration of this permit, or upon earlier termination of operation of the proposed Project, Swan Lake Wind will have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings, and ancillary equipment to a depth of 4 feet. To the extent possible, Swan Lake Wind will restore and reclaim the site to its pre-Project topography and topsoil quality. All access roads will be removed unless written approval is provided by the affected landowner requesting that one or more roads, or portions thereof, be retained. Any agreement for removal to a lesser depth or for no removal will be recorded with the Yankton County Zoning Administrator, which will show the locations of all such foundations. All such agreements between Swan Lake Wind and the affected landowner will be submitted to the Yankton County Zoning Administrator prior to completion of restoration activities. The site will be restored in accordance with the requirements of this condition within 18 months after expiration.

4.11.3 Abandoned Turbines

Swan Lake Wind will advise the Yankton County Zoning Administrator of any proposed turbines that are abandoned prior to termination of operation of the Project. The Yankton County Zoning Administrator may require the permittees to decommission any abandoned turbine.

4.11.4 Performance Security

Swan Lake Wind will, at its cost and expense, be jointly required to execute and file with the county a bond, or other form of security acceptable to the county (i.e., type of security and the form and manner of execution) in an amount of at least 2% of the cost of the aggregate project for a WECS and with such sureties as are deemed sufficient by the county to assure the faithful performance of the terms and conditions of the Ordinance and conditions of any CUP issued pursuant to the Ordinance (Yankton County Planning and Zoning 2023). The full amount of the bond or security will remain in full force and effect throughout the term of the CUP and/or until any necessary site restoration is completed to restore the site pursuant to Section 4.11.1 (above).

4.12 Height from Ground Surface

The minimum height of blade tips, measured from ground surface when a blade is in full vertical position, will be 25.0 feet.

4.13 Towers

The proposed wind turbine generators will be installed on tubular, monopole-type towers. The turbines will be painted a non-reflective, non-obtrusive, non-gloss, off-white color and will not display any advertising except for reasonable identification of the manufacturer or Project operator. To the extent reasonably possible, Swan Lake Wind will use materials, colors, textures, and locations that will blend the Project into the natural setting and existing environment.

4.14 Noise

Per Yankton County ordinances, Swan Lake Wind will ensure the noise level will not exceed 60 decibels, including constructive interference effects, measured at the closest point on the closest property line from the base of the proposed system. Additionally, Swan Lake Wind will ensure the noise level will not exceed 45 dBA, average A-weighted Sound pressure, including constructive interference effects measured 25 feet from the perimeter of the existing non-participating residences, businesses, and buildings owned and/or maintained by a governmental entity. An analysis of the noise level of the proposed Project is in progress and will be provided to the Yankton County Zoning and Planning Commission upon completion.

4.15 Permit Expiration

Swan Lake Wind acknowledges that all permits will become void if no substantial construction has been completed within 3 years of issuance. Swan Lake Wind acknowledges that the following information is required for a permit:

- Boundaries of the site proposed for WECS and associated facilities on a U.S. Geological Survey Map or other map as appropriate.
- Map of easements for WECS.
- Map of occupied residential structures, businesses, and public buildings within a 2.0-mile radius.
- Map of sites for WECS, access roads, and utility lines.
- Location of other WECS in general area.
- Project schedule.
- Mitigation measures.

4.16 Shadow Flicker

Although not a requirement in the Ordinance, Swan Lake Wind will use the industry standard of no more than 30 hours of shadow flicker per year at an occupied residence unless a waiver is in place. Swan Lake Wind will conduct a shadow flicker analysis for both primary and alternative turbine locations, which will be provided to the Yankton County Zoning and Planning Commission upon completion. The shadow flicker impacts will be less than 30 hours per year at all receptors unless a waiver is in place.

5 CONCLUSION

This application demonstrates Swan Lake Wind's compliance with the Ordinance and with the general and specific standards and requirements for conditional land uses as described in Article 26 Section 2605, Requirements for Large or Commercial WECS (Yankton County Planning and Zoning 2023).

Swan Lake Wind looks forward to the opportunity to continue investing in Yankton County for the future.

6 LITERATURE CITED

Yankton County Planning and Zoning. 2023. *Yankton County Zoning Ordinance 2020*. December 19, 2023. Available at: <https://intuviosolutions.blob.core.windows.net/templator-uploads/Uploads/documents/25/Yankton%20County%20Zoning%20Ordinance%20Updated%2012-2023.pdf>. Accessed April 17, 2024.

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APPENDIX A

Boundaries of Site Proposed for Swan Lake Wind Map

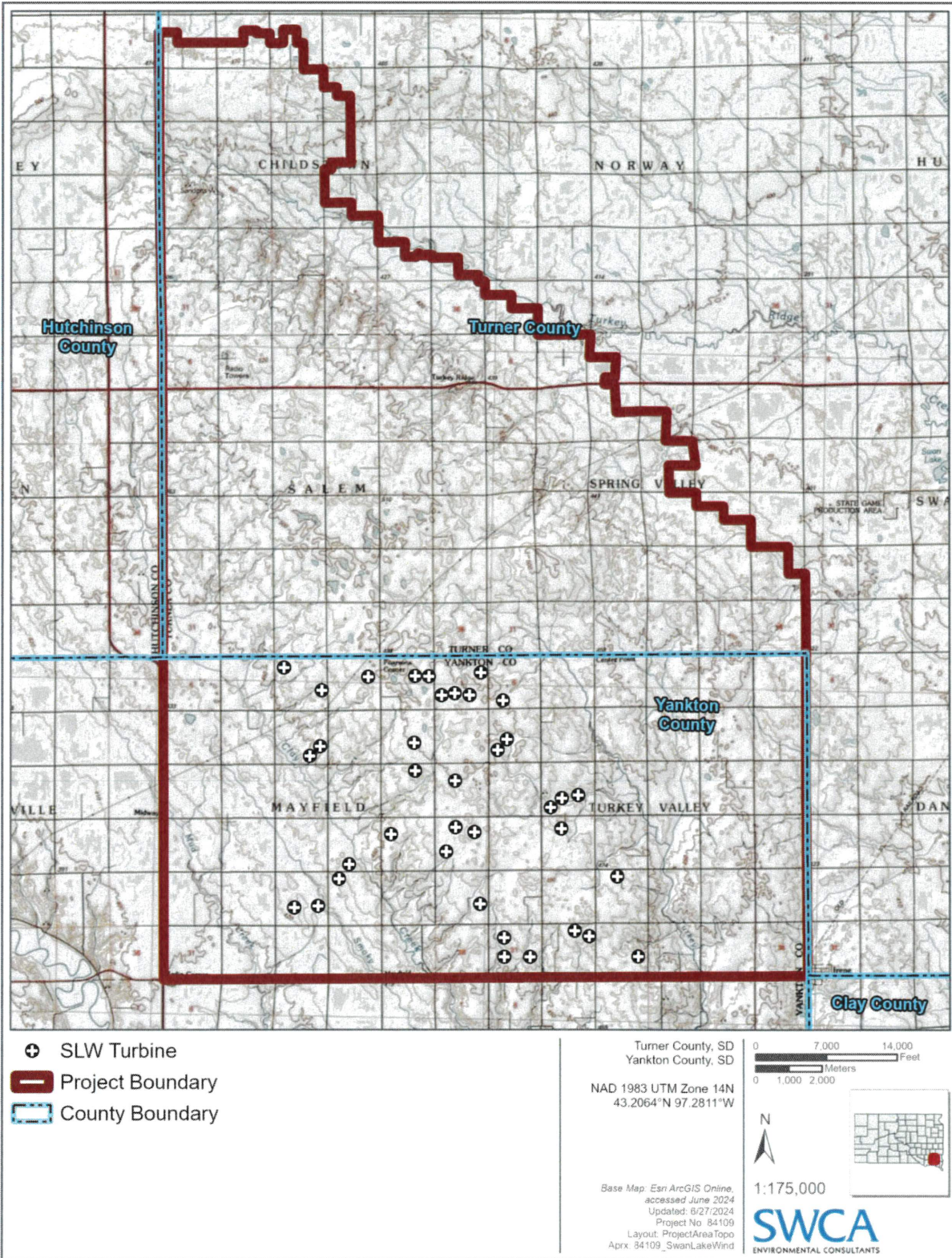


Figure A-1. Swan Lake Wind Energy Project boundary.

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APPENDIX B

Map of Easements for Wind Energy Conversion Systems

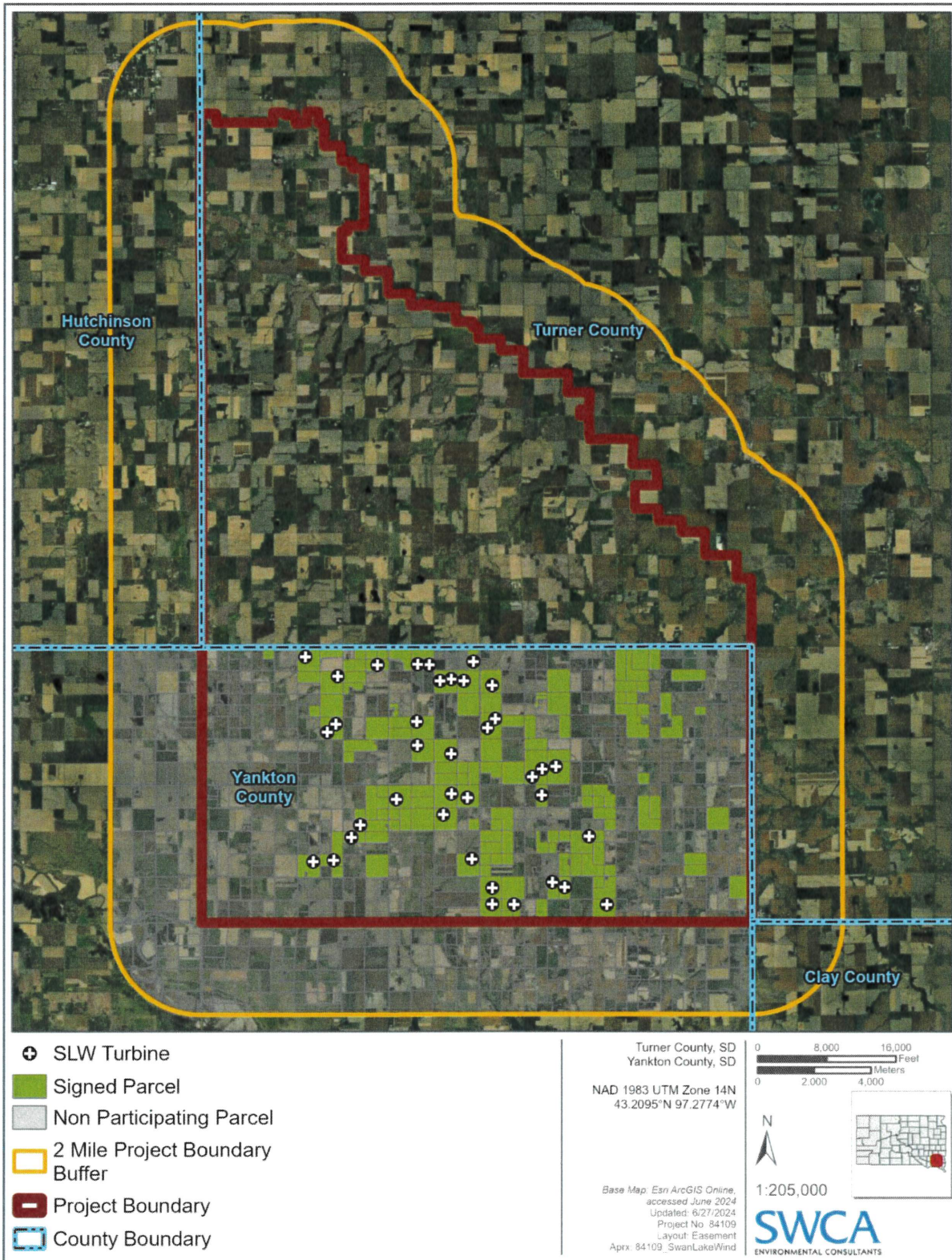


Figure B-1. Swan Lake Wind Energy Project easements.

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APPENDIX C

Map of Occupied Residential Structures, Businesses, and Public Buildings

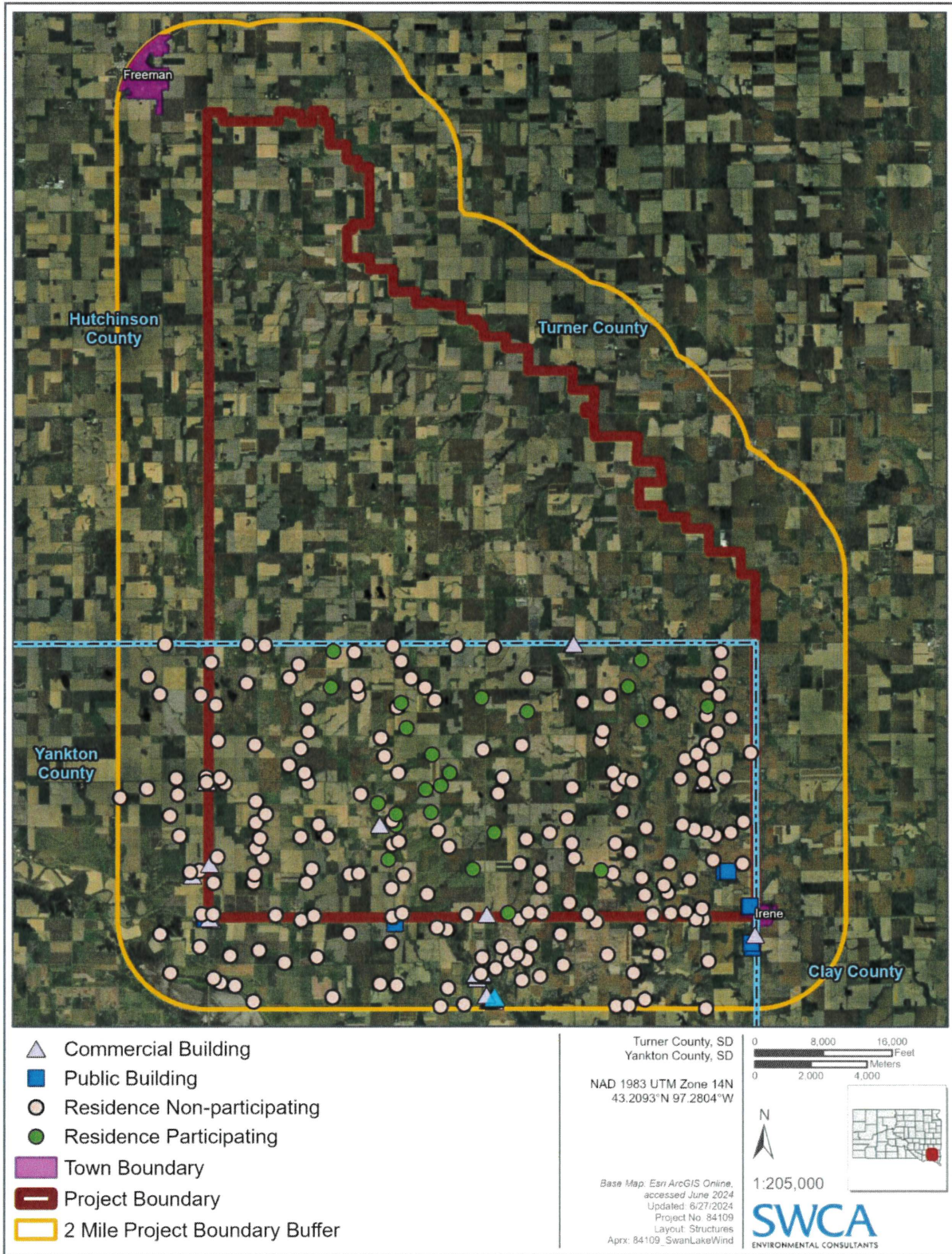


Figure C-1. Residential structures, businesses, and public buildings within 2 miles of the Swan Lake Wind Energy Project.

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