



Grand Bend Wind Farm
Project Update Report

**Grand Bend Wind Limited Partnership,
c/o Northland Power Inc.**



NEEGAN BURNSIDE

September 2012



Grand Bend Wind Farm Project Update Report

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Grand Bend Wind Limited Partnership
c/o Northland Power Inc.

September 2012

File No: PIA 019991

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Record of Revisions

Revision	Date	Description
0	Sept. 26, 2012	Submission for 60 day public review prior to PIC #2

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1.0 Introduction

1.1 Project Overview

Grand Bend Wind Limited Partnership, c/o Northland Power Inc. (“Northland”) is proposing to develop, construct and operate a 100 MW wind facility located north of Grand Bend, Ontario. An application for approval is being prepared under Ontario Regulation 359/09 of the *Environmental Protection Act*. The project is classified as a Class 4 Wind facility under the Regulation. The Grand Bend Wind Farm (“the Project”) is located in Huron County, spanning the lower-tier municipalities of Bluewater and Huron South. Portions of the transmission line also traverse the municipality of Huron East and municipality of West Perth in Perth County.

The basic project components will include up to 48 turbines (Siemens SWT-2.3-113 direct drive wind turbine generators with a total name plate capacity of 100 MW), turbine access roads, a 36 kV electrical collection system, substation, a new transmission line within municipal road right-of ways (“ROWS”) along Rodgerville Road, Line 17 and Road 183 with connection to the provincial power grid at the 230 kV transmission line south of the Seaforth Transformer Station. During construction temporary components will include access roads and work/storage areas at the turbine locations and transmission connections.

1.2 Report Requirements

This Project Update Report is an addendum to the draft reports issued to the Ministry of the Environment, selected agencies, local Municipalities, and Aboriginal Communities on August 27, 2012. The purpose of this report is to notify stakeholders of Project changes from the aforementioned draft reports, prior to the second round of public meetings, in accordance with O.Reg. 359/09 s. 16. This report will be supplied to the aforementioned stakeholders. It will also be posted to the Project website (<http://grandbend.northlandpower.ca/>) on September 26 along with the other draft reports for public review.

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2.0 Project Changes

There are three Project changes discussed in this report, including a modified turbine location, a confirmed location for the switchyard, and the addition of a Construction Compound area. For a general overview of the locations where these changes are proposed, refer to **Figure A1** of **Appendix A**. Further details are provided in the following sections of this report.

2.1 Turbine Location

The location of one Turbine has been modified as shown in **Figure A2** of **Appendix A**. The updated turbine location has been selected in accordance with the setback requirements of O.Reg. 359/09, including noise. The modified UTM coordinates are:

Turbine ID	Original Coordinates		New Coordinates		Distance / Direction From Original Location
	Easting	Northing	Easting	Northing	
T-21	443635	4804535	443654	4804592	60 m towards NNE

This change is based on the recommendation of a telecommunications study for the Project. Minor adjustments to the access road, collector line, and construction area for turbine T-21 will be made to accommodate the updated location.

2.1.1 Environmental Effects and Mitigation

The new location of turbine T-21 does not encroach upon any new significant natural features. As such, no additional negative environmental effects are anticipated and no further mitigation is required.

2.2 Switchyard

As described in the Draft Design and Operations Report and Draft Construction Plan Report, a switchyard will be required at the connection point to the provincial grid. The location of the switchyard has been confirmed, and is shown in **Figure A3** of **Appendix A**. The descriptions and conceptual drawings of the switchyard provided in the Draft Design and Operations Report and Draft Construction Plan Report remain unchanged.

2.2.1 Environmental Effects and Mitigation

There are no significant natural features within 120 m of the proposed switchyard. As such, no additional negative environmental effects are anticipated and no further mitigation is required.

2.3 Construction Compound Area

Additional land at a central location of the Project will be required to temporarily host construction trailers, equipment, materials, vehicles, communications infrastructure, and provide an area for on-site fabrication of Project infrastructure such as weld plate rings and cable modifications. Any hazardous materials such as fuels, oils, and lubricants required for construction equipment will be stored in proper storage containers with associated labels and MSDS documentation, and secured in a proper location identified by the Contractor. The Construction Compound area is approximately 5.4 hectares, and is shown in **Figure A4** of **Appendix A**.

It was originally anticipated that these works would be completed at each turbine site and the Parts and Storage Building, but further review of construction operations indicated this additional Construction Compound area will be required to facilitate construction works.

2.3.1 Construction and Restoration

To prepare the Construction Compound area, topsoil will be stripped and stockpiled. After minor grading, a geotextile will be installed to define a boundary between the subsurface soils, and the aggregate that will be placed and compacted on the surface. Up to 54,000 m² of geotextile and approximately 16,150 m³ of aggregate at an approximate depth of 0.2 m to 0.5 m will be required for the Construction Compound area.

After construction, the aggregate and geotextile will be removed and recycled or otherwise disposed. The subsoil will be ripped, and stockpiled topsoil will be replaced to restore the agricultural use of the land.

2.3.2 Sewage

The Construction Compound area will be serviced by portable washrooms supplied and maintained by a commercial service provider. The supplier will be responsible for regular servicing of the washrooms, including removal and disposal of sewage at an approved facility. It is estimated that one sewage truck will be required to remove approximately 1,350 L of sewage from the Construction Compound area each week during construction.

2.3.3 Water

Drinking water will be supplied to the trailers in the Construction Compound area via a commercial service provider. It is estimated that 750 L of water will be supplied to the Construction Compound area each week during construction.

2.3.4 Electricity

The Construction Compound area will be serviced with electricity by use of generators and/or a new temporary connection from the local distribution system.

2.3.5 Environmental Effects and Mitigation

The Construction Compound Area is within 120 m of two significant woodlands (W-020 and W-021). At least one of these areas also provides significant Turtle Nesting Areas, candidate Turtle Wintering Areas and Habitat for Species of Conservation Concern (to be treated as significant subject to a Habitat Use Survey prior to construction) as well as Generalized Significant Wildlife Habitat. These features all have the potential to be impacted by activities occurring within the construction compound. The Environmental Impact Study Report and Environmental Effects Monitoring Plan will be updated to include the following data and any other necessary supporting information.

Impacts are anticipated to be minimal as no work will occur within any of the features identified above. Indirect impacts may occur, including:

- soil erosion and transport into significant features;
- accidental spills of fuels and other hazardous materials; and,
- accidental vehicle/turtle collisions if turtles wander into the compound area.

To mitigate these potential impacts, the following measures will be undertaken:

- the compound will be set back at least 6m from the dripline of W-21;
- sediment control fencing will be installed along the perimeter of the compound;
- sediment fencing will be toed/keyed in properly and inspected regularly to ensure that turtles cannot inadvertently wander into the site; and,
- hazardous materials will be stored in a safe manner, as described in Section 2.2, above. A spills management and response plan will be developed to address potential accidents.

The final Project reports will reflect these commitments as well as any other potential impacts, mitigation and monitoring identified through consultation with the government agencies, municipalities, First Nations and the public.

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3.0 Conclusion

The Project changes outlined in this report do not substantially alter the extent of the Project. However, in accordance with O.Reg. 359/09, further investigation as required and revisions in the final REA document submissions will be made to reflect these changes.

Respectfully submitted,

Neegan Burnside Ltd.

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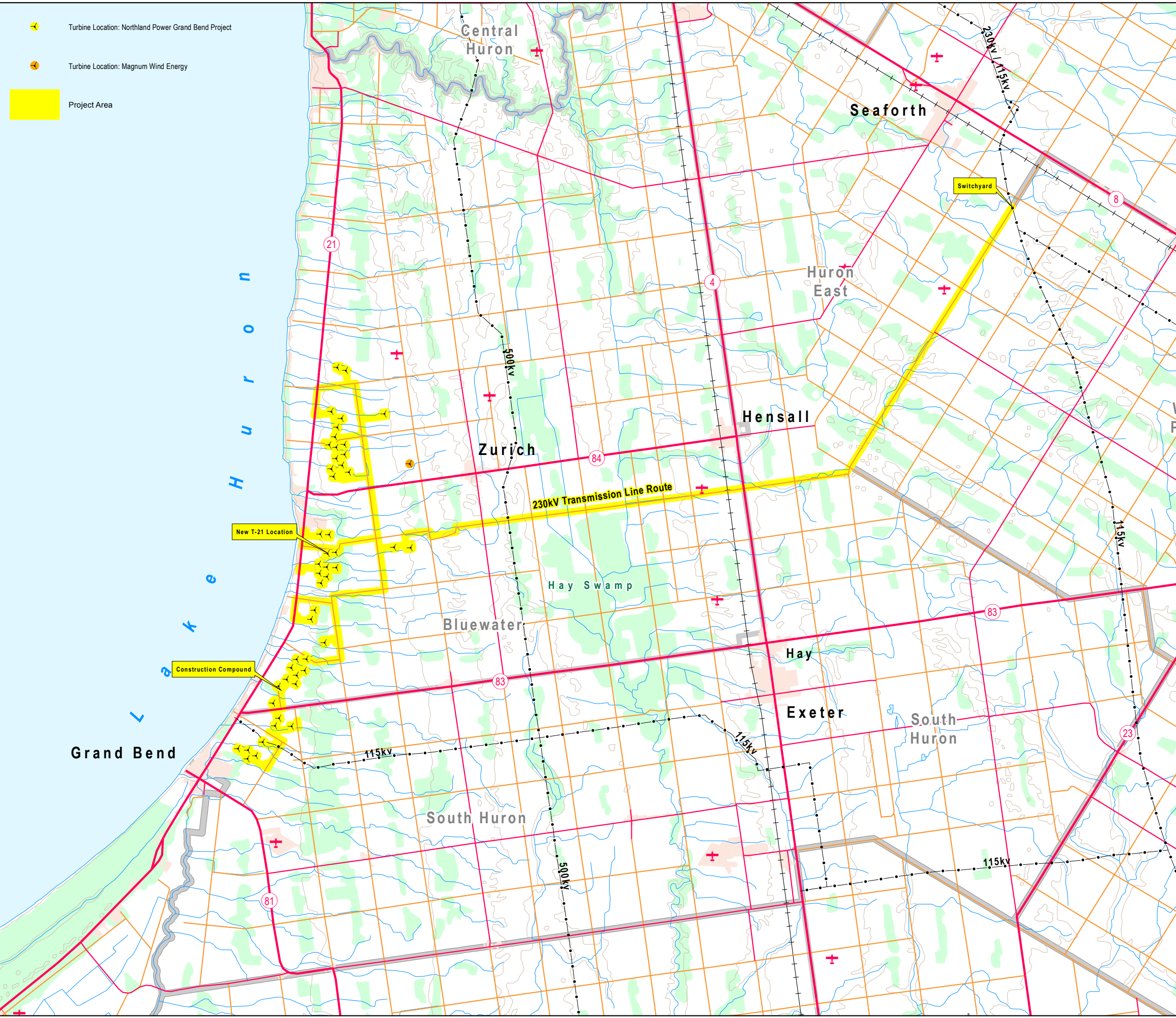
Jim Mulvale, Manager, EH&S
Northland Power Inc.

Appendix A
Figures

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Figure A1 Overview of Project Changes

Grand Bend Wind Farm
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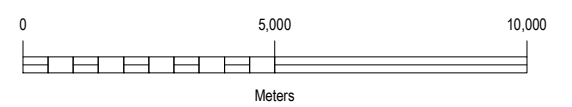
- Turbine Location: Northland Power Grand Bend Project
- Turbine Location: Magnum Wind Energy
- Project Area

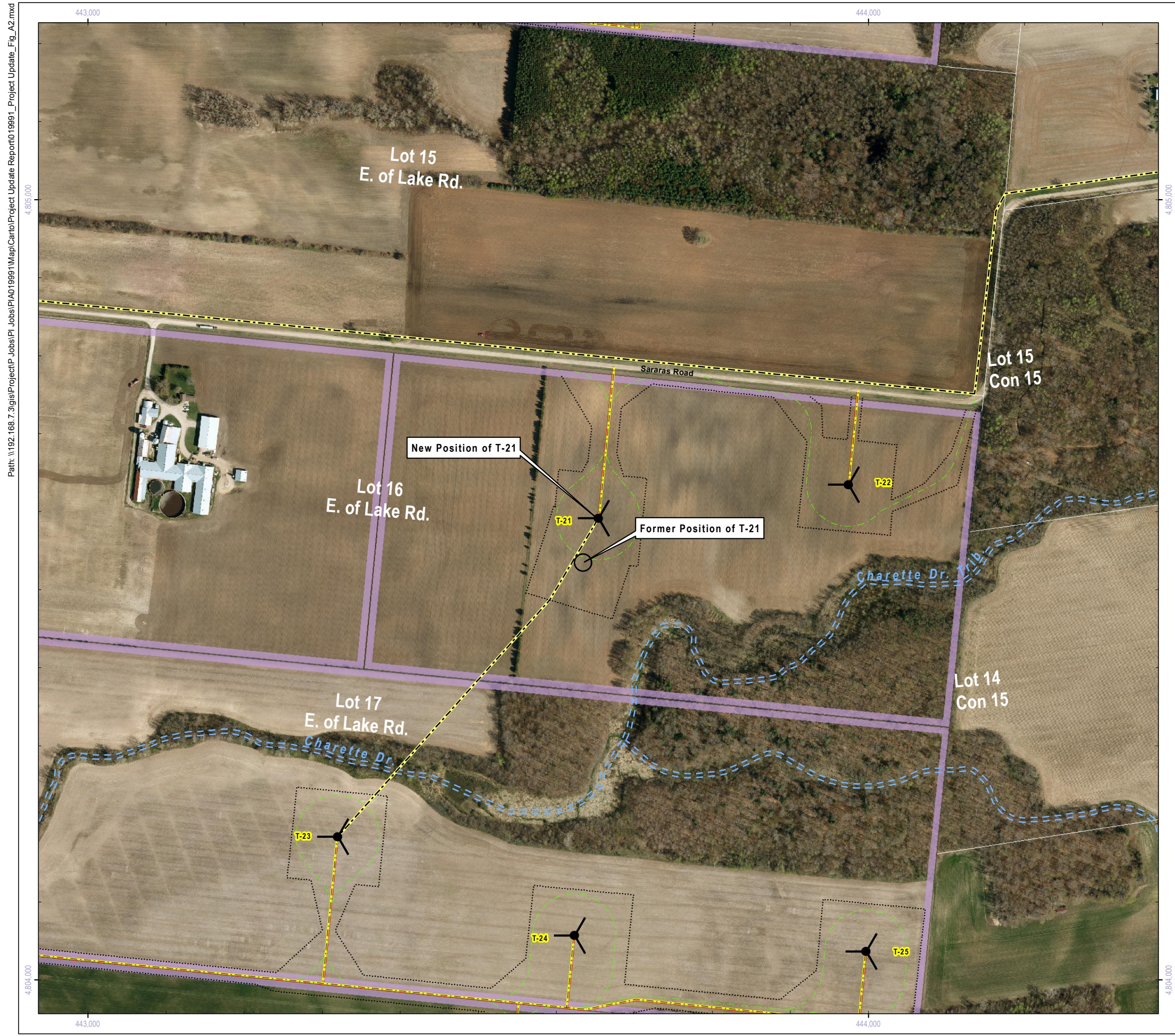
DATA SOURCES:
1. Ministry of Natural Resources, © Queen's Printer for Ontario
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Project Number: PIA019991

Prepared: P. Stubbert

Checked By: C. Shilton





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Figure A2 Modified T-21 Location

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- Wind Turbine Location
- Access Road & Underground Collector Line
- Access Road
- Access Road: For Construction (Temporary)
- Area of Construction
- Transmission Line: Overhead
- Collector Line; Transmission Line: Underground
- Watercourse

NOTES:
Woodland ID's are from the Ecological Land Classification (ELC).

DATA SOURCES:
1. County of Huron (including Imagery: 2010)
2. Ministry of Natural Resources, © Queen's Printer for Ontario
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Checked By: C. Shilton












Potential Limit of Switchyard Construction.
Actual Switchyard area will be smaller;
determined upon detailed design.

Figure A3 Switchyard

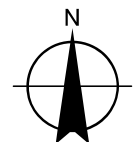
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-  Wind Turbine Location
-  Access Road & Underground Collector Line
-  Access Road
-  Access Road: For Construction (Temporary)
-  Area of Construction
-  Transmission Line: Overhead
-  Collector Line; Transmission Line: Underground

DATA SOURCES:

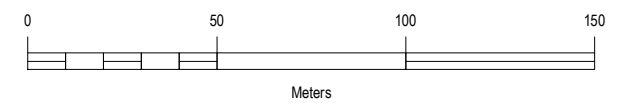
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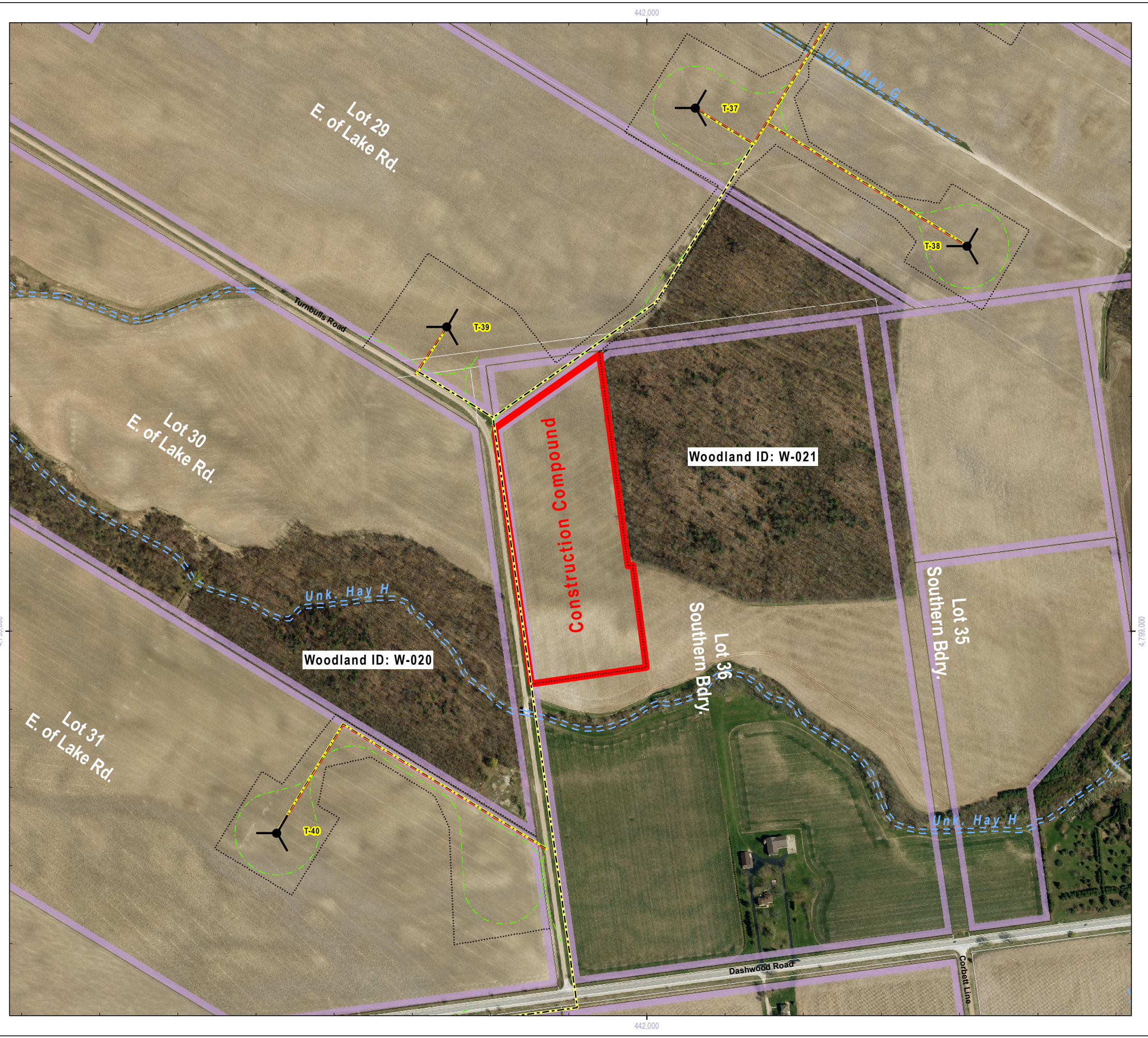











Figure A4
Construction Compound Area
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-  Wind Turbine Location
-  Access Road & Underground Collector Line
-  Access Road
-  Access Road: For Construction (Temporary)
-  Area of Construction
-  Transmission Line: Overhead
-  Collector Line; Transmission Line: Underground
-  Construction Compound
-  Watercourse

NOTES:
 Woodland ID's are from the Ecological Land Classification (ELC).

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