



## NOTICE OF PUBLIC MEETING #2

### To be held by Wainfleet Wind Energy Inc. regarding a Proposal to Engage in a Renewable Energy Project

**Project Name: Wainfleet Wind Energy Project**

**Project Location: Township of Wainfleet, Niagara Region, Ontario**

**Dated at Wainfleet this the 18<sup>th</sup> day of April, 2012**

Wainfleet Wind Energy Inc. is planning to engage in a renewable energy project in respect of which the issuance of a renewable energy approval is required. The proposal to engage in the project and the project itself is subject to the provisions of the *Environmental Protection Act (ACT)* Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with section 15 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment.

#### Meeting Location:

DATE: June 19, 2012

TIME: 3:00 p.m.-8:00 p.m.

PLACE: Township of Wainfleet, Firefighters Memorial Hall, 31907 Park Street, Wainfleet, Ontario, L0S 1V0

The Meeting will be in an Open House format allowing attendees to visit any time during the event.

#### Project Description:

Pursuant to the Act and Regulation, the facility, in respect of which this project is to be engaged in, is a Class 4 Wind Energy Facility. If approved, this facility would have a total maximum name plate capacity of 9 MW. The project location is described in the map below.

#### Documents for Public Inspection:

The Draft Project Description Report titled *Wainfleet Wind Energy Project Draft Project Description Report* describes the project as a wind energy facility, with 5 wind turbines proposed. The Vestas V100 1.8 MW turbine model has been selected as the preferred turbine model. A written copy of the Draft Project Description Report was made available for public inspection on July 22, 2010 at the Township of Wainfleet Clerk's Office (31940 Hwy. #3, P.O. Box 40, Wainfleet, Ontario, L0S 1V0). The draft Project Description Report can also be viewed electronically on the project website at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca)

Further, on behalf of Wainfleet Wind Energy Inc. the study team Has prepared the following supporting documents in order to comply with the requirements of the Act and Regulation: Construction Plan Report, Design and Operations Report, Wind Turbine Specifications Report, Decommissioning Plan Report, Natural Heritage Assessment Report, Environmental Impact Study, Cultural Heritage Assessment Report, Archaeology Assessment Report, Noise Assessment Report. Written copies of the draft supporting documents are currently available for public inspection at the following locations:

- Township of Wainfleet, Clerks Office, 31940 Hwy. #3, P.O. Box 40, Wainfleet, Ontario, L0S 1V0
- Wainfleet Township Public Library, 31909 Park Street, P.O. Box 118, Wainfleet, ON L0S 1V0
- Or electronically at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca)

#### Project Contacts and Information:

To learn more about the project proposal, public meetings, or to communicate concerns please visit the project's website at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca) or contact:

#### Mr. Tom Lewis

Project Manager, IPC Energy  
Wainfleet Wind Energy Project  
2550 Argenta Road, Suite 105  
Mississauga, Ontario, L5N 5R1  
Office: (905) 607-1016  
Fax: (905) 607-5995  
E-mail: Tom@ipcenergy.ca

#### Ms. Britney Pringle

Environmental Planner, MH  
Wainfleet Wind Energy Project  
235 Yorkland Boulevard, Suite 600  
Toronto, Ontario, M2J 1T1  
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E-mail: BPringle@morrisonhershfield.com





**Wainfleet**  
Clean energy for life.

## NOTICE OF DRAFT SITE PLAN and PUBLIC MEETING #2

### To be held by Wainfleet Wind Energy Inc. regarding a Proposal to Engage in a Renewable Energy Project

**Project Name:** Wainfleet Wind Energy Project

**Project Location:** Township of Wainfleet, Niagara Region, Ontario

**Dated at Wainfleet this the 23rd day of May, 2012**

**Wainfleet Wind Energy Inc.** is planning to engage in a renewable energy project in respect of which the issuance of a renewable energy approval is required. The proposal to engage in the project and the project itself is subject to the provisions of the *Environmental Protection Act* (ACT) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with Section 15 and 54.1 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment. The legal effect of the publishing of a notice is such that pursuant to Section 54(1.2) of the Regulation, Wainfleet Wind Energy Inc. does not have to take into account a noise receptor, as defined by the Regulation, that did not exist as of the day before Wainfleet Wind Energy Inc. published the Notice of Draft Site Plan in accordance with 54.1(c)(i) or (ii). Notice of Public Meeting #2 was originally published on the 18th day of April 2012.

#### Meeting Location:

**Date:** June 19, 2012

**Time:** 3:00 p.m. to 8:00 p.m.

**Place:** Township of Wainfleet, Firefighters Memorial Hall,  
31907 Park Street, Wainfleet, ON L0S 1V0

The meeting will be in an open-house format allowing attendees to visit any time during the event.

#### Project Description:

Pursuant to the Act and Regulation, the facility, in respect of which this project is to be engaged in, is a Class 4 Wind Energy Facility. If approved, this facility would have a total maximum name plate capacity of 9 MW. The project location is described in the map.

#### Documents for Public Inspection:

The Draft Project Description Report titled *Wainfleet Wind Energy Project Draft Project Description Report* describes the project as a wind energy facility, with five wind turbines proposed, as well as supporting infrastructure, including access roads, underground collector system and switching station. The Vestas V100 1.8 MW turbine model has been selected as the preferred turbine model. A written copy of the Draft Project Description Report was made available for public inspection on July 22, 2010 at the Township of Wainfleet Clerk's Office (31940 Highway #3, P.O. Box 40, Wainfleet, ON L0S 1V0). The draft Project Description Report can also be viewed electronically on the project website at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca).

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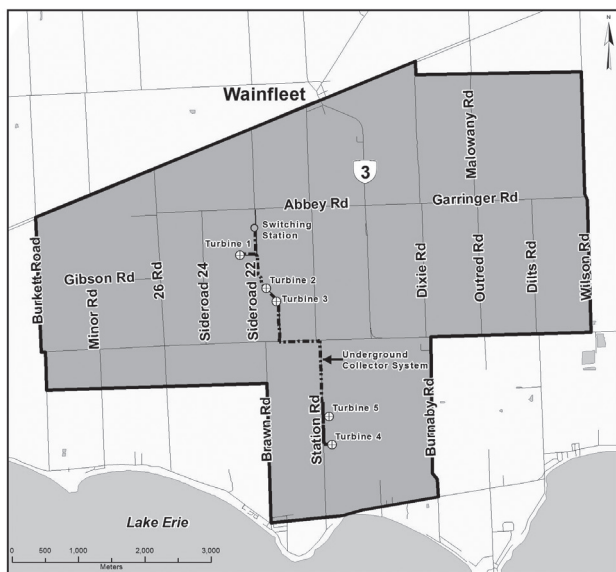
- Township of Wainfleet, Clerk's Office, 31940 Highway #3, P.O. Box 40, Wainfleet, ON L0S 1V0
- Wainfleet Township Public Library, 31909 Park Street, P.O. Box 118, Wainfleet, ON L0S 1V0
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#### Project Contacts and Information:

To learn more about the project proposal, draft site plan, public meetings, or to communicate questions or concerns please visit the project's website at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca) or contact:

**Mr. Tom Lewis**  
Project Manager, IPC Energy  
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Environmental Planner, MH  
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fax: 416-499-9658  
e-mail: [bpringle@morrisonhershfield.com](mailto:bpringle@morrisonhershfield.com)



# Welcome To The 2<sup>nd</sup> Public Open House For The Wainfleet Wind Energy Project



We are here to:

- Describe the Renewable Energy Approval Process
- Present an overview of the Wainfleet Wind Energy Project
- Share results of project studies and reports
- Answer your questions
- Receive your feedback about the project



## **ABOUT WAINFLEET WIND ENERGY INC. AND IPC ENERGY**

### **Wainfleet Wind Energy Inc. Project Proponent (Est. 2009)**

- Started by the Loeffen brothers: John, Harold and the late Bill, a local family with a long term dedication to agricultural-based business and continuous innovation.
- This project allows Loeffen Farms to diversify into green energy and demonstrate their ongoing commitment to the environment.
- In January of 2012, the Loeffens partnered with Rankin Construction Inc., a local civil construction company with a great reputation and extensive wind turbine construction and renewable energy development experience.
- Together this team has extensive agricultural, construction, and development knowledge and expertise, as well as a local perspective.

### **IPC Energy (IPC) Project Developer (Est. 2005)**

- IPC Energy works closely with landowners, municipalities and other parties to develop, build and operate wind energy projects across Canada and internationally.



# MAKING ONTARIO A GLOBAL LEADER IN RENEWABLE ENERGY



## Ontario's Green Energy and Green Economy Act

- Passed in May 2009, to promote the development of a sustainable energy economy and to regulate the Province's renewable energy practices.
- Strategy seeks to phase out coal-fired generation by 2014 and assist the province with meeting its greenhouse gas reduction targets.

## Feed In Tariff (FIT) Program

- Administered by the Ontario Power Authority (OPA), who issue contracts to purchase power at guaranteed rates over 20 years from wind, solar, and bio-energy facilities.
- North America's first comprehensive guaranteed pricing structure for renewable energy, encouraging investment and economic development in Ontario.
- The program requires developers to have a certain percentage of their project costs and labour come from Ontario.

### Fact

Ontario now has more than 1,500 MW of wind generation capacity connected to the grid. In addition, over 600MW are expected to be added by the summer of 2013 under the FIT Program.

## THE RENEWABLE ENERGY APPROVAL PROCESS

- The *Renewable Energy Approval* (REA) process, is outlined in Ontario Regulation 359/09.
- The REA is a streamlined government approvals process which provides service guarantees for renewable energy projects.
- The REA process has mandatory set-back, environmental study and consultation components that must be adhered to.
- The proponent will submit an REA application to the Ministry of the Environment (MOE) for this project.
- MOE will assess the application for completeness and decide whether to issue an approval.
- Other agencies, including the Ministry of Natural Resources (MNR), and the Ministry of Tourism, Culture and Sport (MTCS), also review project reports for approval.
- After the application has been accepted, MOE will post it on the Environmental Registry for a 30-day public comment period.



# THE RENEWABLE ENERGY APPROVAL PROCESS



Stakeholder consultation has been ongoing throughout the entire Renewable Energy Approval (REA) process.

# ROLE OF CONSULTATION

Consultation with stakeholders is taking place to identify, assess, and mitigate any potential negative environmental effects.

Consultation with the public, local municipality, and aboriginal groups is an essential tool in establishing a two-way exchange of information.



Consultation will:

- Provide a better understanding of the project and REA process.
- Allow the Project Team to obtain and use local knowledge in the project's designs and assessment of potential effects or concerns.
- Establish an ongoing dialog with all stakeholders that will be carried forward to the operational phase of the project.

# PROJECT OVERVIEW

- Wainfleet Wind Energy Inc. is proposing to develop a Class 4 Wind Energy Facility with a total nameplate capacity of 9 Megawatts (MW), with five (5) wind turbines proposed.
- The project will be located on privately-owned agricultural lots in the Township of Wainfleet, in Niagara Region.



# BENEFITS OF WIND POWER

Wind power is a great energy option because:

- Wind is an endless resource.
- Wind turbines are quick to install and low maintenance once operational.
- Wind power compliments agricultural operations.
- Wind power projects allow for local ownership keeping more money in Ontario.
- Renewable Energy Projects are only paid for the power they generate, which is paid for by consumers.
- Wind power produces energy with stable production costs, compared to other energy sources with volatile fuel markets (i.e. oil and gas).
- Wind power is one of the lowest new build cost options, saving considerable money in the long run.
- Local content requirements ensure rates being paid for renewable energy result in jobs, economic development and energy diversification in Ontario.



# COMMUNITY AND ENVIRONMENTAL BENEFITS

## Community Benefits

- It will power the equivalent of 2,500 homes (i.e. approximately 85% of the total private dwellings in Wainfleet).
- It will create economic benefits for the local economy by purchasing goods and services during construction and operation.
- It will create job opportunities during construction, operation, and decommissioning phases.
- Generates tax revenue for the Township, Region, and School Board.
- Limited/no increased demand on local services (i.e. garbage collection and water/wastewater service).
- Land lease agreements with landowners will provide additional income for farmers.

## Environmental Benefits

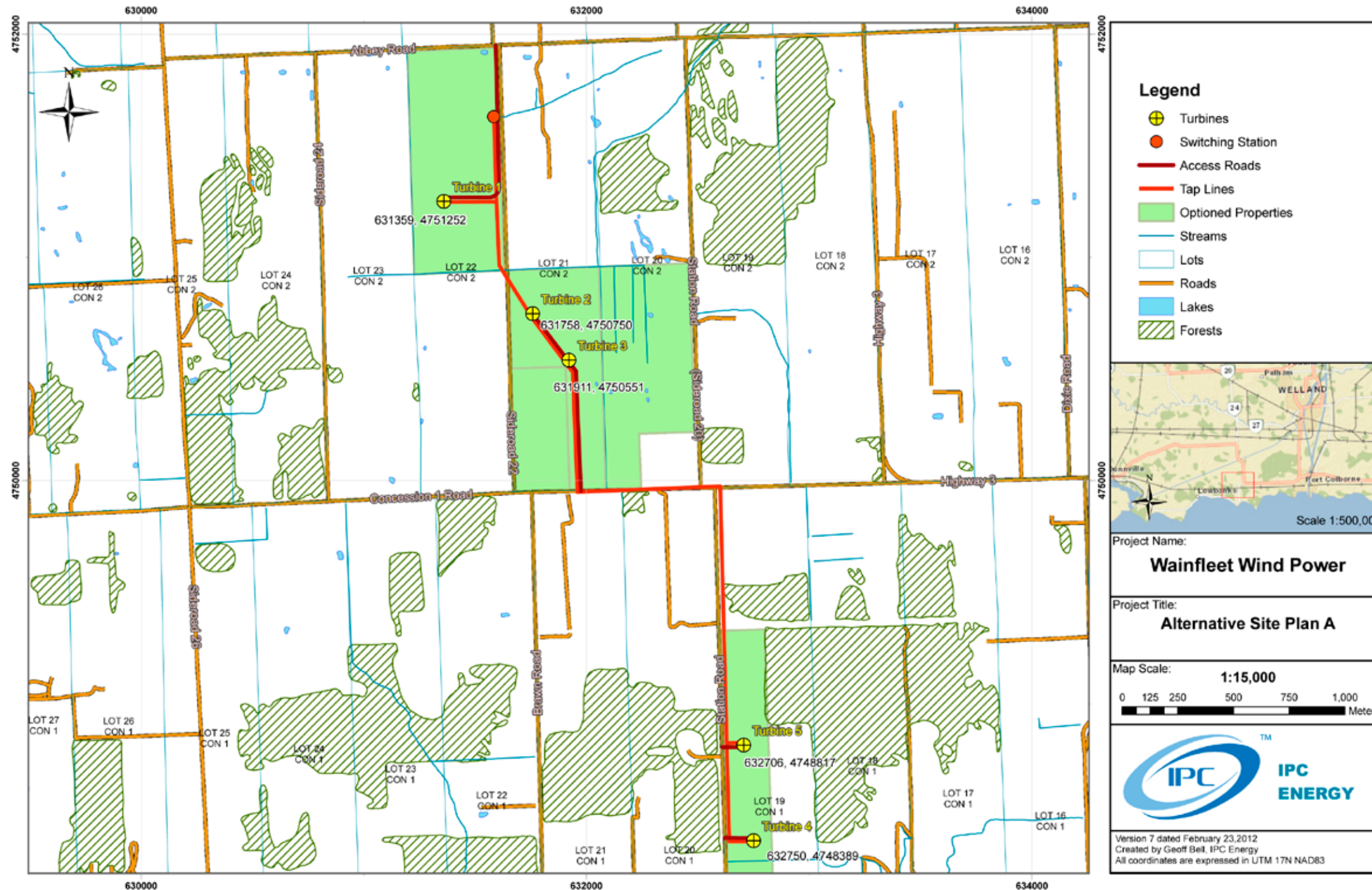
- It will provide a sustainable source of energy for future generations that does not produce greenhouse gas (GHG) emissions.
- The project is estimated to reduce greenhouse gas emissions by 14,000 tons per year.
- Low environmental impact associated with construction and operation.
- Does not use water or produce hazardous or toxic waste.
- Creates healthier living conditions by reducing air emissions including mercury, sulfur, and nitrogen oxides.

## Facts

- Fossil fuels impose costs on the economy in the form of health and environmental damage.
- The Canadian Medical Association estimates air pollution costs Ontario more than \$220 million in health care.
- The Ontario Medical Association's 2005 estimate for premature deaths in Ontario due to air pollution is 5,800 people per year.



# SITE PLAN



Project Name:  
**Wainfleet Wind Power**

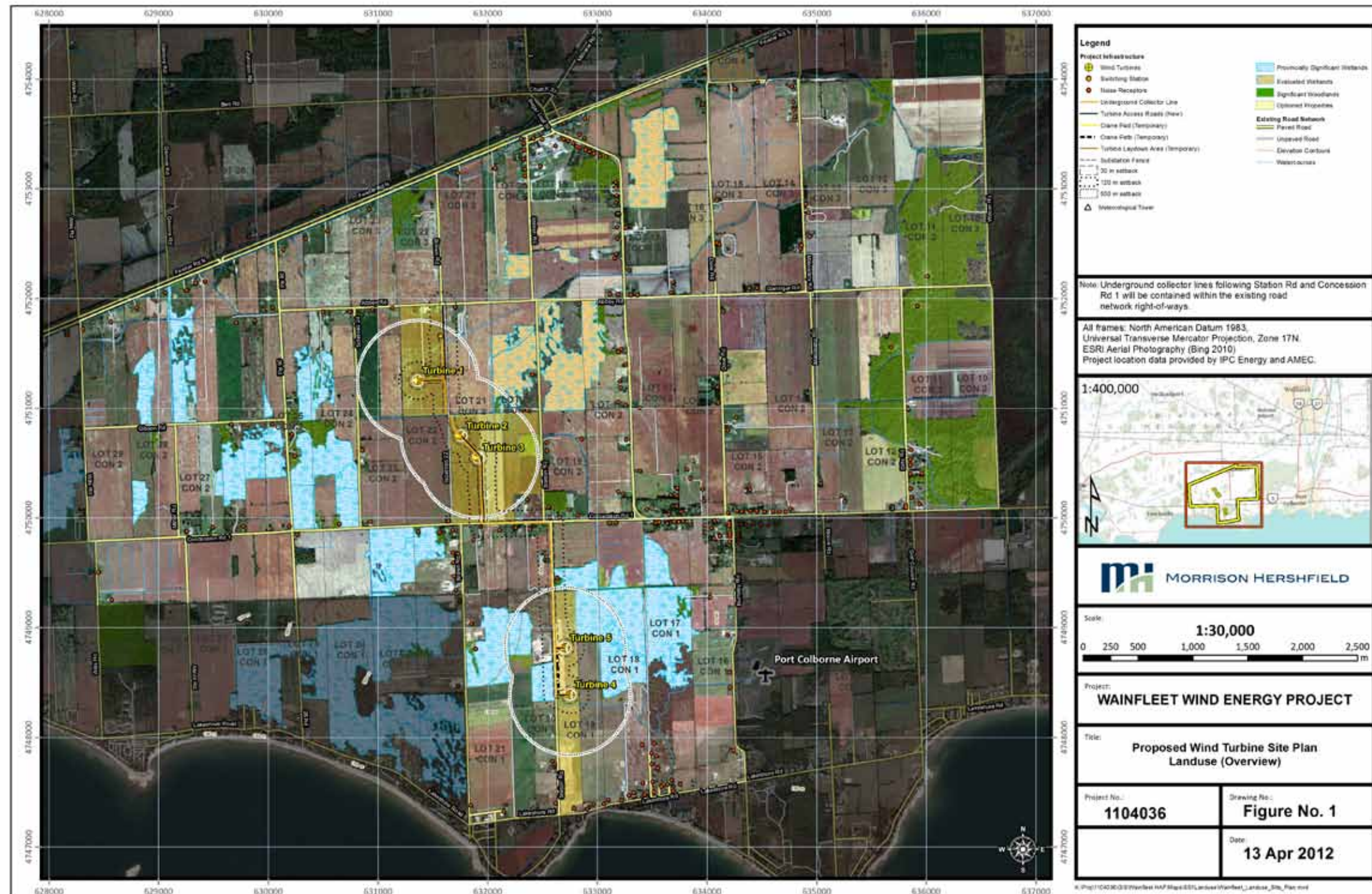
Project Title:  
**Alternative Site Plan A**

Map Scale: **1:15,000**  
0 125 250 500 750 1,000 Meters

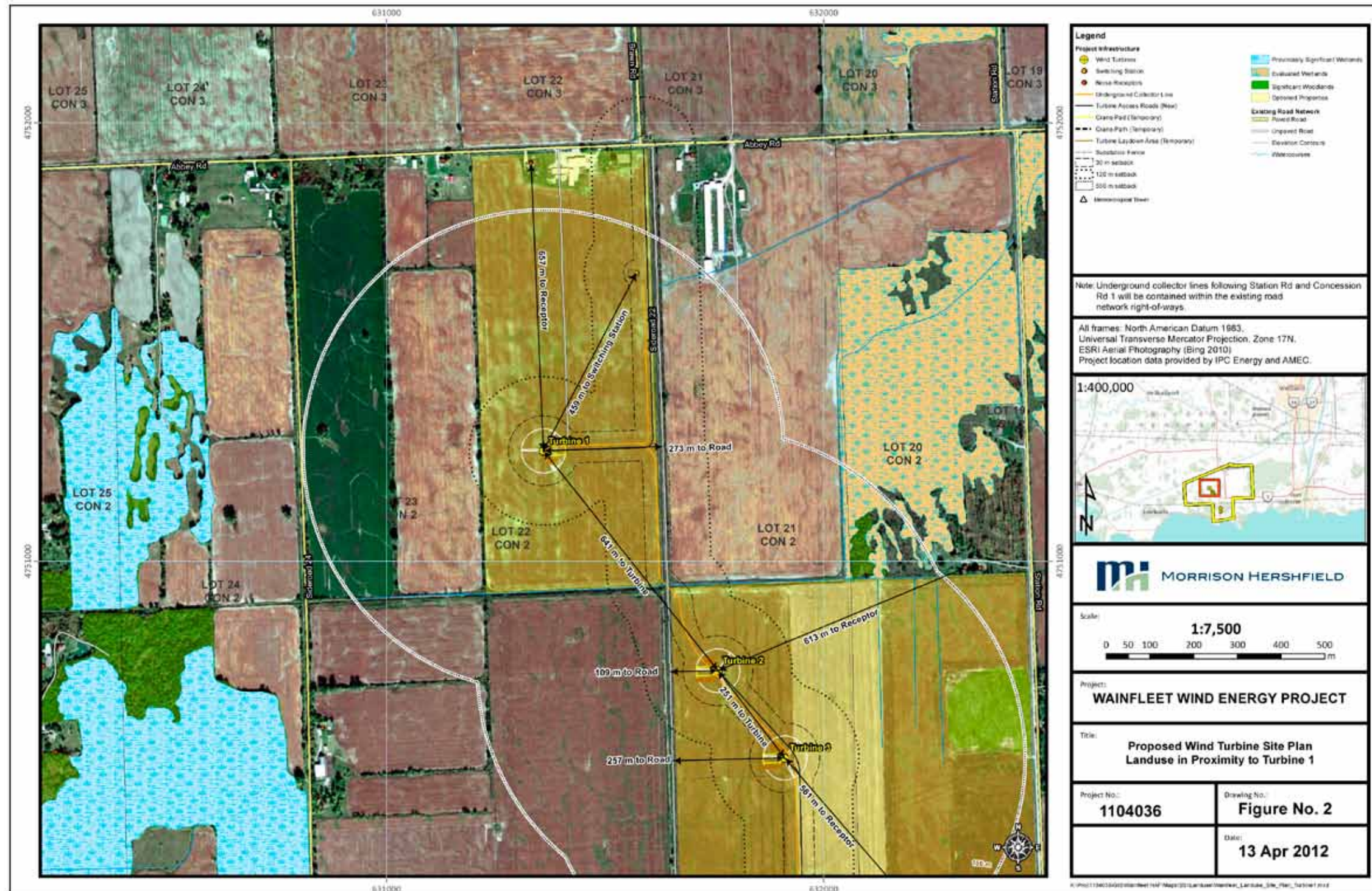


Version 7 dated February 23, 2012  
Created by Geoff Bell, IPC Energy  
All coordinates are expressed in UTM 17N NAD83

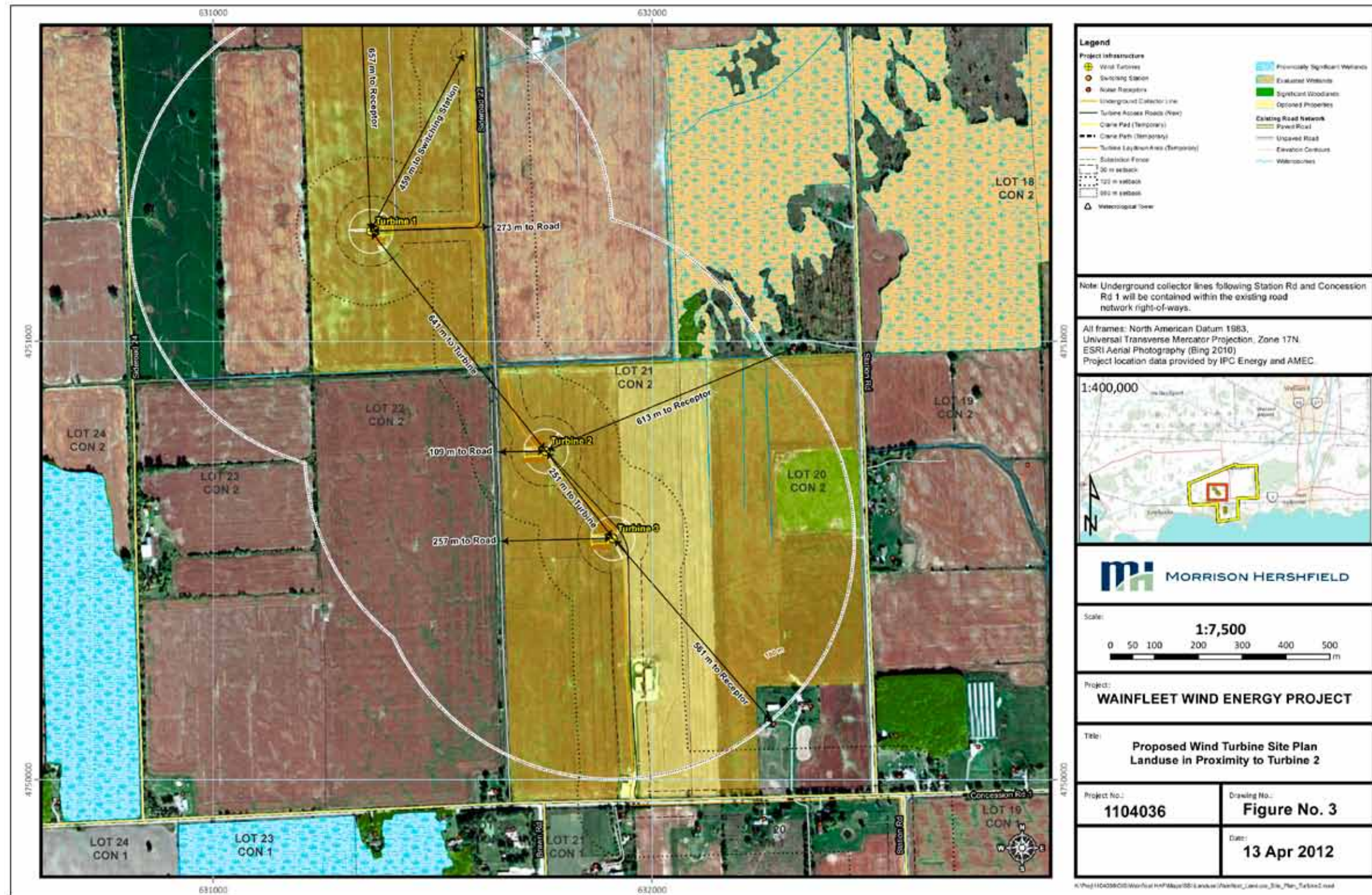
# OVERVIEW MAP



# SITE PLAN - TURBINE 1

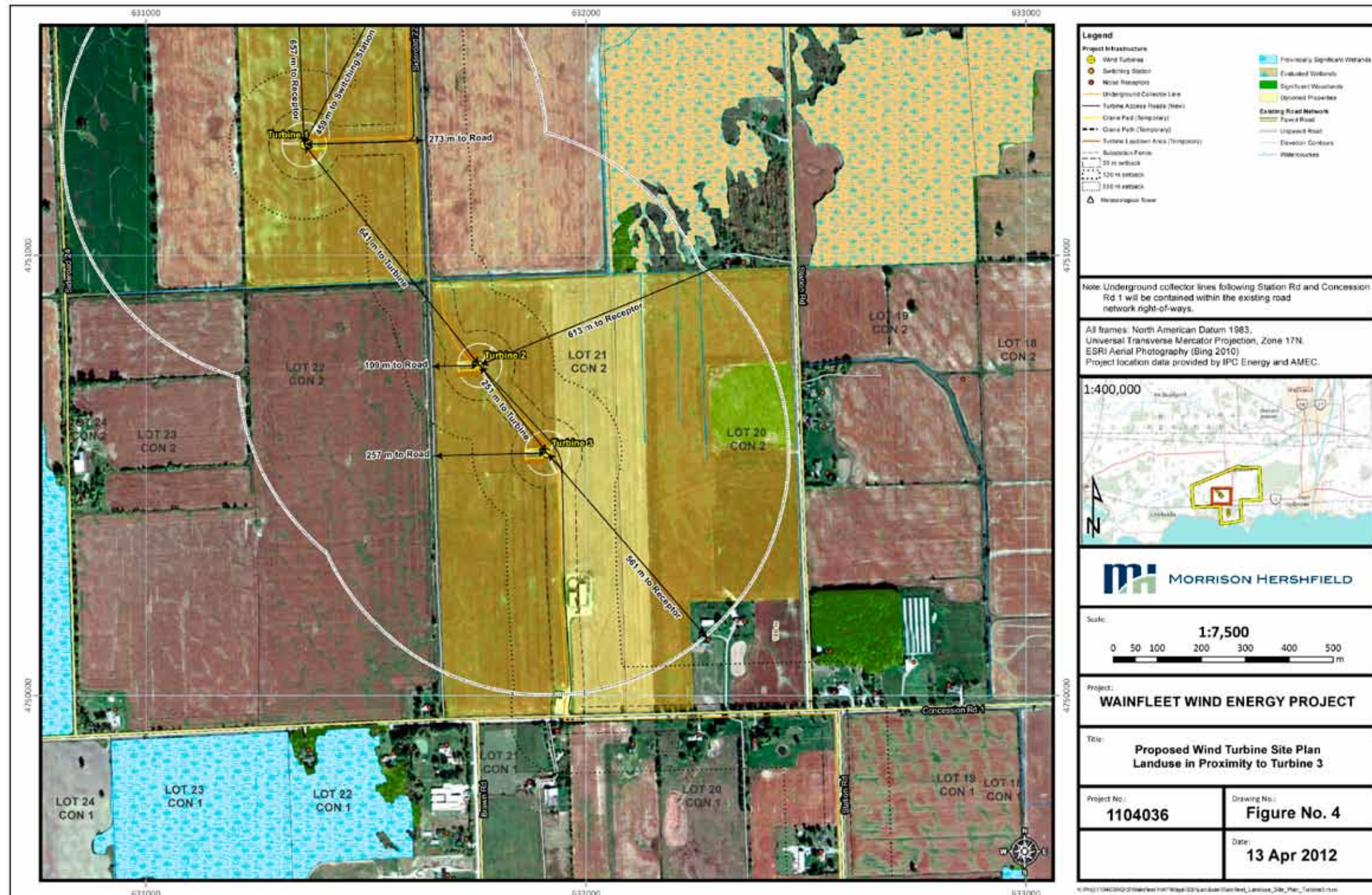


# SITE PLAN - TURBINE 2

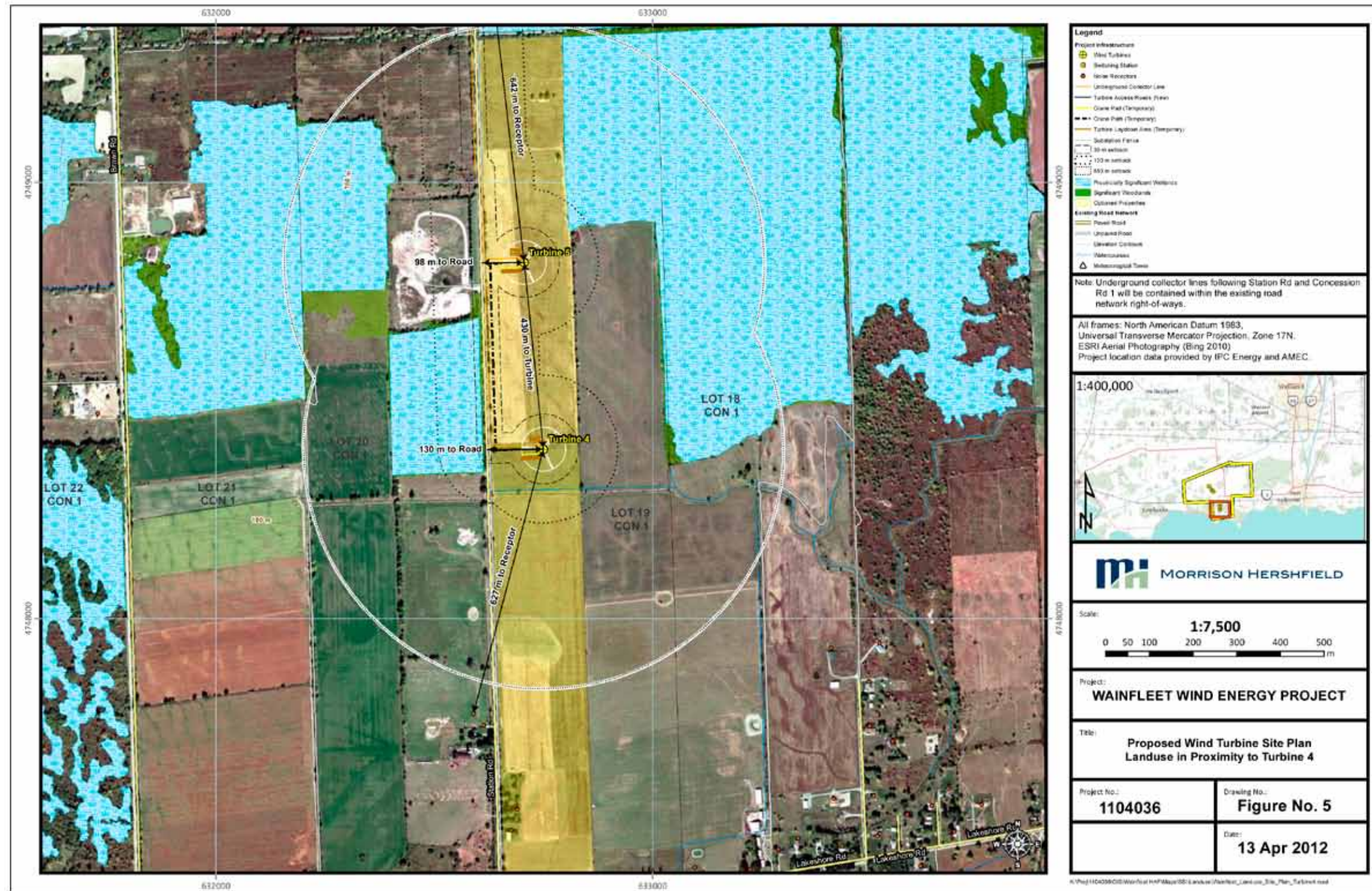


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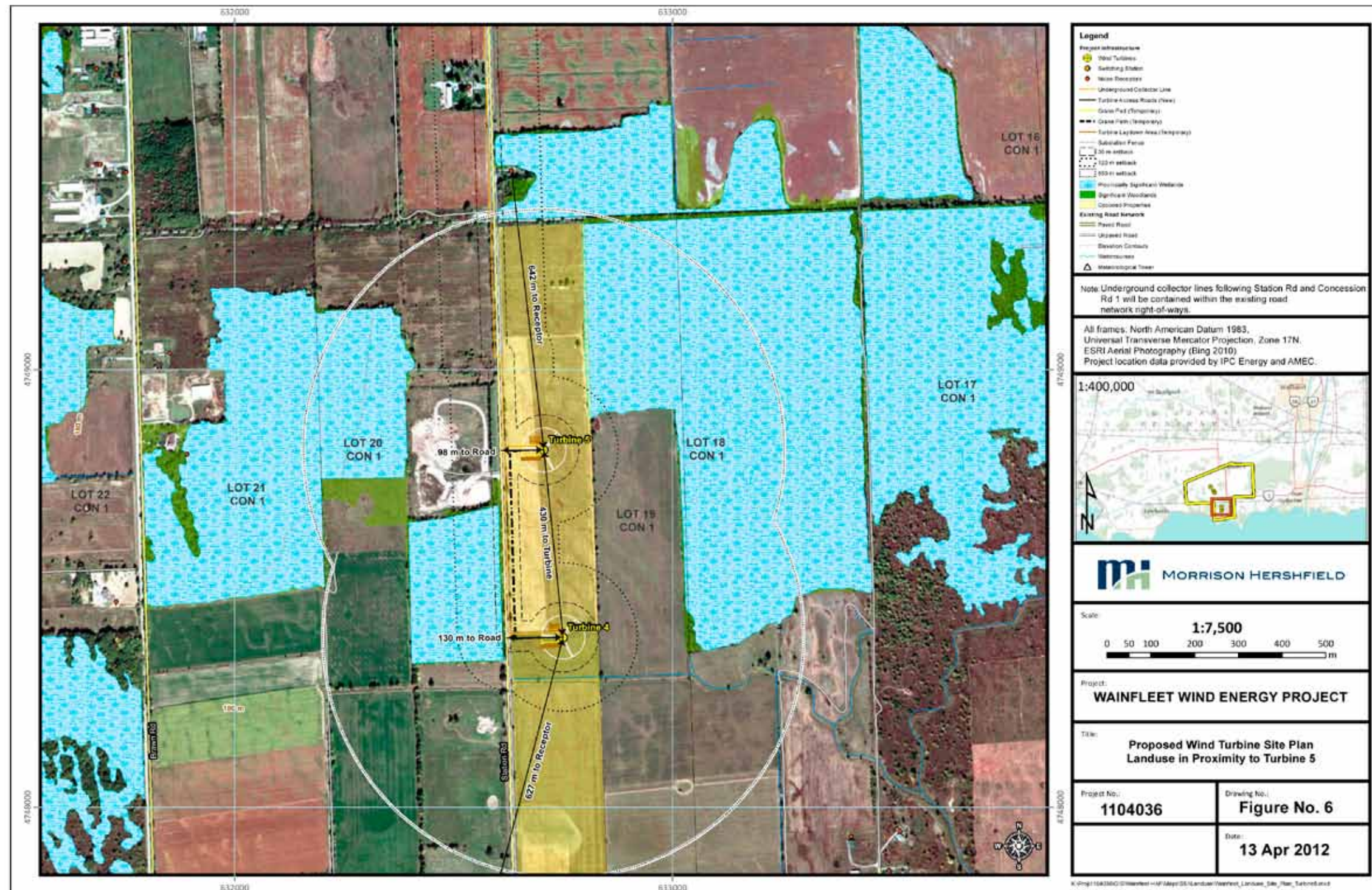
# SITE PLAN - TURBINE 3



# SITE PLAN - TURBINE 4



# SITE PLAN - TURBINE 5



# TURBINE SPECIFICATIONS

## Vestas V100 1.8 MW Wind Turbine Model

### Turbine Blades

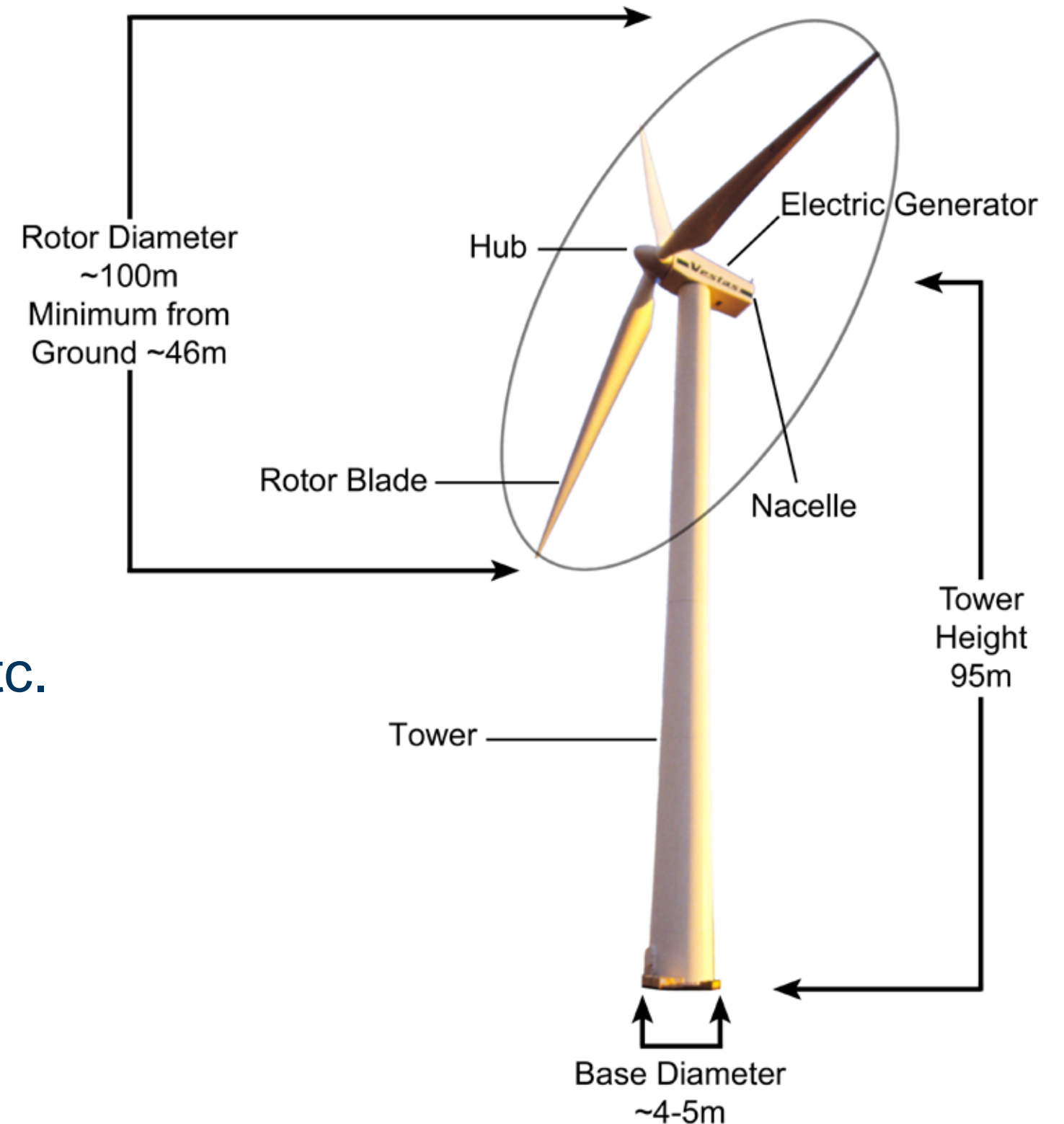
- Blade length of 49 m
- Rotor diameter of 100 m
- Swept area of 7850 m<sup>2</sup>

### Nacelle

- Houses gearbox, generator, bearings, etc.
- Height 5.4 m
- Width 3.4 m
- Length 10.4 m

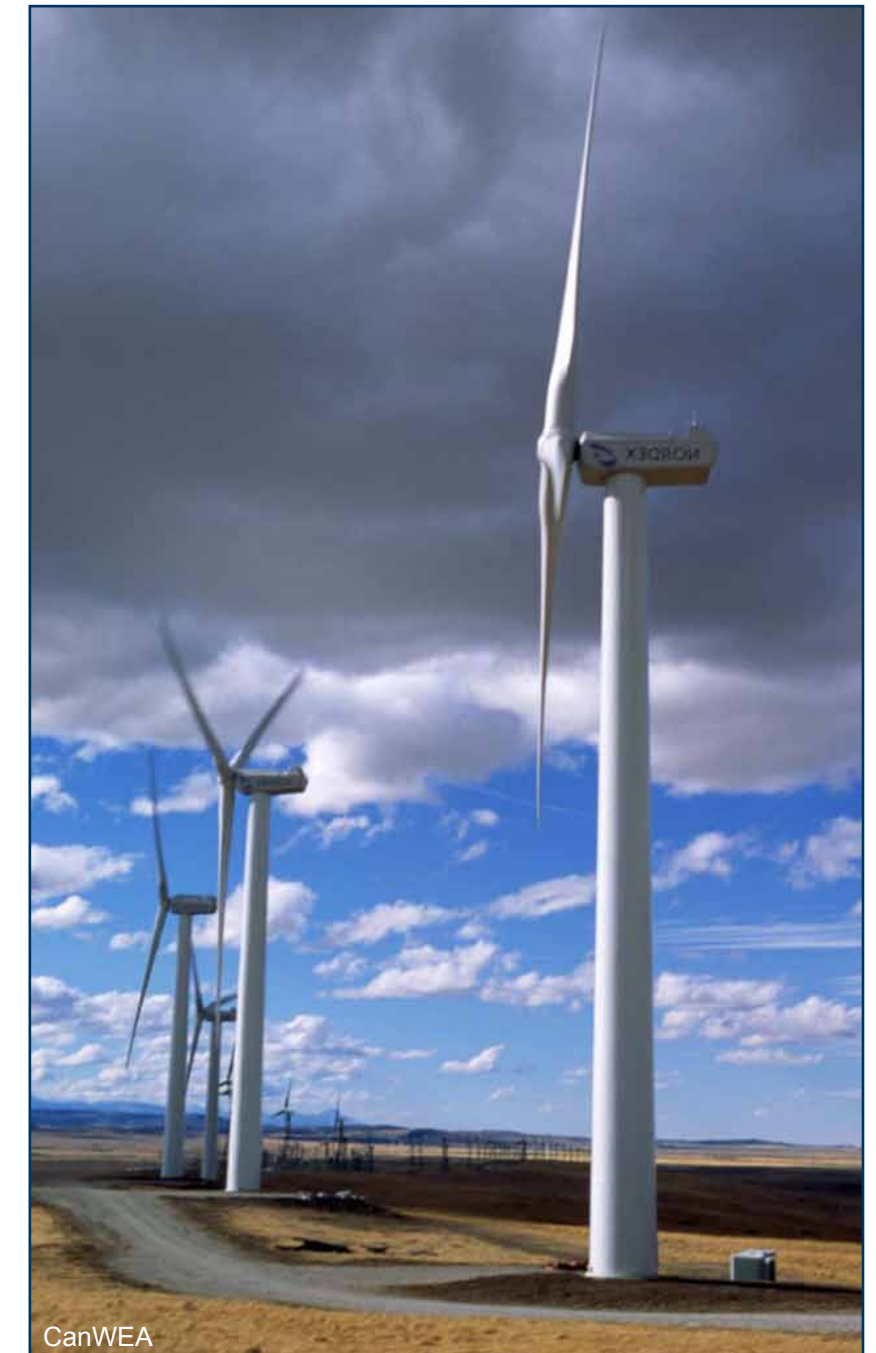
### Tower

- Tubular Steel Tower
- Height 95 m



## WIND ENERGY - HOW THE TECHNOLOGY WORKS

- A computer turns the rotor to face the wind.
- The blades begin to rotate when wind speeds reach approximately 8 km/h.
- Inside the nacelle, the blades propel a shaft that drives a generator through a gearbox and converts the mechanical power to electrical power.
- The electricity is carried down the cables inside the tower.
- Underground collector lines carry the power to the switching station, where it feeds directly into the electrical grid via the Hydro One distribution system.



# KEY COMPONENTS OF A TURBINE



# PROJECT FACILITIES, EQUIPMENT AND TECHNOLOGY



The major components of the project are as follows:

- Five (5) Wind Turbines
- Underground Collector System (27.6kV)
- Turbine Access Roads
- Switching Station
- Small Maintenance Building
- Meteorological Tower
- Temporary Crane Pad and Staging Areas Required for Construction

# CONSTRUCTION PLAN

## Site Preparation

- Survey land and stake turbine locations, access roads, underground collector system, and switching station
- Land clearing and preparation of construction staging areas

## Construction of Facility

- Access road construction and modification (approx. 7 m wide)
- Foundation construction (approx. 20 m<sup>2</sup> and 3 m deep)
- Installation of underground collector system (direct buried and directional drilling)
- Delivery of equipment
- Tower and turbine assembly and installation
- Switching station construction (approx. 7 x 8 m)
- Testing and commissioning



## Site Clean Up and Restoration

- Disturbed areas will be remediated
- Any waste or debris will be removed
- Excavated top-soil will be replaced/reapplied
- Re-vegetation and re-seeding
- Environmental monitoring

## Traffic and Roads

- Only designated transportation routes for the delivery of equipment will be used
- Use of municipal roads during construction will be subject to municipal design and operating restrictions
- Any project related road damages will be repaired

APPROXIMATE CONSTRUCTION SCHEDULE	
ACTIVITY	DATE
Surveying and Geotechnical	March, 2013
Building Permit	March, 2013
Access Road Construction and Modification	April, 2013
Foundation Construction	April, 2013
Electrical Tapline Construction	May, 2013
Delivery of Turbines	May, 2013
Tower and Turbine Assembly and Installation	June, 2013
Switching Station Construction	June, 2013
Interconnection of Turbines to Switching Station	July, 2013
Turbine Testing and Commissioning	August, 2013
Site Restoration and Clean-Up	September, 2013

# DESIGN AND OPERATIONS

The project will produce electricity for 20 years beginning in 2013 and will include:

- Employing 2-3 full-time workers
- Supervision control and data acquisition (SCADA)
- Remote monitoring of weather conditions
- Regularly scheduled maintenance activities
- Storm and lightning protection
- Emergency response and communications plan
- Environmental effects monitoring, including birds and bats



# DECOMMISSIONING PLAN

The Proponent has a FIT contract with the Ontario Power Authority guaranteeing that power generated at the facility will be purchased until 2033.

Each turbine has an approximate lifecycle of 25 years. Following this time, it is possible to extend the lifecycle of the facility by upgrading and replacing old components. Decommissioning of the facility and all associated costs, will be the responsibility of the Proponent.

Decommissioning activities will include removing:

- Turbines
- Foundations
- Underground collector system
- Switching station
- Meteorological tower



All waste generated from decommissioning will be reused or recycled, where possible.

Restoration activities will include:

- Decompacting soil
- Re-grading
- Restoring soil nutrient content
- Re-vegetation and re-seeding

Decommissioning of the facility will comply with all applicable legislation in effect at that time.

# ARCHAEOLOGY

Archaeological Assessments are undertaken to determine if a project may have an effect on archaeological resources. Two stages of archaeological assessments were undertaken by A.M. Archaeological Associates for this project. The studies concluded the following:

## Stage 1: May 2010

- Provides a description and evaluation of all features with archaeological potential in the project study area.
- Archaeological potential was determined by proximity to several factors including: registered sites; historic transportation routes; historic structures; water sources; and modern development.
- The assessment determined that the entire study area containing the five proposed wind turbine locations has archaeological potential. A Stage 2 Archaeological Property Assessment was recommended.



## Stage 2: September 2010 - March 2012

- Studies assessed the locations of the five proposed turbines, underground collector system, access roads, switching station, and maintenance building.
- Based on negative test results, no further archaeological work is required.

The Archaeological Assessment Reports have been reviewed by the Ministry of Tourism, Culture and Sport.

# CULTURAL HERITAGE

Cultural Heritage Assessments are undertaken to determine if a project may have an effect on built heritage resources and cultural heritage landscapes. Unterman McPhail Associates completed the assessment for this project.

The historical summary of the study area showed some potential for cultural heritage resources of value and interest due to the agricultural development of the land in the 19<sup>th</sup> and 20<sup>th</sup> centuries. However, a review of the historical background, site surveys and municipal consultation information determined the potential heritage value and interest of the five (5) wind turbine sites was low. The study concluded the following:

## **Built Heritage**

- There will be no direct impacts to built heritage resources.

## **Cultural Heritage Landscapes**

- Each of the 5 turbine locations are situated on agricultural land, which has been identified as a cultural heritage landscape.
- The sites will be affected by limited change in the viewshed in regard to the setting and character of the identified cultural heritage landscape.



The Cultural Heritage Assessment has been reviewed by the Ministry of Tourism, Culture and Sport.

## NATURAL HERITAGE

A Natural Heritage Assessment Report was prepared to identify significant natural features within 120 m of the project location. Natural features were identified through a records review and site investigation.

All identified natural features were evaluated for significance using Ministry of Natural Resources (MNR) criteria. A total of 15 significant natural features were identified within 120 m of the project location. Results included:

- 1 provincially significant wetland
- 2 significant woodlands
- 1 significant valleylands
- 11 areas of significant wildlife habitat (rare vegetation community, old growth forest, amphibian breeding habitat, 2 bat maternity colonies, 2 landbird migratory stopover areas, amphibian movement corridor, special concern and S1-S3 species habitat, woodland raptor nesting habitat, and woodland area-sensitive breeding bird habitat)



Potential impacts include:

- Temporary disturbance to wildlife due to noise and dust
- Impacts to wildlife from entering the construction area
- Erosion/siltation
- Accidental spills
- Establishment of invasive and disturbance tolerant non-native species near the natural feature
- Avian and bat fatalities may occur due to collision with turbines

Mitigation measures include:

- Fencing around the perimeter of construction areas
- Install and maintain sediment and erosion control measures
- No equipment storage or refueling within natural features
- Post-construction monitoring of birds and bats in accordance with MNR requirements and procedures. Should mortality exceed specified thresholds, additional mitigation measures will be implemented in consultation with the Ministry of Natural Resources.

For more details please see the Natural Heritage Assessment, Environmental Impact Study, and Environmental Effects Monitoring Plan for Birds and Bats.

These reports have been reviewed by the Ministry of Natural Resources.

# WATER BODIES

A Water Assessment and Impact Report has been prepared for this project to:

- Identify water bodies within 120 m of the project location
- Assess potential negative environmental effects
- Provide mitigation and monitoring requirements

Water bodies were identified using:

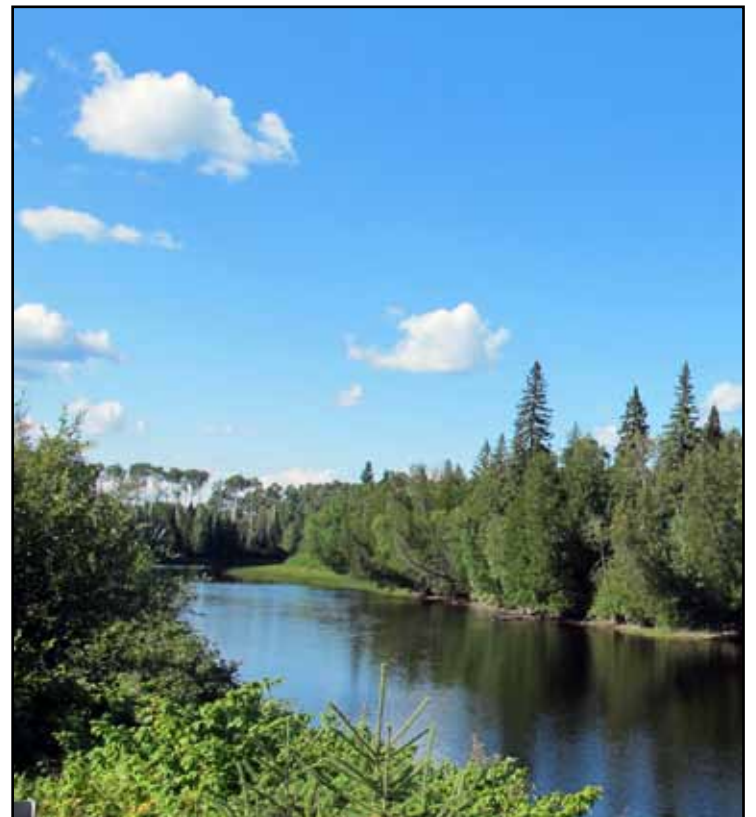
- Ministry of Natural Resources data
- Niagara Peninsula Conservation Authority mapping and data
- Township and Niagara Region mapping
- Geographic Information Systems (GIS) mapping
- Field investigations (December 2009, April 2010)

Potential impacts include:

- Temporary change in surface water runoff patterns
- Erosion and sedimentation
- Vegetation removal
- Contamination from accidental spills

Mitigation measures include:

- Timely revegetation of exposed soils
- Installation of silt fencing and sediment traps
- Proper storage and transportation of materials
- Follow Department of Fisheries and Oceans Operational Statements



The project will require a water crossing for the installation of the underground collectors system. All applicable permits will be obtained from the Niagara Peninsula Conservation Authority.

For more details please see the Water Assessment and Impacts Report

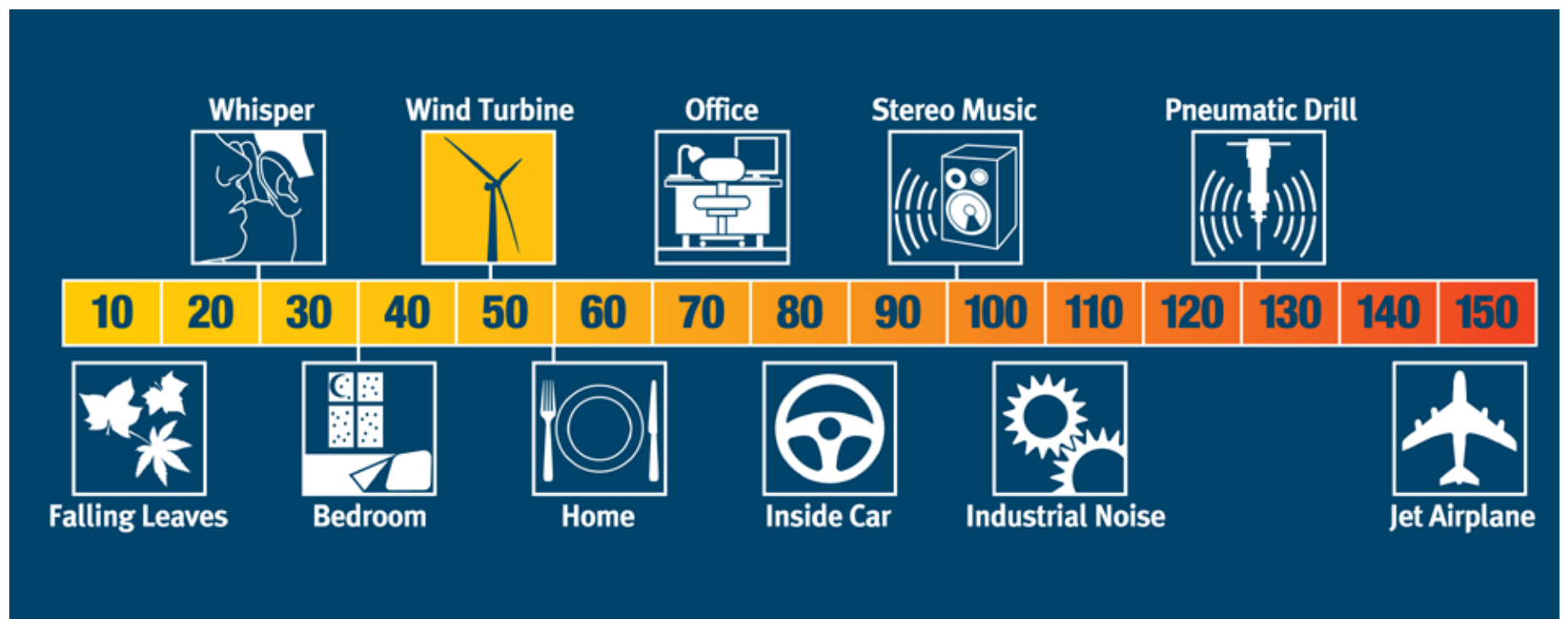
# NOISE ASSESSMENT

A Noise Assessment was undertaken by HGC Engineering to assess the acoustic impact of the project at nearby noise receptors.

Sound power data for the selected wind turbine generator model was obtained from Vestas. The data was used in a computer model to predict the sound level impact at the closest residential receptors.

The results demonstrate compliance with MOE Sound Level Limits for all non-participating noise receptors when all five turbines are operating over their entire speed range.

All regulations have been met by ensuring noise levels do not exceed specified levels (40 dBA) and siting wind turbines a minimum of 550 m from any non-participating point of reception.



# NOISE ASSESSMENT MAP

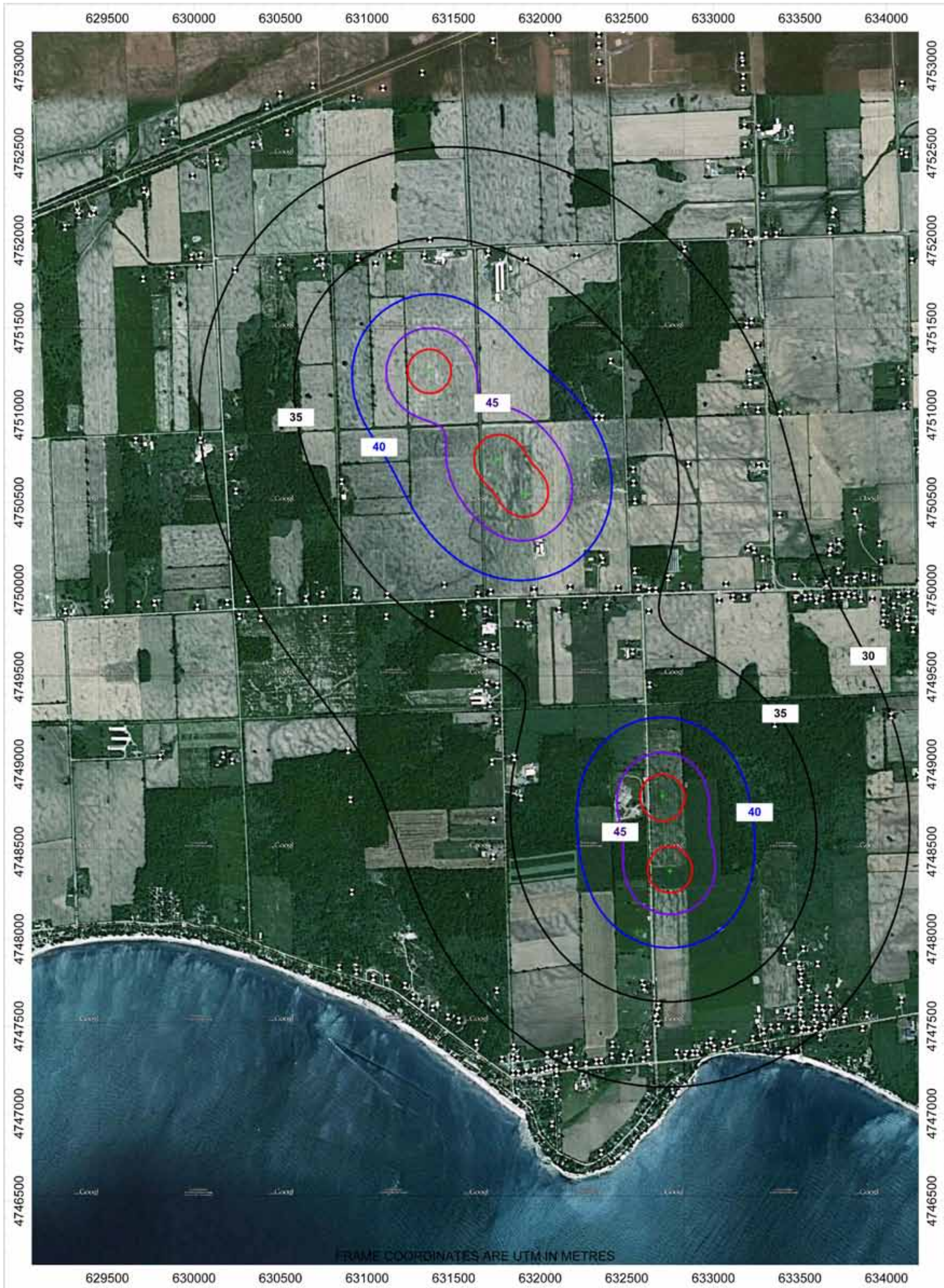


Figure 5: Predicted Sound Level Contours  $L_{eq}$  [dBA]  
Wainfleet Wind Energy Project, Wainfleet, Ontario  
Sound Level Contours Calculated at a Height of 4.5 m

## HEALTH AND SAFETY

Wind energy is a safe and reliable source of energy, which has been in use for decades.

All project facilities and components will be maintained and operated in accordance with all applicable codes and regulations.

Public safety measures are being incorporated into all phases of the project, which include the preparation of an Emergency Response Plan.

A 2010 report, prepared by the Chief Medical Officer of Health for Ontario, titled “The Potential Health Impact of Wind Turbines” concluded that:

- While some people living nearby wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, available scientific evidence to date does not demonstrate a direct causal link between turbine noise and adverse health effects.
- The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects, but it may annoy some people.

*“According to the scientific evidence, there isn’t any direct causal link between wind turbine noise and adverse health effects.”*

*Dr. Arlene King, Ontario’s Chief Medical Officer of Health*

A 2009 study titled, “Wind Turbine Sound and Health Effects: An Expert Panel Review” concluded:

- There is nothing unique about the sound and vibrations emitted by wind turbines.
- The body of accumulated knowledge about sound and health is substantial.
- The body of accumulated knowledge provides no evidence that the audible or subaudible sounds emitted by wind turbines have any direct adverse physiological effects.

Facts:

- MOE’s 550 m setback from the nearest noise receptor is the largest legislated setback in all of North America.
- Setbacks were established based on the most up-to-date, peer-reviewed science.
- MOE’s noise limit of 40 dBA has been in place for over 30 years and meets the World Health Organization’s standards.



# PROPERTY VALUES

A 2010 study titled, “Wind Energy Study-Effect on Real Estate Values in the Municipality of Chatham-Kent” stated:

*In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the viewshed of a wind turbine.*

The U.S Department of Energy’s Lawrence Berkeley National Laboratory Study titled, “The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis” concluded:

- There is no conclusive evidence of the existence of any widespread property value impacts that might be present in communities surrounding wind energy facilities.
- Neither the view of the wind facilities nor the distance of the home to those facilities is found to have any consistent, measureable, and statistically significant effect on home sale prices.

Fact:

The Municipal Property Assessment Corporation (MPAC) is not reducing property assessments as a result of wind energy projects because there is not enough evidence to warrant a negative adjustment.



# WIND ENERGY MYTHS AND MISCONCEPTIONS

**MYTH:** Wind turbines are noisy.

**FACT:** Wind turbine technology over the past decade has rendered mechanical noise from turbines almost undetectable with the main sound being the aerodynamic swoosh of the blades passing the tower. There are strict guidelines on wind turbines and noise emissions to ensure the protection of residential amenity.

**MYTH:** Wind turbines are inefficient; they are only operational 30% of the time.

**FACT:** A modern wind turbine produces electricity 70-85% of the time, but it generates different outputs dependent on wind speed. Variations in the output from wind turbines can be predicted and balanced by grid operators using complementary energy sources.

**MYTH:** Wind energy needs back up to work.

**FACT:** All forms of power generation require back up and no energy technology can be relied on 100%. Variations in the output from wind farms are barely noticeable over and above the normal fluctuation in supply and demand.

**MYTH:** Building a wind farm takes more energy than it ever makes.

**FACT:** A wind turbine produces enough clean electricity in 3 to 5 months to offset all of the greenhouse gas emissions emitted in its manufacture. A modern wind turbine is designed to operate for more than 20 years and at the end of its working life, the area can be restored at low financial and environmental costs.

**MYTH:** Wind turbines cause significant bird mortality.

**FACT:** Post construction mortality reports for wind power projects across Ontario have shown that approximately 2.5 birds per year are killed by individual turbines compared to the 10,000 birds killed per year in Toronto due to collisions with office towers.

**MYTH:** Wind turbines are ugly.

**FACT:** Beauty is in the eye of the beholder, and whether you think a wind turbine is attractive or not will always be your personal opinion.



# VISUALIZATIONS

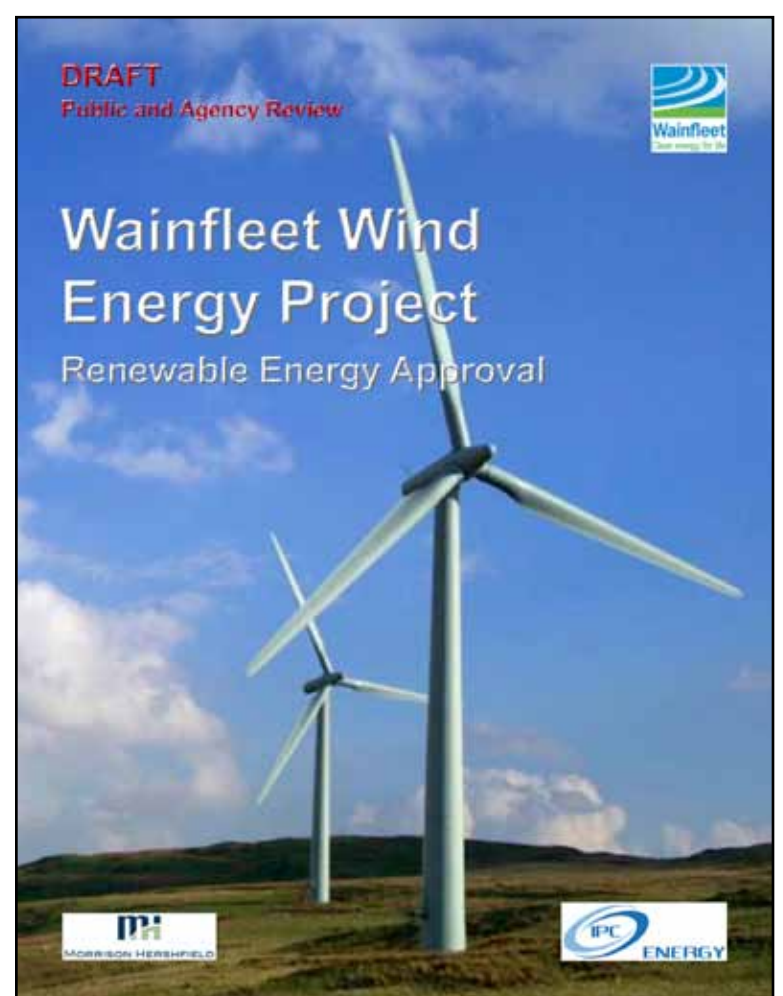


## **DRAFT REPORTS AVAILABLE FOR PUBLIC REVIEW**

- Project Description Report
- Wind Turbine Specifications Report
- Construction Plan Report
- Design and Operations Report
- Decommissioning Plan Report
- Cultural Heritage Assessment Report
- Stage 1 & 2 Archaeology Assessment Reports
- Noise Assessment Report
- Natural Heritage Assessment Report
- Environmental Impact Study Report
- Environmental Effects Monitoring Plan for Birds and Bats
- Water Assessment and Impact Report
- Study Area Map
- Site Plan
- Land-Use Mapping

Copies of these reports are available tonight for your review. Please ask a Project Team representative for assistance. Project reports and updates are also available on the project's website at:

[www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca)



## NEXT STEPS

- Continue consultation with stakeholders and incorporate feedback
- Submit REA application to the Ministry of the Environment
- Continue consultation with the local Township
- Start construction in Spring 2013\*
- Commercial operation date - August 2013

\*Subject to receiving final REA





## PROJECT FEEDBACK

Your input is a valued part of the Wainfleet Wind Energy Project. We encourage you to share your comments with us by completing a Comment Form.

Please deposit Comment Forms in the Comment Box provided.

To learn more about this project, please visit the project's website at [www.wainfleetwindenergy.ca](http://www.wainfleetwindenergy.ca) or contact:

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**OR**

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# **THANK YOU**

**Thank you for attending this  
Public Open House.**

**If you have any questions,  
please speak to any Project  
Team representative in  
attendance.**

**We also encourage you to fill  
out a Comment Form.**

