Just Wind - Wind Farm Development North Dakota Division

P.O. Box 299 • Napoleon, North Dakota 58561 Phone (701) 754-3000

April 7, 2009

Jerry,

Enclosed are 10 **hard copies** for filing on case # PU-07-54 –Just Wind.

Attachments enclosed:

Logan County Wind Farm Map with current 152 Turbine locations.

List of Turbines excluded/or relocated.

List of Turbines located within 1400 ft.

Foundation drawing

Copies of Logan, Emmons, Kidder, and Mclean Counties Zoning Ordinance

Icing Studies

Mitsubishi Turbine Specs

Airport Setback documentation

Consent forms from occupants within 1400 ft. of a Turbine

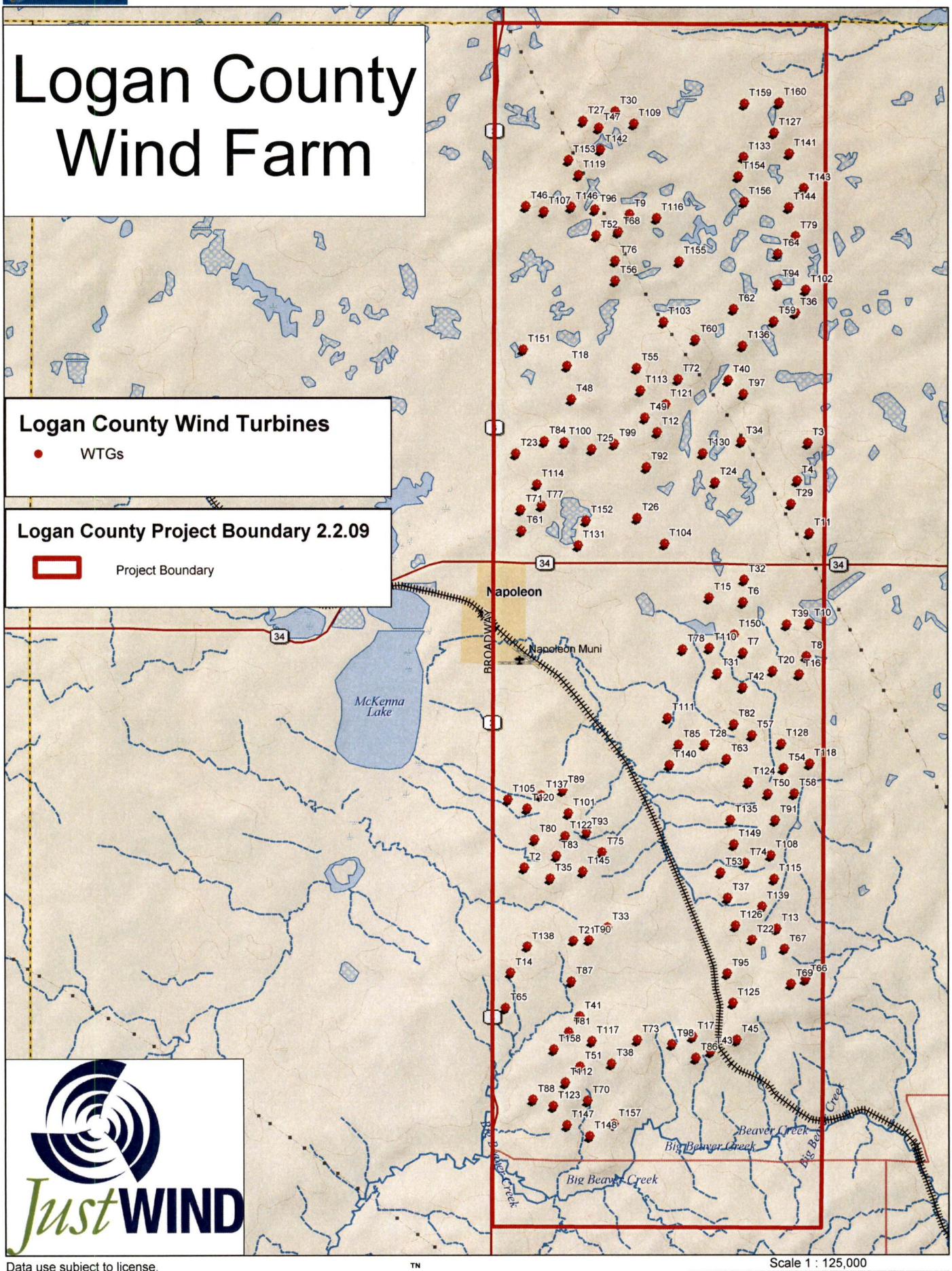
Steve Fettig
Director of LAND MANAGEMENT

Just Wind, LLC - North Dakota Division
P.O. Box 299
Napoleon, ND 58561-0299
(701) 754-3000
(701) 754-3001 Fax
landmanagement@just-wind.com

DeLORME

XMap® 6

Logan County Wind Farm



Data use subject to license.

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www.delorme.com

TN

MN (6.1°E)

Scale 1 : 125,000

0 1 2 3 mi

0 1 2 3 4 5 km

1" = 1.97 mi

Data Zoom 10-6

Logan County Wind Farm

Just Wind, LLC

Turbine Changes:

Excluded Turbines:

Eight turbines are being excluded from the project due to a change of turbine model being used.

T-44 Difficult terrain/Steep grade

T-1 Landowner financing through FSA

T-19 Landowner financing through FSA

T-106 Landowner financing through FSA

T-132 Too close to residence setback

T-5 Too close to property line setback

T-129 Too close to property line setback

T-134 Access road crosses landowner's feedlot

Relocated Turbines:

T-133 Moved northeast 3155 feet - Landowner was excluded from project and became a setback.

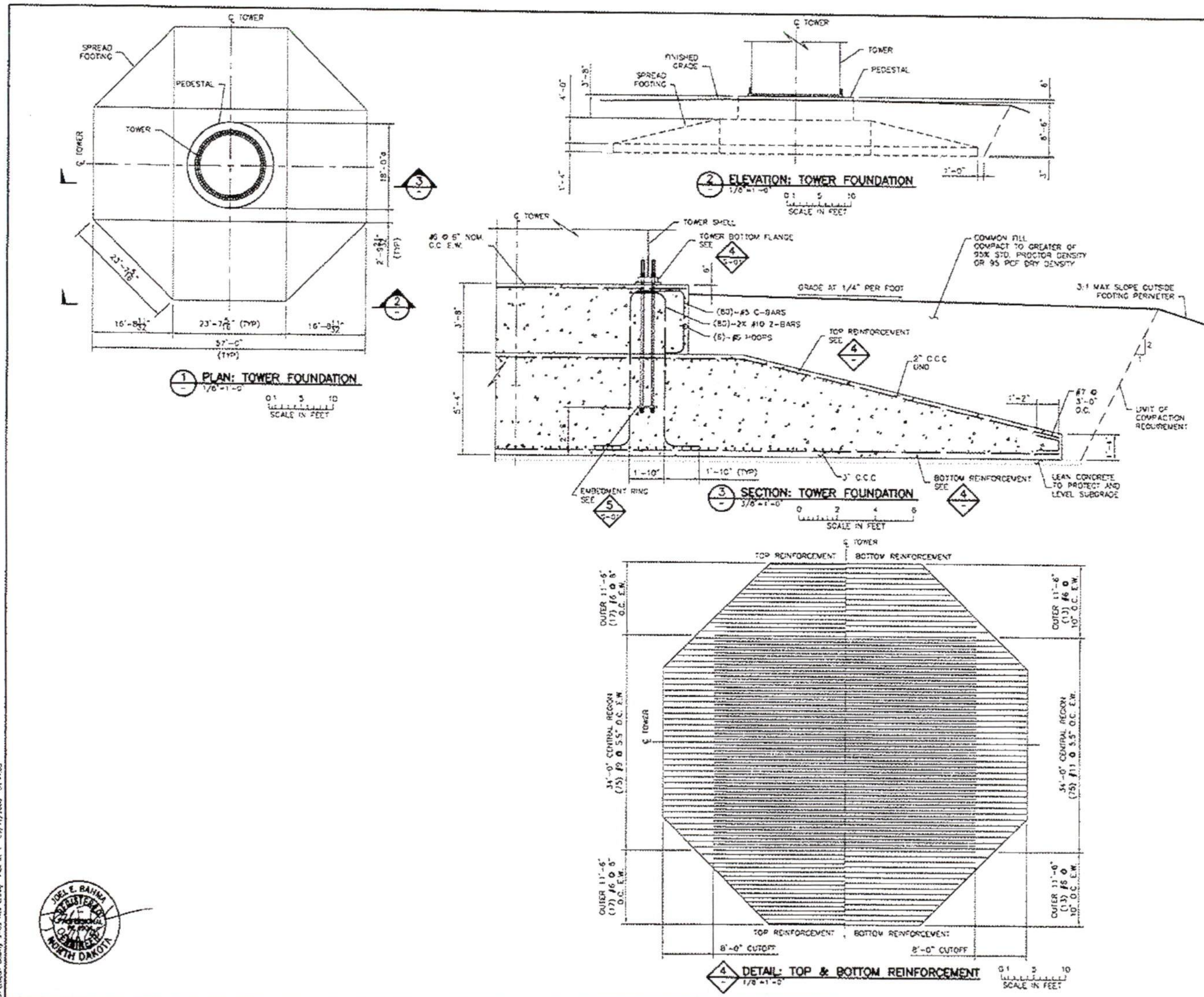
T-55 Moved east 150 feet – Adjacent landowner opted out of project and became a setback.

T-17 Moved southeast 150 feet – Adjacent landowner became a setback.

T-41 Moved west 800 feet – Adjacent landowner became a setback.

Possible Relocation:

T-3 Possible Right of way/Wetland Easement issues



BUILDING AND DESIGN CODES:

INTERNATIONAL BUILDING CODE 2006, INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS.

BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318, 2008, AMERICAN CONCRETE INSTITUTE.

WIND TURBINE AND TOWER:

MANUFACTURER: SIEMENS
MODEL: SWT-2.3-93
POWER OUTPUT: 2.3 MW
ROTOR DIAMETER: 93m
TURBINE HUB HEIGHT: 80m

DESIGN SERVICE LOADS:

UNFACTORED SERVICE LOADS DUE TO EXTREME WIND CONDITION CLASS IEC-IIA (CRITICAL):

OVERTURNING MOMENT, Mxy = 57,550 kN-m = 42,447 ft-kips
HORIZONTAL BASE SHEAR, Hxy = 880 kN = 198 kips
VERTICAL TOWER LOAD, Wz = 2900 kN = 652 kips

FOUNDATION DESIGN DATA:

MIN. FACTOR OF SAFETY AGAINST OVERTURNING: >1.5
MIN. FACTOR OF SAFETY AGAINST SLIDING: >1.5
MIN. FACTOR OF SAFETY AGAINST BEARING CAPACITY FAILURE: >2.26 ON EXTREME

REFERENCE DOCUMENTS:

1. SIEMENS WIND POWER, "PRELIMINARY FOUNDATION LOADS SWT-23-93", DOCUMENT ID: PG-R3-40-EXXXX-XXXX-01, REV. 01, DATED 20070924.

2. BRAUN INTERTEC CORPORATION, "GEOTECHNICAL EVALUATION REPORT, LOGAN COUNTY WIND ENERGY PROJECT, STATE HIGHWAY 3, NAPOLEON, NORTH DAKOTA", SEPEMBER 5, 2008.

MIN. 28-DAY COMPRESSIVE STRENGTH OF CONCRETE:
5000 PSI

MIN. YIELD POINT STRENGTH OF REINFORCING BAR:
60 KSI

MIN. STRENGTH OF ANCHOR BOLTS:
TENSILE STRENGTH 100 KSI YIELD STRENGTH 75 KSI

MIN. 28-DAY COMPRESSIVE STRENGTH OF NON-SHRINK GROUT:
9,500 PSI

MIN. YIELD POINT STRENGTH OF EMBEDMENT PLATE:
36 KSI

VOLUME OF FOUNDATION AS DIMENSIONED:
394 CUBIC YARDS

ESTIMATED WEIGHT OF STEEL:
40 TONS

MAX. AGGREGATE SIZE NO LESS THAN:
1.5 INCHES

ALLOWABLE SOIL BEARING CAPACITY:
3000 PSF

ABBREVIATIONS:

B.O	BOTTOM OF	O.C	ON CENTER
C.C.C	CLEAR CONCRETE COVER	O.D	OUTSIDE DIAMETER
℄	CENTER LINE	R	RADIUS
EL.	ELEVATION	T&B	TOP AND BOTTOM
E.W.	EACH WAY	T.O.C.	TOP OF CONCRETE
EX	EXISTING	TYP	TYPICAL
I.D	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
MIN.	MINIMUM	W/	WITH
NOM.	NOMINAL	ø	DIAMETER

CONFIDENTIAL

FOR PROCUREMENT PURPOSES ONLY
NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NORTH DAKOTA.
PRINTED NAME JOEL E. BAHMA

BARR ENGINEERING CO.
4700 WEST 77TH STREET
MINNEAPOLIS, MN. 55435-4803

Scale	AS SHOWN
Date	08-JULY-08
Drawn	JAD2
Checked	JXB
Designed	JAD2
Approved	CAK

WANZEK CONSTRUCTION, INC.
FARGO, NORTH DAKOTA

LOGAN COUNTY WIND PROJECT
LOGAN COUNTY, NORTH DAKOTA

SPREAD FOOTING FOUNDATION
PLAN, ELEVATION, SECTION & DETAILS

BARR PROJECT No.	CLIENT PROJECT No.	DWG. No.	REV. No.
34/24-001	-	S-02	C

NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION — RELEASED TO/FOR: A B C 0 1 2 3 — DATE RELEASED

Logan

6.11.4.2 Setbacks

The following setbacks and separation requirements shall apply to all Wind Turbines in a Wind Energy Facility.

1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publicly-used structure or facility at a distance not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater.

2) Public Roads and Above Ground Communication and Electrical Lines: Each Wind Turbine shall be set back from the nearest public road or above ground communication and electrical lines at a distance not less than two hundred (200) feet, determined at the center of the existing right-of-way.

3) Wind Energy Facility Perimeter: Each Wind Turbine shall be set back from the Wind Energy Facility Perimeter at a distance not less than two and one half (2.5) times the Rotor Diameter of the Wind Turbine. A Variance may be granted if an authorized representative or agent of the Permitee and those affected parties on Adjoining Properties with associated wind rights sign a formal and legally-binding agreement expressing all parties' support for a Variance that waives or reduces the setback requirement.

6.11.4.3 Minimum Ground Clearance

The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.

6.11.4.4 Restoration of Property

Within one hundred and eighty (180) days of termination or abandonment of leases or easements for a Wind Energy Facility in the County, the Permitee shall cause, at its expense, removal of all structures to a depth of four feet below pre-construction grade.

6.11.4.5 Transfer of Wind Energy Facility Siting Permit

In the event of a change in ownership or controlling interest in a Wind Energy Facility and the transfer of the Permit, any successors and assigns of the original Permitee shall comply with the requirements and conditions of such Permit for the duration of operation of a Wind Energy Facility permitted in the County. Within thirty (30) days of such change in ownership or controlling interest of any entity owning a Wind Energy Facility, the parties to the transaction shall notify the Commission by letter and provide information pursuant to 6.10.3.1 (1). The letter shall be signed by the authorized representatives or agents of

Emmons

1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publicly-used structure or facility at a distance not less than 1.25 times its Total Height or one thousand two hundred and fifty (1,250) feet, whichever is greater.

2) Public Roads and Above Ground Communication and Electrical Lines: Each Wind Turbine shall be set back from the nearest public road or above ground communication and electrical lines at a distance not less than two hundred (200) feet, determined at the center of the existing right-of-way.

3) Wind Energy Facility Perimeter: Each Wind Turbine shall be set back from the Wind Energy Facility Perimeter at a distance not less than two and one half (2.5) times the Rotor Diameter of the Wind Turbine. A Variance may be granted if an authorized representative or agent of the Permitee and those affected parties on Adjoining Properties with associated wind rights sign a formal and legally-binding agreement expressing all parties' support for a Variance that waives or reduces the setback requirement.

3. Minimum Ground Clearance

a. The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.

4. Restoration of Property

a. Within one hundred and eighty (180) days of termination or abandonment of leases or easements for a Wind Energy Facility in the County, the Permitee shall cause, at its expense, removal of all structures to a depth of four feet below pre-construction grade.

5. Transfer of Wind Energy Facility Siting Permit

a. In the event of a change in ownership or controlling interest in a Wind Energy Facility and the transfer of the Permit, any successors and assigns of the original Permitee shall comply with the requirements and conditions of such Permit for the duration of operation of a Wind Energy Facility permitted in the County. Within thirty (30) days of such change in ownership or controlling interest of any entity owning a Wind Energy Facility, the parties to the transaction shall notify the Commission by letter and provide information

Kidder

9) The Permitee 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 adjacent to the land necessary for Wind Turbine access roads, unless otherwise negotiated with the affected landowner. (This paragraph does not apply to feeder lines.)
10) The Permitee shall place overhead feeder lines on public rights-of-way, if a public right-of-way exists, or the Permitee may place feeder lines on private property. A change of routes may be made as long as the feeders remain on public rights of way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the Permitee shall place the feeder in accordance with the easement negotiated with the affected landowner.

7.9 Setbacks

The following setbacks and separation requirements shall apply to all Wind Turbines in a Wind Energy Facility.

1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publicly-used structure or facility at a distance not less than 1.25 times its Total Height or one thousand (1,000) feet, whichever is greater.
2) Public Roads and Above Ground Communication and Electrical Lines: Each Wind Turbine shall be set back from the nearest public road or section line or above ground communication and electrical lines at a distance not less than two hundred (200) feet, determined at the center of the existing right-of-way.
3) Wind Energy Facility Perimeter: Each Wind Turbine shall be set back from the Wind Energy Facility Perimeter at a distance not less than two and one half (2.5) times the Rotor Diameter of the Wind Turbine. A Variance may be granted if an authorized representative or agent of the Permitee and those affected parties on Adjoining Properties with associated wind rights sign a formal and legally-binding agreement expressing all parties' support for a Variance that waives or reduces the setback requirement.
4) All historical site setbacks must be observed.

7.10 Minimum Ground Clearance

The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than forty (40) feet.

Mclean County

The McLean County Planning and Zoning Commission may require a preliminary public hearing to be conducted in the County concerning site location, needs of the facility, size and location of construction crews, employees, roads, housing, community facilities, and County and community services.

A solid waste disposal facility may be allowed in any Agricultural zone as a conditional use, following a final public hearing and approval, provided:

1. It is continuously licensed and approved by the North Dakota State Health Department as to location and operation.
2. There is no evidence that the facility will endanger the public health or the environment.
3. The facility shall develop a comprehensive plan for controlling surface water drainage which is in compliance with North Dakota State Department of Health and Consolidated Laboratories requirements.
4. Operation of the facility shall not present any evidence of danger to surface and groundwater resources.

In addition to these provisions, the McLean County Planning and Zoning Commission may require the following provisions, which will be determined on a case-by-case basis:

1. The site is located at least one-half (½) mile from any and all residences or residentially zoned area unless written approval is obtained from the owner of any residence within this area.
2. All excavation and actual disposal areas shall maintain a minimum set back of one hundred fifty (150) feet from all property lines.
3. Unauthorized entry to the site shall not be permitted. In addition, facility personnel may be required to be on site during all times of active disposal.
4. Fencing, as specified by the Commission, may be required to be installed along the boundaries of the active disposal area.

6.5.11 WIND ENERGY FACILITES

GENERAL PROVISIONS

1. Public hearing required.

A preliminary public hearing shall be conducted in the County concerning site location, needs of the operation and company employees regarding roads, housing, community facilities and County and community services. These hearings are separate from any environmental impact statement process that may be required.

2. Definitions

"Wind Energy Facility" shall mean one or more wind turbine(s) rated at a combined 150 kilowatts nameplate capacity or larger.

3. General requirements.

a. Wind turbines and related towers shall be painted a non-reflective, non-obtrusive color.

b. Wind turbines and related towers shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind energy facility.

c. Each wind tower shall be marked with a visible identification number to assist with provision of emergency services, and the permitee shall file with the local fire and sheriff departments, a wind energy facility map identifying wind turbine locations and numbers.

d. Wind turbines shall not be artificially lighted, except to the extent required by FAA or other applicable authority.

e. The design of buildings and related structures at wind energy facility sites shall, to the extent reasonably possible, use materials, colors, textures and location that will blend the wind energy facility to the natural setting and existing environment.

f. At wind energy facility sites, the location and construction of access roads and other infrastructure shall, to the extent reasonably possible, minimize disruption to farmland, the landscape and agricultural operations within McLean County.

g. The permitee shall promptly replace or repair all fences or gates removed or damaged during all phases of the wind energy facility's life, unless otherwise negotiated with the affected landowner. When the permitee installs a gate where electric fences are present, the permitee shall provide for continuity in the electric fence circuit.

h. The permitee shall ensure that, following completion of construction of a wind energy facility, all County roads will be repaired or restored to a condition at least equal to the condition prior to construction of such facility, as inspected and approved by the McLean County Superintendent of Highways.

i. The permitee shall place electrical line, known as collectors, and communication cables underground when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for wind turbine access roads, unless otherwise negotiated with the affected landowner. (Does not apply to feed lines).

j. The permitee shall place overhead feeder lines on public rights of way, if a public right of way exists, or the permitee may place feeder lines on private property. A change of routes may be made as long as the feeders remain on public rights of way and approval has been obtained from the governmental unit responsible for the affected right of way. When placing feeders on private property, the permitee shall place the feeder in accordance with the easement negotiated with the affected landowner.

4. Setback requirements.

a. Each wind turbine shall be set back from the nearest occupied dwelling, commercial building or publicly used structure or facility a distance not less than 1.25 times it total height or five hundred (500) feet, whichever is greater.

b. Each wind turbine shall be set back from the nearest public road or above ground communication or electrical lines a distance not less than two hundred fifty (250) feet from the center line of the existing right of way.

e. Each wind turbine shall be set back from the wind energy facility perimeter a distance not less than five (5) times the rotor diameter of the wind turbine. A variance may be granted if an authorized representative or agent of the permitee and those affected parties of adjoining properties with associated wind rights sign a formal and binding agreement expressing all parties' support for a variance that my reduce the setback requirement.

5. Minimum ground clearance.

The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than seventy five (75) feet.

6. Restoration of property.

Within one hundred eighty (180) days of termination or abandonment of leases or easements for a wind energy facility in McLean County, the current permitee shall cause, at its own expense, removal of all structures to a depth of four (4) feet below pre-construction grade.

7. Transfer of permit.

Prior to any change in ownership or controlling interest of any entity owning a wind energy facility permitted in McLean County, application shall be made to the McLean County Planning and Zoning Commission, requesting transfer of the wind energy facility siting permit. Approval of such transfer shall be conditioned upon explicit agreement by the new permitee to comply with all provisions of this Ordinance and the original permit. The application may be in letter form and shall be signed by the authorized representatives or agents of both the current permitee and the prospective permitee.

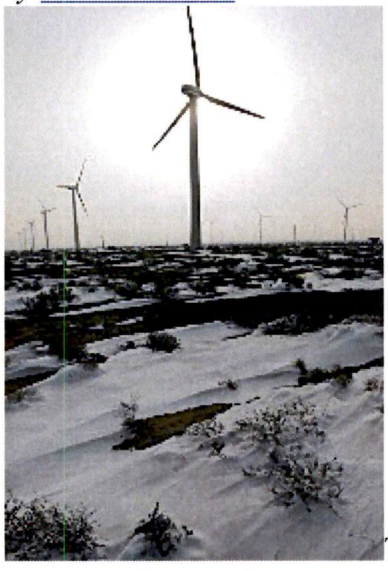
VII. FLOATING ZONES

7.1 DEFINITION

Floating zones are districts with specified purposes which are established by this Ordinance without actually being delineated on the zoning map. When an opportunity arises to carry out the intended purposes on a particular tract of land, an amendment to the Zoning Ordinance will establish the actual boundaries of the district. The developer must embark upon and actually complete the project or the floating zone will disappear.

Ice-Tossing Turbines: Myth or Hazard?

By Kate Galbraith



They produce clean energy, sure, but they can also hurl a mean snowball. (Photo: Getty Images)

How do wind turbines fare in winter weather?

Not so well, according to one little town in England. The Wisbech Standard reports a harrowing tale in which "lumps of ice three or four feet long flew through the air" and smashed into a carpet showroom and a parking lot.

They apparently came off the spinning blades of a 410-foot-tall wind turbine.

No one was hurt, but residents of Whittlesey, in the southeastern part of England, would not rest until the turbine was shut down. One local businessman described the ice shards as "javelins" coming off the blades.

The wind industry concedes that, as with all tall things (buildings, for example, or trees), ice and snow can build up and, eventually, fall down, creating a hazard to people and structures below.

But the industry denies that "ice-throwing" — another concern surrounding wind power — is a problem. "Ice can end up at places other than exactly at the base of the turbine, but it's a myth that a turbine will (and can) operate at high speed with ice on it and fling ice for miles," said Ron Stimmel of the American Wind Energy Association, in an e-mail message.

Just as an airplane will not be able to fly with too much ice on its wings, Mr. Stimmel said, wind turbines are designed to stop or shut off automatically, he said, when they sense the extra weight of ice.

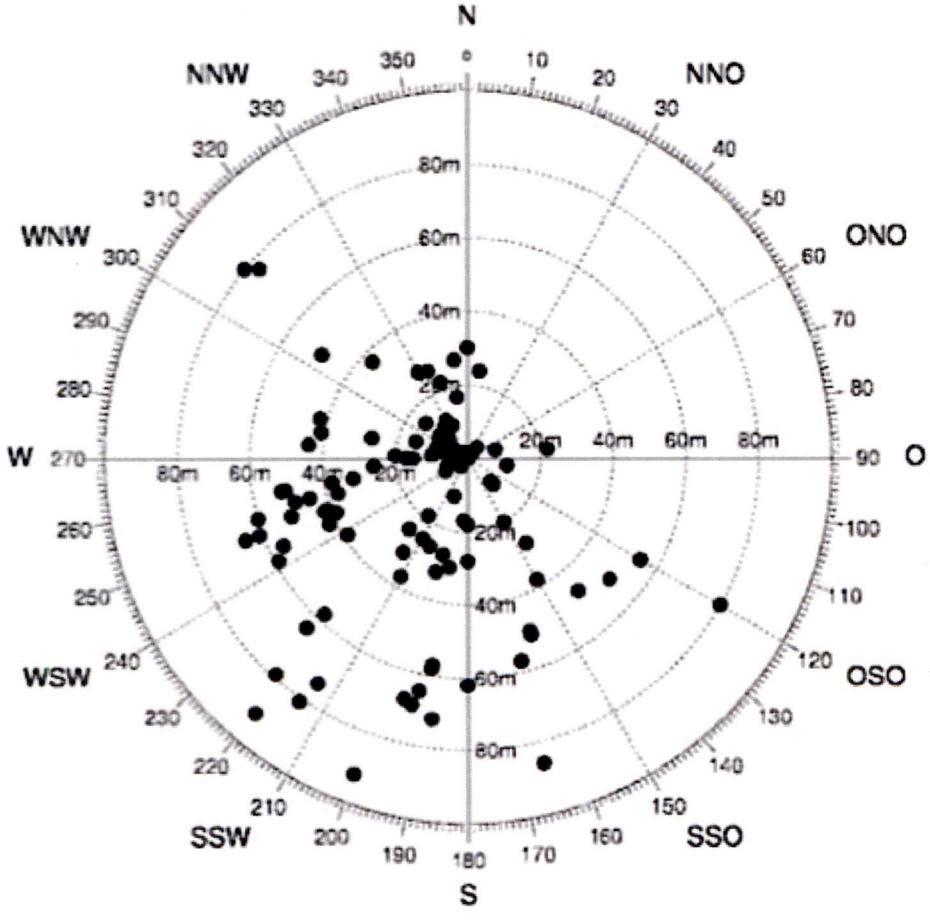
The American Wind Energy Association has posted a brief on the subject, and also discusses the issue in its handbook for siting new wind projects.

But a 2006 publication by G.E. Energy, a maker of large wind turbines, warns that "rotating turbine blades may propel ice fragments some distance from the turbine — up to several hundred meters if conditions are right."

Its recommendations include placing fences and warning signs around turbines, and locating them a safe distance from buildings or roads. They also recommend deactivating turbines when ice begins to form.

A Swiss report last year, titled "Wind Turbine Ice Throw Studies in the Swiss Alps," focused on a turbine near a ski area. That report found ice throw to be a "significant safety risk." The most dangerous place for ice was underneath the turbine, but about 5 percent of fragments landed more than 80 meters — or 260 feet — from the turbine.

A chart from the study shows where and how far ice and snow were flung, relative to the position of the turbine:



Distribution of ice throw relative to the wind turbine. (Source: Wind Turbine Ice Throw Studies in the Swiss Alps)

An earlier German study came to a similar conclusion:

As a general recommendation, it can be stated that wind farm developers should be very careful at ice endangered sites in the planning phase and take ice throw into account as a safety issue. Each incident or accident caused by ice throw is an unnecessary event and will decrease the public acceptance of wind energy.

Review of Wind Turbine Icing Hazards and Mitigation Options – Town of Kingston

Peter McPhee, Senior Engineer

KEMA, Inc.

Presentation to the Kingston Green Energy Committee

October 21, 2008

Project Overview

- KEMA prepared a Feasibility Study for a wind turbine at the Kingston Wastewater Treatment Facility (WWTF) – completed June 2008

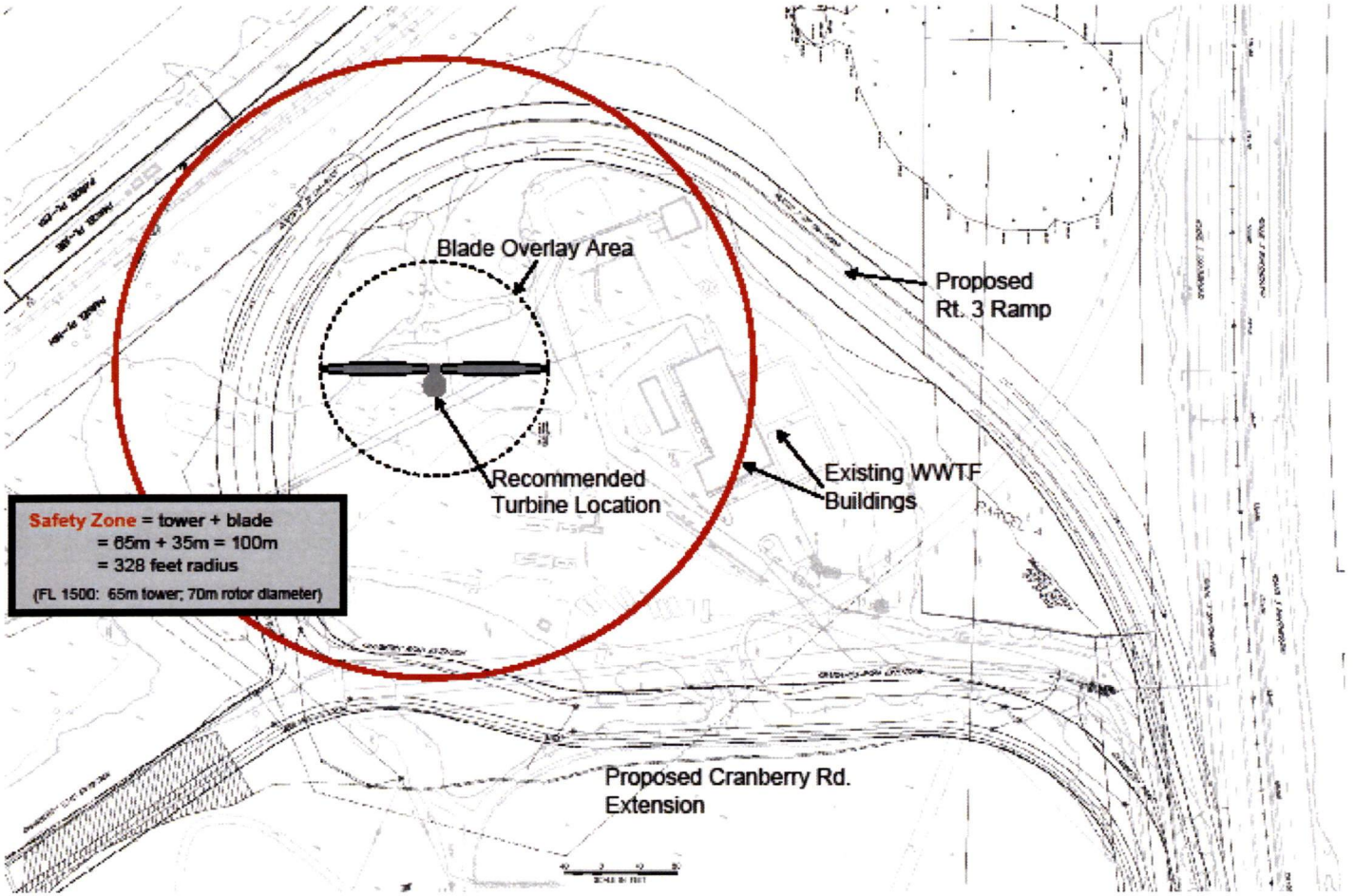
- Due to proximity of proposed turbine to the WWTF and public accessways, Kingston Green Energy Committee and MTC requested KEMA to conduct a review of icing hazards and mitigation strategies

- Study based on:
  - Interviews with manufacturers and operators of wind turbines
  - Review of technologies for ice prevention and detection
  - Review of available literature

KEMA

Aerial Photo of Project Site

Proposed Site Layout Plan



Note: Turbine drawing represents a FL 1500. Turbine scale is accurate to +/- 10%.

Wind turbine overlay by Kema, Inc., safety zone overlay by MTC (September 22, 2008).

KEMA

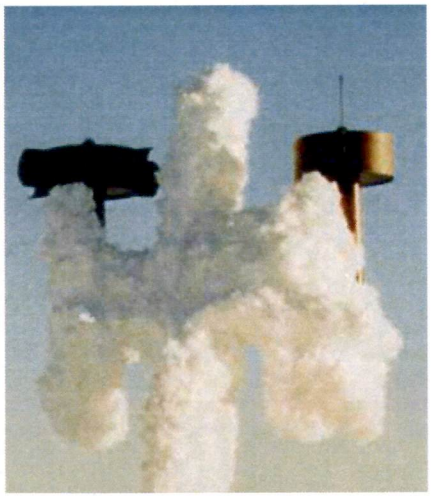
Potential Icing Concerns

- Safety Considerations:
  - Ice fragments from the rotor blades can be thrown from an operating turbine
  - Melting ice fragments can fall from idle turbine blades
- Economic Considerations:
  - Lost revenue due to extended shut-down

Types of Ice

- Glaze ice
  - Result of liquid precipitation striking surfaces at temperatures below the freezing point
  - Transparent, hard, attaches well to surfaces

- Rime Ice
  - Primary concern in high elevations such as hills or mountaintops
  - Greater concern than glaze ice
    - Greater thickness
    - Attached more loosely



Rime ice on control anemometer and wind vane, Finland

Icing in Coastal Massachusetts

- Combination analysis
  - Reviewed meteorological data
  - Interviewed operators of nearby turbines in:
    - Hull (Hull High School, "Hull 1")
    - Buzzard's Bay (MA Maritime Academy)

- Meteorological occurrence of ice
  - NOAA weather data suggests freezing rain or freezing fog less than 1/8th inch (0.25 cm) occurs about 15 days per year
    - However, icing is usually followed by melting – on average only 4 days per year freezing precip is followed by high temps below 32° F
  - Ice storms (>¼ inch or 0.63 cm) occur less than once per year on average (Tattelman et al.)

KEMA

Frequency of Icing – Experiences of Other Towns

- Hull 1 - Hull, MA
  - Turbine located adjacent to Hull High School
  - Does not have ice detection equipment installed
  - Has reportedly never shut down because of icing

- MA Maritime Academy – Buzzard's Bay, MA
  - Received direct training from Vestas (turbine manufacturer)
  - Aware that ice throw occurred on one occasion (~200')
  - Can observe changes in sound when icing occurs
  - Have trained staff to monitor ice development on buildings, ground, roads and listen for audio clues
  - Shut down turbine at first indication of icing
  - Restrict access under turbine blades while melting occurs

Icing Mitigation Strategies

- Automatic Shut-Down Systems
  - Loss of efficiency or imbalance triggers "fault" and automatic shutdown and alarm notification. Requires manual reset after fault condition remedied.
  - Readily available on modern turbines as part of standard or optional packages

- Ice Detectors
  - Ultrasonic ice detectors
    - Well-developed technology for airline industry
    - Estimated Cost: $5,000-$10,000

KEMA

Icing Mitigation Strategies

- Passive Icing Prevention
  - Paint the turbine blades black
    - Accelerates melting
    - Creates more visual impact
    - Estimated cost: $5,000 to $10,000
  - Anti-Adhesive Coatings (Teflon, fluoroethane)
    - Case studies in Pennsylvania and the Yukon
    - Estimated cost: $10,000 - $20,000

Additional Technologies

- When more commercially available/developed, these may complement existing methods:
  - Applied heat
    - Not yet commercially available
    - Would use portion of turbine output for power
    - Expect cost to be high relative to risk in Kingston
  - Web cams
  - Analyzing indirect signals of turbine performance

Conclusions

- Sporadic icing of a wind turbine at the WWTF may occur
- Preventative measures such as alarm systems, ice detection monitors, or anti-adhesive coatings would minimize risk of ice throw
- Conservative operational procedures and WWTF staff training would further reduce risk of ice throw and ensure safety during melting
- Expected down-time due to ice is limited
- Economic impact of icing is expected to be minimal

KEMA

Thank You.

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KEMA, Inc.
67 S. Bedford St, Suite 201E
Burlington, MA 01803

MWT92/2.4 (60Hz, 80m hub height)
WIND TURBINE GENERATOR

(WTI-A-094-R2)

R2 15th. August. 2006

MITSUBISHI HEAVY INDUSTRIES, LTD.
NAGASAKI SHIPYARD & MACHINERY WORKS

Contents

1. INTRODUCTION

1.1 General Information of MWT92/2.4

In this document, the standard technical specification of MWT92/2.4 wind turbine generator will be described in a detailed manner. This intends to provide technical information regarding to the latest equipment and component installed in the wind turbine. Also included in this document is the latest outline and arrangement of the MWT92/2.4 Wind Turbine Generator.

Basically, MWT92/2.4 Wind Turbine Generator is the latest generation of wind turbine designed by Mitsubishi Heavy Industries (MHI) to meet the growing demand of the market in a high capacity but reliable and efficient wind turbine.

The design features of MWT92/2.4 wind turbine are as follows.

a.) Larger rotor diameter for high power capacity.
b.) Variable speed operation.
c.) Upwind, three blades with Individual Blade pitch control.
d.) Active Yaw System to track wind direction and Down Wind Support System for strong wind protection.
e.) High efficiency planetary/parallel/parallel in-house designed gearbox.
f.) Improved blade design for lightning protection and wind load reduction.

1.2 Outline of MWT92/2.4

MWT92/2.4 wind turbine generator is mainly composed of the following primary components and systems.

1. Rotor (Blades, Rotor Head, Pitch Control Equipment)
2. Power Train (Shaft, Gearbox, Generator)
3. Yaw System
4. Tower
5. Controller and Terminal for Communication

1.2.1. Rotor

The rotor is composed of three blades, the rotor head and the pitch control mechanism. The blade is attached in a blade bearing for longitudinal axis rotation. The blades can change pitch individually using the pitch control mechanism inside the rotor head. This is controlled using individual pitch control corresponding to the rotor azimuth angle. The rotor transmits the power to the power train through the mainshaft.

The blade bearing is lubricated with grease. Automatic Grease Distributor *) is prepared for easy maintenance to supply grease automatically during its operation as an option.

*) Option

1.2.1.1 Blades

Blades are made from Glass Fiber Reinforced Plastic (GRFP). Each blade is approximately 44.7 m in length, and utilizes the modified NACA 63-XXX series airfoil. This type of blade has maximum lift for power generation but with low drag characteristics, which minimizes the propagated noise during operation.

The blade structure consists of two skins, the Low Pressure Skin and the High Pressure Skin and two shear webs, the Leading Edge Side Shear Web and the Trailing Side Shear Web. These parts are made from Glass Fiber Reinforced Plastic (GRFP) and core material and bonded together using resins and adhesive. MHI blades utilize stitch fabric material for its strength and lightweight properties.

For lightning strike protection, multiple metal receptors are installed along the body of each blade. These receptors are connected to a down conductor wire. This will conduct the surge of lightning current from the blade to the rotor head.

Blades are installed on the rotor head using T-bolts connections.

1.2.1.2 Rotor head (Hub)

The rotor head is the component on which the three blades are connected. The rotor head is made from cast iron. The pitch control mechanisms and hydraulic cylinders of the blades are attached to the rotor head. The static, dynamic and centrifugal force in the rotor head is transmitted to the nacelle bed-plate using the main shaft bearing.

1.2.1.3 Pitch Control Mechanism

Pitch control is used to control the power generated and to prevent the wind turbine from over-speeding. The pitch control mechanism controls the blade pitch individually with individual components such as hydraulic cylinders, control valves, accumulator, and feedback sensors.

In case of a hydraulic pump problem or leakage, there is an individual accumulator for each blade pitch control mechanism. During emergency situations, the accumulated pressure is sufficient enough to change the individual blade pitch into feathering position and stop or decrease the rotor rotation speed.

Also changing the blade pitch individually is a more effective way of aerodynamic brake. This is because in case that a single blade will not fully change into feather position, the remaining blades will be sufficient enough to decrease the rotor rotation.

1.2.2 Power Train

The power train is inclined at approximately 5° from the horizontal axis. The rotor is connected to the main shaft and rotates at 9-16.9 rpm and drives a speed increasing gearbox for wind turbine generator. The main shaft and gearbox are securely connected by a shrink disk.

The gearbox is connected to the generator by a flexible type shaft coupling. The high speed shaft has a steel mounted disk brake. This brake can be engaged during routine maintenance and emergency conditions.

1.2.2.1 Gearbox

The gearbox transmits torque and increases the rotational speed coming from the main shaft to the generator. The gearbox uses a 3 stage (planetary/parallel/parallel) gear arrangement. By using two oil pumps, the gearbox is lubricated and cooled by forcing the oil to flow through gears and bearings. To reduce mechanical noise propagation, the gearbox is mounted on the nacelle using anti-vibration bushings and torque arms.

1.2.2.2 Generator

The generator is doubly-fed asynchronous generator. It has self-lubricated bearing and uses an air cooling system. It has 6 poles and rating of 60±5% Hz, 690±10% volts. Generator conforms to IEC, JEC, and EMC standards and has a degree of protection of IP54.

1.2.2.3 Transformer

A step up transformer is mounted on the nacelle to step up the 690 V power generated to 34.5 kV* for standard option**. Installing the transformer on the nacelle enables a reduction in the installation cost of installing it outside the nacelle.

It has nominal capacity of 2700 kVA. The low voltage side is connected in star connection while the high voltage side is connected on delta connection.

*) This is the standard grid voltage. Depending on the request voltage, this is subjected to be changed based on the customer grid requirements with cost adjustment.

**) The requirement of installing the transformer outside the nacelle can be applied as an option. In this case, the transformer is to be supplied by the customer. The low voltage point 690V of the generator system is the connection between MHI and the customer. Details shall be estimated in accordance with the customer's request.

1.2.2.4 Braking System

There are two types of brakes. The first one is the aerodynamic brake which changes the pitch position of the blades. The second one is the high speed shaft brakes which use a brake disk mounted on the shaft and brake calipers.

Activation of each brake depends on the many different conditions. Generally, the pitch brake is used during normal braking conditions while the high speed shaft brake is used during emergency and maintenance. Also, the high speed shaft brake is used as parking brake.

1.2.3 Yaw System

The yaw system is composed of a yaw bearing, gears, and brake calipers. Yawing is automatically controlled to face the dominant wind direction.

The yaw bearing is lubricated with grease. Automatic Grease Distributor *) is prepared for easy maintenance to supply grease automatically during its operation as an option.

*) Option

1.2.4 Tower

The tower is the tapered mono-pole steel structure supporting the wind turbine generator. For a wind turbine hub height of 80m, the tower is divided into four sections. The base section has a diameter of approximately 4.3m and the top section has a diameter of 3 m. The sections of the tower are connected using bolts.

Tower accessories include the ladder, base for control panel, lights, safety ropes, etc.

1.2.5 Control and Safety System Concept

The Control and Safety System controls the blade pitch and yawing of the wind turbine during normal operating condition. The Control and Safety System protects the wind turbine using blade pitch, yaw, service brake, and generator contactors.

1.2.5.1 Safety System

The safety system consists of hardwired circuits. This is completely different from software circuits. Along with protection device alarms, the hardwired circuits of the safety system can protect the wind turbine regardless of errors or incorrect actions of the controller.

The safety system will activate the safety action during grid loss or loss of power supply in equipments. The accumulator is used to put the blades in feather position. Appropriate control shutdown is done by UPS.

1.2.5.2 Control System

During the normal condition, the wind turbine is controlled using the blade pitch control and the yaw control. The concept of control system, mainly in the power control of the wind turbine is shown in Figure 2.1.

a. Blade Pitch Control

A hydraulic cylinder is connected to each blade. MWT92/2.4 has blade pitch control that can change the blade pitch individually. Individual pitch control can reduce the fluctuating loads acting on the turbine as well as effective aerodynamic brake.

b. Yaw Control

During normal operation, the rotor is directed upwind and is redirected with changing direction for maximum power generation. The Yaw controls this changing of direction of the nacelle. During strong wind conditions, such as typhoon, the yaw control directs the rotor in downwind position for wind load reduction. This is smart yaw. If the wind speed goes back to normal condition, the rotor is directed again in the upwind position.

c. Service Brake

MWT92/2.4 has mechanical hydraulic disk brake installed in high speed shaft of gearbox. This service brake is used as a parking brake during maintenance and auxiliary brake during emergency conditions.

1.2.5.3 Arrangement of Control Device

Control and Safety System panel is classified according to their location and responsibility.

1. Hub Cabinet: Installed inside the rotor head and controls the blade pitch.
2. Top Cabinet: Installed inside the nacelle. It supervises the power generation control of wind turbine.
3. Converter Panel : Installed inside the nacelle and manages the power generation and conversion.
4. Ground Cabinet: Installed at the bottom of the tower and serves as the communication port for operation and data transmission.

2. GENERAL CONDITIONS

2.1 Design

The main parts of the wind turbine are designed with consideration of a theoretical 20 years lifetime under IEC (International Electro-technical Commission) Class IIA condition, except for seals and consumables.

- GFRP Blade
- Rotor Head Structure
- Nacelle Bedplate
- Main Shaft
- Gearbox
- Generator
- Yaw Gear
- Tower Structure

2.2 Service Interval

- Checking interval is every half year.
- Regular maintenance interval is one year.

2.3 Technical Standards

MWT92/2.4 wind turbine generator and its electrical equipment are manufactured in accordance with IEC and the following Japanese standards, which are applicable as of April 2006.

-JIS (Japanese Industrial Standard)

-JEM (The Standard of Japan Electrical Manufacturer Association)

-JEC (Japanese Electro-technical Committee)

2.4 Operating Grid Requirements

The required operating grid characteristic in which the wind turbine will be connected is according to IEC 61400. The grid voltage and frequency should have a nominal value of ±10% and ±2% respectively. Exceeding the stated tolerances may result in abnormal operation of the wind turbine and cause damage to electrical components.

Also, consideration to grid failure should be noted. The maximum power outages should not exceed once a week.

2.5 Painting and Corrosion Protection

The standard color of the MWT92/2.4 is light gray (Munsel Code N-8.5 equivalent). The paint grade that is used in the outside surface (tower and nacelle) is according to ISO 12944. The corrosion protection of the blade is a Gel-coat.

2.6 Grounding System Requirements

The recommended transition resistance of the wind turbine to earth is below 2 ohm.

2.7 Environment Condition.

Temperature	IEC 61400-1 Standard Condition Operation: -10°C(-20°C*) ~ +40°C Storage : -20°C(-30°C*) ~ +50°C *) Option (under planning)
Elevation	below 1000 meters above sea level

2.8 Quality Control

MWT92/2.4 is manufactured at the facility in accordance with ISO-9001 (2000 edition)

2.9 Reservation of WTG Operation

MHI will determine the control strategy to prevent the loads of wind turbine from exceeding the designed load. MHI will immediately confirm the control strategy as soon as the owner provides the necessary site information. This includes basic site data, wind conditions, seismic loading, terrain characteristics, site lay-out, network condition including power station specification and project schedule.

MHI shall have no responsibility for project liabilities if the information given by the owner is inaccurate and not precise.

3. SCOPE

Normally, MWT92/2.4 has the primary parts and equipment already assembled at the MHI plant and can be delivered on the scheduled time; which the owner and MHI will mutually agreed to. But there is some equipment and parts of the wind turbine that the customer will need to provide in each project. These items are in the scope of responsibility of the owner.

Shown below is the table in which the MWT92/2.4 parts and equipment are itemized. This table will includes which party which will be responsible for the supply of particular equipment and which will install the equipment, etc. Also, attachment 3 shows the figure of the scope of responsibility between MHI and the customer.

Note that this arrangement is subjected to change based on the agreement between MHI and the customer. Also, the quantity of the wind turbines will depend on the customer requirements and decisions.

	MWT92/2.4 Parts and Equipments	Party In-Charge		Remarks
		Supply	Installation	
1	Front Nacelle ·Gearbox ·LO Unit ·Other Front Nacelle Accessories	MHI	Customer	All equipments will be installed at the assembly shop
2	Rear Nacelle ·Generator ·Transformer(Standard Option) ·Control Cabinet ·Lightning Rod ·Ultrasonic Anemometer ·Cooling Equipments ·Other Nacelle Accessories	MHI	Customer	Except for the lightning rod and ultrasonic anemometer, all equipments will be installed at the assembly shop.
3	Yaw Module ·Yaw Motor ·GO Unit ·Other Yaw Module Accessories	MHI	Customer	All equipments will be installed at the assembly shop
4	Rotor ·Blades ·Rotor Head ·Pitch Control Mechanism ·Other Rotor Accessories	MHI	Customer	The blades will be separately transported and installed on the construction site prior to erection

MWT92/2.4 Parts and Equipments		Party In-Charge		Remarks
		Supply	Installation	
5	Tower Tower Climbing Ladder Tower Connecting Bolts Anchor Bolts Tower Template Other Tower Accessories	MHI	Customer	The tower will be transported to the construction site by sections
6	Aviation Obstacle Light	Customer	Customer	
7	Switch Gear	Customer	Customer	
8	Ground Cabinet	MHI	Customer	
9	Tower Grounding	Customer	Customer	
10	Tower Foundation	Customer	Customer	Tower foundation will be constructed by customer prior to WTG erection
11	Other WTG Accessories (Lifting Beams, Special Tools and Equipments, etc)	Lend	Customer	Included in the transportation of WTG modules
12	Communication Cable	Customer	Customer	
13	Power Cable from Switchgear to Substation	Customer	Customer	
14	Substation	Customer	Customer	
15	Substation Ground System	Customer	Customer	
16	Utility Grid	Customer	Customer	The grid specification will depend on the customer

4. SPECIFICATION OUTLINE

Primary Standard Specification of "MWT92/2.4" is as follows.

4.1 General Specification

Rated output	2,400 kW
Hub Height	80 m
Power Regulation	Individual Pitch Control
Yaw Orientation	Active Yaw Control
Designed Wind Class	Extreme: IEC Class IA
	Fatigue: IEC Class IIA
Rated wind speed	12.5 m/s
Cut-in wind speed	3.0 m/s at 10 minutes
Cut-out wind speed	25.0 m/s at 10 minutes (30.0m/s during 2sec)
Reset from Cut-out	20.0 m/s at 10 minutes
Power curve*	Refer to Attachment-2

* Air Density 1.225 kg/m^3 at 10 minutes average

4.2 Technical Specifications

4.2.1 Rotor

Number of Blades	3
Diameter	92.0 m
Swept area	6,647.6 m^2
Rotation Speed	9~16.9 rpm
Tip Speed	72 m/s at 15 rpm
Rotational Direction	Clockwise against wind direction
Orientation	Upwind
Cone Angle	-2 degrees
Tilt Angle	approx. +5 degrees to horizontal axis

4.2.1.1 Blades

Length		44.7 m
Material		GFRP (Glass Fiber Reinforced Plastic)
Airfoil (profile)		NACA 63-XXXX
Twist from root to tip		approximately 20.8 degrees
Chord Length	Root	approximately 1136 mm
	Tip	approximately 3513 mm

Each blade is fitted with multiple metal receptors and a down-conductor for lightning protection.

4.2.1.2 Rotor Head (Hub)

Type	Cast Iron
Material	JIS FCD400L-18L
Corrosion	Anti-Corrosion Painted

4.2.2 Tower

Type	Tapered Mono-pole
Materials	Steel
Hub Height	80 m*
Ground Clearance	approximately 34 m (Hub Height 80 m)
Top Diameter	approximately 3.0 m
Base Diameter (max. dia.)	approximately 4.3 m
Tower utilities	A Ladder, Stage Floors, Safety Wire, Lights, Door, Pad Lock, and Base Floor for control panel
Number of sections	4 sections
Foundation/Anchor System	Anchor Bolts

*This includes the distance from the top tower section flange to hub center.

4.2.3 Nacelle

4.2.3.1 Nacelle Cover

Material	GFRP

4.2.3.2 Nacelle frame

Type	Cast Iron
Material	JIS FCD400-18L
Corrosion	Anti-Corrosion Painted

4.2.3.3 Main shaft

Type	Forged Steel
Material	JIS S45C

4.2.3.4 Main bearing

Type	Double Taper Roller Type
No. of bearing	1 set
Oil Lubrication	Forced lubrication

4.2.3.5 Gearbox

Type	3 Stages, Planetary/Helical/Helical
Gear Ratio	approximately 1:90.6 for 60Hz
Nominal Rotational Speed	
High Speed Shaft to generator	about 1,359 rpm
Low Speed Shaft to Rotor	15 rpm
Oil Lubrication	Oil bath, Splash, and Forced lubrication

4.2.3.6 Mechanical service brake

Type	Disk brake, mounted on high speed shaft
Material	Steel
Number of caliper	1 piece

4.2.3.7 Coupling

Type	Flexible type shaft coupling

4.2.3.8 Generator

Type	Doubly-fed Asynchronous Generator with Wound Rotor
Nominal Capacity	2520 kW
Number of Poles	6 poles
Synchronous Speed	1200 rpm
Rated Voltage	690 V±10%
Frequency	60 Hz± 5%
Degree of Protection	IP54
Rating	Continuous
Standards	IEC, JEC, and EMC standards

4.2.3.9 Converter

Type	PWM with IGBT Power Converter
Nominal Capacity	800 kVA
Rated Voltage	690 V
Frequency	60 Hz
Power Factor Range	0.9 (underexcited) ~ 0.95 (overexcited)

4.2.3.10 Transformer (Standard Option)

Nominal Capacity	2,700 kVA
Rated Voltage	690V/34.5kV*
Connection	Y/△

*) This is the standard voltage. This is subject to change depending on the customer's request based on grid requirements.

4.2.3.11 Hydraulic unit

Function	Governing oil unit To supply hydraulic oil (Control hydraulics for blade pitch, main shaft brake and yaw brake) with oil cooling
Working pressure	25.0 MPa
Oil type	ISO VG32
Pump capacity	43.5 L/min @25.0 MPa, 22kW

4.2.2.12 Yaw System

Control type	Active feedback
Yaw Drive	Geared Induction Motor
Power Rating	3.8 kW x 4sets
Orientation speed of nacelle	about 0.4° per second
Support	4 points bearing

4.2.13 Mechanical yaw brake

Type	Disk brake mounted on yaw bearing
Material	Steel
Number of caliper	9 pieces

4.3 Nacelle Utilities	Emergency stop button, Service socket, Service valve for hydraulics, Lights, Lifting Winch, Access Hatch, Maintenance foothold area inside the nacelle.

4.4 Wind Turbine Control System

Power Regulation	Individual Pitch Control
Yaw Orientation	Active YAW control
Methodology	Two Ultrasonic Anemometers and Wind Vanes
Communication method	Ethernet
Control method	Manual at the site

	Remote start and/or stop by the SCADA System*

*The owner shall decide for the SCADA System that will be used.

4.5 Lightning Protection (IEC Level 1)

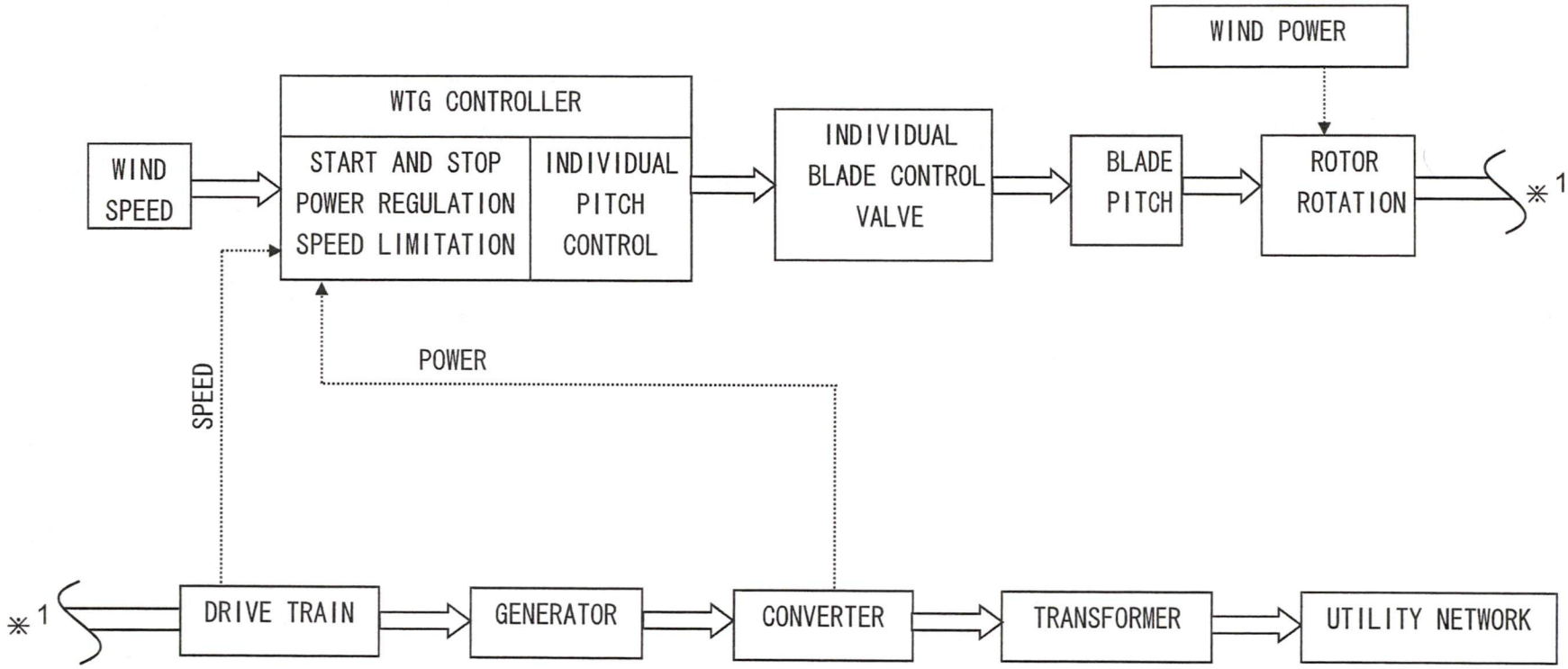
Blade	There are multiple metal receptors on the blade and a down-conductor wire inside of the blade.
Nacelle	The surge of current will be led away from the frame of nacelle to the tower.
Tower	The tower itself will become the conductor from the nacelle to the ground.

5. Options

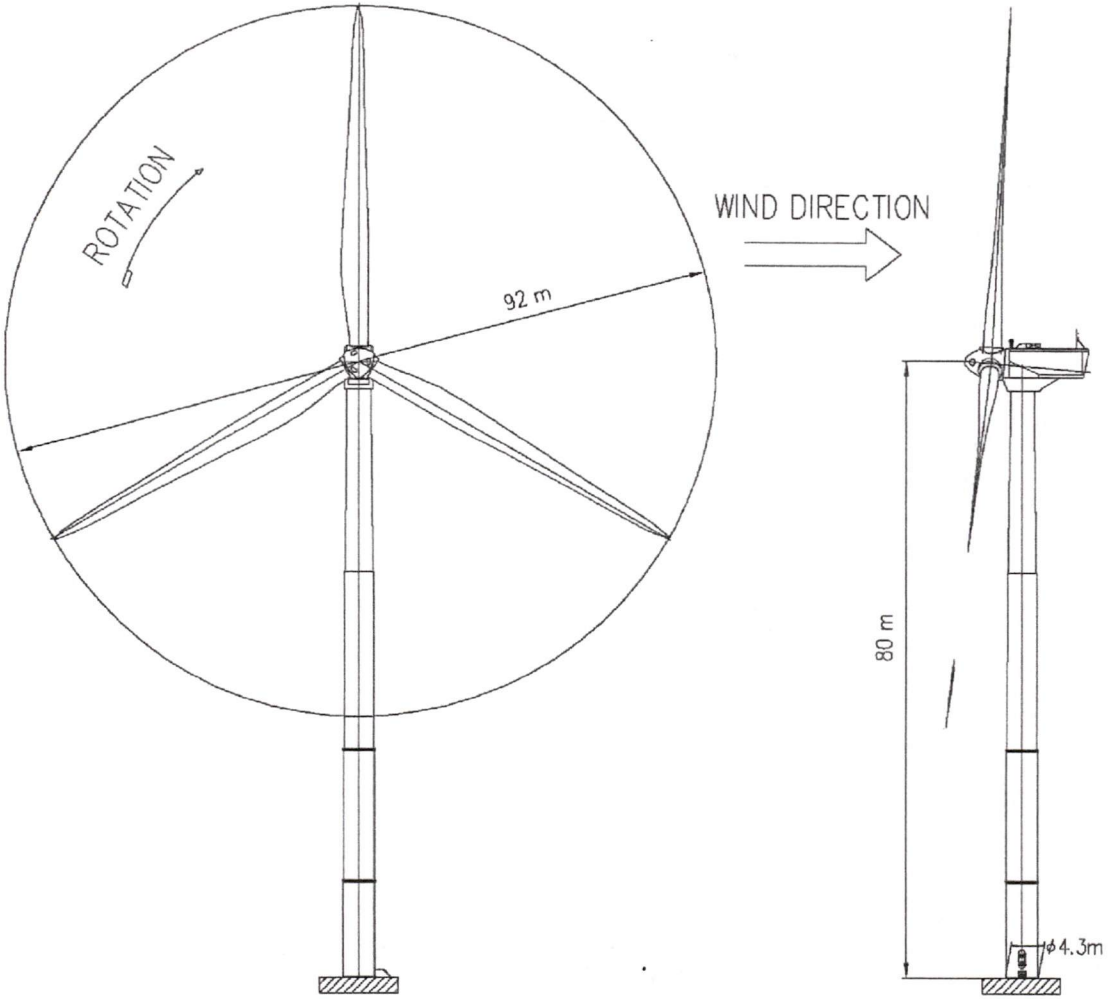
The following will be options.

- Elevator or Climb assist device
- Fire Extinguisher
- Rotor Turning Unit
- Automatic Grease distributor :Blade Bearing
  :Yaw Bearing
- Specification for Cold Weather Condition
- SCADA System

Figure 2-1: Power Control System



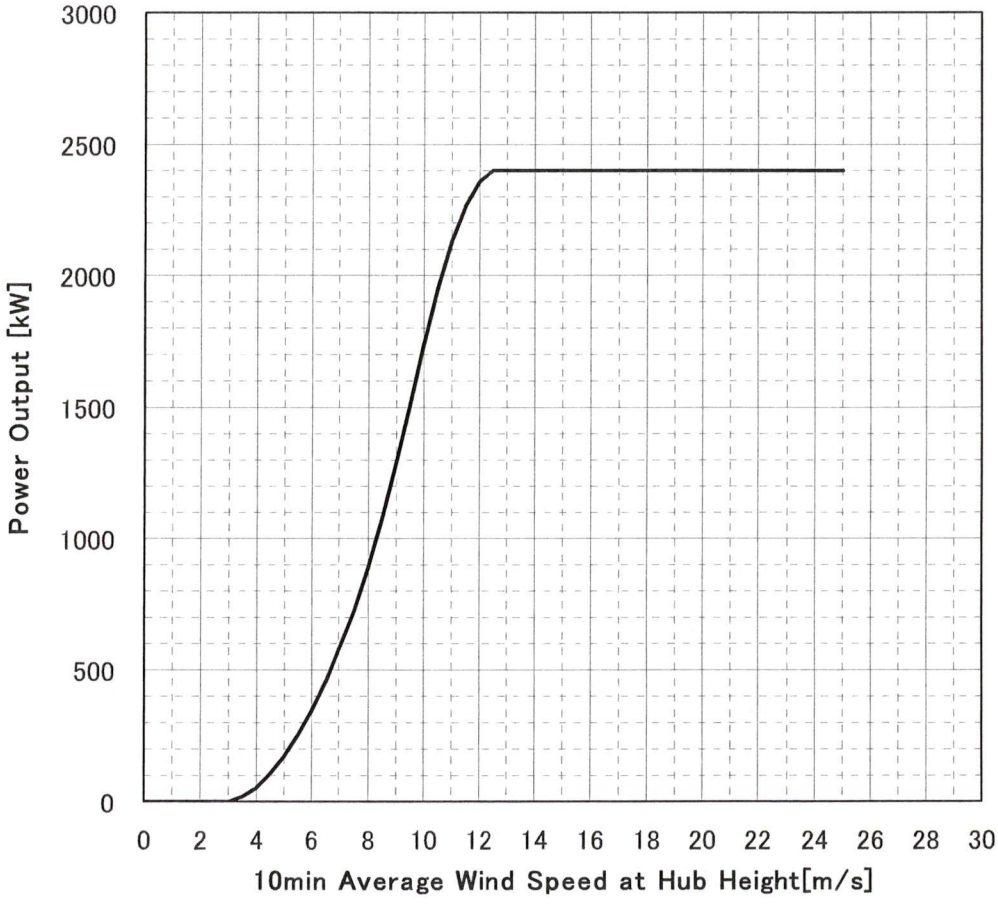
Attachment 1: Outline of MWT92/2.4 & 80m tower



Attachment-2 Standard Power Curve of MWT92/2.4 (Rev.1) :

The Standard power curve of MWT92/2.4 is shown below. Also corresponding values are arranged and shown in the table form in the following page.

Condtion is the air dencity 1.225kg/m3 (15℃ of air temperature, 1013mbar of air pressure), clean rotor blades, horizontal and standard air flow.



Remarks:

The following assumptions and conditions are solely for the purpose of expressing the relationship between wind speed and kilowatt productions and do not constitute representations or warranties of actual conditions.

- The above data are valid at the 10 minutes average speed data measurement at the hub height only.
- The output is measured at the low voltage side of the transformer inside the nacelle.
- For the purpose of computing power output with respect to the power curve, the turbulence intensity is assumed to be 10%.
- This power curve assumes flat ground and the absence of any external factor that could affect the force or direction of wind transition of electrical energy. (for example, array loss, topography, grid loss, etc.)
- This power curve and the turbine specifications assume that the site wind condition is on or below IEC Class IIA Standards.

Standard Power Curve for MWT92/2.4 (Rev.1)

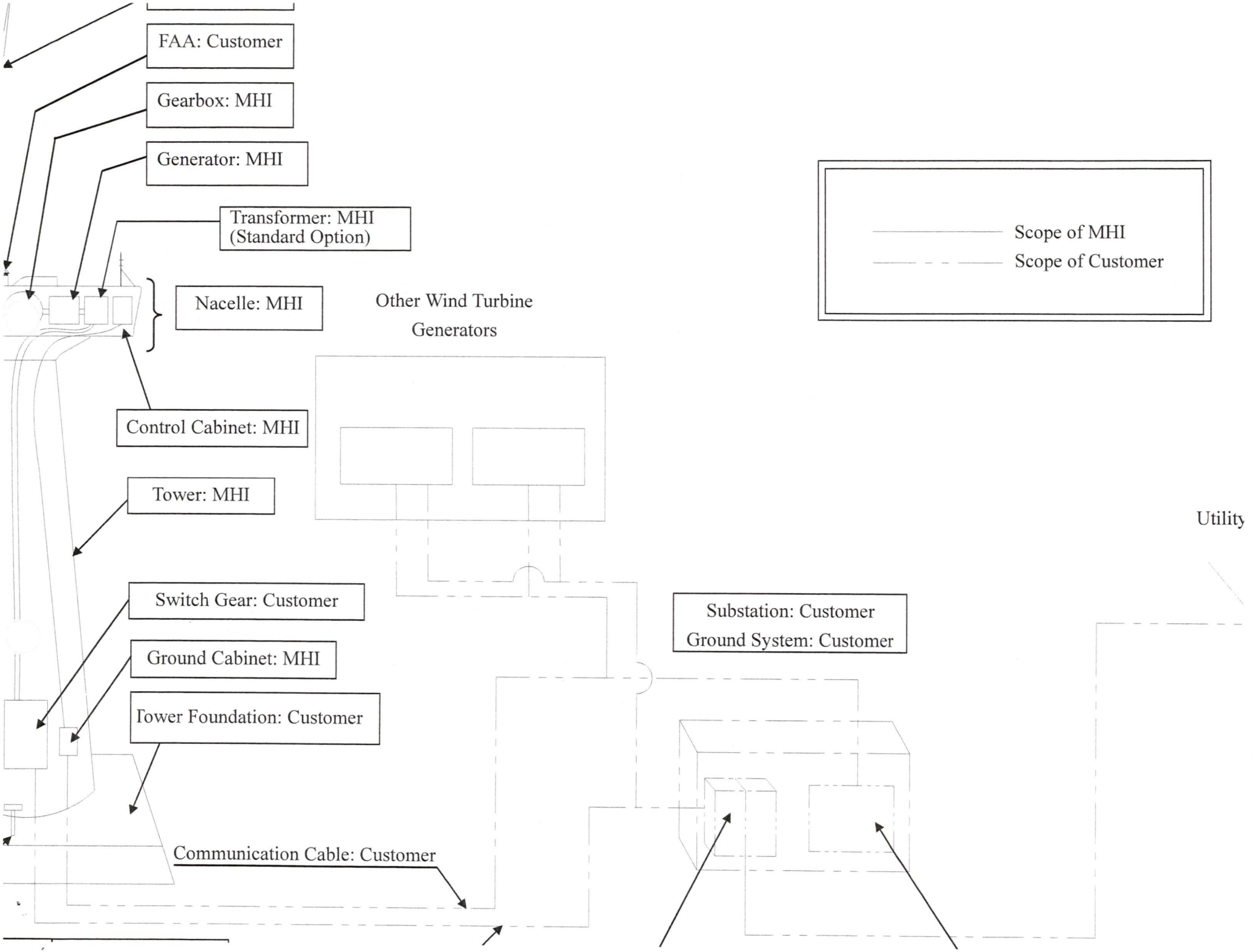
Condtion is the air dencity 1.225kg/m3 (15℃ of air temperature, 1013mbar of air pressure), clean rotor blades, horizontal and standard air flow.

Wind Speed @ Hub Height (m/s)	Output Power (kW) Air Density γ=1.225	Wind Speed @ Hub Height (m/s)	Output Power (kW) Air Density γ=1.225
3.0	0	14.5	2400
3.5	17	15.0	2400
4.0	55	15.5	2400
4.5	108	16.0	2400
5.0	173	16.5	2400
5.5	250	17.0	2400
6.0	343	17.5	2400
6.5	453	18.0	2400
7.0	580	18.5	2400
7.5	727	19.0	2400
8.0	894	19.5	2400
8.5	1082	20.0	2400
9.0	1291	20.5	2400
9.5	1515	21.0	2400
10.0	1743	21.5	2400
10.5	1956	22.0	2400
11.0	2134	22.5	2400
11.5	2270	23.0	2400
12.0	2357	23.5	2400
12.5	2400	24.0	2400
13.0	2400	24.5	2400
13.5	2400	25.0	2400
14.0	2400	>25.0	0

Remarks:

The following assumptions and conditions are solely for the purpose of expressing the relationship between wind speed and kilowatt productions and do not constitute representations or warranties of actual conditions.

- The above data are valid at the 10 minutes average speed data measurement at the hub height only.
- The output is measured at the low voltage side of the transformer inside the nacelle.
- For the purpose of computing power output with respect to the power curve, the turbulence intensity is assumed to be 10%.
- This power curve assumes flat ground and the absence of any external factor that could affect the force or direction of wind transition of electrical energy. (for example, array loss, topography, grid loss, etc.)
- This power curve and the turbine specifications assume that the site wind condition is on or below IEC Class IIA Standards.


FAA: Customer
Gearbox: MHI
Generator: MHI
Transformer: MHI
(Standard Option)
Nacelle: MHI
Other Wind Turbine
Generators
Scope of MHI
Scope of Customer
Control Cabinet: MHI
Tower: MHI
Utility
Switch Gear: Customer
Substation: Customer
Ground System: Customer
Ground Cabinet: MHI
Tower Foundation: Customer
Communication Cable: Customer

b. Impacts

Demographics and residences are anticipated to be affected by the proposed construction and operation of the wind power plant. Figure 12 is an estimate of the additional tax revenue that will be generated as a results of the Development.

c. Mitigative Measures

Just Wind purposes to use the required setbacks established by the Logan County Zoning Ordinance from occupied homesteads, public roads, and adjacent property of landowners not involved in the Project.

d. Occupancy Status of Structures

There are approximately seven (7) homesteads within the Development site.

2. Noise

Noise consultants have recommended a maximum noise threshold of 45dBA at occupied homes. To facilitate planning for this guideline, the manufacturer has created simulations verified by independent testing of noise emissions from the 2.4 MW turbine. Results indicate source noise from turbine at hub height to be 104dB. Uncertainty is +/-2dB for results. The distances of 1,000 feet noise will meet the industry standard of 45 dBA at all occupied homes in the project site. A noise Diagram and additional information is included as Figure 13.

Mike Fischer

From: Richard King [Richard.King@Ulteig.com]
Sent: Wednesday, April 08, 2009 5:22 PM
To: Mike Fischer
Cc: Jon Scraper; Chad Nissen
Subject: RE: Airport Information for Just wind
Attachments: Part 77 Topo.pdf; Part 77 Profile.pdf

Mr. Fischer,

I have included the original drawings we created that identify the airspace surrounding the East side of the Napoleon airport. The first drawing shows an overall plan view while the second drawing depicts the airspace within the primary runway approach. I notice that I did write 5,000 feet in my email when my intention was 9,000 feet as a guideline- my apologies. I believe the 10,000 feet you are referring to is the 50:1 sloped reporting surface. This surface is not a limitation, only a decision making tool in determining what proposed structures will require reporting to the FAA. However, since your towers will exceed 200 feet in height, the distance from the airport has no relevance and all towers will require reporting.

Keep in mind that many structures that would violate an airport's airspace still receive a "determination of no hazard" from the FAA, although I would not expect this for these towers due their height. The FAA also may view structures of this height as a hazard if they are within the extended approach surface, outside of the 9,000 foot boundary. As the size of this wind farm has grown over time, the ability to project the FAA's response to the towers has become more difficult. The FAA will look at all of the towers as a whole in order to determine their impact and is why it is difficult to test just a few tower sites. When we provided the original guidance, the concept include towers isolated to the sections essentially East to Northeast of the airport. As the number of towers and area impacted grows, the greater the potential for a hazard determination.

Please let me know if you have more questions.

Richard

Richard W. King, C.M.
Aviation Planner
Ulteig Engineers, Inc.
3350 38th Ave S
Fargo, ND 58104-7079
(701) 280-8613/ (888) 557-9090
richard.king@ulteig.com

From: Mike Fischer [mailto:mfischer@just-wind.com]
Sent: Wednesday, April 08, 2009 11:28 AM
To: Richard King
Cc: Pete Eade
Subject: Airport Information for Just wind

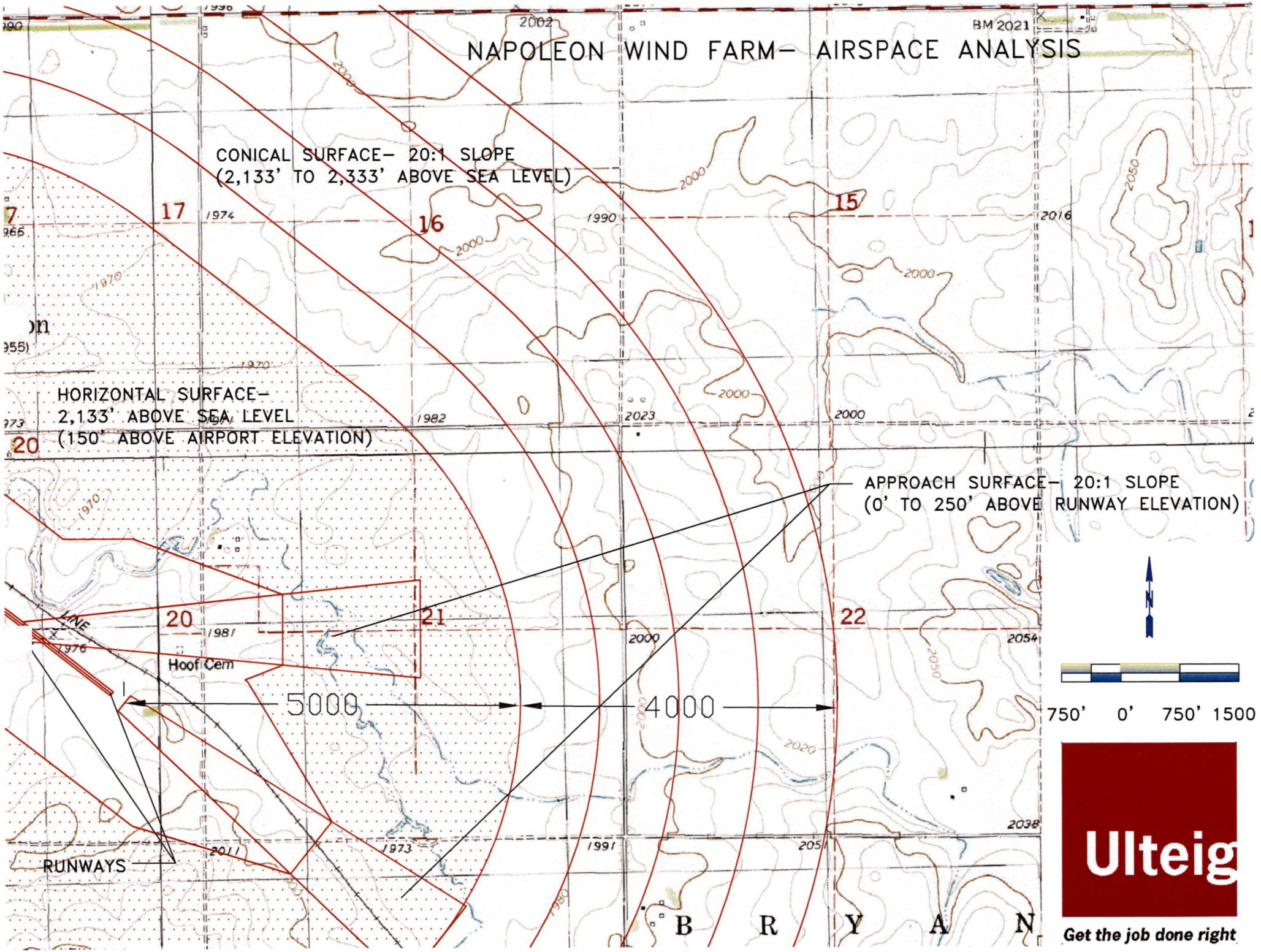
Hi Richard,

We are trying to define the airport "setback" information on the Logan County project as requested by the ND PSC. I received the email that you sent back to Brad Danielson that gives a "guideline" of 5000 ft. I have some information

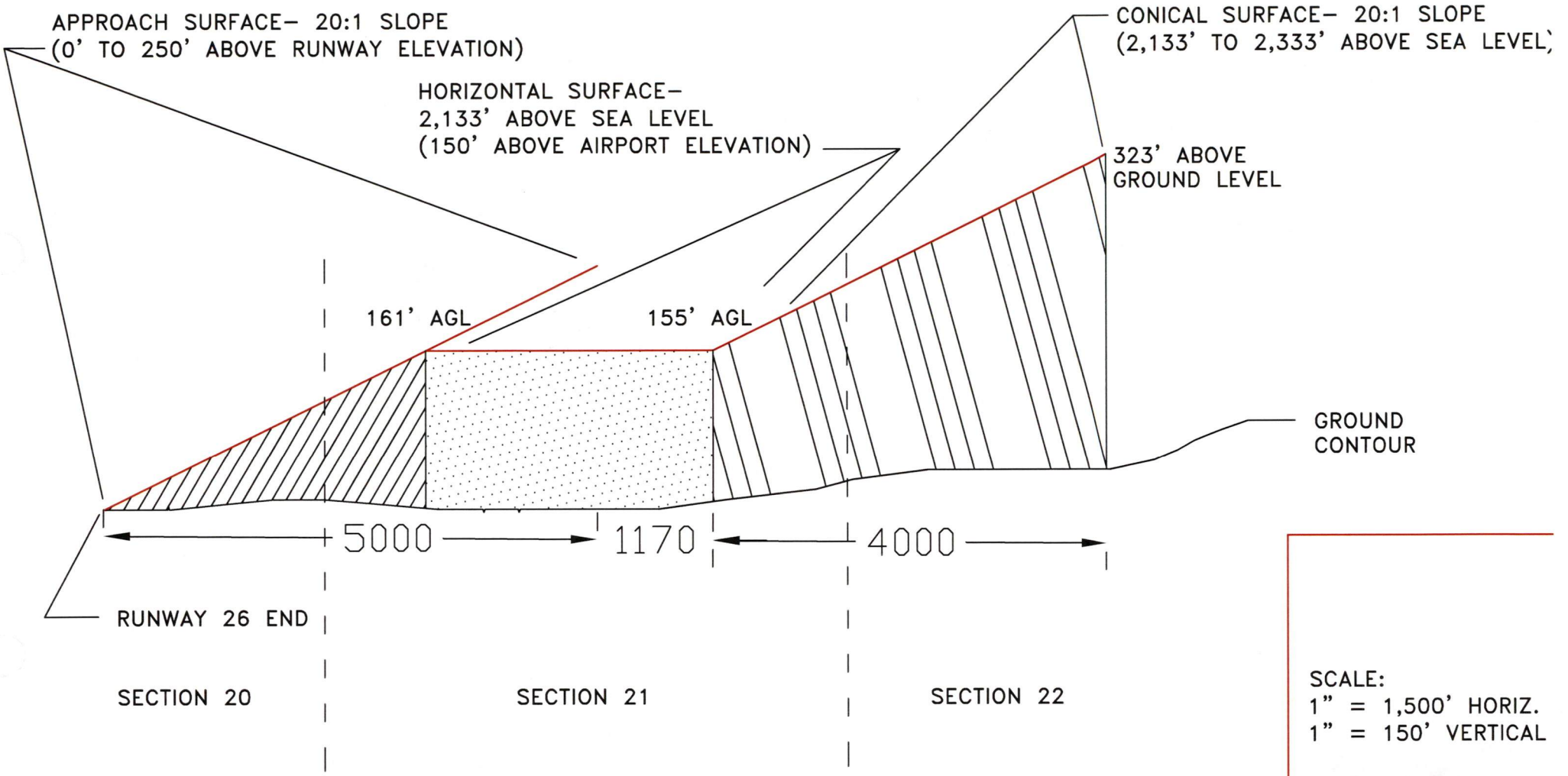
from the FAA website that uses 10,000 ft as a guideline for runways of not more than 3200 ft. I was wondering if you could provide a better explanation or some documentation that I might use for this purpose. Any information would be appreciated.

Thank you,

Mike Fischer
Just Wind, LLC
P.O. Box 299
Napoleon, ND 58561-0299
(701) 754-3000
(701) 754-3001 Fax


NAPOLEON WIND FARM– AIRSPACE ANALYSIS
CONICAL SURFACE– 20:1 SLOPE
(2,133' TO 2,333' ABOVE SEA LEVEL)
HORIZONTAL SURFACE–
2,133' ABOVE SEA LEVEL
(150' ABOVE AIRPORT ELEVATION)
APPROACH SURFACE– 20:1 SLOPE
(0' TO 250' ABOVE RUNWAY ELEVATION)
5000
4000
RUNWAYS
Hoof Cem
BM 2021
750' 0' 750' 1500
Ulteig
Get the job done right

NAPOLEON WIND FARM– AIRSPACE ANALYSIS
EXTENDED RUNWAY 26 CENTERLINE



SCALE:
1" = 1,500' HORIZ.
1" = 150' VERTICAL

Ulteig

Get the job done right

Just Wind - Wind Farm Development **North Dakota Division**

P.O. Box 299 • Napoleon, North Dakota 58561 Phone (701) 754-3000 Fax (701) 754-3001

North Dakota Public Service Commission
Mr. Kevin Kramer, Mr. Tony Clark, Mr. Brian Kalk
600 E. Boulevard, Dept. 408
Bismarck, ND 58505

Dear Sirs,

Enclosed please find the consent waivers we have presently obtained. As we receive additional requests we will send them on to you.

Sincerely,

Don Metzger
Director of Development – Midwest Division

Just Wind, LLC
P.O. Box 299
Napoleon, ND 58561-0299
(701) 754-3000 Office
(701) 754-3001 Fax
dmetzger@just-wind.com

April 15, 2009

6 Turbines located between 800 ft. and 1400 ft. of 6 residences

T-95.....884 ft.,,,,,,,,,,,,occupied residence of Marcella Bitz- signed consent

T-156.....903 ft.,,,,,,,,,,,,occupied residence of Scott Schumacher-signed consent

T-153.....945 ft.,,,,,,,,,,,,occupied residence of Ryan Johnson-signed consent

T-91.....1007 ft.,,,,,,,,,,,occupied residence of Charles Nord-signed consent

T-155.....1076 ft.,,,,,,,,,,,abandoned farmstead of Allen Foster- awaiting consent

T-16.....1186 ft.,,,,,,,,,,,occupied residence of Jeff Metzger-signed consent

CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

This **CONSENT AND WAIVER FOR EXTENDED SET BACK AREA** (this "Consent and Waiver") is dated and effective as of the 15 day of April, 2009 (the "Effective Date"), by MARCELLA BITZ, a single person, whose address is 10616 South 90th East Court, Tulsa, Oklahoma 74133 ("Occupant") in favor of LOGAN COUNTY WIND FARM, LLC, a North Dakota limited liability company, whose address is 500 Lake Street, Suite 203, Excelsior, Minnesota 55331 ("Logan County Wind"), in light of the following facts and circumstances:

A. WHEREAS, Logan County Wind is a wind farm developer currently developing a wind generating electric power project within a portion of Logan County, North Dakota (the "Wind Project"); and

B. WHEREAS, Occupant currently occupies a dwelling, commercial building or publically-used structure or facility on the real property legally described in Exhibit A attached hereto and made a part hereof by reference (the "Property") and which Property is within or adjacent to the Wind Project; and

C. WHEREAS, the Property is subject to the Logan County Zoning Ordinance, Section 6.11.42.2(1), regarding setbacks for turbines from occupied structures and facilities (the "Logan County Setback") as follows:

> "1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publically-used structure or facility at a distance of not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater;" and

D. WHEREAS, the North Dakota Public Service Commission has informed Logan County Wind that it has a concern regarding possible icing hazards from turbines constructed within 1400 feet of occupied, structures and facilities and has requested that Logan County Wind obtain this Consent and Waiver for siting and constructing a turbine or turbines on or adjacent to the Property which are less than 1400 feet from an occupied dwelling, commercial building or publically-used structure or facility (but which are in compliance with the Logan County Setback).

CONSENT AND WAIVER

NOW THEREFORE, in consideration of the terms and conditions of this Consent and Waiver and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Occupant hereby agreed as follows:

1. Consent and Wavier of Extended Set Back Area. Occupant hereby consents to the siting and placement of turbines within 1400 feet from any and all dwellings, commercial

buildings or publically-used structure or facility, and waives any suggestion or requirement by the North Dakota Public Service Commission that turbines situated on or adjacent to the Property be no less than 1400 feet from an occupied dwelling, commercial building and publically-used structure or facility located on the Property.

2. Compliance with County Ordinance Regarding Wind Energy. Occupant does not, by granting this Consent and Wavier, waive any setback, conditions or requirements contained in the Logan County Zoning Ordinance regarding Wind Energy.

3. Successors and Assigns. This Consent and Waiver is binding upon Occupant, his, her or their heirs, personal representatives, successors and assigns. This Consent and Waiver shall inure to the benefit of Logan County Wind and its successors and assigns.

4. Governing Law. This Consent and Waiver shall be governed by and interpreted in accordance with the laws of the State of North Dakota.

IN WITNESS WHEREOF, the Occupant has caused this Consent and Waiver to be executed and delivered on the dates set forth below.

OCCUPANT:

Marcella Bitz

Marcella Bitz

Dated: 4-15-09

STATE OF NORTH DAKOTA)
) *ss.*
COUNTY OF Logan)

On this 15 day of April, 2009, before me personally appeared Marcella Bitz, a single person, known to me to be the persons who are described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same.

(STAMP/SEAL ↓)

Kimberly Glatt

Notary Public

Kimberly Glatt

Print, Type or Stamp Name of Notary

My commission expires: 9-8-2014

KIMBERLY GLATT
Notary Public
State of North Dakota
My Commission Expires Sept. 8, 2014

Exhibit A
TO
CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

DESCRIPTION OF PROPERTY

All the following real property lying and being in the County of Logan and State of North Dakota, and described as follows, to-wit:

Northeast Quarter (NE¼), Southeast Quarter (SE¼), and that part of the East Half of the Northwest Quarter (E½NW¼) East of the railroad right-of-way, all in Section Fourteen (14), Township One Hundred Thirty-Four (134), Range Seventy-Two (72).

4428913v1
14024.1
T-95, Marcella Bitz

CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

This **CONSENT AND WAIVER FOR EXTENDED SET BACK AREA** (this "Consent and Waiver") is dated and effective as of the 13 day of April, 2009 (the "Effective Date"), by SCOTT SCHUMACHER and RITA SCHUMACHER, also known as MERITTA SCHUMACHER, husband and wife, whose address is 5671 35th Avenue South East, Napoleon, North Dakota 58561 ("Occupant") in favor of LOGAN COUNTY WIND FARM, LLC, a North Dakota limited liability company, whose address is 500 Lake Street, Suite 203, Excelsior, Minnesota 55331 ("Logan County Wind"), in light of the following facts and circumstances:

A. WHEREAS, Logan County Wind is a wind farm developer currently developing a wind generating electric power project within a portion of Logan County, North Dakota (the "Wind Project"); and

B. WHEREAS, Occupant currently occupies a dwelling, commercial building or publically-used structure or facility on the real property legally described in Exhibit A attached hereto and made a part hereof by reference (the "Property") and which Property is within or adjacent to the Wind Project; and

C. WHEREAS, the Property is subject to the Logan County Zoning Ordinance, Section 6.11.42.2(1), regarding setbacks for turbines from occupied structures and facilities (the "Logan County Setback") as follows:

> "1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publically-used structure or facility at a distance of not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater;" and

D. WHEREAS, the North Dakota Public Service Commission has informed Logan County Wind that it has a concern regarding possible icing hazards from turbines constructed within 1400 feet of occupied, structures and facilities and has requested that Logan County Wind obtain this Consent and Waiver for siting and constructing a turbine or turbines on or adjacent to the Property which are less than 1400 feet from an occupied dwelling, commercial building or publically-used structure or facility (but which are in compliance with the Logan County Setback).

CONSENT AND WAIVER

NOW THEREFORE, in consideration of the terms and conditions of this Consent and Waiver and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Occupant hereby agreed as follows:

1. Consent and Wavier of Extended Set Back Area. Occupant hereby consents to the siting and placement of turbines within 1400 feet from any and all dwellings, commercial buildings or publically-used structure or facility, and waives any suggestion or requirement by the North Dakota Public Service Commission that turbines situated on or adjacent to the Property be no less than 1400 feet from an occupied dwelling, commercial building and publically-used structure or facility located on the Property.

2. Compliance with County Ordinance Regarding Wind Energy. Occupant does not, by granting this Consent and Wavier, waive any setback, conditions or requirements contained in the Logan County Zoning Ordinance regarding Wind Energy.

3. Successors and Assigns. This Consent and Waiver is binding upon Occupant, his, her or their heirs, personal representatives, successors and assigns. This Consent and Waiver shall inure to the benefit of Logan County Wind and its successors and assigns.

4. Governing Law. This Consent and Waiver shall be governed by and interpreted in accordance with the laws of the State of North Dakota.

IN WITNESS WHEREOF, the Occupant has caused this Consent and Waiver to be executed and delivered on the dates set forth below.

OCCUPANT:

Scott Schumacher

Scott Schumacher

Dated: 4-13-2009

Meritta Schumacher

Rita Schumacher a/k/a Meritta Schumacher

Dated: 4-13-09

STATE OF NORTH DAKOTA)
) *ss.*
COUNTY OF Logan)

On this 13 day of April, 2009, before me personally appeared Scott Schumacher and Rita Schumacher, also known as Meritta Schumacher, husband and wife, known to me to be the persons who are described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same.

(STAMP/SEAL ↓)

CELESTE KLEPPE
Notary Public
State of North Dakota
My Commission Expires July 29, 2014

Celeste Kleppe

Notary Public

Celeste Kleppe

Print, Type or Stamp Name of Notary

My commission expires: _____

Exhibit A
TO
CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

DESCRIPTION OF PROPERTY

All the following real property lying and being in the County of Logan and State of North Dakota, and described as follows, to-wit:

A Tract described as follows: Beginning at a point that is 1020′ due west of NE corner of SE¼ of 14-136-72; thence in a south southeasterly direction to a point that is 1570′ due south and 880′ due west of the NE corner of SE¼ of 14-136-72; thence due west 765′; thence in a north northeasterly direction to a point that is 1420′ due west of the NE corner of SE¼ of 14-136-72; thence due east 400′ to point of beginning.

4427629v1
14024.1
T-156, Richard Gross

CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

This **CONSENT AND WAIVER FOR EXTENDED SET BACK AREA** (this "Consent and Waiver") is dated and effective as of the 14 day of April, 2009 (the "Effective Date"), by RYAN R. JOHNSON and MELISSA JOHNSON, husband and wife, whose address is 5582 32nd Street Southeast, Napoleon, North Dakota 58561 ("Occupant") in favor of LOGAN COUNTY WIND FARM, LLC, a North Dakota limited liability company, whose address is 500 Lake Street, Suite 203, Excelsior, Minnesota 55331 ("Logan County Wind"), in light of the following facts and circumstances:

A. WHEREAS, Logan County Wind is a wind farm developer currently developing a wind generating electric power project within a portion of Logan County, North Dakota (the "Wind Project"); and

B. WHEREAS, Occupant currently occupies a dwelling, commercial building or publically-used structure or facility on the real property legally described in Exhibit A attached hereto and made a part hereof by reference (the "Property") and which Property is within or adjacent to the Wind Project; and

C. WHEREAS, the Property is subject to the Logan County Zoning Ordinance, Section 6.11.42.2(1), regarding setbacks for turbines from occupied structures and facilities (the "Logan County Setback") as follows:

> "1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publically-used structure or facility at a distance of not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater;" and

D. WHEREAS, the North Dakota Public Service Commission has informed Logan County Wind that it has a concern regarding possible icing hazards from turbines constructed within 1400 feet of occupied, structures and facilities and has requested that Logan County Wind obtain this Consent and Waiver for siting and constructing a turbine or turbines on or adjacent to the Property which are less than 1400 feet from an occupied dwelling, commercial building or publically-used structure or facility (but which are in compliance with the Logan County Setback).

CONSENT AND WAIVER

NOW THEREFORE, in consideration of the terms and conditions of this Consent and Waiver and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Occupant hereby agreed as follows:

1. Consent and Wavier of Extended Set Back Area. Occupant hereby consents to the siting and placement of turbines within 1400 feet from any and all dwellings, commercial

buildings or publically-used structure or facility, and waives any suggestion or requirement by the North Dakota Public Service Commission that turbines situated on or adjacent to the Property be no less than 1400 feet from an occupied dwelling, commercial building and publically-used structure or facility located on the Property.

2. Compliance with County Ordinance Regarding Wind Energy. Occupant does not, by granting this Consent and Wavier, waive any setback, conditions or requirements contained in the Logan County Zoning Ordinance regarding Wind Energy.

3. Successors and Assigns. This Consent and Waiver is binding upon Occupant, his, her or their heirs, personal representatives, successors and assigns. This Consent and Waiver shall inure to the benefit of Logan County Wind and its successors and assigns.

4. Governing Law. This Consent and Waiver shall be governed by and interpreted in accordance with the laws of the State of North Dakota.

IN WITNESS WHEREOF, the Occupant has caused this Consent and Waiver to be executed and delivered on the dates set forth below.

OCCUPANT:

Ryan R. Johnson

Dated: 4-14-09

Melissa Johnson

Dated: 4-14-09

STATE OF NORTH DAKOTA)
) *ss.*
COUNTY OF Logan)

On this 14 day of April, 2009, before me personally appeared Ryan R. Johnson and Melissa Johnson, husband and wife, known to me to be the persons who are described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same.

(STAMP/SEAL ↓)

Notary Public

Kimberly Glatt

Print, Type or Stamp Name of Notary

KIMBERLY GLATT
Notary Public
State of North Dakota
My Commission Expires Sept. 8, 2014

My commission expires: 9-8-2014

Exhibit A
TO
CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

DESCRIPTION OF PROPERTY

All the following real property lying and being in the County of Logan and State of North Dakota, and described as follows, to-wit:

West 60 acres, more or less, of the SW¼ of Section 9, Township 136, Range 72.

4428847v1
14024.1
T-153, Ryan R. Johnson

CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

This **CONSENT AND WAIVER FOR EXTENDED SET BACK AREA** (this "Consent and Waiver") is dated and effective as of the 16 day of April, 2009 (the "Effective Date"), by CHARLES W. NORD and BERNADINE R. NORD, husband and wife, whose address is P.O. Box 158, Napoleon, North Dakota 58561 ("Occupant") in favor of LOGAN COUNTY WIND FARM, LLC, a North Dakota limited liability company, whose address is 500 Lake Street, Suite 203, Excelsior, Minnesota 55331 ("Logan County Wind"), in light of the following facts and circumstances:

A. WHEREAS, Logan County Wind is a wind farm developer currently developing a wind generating electric power project within a portion of Logan County, North Dakota (the "Wind Project"); and

B. WHEREAS, Occupant currently occupies a dwelling, commercial building or publically-used structure or facility on the real property legally described in Exhibit A attached hereto and made a part hereof by reference (the "Property") and which Property is within or adjacent to the Wind Project; and

C. WHEREAS, the Property is subject to the Logan County Zoning Ordinance, Section 6.11.42.2(1), regarding setbacks for turbines from occupied structures and facilities (the "Logan County Setback") as follows:

> "1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publically-used structure or facility at a distance of not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater;" and

D. WHEREAS, the North Dakota Public Service Commission has informed Logan County Wind that it has a concern regarding possible icing hazards from turbines constructed within 1400 feet of occupied, structures and facilities and has requested that Logan County Wind obtain this Consent and Waiver for siting and constructing a turbine or turbines on or adjacent to the Property which are less than 1400 feet from an occupied dwelling, commercial building or publically-used structure or facility (but which are in compliance with the Logan County Setback).

CONSENT AND WAIVER

NOW THEREFORE, in consideration of the terms and conditions of this Consent and Waiver and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Occupant hereby agreed as follows:

1. Consent and Wavier of Extended Set Back Area. Occupant hereby consents to the siting and placement of turbines within 1400 feet from any and all dwellings, commercial

buildings or publically-used structure or facility, and waives any suggestion or requirement by the North Dakota Public Service Commission that turbines situated on or adjacent to the Property be no less than 1400 feet from an occupied dwelling, commercial building and publically-used structure or facility located on the Property.

2. Compliance with County Ordinance Regarding Wind Energy. Occupant does not, by granting this Consent and Wavier, waive any setback, conditions or requirements contained in the Logan County Zoning Ordinance regarding Wind Energy.

3. Successors and Assigns. This Consent and Waiver is binding upon Occupant, his, her or their heirs, personal representatives, successors and assigns. This Consent and Waiver shall inure to the benefit of Logan County Wind and its successors and assigns.

4. Governing Law. This Consent and Waiver shall be governed by and interpreted in accordance with the laws of the State of North Dakota.

IN WITNESS WHEREOF, the Occupant has caused this Consent and Waiver to be executed and delivered on the dates set forth below.

OCCUPANT:

Charles W. Nord

Dated: 4-16-09

Bernadine R. Nord

Dated: 4-16-09

STATE OF NORTH DAKOTA)
) *ss.*
COUNTY OF Logan)

On this 16 day of April, 2009, before me personally appeared Charles W. Nord and Bernadine R. Nord, husband and wife, known to me to be the persons who are described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same.

(STAMP/SEAL ↓)

KIMBERLY GLATT
Notary Public
State of North Dakota
My Commission Expires Sept. 8, 2014

Notary Public

Kimberly GLATT
Print, Type or Stamp Name of Notary

My commission expires: 9-8-2014

Exhibit A
TO
CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

DESCRIPTION OF PROPERTY

All the following real property lying and being in the County of Logan and State of North Dakota, and described as follows, to-wit:

Lots One (1) and Two (2) and South Half of the Northeast Quarter (S ½ NE ¼) of Section One (1), Township One Hundred Thirty-Four (134), Range Seventy-Two (72); Lots Three (3) and Four (4) and South Half of the Northwest Quarter (S ½ NW ¼) of Section One (1), Township One Hundred Thirty-Four (134), Range Seventy-Two (72).

4427831v1
14024.1
T-91, Selma Nord

CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

This **CONSENT AND WAIVER FOR EXTENDED SET BACK AREA** (this "Consent and Waiver") is dated and effective as of the 14 day of April, 2009 (the "Effective Date"), by JEFFREY L. METZGER and CHARLOTTE C. METZGER, husband and wife, whose address is 2470 Fairview Lane, Mound, Minnesota 55364 ("Occupant") in favor of LOGAN COUNTY WIND FARM, LLC, a North Dakota limited liability company, whose address is 500 Lake Street, Suite 203, Excelsior, Minnesota 55331 ("Logan County Wind"), in light of the following facts and circumstances:

A. WHEREAS, Logan County Wind is a wind farm developer currently developing a wind generating electric power project within a portion of Logan County, North Dakota (the "Wind Project"); and

B. WHEREAS, Occupant currently occupies a dwelling, commercial building or publically-used structure or facility on the real property legally described in Exhibit A attached hereto and made a part hereof by reference (the "Property") and which Property is within or adjacent to the Wind Project; and

C. WHEREAS, the Property is subject to the Logan County Zoning Ordinance, Section 6.11.42.2(1), regarding setbacks for turbines from occupied structures and facilities (the "Logan County Setback") as follows:

> "1) Occupied Structures and Facilities: Each Wind Turbine shall be set back from the nearest occupied dwelling, commercial building or publically-used structure or facility at a distance of not less than 1.25 times its Total Height or seven hundred and fifty (750) feet, whichever is greater;" and

D. WHEREAS, the North Dakota Public Service Commission has informed Logan County Wind that it has a concern regarding possible icing hazards from turbines constructed within 1400 feet of occupied, structures and facilities and has requested that Logan County Wind obtain this Consent and Waiver for siting and constructing a turbine or turbines on or adjacent to the Property which are less than 1400 feet from an occupied dwelling, commercial building or publically-used structure or facility (but which are in compliance with the Logan County Setback).

CONSENT AND WAIVER

NOW THEREFORE, in consideration of the terms and conditions of this Consent and Waiver and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Occupant hereby agreed as follows:

1. Consent and Wavier of Extended Set Back Area. Occupant hereby consents to the siting and placement of turbines within 1400 feet from any and all dwellings, commercial

buildings or publically-used structure or facility, and waives any suggestion or requirement by the North Dakota Public Service Commission that turbines situated on or adjacent to the Property be no less than 1400 feet from an occupied dwelling, commercial building and publically-used structure or facility located on the Property.

2. Compliance with County Ordinance Regarding Wind Energy. Occupant does not, by granting this Consent and Wavier, waive any setback, conditions or requirements contained in the Logan County Zoning Ordinance regarding Wind Energy.

3. Successors and Assigns. This Consent and Waiver is binding upon Occupant, his, her or their heirs, personal representatives, successors and assigns. This Consent and Waiver shall inure to the benefit of Logan County Wind and its successors and assigns.

4. Governing Law. This Consent and Waiver shall be governed by and interpreted in accordance with the laws of the State of North Dakota.

IN WITNESS WHEREOF, the Occupant has caused this Consent and Waiver to be executed and delivered on the dates set forth below.

OCCUPANT:

Jeffrey L. Metzger

Dated: 4-14-09

Charlotte C. Metzger

Dated: 4-14-09

STATE OF North Dakota)
) ss.
COUNTY OF Logan)

On this 14 day of April, 2009, before me personally appeared Jeffrey L. Metzger and Charlotte C. Metzger, husband and wife, known to me to be the persons who are described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same.

(STAMP/SEAL ↓)

KIMBERLY GLATT
Notary Public
State of North Dakota
My Commission Expires Sept. 8, 2014

Kimberly Glatt
Notary Public

Kimberly Glatt
Print, Type or Stamp Name of Notary

My commission expires: 9-8-2014

Exhibit A
TO
CONSENT AND WAIVER FOR EXTENDED SET BACK AREA

DESCRIPTION OF PROPERTY

All the following real property lying and being in the County of Logan and State of North Dakota, and described as follows, to-wit:

A tract of land in the Southeast Quarter (SE¼) of Section Twenty-Four (24), Township One Hundred Thirty-Five (135), Range Seventy Two (72), described as: beginning at a point that is the SW corner of said SE¼, thence due North 1080′, thence due East 530′, thence due South 1080′, thence due West 530′, to point of beginning. All lines running parallel to section line.

4427768v1
14024.1
T-16, Betty Jorissen