Table 1

Wisconsin Power and Light Company
Bent Tree Wind Farm
Route Comparison Matrix

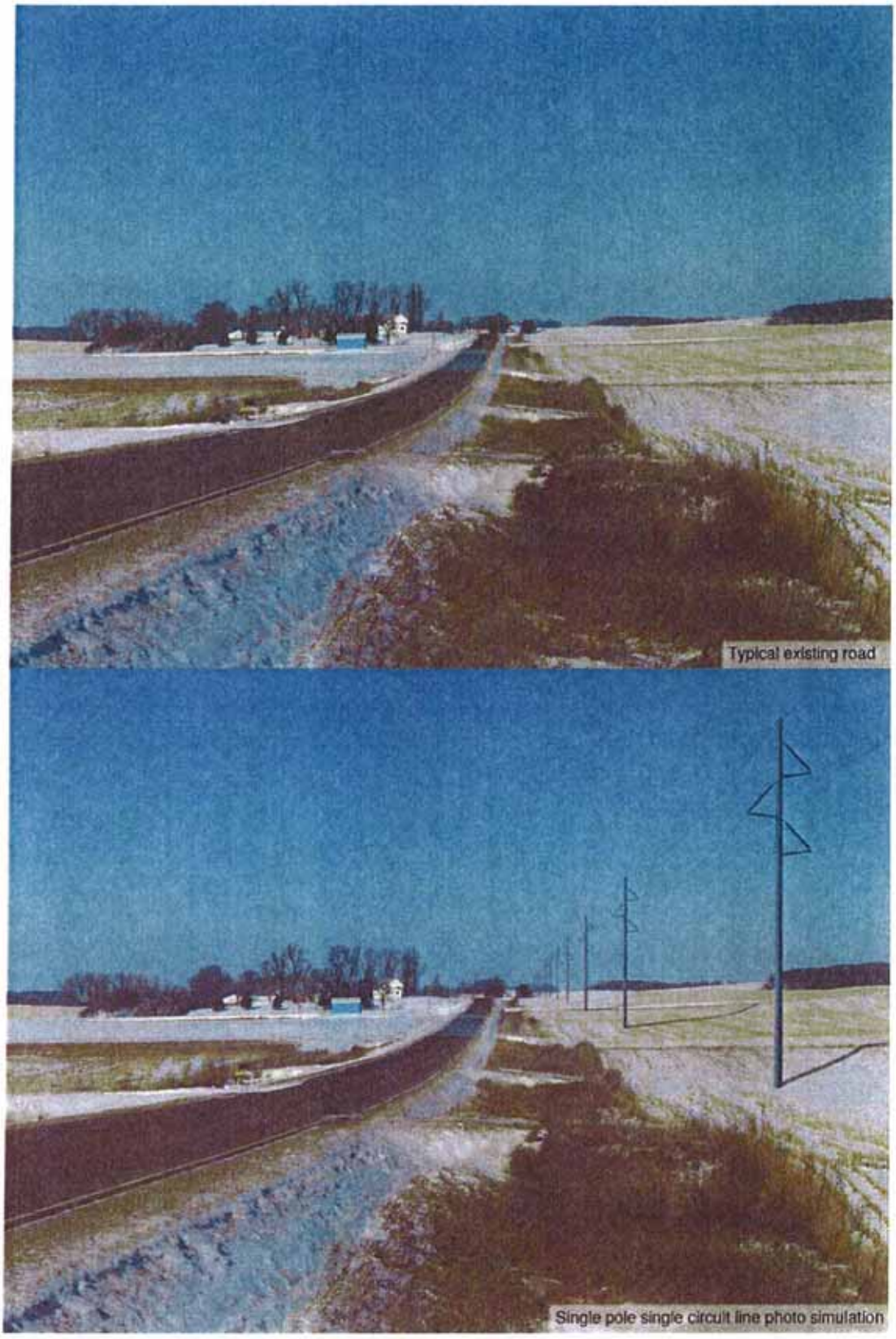
Criteria	(1) Primary Route	(2) Alternate Route	(3) ITC Route	(4) Alternate Route (Variation #1)	(5) Alternate Route (Variation #2)
1.1. Total Length (miles)	16.16	16.54	16.62		
1.2. Number of Angle Structures (>30°)	7	8	7	13	11
1.3. Length along existing Transmission/Distribution ROW	15,840	15,840	0		
1.4. Length Along Roads or Highways (ft)	52,588	70,224	33,264		
1.5. Length along Section Lines and Quarter Sections (ft)	7,720	0	5,353		
1.6. Paralleling Existing Utilities (Pipelines, Railroads, etc. in feet)	0	0	0		
1.7. Double Circuit with existing lines (miles)	3.0 (161 KV)	3.0 (161 KV)	10.3 (161 KV)	3.0 (161 KV)	3.0 (161 KV)
1.8. Existing Ground Profile (slope)	N/A	Some Moderate Differences	N/A		
1.9. Rating of Overall Line Maintenance Accesses	4	3	5		
1.10. Number of T- Line Crossings (Transmission/Distribution)	1	1	1		
1.11. Number of Road Crossings	14	14	14	12	12
2.1. Proximity of Residential Structures	14	19	13	14+	12+
2.2. Proximity to Schools	0	0	0	0	0
2.3. Proximity of Non-residential Structures	Included in 2.1	Included in 2.1	Included in 2.1	Included in 2.1	Included in 2.1
2.4. Number of Public Facilities in Proximity	Included in 2.1	Included in 2.1	Included in 2.1	Included in 2.1	Included in 2.1
2.5. Total Public Lands Crossed	0-45' closest pt	0-34' closest pt	0-48.5' closest pt		

Wisconsin Power and Light Company
Bent Tree Wind Farm
Route Comparison Matrix

Criteria	(1) Primary Route	(2) Alternate Route	(3) ITC Route	(4) Alternate Route (Variation #1)	(5) Alternate Route (Variation #2)
2.6. Locally Significant Historical Structures	0	0	0		
2.7. Number of Landowners Affected	58	61	63		
2.8. Length within 0.5 miles of Municipal Boundaries	0.75 miles that is 0.4 miles from Hayward	• 1 angle is 0.5 miles from Mancheste r • 0.75 miles that is 0.4 miles from Hayward	0.75 miles that is 0.4 miles from Hayward		
2.9. Proximity to Private Airstrips (Non-FAA Facilities) (mile)	1.0	2.5	1.3		
2.10. Communication/radio/TV Towers	Equal and acceptable	Equal and acceptable	Equal and acceptable		
2.11. Bent Tree Wind Farm participating landowners	6 out of 6	14 out of 19	5 out of 5	14 out of 19	14 out of 19
3.1. Wetlands within the Corridor	5	6	2		
3.2. Length Through Cropland (mile)	1.13 mile	0.50 mile on DC	1.55 mile on DC	3 miles	3.5 miles
3.3. Length through Grassland (feet)	5.5 mile	2.33 mile on DC	9.80 mile on DC		
3.4. Woodlands within the Corridor (acres)	25.32 acres	17.94 acres	20.99 acres		
3.5. Wildlife Habitat Areas	0	0	0		

Wisconsin Power and Light Company
Bent Tree Wind Farm
Route Comparison Matrix

Criteria	(1) Primary Route	(2) Alternate Route	(3) ITC Route	(4) Alternate Route (Variation #1)	(5) Alternate Route (Variation #2)
3.6. Wildlife Management Areas	0	0	0		
3.7. State-Listed Threatened and Endangered Plant Species	0	0	0		
3.8. Stream Crossings	• CDJ 21(could avoid by placing on other side of road) • Bancroft Creek • CDJ 22	• CDJ 11 • Bancroft Creek • CD 66 • CDJ 22	1. CDJ 21 (could avoid by placing on other side of road) 2. Bancroft Creek 3. CD 65 4. CDJ 22		
3.9. Length within Floodplains or Major Drainage Areas	0	0	0		
3.10. Proximity to FAA recognized Airports	3.5 miles from 5000 ft buffer around Albert Lea	1.4 miles from 5000 ft buffer around Albert Lea	0.5 miles from 5000 ft buffer around Albert Lea		
3.11. Proximity to Unregistered Archaeological Sites	Closest pt is 3.35 miles	Closest pt is 2.99 miles	Closest pt is 3.25 miles		

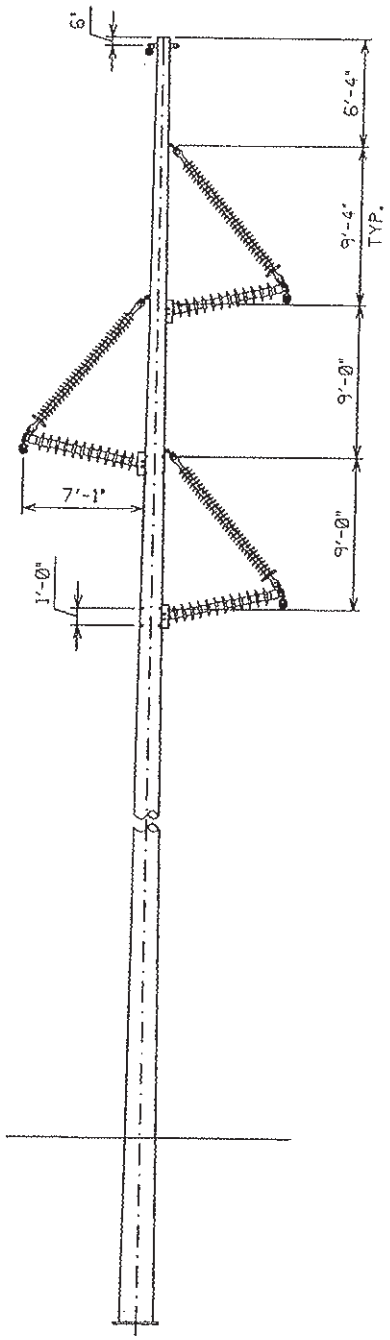

Typical existing road
Single pole single circuit line photo simulation

Typical existing road

Single pole single circuit line photo simulation

Existing H-frame line

Single pole double circuit line photo simulation



ELEVATION

NOT FOR CONSTRUCTION December 23, 2008

Revision	Date	Number	By

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Name
Signed:
Date: 00/00/00 License Number: 00000

ALLIANT

CEDAR RAPIDS, IA

Ulteig

Bismarck - Denver - Detroit Lakes - Fargo - Minneapolis - Sioux Falls
5201 East River Road Suite 308
Minneapolis, Minnesota 55421
Phone: 763.571.2500 Fax: 763.571.1168
Web: www.ulteig.com

Drawn By: LAS
Checked By: JKA
Approved By: CWP

BENT TREE
TANGENT
STRUCTURE DRAWING

Scale: 3/32"=1'-0"
Project Number: 08.00313
Date: December 23, 2008
Sheets: 1 of 1

TAN

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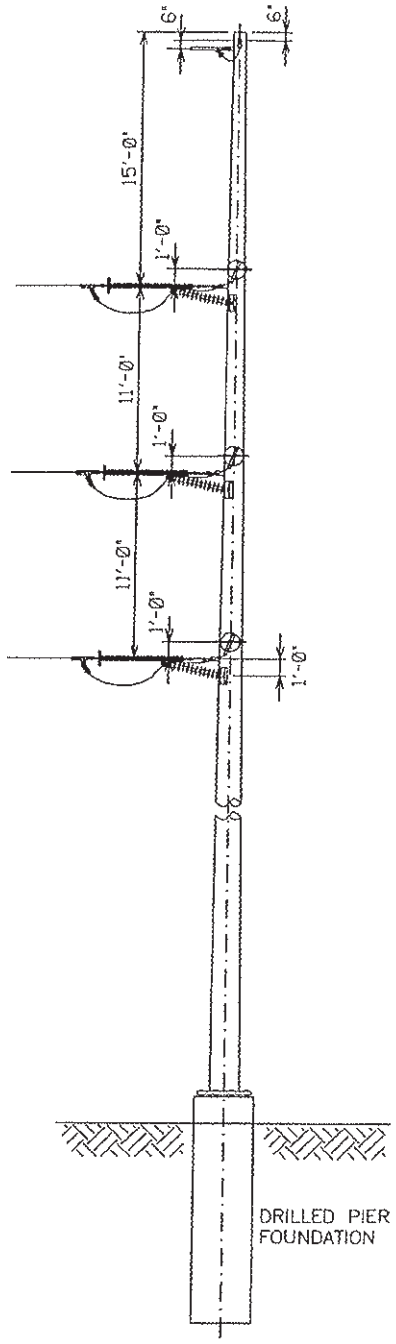

ELEVATION

NOT FOR CONSTRUCTION December 23, 2008

Revision	Date	Number	By

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Name
Signed:
Date: 00/00/00 License Number: 00000

ALLIANT

CEDAR RAPIDS, IA

Ulteig

Bismarck - Denver - Detroit Lakes - Fargo - Minneapolis - Sioux Falls
5201 East River Road Suite 308
Minneapolis, Minnesota 55421
Phone: 763.571.2509 Fax: 763.571.1168
Web: www.ulteig.com
Drawn By: LAS
Checked By: JKA
Approved By: CWP

BENT TREE
90 DEG. DEADEND
STRUCTURE DRAWING

Scale: 3/32"=1'-0"
Project Number: 08.00313
Date: December 23, 2008
Sheets: 1 of 1

90 DEG

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Agencies Contacted for: Bent Tree Wind Farm 161 kV Transmission Line Route Study

Freeborn County SWCD
1400 West Main Street
Albert Lea, MN 56007

Freeborn County Museum
1031 Bridge Street
Albert Lea, MN 56007

MN DNR, Southern Regional Office
261 Highway 15 S
New Ulm, MN 56071-8915
507-359-6000

MPCA Rochester Office
18 Wood Lake Drive SE
Rochester, MN 55904
507-285-7343

MN Department of Agriculture
Becky Balk
625 N Robert Street
St. Paul, MN 55155

MN Department of Health
Environmental Health Division
Policy, Planning & Analysis Unit
625 N Robert Street
St. Paul, MN 55155

MN Department of Natural Resources
Steve Colvin
Environmental Review Unit
500 Lafayette Road
St. Paul, MN 55155

MPCA
Rick Newquist
Env Review
Unit/Majors/Rem Division
520 Lafayette Road
St. Paul, MN 55155

MnDOT
Gerald Larson
Environmental Services
395 John Ireland Blvd
MS 620
St. Paul, MN 55155

MN Board of Water and Soil Resources
Jim Haertel
520 Lafayette Road
St. Paul, MN 55155

MN State Archaeologist
Fort Snelling History Center
St. Paul, MN 55111-4061

US Army Corps of Engineers
Tamara Cameron
Regulatory Functions Branch
190 Fifth Street E
St. Paul, MN 55101-1638

US Fish and Wildlife Service
Twin Cities Field Office E.S.
4101 E 80th Street
Bloomington, MN 55425-1665

USDA/APHIS/Wildlife Services
St Paul Downtown Airport
644 Bayfield St, Suite 215
St Paul, MN 55107

Minnesota Historical Society
Government Programs and Compliances Officer
345 Kellogg Boulevard W
St. Paul, MN 55102-1906

MN DNR
Lisa Joyal
Endangered Species Environmental Review Coordinator
500 Lafayette Road, Box 25
St. Paul, MN 55155

NRCS Service Center
1400 West Main Street
Albert Lea, MN 56007-1816

USDA
Austin Service Center
1408 21st Ave NW Ste. #3
Austin, MN 55912

MnDNR Waters
1160 South Victory Drive
Mankato, MN 56001

Ulteig

3350 38th Ave. S.
Fargo, ND 58104
Tel 701-280-8500
Fax 701-237-3191

www.ulteig.com

December 2, 2008

MN DNR
Lisa Joyal
Endangered Species Environmental Review Coordinator
500 Lafayette Road, Box 25
St. Paul, MN 55155

Subject: Solicitation of Views for a Transmission Line Routing Study
Bent Tree Wind Farm
Freeborn County, Minnesota
UEI Project No. R08.00313

Ulteig Engineers, Inc. (Ulteig), sponsored by Alliant Energy, is preparing a Transmission Line Routing Study for the proposed Bent Tree Wind Farm in Freeborn County, MN. The transmission corridor is anticipated to run from the Bent Tree Wind Farm southeastward to the Hayward Substation, an existing substation located west of Hayward, Minnesota.

The purpose of this letter is a solicitation of your views on the project regarding potential environmental impacts or concerns specifically related to your agency jurisdiction so we can avoid environmentally sensitive areas when determining the route. A detailed environmental report will be completed once the route has been determined. The purpose of the report will be to identify a preferred and at least one alternative route from the Bent Tree Wind Farm Collector Substation to the Hayward Substation. The proposed routes will be based on environmental, land use, social and engineering criteria.

The proposed route will be located somewhere within the highlighted Sections indicated on the enclosed Project Location Map. Although the darker blue Sections inside the Bent Tree Wind Farm Boundary have been examined for environmentally sensitive areas, Ulteig requests for completion purposes that information on sensitive areas be provided for inside the boundary as well as the area identified on the map as having not been studied previously.

We look forward to receiving your comments as soon as possible. If you have any questions or need additional information, please contact me at 701-280-8582.

Sincerely,

Jennifer Hanley

Jennifer Hanley, PE
Environmental Engineer
JAH/
Enclosure

NO STAPLES
PLEASE

For Agency Use Only:
Received _____ Due _____ RUSH
Related ERDB# _____
Search Radius _____mi. ER/All Map'd _____ EOs _____
NoR/ NoC/ NoE/ Std/ Sub Let ____ Inv _____ Log out ____

MINNESOTA NATURAL HERITAGE INFORMATION SYSTEM (NHIS) DATA REQUEST FORM

DATE OF REQUEST 12/1/08

WHO IS REQUESTING THE INFORMATION?

Name and Title Jennifer Hanley, Environmental Engineer

Agency/Company Ulteig Engineers, Inc.

Mailing Address 3350 38th Ave S (Street) Fargo (City) ND (State) 58104 (Zip Code)

Phone 701-280-8582 FAX 701-237-3191 e-mail jennifer.hanley@ultieg.com

WHAT INFORMATION DO YOU NEED? Preferred Reply Method: Email ☑ US Mail ☐

☑ Printouts of known occurrences of federally and state listed plants and animals; native plant communities; and aggregation sites such as bat hibernacula, colonial waterbird nesting sites, and prairie chicken booming grounds.
- ☐ With Environmental Review
- ☐ Printouts Only; No Review Needed

☑ Printouts of information listed above, plus geological features and state rare species with no legal status.
- ☐ With Environmental Review
- ☐ Printouts Only; No Review Needed

☐ Other (describe) _____

INFORMATION WE NEED FROM YOU:

1) **Enclose a map** of the project boundary (topographic maps or aerial photos are preferred).
2) If possible, please **provide a GIS shapefile** (NAD 83, UTM Zone 15N) of the project area.
3) List the following locational information (attach additional sheets if necessary):

For Agency Use Only:	County	Township #	Range #	Section(s) (please list all sections)
	Freeborn	T104N	R22W	1-5, 9-17, 20-29, 33-36
	Freeborn	T103N	R22W	1-5, 8-24
	Freeborn	T104N	R21W	4-11, 14-23, 26-35
	Freeborn	T103N	R21W	1-30, 35-36 (SEE ADDITIONAL SHEETS FOR REST OF T, R, S)

4) Please provide the following information (attach additional sheets if necessary):

Project Name Bent Tree Wind Farm Transmission Line Route Study

Project Proposer Alliant Energy

Detailed Project Description (see instructions, please)

The transmission line will run from a new wind farm substation just east of Hartland, MN to the ITC-Midwest Hayward substation. It will include installation of single-shaft tubular steel or wood poles. The route will follow existing right of way as much as possible. This report will identify the preliminary route of the transmission line.

Current/Past Land-Use of Project Site Farmland, Existing Right of Way

5) You will be provided with a response letter, an index database printout, and a detailed database printout. **Describe how you plan to use this information,** including in what form and detail, if any, you wish to publish this information. (Please note that we do not generally give permission to publish the detailed database printout.)

This information will be used to determine a preliminary route for the transmission line. It will be included in the report appendices.

TURN-AROUND TIME

Requests generally take **3 weeks** from date of receipt to process, and are processed in the order received. Rush requests are processed in 2 weeks or less, and include an extra fee.

FEES

For-profit organizations, including consultants working for governmental agencies, are charged a fee for this service. In addition, **a fee may be charged for large requests from any source. A surcharge of $50 is applied for ALL rush orders;** if this is a rush order, please check the blank below. All fees are subject to change. Please do not include payment with your request; an invoice will be sent to you.

☐ **Rush - ($50 fee for ALL rush orders)**

"The information supplied above is complete and accurate. I understand that material supplied to me from the Minnesota Natural Heritage Information System is copyrighted and that I am not permitted to reproduce or publish any of this copyrighted material without prior written permission from the Minnesota DNR. Further, if permission to publish is given, I understand that I must credit the Minnesota Natural Heritage and Nongame Research Program, Minnesota Department of Natural Resources as the source of the material."

Signature **(required)** Jennifer Henley

Mail or email completed forms to:

Lisa Joyal *(for projects associated with environmental reviews; e.g., EAWs)*
Endangered Species Environmental Review Coordinator
lisa.joyal@dnr.state.mn.us
or
Sharron Nelson *(for general requests)*
Assistant Database Manager
sharron.nelson@dnr.state.mn.us
at
Natural Heritage and Nongame Research Program
Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, Minnesota 55155

For further information call:

(651) 259-5109

(651) 259-5123

Or FAX completed forms to: (651) 296-1811

Additional information about the Natural Heritage & Nongame Research Program is available at http://www.dnr.state.mn.us/eco/nhnrp/

For Agency Use Only:
EO's requiring comment

Sources contacted	Topic	Response

Response Summary

Responder

Revised May 2007

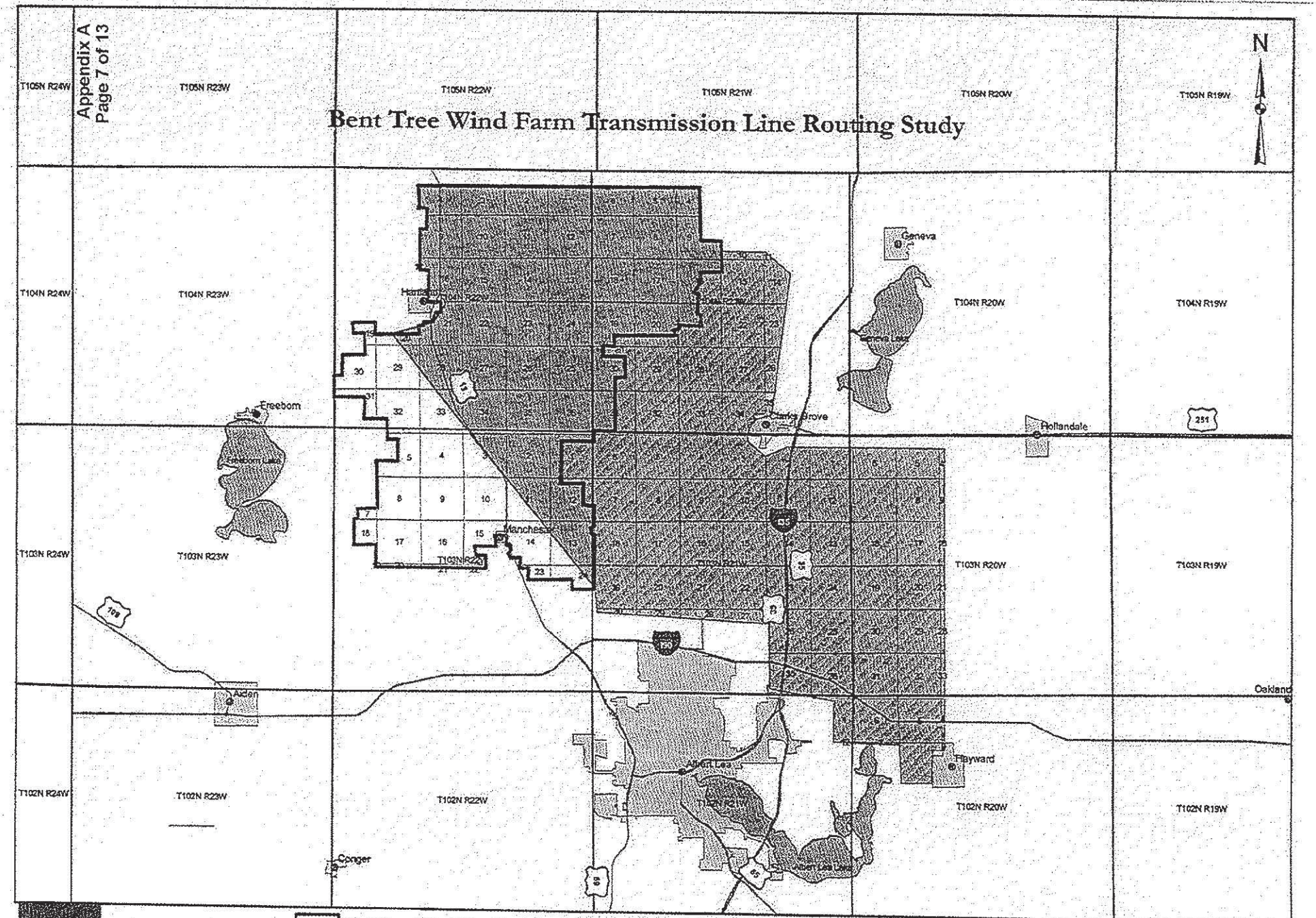
Instructions for the Minnesota Natural Heritage Information System Data Request Form

Please read the following!

- There is generally a **3-week turn-around time** to process requests. Rush requests (2 week turn-around) are charged an additional $50 (Please note that the rush fee applies to all rush requests regardless of non-profit or government status).
- Legible **maps** clearly showing the location and boundaries of the project **(including associated infrastructure)** are required for processing all data requests. Topographic maps or aerial photographs are preferred.
- If the project boundary is large or complex, please provide a **GIS shapefile** (NAD 83, UTM Zone 15) of the project boundary. An additional "digitizing fee" (regardless of non-profit or government status) will be charged for projects that require a substantial amount of time to digitize.
- Please provide a detailed **project description**, attaching separate pages to the form if necessary. Identify the type of development (e.g., housing, commercial, utility, ethanol facility) being proposed, the size and # of units (if applicable), construction methods, and **any associated infrastructure** such as access roads, utility connections, and water supply and/or discharge pipelines.
- **Signatures** are required. The person whose name is entered on the form under the "Who is Requesting the Information" section must sign the form as an acknowledgment of the State of Minnesota's copyright on all generated printouts.
- We cannot begin processing data requests until we receive all parts of the request, including a map and a completed, signed information request form. Our reply due date will be 3 weeks (2 weeks for a rush job) from when we receive a complete request.
- **Responses** are returned to the person whose name is entered on the form under the "Who is Requesting the Information?" section.
- On the form, note the first sentence under the subheading "**FEES**". As a courtesy, we currently provide database searches to other governmental agencies and non-profit entities free of charge. For-profit entities, *including* consultants working for governmental agencies, are charged a fee. Please do *not* include payment with your request; an invoice will be sent to you.
- An **electronic copy** of the form is available at the DNR's web site – http://files.dnr.state.mn.us/eco/nhnrp/nhis_data_request.pdf
- You may reproduce this form for your own use or to distribute.

County	Township #	Range #	Section (s)
Freeborn	T103N	R20W	4-9, 16-21, 28-33
Freeborn	T102N	R21W	1, 12
Freeborn	T102N	R20W	4-9

Bent Tree Wind Farm Transmission Line Routing Study



Project Location Map
11/26/08
Cartography by JH

Bent Tree Wind Farm Boundary
Transmission Corridor
Not Studied Yet
Sec
Cities
City Boundaries
Township and Range
Interstate Highways
Major Roads
Water Bodies

Jennifer Hanley

From: Linda Evenson [levenson@smig.net]
Sent: Tuesday, December 23, 2008 2:19 PM
To: Jennifer Hanley
Subject: Bent Tree Wind Farm
Attachments: Cemetery Locations.doc

Jennifer,

As per our telephone conversation, attached is the list of cemeteries in Freeborn County.

L. Evenson
Librarian
Freeborn County Historical Museum
1031 Bridge Avenue
Albert Lea, MN 56007
507-373-8003
levenson@smig.net
www.smig.net/fchm

Cemetery Locations
Freeborn County, Minnesota

Albert Lea Cemetery (see Graceland)
Alden Community Cemetery – 22384 640th Ave — Carlston township, section 34
Bath Seventh Day Adventist – 74821 315th St — Bath township, section 17
Bear Lake Concordia Lutheran Cemetery – 69421 154th St — Nunda township, section 4
Bohemian National Cemetery – 17967 850th Ave — Hayward township, section 25
Brush Hill Cemetery – 13496 705th Ave — Nunda township, section 15
Carlston Cemetery – 64934 245th St — Carlston township, section 22
Central Freeborn Lutheran Church Cemetery – 74427 245th St — Bancroft township, section 20
Clarks Grove Baptist Church Cemetery – 28503 Co. Rd. 45 — Bath township, section 35
Concordia Lutheran Church Cemetery – 49400 190th St — Pickerel Lake township, section 16
Conger Community Cemetery – 47488 180th St — Pickerel Lake township, section 19
Danish Lutheran Cemetery (see Carlston Cemetery)
Deer Creek Valley Lutheran Cemetery – 87332 State Line Road — London township, section 33
District 16 Cemetery (see Carlston Cemetery)
East Freeborn Lutheran Cemetery – 23758 785th Ave — Bancroft township, section 25
Emmons Lutheran Cemetery (see Oaklawn Cemetery)
Fairview Cemetery – 86964 230th Ave — Moscow township, section 29
First Lutheran Cemetery – intersection of 780th Ave & 170th St — Albert Lea township, section 35
Freeborn Cemetery – 28682 653rd Ave — Freeborn township, section 35
Geneva Cemetery – North edge city of Geneva, 5th Street NW — Geneva township, section 8
Graceland Cemetery – State Highway 13 & Co. Rd. 46 — Albert Lea township, section 7
Green Cemetery – East side of Exit 5 & I-35; on private property — Freeman township, section 4
Greenwood Cemetery – 80070 150th St — ShellRock township, section 5
Hartland South Cemetery (see United Lutheran Cemetery)
Hartland Village Cemetery – In city, 613 Barker St — Hartland township, section 20
Hayward Cemetery – In city, So. Main St — Hayward township, section 9
Hillcrest Cemetery – 85570 215th St — Oakland township, section 6
Hillcrest Memorial Gardens – 17554 Highway 65 So. — Albert Lea township, section 27
Hollandale Cemetery – In city — Riceland township, section 2
Honey Farm Marker – In Glenville, Highway 65, west side between 2nd & 3rd Streets. — ShellRock township, section 6
Hoyt-Will Cemetery (see Pilgrims Rest Cemetery)
Itasca Cemetery – 22234 Muskie Ave, Albert Lea. — Bancroft township, section 31
Kenevan Family Cemetery – 88144 180th St; private cemetery — Oakland township, section 22
Kestner Cemetery - South of 180th St; East of 850th Ave; private cemetery — Oakland township, section 30
Krikava Family Cemetery – 17543 830th Ave; private cemetery — Hayward township, section 27
Lakewood Cemetery - 1101 Lakewood Ave, Albert Lea — Albert Lea township, section 5
Lane Cemetery (see Mockingbird Hill Cemetery)
Lime Creek Lutheran Cemetery – 66788 100th St — Mansfield township, section 36
London Cemetery – 90165 145th St — London township, section 12
Lunder Lutheran Church Cemetery – 14982 735th St — Freeman township, section 6
Mansfield Lutheran Church Cemetery – 14711 630th Ave — Mansfield township, section 8
Mansfield Township Cemetery – 13881 640th Ave — Mansfield township, section 16

Mockingbird Hill Cemetery –	London township, section 17
Moscow Cemetery – 89015 240th St	Moscow township, section 23
Moscow Lutheran Cemetery – 25965 870th Ave	Moscow township, section 17
Nelson, McIntyre, Arneson Cemetery (see Peterson Cemetery)	
North Freeborn Lutheran Cemetery – 75193 303rd St	Bath township, section 21
North Round Prairie Cemetery – 75220 136th St	Freeman township, section 16
Norwegian Lutheran Cemetery (see Hartland Village Cemetery)	
Norwegian Lutheran Cemetery (see Lakewood Cemetery)	
Norwegian Lutheran Cemetery (see United Lutheran Cemetery)	
Oakland Lutheran Church Cemetery – 85675 850th Ave	Oakland township, section 6
Oaklawn Cemetery – 68316 State Line Road	Nunda township, section 32
Old Carlston Cemetery – South shore of Freeborn Lake	Carlston township, section 10
Old Round Prairie Cemetery (see North Round Prairie Cemetery)	
Old St. Theodore's Catholic Cemetery – E. Main St, Albert Lea, abandoned	Albert Lea township, section 2
Our Saviors Danish Lutheran Cemetery - 14025 850th Ave	ShellRock township, section 12
Peterson Cemetery –	Bath township, section 21
Pickerel Lake German Methodist Cemetery (see Shady Oak Cemetery)	
Pilgrim's Rest Cemetery – 84675 130th St	ShellRock township, section 24
Potters Field Cemetery – 75508 240th St, abandoned	Bancroft township, section 21
Red Oak Grove Cemetery (see Moscow Cemetery)	
Riceland Cemetery – 81038 265th St	Riceland township, section 9
Round Prairie Lutheran Church Cemetery – 12881 757th Ave	Freeman township, section 21
St. Aidens Catholic Cemetery – 74111 325th St	Bath township, section 8
St. James Catholic Cemetery - 12440 725th Ave	Nunda township, section 24
St. Mary's Catholic Cemetery – 30301 860th Ave	Newry township, section 19
St. Paul's Lutheran Cemetery – 81029 265th St	Riceland township, section 9
St. Theodore's Catholic Cemetery – Lakewood Ave, Albert Lea	Albert Lea township, section 5
Salem Cemetery (see Shady Oak Cemetery)	
Schneider Cemetery (see Mansfield Township Cemetery)	
Seven Day Grove Cemetery (see Trenton Cemetery)	
Seventh Day Adventist Cemetery (see Riceland Cemetery)	
Shady Oak Cemetery – 71117 180th St	Pickerel Lake township, section 23
State Line Cemetery (see Oaklawn Cemetery)	
Sumner Cemetery – 85850 227th St	Moscow township, section 31
Swedish Cemetery – 62246 120th St	Mansfield township, section 20
Taylor-DeGood Cemetery – 25995 Freeborn-Mower Road	Moscow township, section 13
Trenton Cemetery – 65131 330th St	Freeborn township, section 11
Trondhjem Cemetery – 85765 850th Ave	Oakland township, section 6
United Lutheran Cemetery – 69469 300th St	Hartland township, section 28
Wanderer's Rest Cemetery - 10907 830th Ave	ShellRock township, section 34
West Freeborn Lutheran Cemetery – 27168 695th Ave	Manchester township, section 4
West Round Prairie Cemetery (see North Round Prairie Cemetery)	
London Deer Creek Cemetery – Corner of 500th Street & Thrush Avenue, Worth Co., Iowa	
State Line Cemetery – corner of 500th Street & Highway 65, Worth Co., Iowa	
Stene Family Cemetery – Winnebago Co., Iowa, private cemetery	

Minnesota Department of Natural Resources
Division of Ecological Resources, Box 25
500 Lafayette Road
St. Paul, Minnesota 55155-4025
Phone: (651) 259-5109 Fax: (651) 296-1811 E-mail: lisa.joyal@dnr.state.mn.us

January 7, 2009

Ms. Jennifer Hanley
Ulteig Engineers
3350 - 38th Avenue South
Fargo, ND 58104

Re: Request for Natural Heritage information in the vicinity of the proposed Bent Tree Wind Farm Transmission Line Route, Freeborn County
Correspondence # : ERDB 20080511-0005

Dear Ms. Hanley,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, several rare features have been documented within the search area (for details, see the enclosed database reports). Please note that the following **rare features *may* be impacted** by the proposed project:

- An Oak Forest native plant community has been documented in the northern half of T104N R22W Section 24. This particular native plant community is a remnant of the Big Woods. In the 1850's, the Big Woods forest (dominated primarily by red oak, sugar maple, and basswood trees) stretched across 1.3 million acres of Minnesota. Today, the Big Woods remnants occur in small isolated patches, and only 2% (28,000 acres) of pre-settlement Big Woods stands remain. As such, we recommend that the project be designed to avoid both direct and indirect impacts to this rare forest community.

- Several state-listed threatened plant species have been documented within native prairie remnants in the railroad rights-of-way located just outside the project boundary. Because these plants are associated with native prairie, the transmission line will need to avoid any native prairie remnants that may remain within the area of interest. If this is not feasible, a botanical survey of any affected prairie remnants will be required. **Please contact me if construction activities are planned within any native prairie remnants.** We will need to discuss potential surveyors, survey protocol, and other requirements before any survey work is initiated.

  Please note that the Minnesota County Biological Survey conducted additional botanical surveys in Freeborn County during the 2008 field season. The survey results, however, have not yet been entered into the Natural Heritage Information System. **Please contact me again in the early spring of 2009 for this data.**

- The Manchester Wildlife Management Area (WMA) is located in T104N R22W Section 35 and T103N R22W Section 2 (Shapefiles of WMA boundaries can be downloaded from the DNR's Data Deli website at http://deli.dnr.state.mn.us/.) If the proposed transmission line will be routed near the WMA, please contact the Area Wildlife Manager, Jeanine Vorland at 507-455-5841, to discuss any concerns she may have about the project.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

The enclosed results include an Index Report and a Detailed Report of records in the Rare Features Database, the main database of the NHIS. To control the release of specific location information, which might result in the destruction of a rare feature, both reports are copyrighted.

The Index Report provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an environmental review document (e.g., EAW or EIS), municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the index report for any other purpose, please contact me to request written permission. **The Detailed Report is for your personal use only as it may include specific location information that is considered nonpublic data under *Minnesota Statutes*, section 84.0872, subd. 2. If you wish to reprint or publish the Detailed Report for any purpose, please contact me to request written permission.**

Please be aware that this letter focuses only on potential effects to *rare natural features*; there may be other natural resource concerns associated with the proposed project. This letter does not constitute review or approval by the Department of Natural Resources as a whole.

An invoice in the amount of $202.29 will be mailed to you under separate cover within two weeks of the date of this letter. You are being billed for the database search and printouts, and staff scientist review. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Lisa Joyal

Lisa Joyal
Endangered Species Environmental Review Coordinator

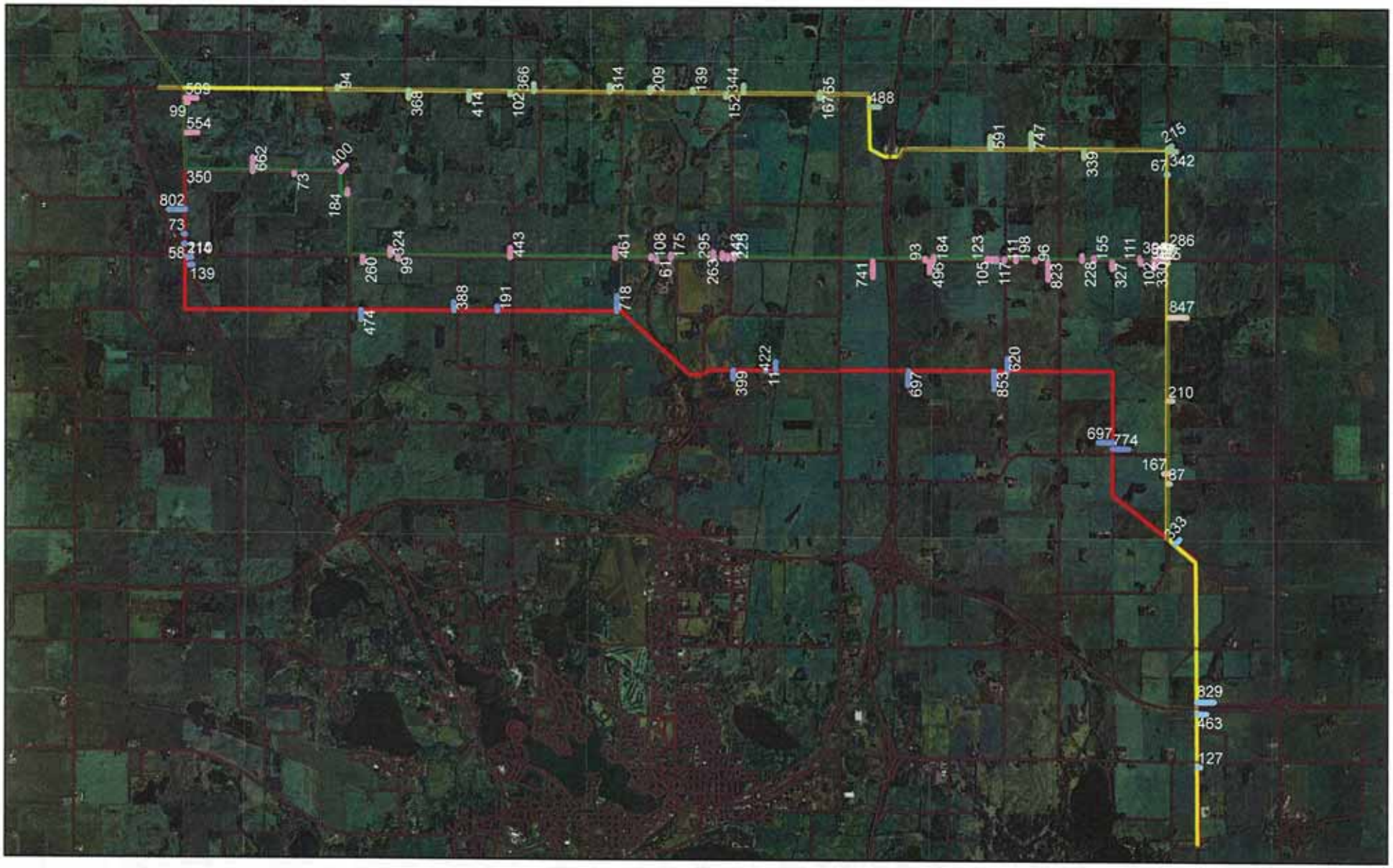
enc. Rare Features Database: Index Report
Rare Features Database: Detail Report
Rare Features Database Reports: An Explanation of Fields

cc: Matt Langan

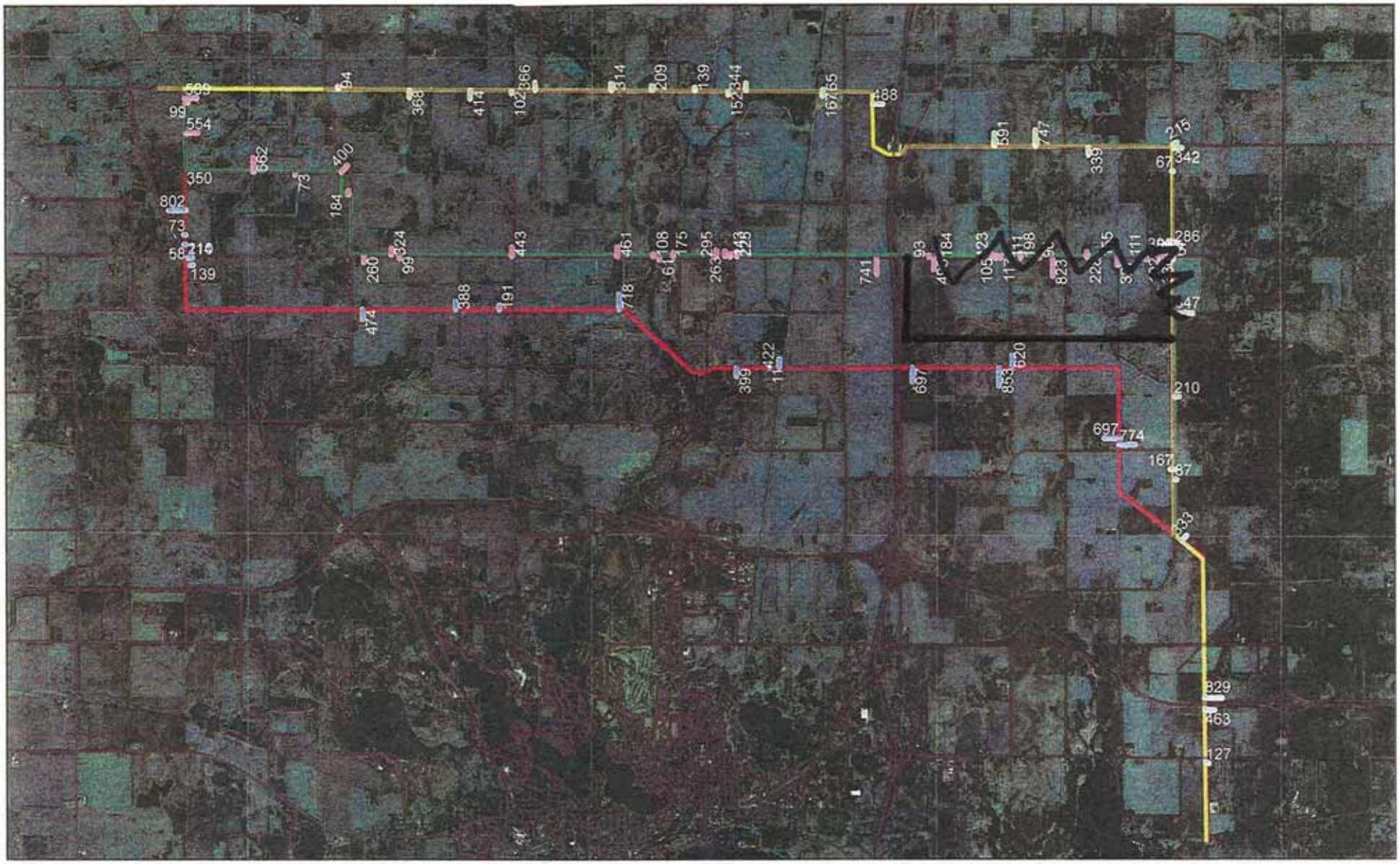
PRIMARY – Yellow

ALTERNATIVE – Green

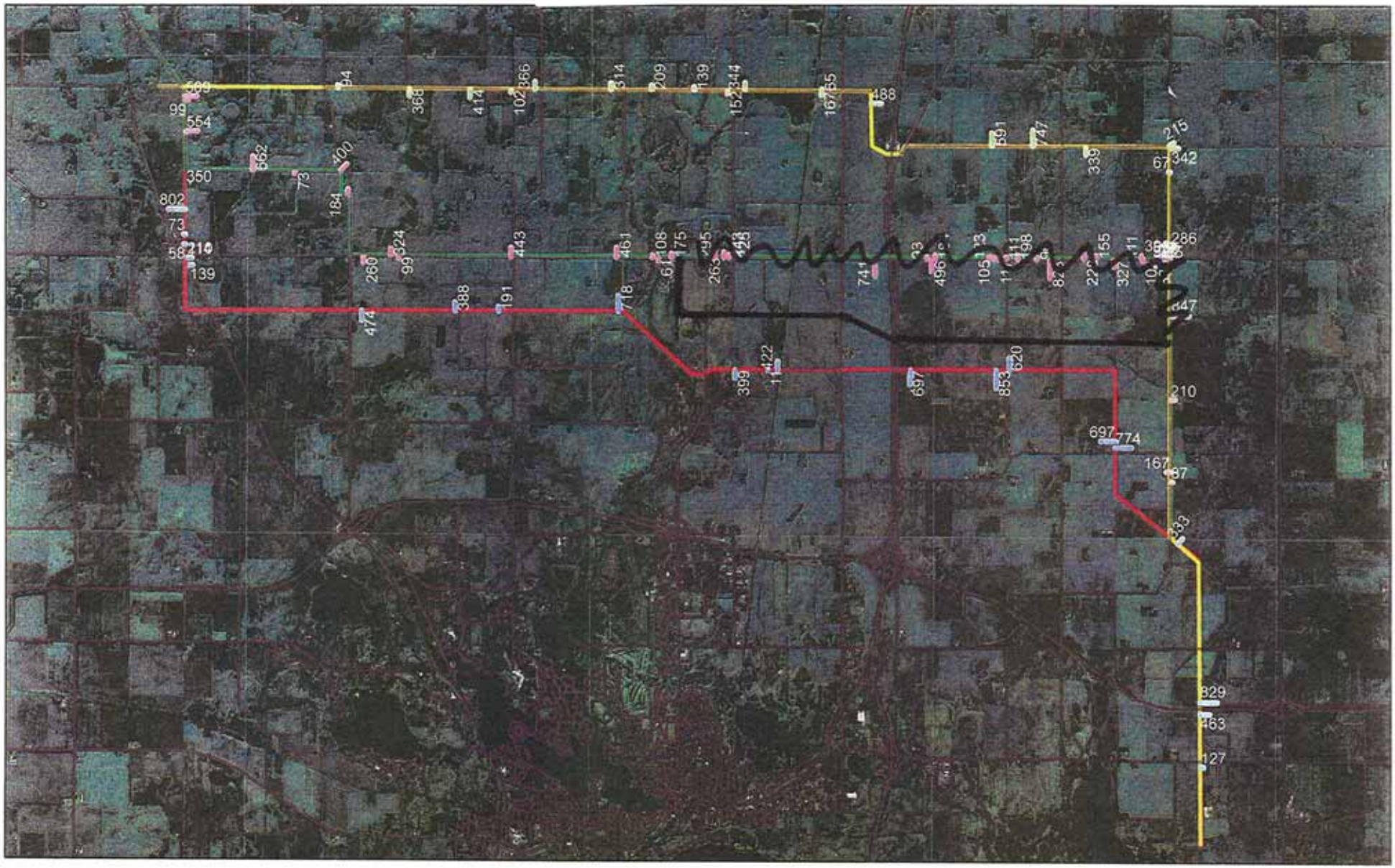
CROSS COUNTRY - Red



1st Variation to Alternative



2nd Variation to Alternative



I. RESPONSE TO LETTER FROM SAFE WIND IN FREEBORN COUNTY

Below, WPL has answered many of the questions raised by Safe Wind in Freeborn County's letter to the Planning Commission dated March 16, 2009. WPL has not repeated some of the concerns that are addressed above, such as existing corridors, interconnection, right of way acquisition, impact on agriculture, health and safety, air quality, water quality, cost, and electric safety code.

- Substation Description:
  - The substation will be surrounded by chain link fence with perimeter shrubbery.
- Transmission line Description
  - Conductor Size - T2 -795 ACSR (T2 - Drake)
  - Type - ACSR (Aluminum conductor steel re-enforced)
  - Thermal limits - Conductor temp = 100 C (wind speed = 2 ft/sec, ambient temp = 40 C)
  - Amps - 1598 Amps/446 MVA @ 161 kV (based on above 100 C conductor temp)
  - Double circuited or bundled Single circuit - bundled single circuit
- Alliant Energy Corporation is the utility holding company for WPL—the applicant.
- WPL will adhere and comply with all state and federal construction and safety standards
- Decommissioning Agreement with Escrow Account,
  - WPL is a regulated utility under the jurisdiction of the Wisconsin Public Service Commission with an annual operating income of $1.1 Billion.
- Maintenance Agreement with landowners
  - WPL has committed in its application to maintain the land and transmission line in accordance with all state and federal requirements
- "There is current legislation to require unused easments to be returned to the fee owner. Safe Wind asks: would land, if not used, be returned to owner through reversion of easement?
  - WPL will comply with a state rules and regulations. If easement reversion is required by state statute, WPL will comply.
- Human Settlement:

    - Safe Wind avers that all Human Settlement issues are not addressed; WPL is unclear as to what was not addressed.
- Schools
    - Freeborn County determined that there are no actual schools in proximity to the proposed routes, just the school districts, thus there will be no impact on the schools.
- Aesthetics—Will substation be lighted?
    - Substation will be minimally lit for security purposes.
- Tax base
    - The wind generation tax in Minnesota is:12 cents per kWh. When fully developed, this project will generate in excess of $1,000,000 annually in tax revenue
- Corona and Henshaw effects
    - No mining activity in the area
- Commuincation problems
    - WPL will work with landowners to resolve any communication issues resulting from WPL's transmission line.
- Condemnation rights
    - WPL's proposed routes are primarily along the public road right-of-way, thus WPL expects to use the public right of way when private easements are not granted. WPL has not requested condemnation rights.

ALLIANT ENERGY
Wisconsin Power and Light

Wisconsin Power and Light Co.
An Alliant Energy Company

Alliant Energy
4902 North Biltmore Lane
Madison, Wisconsin 53718-2148

Office: 1.800.822.4348
www.alliantenergy.com

Arshia Javaherian
Regulatory Attorney

April 21, 2009

Wayne Sorensen
Freeborn County Environmental Services
Planning and Zoning Division
411 South Broadway Ave
Albert Lea, Minnesota 56007

Dear Wayne:

Below please find Wisconsin Power and Light Company's responses your questions regarding the proposed Bent Tree transmission lines.

1. **Cost of cross country route (ITC 161kV line from Hayward to Winnebago)**

   Rebuilding a single circuit transmission line into a double circuit transmission line is generally 2-3 times more costly than building an new single circuit transmission line.

2. **Cost of burying line on primary route.**

   5 times more costly than building an overhead transmission line.

3. **Is a 66' township right of way wide enough if both adjoining landowners refuse easements?**

   Yes, although the pole may be closer to the road than is desirable.

4. **Comment on concrete leachate and treated wood post leachate from poles as it relates to groundwater quality.**

   Construction and operation of the proposed transmission line is not expected to impact groundwater quality in the local area. Initially, WPL will use best management practices during the construction phase to ensure that concrete and wood materials are not mixed with sedimentation that is potentially discharged to existing surface and near-surface waters. These practices include, but are not limited to, use of silt fences, protecting exposed soil,

immediately stabilizing restored soil, controlling temporary soil stockpiles, controlling vehicle tracking, and thorough/efficient cleanup of construction areas.

WPL will use quality materials in the construction of the line that will not readily leach into neighboring soils over the life of the line. Once the transmission line is in operation, WPL will perform routine inspections and maintenance to the pole structures and take appropriate actions as necessary to prevent those structures, showing signs of damage or deterioration, from having an impact on local water quality.

5. **Are all the data on noise, EMF, electrical fields, etc. in your information based on 200 MW or 400 MW?**

Data on noise, EMF and electric fields is constant regardless of the amount of energy generated by the wind farm. Regardless of the load, amount of energy generated, the static voltage of the line, the spacing of the conductors and the height of the conductors from the ground will not change. Static voltage of the line, the spacing of the conductors and the height of the conductors from the ground determine the noise, EMF and electric fields generated by a transmission line.

Please contact me at 608-458-0512 if you have any questions.

Yours Truly,

Arshia Javaherian

Zenk • Read • Trygstad & ASSOCIATES, INC.

Engineers/Architects

April 29, 2009

Mr. Wayne Sorensen
Freeborn County Environmental Services
411 South Broadway
P.O. Box 1147
Albert Lea, MN 56007

RE: Wisconsin Light and Power
161 KV Transmission Line Project
ZRT File No. 8853

Dear Mr. Sorensen:

The following correspondence is per your request to have our firm conduct a review of the environmental assessment prepared by the Freeborn County staff for the proposed Wisconsin Light and Power 161 KV transmission line and substation. Our review is pursuant to the State of Minnesota Administrative Rules concerning environmental assessments. The purpose of the act is to locate high voltage transmission lines in an orderly manner compatible with environmental preservation and efficient use of resources. Chosen routes shall minimize adverse human and environmental impact while ensuring continuing electric power system reliability and integrity and ensuring energy needs are fulfilled in an orderly and timely fashion.

It is our understanding a certificate of need for generation and transmission has already been applied for and has been issued for the wind farm, substation and transmission line. Minnesota Administrative Rules require that an Environmental Assessment be prepared for the proposed project and that many factors be considered in the Assessment. Based on our review of the Environmental Assessment received, we offer the following comments:

✓a. Route comparison matrix should be labeled Table 1.

b. All five potential routes assume utilization of ITC's line or easement for the last segment of the route with no contingency route(s) listed. It appears the possibility exists that this assumption could be rejected and an alternative route could be rejected and an alternative route could be required. Would the Environmental Assessment need to be amended if this occurs?

Sec 14

✓c. Reference to Table 3 on page 41 should read Table 2.

1-6 d. 400 MW size limit. Statement that this is the limit and any increase would require a new application and permit is not clearly stated.

7-E e. Crop Yields: Probable effects not clearly stated.

Having reviewed the report, we find that the Environmental Assessment addresses the items required to be considered per Minnesota Administrative Rule 7849, the Freeborn County Commissioners Environmental Assessing Scoping document, and the Safe Wind questions of March 16, 2009.

Respectfully submitted,

ZENK READ TRYGSTAD & ASSOCIATES, INC.

Timothy D. Reisnour, P.A.
Vice President

William J. Trygstad, P.E.
Vice President

Bruce Palmer, P.E.
PALMER ENGINEERING

507/373-0680 907 Sykes Street P.O. Box 689 Albert Lea, Minnesota 56007 FAX 507/373-0716

RESOLUTION _____
ENVIRONMENTAL ASSESSMENT SCOPING

WHEREAS, the Freeborn County Board of Commissioners, in accordance with Minnesota Administrative Rules # 7849.6200 Subp. 5 hereby issue the following scoping decision for the Environmental Assessment that will be prepared for the proposed Wisconsin Power and Light 161 KV transmission line.

NOW THEREFORE BE IT RESOLVED, that the Freeborn County Board of Commissioners shall consider required factors as listed in Minnesota Administrative Rules 7849.5910.
In addition the following factors requested to be considered shall be specifically included in the Environmental Assessment;

- Property values impact 5-B
- Impact on the gas pipelines 1-H
- Can the gas pipelines be used as a route 1-H
- Impacts on bats and birds including bald eagles 9-N 9-O 9-P
- Can it be buried 1-I
- Effect of bad weather on the line Sec 15
- Electromagnetic fields (EMF) 6-D 6-E
- Effect on trees by the right of way 9-L
- Size limit of 400 mw Sec 1-B
- Alternate routes-
    - -existing cross country line 1-E
    - -Two other variations of alternative route 1-F 1-G
- Effect on farm animals and crop yields Sec 6, 7-A, 7-E
- Can easement agreements be public 3-D
- Effects of construction process including but not limited to dust, noise, traffic control, road impact and emergency services. 3-E, 3-F, 9-C
- Effects on aerial farming and irrigation 7-B 7-C
- Installation safety procedures for residents and livestock 3-E 3-F Sec 6
- Lightning issues with new poles 6-L

I hereby certify that the above is a true and correct copy of a resolution adopted by the Freeborn County Board of Commissioners at their session on the 14st day of April 2009, and as appears on the minutes of their record of proceedings.

_____
John Kluever
Administrator/Clerk
County of Freeborn
State of Minnesota