

## **APPENDIX F – Land Values**

**MARKET IMPACT ANALYSIS**  
**DODGE COUNTY WIND**  
**DODGE COUNTY AND STEELE COUNTY, MINNESOTA**

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December 20, 2021

Dodge County Wind, LLC  
700 Universe Boulevard  
Juno, Florida 33408

Attention: Mark Lennox – Project Director

Subject: Market Impact Analysis  
Dodge County Wind  
Dodge County and Steele County, Minnesota

Dear Mr. Lennox,

In accordance with your request, the proposed development of the Dodge County Wind in Dodge County and Steele County, Minnesota, has been analyzed and this market impact analysis has been prepared.

MaRous & Company has conducted similar market impact studies for a variety of clients and for several different proposed developments over the last 40 years. Clients have ranged from municipalities, counties, and school districts, to corporations, developers, and citizen's groups. The types of proposals analyzed include commercial developments such as shopping centers and big-box retail facilities; religious facilities such as mosques and mega-churches; residential developments such as high-density multifamily and congregate-care buildings and large single-family subdivisions; recreational uses such as skate parks and lighted high school athletic fields; and industrial uses such as waste transfer stations, landfills, and quarries.

MaRous & Company has conducted numerous market studies of energy-related projects. The wind-related projects include the following by state:

- ✧ **Minnesota** - Freeborn County Wind Farm in Freeborn County and Three Waters Wind in Jackson County.
- ✧ **Iowa** - Ida County Wind Farm in Ida County, Palo Alto County Wind Farm in Palo Alto County, Worthwhile Wind in Worth County, and Three Waters Wind in Dickinson County.
- ✧ **Illinois** - Grand Ridge V and Otter Creek wind farms in LaSalle County, Pleasant Ridge Wind Farm in Livingston County, Walnut Ridge Wind Farm in Bureau County, McLean County Wind Farm in McLean County, Radford's Run Wind Farm in Macon County, Midland Wind Project in Henry County, Harvest Ridge Wind Project in Douglas County, Lincoln Land Wind in Morgan County, Bennington Wind Project in Marshall County, Goose Creek Wind in Piatt County, Shady Oaks II in Lee County, Osagrove Flats Wind Project in LaSalle County, and Crescent Ridge Wind Farm in McLean County.
- ✧ **Indiana** - Tippecanoe County Wind Farm in Tippecanoe County and Roaming Bison Wind Farm in Montgomery County.
- ✧ **Ohio** - Seneca Wind in Seneca County and Republic Wind in Seneca County and Sandusky County.
- ✧ **New York** - Orangeville Wind Farm in Wyoming County and Alle-Catt Wind Farm in Allegany County, Cattaraugus County, and Wyoming County.

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- ✧ **South Dakota** - Dakota Range Wind Project I, II, & III, in Codington County, Grant County, and Roberts County, Deuel Harvest Wind Farm in Deuel County, Crocker Wind Farm in Clark County, Prevailing Wind Park in Charles Mix County, Bon Homme County, and Hutchinson County, Triple-H Wind Project in Hyde County, Crowned Ridge Wind II in Codington County, Deuel County, and Grant County, Tatanka Ridge Wind Farm in Deuel County, and Sweetland Wind Farm in Hand County.
  - ✧ **Kansas** - Neosho Ridge Wind Farm in Neosho County and Jayhawk Wind in Bourbon County and Crawford County.

The solar-related projects include the following by state:

- ✧ **Illinois** - Hickory Point Solar Energy Center in Christian County, Mulligan Solar in Logan County, Black Diamond Solar in Christian County, South Dixon Solar in Lee County, and Pleasant Grove Solar in Boone County and McHenry County, Double Black Diamond Solar in Sangamon County and Morgan County, and Osagrove Flats Solar in LaSalle County.
- ✧ **Indiana** - Lone Oak Solar Farm in Madison County, Hardy Hills Solar in Clinton County, and Mammoth Solar in Pulaski County and Starke County.
- ✧ **Wisconsin** - Badger Hollow Solar Farm in Iowa County, Paris Solar Energy Center in Kenosha County, Darien Solar Energy Center in Rock County and Walworth County, Grant County Solar in Grant County, Koshkonong Solar in Dane County, and St. Croix Solar in St. Croix County.
- ✧ **Maryland** - Dorchester County Solar Farms in Dorchester County.
- ✧ **Solar Projects of the Western Regions of the United States of America** - Arizona, Colorado, Nevada, New Mexico, and Utah in the Southwest Region; Idaho and Oregon in the Northwest Region; Texas in the Southern Great Plains Region; General Research in the Northern Great Plains Region.

We also have analyzed the impact of transmission lines on adjacent residential uses and a number of proposed natural gas-fired electric plants in various locations.

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## Project Summary

Project Information	
Project Name	Dodge County Wind
Location	Dodge County and Steele County, Minnesota
<i>Townships</i>	<b>Dodge County</b> – Ashland, Claremont, Ripley, Westfield <b>Steele County</b> – Aurora, Havana
Property Type	Wind Farm
Project Developer	Dodge County Wind, LLC
Wind Farm Description	
Total Project Area Land Acreage	≈ 28,348 Acres
<i>Actual Land Acreage Used by Turbines</i>	≈ 11,366 Acres
Number of Turbines	≈ 79 Turbines
Turbine Specifications	
<i>Type</i>	GE 3.4/114/98, GE 3.4/114/80, GE 2.5/114/90
<i>Capacity</i>	2.5 Megawatts - 3.4 Megawatts
<i>Tip Height</i>	≈ 551 Feet
Total Capacity	≈ 259 Megawatts
Setbacks/Noise/Shadow Flicker	Setbacks: <div> <div>✧</div> <div>3 Rotor Diameters Crosswind x 5 Rotor Diameters Downwind – Non-Participating Parcel Lines</div> </div> <div> <div>✧</div> <div>1.1 x Tip Height– Roads</div> </div> Noise: <div> <div>✧</div> <div>47 dBA</div> </div> Shadow Flicker: <div> <div>✧</div> <div>Limit of 30 hours/year</div> </div>
Participant Acreage	≈ 11,366 Acres
Population Density within Project Area	≈ 6.8 Persons per Square Mile
Transmission Line Description	
Footprint Linear Distance	≈ 27 Miles
Transmission Line Specifications	
<i>Type</i>	Steel Monopole
<i>Height</i>	100 Feet – 140 Feet
<i>Total Capacity</i>	≈ 161 Kilovolts
Ancillary Construction	
Collector substation	Operations and maintenance building
Underground collection cables	Gravel access roads
Transmission line/ Rebuild 2.5 miles of existing transmission line	Aircraft Detection Lighting System
<b>Total Project Cost (All Encompassing)</b>	≈ \$370,000,000 - \$405,000,000

## **Purpose and Intended Use of the Study**

The purpose of this appraisal assignment is to analyze the impact, if any, on the value of the surrounding rural residential and agricultural properties due to the development of the wind farm and transmission line. Specifically, this study is designed to address the question of whether the development of the wind farm and transmission line has an effect on the value of residential uses and/or agricultural land in proximity to the turbines. Any other use or user of this report is considered to be unintended.

## **Executive Summary**

As a result of the market impact analysis undertaken, MaRous & Company has concluded that there is no market data indicating the project will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, market data from Minnesota supports the conclusion that the project will not have a negative impact on rural residential or agricultural property values in the surrounding area. Finally, for agricultural properties that host turbines, the additional income from the wind lease may increase the value and marketability of those properties. The foregoing general conclusions are the result of considerable study of the following information and data:

- ⋄ The use will meet or exceed all the required development and operating standards.
- ⋄ Controls are in place to ensure on-going compliance.
- ⋄ There are significant financial benefits to the local economy and to the local taxing bodies from the development of the wind farm and transmission line.
- ⋄ The wind farm and transmission line will create well-paid jobs in the area which will benefit overall market demand.
- ⋄ An analysis of recent residential sales proximate to existing wind farms, which includes residential sales within five times turbine tip height, did not support any finding that proximity to a wind turbine had any impact on property values.
  - The population within the area of the proposed transmission line has an extremely low density of 7.9 persons per square mile, which can be attributed to the limited proximity to economic centers, rolling terrain, lack of paved roads, and infrastructure.
- ⋄ An analysis of agricultural land values in the area and in other areas of the state with wind farms did not support any findings that the agricultural land values are negatively impacted by the proximity to wind turbines.
- ⋄ Studies indicate that wind turbine leases add value to agricultural land.
- ⋄ Assessors of various counties across the state and the Midwest region have been consulted based on their experience with transmission lines. General interviews and conversations with assessors indicate that they do not value land or residential property less if they are proximate to high voltage transmission lines.



- ∴ A survey of County Assessors in 11 Minnesota counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 41 Iowa counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 20 Illinois counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 5 Indiana counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm, and that there were no reductions in assessed valuations.
- ∴ A survey of County Auditors in 3 Ohio counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 6 New York counties and City/Town Assessors in 7 New York cities/towns in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 21 Kansas counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A survey of County Assessors in 8 South Dakota counties in which wind farms are located determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuations.
- ∴ A summary of the findings in literature on peer-reviewed studies of wind farms and transmission lines in North America, although not specific to Minnesota, reported conclusions that are consistent with our findings.

## Definition of Market Value

*When discussing market value, the following definition is used:*

The most probable price a property should bring in a competitive and open market under all conditions' requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- ∴ Buyer and seller are typically motivated.
- ∴ Both parties are well informed or well advised and acting in what they consider their own best interests.
- ∴ A reasonable time is allowed for exposure in the open market.
- ∴ Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto.
- ∴ The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.<sup>1</sup>

## Scope of Work and Reporting Process

Information was gathered concerning the real estate market generally and the market of the area surrounding the proposed wind farm specifically. The uses in the surrounding area were considered. The following summarizes the actions taken:

- ∴ Review and analysis of the Dodge County and Steele County Wind Energy Ordinances, and other public documents.
- ∴ Review and analysis of the demographics in the area of the proposed wind farm and transmission line.
- ∴ Review and analysis of data on the general market area of the wind farm and transmission line, and on the other areas in Minnesota and/or Dodge County and Steele County in which existing wind farms are located.
- ∴ Review and analysis of data on the market for single-family houses in the immediate area of the proposed wind farm and from other areas in each of the counties from public sources, and from the Dodge County and Steele County and/or Minnesota public records.
- ∴ Interviews of local real estate professionals concerning recent sales in the area, local market conditions, and the impact of wind turbines on property values in the area.
- ∴ Properties used for development of the matched pairs were physically inspected on the exterior, and photographs of the interiors were reviewed where available.

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<sup>1</sup> (12 C.F.R. Part 34.42(g); 55 Federal Register 34696, August 24, 1990, as amended at 57 Federal Register 12202, April 9, 1992; 59 Federal Register 29499, June 7, 1994)

- ∴ Inspections were performed of the project area and the areas in nearby counties with existing wind farms by Michael S. MaRous on August 30, 2021.

This document is considered to conform to the requirements of the *Uniform Standards of Professional Appraisal Practice and Advisory Opinions* (USPAP). This letter is a brief recapitulation of the appraisal data, analyses, and conclusions. Additional supporting documentation is retained in the MaRous and Company office file. There are no extraordinary assumptions or hypothetical conditions included in the market study.

In order to form a judgment concerning the potential impact, if any, on the value of the surrounding residential properties of the approval of the conditional use for the wind farm and transmission line, the following has been considered:

- ∴ The character and the value of the residential and agricultural properties in the general area of the proposed wind farm and transmission line.
- ∴ Agricultural land values in Dodge County and Steele County, and in other Minnesota counties in which wind farms are located.
- ∴ Market trends for both residential and agricultural land up to the past 5 years.
- ∴ The economic impact the proposed wind farm and transmission line would have on the larger community.
- ∴ The potential impact on the value of the surrounding residential and agricultural properties.

## Description of Area Demographics and Development Area Analysis

Dodge County Wind Location		
<b>Dodge Center, Minnesota</b>		
2010 Population		2,671 Persons
2021 Population		3,286 Persons
Median Household Income in 2021		\$63,363
Number of Households in 2021		1,238 Households
Number of Housing Units in 2021		1,315 Units
Number of Vacant Housing Units in 2021		77
Unemployment Rate		2.9%
<b>Blooming Prairie, Minnesota</b>		
2010 Population		1,996 Persons
2021 Population		2,087 Persons
Median Household Income in 2021		\$59,984
Number of Households in 2021		852 Households
Number of Housing Units in 2021		915 Units
Number of Vacant Housing Units in 2021		63 Units
Unemployment Rate		3.6%
<b>Claremont, Minnesota</b>		
2010 Population		548 Persons
2021 Population		557 Persons
Median Household Income in 2021		\$54,652
Number of Households in 2021		226 Households
Number of Housing Units in 2021		256 Units
Number of Vacant Housing Units in 2021		30 Units
Unemployment Rate		12.6%
<b>Steele County, Minnesota</b>		
2010 Population		36,576 Persons
2021 Population		37,461 Persons
Median Household Income in 2021		\$68,986
Number of Households in 2021		14,835 Households
Number of Housing Units in 2021		15,974 Units
Number of Vacant Housing Units in 2021		1,139 Units
Unemployment Rate		3.7%
<b>Dodge County, Minnesota</b>		
2010 Population		20,087 Persons
2021 Population		22,121 Persons
Median Household Income in 2021		\$76,894
Number of Households in 2021		8,292 Households
Number of Housing Units in 2021		8,827 Units
Number of Vacant Housing Units in 2021		535 Units
Unemployment Rate		2.8%
<b>Main Roadway Arterials</b>		
North/South	Interstate 35 and Route 218 extends west of the footprint	
East/West	Route 14 extends north of the footprint	

### Nearest Cities within the Market Area of Dodge County Wind

#### Owatonna, Minnesota ≈ 5 Miles Northwest of Project Footprint

2010 Population	25,587 Persons
2021 Population	25,863 Persons

#### Hayfield, Minnesota ≈ 7 Miles Southeast of Project Footprint

2010 Population	1,340 Persons
2021 Population	1,484 Persons

#### Kasson, Minnesota ≈ 8 Miles East of Project Footprint

2010 Population	5,928 Persons
2021 Population	6,482 Persons

#### Mantorville, Minnesota ≈ 9 Miles East of Project Footprint

2010 Population	1,193 Persons
2021 Population	1,325 Persons

#### Austin, Minnesota ≈ 17 Miles South of Project Footprint

2010 Population	24,897 Persons
2021 Population	25,370 Persons

#### Rochester, Minnesota ≈ 19 Miles East of Project Footprint

2010 Population	106,787 Persons
2021 Population	123,332 Persons

#### Albert Lea, Minnesota ≈ 22 Miles Southwest of Project Footprint

2010 Population	18,032 Persons
2021 Population	17,836 Persons

Site to do Business - <https://www.stdb.com/>

### Top Employers Near Dodge County and Steele County, Minnesota

#### Business Name

#### Business Type

Mayo Clinic	Health Care
IBM	IT Services
Hormel Foods Corporation	Food & Beverage Manufacturing
University of Minnesota	Education
Hearth & Home Technologies	Consumer Products Manufacturing
Kwik Trip	Convenience Stores & Truck Stops
Western Digital Overview	Computer Hardware & Software
CitiusTech	IT Services
US Army	Federal Agencies
The Home Depot	Home Centers & Hardware Stores

Top Companies in Dodge Center, MN - [https://www.glassdoor.com/Explore/top-companies-dodge-center\\_IL14,26\\_IC1142624.htm](https://www.glassdoor.com/Explore/top-companies-dodge-center_IL14,26_IC1142624.htm)

## **Other Existing Wind Farms Near the Project Area**

The closest operating wind farms within the market area of the proposed project include the following projects:

- ⋄ The Freeborn Wind Farm has a total capacity of approximately 200.0 megawatts and came online in 2021.
- ⋄ The Farmers Wind Project has a total capacity of approximately 5.7 megawatts and came online in 2004.
- ⋄ The Lakefield Wind Project has a total capacity of approximately 205.5 megawatts and came online in 2011.
- ⋄ The Cisco Wind Project has a total capacity of approximately 8.4 megawatts and came online in 2008.
- ⋄ The Ewington Wind Project has a total capacity of approximately 21.0 megawatts and came online in 2008.
- ⋄ The Endeavor Wind Projects have a total capacity of approximately 122.8 megawatts and came online in 2008.
- ⋄ The Flying Cloud Wind Project has a total capacity of approximately 43.5 megawatts and came online in 2003.

### Residential Sales and Activity Nearest to the Project Area

Like the majority of Minnesota, this area is primarily rural in nature. In addition to farms, there are single-family houses situated on either smaller lots or larger farmsteads. The following table summarizes examples of the most recent single-family residential sales in the general area of the Dodge County Wind. A map illustrating the location of each of these sales is included in the addenda to this market impact study.

<b>MOST RECENT SINGLE-FAMILY RESIDENTIAL SALES SUMMARY NEAREST TO THE FOOTPRINT OF DODGE COUNTY WIND</b>							
<b>No.</b>	<b>Location</b>	<b>Sale Price</b>	<b>Sale Date</b>	<b>Site Size (Acres)</b>	<b>Year Built</b>	<b>Building Size (Sq. Ft.)</b>	<b>Sale Price Per Sq. Ft. of Bldg. Area Incl. Land</b>
1	10551 89 <sup>th</sup> Ave. SE Blooming Prairie, MN 55917	\$180,000	12/11/20	3.55	2003	1,620	\$111.11
2	8496 SE 38 <sup>th</sup> St. Claremont, MN 55924	\$187,000	4/26/21	1.13	1976	1,296	\$144.29
3	12715 655 <sup>th</sup> St. Claremont, MN 55924	\$191,000	8/17/20	7.00	1910	1,534	\$124.51
4	16739 660 <sup>th</sup> St. Dodge Center, MN 55927	\$212,000	10/9/18	6.31	1972	1,728	\$122.69
5	4452 SE 84 <sup>th</sup> Ave. Claremont, MN 55924	\$245,000	12/18/20	4.88	1900	1,900	\$128.95
6	66091 130 <sup>th</sup> Ave. Claremont, MN 55924	\$320,000	9/18/20	11.00	1875	1,712	\$186.92

## Project Description

The project is proposed to consist of approximately 79 turbines with an individual capacity between 2.5 megawatts and 3.4 megawatts; the turbines will have a tip height of up to 551 feet. The total capacity of the wind farm will be approximately 259 megawatts, with a total footprint consisting of approximately 11,366 acres of leased land within a total footprint of 28,348 acres.

The turbines will be constructed to meet applicable standards and will be monitored to ensure compliance with those standards and to limit the impact of noise, and shadow flicker. Additional efforts are being made to limit the impact on avian and wildlife resources in the area.

The transmission line is proposed to consist of an approximately 27-mile-long 161 kilovolt transmission line; the poles will be of steel monopole construction, have a tip height between approximately 100 and 140 feet, and have a span of approximately 400 feet between each pole. There is an existing transmission line that is of wooden monopole construction, has a tip height of approximately 80 feet, and has a span of approximately 400 feet between each pole. 2.5 miles of this existing transmission line will be torn down and rebuilt to aid in the circuit efficiency of the new line.

Roads will be improved both before and after construction to accommodate the installation of the turbines and to repair any damage caused by the construction. During the Decommissioning Phase, road repairs will be undertaken as needed.

Ancillary construction includes gravel access roads, a collector substation, underground collection cables, transmission line, an operations and maintenance building, and an Aircraft Detection Lighting System (ALDS).

## Project Benefits

<b>Taxes</b>	
Property Taxes	Estimated total to be between approximately \$870,000 and \$1,180,000 per year over the life of the project after the first year.
Beneficiaries	Dodge County and Steele County
<b>Land Agreements</b>	
Participating Landowner Lease Payments	Lease payments of approximately \$5,000 per megawatt installed per year will be made to participating landowners
Good Neighbor Agreements	Good neighbor payments of approximately \$1,500 per year will be made to participating landowners
<b>Job Creation</b>	
Temporary/Construction	≈ 400 Construction Jobs
Permanent	≈ 5-8 Permanent Jobs
<b>Induced Impacts due to Construction</b>	
Indirect Impacts	Permit payments to the county and anticipated increase in household spending to local businesses



## Market Impact Analysis

A market impact analysis is undertaken to develop an opinion as to whether the proposed wind farm and transmission line will have an effect on the value of residential uses and/or agricultural land in proximity to the turbines and transmission line. This analysis includes:

- ⋄ Review of the considered factors that could potentially impact value due to transmission lines.
- ⋄ A matched pair analysis considering the impact on value of residential properties proximate to a wind farm in Minnesota, as well as matched pairs developed and analyzed of residential properties in counties with similar demographics, land use, and economic characteristics of other states in the Midwest, specifically Minnesota, Iowa, Illinois, Indiana, Ohio, and Kansas.
- ⋄ The value of agricultural land in Dodge County and Steele County and in other counties with existing wind farms.
- ⋄ Interviews of local and national real estate professionals.
- ⋄ The results of a survey of assessors in Minnesota, Iowa, Illinois, Indiana, South Dakota, Kansas, New York, and Ohio, with existing wind farms in their respective jurisdictions.
- ⋄ The results of several academic and peer-reviewed studies on the impact of wind turbines and transmission lines on residential property values.

## Factors of Transmission lines that Affect Property Values Considered

- ✧ Appearance
  - Utility-grade transmission lines have a passive use of the land they occupy and are compatible with rural or agricultural uses in their immediate area. They are also heavily integrated into modern society, therefore, are essentially accepted as a standard part of the environment. Transmission lines are considered to be nearly invisible when viewed upon at distance over 2,000 feet. The proposed transmission lines are to be installed upon steel monopoles and will be taller than the existing transmission lines, therefore, the transmission line will have a smaller than standard view impact from the existing residences. Single poles that cause a lessened visual impact are considered to be significantly more appealing than the older and much larger structures. Below you will see photographs of other common agricultural structures, such as ethanol plants, grain storage facilities, commercial greenhouses, hog farms, dairy farms, poultry farms, wind farms, and solar farms.



Ethanol Plant



Grain Storage Facility



Commercial Greenhouse



Hog Farm



Dairy Farm



Poultry Farm



Raceway/Drag Strip



Wind Farm



Solar Farm

- ✧ Noise and Odor
  - Transmission lines typically do not emit significant sound. Transmission lines do not produce any odor.
- ✧ Traffic
  - Due to the low maintenance requirements of transmission lines, there is an insignificant amount of traffic that is associated with transmission lines.
- ✧ Hazardous Materials
  - Transmission lines are reported to not produce any hazardous materials, toxins, or associated odors.
- ✧ Public Services
  - Infrastructure Benefits
    - Development of transmission lines are the building blocks of the power grid connecting power generation to the public. Further, building utility scale transmission lines increases the need for local construction workers.
  - Schools
    - Transmission lines deliver vital power to distribute lines that provide power to schools. Transmission lines also do not add extra students to the classrooms causing overcrowding, such as a residential development that would add new families and students.
  - Public Safety
    - Transmission lines deliver vital power to distribute lines that provide power to public safety departments.

## Matched Pair Analysis

A matched pair analysis is a methodology which analyzes the importance of a selected characteristic, in this instance proximity to a wind turbine, to the value of a property.<sup>2</sup> This technique compares the sale of a property in proximity to the selected characteristic to the sale of a similar property in the same market area and under similar market conditions but without the proximity to the selected characteristic.

It is difficult to find properties that are identical except for proximity to a wind turbine, and which also occurred under substantially similar market conditions, especially in rural areas. Many sales in the area are also conducted privately from family member to family member, or passed down from generation to generation, causing there to be a lack of sale information. Additionally, in many cases, the properties in these types of transactions do not sell at full market value. The matched pair analysis accounts for different adjustments that must be made to account for the differences in the paired properties.

Data from similar Midwestern states that have a strong presence of wind turbines, similar demographics, similar economics, and similar agricultural characteristics, have also been analyzed.

Adjustment grids are included with each matched pair analysis to compare each variable of sale. The adjustment comparisons in the following analyses are qualitative. A qualitative analysis involves using quality ratings based on how the non-proximate sales compare to the proximate sales and does not require using dollar adjustments.<sup>3</sup> The non-proximate sales are adjusted with the notations of superior (-), similar (o), and inferior (+). The superior variables are given downward adjustments to meet the related variables of the proximate residences. The similar variables do not require adjustments. The inferior variables are given upward adjustments in order to meet the related variables of the proximate residences.

Details of the sales included in this analysis are retained in the MaRous & Company office files; maps in the addenda to this report illustrate the location of the properties. Unless otherwise indicated, none of the purchasers in these transactions appear to own any other property in proximity, and none of the transactions appear to have a wind turbine lease associated with the property.

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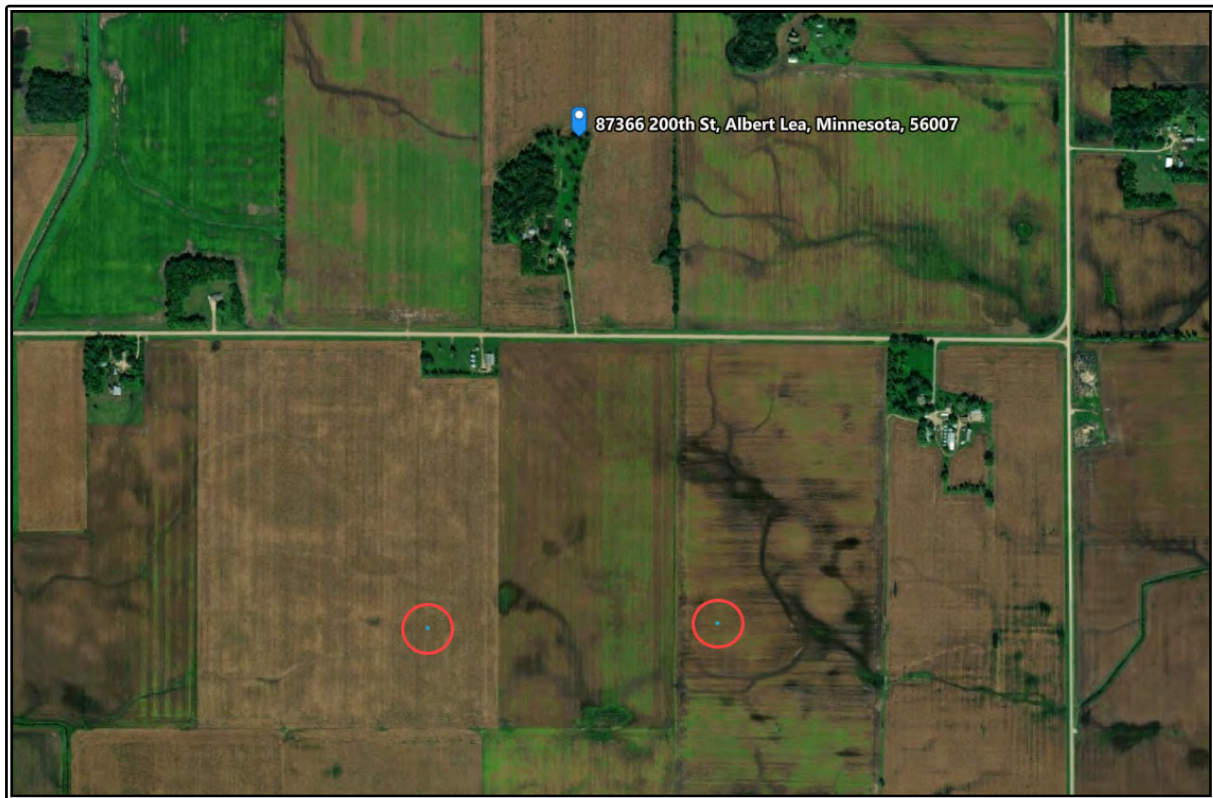
<sup>2</sup> See the discussion "Paired Sales Analysis" and "Sale/Resale Analysis" in Bell, Randall, MAI, *Real Estate Damages, Applied Economics and Detrimental Conditions*, Second Edition, Appraisal Institute, 2008, pages 25-27.

<sup>3</sup> Horn, T. (2015, September 3). What qualitative analysis is and how agents can use it to price their listings • Birmingham Appraisal Blog. Retrieved from <https://birminghamappraisalblog.com/appraisal/what-qualitative-analysis-is-and-how-agents-can-use-it-to-price-their-listings/>

### Minnesota Analysis - Freeborn County Matched Pair No. 1

Freeborn County Matched Pair No. 1 considers the sale of a house located at 87366 200<sup>th</sup> Street, Albert Lea, that sold in July 2021 for \$196,400. This house is located approximately 2,580 feet from the nearest turbine of the Freeborn Wind Farm, which came online in 2021. The photograph below is an aerial view of the multiple turbines visible to the south of the house.

This property is compared with a similar property located at 72582 110<sup>th</sup> Street, Emmons, that sold in July 2020 for \$189,900. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.





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**FREEBORN COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	87366 200 <sup>th</sup> St. Albert Lea, MN 56007	72582 110 <sup>th</sup> St. Emmons, MN 56029
Distance from Turbine (Ft.)	2,580	N/A
Sale Date	July 7, 2021	July 28, 2020
Sale Price	\$196,400	\$189,900
Sale Price/Sq. Ft. (A.G.)	\$97.04	\$75.60
Year Built	1926	1964
Building Size (Sq. Ft.)	2,024	2,512
Lot Size (Acres)	11.30	6.61
Style	Two-story; frame (vinyl) 4 bedrooms, 2 bath	One-story; frame (metal) 3 bedrooms, 2 bath
Basement	Full, unfinished	Full, partially finished, walkout
Utilities	Hydronic heat Wood stove heat Well & septic	Central air Forced-air heat Well & septic
Other	1-car detached garage Grain storage, granary Machine shed, pole barn	1-car attached garage Machine shed

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87366 200<sup>th</sup> Street



72582 110<sup>th</sup> Street

The house at 87366 200<sup>th</sup> Street, is located approximately 2,580 feet away from the nearest turbine, in a rural area. Both houses have similar building sizes, located in a similar rural location. The 87366 200<sup>th</sup> Street property has a superior market conditions, lot size, style, and outbuildings. The 72582 110<sup>th</sup> Street property is of superior age, building size, basement, and utilities.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	72582 110th St. Emmons, MN 56029	+	-	-	+	O	+	-	-	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

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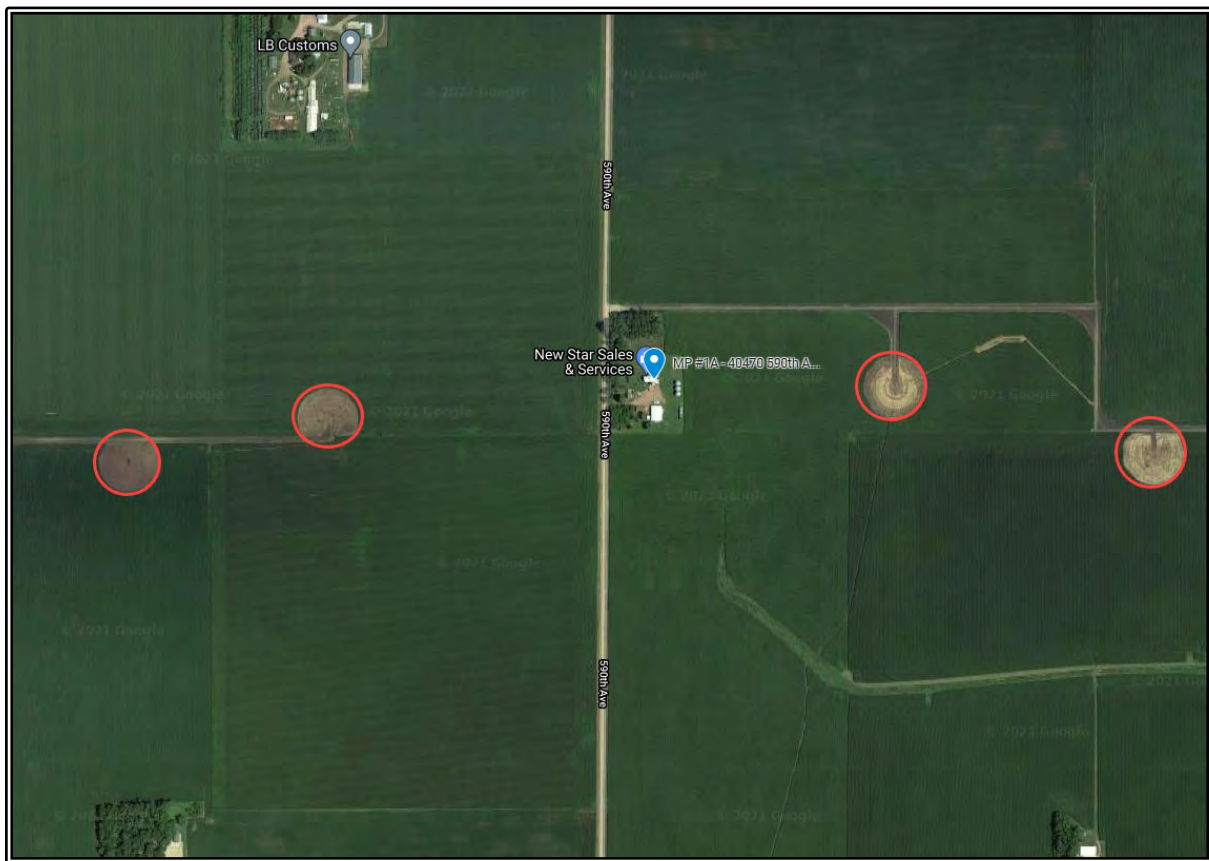
Upward adjustments are made to the 72582 110<sup>th</sup> Street property for the superior market conditions, lot size, style, and outbuildings of the 87366 200<sup>th</sup> Street property. Downward adjustments are made for the superior age, building size, basement, and utilities of the 72582 110<sup>th</sup> Street property compared to those features of the 87366 200<sup>th</sup> Street property. The two properties have essentially the same location.

Considering the adjustments noted in the following table for the 72582 110<sup>th</sup> Street property, the two properties give the impression of being similar. Therefore, the higher per square foot sale price of the 87366 200<sup>th</sup> Street sale appears to not support a finding that there is a negative impact on value resulting from the proximity of the 87366 200<sup>th</sup> Street property to a wind turbine.

### Minnesota Analysis - Cottonwood County Matched Pair No. 1

Cottonwood County Matched Pair No. 1 considers the sale of a house located at 40470 590<sup>th</sup> Avenue, Mountain Lake, that sold in December 2020 for \$335,000. This house is located approximately 1,370 feet from the nearest turbine of the Odell Wind Project, which came online in 2016. The photograph below is an aerial view of the multiple turbines visible to the east and west of the house.

This property is compared with a similar property located at 91885 370<sup>th</sup> Avenue, Heron Lake, that sold in September 2021 for \$259,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.





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**COTTONWOOD COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	40470 590 <sup>th</sup> Ave. Mountain Lake, MN 56159	91885 370 <sup>th</sup> Ave. Heron Lake, MN 56137
Distance from Turbine (Ft.)	1,370	N/A
Sale Date	December 11, 2020	September 3, 2021
Sale Price	\$335,000	\$259,000
Sale Price/Sq. Ft. (A.G.)	\$126.80	\$90.69
Year Built	1928	1964
Building Size (Sq. Ft.)	2,642	2,856
Lot Size (Acres)	6.00	11.25
Style	Two-story; frame (vinyl) 4 bedrooms, 2 bath	One-story; frame (vinyl) 3 bedrooms, 2 bath
Basement	Full, finished	Full, finished
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	3-car detached garage Patio Porch	1-car attached garage

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40470 590<sup>th</sup> Avenue

91885 370<sup>th</sup> Avenue



The house at 40470 590<sup>th</sup> Avenue, is located approximately 1,370 feet away from the nearest turbine, in a rural area. Both houses have similar building sizes, located in a similar rural location, have similar basements, and utilities. The 40470 590<sup>th</sup> Avenue property has a superior building style and has superior outbuildings. The 91885 370<sup>th</sup> Avenue property was sold in superior market conditions, is of a superior age, and superior lot size.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	91885 370th Ave. Heron Lake, MN 56137	-	-	O	-	O	+	O	O	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

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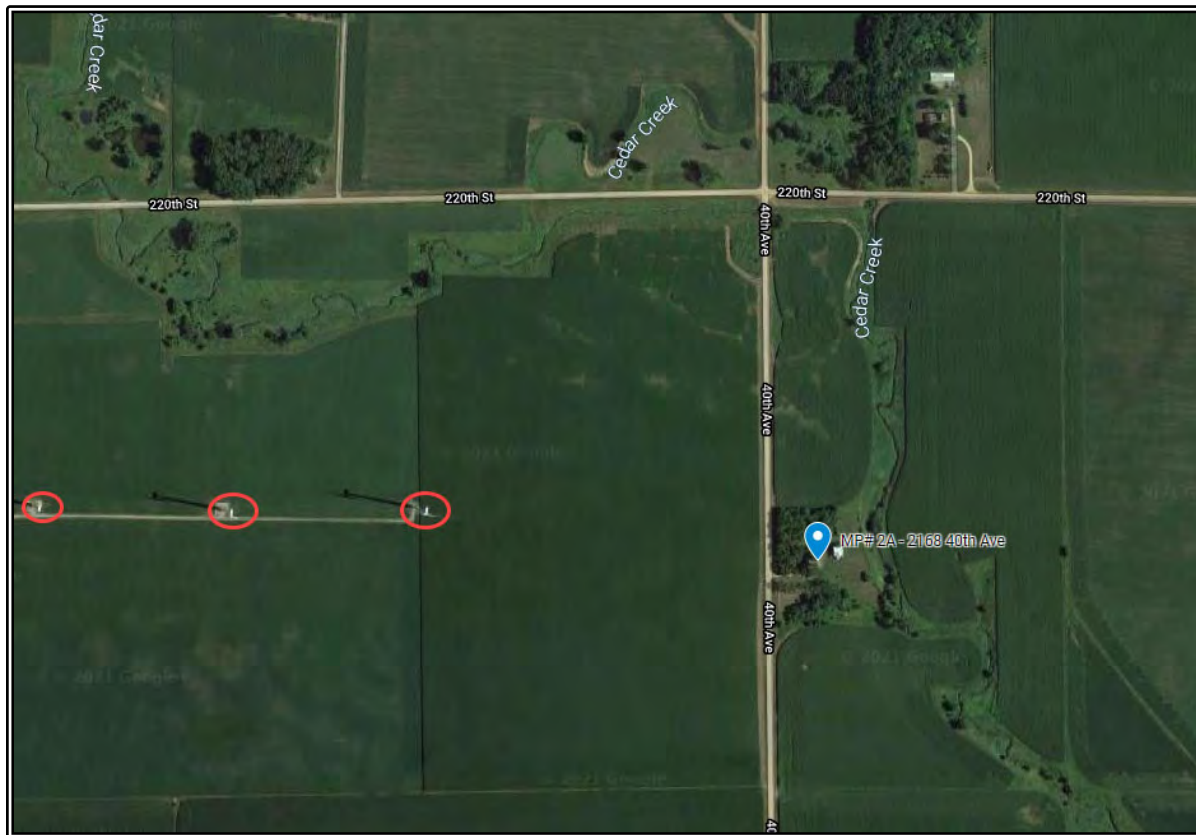
Upward adjustments are made to the 91885 370<sup>th</sup> Avenue property for the superior style and outbuildings of the 40470 590<sup>th</sup> Avenue property. Downward adjustments are made for the superior market conditions, age, and lot size of the 91885 370<sup>th</sup> Avenue property compared to those features of the 40470 590<sup>th</sup> Avenue property. The two properties have essentially the same, building size, location, basement, and utilities.

Considering the adjustments noted in the following table for the of the 91885 370<sup>th</sup> Avenue property, the 91885 370<sup>th</sup> Avenue property gives the impression of being slightly superior. Therefore, the higher per square foot sale price of the 40470 590<sup>th</sup> Avenue sale appears to not support a finding that there is a negative impact on value resulting from the proximity of the 40470 590<sup>th</sup> Avenue property to a wind turbine.

### **Minnesota Analysis - Martin County Matched Pair No. 1**

Martin County Matched Pair No. 1 considers the sale of a house located at 2168 40<sup>th</sup> Avenue, Trimont, that sold in December 2020 for \$138,000. This house is located approximately 1,750 feet from the nearest turbine of the Trimont Area Wind Farm, which came online in 2005. The photograph below is an aerial view of the multiple turbines visible to the west of the house.

This property is compared with a similar property located at 1027 250<sup>th</sup> Street, Ormsby, that sold in May 2021 for \$125,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



### MARTIN COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	2168 40 <sup>th</sup> Ave. Trimont, MN 56176	1027 250 <sup>th</sup> St. Ormsby, MN 56162
Distance from Turbine (Ft.)	1,750	N/A
Sale Date	December 18, 2020	May 14, 2021
Sale Price	\$138,000	\$125,000
Sale Price/Sq. Ft. (A.G.)	\$94.78	\$76.03
Year Built	1938	1915
Building Size (Sq. Ft.)	1,456	1,644
Lot Size (Acres)	6.03	4.40
Style	Two-story; frame (vinyl) 4 bedrooms, 1.1 bath	One-story; frame (vinyl) 3 bedrooms, 2 bath
Basement	Full, unfinished	N/A
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	Machine shed Patio	1-car detached garage Barn Machine shed



2168 40<sup>th</sup> Avenue



1027 250<sup>th</sup> Street

The house at 2168 40<sup>th</sup> Avenue, is located approximately 1,750 feet away from the nearest turbine, in a rural area. Both houses are of a similar age, have similar building and lot sizes, located in a similar rural location, and have similar utilities. The 2168 40<sup>th</sup> Avenue property has a superior building style and a superior basement. The 1027 250<sup>th</sup> Street property was sold in superior market conditions and superior outbuildings.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1027 250th St. Ormsby, MN 56162	-	O	O	O	O	+	+	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 1027 250<sup>th</sup> Street Avenue property for the superior style and basement of the 2168 40<sup>th</sup> Avenue property. Downward adjustments are made for the superior market conditions and outbuildings of the 1027 250<sup>th</sup> Street property compared to those features of the 2168 40<sup>th</sup> Avenue property. The two properties have essentially the same age, building size, lot size, location, and utilities.

Considering the adjustments noted in the following table for the of the 1027 250<sup>th</sup> Street property, the two properties give the impression of being essentially similar. Therefore, the higher per square foot sale price of the 2168 40<sup>th</sup> Avenue sale appears to not support a finding that there is a negative impact on value resulting from the proximity of the 2168 40<sup>th</sup> Avenue property to a wind turbine.



## Matched Pair Analysis – Iowa, Illinois, South Dakota, Indiana, Ohio, and Kansas

In addition to analyzing sales in the subject project area, MaRous & Company has researched sales in proximity to several existing wind farms in rural areas of Iowa, Illinois, South Dakota, Indiana, Ohio, and Kansas in order to discover whether residential property values in these areas were impacted by their locations. The following are the results of the most recent of these studies.

As with the research from Minnesota, details of these sales are retained in the MaRous & Company office files; maps in the addenda to this report illustrate the location of these matched pairs. Unless otherwise indicated, none of the purchasers in these transactions appear to own any other property in proximity, and none of the transactions appear to have a wind turbine lease associated with the property.

### Iowa Analysis - Boone County Matched Pair No. 1

Boone County Matched Pair No. 1 considers the sale of a house located at 1002 B Avenue, Grand Junction, that sold in August 2019 for \$208,000. This house is located approximately 1,415 feet from the nearest turbine of the Beaver Creek Wind Farm, which came online in 2017. The photograph below is an aerial view of the multiple turbines visible to the north and west of the house.

This property is compared with a similar property located at 455 270<sup>th</sup> Street, Ogden, that sold in February 2019 for \$186,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



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**BOONE COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	1002 B Ave. Grand Junction, IA 50107	455 270 <sup>th</sup> St. Ogden, IA 50212
Distance from Turbine (Ft.)	1,415	N/A
Sale Date	August 14, 2019	February 26, 2019
Sale Price	\$208,000	\$186,000
Sale Price/Sq. Ft. (A.G.)	\$120.44	\$120.16
Year Built	1908	1933
Building Size (Sq. Ft.)	1,727	1,548
Lot Size (Acres)	2.73	1.02
Style	Two-story; frame (vinyl) 4 bedrooms, 2 bath	1.5-story; frame (metal) 4 bedrooms, 1 bath
Basement	Partial, finished	Full, finished
Utilities	Central air Forced-air heat Well & septic	Other heating well & septic
Other	2-car attached garage 3-car detached garage Machine shed, pole barn Well house, and porch	2-car detached garage Porch

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1002 B Avenue

455 270<sup>th</sup> Street



The house at 1002 B Avenue, is located approximately 1,415 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions, have similar building sizes, and located in a similar rural location. The 1002 B Avenue property has a superior lot size, has a superior building style, has superior utilities, and has superior outbuildings. The 455 270<sup>th</sup> Street property is of a superior age and a superior basement.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	455 270 <sup>th</sup> St. Ogden, IA 50212	O	-	O	+	O	+	-	+	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

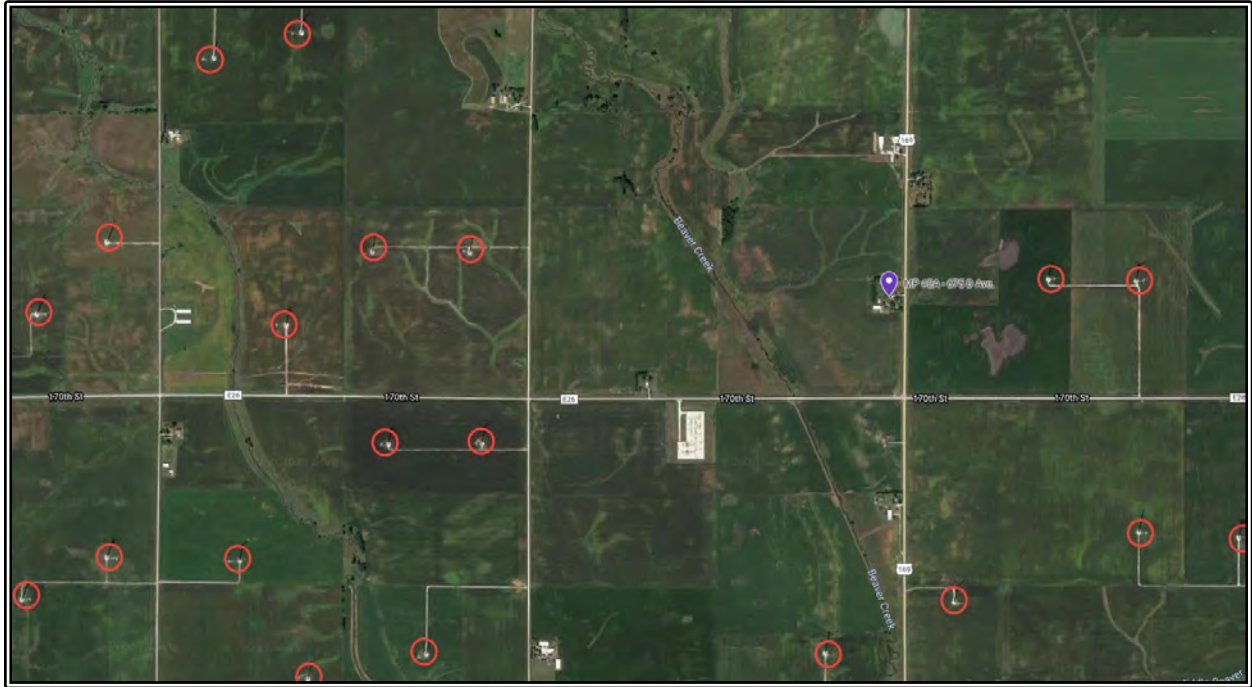
Upward adjustments are made to the 455 270<sup>th</sup> Street property for the superior lot size, style, utilities, and outbuildings of the 1002 B Avenue property. Downward adjustments are made for the superior age and basement of the 455 270<sup>th</sup> Street property compared to those features of the 1002 B Avenue property. The two properties have essentially the same market conditions, building size, and location.

Considering the adjustments noted in the following table for the superior lot size, style, utilities, and outbuildings of the 455 270<sup>th</sup> Street property and for the younger age and superior basement of the 1002 B Avenue property, the two properties give the impression of being essentially similar. Therefore, the per square foot sale price for the two properties are similar, the data concerning the 1002 B Avenue sale appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1002 B Avenue property to a wind turbine.

#### Iowa Analysis - Boone County Matched Pair No. 2

Boone County Matched Pair No. 2 considers the sale of a house located at 675 D Avenue, Ogden, that sold in October 2017 for \$195,000. This house is located approximately 2,130 feet from the nearest turbine of the Beaver Creek Wind Farm, which came online in 2017. The following photograph is an aerial view of the multiple turbines visible in various directions from the house.

This property is compared with a similar property located at 375 335<sup>th</sup> Street, Perry, that sold in June 2017 for \$160,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



### BOONE COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	675 D Ave. Ogden, IA 50212	375 335 <sup>th</sup> St. Perry, IA 50220
Distance from Turbine (Ft.)	2,130	N/A
Sale Date	October 20, 2017	June 15, 2017
Sale Price	\$195,000	\$160,000
Sale Price/Sq. Ft. (A.G.)	\$101.67	\$78.51
Year Built	1924	1978
Building Size (Sq. Ft.)	1,918	2,038
Lot Size (Acres)	4.67	2.72
Style	Two-story; frame (wood) 3 bedrooms, 1.1 bath	One-story; frame (wood) 3 bedrooms, 1.2 bath
Basement	Full, finished	Partial, finished
Utilities	Other heating Well & septic	Forced-air heating Well & septic
Other	2-car attached garage	2-car attached garage





375 335<sup>th</sup> Street

675 D Avenue



The house at 675 D Avenue, is located approximately 2,130 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions, located in a similar rural location, and have similar outbuildings. The 675 D Avenue property has a superior lot size, has a superior building style, and has a superior basement. The 375 335<sup>th</sup> Street property is of a superior age, has a superior building size, and has superior utilities.

#### ADJUSTMENT GRID MATCHED PAIR NO. 2

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	375 335 <sup>th</sup> St. Perry, IA 50220	O	-	-	+	O	+	+	-	O
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

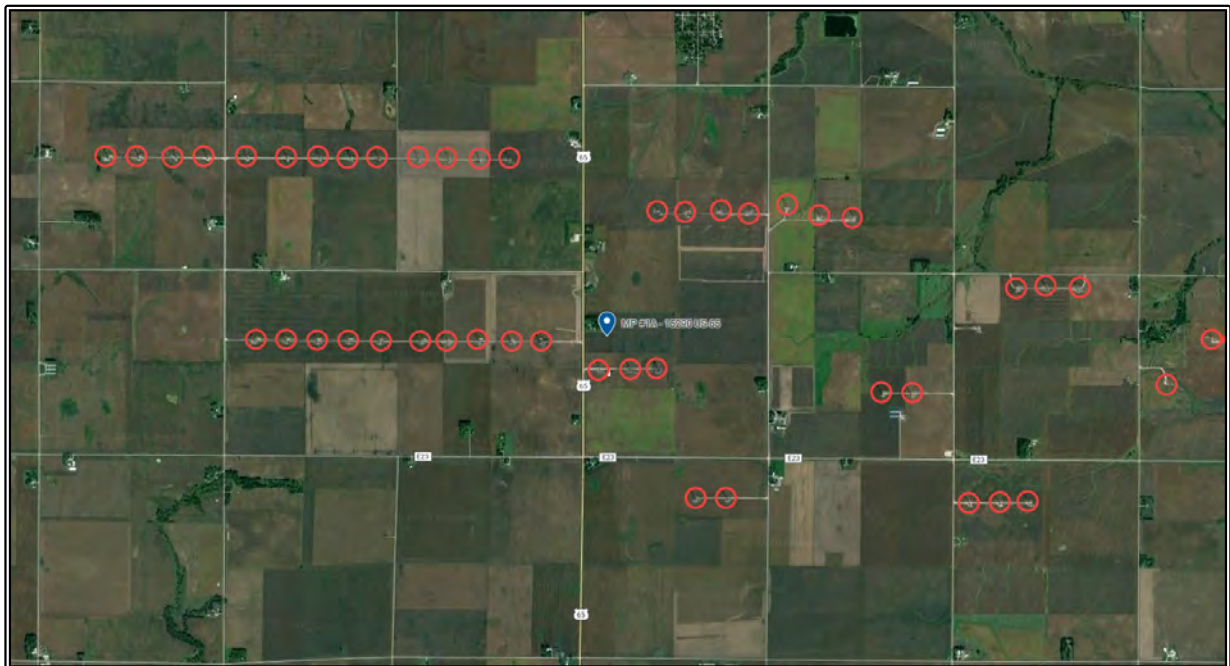
Upward adjustments are made to the 375 335<sup>th</sup> Street property for the superior lot size, style, and basement of the 675 D Avenue property. Downward adjustments are made for the superior age, building size, and utilities of the 375 335<sup>th</sup> Street property compared to those features of the 675 D Avenue property. The two properties have essentially the same market conditions, location, and outbuildings.

Considering the adjustments noted in the following table for the superior age, building size, and utilities of the 375 335<sup>th</sup> Street property and for the superior lot size, style, and basement of the 675 D Avenue property, the two properties give the impression of being essentially similar. Therefore, although the two properties give the impression of being similar, the higher per square foot sale price for the 675 D Avenue property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 675 D Avenue property to a wind turbine.

## Iowa Analysis - Story County Matched Pair No. 1

Story County Matched Pair No. 1 considers the sale of a house located at 15290 U.S. Highway 65, Zearing, that sold in November 2018 for \$172,000. This house is located approximately 1,426 feet from the nearest turbine of Story County Wind, which came online in 2008. The photograph below is an aerial view of the multiple turbines visible in various directions from the house.

This property is compared with a similar property located at 57576 East Lincoln Highway, Ames, that sold in January 2018 for \$280,000. This property is not considered to be proximate to wind turbines; however, the property is located 8,976 feet from the nearest turbine of the Iowa DG Portfolio Project, which came online in 2017. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



## STORY COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	15290 U.S. Highway 65 Zearing, IA 50278	57576 E. Lincoln Hwy. Ames, IA 50010
Distance from Turbine (Ft.)	1,426	8,976
Sale Date	August 17, 2017	January 8, 2018
Sale Price	\$172,000	\$280,000
Sale Price/Sq. Ft. (A.G.)	\$90.81	\$87.50
Year Built	1948	1939 (Remodel: 1984)
Building Size (Sq. Ft.)	1,894	3,200
Lot Size (Acres)	4.46	4.65
Style	1.5-story; frame (metal) 3 bedrooms, 2 bath	One-story; frame (wood) 6 bedrooms, 2.2 bath
Basement	Full, finished	Partial, finished
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	2-car attached garage 2-car detached garage Deck	3,504 S.F. detached garage RV parking 2,500 S.F. shop/office Deck, porch, and patio



15290 U.S. Highway 65

57576 East Lincoln Highway



The house at 15290 U.S. Highway 65, is located approximately 1,426 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions, have similar lot sizes, located in a similar rural location, and have similar utilities. The 15290 U.S. Highway 65 property has a superior basement. The 57576 East Lincoln Highway property is of a superior age, has a superior building size, has a superior building style, and has superior outbuildings.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	57576 E. Lincoln Hwy. Ames, IA 50010	0	-	-	0	0	-	+	0	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
0	No adjustment necessary									

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Upward adjustments are made to the 57576 East Lincoln Highway property for the superior basement of the 15290 U.S. Highway 65 property. Downward adjustments are made for the superior age, building size, style, and outbuildings of the 57576 East Lincoln Highway property compared to those features of the 15290 U.S. Highway 65 property. The two properties have essentially the same market conditions, lot size, location, and utilities.

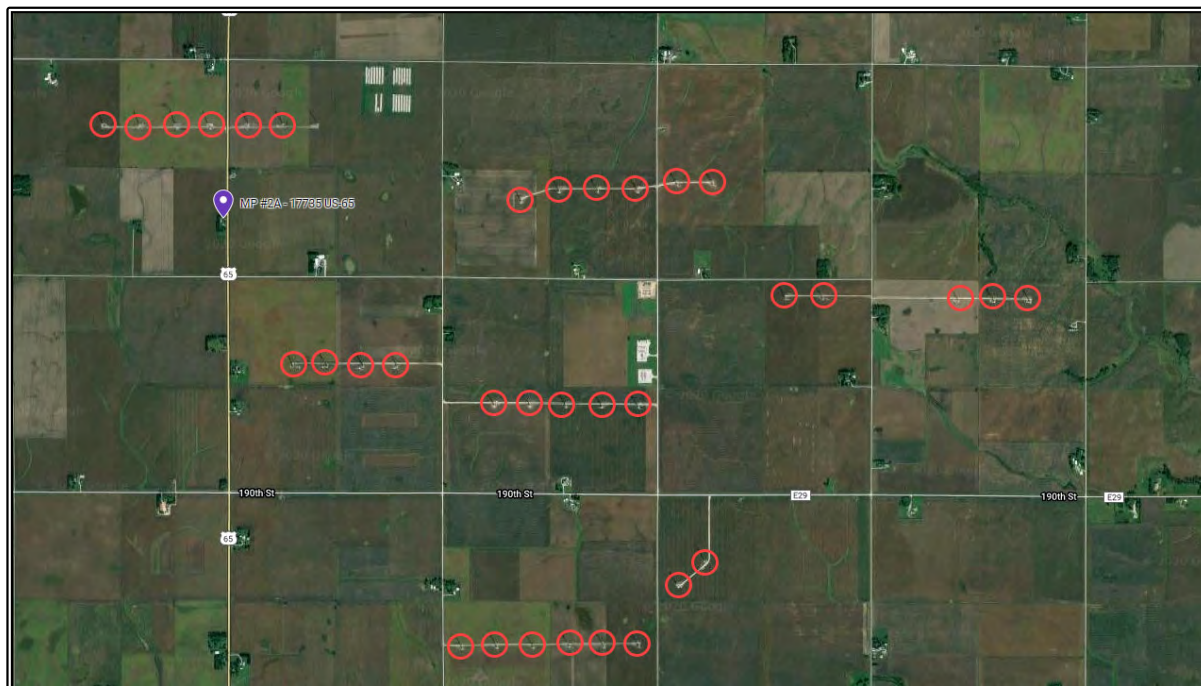
Considering the adjustments noted in the following table for the superior age, building size, style, and outbuildings of the 57576 East Lincoln Highway property and for the superior basement of the 15290 U.S. Highway 65 property, the 57576 East Lincoln Highway property appears to be superior. Therefore, although the 57576 East Lincoln Highway property gives the impression of being superior, the higher per square foot sale price for the 15290 U.S. Highway 65 property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 15290 U.S. Highway 65 property to a wind turbine.

### **Iowa Analysis - Story County Matched Pair No. 2**

Story County Matched Pair No. 2 considers the sale of a house located at 17735 U.S. Highway 65, Zearing, that sold in November 2018 for \$170,000. This house is located approximately 2,300 feet from the nearest turbine of Story County Wind, which came online in 2008. The following photograph is an aerial view of the multiple turbines visible in various directions from the house.

This property is compared with a similar property located at 12894 530<sup>th</sup> Avenue, Story City, that sold in August 2018 for \$258,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.





## STORY COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	17735 U.S. Highway 65 Zeasing, IA 50278	12894 530 <sup>th</sup> Ave. Story City, IA 50248
Distance from Turbine (Ft.)	2,300	N/A
Sale Date	November 14, 2018	August 5, 2018
Sale Price	\$170,000	\$258,000
Sale Price/Sq. Ft. (A.G.)	\$126.39	\$127.53
Year Built	1974	1918
Building Size (Sq. Ft.)	1,345	2,023
Lot Size (Acres)	1.18	5.88
Style	One-story; frame (brick) 3 bedrooms, 1.1 bath	Two-story; frame (wood) 5 bedrooms, 1 bath
Basement	Full, finished	Partial, finished
Utilities	Other cooling Baseboard heating Well & septic	Other cooling Forced-air heating Well & septic
Other	4-car detached garage Machine shed Deck	2-car detached garage Machine shed Deck



17735 U.S. Highway 65



12894 530<sup>th</sup> Avenue

The house at 17735 U.S. Highway 65, is located approximately 2,300 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions and are located in a similar rural location and have similar outbuildings. The 17735 U.S. Highway 65 property is of a superior age and has a superior basement. The 12894 530<sup>th</sup> Avenue property has a superior building size, has a superior lot size, has a superior building style, and has superior utilities.

#### ADJUSTMENT GRID MATCHED PAIR NO. 2

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	12894 530 <sup>th</sup> Ave. Story City, IA 50248	O	+	-	-	O	-	+	-	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

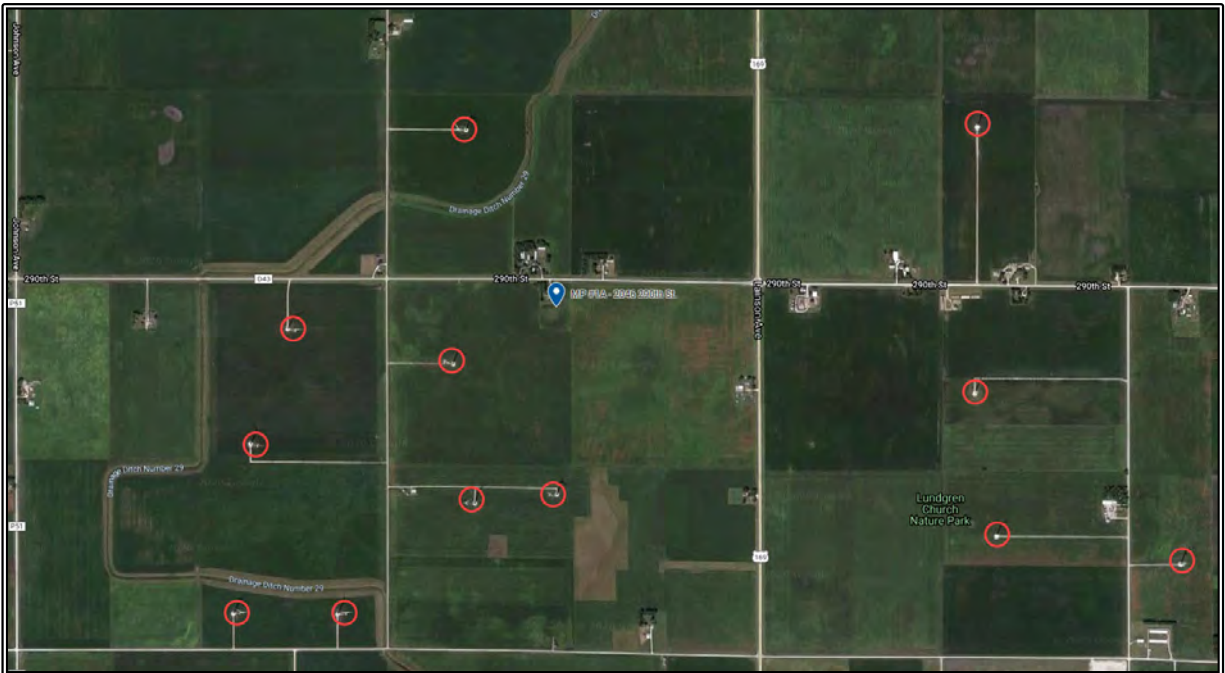
Upward adjustments are made to the 12894 530<sup>th</sup> Avenue property for the superior age, basement, and outbuildings of the 17735 U.S. Highway 65 property. Downward adjustments are made for the superior building size, lot size, style, and utilities of the 12894 530<sup>th</sup> Avenue property compared to those features of the 17735 U.S. Highway 65 property. The two properties have essentially the same market conditions and location. Therefore, although the two properties give the impression of being similar, the similar per square foot sale price for the 17735 U.S. Highway 65 property compared to the 12894 530<sup>th</sup> Avenue property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 17735 U.S. Highway 65 property to a wind turbine.

Considering the adjustments noted in the following table for the superior building size, lot size, style, and utilities of the 12894 530<sup>th</sup> Avenue property and for the superior age, basement, and outbuildings of the 17735 U.S. Highway 65 property, the two properties give the impression of being essentially similar. Therefore, although the two properties give the impression of being similar, the similar per square foot sale price for the 17735 U.S. Highway 65 property compared to the 12894 530<sup>th</sup> Avenue property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 17735 U.S. Highway 65 property to a wind turbine.

## Iowa Analysis - Webster County Matched Pair No. 1

Webster County Matched Pair No. 1 considers the sale of a house located at 2046 290<sup>th</sup> Street, Fort Dodge, that sold in November 2017 for \$134,000. This house is located approximately 1,615 feet from the nearest turbine of the Lundgren Wind Farm, which came online in 2014. The photograph below is an aerial view of the multiple turbines visible in various directions from the house.

This property is compared with a similar property located at 2611 180<sup>th</sup> Street, Fort Dodge, that sold in May 2017 for \$215,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



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**WEBSTER COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	2046 290 <sup>th</sup> St. Fort Dodge, IA 50501	2611 180 <sup>th</sup> St. Fort Dodge, IA 50501
Distance from Turbine (Ft.)	1,615	N/A
Sale Date	November 14, 2017	May 26, 2017
Sale Price	\$134,000	\$215,000
Sale Price/Sq. Ft. (A.G.)	\$104.04	\$93.80
Year Built	1960	1915
Building Size (Sq. Ft.)	1,288	2,292
Lot Size (Acres)	6.71	12.00
Style	One-story; frame (vinyl) 3 bedrooms, 1.1 bath	Two-story; frame (vinyl) 4 bedrooms, 2 bath
Basement	Partial, finished	Full, unfinished
Utilities	Other Cooling Forced-air heat Well & septic	Other Cooling; forced-air heat; well & septic
Other	1-car attached garage 1-car detached garage	1-car detached garage Pole barn and patio

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2046 290<sup>th</sup> Street

2611 180<sup>th</sup> Street





The house at 2046 290<sup>th</sup> Street, is located approximately 1,615 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions, located in a similar rural location, have similar basement, have similar utilities, and have similar outbuildings. The 2046 290<sup>th</sup> Street property has a superior age. The 2611 180<sup>th</sup> Street property is of a superior building size, has a superior lot size, and a superior building style.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	2611 180 <sup>th</sup> St. Fort Dodge, IA 50501	O	+	-	-	O	-	O	O	O
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

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Upward adjustments are made to the 2611 180<sup>th</sup> Street property for the superior age of the 2046 290<sup>th</sup> Street property. Downward adjustments are made for the superior building size, lot size, and style of the 2611 180<sup>th</sup> Street property compared to those features of the 2046 290<sup>th</sup> Street property. The two properties have essentially the same market conditions, location, basement, utilities, and outbuildings. Therefore, although the 2611 180<sup>th</sup> Street property gives the impression of being superior, the higher per square foot sale price for the 2046 290<sup>th</sup> Street property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 2046 290<sup>th</sup> Street property to a wind turbine.

Considering the adjustments noted in the following table for the superior building size, lot size, and style of the 2611 180<sup>th</sup> Street property and for the superior age of the 2046 290<sup>th</sup> Street property, the 2611 180<sup>th</sup> Street property appears to be superior. Therefore, although the 2611 180<sup>th</sup> Street property gives the impression of being superior, the higher per square foot sale price for the 2046 290<sup>th</sup> Street property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 2046 290<sup>th</sup> Street property to a wind turbine.

### Illinois Analysis - McLean County Matched Pair No. 1

McLean County Matched Pair No. 1 considers the sale of a house located at 29394 E 850 North Road, Ellsworth, that sold in November 2015 for \$207,000. This house is located approximately 1,865 feet from the nearest turbine, and there are several turbines visible to the north and east. The photograph below is of the turbines visible from the house, with the majority visible in the distance.



This property is compared with a similar property located at 26298 E 1000 North Road, Downs, that sold in March 2015 for \$220,000. This property is not located near wind turbines; however, there are some visible more than 1 mile to the east. Market conditions are considered to be similar. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.

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**MCLEAN COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	29394 E 850 North Rd. Ellsworth, IL 61737	26298 E 1000 North Rd. Downs, IL 61736
Distance from Turbine (Ft.)	1,865	N/A
Sale Date	November 17, 2015	March 11, 2015
Sale Price	\$207,000	\$220,000
Sale Price/Sq. Ft. (A.G.)	\$86.25	\$82.71
Year Built	1978	1978
Building Size (Sq. Ft.)	2,400	2,660
Lot Size (Acres)	1.70	2.49
Style	Two-story, frame (vinyl/brick) 4 bedrooms; 2 bath	Two-story, frame (vinyl) 4 bedrooms; 2 bath
Basement	Full, finished	Full, finished
Utilities	Central air Propane heat Well & septic	Central air Propane heat Well & septic
Other	2-car detached garage Patio, deck, small shed	2.5-car attached garage Large storage shed

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29394 E 850 North Road

26298 E 1000 North Road



Both houses are of similar construction type, age, and size. Both had been updated recently, with the house at 29394 E 850 North Road having been updated more extensively than the other. Both have finished basements; however, basement build-out in the house at 26298 E 1000 North Road is not completely finished. The house at 26298 E 1000 North Road has a large shed with a drive-in door. The superior interior features and the larger shed are offset by the approximately ½-acre larger site size of the property at 26298 E 1000 North Road. Both houses are located on paved roads.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	26298 E 1000 North Rd. Downs, Illinois	○	○	○	-	○	○	○	○	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
○	No adjustment necessary									

Downward adjustments are made for the superior lot size and outbuildings of the 26298 E 1000 North Road property. When the adjustments noted above are made to the sale price of the 26298 E 1000 North Road property, the two properties have essentially the same sale price per square foot value. Thus, the difference in the sales price does not support the conclusion that there is any negative impact on value resulting from the proximity of the 29394 E 850 North Road property to wind turbines.

#### Illinois Analysis - McLean County Matched Pair No. 2

McLean County Matched Pair No. 2 considers the sale of a house located at 25156 E 1400 North Road, Ellsworth, that sold in November 2015 for \$196,000. This house is located approximately 2,210 feet from the nearest turbine, but there are several turbines proximate to the south, southeast, and southwest. The photograph below is of the turbines visible from the property.



This property is compared with a similar property located at 787 E 1300 North Road, Sibley, that sold in March 2015 for \$125,000. This property is not located near wind turbines. Market conditions are considered to be similar. Although this property is located in Ford County, both properties have similar, rural locations. The salient details of these two properties are summarized in the following table.

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**MCLEAN COUNTY MATCHED PAIR NO. 2**

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	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
Address	25156 E 1400 North Rd. Ellsworth, IL 61737	787 E 1300 North Rd. Sibley, IL 61773
Distance from Turbine	2,210	N/A
Sale Date	November 1, 2015	March 13, 2015
Sale Price	\$196,000	\$125,000
Sale Price/Sq. Ft. (A.G.)	\$66.58	\$49.56
Year Built	1890	1900
Building Size (Sq. Ft.)	2,944	2,522
Lot Size (Acres)	4.14	3.36
Style	Two-story, frame (vinyl) 4 bedrooms; 2 bath	Two-story, frame (vinyl) 4 bedrooms; 2 bath
Basement	Full, finished	Full, partially finished
Utilities	Central air Propane heat Well & septic	Central air Propane heat Well & septic
Other	1-car attached garage Porch, machine shop	2-car detached garage Deck, large shed

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25156 E 1400 North Road

787 E 1300 North Road





Both houses are of similar construction type, age, and size. Both have been remodeled in the recent past. The E 1400 North Road house has a large freestanding garage/machine shed that has water and electricity, which is superior to the older shed on the site of the E 1300 North Road house. Also, the site size of the E 1400 North Road house is approximately  $\frac{3}{4}$  acre larger than the E 1300 North Road house. Both factors are reflected in its higher sale price.

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**ADJUSTMENT GRID MATCHED PAIR NO. 2**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
2B	787 E 1300 North Rd. Sibley, Illinois	○	○	+	+	○	○	○	○	○
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment based on comparable being superior in comparison to property #2A									
○	No adjustment necessary									

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Upward adjustments are made for the larger building size and the larger lot size of the E 1400 North Road property. When the adjustments noted above are made to the sale price of the E 1300 North Road property, the two properties have a similar sale price per square foot value. Thus, the difference in the sales price does not support the conclusion that there is any negative impact on value resulting from the proximity of the E 1400 North Road property to wind turbines.

### Illinois Analysis - McLean County Matched Pair No. 3

McLean County Matched Pair No. 3 considers the sale of a house located at 25017 E 1400 North Road, Ellsworth, that sold in September 2015 for \$159,000. This house is located approximately 1,573 feet from the nearest turbine, and there are several turbines proximate to the south, southeast, and southwest. The photograph below is of the turbines visible from the property.



This property is compared with a similar property located at 10837 Yankee Town Road, Farmer City, that sold in October 2016 for \$134,000. This property is not located near wind turbines. Market conditions are considered to be slightly superior at the date of sale of this property. Although this house is located in DeWitt County, both properties have similar rural locations. The salient details of these two properties are summarized in the following table.



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**MCLEAN COUNTY MATCHED PAIR NO. 3**

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	<b>3A - Proximate to a Wind Turbine</b>	<b>3B - Not Proximate to a Wind Turbine</b>
Address	25017 E 1400 North Rd. Ellsworth, IL 61737	10837 Yankee Town Rd. Farmer City, IL 61842
Distance from Turbine	1,573	N/A
Sale Date	September 3, 2015	October 3, 2016
Sale Price	\$159,000	\$134,000
Sale Price/Sq. Ft. (A.G.)	\$81.45	\$68.37
Year Built	1880	1908
Building Size (Sq. Ft.)	1,952	1,960
Lot Size (Acres)	2.87	4.00
Style	Two-story, frame (vinyl) 4 bedrooms; 2 bath	Two-story, frame (vinyl) 4 bedrooms; 2 bath
Basement	Full, finished	Full, finished
Utilities	Central air Propane heat Well & septic	Central air Propane heat Well & septic
Other	No separate garage Large shed with drive-in doors Other farm buildings	No separate garage Large shed with drive-in doors Other farm buildings

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25017 E 1400 North Road

10837 Yankee Town Road



Both houses are of similar construction type, age, and size. Both have been remodeled and updated. Neither property has a garage; both have large buildings with drive-in doors for cars and other equipment. Both properties have other farm buildings on the site. The Yankee Town Road house has a site that is approximately 1.25 acres larger than that of the E 1400 North Road house.

#### ADJUSTMENT GRID MATCHED PAIR NO. 3

SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
3B	10837 Yankee Town Rd. Farmer City, Illinois	-	0	0	-	0	0	0	0	0
+	Positive adjustment based on comparable being inferior in comparison to property #3A									
-	Negative adjustment based on comparable being superior in comparison to property #3A									
0	No adjustment necessary									

Downward adjustments are made for the superior market conditions and larger lot size of the E 1400 North Road property. When the adjustments noted above are made to the sale price of the Yankee Town Road property, the E 1400 North Road property appears to have a superior sale price per square foot value to that of the Yankee Town Road property. Thus, the difference in the sales price does not support the conclusion that there is any negative impact on value resulting from the proximity of the E 1400 North Road property to wind turbines.

#### Illinois Analysis - LaSalle County Matched Pair No. 1

LaSalle County Matched Pair No. 1 considers the sale of a house located at 1468 East 22<sup>nd</sup> Road, Streator, that sold in November 2018 for \$185,000. This house is located approximately 2,870 feet from the nearest turbine of the Grand Ridge III Wind Farm, which came online in 2009. As well as 2,745 feet from the nearest solar panel of the Grand Ridge Solar Farm, which came online in 2012. The photograph below is an aerial view of the multiple turbines and solar farm visible each direction of the house.

This property is compared with a similar property located at 4160 East 7<sup>th</sup> Road, Mendota, that sold in March 2019 for \$158,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



### LaSALLE COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	1468 E 22 <sup>nd</sup> Rd. Streator, IL 61364	4160 E 7 <sup>th</sup> Rd. Mendota, IL 61342
Distance from Turbine (Ft.)	2,870	N/A
Distance from Solar Panel (Ft.)	2,745	N/A
Sale Date	November 18, 2018	March 10, 2019
Sale Price	\$185,000	\$158,000
Sale Price/Sq. Ft. (A.G.)	\$83.18	\$61.77
Year Built	1917	1900
Building Size (Sq. Ft.)	2,224	2,558
Lot Size (Acres)	2.22	2.96
Style	Two-story; frame (vinyl) 5 bedrooms, 2 bath	Two-story; frame (vinyl) 4 bedrooms, 2 bath
Basement	Partial	N/A
Utilities	Well & septic	Central air Forced air heating Well & septic
Other	2-car detached garage Barn Machine Shed	2-car detached garage



1468 East 22<sup>nd</sup> Road



4160 East 7<sup>th</sup> Road

The house at 1468 East 22<sup>nd</sup> Road, is located in a rural area. Both houses have essentially the same age, building size, and location. The 1468 East 22<sup>nd</sup> Road property has a superior building style, basement, and outbuildings. The 4160 East 7<sup>th</sup> Road property is of a superior market conditions, lot size, and utilities.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	4160 E 7th Rd. Mendota, IL 61342	-	O	O	-	O	+	+	-	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 4160 East 7<sup>th</sup> Road property for the superior building style, basement, and outbuildings of the 1468 East 22<sup>nd</sup> Road. Downward adjustments are made for the superior market conditions, lot size, and utilities of the 4160 East 7<sup>th</sup> Road property compared to those features of the 1468 East 22<sup>nd</sup> Road property. The two properties have essentially the same age, building size, and location. Therefore, although the 4160 East 7<sup>th</sup> Road property gives the impression of being superior, the higher per square foot sale price for the 1468 East 22<sup>nd</sup> Road property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1468 East 22<sup>nd</sup> Road property to a wind turbine or solar panel.



### Illinois Analysis - LaSalle County Matched Pair No. 2

LaSalle County Matched Pair No. 2 considers the sale of a house located at 1563 East 28<sup>th</sup> Road, Ransom, that sold in January 2020 for \$164,000. This house is located approximately 1,966 feet from the nearest turbine of the Grand Ridge III Wind Farm, which came online in 2009. The photograph below is an aerial view of the multiple turbines visible each direction of the house.

This property is compared with a similar property located at 4160 East 7<sup>th</sup> Road, Mendota, that sold in March 2019 for \$158,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



## LaSALLE COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	1563 E 28 <sup>th</sup> Rd. Ransom, IL 60470	4160 E 7 <sup>th</sup> Rd. Mendota, IL 61342
Distance from Turbine (Ft.)	1,966	N/A
Sale Date	January 28, 2020	March 10, 2019
Sale Price	\$164,000	\$158,000
Sale Price/Sq. Ft. (A.G.)	\$88.65	\$61.77
Year Built	1904	1900
Building Size (Sq. Ft.)	1,850	2,558
Lot Size (Acres)	7.00	2.96
Style	Two-story; frame (vinyl) 4 bedrooms, 1 bath	Two-story; frame (vinyl) 4 bedrooms, 2 bath
Basement	Full, unfinished	N/A
Utilities	Central air Forced air heating Well & septic	Central air Forced air heating Well & septic
Other	2-car detached garage Barn Machine Shed	2-car detached garage



1563 East 28<sup>th</sup> Road

4160 East 7<sup>th</sup> Road





The house at 1563 East 28<sup>th</sup> Road, is located in a rural area. Both houses have essentially the same age, location, building style, and utilities. The 1563 East 28<sup>th</sup> Road property has a superior market conditions, lot size, basement, and outbuildings. The 4160 East 7<sup>th</sup> Road property is of a superior building size.

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**ADJUSTMENT GRID MATCHED PAIR NO. 2**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	4160 E 7th Rd. Mendota, IL 61342	+	O	-	+	O	O	+	O	+
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment based on comparable being superior in comparison to property #2A									
O	No adjustment necessary									

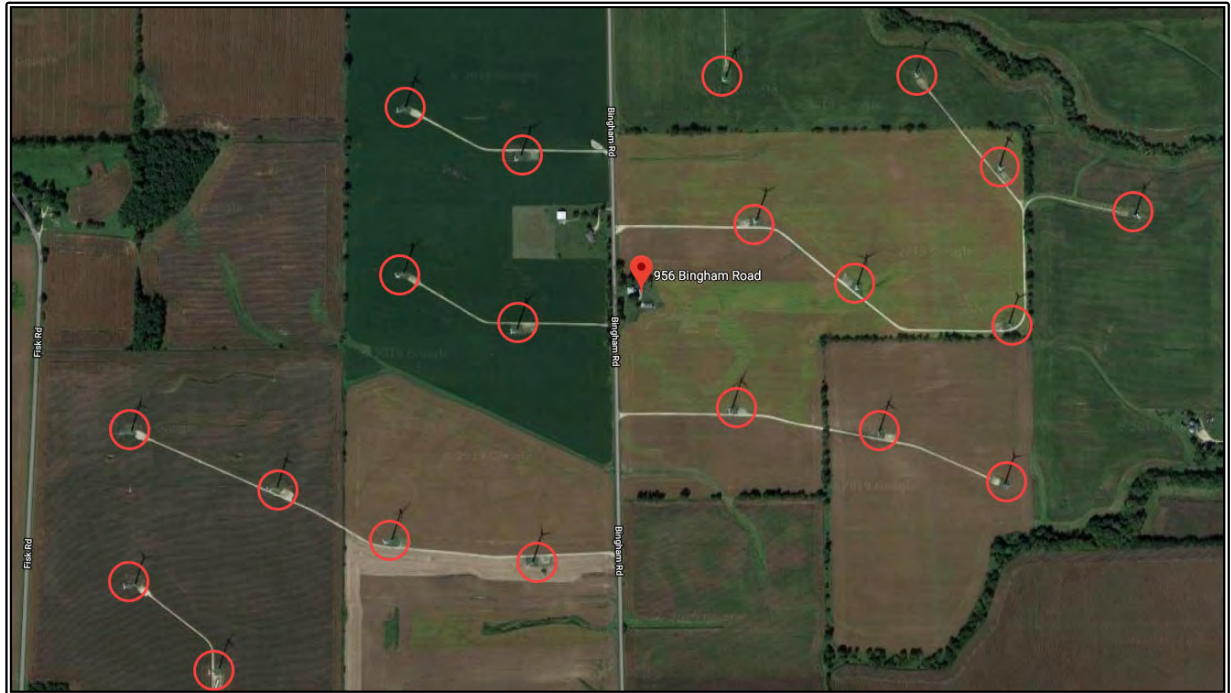
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Upward adjustments are made to the 4160 East 7<sup>th</sup> Road property for the superior market conditions, lot size, basement, and outbuildings of the 1563 East 28<sup>th</sup> Road. Downward adjustments are made for the superior building size of the 4160 East 7<sup>th</sup> Road property compared to those features of the 1563 East 28<sup>th</sup> Road property. The two properties have essentially the same age, location, building style, and utilities. Therefore, although the two properties give the impression of being similar, the higher per square foot sale price for the 1563 East 28<sup>th</sup> Road property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1563 East 28<sup>th</sup> Road property to a wind turbine.

### **Illinois Analysis - Lee County Matched Pair No. 1**

Lee County Matched Pair No. 1 considers the sale of a house located at 956 Bingham Road, Steward, that sold in November 2017 for \$185,000. This house is located approximately 735 feet from the nearest turbine of the Mendota Hills Wind Farm, which originally came online in 2003 and was subsequently renewed in 2019. The photograph below is an aerial view of the multiple turbines visible each direction of the house.

This property is compared with a similar property located at 3535 Elva Road, Steward, that sold in June 2018 for \$180,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



### LEE COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	956 Bingham Rd. Steward, IL 60553	3535 Elva Rd. Steward, IL 60553
Distance from Turbine (Ft.)	735	N/A
Sale Date	November 29, 2017	June 24, 2018
Sale Price	\$185,000	\$180,000
Sale Price/Sq. Ft. (A.G.)	\$100.00	\$87.89
Year Built	1900	1972
Building Size (Sq. Ft.)	1,850	2,048
Lot Size (Acres)	2.41	3.22
Style	Two-story; frame (vinyl) 4 bedrooms, 2 bath	One-story; frame (vinyl) 4 bedrooms, 2 bath
Basement	Full	Full, partially finished
Utilities	Wall-unit air Radiant heat Well & septic	Hydronic heating; well & septic
Other	2-car detached garage; Storage shed Deck, porch, and patio	3-car attached garage Storage shed, horse paddock Porch, and patio



956 Bingham Road



3535 Elva Road

The house at 956 Bingham Road, is located approximately 735 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions, have similar lot sizes, located in a similar rural location, and have similar basements. The 956 Bingham Road property has a superior building style and has superior utilities. The 3535 Elva Road property is of a superior age, superior building size, and has superior outbuilding.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

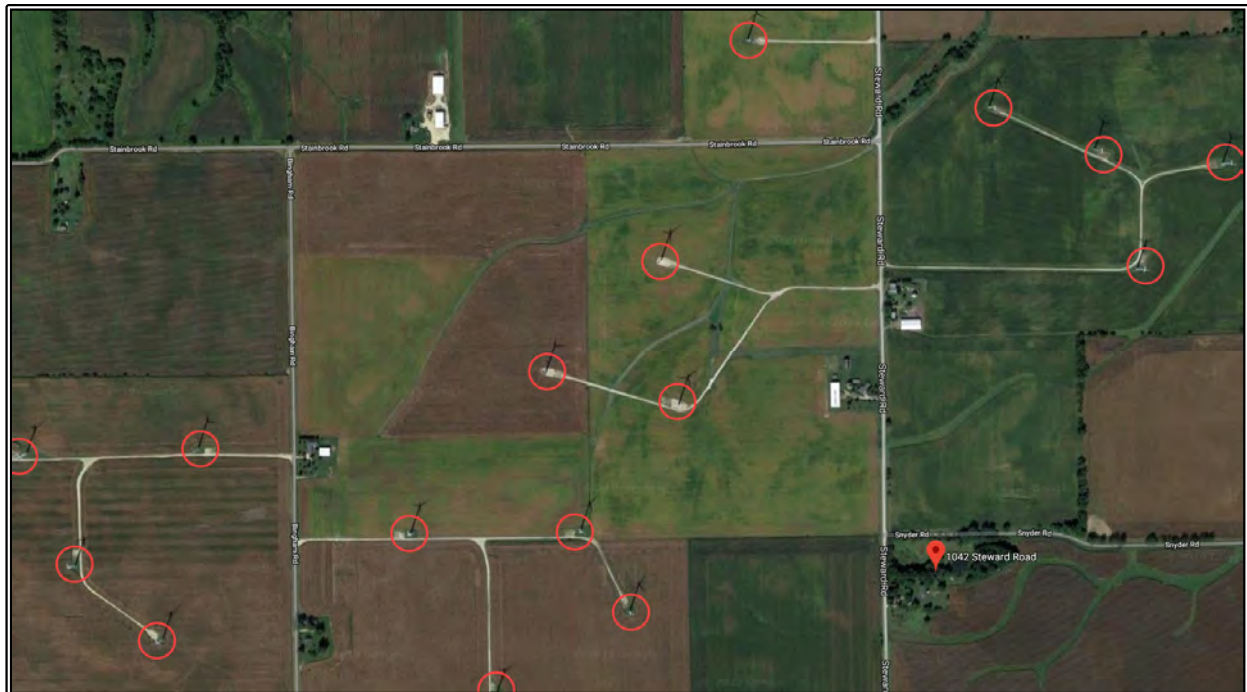
Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	3535 Elva Rd. Steward, IL 60553	O	-	-	O	O	+	O	+	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 3535 Elva Road property for the superior building style and utilities of the 956 Bingham Road. Downward adjustments are made for the superior age, building size, and outbuildings of the 3535 Elva Road property compared to those features of the 956 Bingham Road property. The two properties have essentially the same market conditions, lot size, location, and basements. Therefore, although the 3535 Elva Road property gives the impression of being superior, the higher per square foot sale price for the 956 Bingham Road property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 956 Bingham Road property to a wind turbine.

## Illinois Analysis - Lee County Matched Pair No. 2

Lee County Matched Pair No. 2 considers the sale of a house located at 1042 Steward Road, Steward, that sold in July 2017 for \$320,000. This house is located approximately 1,780 feet from the nearest turbine of the Mendota Hills Wind Farm, which originally came online in 2003 and was subsequently renewed in 2019. The following photograph is an aerial view of the multiple turbines visible to the west of the house.

This property is compared with a similar property located at 3377 Willow Creek Road, Lee, that sold in February 2018 for \$319,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.





## LEE COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	1042 Steward Rd. Steward, IL 60553	3377 Willow Creek Rd. Lee, IL 60530
Distance from Turbine (Ft.)	1,780	N/A
Sale Date	July 27, 2017	February 15, 2018
Sale Price	\$320,000	\$319,000
Sale Price/Sq. Ft. (A.G.)	\$181.82	\$141.34
Year Built	1936	2002
Building Size (Sq. Ft.)	1,760	2,257
Lot Size (Acres)	9.08	2.00
Style	Two-story; frame (brick) 4 bedrooms, 2 bath	One-story; frame (vinyl) 6 bedrooms, 2 bath
Basement	Full	Full, finished 2,000 sq. ft. walkout
Utilities	Central air Forced-air heating Well & septic	Central and geothermal air Geothermal heating Well & septic
Other	2-car detached garage Pole barn Pond, porch, and patio	2-car attached garage Machine shed with 1-car garage Two-tiered deck, porch, patio, and pool



1042 Steward Road



3377 Willow Creek Road

The house at 1042 Steward Road, is located approximately 1,780 feet away from the nearest turbine, in a rural area. Both houses were sold in similar market conditions and located in a similar rural location. The 1042 Steward Road property has a superior lot size. The 3377 Willow Creek Road property is of a superior age, has a superior building size, is of a superior building style, has a superior basement, has superior utilities, and has superior outbuildings.

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**ADJUSTMENT GRID MATCHED PAIR NO. 2**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	3377 Willow Creek Rd. Lee, IL 60530	0	-	-	+	0	-	-	-	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
0	No adjustment necessary									

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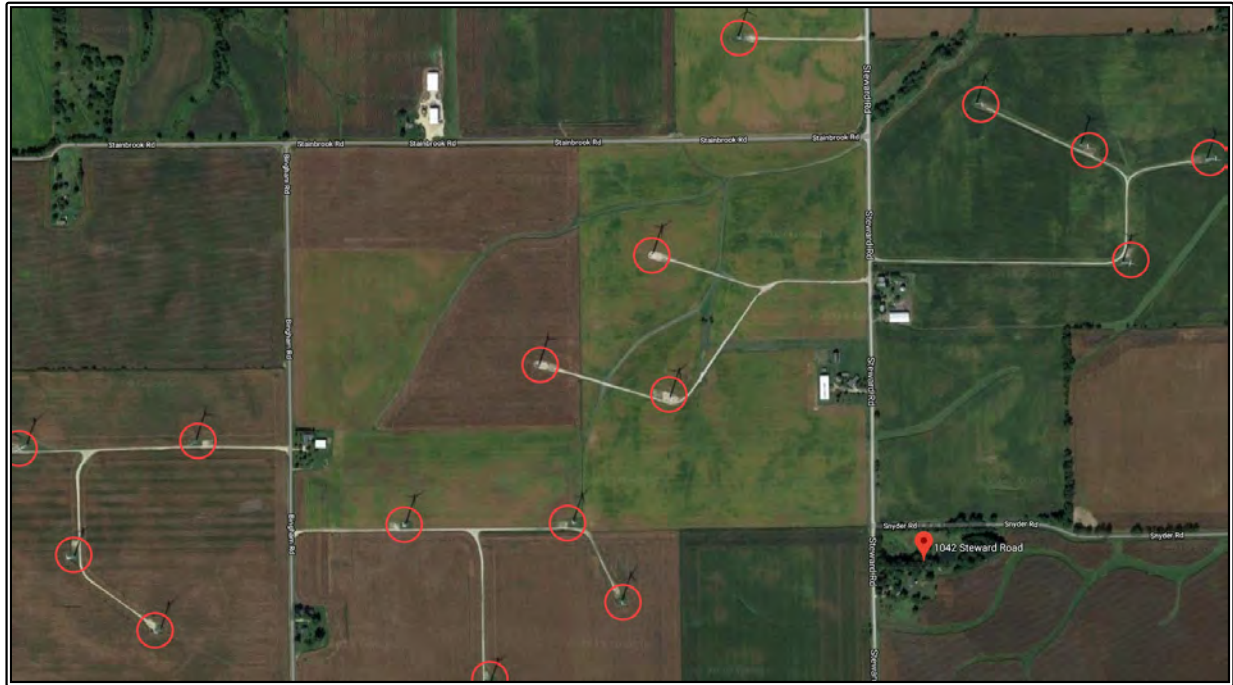
Upward adjustments are made to the 3377 Willow Creek Road property for the larger lot size of the 1042 Steward Road property. Downward adjustments are made for the superior age, building size, style, basement, utilities, and outbuildings of the 3377 Willow Creek Road property compared to those features of the 1042 Steward Road property. The two properties have essentially the same market conditions and location. Therefore, although the 3377 Willow Creek Road property gives the impression of being superior, the higher per square foot sale price for the 1042 Steward Road property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1042 Steward Road property to a wind turbine.

### **Illinois Analysis - Lee County Matched Pair No. 3**

Lee County Matched Pair No. 3 considers the prior sale of a house located at 1042 Steward Road, Steward, that sold in August 2009 for \$240,000. This house is located approximately 1,780 feet from the nearest turbine of the Mendota Hills Wind Farm, which originally came online in 2003 and was subsequently renewed in 2019. The photograph below is an aerial view of the multiple turbines visible to the west of the house.

This property is compared to the prior sale of a similar property located at 3535 Elva Road, Steward, that sold in June 2013 for \$96,253. As well as a prior sale of a similar property located at 3377 Willow Creek Road, Lee, that sold in February 2014 for \$150,000. These properties are not located near wind turbines. All three of the properties are situated in rural locations. The salient details of these three properties are summarized in the following table.





### LEE COUNTY MATCHED PAIR NO. 3 (PRIOR SALES)

	3A - Proximate to a Wind Turbine	3B - Not Proximate to a Wind Turbine	3B - Not Proximate to a Wind Turbine
Address	1042 Steward Rd. Steward, IL 60553	3535 Elva Rd. Steward, IL 60553	3377 Willow Creek Rd. Lee, IL 60530
Distance from Turbine (Ft.)	1,780	N/A	N/A
Sale Date	August 13, 2009	March 22, 2013	December 15, 2014
Sale Price	\$240,000	\$96,253	\$150,000
Sale Price/Sq. Ft. (A.G.)	\$136.36	\$47.00	\$66.46
Year Built	1936	1972	2002
Building Size (Sq. Ft.)	1,760	2,048	2,257
Lot Size (Acres)	9.08	3.22	2.00
Style	Two-story; frame (brick) 4 bedrooms, 2 bath	One-story; frame (vinyl) 4 bedrooms, 2 bath	One-story; frame (vinyl) 6 bedrooms, 2 bath
Basement	Full	Full, partially finished	Full, finished 2,000 sq. ft. walkout
Utilities	Central air Forced-air heating Well & septic	Hydronic/steam heating Well & septic	Central and geothermal air; geothermal heating; well & septic
Other	2-car detached garage Pole barn Pond, porch, and patio	3-car attached garage Storage shed, horse paddock Porch, and patio	2-car attached garage Machine shed with 1-car garage Two-tiered deck, porch, patio, and pool



1042 Steward Road



3535 Elva Road



3377 Willow Creek Road

Both the 1042 Steward Road and the 3535 Elva Road properties are located in a similar rural location, have a similar building style, and have similar basements. The 1042 Steward Road property has a superior lot size and has superior utilities. The 3535 Elva Road property was sold in superior market conditions, is of a superior age, has a superior building size, and has superior outbuildings.

Both the 1042 Steward Road and the 3377 Willow Creek Road properties are located in a similar rural location. The 1042 Steward Road property has a superior lot size. The 3377 Willow Creek Road property was sold in superior market conditions, is of a superior age, has a superior building size, is of a superior building style, has a superior basement, has superior utilities, and has superior outbuildings.

**ADJUSTMENT GRID MATCHED PAIR NO. 3  
(PRIOR SALES)**

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
3B	3535 Elva Rd. Steward, IL 60553	-	-	-	+	O	O	O	+	-
3C	3377 Willow Creek Rd. Lee, IL 60530	-	-	-	+	O	-	-	-	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 3535 Elva Road property for the larger lot size and the superior utilities of the 1042 Steward Road property. Downward adjustments are made for the superior market conditions, age, building size, and outbuildings of the 3535 Elva Road property compared to those features of the 1042 Steward Road property. The two properties have essentially the same location, style, and basements.

Upward adjustments are made to the 3377 Willow Creek Road property for the larger lot size of the 1042 Steward Road property. Downward adjustments are made for the superior market conditions, age, building size, style, basement, utilities, and outbuildings of the 3377 Willow Creek Road property compared to those features of the 1042 Steward Road property. The two properties have essentially the same location.

The 2013 prior sale of the 3535 Elva Road and the 2014 prior sale of the 3377 Willow Creek Road properties give the impression of being superior including, selling during the recovery of the housing market recession, compared to selling during the peak of the recession, such as the 2009 prior sale of the 1042 Steward Road property. However, the higher per square foot sale of the 2009 prior sale for the property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1042 Steward Road property to a wind turbine.

#### **Illinois Analysis - Macon County Matched Pair No. 1**

Macon County Matched Pair #1 considers the recent sale of a property located at 8873 North Glasgow Road, Warrensburg, that is 1,855 feet from the nearest wind turbine located within the subject, Radford's Run, with approximately four additional turbines visible from the property to the north and west.

This sale is compared with a similar property located at 1511 Hunters View Drive, Mount Zion, that sold in June 2013. The location is in a suburban setting, but the area is still very rural in nature. The salient details of these two properties are summarized in the table below.

## MACON COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1A - Prior Sale	1B - Not Proximate to a Wind Turbine
Address	8873 North Glasgow Rd. Warrensburg, IL 62573	8873 North Glasgow Rd. Warrensburg, IL 62573	1511 Hunters View Dr. Mount Zion, IL 62549
Distance from Turbine	1,855 Feet	NA	NA
Sale Date	June 12, 2017	March 25, 2014	June 31, 2013
Sale Price	\$214,000	\$184,000	\$193,000
Sale Price/Sq. Ft. (A.G.)	\$124.35	\$106.91	\$91.90
Year Built	2006	2006	2006
Building Size (Sq. Ft.)	1,721	1,721	2,100
Lot Size (Acres)	1.04	1.35	0.21
Style	1-story, frame (vinyl) 4 bedrooms, 2 bath	1-story, frame (vinyl) 3 bedrooms, 2 bath	2-story, frame (vinyl/brick) 4 bedrooms; 2.1 bath
Basement	Full; partially finished	Full; unfinished	Full; finished
Utilities	Geothermal heat & cooling Well & septic	Geothermal heat & cooling Well & septic	Central Air Forced-air heat Public Sewer
Other	2.5-car attached garage Front porch and deck	2.5-car attached garage Front porch	3-car attached garage Patio



8873 North Glasgow Road

1511 Hunters View Drive



The house at 8873 North Glasgow Road, is located approximately 8 miles northwest of Decatur, in a rural area. According to the Macon County Assessor's records, this house previously sold in March 2014 for \$184,000. This indicates an increase in value of approximately 16% during a period in which residential sale prices generally were not increasing. There is no lease for a wind turbine on this property. According to the most recent selling broker, there was an issue with the well test; the yard was dug up to find the well and to treat the problem. The yard has since returned to normal condition. The broker also stated that the house is in excellent condition and showed very well. The sellers added a wrap-around deck and finished part of the basement to add a fourth bedroom. The seller was being relocated and was offered a low price for the relocation fee; the sellers put the house on the market on their own and were able to sell it within six weeks, for greater than the asking price.

The house on Hunters View Drive has a similar, rural location, yet is situated in a suburban setting, and is approximately 4 miles south of Decatur. Although this house sits on a smaller lot than the Glasgow Road property, this is offset by the extra bedroom and by the second floor. The property is not near a wind farm.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	1511 Hunters View Drive Mount Zion, Illinois	+	0	-	+	-	0	0	+	0
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
0	No adjustment necessary									

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The comparison will be made to the June 2017 date of sale because it is most similar to the sale of the Hunters View Drive property.

Upward adjustments are made for the superior market conditions, larger lot size, and geothermal heating and cooling system of the Glasgow Road property. Downward adjustments are made for the superior building size of the Hunters View Drive property. When the adjustments noted above are made to the sale price of the Hunters View Drive property, the two properties have essentially the same sale price per square foot value. Therefore, although the Hunters View Drive house is larger, the higher per foot sales price for the Glasgow Road house is justified by its superior condition and amenities, and its larger lot size. Thus, the difference in the sales price does not support the conclusion that there is any diminution in value resulting from the proximity of the Glasgow Road property to wind turbines. This is further supported by the subsequent sale of the Glasgow Road property, at which time the 2017 sale price increased by \$17.44 per square foot over the 2014 sale price.

### **Illinois Analysis - Livingston County Matched Pair No. 1**

Livingston County Matched Pair No. 1 considers the sale of a property in Livingston County that is located proximate to the Cayuga Ridge Wind Farm. Cayuga Ridge construction began in 2009, and the wind farm came fully online in March 2010. The house at 23090 N 2500 East Road, Odell, is 2,322 feet east of a wind turbine, 3,229 feet west of a wind turbine, and 3,440 feet south of a wind turbine. The photograph below illustrates the location of this house, on the right side of the frame, relative to the nearest turbines.



This sale is compared with a similar property located at 16101 E 1400 North Road in Pontiac that is not proximate to a wind turbine. The salient details of these two properties are summarized in the following table.



## LIVINGSTON COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	23090 N 2500 East Rd. Odell, IL 60460	16101 E 1400 North Rd. Pontiac, IL 61764
Distance from Turbine	2,322 Feet	N/A
Sale Date	August 15, 2013	November 18, 2013
Sale Price	\$205,000	\$167,500
Sale Price/Sq. Ft. (A.G.)	\$108.41	\$89.33
Year Built	1971	1967
Building Size (Sq. Ft.)	1,891	1,875
Lot Size (Acres)	3.63	3.27
Style	One-story; brick 4 bedrooms, 1.1 bath	One-story; brick 3 bedrooms, 2 bath
Basement	Full, partially finished	Crawlspace
Utilities	Central air Electric heat Well & septic	Central air Propane heat Well & septic
Other	2-car detached garage 2 pole barns; 60 x 90 shed (subsequently demolished)	1-car attached garage 30 x 40 shed 64 x 42 machine shop



23090 N 2500 East Road

16101 E 1400 North Road



Both properties are located in the Pontiac High School district. The lot sizes are similar; however, the Odell property is approximately 1/3-acre larger. The houses are of similar construction age and are of equivalent size. The condition of both is assumed to be similar. The Odell property has an additional bedroom and is superior in that it has a full, partially finished basement and a larger garage. However, the Pontiac property has two full bathrooms, a first-floor laundry room, and propane gas heat. The outbuildings of the Odell property were in poor condition and were demolished subsequent to the sale; therefore, the Pontiac property is considered superior in that regard, which offsets the smaller size of the garage.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

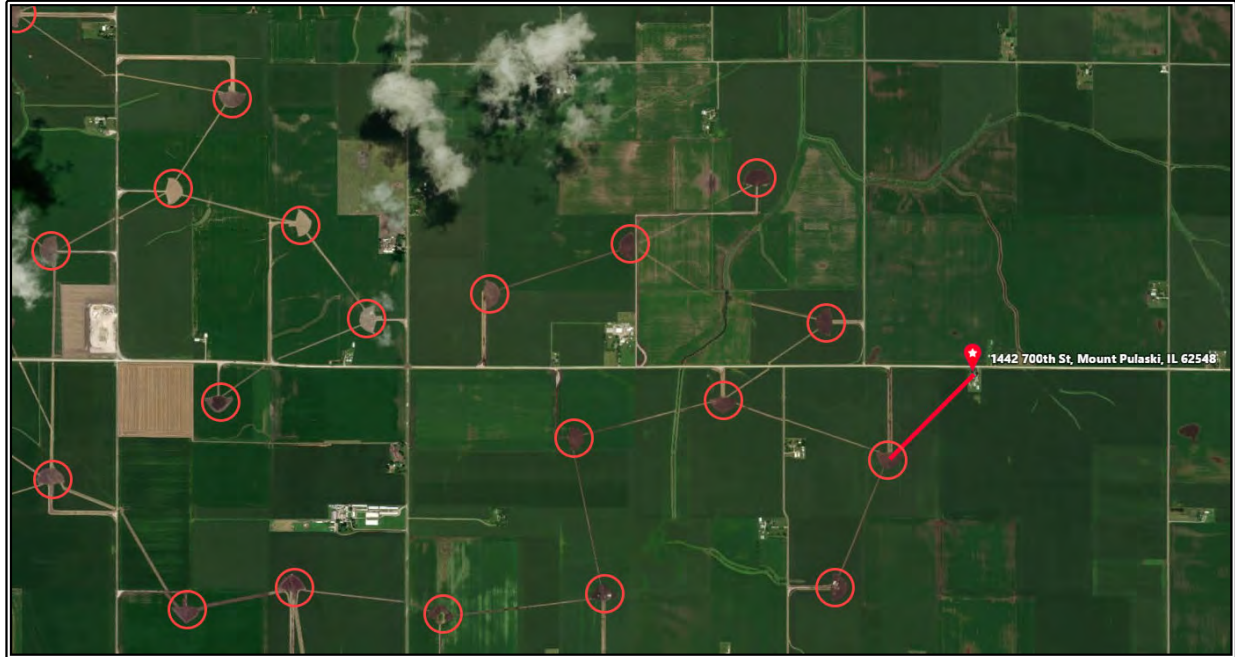
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	16101 E 1400 North Rd. Pontiac, Illinois	○	○	○	○	○	○	+	○	○
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
○	No adjustment necessary									

An upward adjustment is made for the superior basement of the N 2500 East Road property. When the adjustments noted above are made to the sale price of the E 1400 North Road property, the N 2500 East Road property appears to have a superior sale price per square foot value to that of the E 1400 North Road property. Thus, the difference in the sales price does not support the conclusion that there is any negative impact on value resulting from the proximity of the N 2500 East Road property to wind turbines.

#### Illinois Analysis - Logan County Matched Pair No. 1

Logan County Matched Pair No. 1 considers the sale of a house located at 1442 700<sup>th</sup> Street, Mount Pulaski, that sold in April 2018 for \$170,000. This house is located approximately 2,080 feet from the nearest turbine of HillTopper, which came online in 2018. The photograph below is an aerial view of the multiple turbines visible to the west of the house.

This property is compared with a similar property located at 488 100<sup>th</sup> Avenue, Athens, that sold in July 2017 for \$158,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.



### LOGAN COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	1442 700 <sup>th</sup> St. Mount Pulaski, IL 62548	488 100 <sup>th</sup> Ave. Athens, IL 62613
Distance from Turbine (Ft.)	2,080	N/A
Sale Date	April 15, 2019	July 31, 2017
Sale Price	\$170,000	\$158,000
Sale Price/Sq. Ft. (A.G.)	\$82.68	\$81.61
Year Built	1910	1901
Building Size (Sq. Ft.)	2,056	1,936
Lot Size (Acres)	2.00	4.94
Style	Two-story; frame (vinyl/wood) 4 bedrooms, 2 bath	Two-story; frame (vinyl/brick) 4 bedrooms, 2 bath
Basement	N/A	Full, unfinished
Utilities	Central air Heat pump Well & septic	Central air Forced-air heating Well & septic
Other	Barn with two parking spaces Deck, porch, and patio	2-car detached garage Deck, porch, and patio



488 100<sup>th</sup> Avenue

1442 700<sup>th</sup> Street



The house at 1442 700<sup>th</sup> Street, is located approximately 2,080 feet away from the nearest turbine, in a rural area. Both houses are of similar age, similar building size, located in a similar rural location, have a similar building style, have similar utilities, and have similar outbuildings. The 1442 700<sup>th</sup> Street property was sold in slightly superior market conditions. The 488 100<sup>th</sup> Avenue property has a superior lot size and has a superior basement.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	488 100th Ave. Athens, IL 62613	+	O	O	-	O	O	-	O	O
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 488 100<sup>th</sup> Avenue property for the superior market conditions of the 1442 700<sup>th</sup> Street property. Downward adjustments are made for the larger lot size and superior basement of the 488 100<sup>th</sup> Avenue property compared to the basement of the 1442 700<sup>th</sup> Street property. The two properties have essentially the same age, building size, location, style, utilities, and outbuildings. Therefore, although the two properties give the impression of being similar in many categories, the higher per square foot sale price for the 1442 700<sup>th</sup> Street property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 1442 700<sup>th</sup> Street property to a wind turbine.



### South Dakota Analysis - Brookings County Matched Pair No. 1

The Buffalo Ridge Wind Farms are located in Brookings County in the East-Central region of South Dakota and consist of 129 turbines that began commercial operations in 2009. Both phases I and II are located primarily in Brookings County. Phase I came online in 2009 with 24 turbines generating approximately 50.4 MW of power. Phase II was much larger, following the first phase the next year in 2010 with 105 turbines generating approximately 210 MW of power. A property located at 21088 487<sup>th</sup> Avenue, Elkton, South Dakota, sold in October 2016 for \$183,000. The nearest turbine is approximately 1,028 feet to the south of this property. The aerial map below illustrates the relationship of the 487<sup>th</sup> Avenue property to the closest wind turbines.

This property is compared with a similar property located at 5705 Rathum Loop, Brookings, South Dakota, that sold in June 2015, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following table.





## BROOKINGS COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	21088 487 <sup>th</sup> Ave. Elkton, SD 57026	5705 Rathum Loop Brookings, SD 57006
Distance from Turbine (Ft.)	1,028	N/A
Sale Date	October 14, 2016	June 5, 2015
Sale Price	\$183,000	\$142,000
Sale Price/Sq. Ft. (A.G.)	\$66.64	\$68.33
Year Built	2003	1973
Building Size (Sq. Ft.)	2,746	2,078
Lot Size (Acres)	8.00	0.49
Style	One-story, frame (vinyl) 5 bedrooms, 3 bath	One-story; frame (vinyl) 3 bedrooms, 1 bath
Basement	Partial	Crawlspace/Partially finished
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	1-car attached garage Patio, deck, utility buildings	1-car attached garage 3-car detached garage Patio, deck, utility buildings



21088 487<sup>th</sup> Avenue



5705 Rathum Loop

Both the 487<sup>th</sup> Avenue property and the Rathum Loop property are ranch-style houses. However Rathum Loop appears to contain only three bedrooms, whereas 487<sup>th</sup> Avenue has five bedrooms. An upward adjustment of Rathum Loop for the superior building style of 487<sup>th</sup> Avenue is required. In the case of the Rathum Loop property, there are utility buildings, a detached three-car garage, and a one-car attached garage; however, the 487<sup>th</sup> Avenue property has a just one larger utility building and an attached one-car garage. A downward adjustment for the superior outbuildings of Rathum Loop is required. The 487<sup>th</sup> Avenue building is of newer construction, and Rathum Loop is approximately 50 years old. Both properties are considered to be in normal condition by the Brookings County Assessor. An upward adjustment of Rathum Loop is required due to 487<sup>th</sup> Avenue's newer age. An upward adjustment is made for the larger building size of the 487<sup>th</sup> Avenue property. The 487<sup>th</sup> Avenue property is also situated on a much larger lot than that of the Rathum Loop property requiring an upward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree. The Rathum Loop property has a superior location to the 487<sup>th</sup> Street property due to its close proximity to the town of Brookings, requiring a downward adjustment.

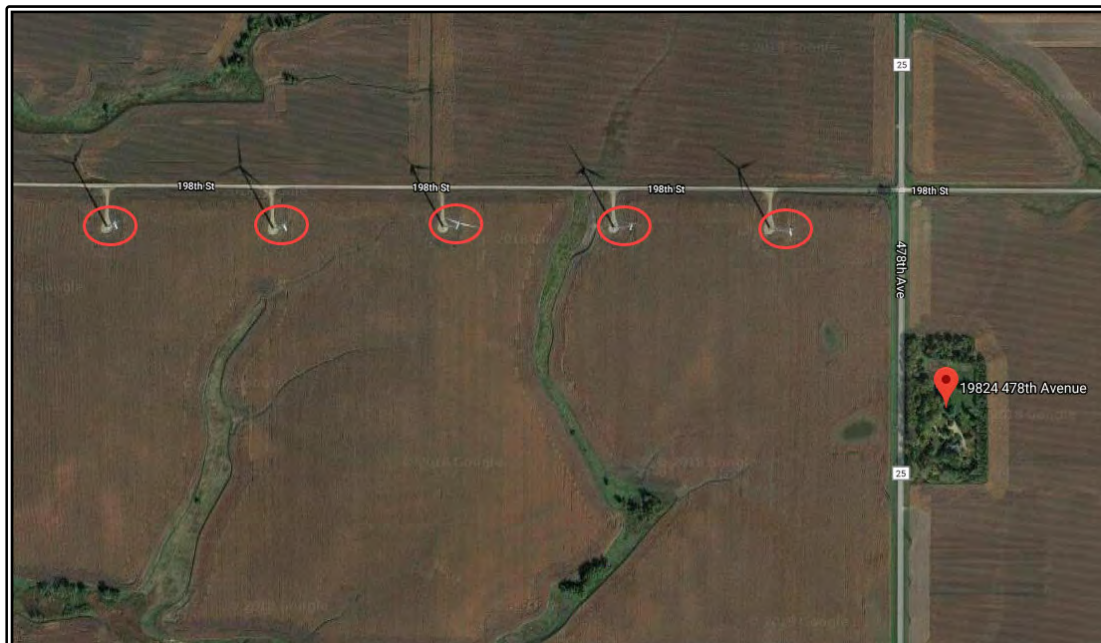
Considering the adjustments noted in the following table for the older age and smaller size of the Rathum Loop property and for the superior market conditions of the 487<sup>th</sup> Avenue property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 487<sup>th</sup> Avenue property.

ADJUSTMENT GRID MATCHED PAIR NO. 1										
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	5705 Rathum Loop Brookings, South Dakota	+	+	+	+	-	+	O	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

## South Dakota Analysis - Brookings County Matched Pair No. 2

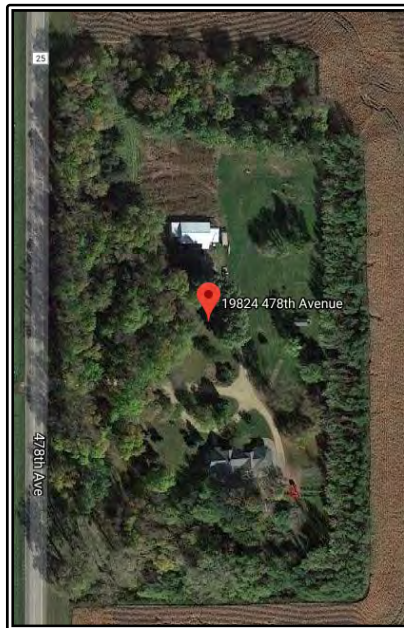
A property located at 19824 478<sup>th</sup> Avenue, Toronto, South Dakota, sold in March 2011 for \$235,000. The nearest turbine is approximately 1,548 feet to the northwest of this property. The following aerial map illustrates the relationship of the 478<sup>th</sup> Avenue property to the closest wind turbines.

This property is compared with a similar property located at 20485 475<sup>th</sup> Avenue, Brookings, South Dakota, that sold in August 2016, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following table.

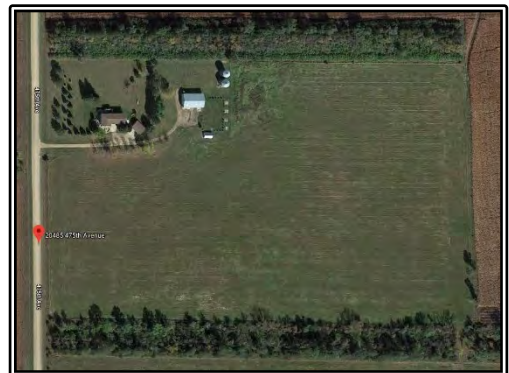


### BROOKINGS COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	19824 478 <sup>th</sup> Ave. Toronto, SD 57268	20485 475 <sup>th</sup> Ave. Brookings, SD 57002
Distance from Turbine (Ft.)	1,548	N/A
Sale Date	March 14, 2011	August 10, 2016
Sale Price	\$235,000	\$300,000
Sale Price/Sq. Ft. (A.G.)	\$100.38	\$129.53
Year Built	1998	2016
Building Size (Sq. Ft.)	2,341	2,316
Lot Size (Acres)	9.50	19.10
Style	1.5-story, frame (stone/vinyl) 3 bedrooms, 1.2 bath	One-story; frame (vinyl) 4 bedrooms, 3 bath
Basement	Partial	Full
Utilities	Radiant floor heat Well & septic	Central air Geothermal heat Well & septic
Other	1-car attached garage	3-car attached garage



19824 478<sup>th</sup> Avenue



20485 475<sup>th</sup> Avenue

Although the 478<sup>th</sup> Avenue property is a 1.5-story house and the 475<sup>th</sup> Avenue property is a ranch-style house, the two houses are of equivalent size. In the case of the 475<sup>th</sup> Avenue property, there is an attached three-car garage, while the 478<sup>th</sup> Avenue property has an attached one-car garage. A downward adjustment for the superior outbuildings of 475<sup>th</sup> Avenue is required. The 475<sup>th</sup> Avenue building is of newer construction than 478<sup>th</sup> Avenue property. Both properties are considered to be in normal condition by the Brookings County Assessor. A downward adjustment of 475<sup>th</sup> Avenue is required for its newer age, as well as a downward adjustment of 475<sup>th</sup> Avenue for its superior market conditions. The 475<sup>th</sup> Avenue property is situated on a much larger lot than that of the 478<sup>th</sup> Avenue property requiring a downward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree. The 475<sup>th</sup> Avenue property has a superior location to the 478<sup>th</sup> Avenue property due to its close proximity to the town of Brookings, requiring a downward adjustment.

#### ADJUSTMENT GRID MATCHED PAIR NO. 2

SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
2B	20485 475 <sup>th</sup> Ave. Brookings, South Dakota	-	-	O	-	-	O	-	-	-
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment based on comparable being superior in comparison to property #2A									
O	No adjustment necessary									

Considering the adjustments noted in the following table for the newer age and superior market conditions of the 475<sup>th</sup> Avenue property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 478<sup>th</sup> Avenue property.



### South Dakota Analysis - Brookings County Matched Pair No. 3

A property located at 20937 486<sup>th</sup> Avenue, Elkton, South Dakota, sold in December 2011 for \$175,000. The nearest turbine is approximately 1,433 feet to the northeast of this property. The aerial map below illustrates the relationship of the 486<sup>th</sup> Avenue property to the closest wind turbines.

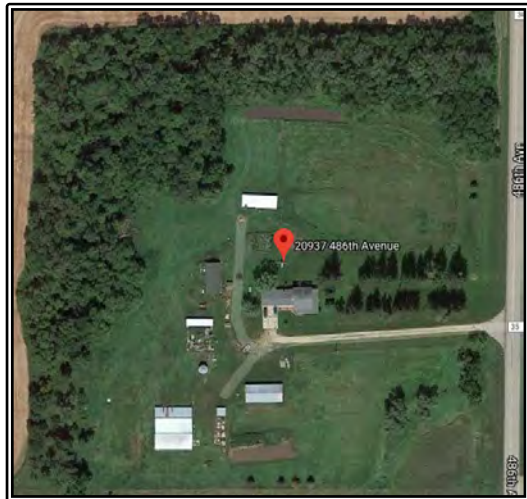
This property is compared with a similar property located at 518 West 44<sup>th</sup> Street S, Brookings, South Dakota, that sold in October 2017, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following table.





### BROOKINGS COUNTY MATCHED PAIR NO. 3

	3A - Proximate to a Wind Turbine	3B - Not Proximate to a Wind Turbine
Address	20937 486 <sup>th</sup> Ave. Elkton, SD 57026	518 W. 44 <sup>th</sup> St. S Brookings, SD 57006
Distance from Turbine (Ft.)	1,433	N/A
Sale Date	December 1, 2011	October 9, 2017
Sale Price	\$175,000	\$175,900
Sale Price/Sq. Ft. (A.G.)	\$79.26	\$104.70
Year Built	1918	1990
Building Size (Sq. Ft.)	2,208	1,680
Lot Size (Acres)	14.28	4.55
Style	Two-story, frame (vinyl) 4 bedrooms, 2 bath	One-story; frame (vinyl) 3 bedrooms, 2 bath
Basement	Partial	Crawlspace
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	2-car attached garage	2-car detached garage



20937 486<sup>th</sup> Avenue



518 W. 44<sup>th</sup> Street S

The 486<sup>th</sup> Avenue property is a two-story house, and the 44<sup>th</sup> Street South property is a one-story house, and the 486<sup>th</sup> Avenue has an extra bedroom. The superior style and number of bedrooms of the 486<sup>th</sup> Avenue property require an upward adjustment. In the case of the outbuildings, both properties have a two-car garage. The 44<sup>th</sup> Street South building is of newer construction than 486<sup>th</sup> Avenue property, which is 100 years old. Both properties are considered to be in normal condition by the Brookings County Assessor. A downward adjustment of 44<sup>th</sup> Street South is required for its newer age, as well as a downward adjustment of 44<sup>th</sup> Street South for its superior market conditions. The 486<sup>th</sup> Avenue property is situated on a much larger lot than that of the 44<sup>th</sup> Street South property requiring an upward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree.

Considering the adjustments noted in the following table for the newer age and superior market conditions of the 44<sup>th</sup> Street South property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 486<sup>th</sup> Avenue property.

ADJUSTMENT GRID MATCHED PAIR NO. 3										
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
3B	518 W. 44 <sup>th</sup> St. S. Brookings, South Dakota	-	-	+	+	○	+	+	○	○
+	Positive adjustment based on comparable being inferior in comparison to property #3A									
-	Negative adjustment based on comparable being superior in comparison to property #3A									
○	No adjustment necessary									

#### South Dakota Analysis - Brookings County Matched Pair No. 4

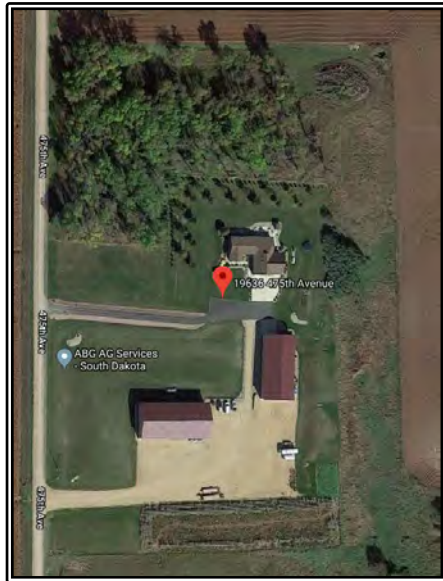
A property located at 19636 475<sup>th</sup> Avenue, Toronto, South Dakota, sold in November 2013 for \$530,000. The nearest turbine is approximately 2,309 feet to the southeast of this property. The following aerial map illustrates the relationship of the 475<sup>th</sup> Avenue property to the closest wind turbines.

This property is compared with a similar property located at 46246 214<sup>th</sup> Street, Volga, South Dakota that sold in December 2016, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following table.



#### BROOKINGS COUNTY MATCHED PAIR NO. 4

	4A - Proximate to a Wind Turbine	4B - Not Proximate to a Wind Turbine
Address	19636 475 <sup>th</sup> Ave. Toronto, SD 57268	46246 214 <sup>th</sup> St. Volga, SD 57071
Distance from Turbine (Ft.)	2,309	N/A
Sale Date	November 21, 2013	December 21, 2016
Sale Price	\$530,000	\$317,000
Sale Price/Sq. Ft. (A.G.)	\$151.60	\$182.81
Year Built	1989	2001
Building Size (Sq. Ft.)	3,496	1,734
Lot Size (Acres)	13.00	10.43
Style	One-story; frame (vinyl) 5 bedrooms, 3 bath	One-story; frame (vinyl) 4 bedrooms, 3 bath
Basement	Partial	Full
Utilities	Central air Forced-air heat Well & septic	Central air Geothermal heat Well & septic
Other	3-car attached garage Two commercial utility buildings Gazebo	1-car attached garage 2-car detached garage



19636 475<sup>th</sup> Avenue



46246 214<sup>th</sup> Street

Both the 475<sup>th</sup> Avenue property and the 214<sup>th</sup> Street property are a one-story ranch style house. In the case of the outbuildings, the 475<sup>th</sup> Avenue property is superior with two large commercial-style utility buildings and a three-car attached garage compared to the 214<sup>th</sup> Street property with a two-car detached garage and a one-car attached garage. The superiority of the 475<sup>th</sup> Avenue buildings requires an upward adjustment. The 214<sup>th</sup> Street building is of newer construction than 475<sup>th</sup> Avenue property. Both properties are considered to be in normal condition by the Brookings County Assessor. A downward adjustment of 214<sup>th</sup> Street is required for its newer age, as well as a downward adjustment of 214<sup>th</sup> Street for its superior market conditions. The 475<sup>th</sup> Avenue property is situated on a larger lot than that of the 214<sup>th</sup> Street property requiring an upward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree.

Considering the adjustments noted in the following table for the newer age and superior market conditions of the 214<sup>th</sup> Street property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 475<sup>th</sup> Avenue property.

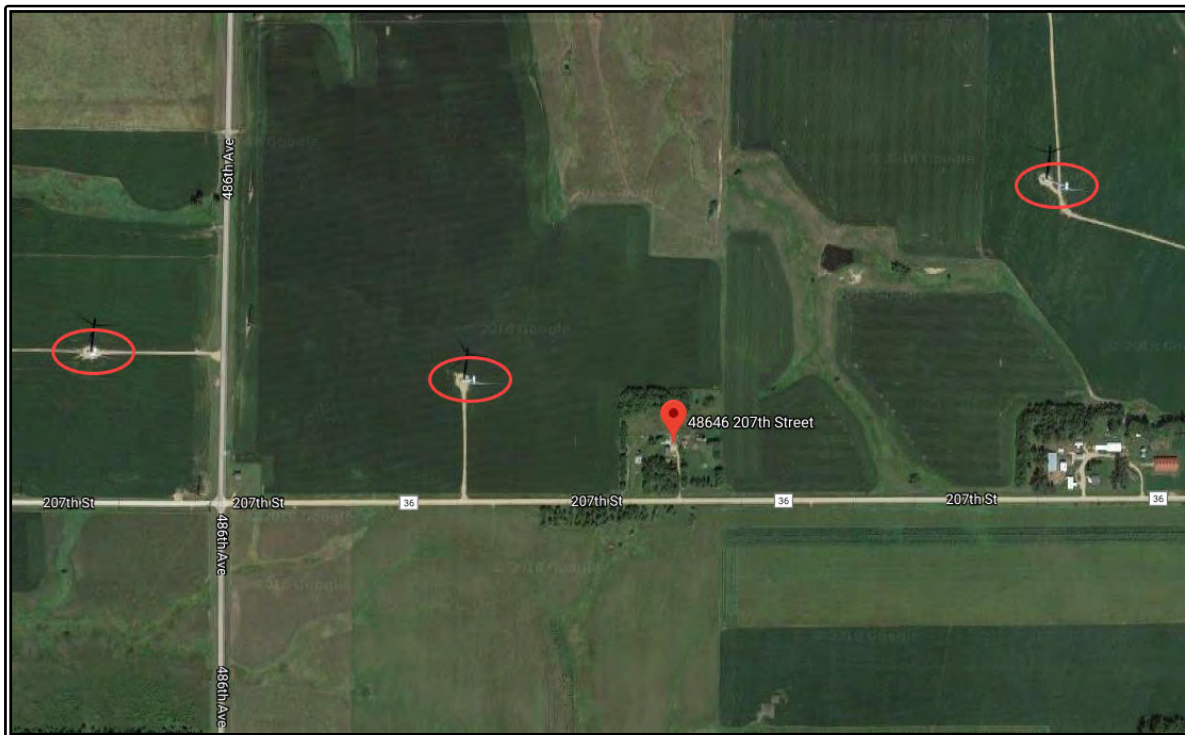
ADJUSTMENT GRID MATCHED PAIR NO. 4										
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
4B	46246 214 <sup>th</sup> St. Volga, South Dakota	-	-	+	+	O	O	-	-	+
+	Positive adjustment based on comparable being inferior in comparison to property #4A									
-	Negative adjustment based on comparable being superior in comparison to property #4A									
O	No adjustment necessary									



### South Dakota Analysis - Brookings County Matched Pair No. 5

A property located at 48646 207<sup>th</sup> Street, Elkton, South Dakota, sold in March 2014 for \$190,000. The nearest turbine is approximately 1,118 feet to the west of this property. The aerial map below illustrates the relationship of the 207<sup>th</sup> Street property to the closest wind turbines.

This property is compared with a similar property located at 5705 Rathum Loop, Brookings, South Dakota, that sold in June 2015, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following table.





## BROOKINGS COUNTY MATCHED PAIR NO. 5

	5A - Proximate to a Wind Turbine	5B - Not Proximate to a Wind Turbine
Address	48646 207 <sup>th</sup> St. Elkton, SD 57026	5705 Rathum Loop Brookings, SD 57006
Distance from Turbine (Ft.)	1,118	N/A
Sale Date	March 26, 2014	June 5, 2015
Sale Price	\$190,000	\$142,000
Sale Price/Sq. Ft. (A.G.)	\$87.96	\$68.33
Year Built	1936	1973
Building Size (Sq. Ft.)	2,160	2,078
Lot Size (Acres)	6.95	0.49
Style	Two-story, frame (vinyl) 3 bedrooms, 3 bath	One-story; frame (vinyl) 3 bedrooms, 1 bath
Basement	Partial	Crawlspace/Partially finished
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	1-car attached garage 2-car detached garage	1-car attached garage 3-car detached garage Patio, deck, utility buildings



48646 207<sup>th</sup> Street



5705 Rathum Loop

Although the 207<sup>th</sup> Street property is a two-story house and the Rathum Loop property is a ranch-style house, the two houses are of equivalent size. However, an upward adjustment to Rathum Loop is required for the superior building style of 207<sup>th</sup> Street property. In the case of the Rathum Loop property, there are utility buildings, a detached three-car garage, and a one-car attached garage. In comparison, the 207<sup>th</sup> Street property has an attached one-car garage and a detached two-car garage. A downward adjustment for the superior outbuildings of Rathum Loop is required. Although the Rathum Loop building is of newer construction, it is still approximately 50 years old. The 207<sup>th</sup> Street property is closer to 80 years old. Both properties are considered to be in normal condition by the Brookings County Assessor. A downward adjustment of Rathum Loop is required for its newer age, as well as a downward adjustment of Rathum Loop for its superior market conditions. The 207<sup>th</sup> Street property is situated on a much larger lot than that of the Rathum Loop property requiring an upward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree. The Rathum Loop property has a superior location to the 207<sup>th</sup> Street property due to its close proximity to the town of Brookings, requiring a downward adjustment.

Considering the adjustments noted in the following table for the newer age and superior market conditions, yet smaller lot size of the Rathum Loop property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 207<sup>th</sup> Street property.

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**ADJUSTMENT GRID MATCHED PAIR NO. 5**

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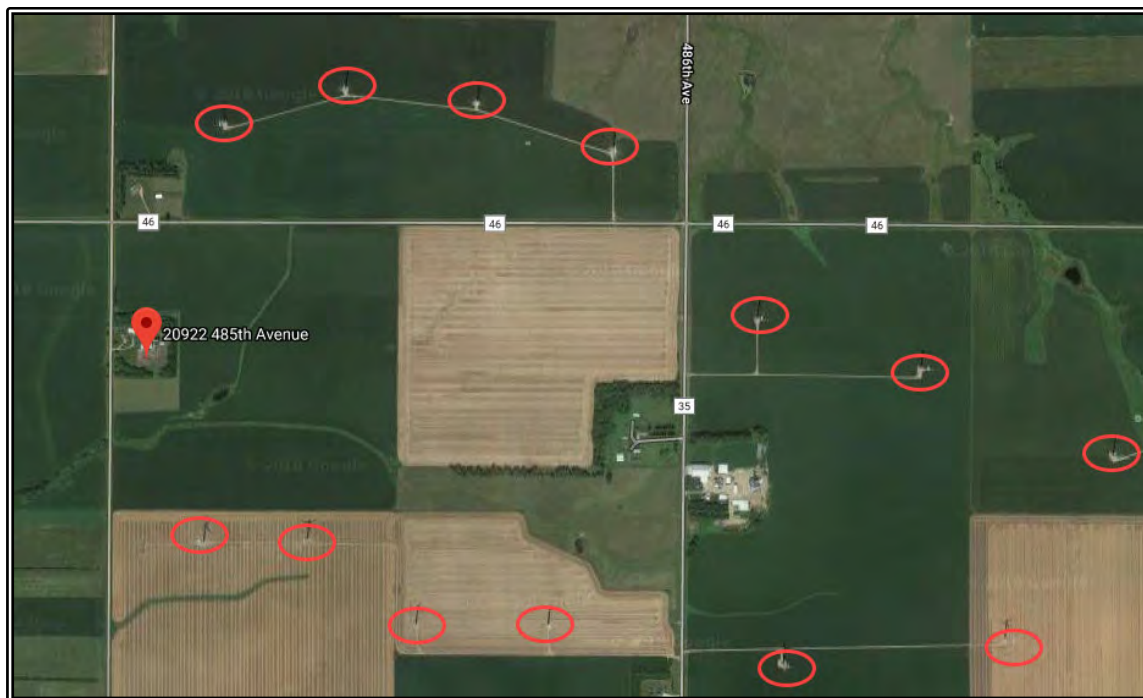
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
5B	5705 Rathum Loop Brookings, South Dakota	-	-	O	+	-	+	O	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #5A									
-	Negative adjustment based on comparable being superior in comparison to property #5A									
O	No adjustment necessary									

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**South Dakota Analysis - Brookings County Matched Pair No. 6**

A property located at 20922 485<sup>th</sup> Avenue, Elkton, South Dakota, sold in August 2010 for \$180,000. The nearest turbine is approximately 1,959 feet to the south, as well as twelve other turbines within approximately a half mile to the east, of this property. The aerial map illustrates the relationship of the 20922 485<sup>th</sup> Avenue property to the closest wind turbines.

This property is compared with a similar property located at 46464 218<sup>th</sup> Street, Volga, South Dakota, that sold in November 2014, which is not located proximate to any wind turbines. The salient details of these two properties are summarized in the following below.



### BROOKINGS COUNTY MATCHED PAIR NO. 6

	6A - Proximate to a Wind Turbine	6B - Not Proximate to a Wind Turbine
Address	20922 485 <sup>th</sup> Ave. Elkton, SD 57026	46464 218 <sup>th</sup> St. Volga, SD 57071
Distance from Turbine (Ft.)	1,959	N/A
Sale Date	August 4, 2010	November 14, 2014
Sale Price	\$180,000	\$190,600
Sale Price/Sq. Ft. (A.G.)	\$107.14	\$113.45
Year Built	1992	1918
Building Size (Sq. Ft.)	1,680	1,680
Lot Size (Acres)	13.35	15.00
Style	One-story; frame (vinyl) 4 bedrooms, 2 bath	Two-story; frame (vinyl) 5 bedrooms, 2 bath
Basement	Partial	Full
Utilities	Central air Geothermal heat Well & septic	Central air Forced-air heat Well & septic
Other	1-car attached garage	1-car detached garage



20922 485<sup>th</sup> Avenue



46464 218<sup>th</sup> Street

The 218<sup>th</sup> Street property is a two-story house with five bedrooms, and the 485<sup>th</sup> Avenue property is a one-story ranch style house with four bedrooms. The superior style of the 218<sup>th</sup> Street property requires a downward adjustment. In the case of the outbuildings, both properties have a one-car garage. The 485<sup>th</sup> Avenue building is of newer construction than the 218<sup>th</sup> Street property, which is 100 years old. Both properties are considered to be in normal condition by the Brookings County Assessor. An upward adjustment of 218<sup>th</sup> Street is required for 485<sup>th</sup> Avenue's newer age, as well as a downward adjustment of 218<sup>th</sup> Street for its superior market conditions. The 218<sup>th</sup> Street property is situated on a larger lot than that of the 485<sup>th</sup> Avenue property requiring an upward adjustment; however, both lots are surrounded by agricultural and pastureland, which mitigates the size differential to some degree.

Considering the adjustments noted in the following table for the older age, yet superior market conditions of the 218<sup>th</sup> Street property, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the 485<sup>th</sup> Avenue property.

#### ADJUSTMENT GRID MATCHED PAIR NO. 6

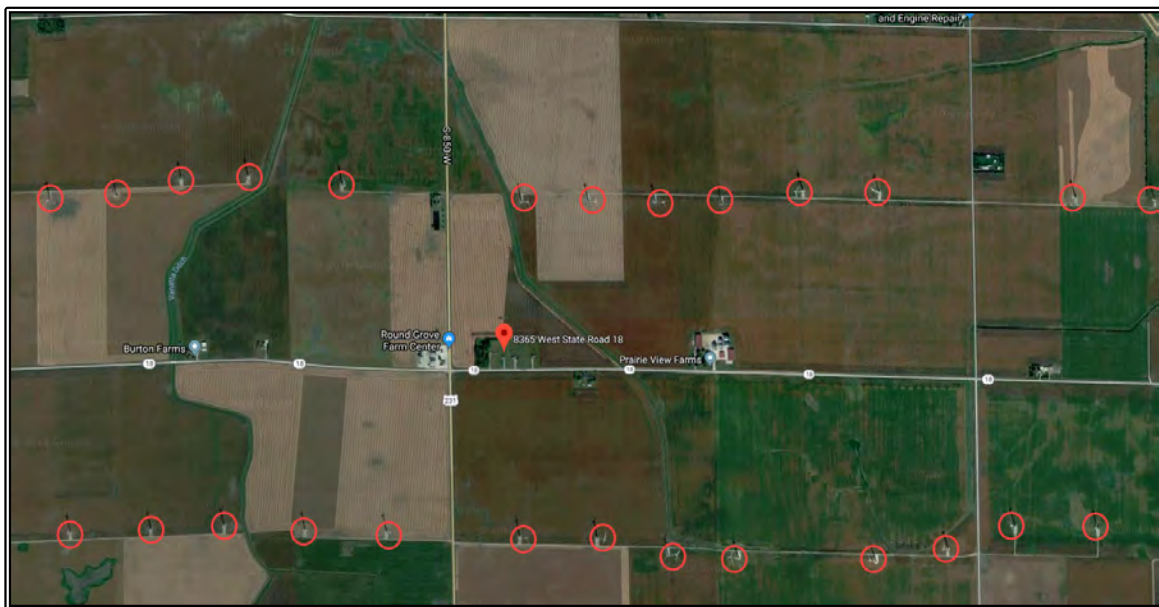
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
6B	46464 218 <sup>th</sup> St. Volga, South Dakota	-	+	O	O	O	-	-	+	O
+	Positive adjustment based on comparable being inferior in comparison to property #6A									
-	Negative adjustment based on comparable being superior in comparison to property #6A									
O	No adjustment necessary									



### Indiana Analysis - White County Matched Pair No. 1

White County Matched Pair No. 1 considers the sale of a house located at 8365 West State Road 18, Brookston, that sold in December 2017 for \$159,900. This house is located approximately 2,340 feet from the nearest turbine of the Meadow Lake Wind Farm, which came online in 2009, and there are several turbines visible in each direction. The photograph below is an aerial view of the turbines visible surrounding the house.

This property is compared with a similar property located at 1105 South Airport Road, Monticello, that sold in December 2017 for \$173,200. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the following table.





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**WHITE COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	8365 W State Road 18 Brookston, IN 47923	1105 S Airport Rd. Monticello, IN 47960
Distance from Turbine (Ft.)	2,340	N/A
Sale Date	December 27, 2017	December 18, 2017
Sale Price	\$159,900	\$173,200
Sale Price/Sq. Ft. (A.G.)	\$90.34	\$70.78
Year Built	2003	1927
Building Size (Sq. Ft.)	1,770	2,447
Lot Size (Acres)	2.09	1.64
Style	One-story; frame (brick) 3 bedrooms, 2 bath	Two-story; frame (vinyl) 5 bedrooms, 2.5 bath
Basement	Crawlspace	Partial/Crawlspace
Utilities	Central air Forced-air heat well & septic	Central air Other heating Well & septic
Other	2-car attached garage Deck	1-car attached garage 2-car detached garage Pool

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8365 West State Road 18

1105 South Airport Road



The house at 8365 West State Road 18, is located approximately 2,400 feet away from the nearest turbine, in a rural area. Both houses are located in a similar rural location, have similar utilities, and were sold in similar market conditions. The 8365 West State Road 18 property is of superior age and has a superior lot size. The 1105 South Airport Road property has a superior building size, a superior building style, and has a superior basement and outbuildings.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1105 S Airport Rd. Monticello, IN 47960	O	+	-	+	O	-	-	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

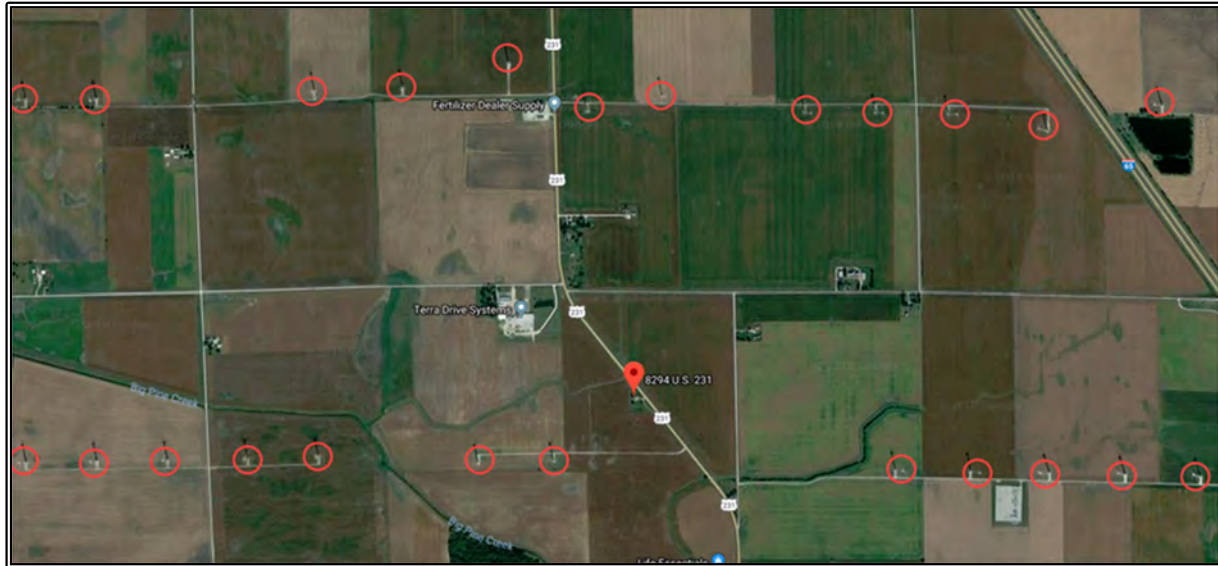
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Upward adjustments are made to the 1105 South Airport Road property for the superior age and the larger lot size of the 8365 West State Road 18 property. Downward adjustments are made for the superior building size, building style, basement, and outbuildings of the 1105 South Airport Road property compared to those features of the 8365 West State Road 18 property. The two properties have essentially the same location, utilities, and were sold in similar market conditions. Therefore, although the 1105 South Airport Road property give the impressions of being superior in many categories, the much higher per square foot sale price for the 8365 West State Road 18 property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 8365 West State Road 18 property to a wind turbine.

### **Indiana Analysis - White County Matched Pair No. 2**

White County Matched Pair No. 2 considers the sale of a house located at 8294 South US Highway 231, Brookston, that sold in September 2016 for \$157,000. This house is located approximately 1,410 feet from the nearest turbine of the Meadow Lake Wind Farm, which came online in 2009, and there are several turbines visible in each direction.

The following photograph is an aerial view of the turbines visible surrounding the house. This property is compared with a similar property located at 6288 East Ash Court, Monticello, that sold in June 2017 for \$150,800. This property is not located near wind turbines. Market conditions are considered to be similar. The salient details of these two properties are summarized in the following table.



## WHITE COUNTY MATCHED PAIR NO. 2

	2A - Proximate to a Wind Turbine	2B - Not Proximate to a Wind Turbine
Address	8294 S US Highway 231 Brookston, IN 47923	6288 E Ash Ct. Monticello, IN 47960
Distance from Turbine (Ft.)	1,410	N/A
Sale Date	September 23, 2016	June 22, 2017
Sale Price	\$157,000	\$150,800
Sale Price/Sq. Ft. (A.G.)	\$80.60	\$59.23
Year Built	1926	1968
Building Size (Sq. Ft.)	1,948	2,546
Lot Size (Acres)	1.35	1.44
Style	One-story; frame (vinyl)	Two-story; frame (vinyl/brick)
Basement	5 bedrooms, 2 bath Crawlspace	5 bedrooms, 2.5 bath Crawlspace
Utilities	Central air Forced-air heat Well & septic	Central air Forced-air heat Well & septic
Other	2-car attached garage	1-car attached garage 2-car detached garage Deck



8294 South US Highway 231



6288 East Ash Court

The house at 8294 South US Highway 231, is located approximately 1,410 feet away from the nearest turbine, in a rural area. Both houses have a similar lot size, a similar rural location, have similar basements, and similar utilities. The 6288 East Ash Court property is of superior building size, building style, age, outbuildings, and was sold in superior market conditions.

#### ADJUSTMENT GRID MATCHED PAIR NO. 2

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	6288 E Ash Ct. Monticello, IN 47960	-	-	-	O	O	-	O	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment based on comparable being superior in comparison to property #2A									
O	No adjustment necessary									

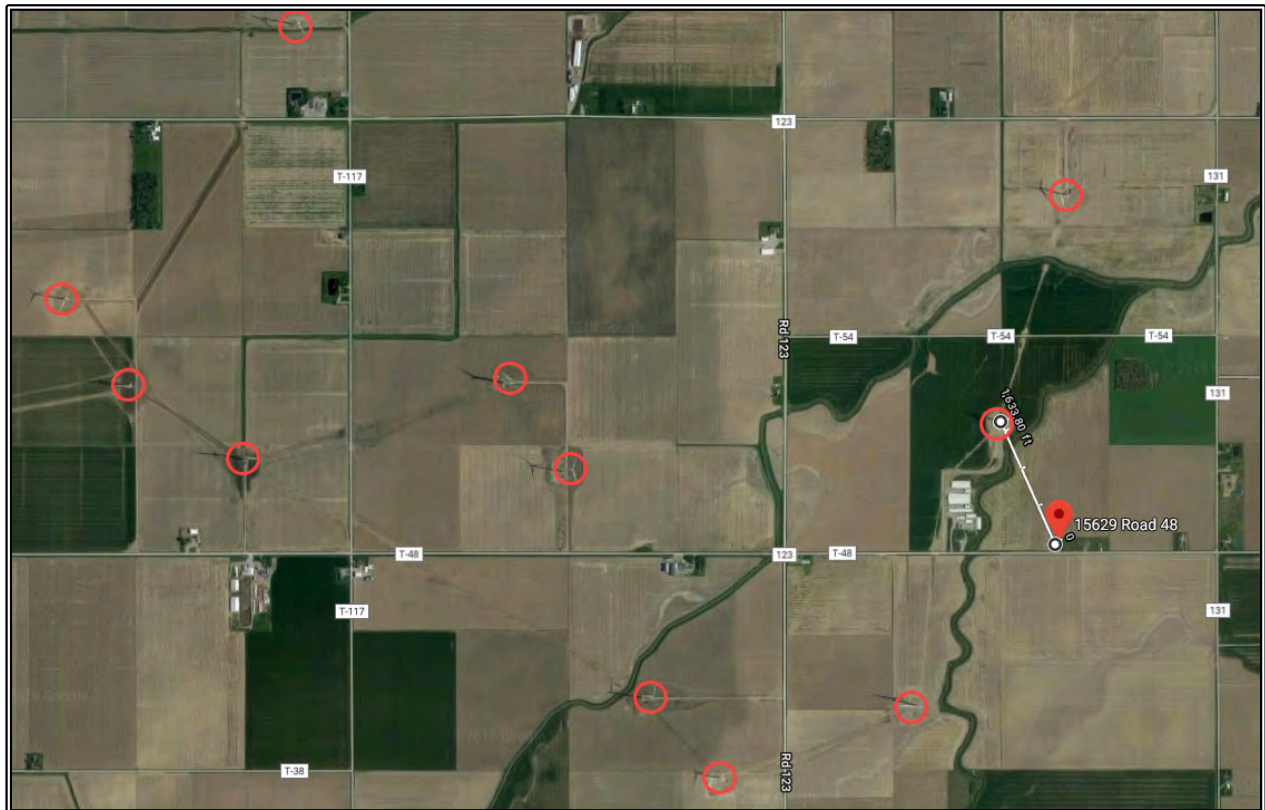
Downward adjustments were made for the superior market conditions, age, building size, building style, and outbuildings of the 6288 East Ash Court property compared to the 8294 South US Highway 231 property. The two properties have essentially the same location, lot size, basement, and utilities. Therefore, although the 6288 East Ash Court property give the impressions of being superior in many categories, the much higher per square foot sale price for the 8294 South US Highway 231 property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 8294 South US Highway 231 property to a wind turbine.



## Ohio Analysis - Paulding County Matched Pair No. 1

Paulding County Matched Pair No. 1 considers the recent sale of a property located at 15629 Road 48, Haviland, Ohio, that is 1,633 feet from the nearest wind turbine located within the Northwest Ohio wind farm, which went online in 2018, with approximately fifteen additional turbines visible from the property to the north, south, and west. This property sold on October 30, 2017, and then again on May 19, 2019.

This sale is compared with a similar property located at 11388 State Route 613, Paulding, Ohio, that sold on September 28, 2018. The salient details of these two properties are summarized in the table below.





**PAULDING COUNTY MATCHED PAIR NO. 1**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1A - Prior Sale</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	15629 Road 48 Haviland, OH 45851	15629 Road 48 Haviland, OH 45851	11388 State Route 613 Paulding, OH 45879
Distance from Turbine (Ft.)	1,633	N/A	N/A
Sale Date	May 19, 2019	October 30, 2017	September 28, 2018
Sale Price	\$110,000	\$85,000	\$133,000
Sale Price/Sq. Ft. (A.G.)	\$95.65	\$70.22	\$67.75
Year Built	1963	1963	1980
Building Size (Sq. Ft.)	1,150	1,150	1,963
Lot Size (Acres)	0.45	0.45	2.97
Style	One-story, frame (stone/vinyl)	One-story, frame (stone/vinyl)	One-story, frame (brick)
	3 bedrooms, 1 bath	3 bedrooms, 1 bath	3 bedrooms, 2 bath
Basement	Crawlspace	Crawlspace	N/A
Utilities	Wall unit cooling Radiant heating Well & septic	Wall unit cooling Radiant heating Well & septic	Central air Other heat Well & septic
Other	1-car detached garage Shed and barn	1-car detached garage Shed and barn	2-car attached garage



15629 Road 48

11388 State Route 613



The house at 15629 Road 48, is located approximately 1,633 feet away from the nearest turbine, in a rural area. Both houses are of similar styles, similar rural location, have similar basements, have similar utilities, and have similar outbuildings. The 11388 State Route 613 property is of superior building size, lot size, and vintage.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	11388 State Route 613 Paulding, OH 45879	+	-	-	-	o	o	+	o	o
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
o	No adjustment necessary									

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Downward adjustments were made for the superior vintage, building size, and lot size of the 11388 State Route 613 property compared to the 15629 Road 48 property. Upward adjustments were made for the superior market conditions and basement of the 15629 Road 48 property compared to the 11388 State Route 613 property. The two properties have essentially the same location, style, utilities, and outbuildings. Therefore, although the 11388 State Route 613 property give the impressions of being superior in more categories, the much higher per square foot sale price for the 15629 Road 48 property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 15629 Road 48 property to a wind turbine.

## Ohio Analysis - Paulding County Matched Pair No. 2

Paulding County Matched Pair No. 2 considers the recent sale of a property located at 4974 U.S. Route 127, Haviland, Ohio, that is 2,650 feet from the nearest wind turbine located within the Northwest Ohio wind farm, with approximately fifteen additional turbines visible from the property to the north, south, and west. This property sold on June 12, 2019.

This sale is compared with a similar property located at 7658 State Route 111, Paulding, Ohio, that sold on August 9, 2018. The salient details of these two properties are summarized in the table below.



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**PAULDING COUNTY MATCHED PAIR NO. 2**

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	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
Address	4974 U.S. Route 127 Haviland, OH 45851	7658 State Route 111 Paulding, OH 45879
Distance from Turbine (Ft.)	2,650	N/A
Sale Date	June 12, 2019	August 9, 2018
Sale Price	\$234,000	\$239,000
Sale Price/Sq. Ft. (A.G.)	\$93.30	\$68.96
Year Built	1977	2000
Building Size (Sq. Ft.)	2,508	3,466
Lot Size (Acres)	1.20	4.89
Style	One-story, frame (brick) 2 bedrooms, 2.1 bath	1.5-story, frame (vinyl) 4 bedrooms, 3 bath
Basement	Full, partially finished	N/A
Utilities	Central air Other heat Well & septic	Central air Forced-air heat Well & septic
Other	2-car attached garage Patio	3-car attached garage Shed and pond

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4974 U.S. Route 127

7658 State Route 111



The house at 4974 U.S. Route 127, is located approximately 2,650 feet away from the nearest turbine, in a rural area. Both houses are in a similar rural location. The 7658 State Route 111 property is of superior vintage, building size, lot size, style, utilities, and outbuildings.

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**ADJUSTMENT GRID MATCHED PAIR NO. 2**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
2B	7658 State Route 111 Paulding, OH 45879	+	-	-	-	o	-	+	-	-
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment based on comparable being superior in comparison to property #2A									
o	No adjustment necessary									

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Downward adjustments were made for the superior vintage, building size, lot size, style, utilities, and outbuildings of the 7658 State Route 111 property compared to the 4974 U.S. Route 127 property. Upward adjustments were made for the superior market conditions and basement of the 4974 U.S. Route 127 property compared to the 7658 State Route 111 property. The two properties have essentially the same location. Therefore, although the 7658 State Route 111 property give the impressions of being superior in more categories, the much higher per square foot sale price for the 4974 U.S. Route 127 property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 4974 U.S. Route 127 property to a wind turbine.



### Ohio Analysis - Paulding County Matched Pair No. 3

Paulding County Matched Pair No. 3 considers the recent sale of a property located at 3803 Road 48, Payne, Ohio, that is 1,705 feet from the nearest wind turbine located within the Northwest Ohio wind farm, with approximately fifteen additional turbines visible from the property in multiple directions. This property sold on September 5, 2019.

This sale is compared with a similar property located at 11627 Road 137, Paulding, Ohio, that sold on January 11, 2018. The salient details of these two properties are summarized in the table below.



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**PAULDING COUNTY MATCHED PAIR NO. 3**

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	<b>3A - Proximate to a Wind Turbine</b>	<b>3B - Not Proximate to a Wind Turbine</b>
Address	3803 Road 48 Payne, OH 45880	11627 Road 137 Paulding, OH 45879
Distance from Turbine (Ft.)	1,705	N/A
Sale Date	September 5, 2019	January 11, 2018
Sale Price	\$235,000	\$175,000
Sale Price/Sq. Ft. (A.G.)	\$81.34	\$77.16
Year Built	1950	1979
Building Size (Sq. Ft.)	2,889	2,268
Lot Size (Acres)	5.00	5.04
Style	One-story, frame (vinyl) 4 bedrooms, 2 bath	1.5-story, frame (vinyl) 4 bedrooms, 2 bath
Basement	Full, partially finished	Full, partially finished
Utilities	Central air Other heat Well & septic	Geothermal cooling/heat Electric heat Well & septic
Other	3-car detached garage Machine shed and deck	2-car attached garage Shed and porch

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3803 Road 48



11627 Road 137

The house at 3803 Road 48, is located approximately 1,705 feet away from the nearest turbine, in a rural area. Both houses have similar lot sizes, in a similar rural location, have similar basements, and have similar outbuildings. The 11627 Road 137 property is of superior vintage, of similar style, and superior utilities. The 3803 Road 48 property is of superior market conditions and superior building size.

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**ADJUSTMENT GRID MATCHED PAIR NO. 3**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
3B	11627 Road 137 Paulding, OH 45879	+	-	+	o	o	-	o	-	o
+	Positive adjustment based on comparable being inferior in comparison to property #3A									
-	Negative adjustment based on comparable being superior in comparison to property #3A									
o	No adjustment necessary									

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Downward adjustments were made for the superior vintage, style, and utilities of the 11627 Road 137 property compared to the 3803 Road 48 property. Upward adjustments were made for the superior market conditions and building size of the 3803 Road 48 property compared to the 11627 Road 137 property. The two properties have essentially the same lot size, location, basement, and outbuildings. Therefore, although the 11627 Road 137 property give the impressions of being superior in more categories, the higher per square foot sale price for the 3803 Road 48 property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 3803 Road 48 property to a wind turbine.

## Ohio Analysis - Paulding County Matched Pair No. 4

Paulding County Matched Pair No. 4 considers the recent sale of a property located at 13802 Road 48, Haviland, Ohio, that is 1,240 feet from the nearest wind turbine located within the Northwest Ohio wind farm, with approximately fifteen additional turbines visible from the property multiple directions. This property sold on June 18, 2017.

This sale is compared with a similar property located at 6279 Road 180, Antwerp, Ohio, that sold on August 29, 2019. The salient details of these two properties are summarized in the table below.



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**PAULDING COUNTY MATCHED PAIR NO. 4**

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	<b>4A - Proximate to a Wind Turbine</b>	<b>4B - Not Proximate to a Wind Turbine</b>
Address	13802 Road 48 Haviland, OH 45851	6279 Road 180 Antwerp, OH 45813
Distance from Turbine (Ft.)	1,240	N/A
Sale Date	June 18, 2017	August 29, 2019
Sale Price	\$172,500	\$165,000
Sale Price/Sq. Ft. (A.G.)	\$90.27	\$76.53
Year Built	1900	1972
Building Size (Sq. Ft.)	1,911	2,156
Lot Size (Acres)	1.01	0.36
Style	Two-story, frame (vinyl) 4 bedrooms, 1.1 bath	Two-story, frame (vinyl) 3 bedrooms, 2 bath
Basement	Full, partially finished	N/A
Utilities	Central air Other heat Well & septic	Central air Other heat Well & septic
Other	2-car attached garage Patio	3-car attached garage Deck and pool

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13802 Road 48

6279 Road 180





The house at 13802 Road 48, is located approximately 1,240 feet away from the nearest turbine, in a rural area. Both houses are in a similar rural location and have similar utilities. The 6279 Road 180 property is of superior market conditions, superior vintage, superior building size, and superior outbuildings. The 13802 Road 48 property has superior lot size, superior style, and has a superior basement.

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**ADJUSTMENT GRID MATCHED PAIR NO. 4**

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SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
4B	6279 Road 180 Antwerp, OH 45813	-	-	-	+	o	+	+	o	-
+	Positive adjustment based on comparable being inferior in comparison to property #4A									
-	Negative adjustment based on comparable being superior in comparison to property #4A									
o	No adjustment necessary									

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Downward adjustments were made for the superior market conditions, vintage, building size, and outbuildings of the 6279 Road 180 property compared to the 13802 Road 48 property. Upward adjustments were made for the superior lot size, style, and basement of the 13802 Road 48 property compared to the 6279 Road 180 property. The two properties have essentially the same location and utilities. Therefore, although the 6279 Road 180 property gives the impression of being superior in more categories, the higher per square foot sale price for the 13802 Road 48 property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 13802 Road 48 property to a wind turbine.

### **Kansas Analysis - Coffey County Matched Pair No. 1**

Coffey County Matched Pair No. 1 considers the sale of a house located at 2045 Trefoil Road Northeast, Waverly, that sold in November 2018 for \$162,500. This house is located approximately 1,960 feet from the nearest turbine of the Waverly Wind Farm, which came online in 2016, and there are several turbines visible in each direction.

The following photograph is an aerial view of the turbines visible surrounding the house.



This property is compared with a similar property located at 1804 North C Street, Le Roy, that sold in June 2018 for \$120,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the table below.

#### COFFEY COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	2045 Trefoil Rd. NE Waverly, KS 66871	1804 North C St. Le Roy, KS 66857
Distance from Turbine (Ft.)	1,960	N/A
Sale Date	November 19, 2018	June 15, 2018
Sale Price	\$162,500	\$120,000
Sale Price/Sq. Ft. (A.G.)	\$113.80	\$39.53
Year Built	1977	2002
Building Size (Sq. Ft.)	1,428	3,036
Lot Size (Acres)	12.00	0.50
Style	One-story; frame (vinyl) 3 bedrooms, 2 bath	One-story; frame (brick) 4 bedrooms, 3 bath
Basement	Full, unfinished walkout Central air	Full, partial finished Central air
Utilities	Forced-air heat/heat pump Well & septic	Forced-air heating Well & septic
Other	Fully stocked pond	2-car attached garage 2-car detached garage Porch



2045 Trefoil Road Northeast



1804 North C Street

The house at 2045 Trefoil Road Northeast, is located approximately 1,960 feet away from the nearest turbine, in a rural area. Both houses are located in a similar rural location with paved roads, have similar utilities, have similar basements, and were sold in similar market conditions. The 2045 Trefoil Road Northeast property has a superior lot size. The 1804 North C Street property has a superior age, a superior building size, a superior building style, and has superior outbuildings.

#### ADJUSTMENT GRID MATCHED PAIR NO. 1

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1804 North C St. Le Roy, KS 66857	O	-	-	+	O	-	O	O	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

Upward adjustments are made to the 1804 North C Street property for the larger lot size of the 2045 Trefoil Road Northeast property. Downward adjustments are made for the superior age, building size, building style, and outbuildings of the 1804 North C Street property compared to those features of the 2045 Trefoil Road Northeast property. The two properties have essentially the same location, utilities, and were sold in similar market conditions. Therefore, although the 1804 North C Street property gives the impression of being superior in many categories, the much higher per square foot sale price for the 2045 Trefoil Road Northeast property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 2045 Trefoil Road Northeast property to a wind turbine.

### **Kansas Analysis - Harper County Matched Pair No. 1**

Harper County Matched Pair No. 1 considers the sale of a house located at 330 Northwest 150<sup>th</sup> Road, Harper, that sold in July 2017 for \$385,000. This house is located approximately 1,330 feet from the nearest turbine of the Flat Ridge II Wind Farm, which came online in 2013, and there are several turbines visible in each direction. The following photograph is an aerial view of the turbines visible surrounding the house.

This property is compared with a similar property located at 750 Northeast 110<sup>th</sup> Road, Danville, that sold in January 2017 for \$174,900. This property is not located near wind turbines. Market areas are considered to be similar. The salient details of these two properties are summarized in the following table.



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**HARPER COUNTY MATCHED PAIR NO. 1**

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	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	330 NW 150 <sup>th</sup> Rd. Harper, KS 67058	750 NE 110 <sup>th</sup> Rd. Danville, KS 67036
Distance from Turbine (Ft.)	1,330	N/A
Sale Date	July 14, 2017	January 1, 2017
Sale Price	\$385,000	\$174,900
Sale Price/Sq. Ft. (A.G.)	\$120.46	\$73.49
Year Built	1997	1955
Building Size (Sq. Ft.)	3,196	2,380
Lot Size (Acres)	5.20	5.92
Style	One-story; frame (stone)	Two-story; frame (brick)
Basement	5 bedrooms, 4 bath Partial, finished	4 bedrooms, 2 bath N/A
Utilities	Other cooling Forced-air heat Well & septic	Other cooling Other heat Well & septic
Other	2-car attached garage Farm building Pond, deck, patio, fire pit	1-car attached garage 2-car detached garage Round top building & extra structure

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330 Northwest 150<sup>th</sup> Road

750 Northeast 110<sup>th</sup> Road





The house at 330 Northwest 150<sup>th</sup> Road, is located approximately 1,330 feet away from the nearest turbine, in a rural area. The 330 Northwest 150<sup>th</sup> Road property is of superior age and superior building size. The 750 Northeast 110<sup>th</sup> Road property has superior outbuildings compared to 330 Northwest 150<sup>th</sup> Road. Both houses were sold in similar market conditions, located in a similar rural location, have similar lot sizes, similar building styles, similar basements, and have similar utilities.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	750 NE 110 <sup>th</sup> Rd. Danville, KS 67036	○	+	+	○	○	○	○	○	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
○	No adjustment necessary									

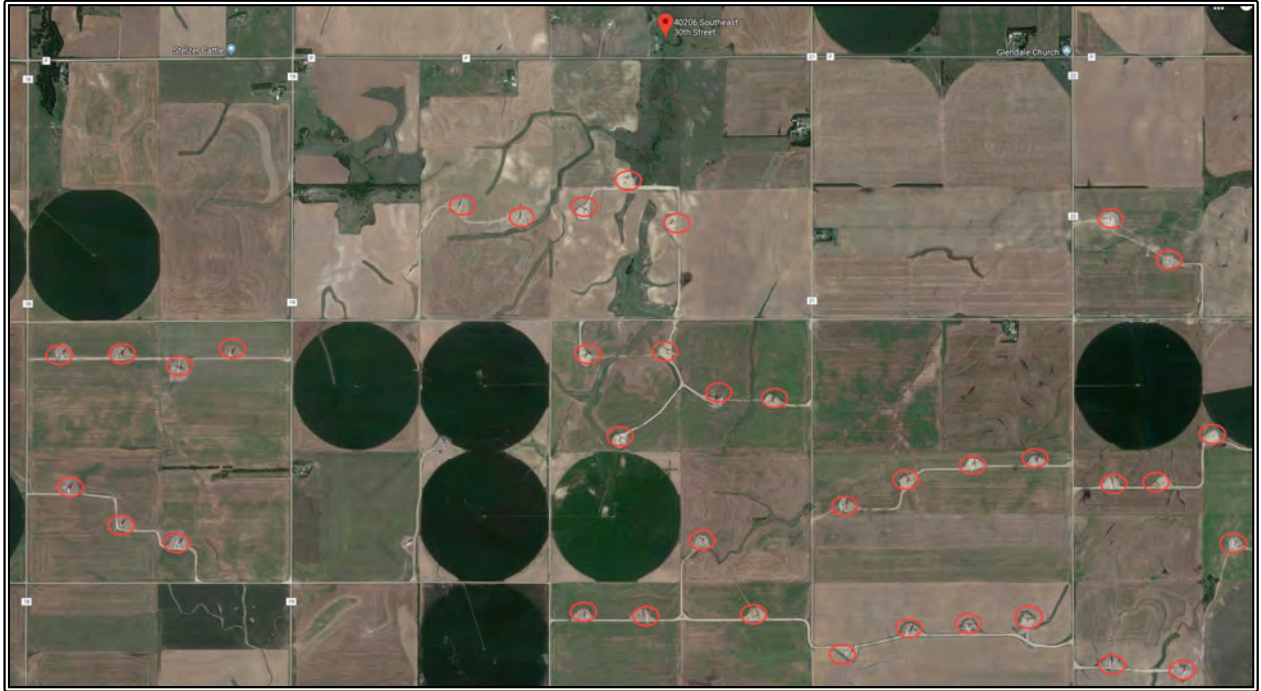
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Upward adjustments were made for the superior age and building size of the 330 Northwest 150<sup>th</sup> Road property compared to the 750 Northeast 110<sup>th</sup> Road property. Downward adjustments were made for the superior outbuildings of the 750 Northeast 110<sup>th</sup> Road property compared to those of the 330 Northwest 150<sup>th</sup> Road property. The two properties have essentially the same market conditions, location, style, basement, and utilities. Therefore, although the two properties give the impression of being similar in many categories, the much higher per square foot sale price for the 330 Northwest 150<sup>th</sup> Road property appears to support the conclusion that there is not any negative impact in value resulting from the proximity of the 330 Northwest 150<sup>th</sup> Road property to a wind turbine.

**Kansas Analysis - Pratt County Matched Pair No. 1**

Pratt County Matched Pair No. 1 considers the sale of a house located at 40206 Southeast 30<sup>th</sup> Street, Pratt, that sold in January 2018 for \$195,000. This house is located approximately 2,710 feet from the nearest turbine of the Ninnescah Wind Farm, which came online in 2016, and there are several turbines visible towards the southern direction of the property.

The following photograph is an aerial view of the turbines visible surrounding the house.



This property is compared with a similar property located at 1517 Eastland Place, Pratt, that sold in December 2017 for \$230,000. This property is not located near wind turbines. Both properties are situated in rural locations. The salient details of these two properties are summarized in the table below.

## PRATT COUNTY MATCHED PAIR NO. 1

	1A - Proximate to a Wind Turbine	1B - Not Proximate to a Wind Turbine
Address	40206 SE 30 <sup>th</sup> St. Pratt, KS 67124	1517 Eastland Pl. Pratt, KS 67124
Distance from Turbine (Ft.)	2,710	N/A
Sale Date	January 29, 2018	December 11, 2017
Sale Price	\$195,000	\$230,000
Sale Price/Sq. Ft. (A.G.)	\$106.56	\$59.85
Year Built	2002	2010
Building Size (Sq. Ft.)	1,830	3,843
Lot Size (Acres)	10.01	0.29
Style	One-story; frame (brick) 3 bedrooms, 2 bath	One-story; frame (brick) 5 bedrooms, 3 bath
Basement	N/A	Full, finished
Utilities	Central air Propane gas heat Well & septic	Central air Forced-air heating Public water & sewer
Other	2-car attached garage 3-bay work shed & storage building Deck, patio, pool, pond, and creek	2-car attached garage Cul-de-sac Porch and deck



40206 Southeast 30<sup>th</sup> Street

1517 Eastland Place



The house at 40206 Southeast 30<sup>th</sup> Street, is located approximately 2,710 feet away from the nearest turbine, in a rural area. Both houses are of similar building styles, are of similar age, and were sold in similar market conditions. The 40206 Southeast 30<sup>th</sup> Street property has a superior lot size and superior outbuildings. The 1517 Eastland Place property has a superior building size, a superior basement, a superior location on a paved cul-de-sac, and has superior utilities.

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**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1517 Eastland Pl. Pratt, KS 67124	O	O	-	+	-	O	-	-	+
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
O	No adjustment necessary									

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Upward adjustments are made to the 1517 Eastland Place property for the larger lot size and superior outbuildings of the 40206 Southeast 30<sup>th</sup> Street property. Downward adjustments are made for the superior building size, location, basement, and utilities of the 1517 Eastland Place property compared to those features of the 40206 Southeast 30<sup>th</sup> Street property. The two properties have essentially the same style, age, and were sold in similar market conditions. Therefore, although the 1517 Eastland Place property gives the impression of being superior in many categories, the much higher per square foot sale price for the 40206 Southeast 30<sup>th</sup> Street property appears to not support a finding that there is a negative impact on value resulting from the proximity of the 40206 Southeast 30<sup>th</sup> Street property to a wind turbine.

### Matched Pair Analysis Conclusions

Studies in Minnesota and studies in rural counties of Iowa, Illinois, South Dakota, Indiana, Ohio, and Kansas, comparing sales of properties proximate to wind turbines with similar properties selling under similar market conditions without proximity to wind turbines have not discovered any sales in which proximity to wind turbines appears to have had a negative impact on property values. Therefore, the conclusion is that there does not appear to have been any measurable negative impact on surrounding residential property values due to the proximity of a wind farm.

## Agricultural Land Values

Agricultural land values are typically tied to the productivity of the land and to the commodity prices of crops like corn and soybeans. Other factors include favorable interest rates and the supply of land compared to the number of buyers. According to the University of Minnesota Extension's study, *Minnesota Farmland Sales by County – 2018-2019 Farmland Sales*, the average price per acre of agricultural land sold in Jackson County, Minnesota, in 2019 was approximately \$5,393 per acre. This value was down from approximately \$6,782 in 2018.<sup>4</sup>

The *First-Quarter 2021 Agricultural Conditions Survey*, published by the Federal Reserve Bank of Minneapolis from the Federal Reserve 9<sup>th</sup> District stated that “Cropland values and cash rents generally increased in early 2021, continuing a trend from recent surveys. Ninth District nonirrigated cropland values rose by 6.8 percent on average from the first quarter of 2020. Irrigated land values fell slightly, by 1.3 percent on average, while ranchland values were unchanged.” “Land values climbed the most in Minnesota, where lenders reported that nonirrigated cropland prices rose 10 percent from a year ago. In Wisconsin, by contrast, values for the same class of land were down by nearly 15 percent, while values in North Dakota and South Dakota were more in line with district averages. By contrast, cash rents on nonirrigated land appeared to rise the most in Wisconsin but were more uniform in the remainder of the district.”<sup>5</sup>

The *Second-Quarter 2021 Agricultural Conditions Survey*, published by the Federal Reserve Bank of Minneapolis from the Federal Reserve 9<sup>th</sup> District stated that “After halting their half-decade slide and rebounding since late last year, land values and cash rents surged in the second quarter. Ninth District nonirrigated cropland values increased by 16 percent on average from the second quarter of 2020. Ranch- and pastureland values also jumped, by nearly 13 percent, while nonirrigated cropland values increased about 10 percent. The district average cash rent for nonirrigated land jumped by more than 9 percent from a year ago. Rents for irrigated land and ranchland each increased about 6 percent. Changes in land values and rents were generally consistent across district states.”<sup>6</sup>

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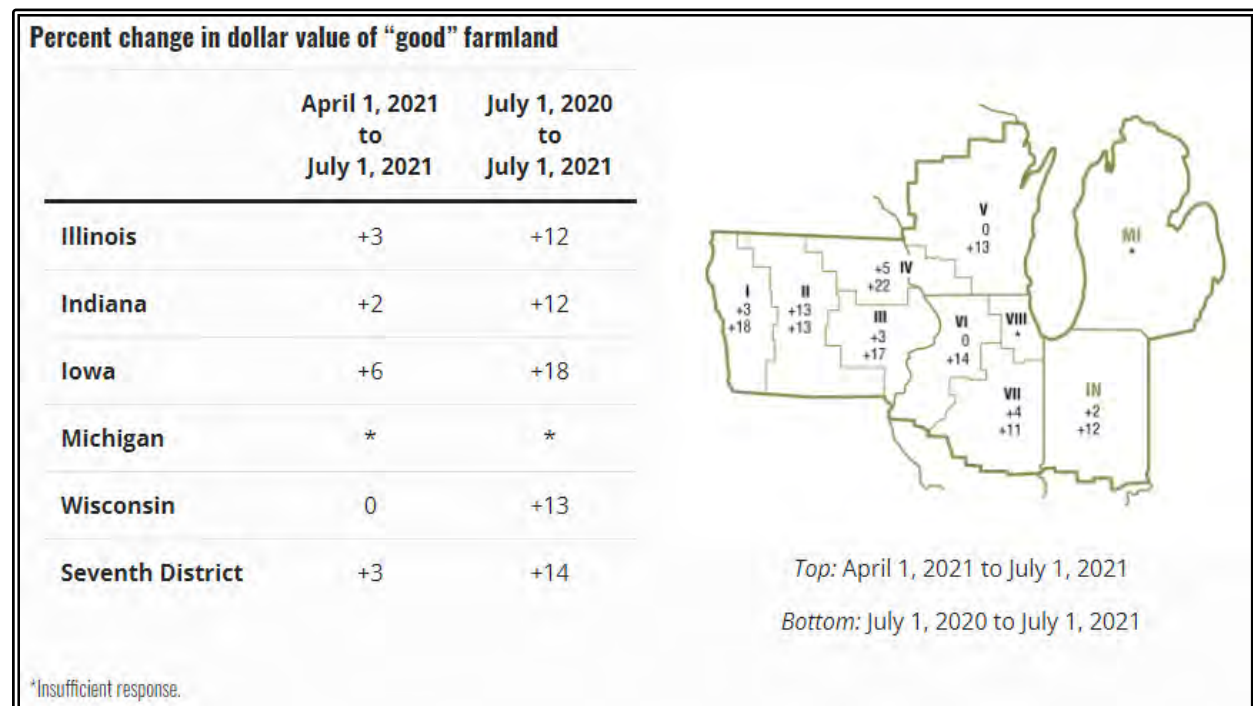
<sup>4</sup> <https://extension.umn.edu/farmland-rent-and-economics/farmland-sale-prices#farmland-sales-2923260>

<sup>5</sup> <https://www.minneapolisfed.org/article/2021/farm-finance-strong-heading-into-growing-season>

<sup>6</sup> <https://www.minneapolisfed.org/article/2021/farm-finance-held-up-into-summer-despite-drought-concerns>



The November 2020 edition of the *AgLetter*, published by the Federal Reserve Bank of Chicago from the Federal Reserve 7<sup>th</sup> District stated that “Farmland values for the Seventh Federal Reserve District climbed 14 percent on a year-over-year basis in the second quarter of 2021—their largest such gain in eight years. Values for “good” agricultural land moved up 3 percent in the second quarter of 2021 from the first quarter, according to a survey of 152 District bankers. With 70 percent of the survey respondents forecasting higher District farmland values during the July through September period of 2021 and 30 percent forecasting stable values, such values were expected to rise again during the third quarter of this year.” “At 14 percent, the year-over-year increase in the value of District farmland for the second quarter of 2021 was the largest recorded since 2013’s third quarter. All five District states exhibited double-digit year-over-year gains in their agricultural land values (see map and table below but note that too few Michigan bankers responded to report a numerical change in farmland values). “Good” agricultural land in the District increased 3 percent in the second quarter of 2021 relative to the first quarter. This was the third quarterly gain in a row for District agricultural land values; there had not been such a streak since the first quarter of 2013.”<sup>7</sup>



<sup>7</sup> <https://www.chicagofed.org/publications/agletter/2020-2024/august-2021>

## SUMMARY OF RECENT LAND SALES NEAREST TO DODGE COUNTY WIND

No.	Owner Mailing Address* & Parcel Identification	Sale Price	Sale Date	Land Area (Acres)	CPI	Sale Price Per Acre
1	71884 150 <sup>th</sup> Avenue Hayfield, Minnesota 55940  Dodge County, MN 105N 18W – 12 APN: 18.012.0301					
	<b>Land Sale #1 - 1 Parcel</b>	<b>\$130,000</b>	<b>9/30/20</b>	<b>152.28</b>	<b>94.0</b>	<b>\$853.69</b>
2	12927 585 <sup>th</sup> Street Claremont, Minnesota 55924  Dodge County, MN 107N 18W – 4, 9 APN: 09.004.0700					
	<b>Land Sale #2 - 1 Parcel</b>	<b>\$152,500</b>	<b>4/16/21</b>	<b>155.67</b>	<b>90.4</b>	<b>\$979.64</b>
3	65344 105 <sup>th</sup> Avenue Kasson, Minnesota 55944  Dodge County, MN 106N 18W – 7 APN: 15.007.0100					
	<b>Land Sale #3 - 1 Parcel</b>	<b>\$229,000</b>	<b>10/1/20</b>	<b>155.71</b>	<b>73.4</b>	<b>\$1,470.68</b>
4	18600 650 <sup>th</sup> Street Dodge Center, Minnesota 55927  Dodge County, MN 106N 17W – 4 APN: 07.004.0800					
	<b>Land Sale #4 - 1 Parcel</b>	<b>\$500,000</b>	<b>5/29/20</b>	<b>78.54</b>	<b>93.7</b>	<b>\$6,366.18</b>
5	71661 160 <sup>th</sup> Avenue Hayfield, Minnesota 55940  Dodge County, MN 105N 18W – 12 APN: 18.012.0400					
	<b>Land Sale #5 - 1 Parcel</b>	<b>\$649,900</b>	<b>3/5/21</b>	<b>147.29</b>	<b>97.1</b>	<b>\$4,412.38</b>
6	1607 7 <sup>th</sup> Street SE Austin, Minnesota 55912  Dodge County, MN 105N 18W – 30, 105N 19W – 25 APN: 18.030.0600					
	<b>Land Sale #6 - 1 Parcel</b>	<b>\$1,090,000</b>	<b>7/30/21</b>	<b>113.31</b>	<b>88.6</b>	<b>\$9,619.63</b>
7	P.O. Box 929 Lakefield, Minnesota 56150  Dodge County, MN 106N 17W – 6 APN: 07.006.0100					
	<b>Land Sale #7 - 1 Parcel</b>	<b>\$1,600,000</b>	<b>5/1/20</b>	<b>148.24</b>	<b>78.6</b>	<b>\$10,793.31</b>
<b>Summary Averages:</b>					<b>88.0</b>	<b>\$4,927.93</b>
<b>Dodge County Averages:</b>					<b>85.6</b>	<b>\$6,782.00</b>

\*Owner mailing address is not to be considered parcel address, in some cases

The above analysis includes land sales that are nearest to the project footprint in Dodge County and Steele County, Minnesota.<sup>8</sup> The above summary of land sales in Dodge County reveal that the agricultural land nearest to the area of the project footprint is of above-average quality for the county, with an average Crop Productivity Index of 88.0 compared to the county's overall average Crop Productivity Index 85.6. Adding wind turbines and land leases should only add value to the land prices and farm revenue benefit of the above-average land, and then benefit the land prices and farm revenue of the parcels with below-average land by adding an extra steady income stream.

### **Agricultural Land Sales near Wind Farms**

The research was not exhaustive, however, an article titled *Grundy County farmland sale sets a new record in Iowa, beating high set in 2012* published by the Des Moines Register reported, "The Grundy County acres, located near Wellsburg and west of Waterloo, had a wind turbine constructed on the site that likely helped to boost the value of the land, he said. The land lease will generate \$21,122 in income in 2022, the seller said, and is expected to grow 2% annually through the life of the 23-year contract."<sup>9</sup>

In Illinois there was one reported sale of agricultural land close to wind turbines located in McLean County, Illinois, in March 2013. The farm, comprised of two tracts, was considered "highly desirable" with a productivity rating of 135 and 132 respectively (the low end of the excellent range.) The report commented, "...the wind turbine lanes were not a nuisance as they ran the same direction as the farm is planted (north-south.)" In 2014, there were three sales of farms with wind turbines in Region 4, which includes the counties of Marshall, Woodford, Mason, Putnam, Livingston, McLean, and Tazewell. The report stated, "In general, investors may have paid a premium for the wind turbine. High quality farmland with wind turbines is stable."<sup>10</sup>

Another reported sale in November 2017 was to be associated with wind turbines within Jerauld County, South Dakota, which is home to the Wessington Springs Wind Farm and has similar demographics as the project area. The property is situated on pastureland of poor quality with significant topography issues, which would reflect a lower price per acre than the region's average price of \$2,011 per acre. However, the sale included multiple wind turbine leases, and sold with an above average price per acre of \$2,800, which signifies a direct correlation to the benefit associated with the turbines on the land.

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<sup>8</sup> AcreValue Pro - <https://www.acrevalue.com/>

<sup>9</sup> <https://www.desmoinesregister.com/story/money/agriculture/2021/09/01/grundy-county-acres-iowa-farmland-sale-sets-new-state-record-beating-2012-high-corn-soybean-prices/5682910001/>

<sup>10</sup> Klein, David E., and Schnitkey, Gary, 2014 *Illinois Land Values and Lease Trends*, Illinois Society of Professional Farm Managers and Rural Appraisers

Wind turbines typically are considered to be of significant benefit to farmers. For example, Iowa farmers interviewed by the *Omaha World Herald*, were positive about the stable income as opposed to the vicissitudes of commodity prices.<sup>11</sup> Franklin County, Iowa reported lowering real estate taxes for the county as a whole because of the taxes generated by the wind turbines in that county. Support for good prices comes from the lack of land for sale, stable commodity prices, and low interest rates. Marginal land in areas where wind turbines are located or proposed is popular with investors.<sup>12</sup>

A report was discovered for Illinois, the *2016 Illinois Land Values and Lease Trends*, indicated that the impact of wind turbine leases is being experienced in McLean, Livingston, and Woodford counties, where turbine leases have provided “income diversification, beyond agriculture, which makes these tracts more attractive to an outside investor.”<sup>13</sup> Further, they noted that “investors are still paying a little more of a premium for the wind turbines just as they had in the past few years.”<sup>14</sup> The report notes that the premium is related directly to the number of years left on the lease.

An updated report was discovered for Illinois, an article titled *Wind Energy and Farmland Values* in the *2018 Illinois Land Values and Lease Trends*, indicated that as of March 22, 2018, Illinois was home over to 27 wind projects that individually have a nameplate capacity of 50 megawatts or greater.

Understanding Illinois and its major involvement in wind energy have allowed for several positive side effects besides allowing for cleaner energy. The first benefit is that it appears to impact land values in a positive way significantly. The typical capitalization rate for well-managed farmland in Illinois is usually between 2.5% to 3.5%. The capitalization rate for land with lease payments associated with wind projects is approximately 9%, appearing to be both far more lucrative and more efficient use of the land. A few more of the positive improvements that are associated with wind projects is that the township and county officials within the project area typically create plans with the project developers to repair and improve roads that were used during construction. In addition, the land that is undeveloped by the project developer is available for the discretionary use of the landowners. Different improvements like paved areas around turbines and gravel roads are left once the work is completed. With any improvements, there are always concerns and potential issues that may come to mind, but it appears that with each wind turbine project completed in Illinois derives a far better outcome than worse, when speaking of land values.<sup>15</sup>

Overall, it appears that there is little or no relationship between agricultural land values and the location of wind farms, with productivity being the driving force behind land values. However, wind farm lease revenue does appear to increase the marketability and value of the land benefiting from the lease.

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<sup>11</sup> [http://www.omaha.com/money/turning-to-turbines-as-commodity-prices-remain-low-wind-energy/article\\_2814e2cf-83a3-5 47d-a09e-f039e935f399.html](http://www.omaha.com/money/turning-to-turbines-as-commodity-prices-remain-low-wind-energy/article_2814e2cf-83a3-5 47d-a09e-f039e935f399.html) Accessed September 18, 2107.

<sup>12</sup> <http://www.agriculture.com/farm-management/farm-land/farmland-sales-hard-to-find-as-growers-hold-tight-keeping-land-value> Accessed September 18, 2017.

<sup>13</sup> Klein, David E., and Schmitkey, Gary, 2016 *Illinois Land Values and Lease Trends*, Illinois Society of Professional Farm Managers and Rural Appraisers, Page 38.

<sup>14</sup> *Ibid.* Page 42.

<sup>15</sup> Klein, D., Baker, S., Sherrick, B., & Haight, B. (2018). *Wind Energy and Farmland Values*. 2018 *Illinois Land Values and Lease Trends*.

## **Real Estate Professionals & Assessor/Auditor/Appraiser Surveys 2016-2021**

Real estate professionals from the surrounding market areas and in the Midwest and the Northeast were contacted to discuss market conditions, specific market transactions, and to investigate whether they had experience with or knowledge of any impact of wind farms on residential property values.

Joy Boyd, a local Illinois licensed real estate broker active in Christian and Macon Counties and the surrounding area, has observed rural residential property values near the existing wind farm, Radford's Run, have not been negatively impacted due to the proximity to a wind turbine. Ms. Boyd also reported that rural residential properties in the general area overall are accepting of alternative uses for the land due to the proximity of existing intense agricultural uses: agricultural and industrial type buildings, gravel roads, and other intrusive uses of the land. It has been observed that the residents within Christian County and the surrounding counties have consistently agree that the only negative land use possibly impacting property values and buyers' decisions are the existing hog containment facilities within the county.

Real estate professional, Joseph M. Webster, MAI, of Webster & Associates, Inc., Decatur, Illinois, was previously consulted within 2016 and 2017 for his extensive experience with agricultural, commercial, and residential values in the Decatur, and Macon County area, as well as the broader market area. Mr. Webster provided background information on the economic conditions as well as information on agricultural and residential values of the central Illinois area.

Michael Crowley, Sr., SRA of Real Estate Consultants, Ltd., Spring Valley, Illinois was consulted. Mr. Crowley has had extensive experience with wind farm development in Central Illinois, including projects in counties with similar demographics and character, such as Bureau, Whiteside, and Lee counties. Mr. Crowley has been unable to document any loss in property values attributable to the proximity of wind turbines.

Donna J. Schiener, a New York Certified Residential Real Estate Appraiser of Zientek Appraisals, was consulted. Ms. Schiener has provided detailed appraisals of six residences in the area of Orangeville Wind Farm.

Kansas broker, Mandy Collum of United Country Real Estate Professionals, states that the Neosho County residential market is very stable and has been stable over the past couple years. She also states that the county is very rural; therefore, residential sales are limited. Her view on the market indicates that the highest end for the residential market values range is typically \$250,000 and the highest end for the agricultural land values is typically \$3,300 per acre. Ms. Collum also pointed out that the market is demanding residential properties that are modern, well maintained, and show well to potential buyers. Properties with these features can be typically valued greater than \$100,000.



Kansas broker, Stephanie Tuggle of Keller Williams Realty Select, states that Neosho County's residential market was affected heavily by the housing crisis that began in 2008 and continued through 2012; however, since 2012 the Neosho market has been slowly recovering and appears to be stable and at the peak of its market potential due to the discovery of some declining values throughout the county and due to values in the state trending downwards. Ms. Tuggle did not comment on her opinion of the range of values for residential properties; however, her opinion of the highest end for the agricultural land values is typically \$3,000 per acre.

David Engelman, Kansas General Certified Appraiser, Wilson County, Kansas, was consulted. Mr. Engelman has had extensive experience with agricultural, commercial, and residential values in the Neosho County area, as well as the broader southeast Kansas market area.

Jim Aesoph of Aesoph Real Estate, Inc. is a broker with 27 years of experience in northeast South Dakota. MaRous and Company contacted Mr. Aesoph due to his highly regarded reputation in the region. He stated that he contacted the assessors of the adjacent Codington, Grant, and Roberts counties to discuss land prices in each respective county, and each of them informed Mr. Aesoph that they are not aware of any effect on land prices due to new wind projects in the area. He also stated that 5 years ago land prices were roughly \$6,000 per acre, and now the average acre price is approximately \$4,000. The reduction in land prices, he mentioned, is not due to the wind project, but due to the production of corn on the land.

Interviews were conducted with six auctioneers throughout South Dakota. Marshall Hansen of Bob Hansen Auction stated that while turbines closer to home could possibly keep a buyer away, in areas of low population the development of turbines has a positive effect on the area. Mr. Hansen also stated that chemicals, such as insecticides, pose a larger impact on wildlife and game birds than turbines. Lenny Burlage of Burlage-Peterson Auctions stated that turbines do not negatively affect residential values but can affect each individual person differently. Jackson Hagerfeld of Advantage Land Company stated that he does see any impact on land from wind turbines, and the recent land sale prices are driven up by the limited number of properties on the market. Jim Thorpe of Thorpe Realty & Auction stated that turbine leases have positively impacted landowners with turbines on their land. Mr. Thorpe also stated that he had noticed a movement of buyers from larger cities buying properties that are being sold off by the aging population that is moving out of the area. Jeff Juffer of Juffer Incorporated stated that from the existing turbines within the Beethoven Wind Farm footprint have not had any effect, positive or negative, on the local market. Mr. Juffer also states that Avon and the immediate surrounding area is lacking in industry and would benefit from an outside influence to attract businesses to the area. Lastly, Glen Peterson of Peterson Auctioneers states that in the past two years there has been a demand for land that is not dependent on if a turbine is on the land or not, which can be assumed that turbines do not affect land sales in any way, positively or negatively.

Rick Mummert of Ron Holton Real Estate reported that residential conditions in both Freeborn and Mower counties in Minnesota had been stable through the last 3 years, primarily due to the very rural nature of the area; however, the area is benefitting from the low-interest rates. He reported that the Highway 14 corridor had experienced increases in residential values; in his opinion, the difference was due to the more developed nature of the area and the availability of jobs.

Interviews with brokers proximate to wind farms in Minnesota, Pennsylvania, New York, Illinois, Indiana, Iowa, and Kansas yielded similar results. Although a number of them wished to remain anonymous, they stated that they did not believe that the proximity to wind turbines had any bearing on the sale prices of residential properties in the area.

### **Minnesota Assessors Survey – October 2021**

In October 2021, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 11 counties in Minnesota in which wind farms with more than 25 turbines currently are operational. As of the July 2021, The Wind Power database reported there were 137 wind projects online with 2,819 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of, and the proximity to, a wind project facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ There have been no successful tax appeals in any county based upon wind project-related concerns.
- ∴ In the past 18 months, the assessor's offices have not experienced successful real estate tax appeals based upon wind project-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ Residential assessed values have fluctuated consistently countywide as influenced by market conditions, with no regard for proximity to a wind project.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and by external influences.

## **Iowa Assessors Survey - September 2021**

In September 2021, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 41 counties in Iowa in which wind farms with more than 25 turbines currently are operational. As of the July 2021, The Wind Power database reported there were a total of 67 wind projects online with 5,122 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ In the past 18 months, the assessor's offices have not experienced successful real estate tax appeals based upon wind project-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As the available market data do not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Virtually all assessors volunteered that the wind farms provided positive economic benefits to their counties and, in fact, had a positive impact on real estate values.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

## **Illinois Assessors Survey - Updated October 2020**

In March 2015, then updated in October 2016, as well as, in October 2020, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 20 counties in Illinois in which wind farms currently are operational. As of the second quarter of 2020, the AWEA reported there were 55 wind projects online with 3,035 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.

- ∴ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based on wind farm-related concerns. There have been no reductions in assessed valuations related to wind turbines.<sup>16</sup>
- ∴ As the available market data do not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

### **Indiana Assessors Survey – January 2019**

In January 2019, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 5 counties in Indiana in which wind farms with more than 25 turbines currently are operational. Of the wind farms with more than 25 turbines, Indiana contains more than 14 wind farms with more than 1,190 wind turbines. As of 2018, the AWEA reported there were approximately 16 wind projects with approximately 1,203 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based upon wind farm-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As the available market data does not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

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<sup>16</sup> A lawsuit was apparently filed in 2013 against the Supervisor of Assessments in Vermilion County by a homeowner proximate to wind turbines; however, there has been no further action on the matter.

## **Ohio Auditors Survey – July 2019**

In July 2019, MaRous & Company conducted a survey of the County Auditors or a deputy auditor in 3 counties in which wind farms with more than 25 turbines currently are operational. Of the wind farms with more than 25 turbines, Ohio has more than 5 wind farms with more than 327 wind turbines. As of April 2019, the AWEA reported there were approximately 38 wind projects with approximately 382 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The detailed analysis is attached in the addenda at the end of this report. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based on wind farm-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As the available market data do not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

## **Kansas Appraiser Survey – January 2019**

In January 2019, MaRous & Company conducted a survey of the county appraiser or a staff member in 21 counties in Kansas in which wind farms with more than 25 turbines currently are operational. Of the wind farms with more than 25 turbines, Kansas contains more than 29 wind farms with more than 2,856 wind turbines. As of 2018, the AWEA reported there were approximately 37 wind projects with approximately 2,996 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.



- ∴ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based upon wind farm-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As the available market data does not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

### **South Dakota Assessors Survey - November 2017, Updated April 2018**

In November 2017 my office conducted a survey of the supervisor of assessments or a deputy supervisor in eight counties in South Dakota, then two additional counties in April 2018, in which wind farms with more than 25 turbines currently are operational, and South Dakota has more than nine wind farms with more than 510 wind turbines. As of the third quarter of 2018, the AWEA reported there were 14 wind projects online with 583 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The detailed analysis is attached in the addenda at the end of this report. The following is a summary of the results of that survey:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ In the past 5 years, the only assessor's office to have experienced a real estate tax appeal based upon wind farm-related concerns was Aurora County, but the appeal was denied by the county. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As the available market data does not support the claim of a negative impact upon residential or agricultural values, residential and agricultural assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ∴ Virtually all assessors volunteered that the wind farms provided positive economic benefits to their counties and, in fact, had a positive impact on real estate values.

## **New York Assessors Survey – May 2019**

In May 2019, MaRous & Company conducted a survey of the supervisor of assessments or a deputy supervisor in six counties and the supervisor of assessments or a deputy supervisor in seven cities/towns in New York in which wind farms with more than 25 turbines currently are operational, and New York has more than 14 wind farms with more than 940 wind turbines within those parameters. As of 2019, the AWEA reported there were approximately 29 wind projects with approximately 1,128 wind turbines in the state with additional farms being added each year. The interviews were intended to allow the assessment officials to share their experience regarding the wind farm(s) impact upon the market values and/or assessed values of surrounding properties. The detailed analysis is attached in the addenda at the end of this report. The following is a summary of the results of that survey:

- ✧ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ✧ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based on wind farm-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ✧ As the available market data do not support the claim of a negative impact upon residential values, residential assessed values have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.
- ✧ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and external influences.

## Wind Literature Review

MaRous & Company is familiar with several academic and peer-reviewed studies on the impact of wind turbines on residential property values. There are no peer-reviewed studies for the state of Minnesota. However the following studies are consistent with our findings in Minnesota. These are summarized below:

### **Municipal Property Assessment Corporation (MPAC) Study, 2008, 2012, and 2016** *Ontario, Canada*

This study originally was conducted in 2008 and was updated in 2012 and 2016. The conclusions in all three studies are similar: “there is *no statistically significant impact on sale prices* of residential properties in these market areas resulting from proximity to an IWT [Industrial Wind Turbine] when analyzing sale prices.” (2012 Study, Page 5; emphasis in original) Using 2,051 properties and generally accepted time adjustment techniques, MPAC “cannot conclude any loss in price due to the proximity of an IWT.” (2012 Study, Page 29) Further, Appendix G of the 2012 MPAC report “Re-sale Analysis” states in the “Summary of Findings” “MPAC’s own re-sale analysis using a generally accepted methodology for time adjustment factors indicates no loss in price based on proximity to the nearest IWT.”

### **Lawrence Berkeley National Laboratory (LBNL) Studies, 2009, 2010, 2013, and 2014** *Nationwide*

The 2009 LBNL study included analysis of 7,489 sales within 10 miles of 11 wind farms and 125 post-construction sales within 1 mile of a wind turbine. The study used rural settings and wind farms of more than 50 turbines, and considered area stigma, scenic vista sigma, and nuisance stigma in varying distances from a wind turbine. The 2010 LBNL study included 7,500 single-family residential sales located in nine states and proximate to 24 wind farms, and 4,937 post-construction sales within 10 miles of a wind turbine. The 2013 LBNL study included 51,276 sales located in nine states and proximate to 67 wind farms, and 376 post-construction sales within 1 mile of a wind turbine. The 2014 LBNL study included over 50,000 sales located in nine states and proximate to 67 wind farms, and 1,198 post-construction sales within 1 mile of a wind turbine. All were located in rural settings and near wind farms of more than 0.5 megawatts. These study concentrated on nuisance stigma in varying distances from a wind turbine. The study found no statistically significant evidence that turbines affect sale prices. Neither study found statistical evidence that home values near turbines were affected.

### **University of Rhode Island, 2013** *Rhode Island*

Structured similarly to the LBNL studies, this study included 48,554 total sales proximate to 10 wind farms, and 412 post-construction sales within 1 mile of a turbine. These wind farms were mostly small facilities in urban settings. The study included nuisance and scenic vista stigmas. Page 421 of the report stated, “Both the whole sample analysis and the repeat sales analysis indicate that houses within a half mile had essentially no price change ...” after the turbines were erected.

### **The University of Guelph, Melancthon Township, 2013**

*Ontario, Canada*

This study analyzed two wind farms in the township, using 5,414 total sales and 18 post-construction sales within 1 kilometer of a wind turbine. The study included nuisance and scenic vista stigmas. Page 365 of the study stated that “These results do not corroborate the concerns regarding potential negative impacts of turbines on property values.”

### **University of Connecticut/LBNL, 2014**

*Massachusetts*

This study included 312,677 total sales proximate to 26 wind farms, and 1,503 post-construction sales within 1 mile of a wind turbine. These wind farms were located in urban settings and primarily were proximate to small wind farms. The study included wind turbines and other environmental amenities/disamenities (including beaches and open spaces/landfills, prisons, highways, major road, and transmission lines) together, for nuisance stigma. “Although the study found the effects from a variety of negative features ... and positive features ... the study found no net effects due to the arrival of turbines.”

### **Wichita State University, 2019**

*Kansas*

This study strived to decipher and develop a better understanding of wind projects and their effect on rural properties in Kansas. The study’s data is based on 23 operational wind projects in Kansas which came online between 2005 to 2015. The properties and their values, which were appraised at the county level, have sale dates ranging from 2002 to 2018. The study and its results suggest that property values do not spike once the project is completed. Rather, it was noted that they have a more “modest” growth, and that the three-year average for property value growth was 0.3% after a project had been completed and operational.

These studies had a combined number of over 3,700 transactions within 1 mile of operating turbines and found no evidence of value impact.<sup>17</sup>

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<sup>17</sup> Although I have read these studies, the substance of these summaries was taken from a seminar conducted by the Appraisal Institute on March 5, 2015.

## **Transmission Line Peer-Reviewed Literature Review**

MaRous & Company is familiar with several academic and peer-reviewed studies on the impact of transmission lines on residential property values. There are no peer-reviewed studies specific to the state of Minnesota. However, the following studies are consistent with our findings in Minnesota. These are summarized below:

### **Property Value Impacts from Transmission Lines, Subtransmission Lines, and Substations, 2016**

*Appraisal Institute - Nationwide*

Abstract: Prior research on the value impact of proximity to transmission lines has relied on relatively limited sample sizes, property characteristics, and types of lines. This study extends the previous research by analyzing almost all single-family home sales over a fourteen-year period for Salt Lake County, Utah, using over 125,000 transactions and approximately 450 home characteristics to examine the effects of various types of transmission lines and of substations. This large sample analysis permits estimation of the countywide aggregate effects of these factors on property values. The results find some negative effects that differ by type of transmission line, and as in previous research, the effects diminish with distance. As with some previous research, the results also show some evidence of modest positive effects associated with proximity to large transmission lines, which may be related to greenways constructed beneath such lines. Ongoing research to improve the reliability of the study results will include consideration of property rights associated with the transmission corridors and impact on home values of fronting road types.<sup>18</sup>

### **The Effect of High-Voltage Overhead Transmission Lines on Property Values: A Review of the Literature Since 2010, 2017**

*Appraisal Institute - Worldwide*

Abstract: Renewable energy initiatives require modernization to the power grid. Renewable energy must be transported long distances by high-voltage overhead transmission lines (HVOTLs) from generation point to population centers. This article discusses the literature since 2010 regarding the impact of HVOTLs on property values. Previous reviews have divided the literature into three categories: statistical price models, survey-based research, and other appraisal methods, such as paired sales and resale analyses. The article examines the developments within these three established empirical approaches and extends the literature review beyond the United States to studies in Europe and New Zealand.<sup>19</sup>

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<sup>18</sup> Tatos, T., Glick, M., PhD, & Lunt, T. A., MAI. (2016). *Property Value Impacts from Transmission Lines, Subtransmission Lines, and Substations. The Appraisal Journal, (Summer 2016).*

<sup>19</sup> Anderson, O. C., MAI, Williamson, J., PhD, & Wohl, A. (2017). *The Effect of High-Voltage Overhead Transmission Lines on Property Values: A Review of the Literature Since 2010. The Appraisal Journal, (Summer 2017).*



## **Transmission Lines & Property Value Impacts, 2012**

### *Nationwide*

Many stakeholders in the Mountain States Transmission Intertie (MSTI) permitting process including local government officials are concerned about the potential impact of a new high voltage overhead transmission line on private property values in Montana and Idaho. This review discusses research on property value impacts from high voltage overhead transmission lines with a focus on what can be learned that is of relevance to the proposed MSTI project.

The target audience for this review is local government officials associated with the MSTI Review Project. There is a significant body of professional and academic literature on property value impacts from transmission lines. Several important summaries of this body of work are available, including one commissioned for the Draft Environmental Impact Statement (EIS) for the MSTI project, however, one new study has yet to be assimilated into existing summaries of the professional literature on property value impacts from high voltage overhead transmission lines. The new study is Dr. James Chalmers' research on sales of properties located along the 500 kV Colstrip-BPA line in Montana. Dr. Chalmers' research was carried out under contract to Northwestern Energy in 2010 and 2011. His findings are available in a detailed research report and were published in two peer-reviewed journal articles in 2012.

Chalmers' research is relevant to the MSTI proposal because it considers property types more comparable to the areas affected by MSTI than any other published studies. If built, MSTI would traverse parts of Montana and Idaho where agriculture land uses, including ranching and intensive crop production, are dominant on private property. Forested cabin sites, exurban and rural residential properties could also be affected. Chalmers' study provides new insights into the market effects of the Colstrip-BPA line on similar property types—although it is not appropriate to generalize from such research to effects on specific properties. The only way to assess impacts on an individual property is through a professional appraisal. Furthermore, Chalmers' research was not designed to provide an impact analysis for MSTI and there it presents opportunities and some notable limitations as a resource in assessing potential impacts from the MSTI line.<sup>20</sup>

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<sup>20</sup> Haggerty, J.; DiGiorgio, M. (2012). *Transmission Lines & Property Value Impacts (Rep.)*. Headwaters Economics.

## Conclusions

As a result of the market impact analysis undertaken, MaRous & Company has concluded that there is no market data indicating the wind farm and transmission line will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, market data from Minnesota, as well as from other states, supports the conclusion that the project will not have a negative impact on rural residential or agricultural property values in the surrounding area. Finally, for agricultural properties that host turbines, the additional income from the wind lease may increase the value and marketability of those properties. These conclusions are based on the following:

- ⋈ There are significant financial benefits to the local economy and to the local taxing bodies from the development of the wind farm and transmission line.
- ⋈ The proposed wind farm and transmission line will create well-paid jobs in the area which will benefit overall market demand.
- ⋈ An analysis of recent residential sales proximate to existing wind farms, in Minnesota and other midwestern states, did not support any finding that proximity to a wind turbine had a negative impact on property values.
  - The population within the area of the proposed transmission line has an extremely low density of 7.9 persons per square mile, which can be attributed to the limited proximity to economic centers, rolling terrain, lack of paved roads, and infrastructure.
- ⋈ An analysis of agricultural land values in Minnesota did not support any finding that agricultural land values are negatively impacted by the proximity to wind turbines.
- ⋈ Reports from Minnesota, Iowa, Illinois, South Dakota, Kansas, and Indiana indicate that wind turbine leases add value to agricultural land.
- ⋈ A survey of County Assessors in 11 Minnesota counties, 41 Iowa counties, 20 Illinois counties, 5 Indiana Counties, 21 Kansas counties, 8 South Dakota counties, and 3 Ohio counties in which wind farms with more than 25 turbines are located, and assessors of various counties across the state and the Midwest region have been consulted based on their experience with transmission lines determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a wind farm and that there were no reductions in assessed valuation.

This report is based on market conditions proposed as of August 30, 2021. This market impact study has been prepared specifically for the use of the client and to support the development of the Dodge County Wind, in Dodge County and Steele County, Minnesota. Any other use or user of this report is considered to be unintended.

Respectfully submitted,  
MaRous & Company



Michael S. MaRous, MAI, CRE  
Minnesota Certified General- #40330656 (8/22 expiration)  
Illinois Certified General - #553.000141 (9/23 expiration)

## CERTIFICATE OF REPORT

I do hereby certify that:

- ✧ The statements of fact contained in this report are true and correct.
- ✧ The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, conclusions, and recommendations.
- ✧ I have no present or prospective personal interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- ✧ I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- ✧ I have no bias with respect to the property that is the subject of the work under review or to the parties involved with this assignment.
- ✧ My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- ✧ My compensation for completing this assignment is not contingent upon the development or reporting of predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal consulting assignment.
- ✧ My analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- ✧ I have made a personal inspection of the subject of the work under review.
- ✧ Joseph M. MaRous provided significant research and analysis assistance to the person signing this certification.
- ✧ The reported analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Foundation.
- ✧ The use of the report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- ✧ As of the date of this report, Michael S. MaRous, MAI, CRE, has completed the continuing education requirements for Designated Members of the Appraisal Institute.

Respectfully submitted,  
MaRous & Company

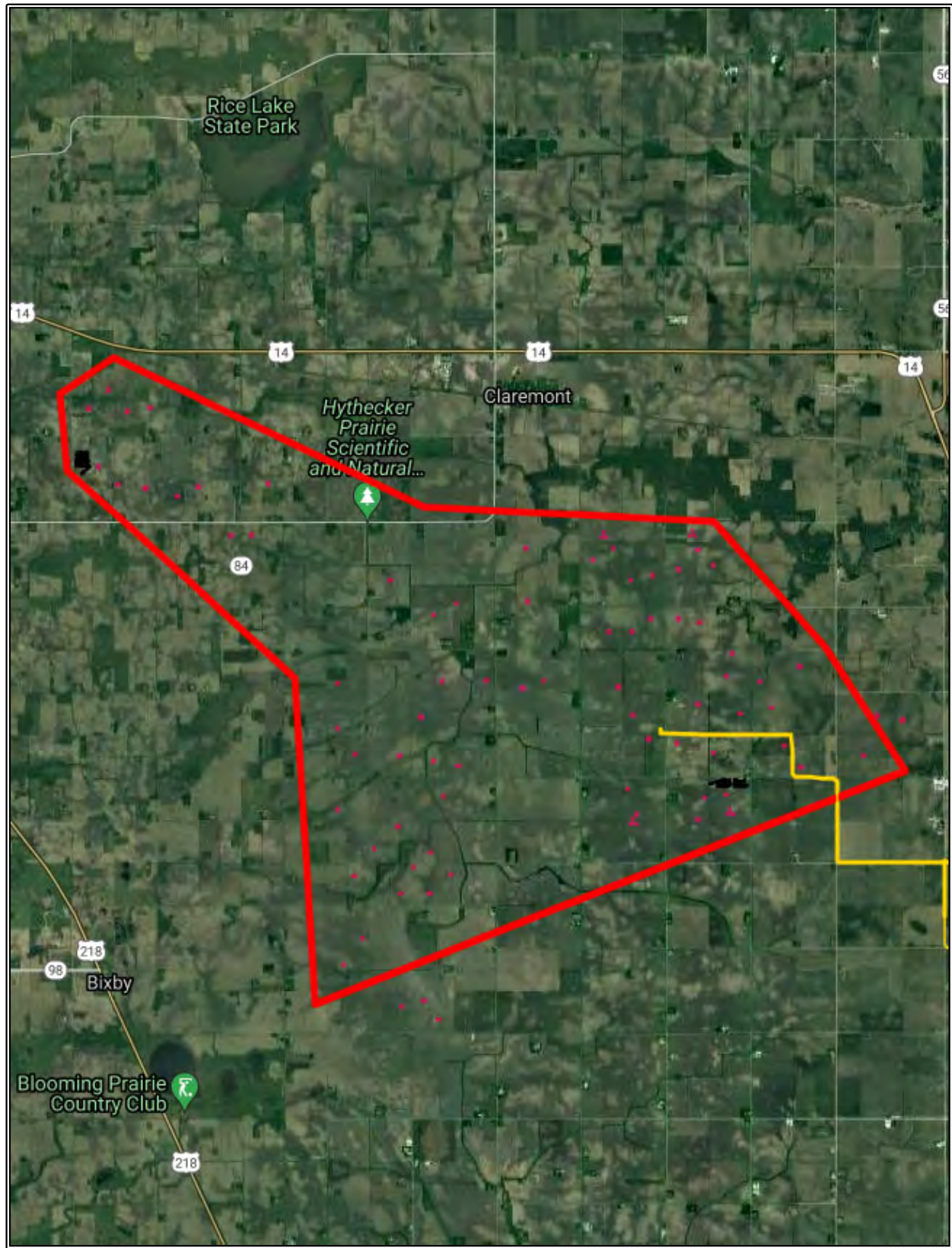


Michael S. MaRous, MAI, CRE  
Minnesota Certified General- #40330656 (8/22 expiration)  
Illinois Certified General - #553.000141 (9/23 expiration)

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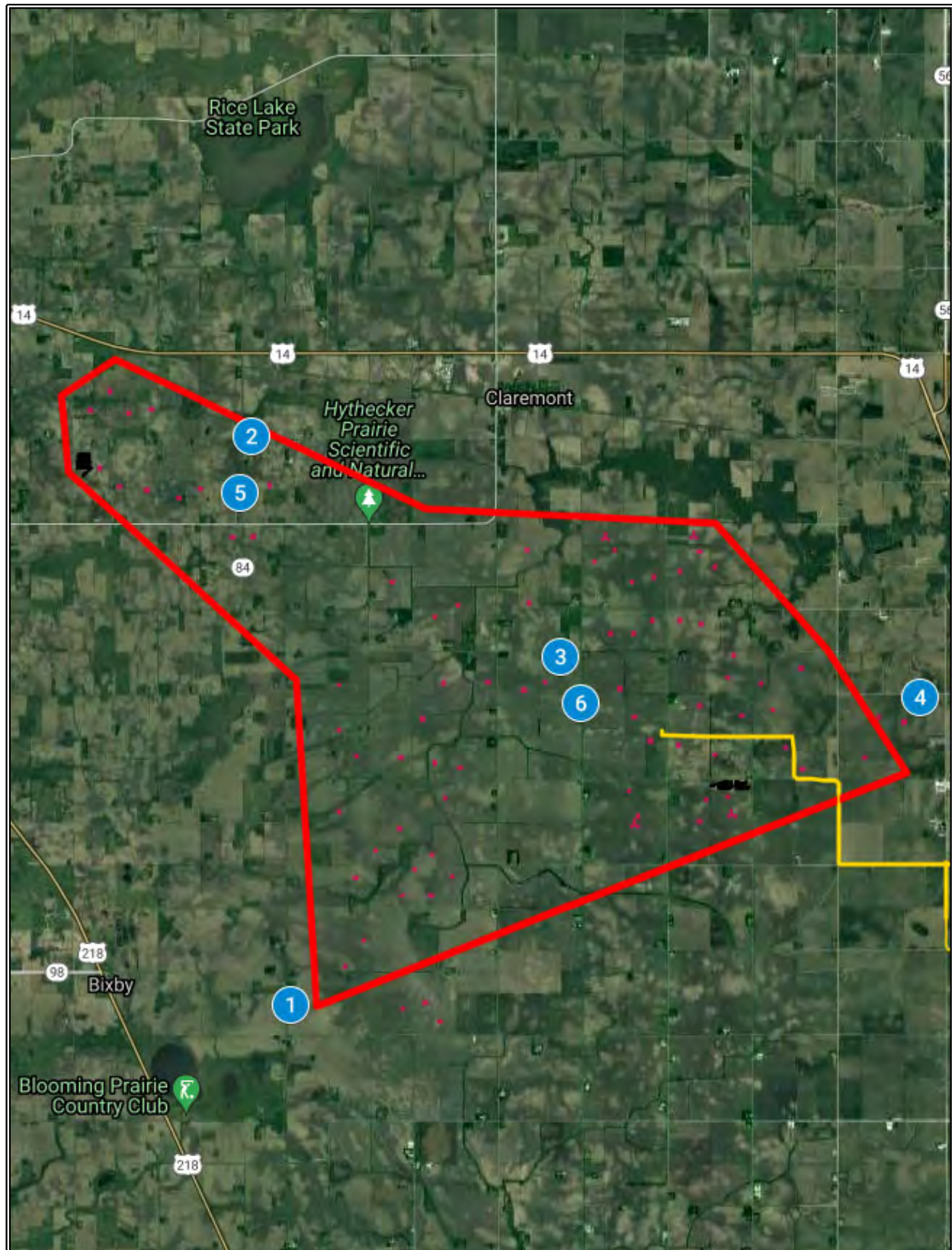
## **ADDENDA**





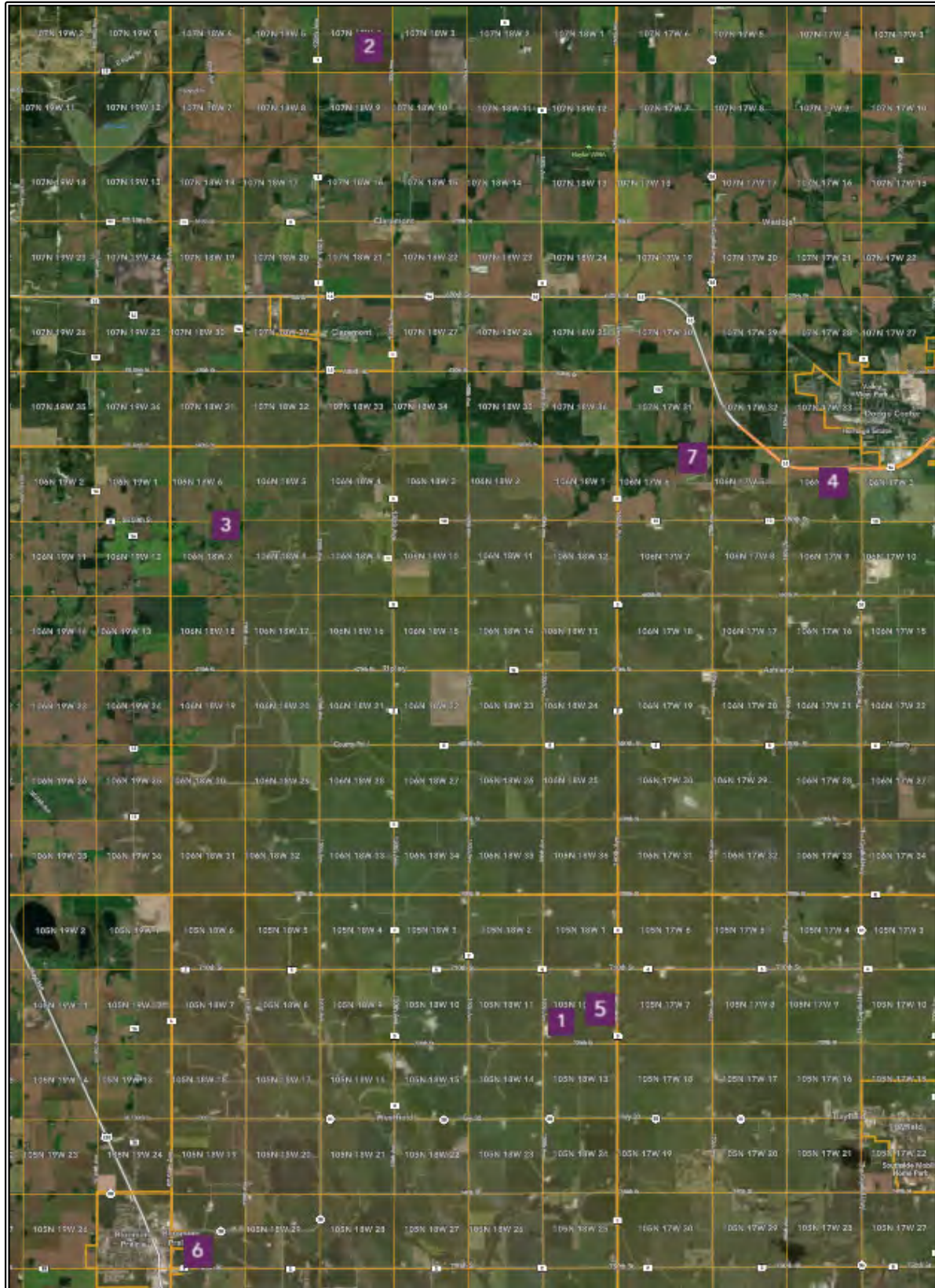
**DODGE COUNTY WIND FOOTPRINT**



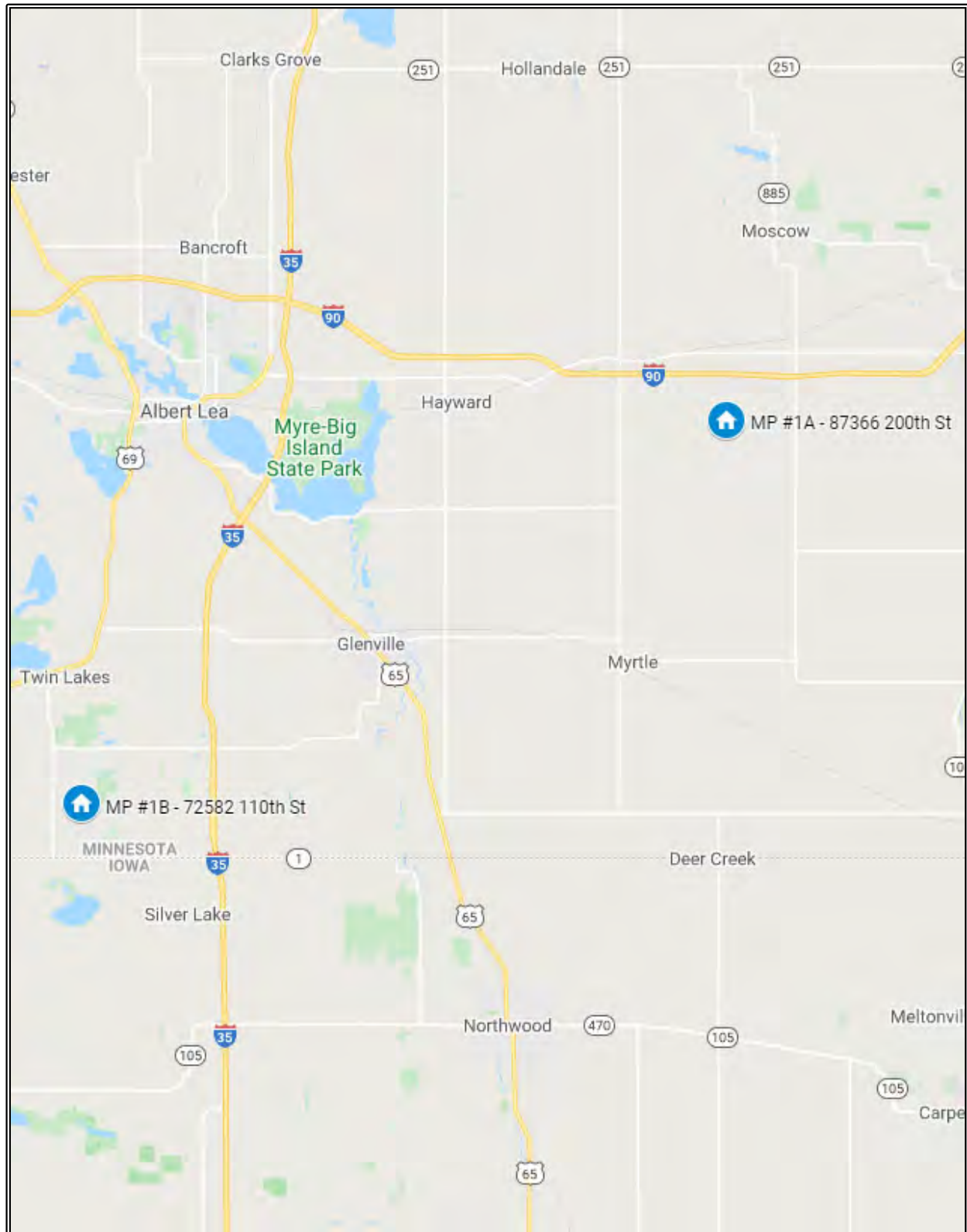


RECENT SINGLE-FAMILY HOUSE SALES LOCATION MAP



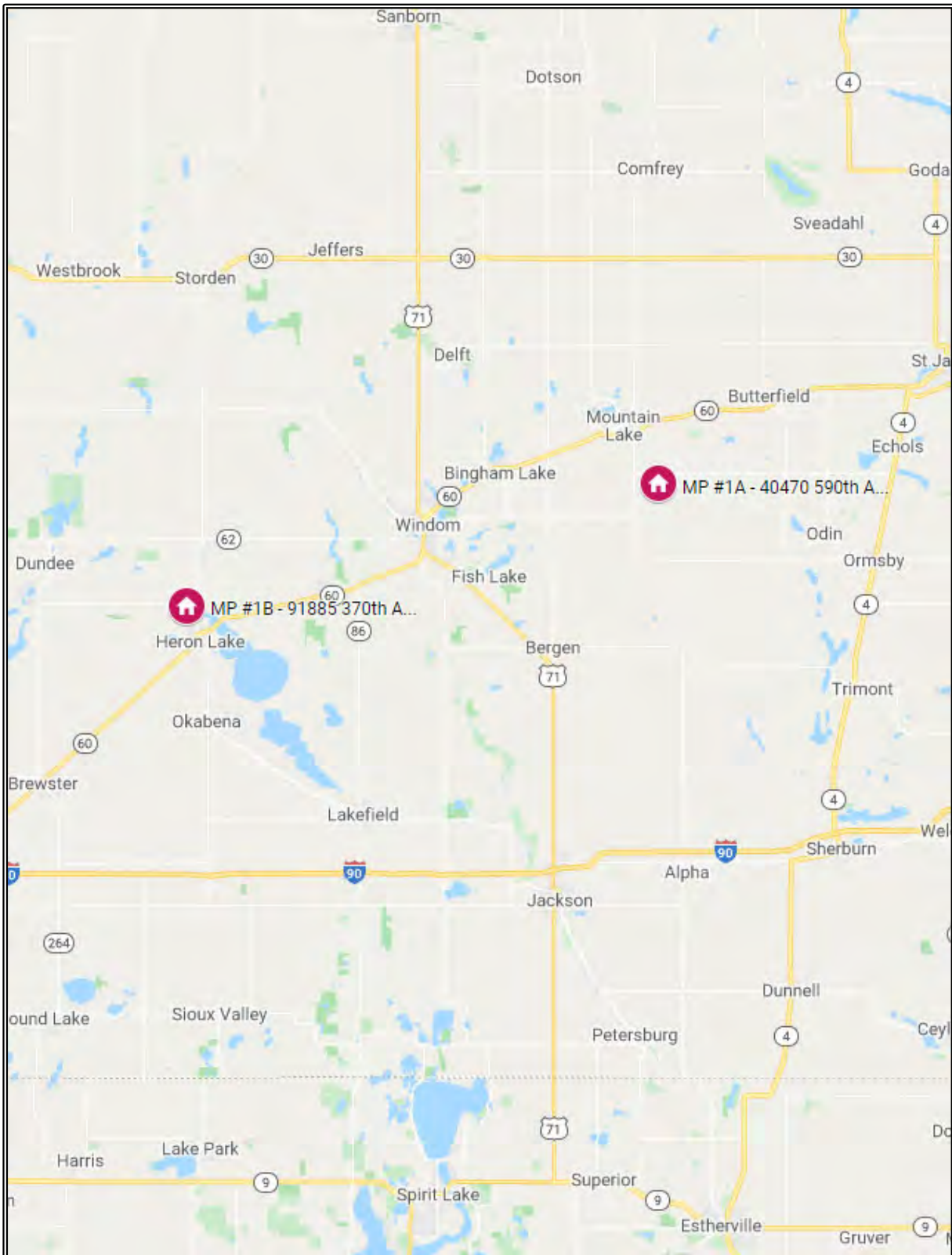


LAND SALES LOCATION MAP



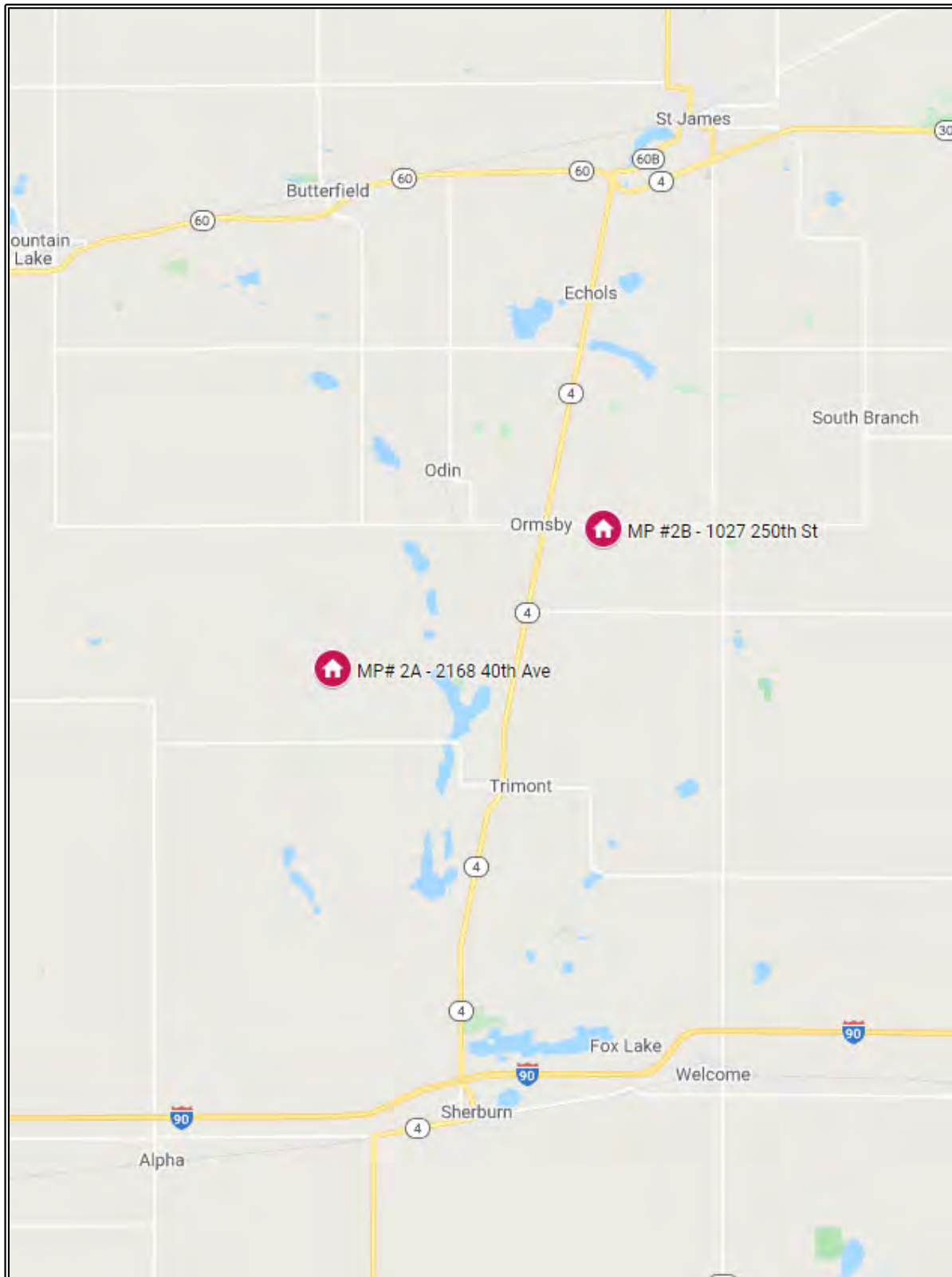
**FREEBORN COUNTY, MINNESOTA MATCHED PAIR LOCATION MAP**



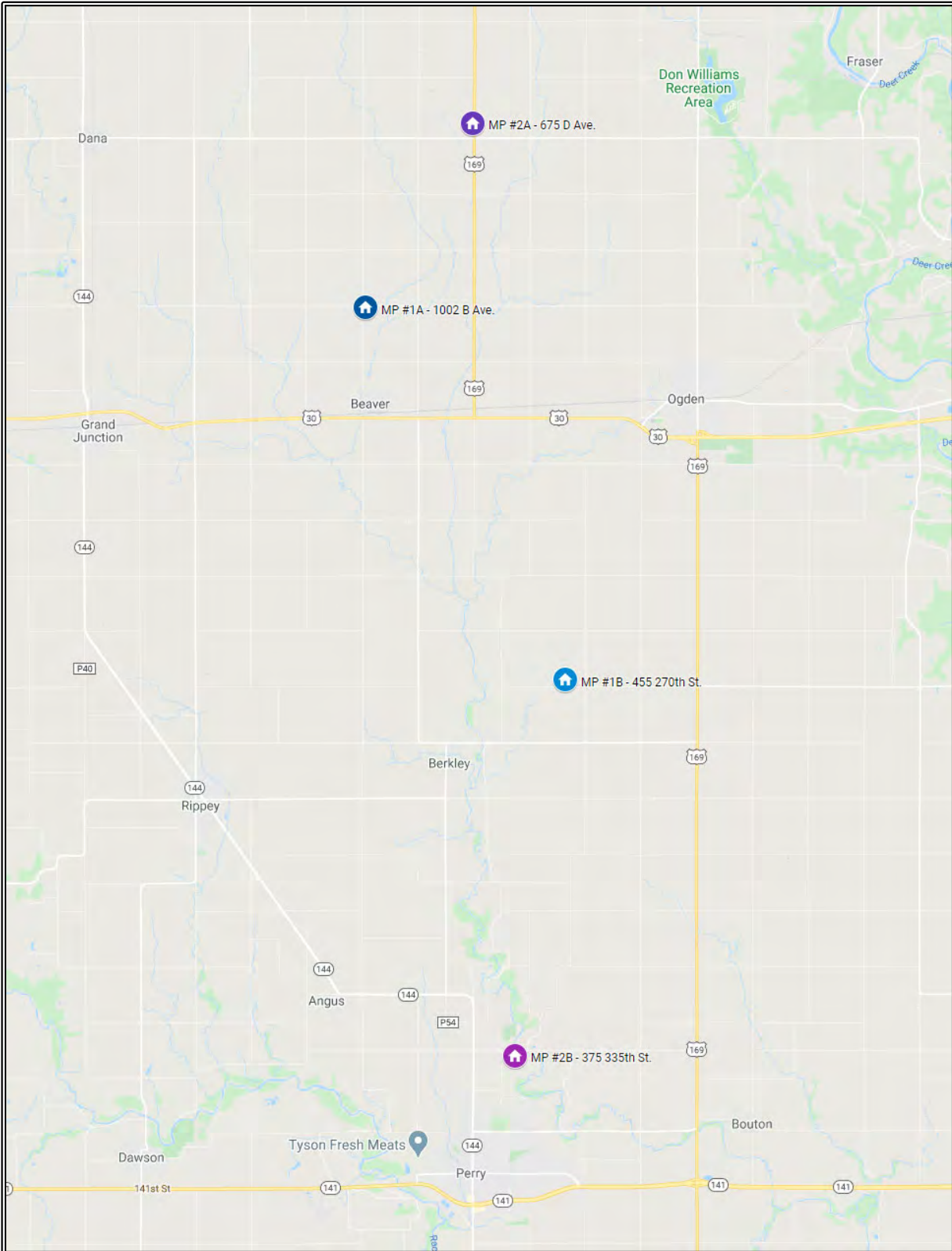


**COTTONWOOD COUNTY, MINNESOTA MATCHED PAIR LOCATION MAP**

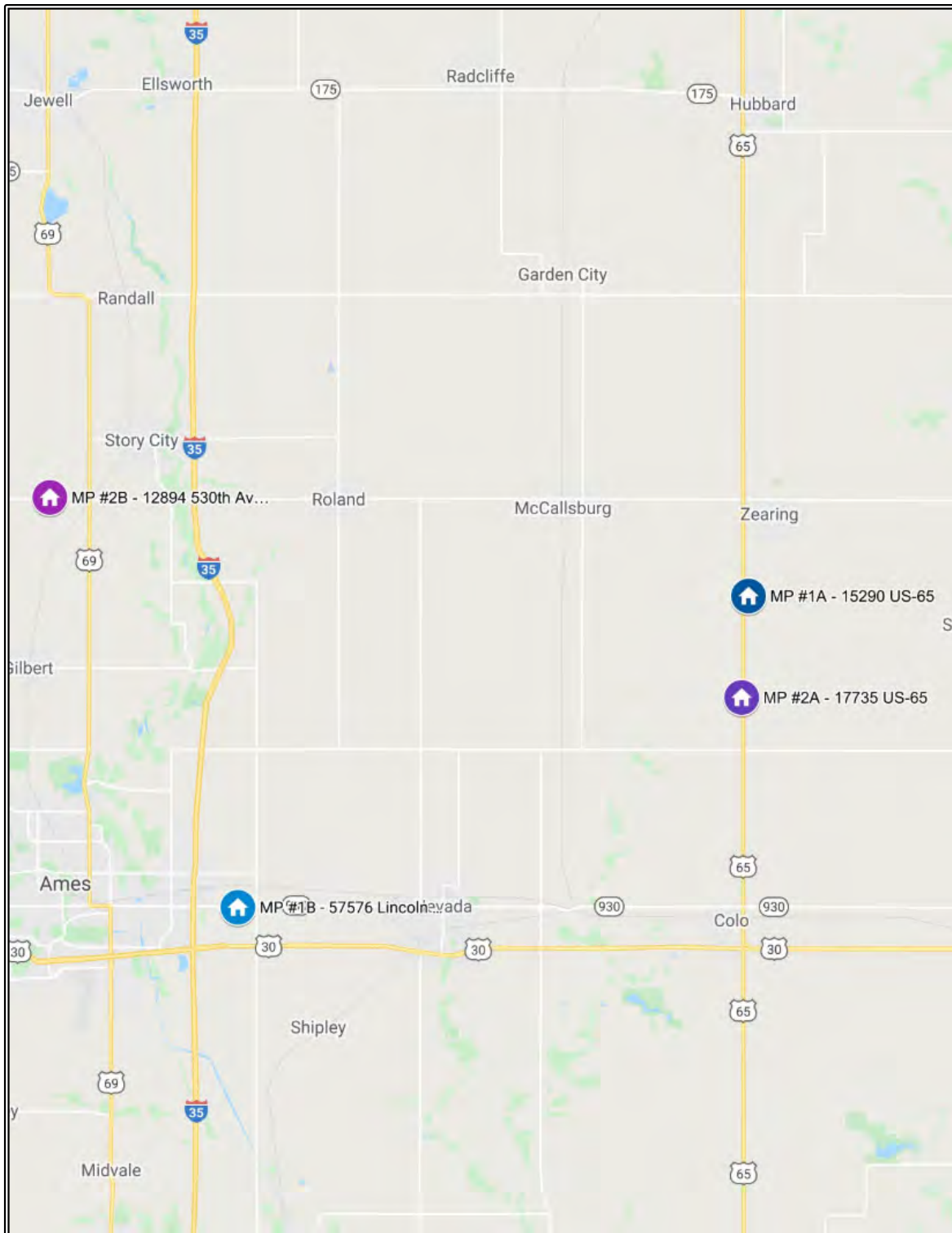




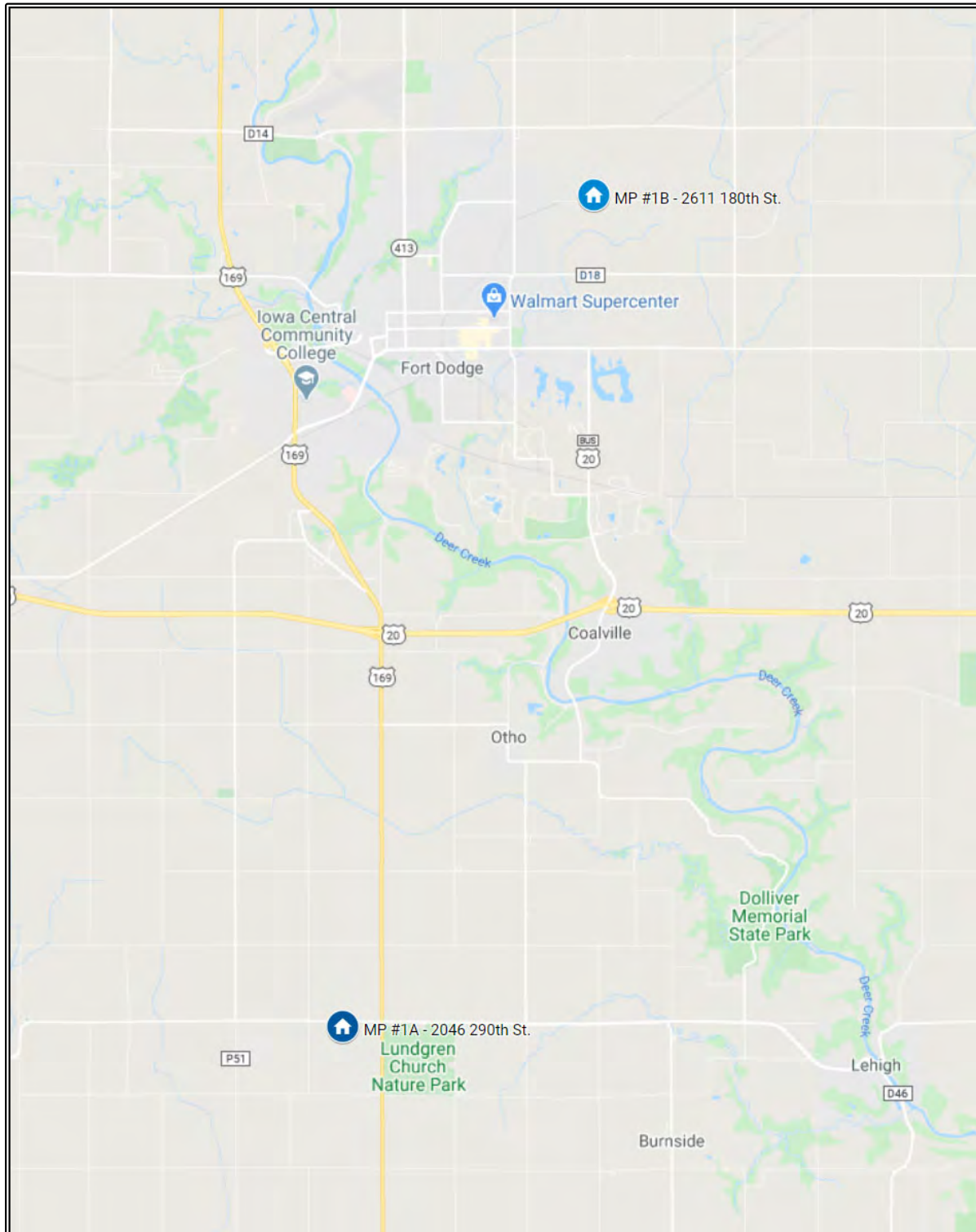
**MARTIN COUNTY, MINNESOTA MATCHED PAIR LOCATION MAP**



**BOONE COUNTY, IOWA MATCHED PAIR LOCATION MAP**



**STORY COUNTY, IOWA MATCHED PAIR LOCATION MAP**



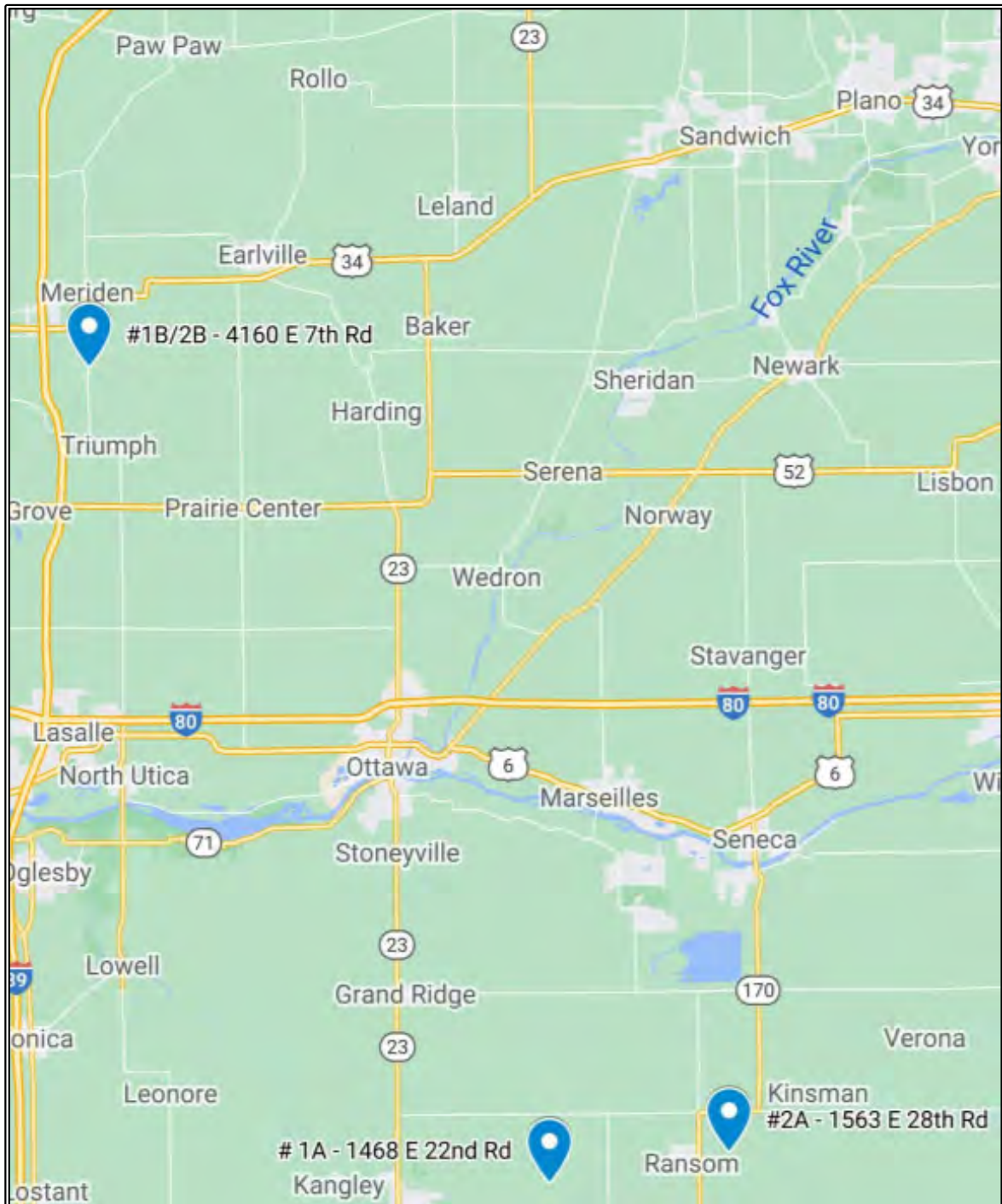
**WEBSTER COUNTY, IOWA MATCHED PAIR LOCATION MAP**



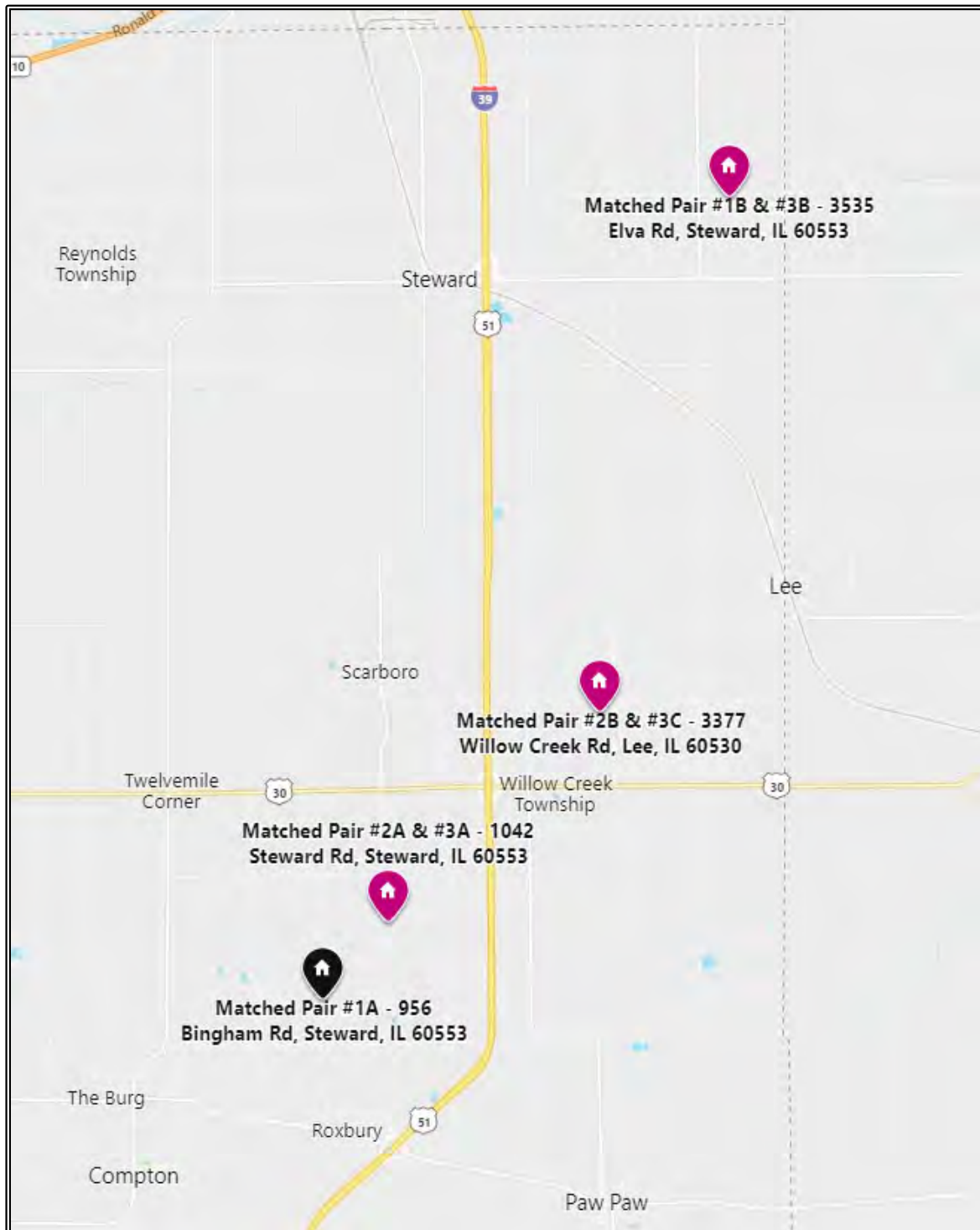


MCLEAN COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP

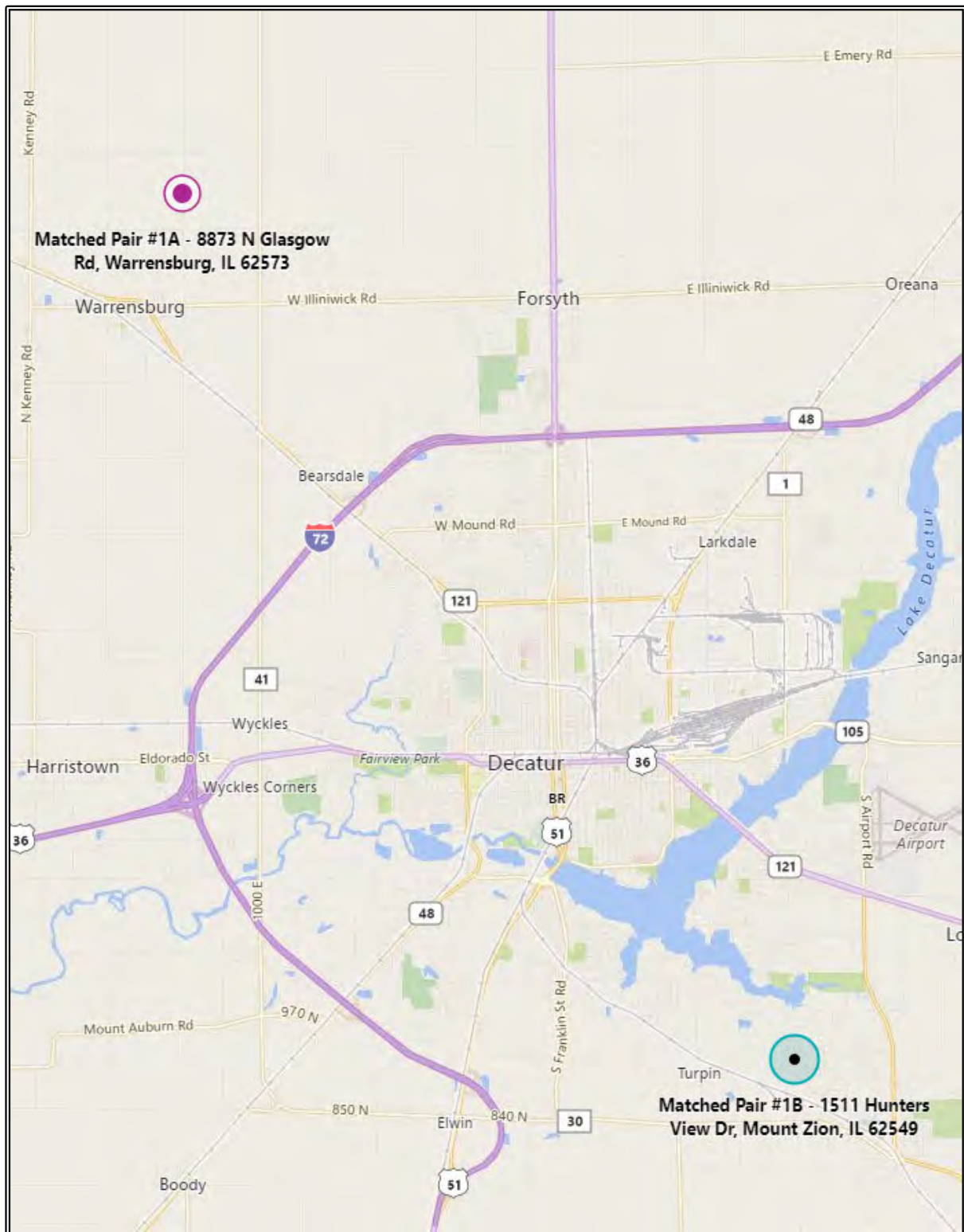




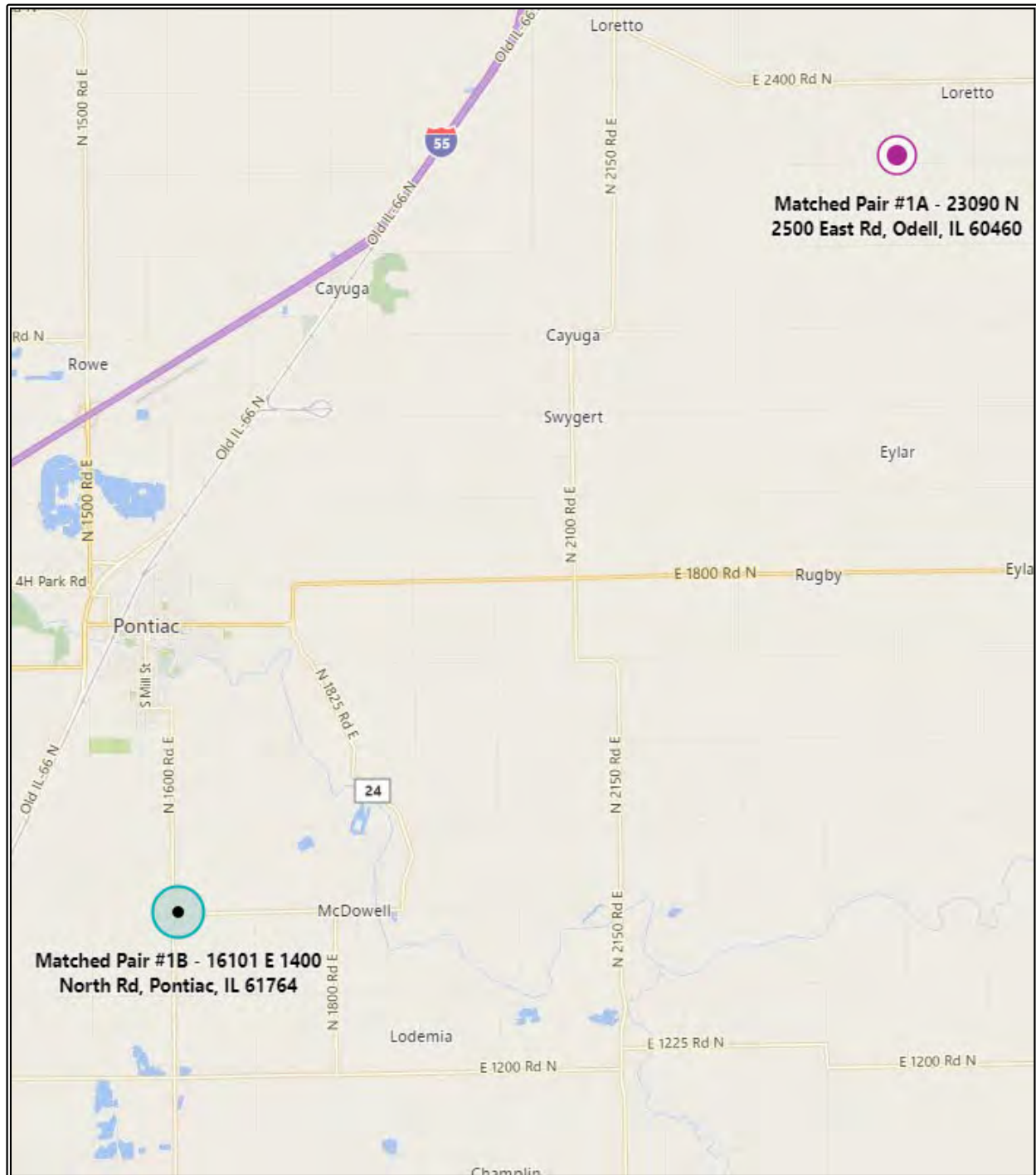
**LASALLE COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**



**LEE COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**

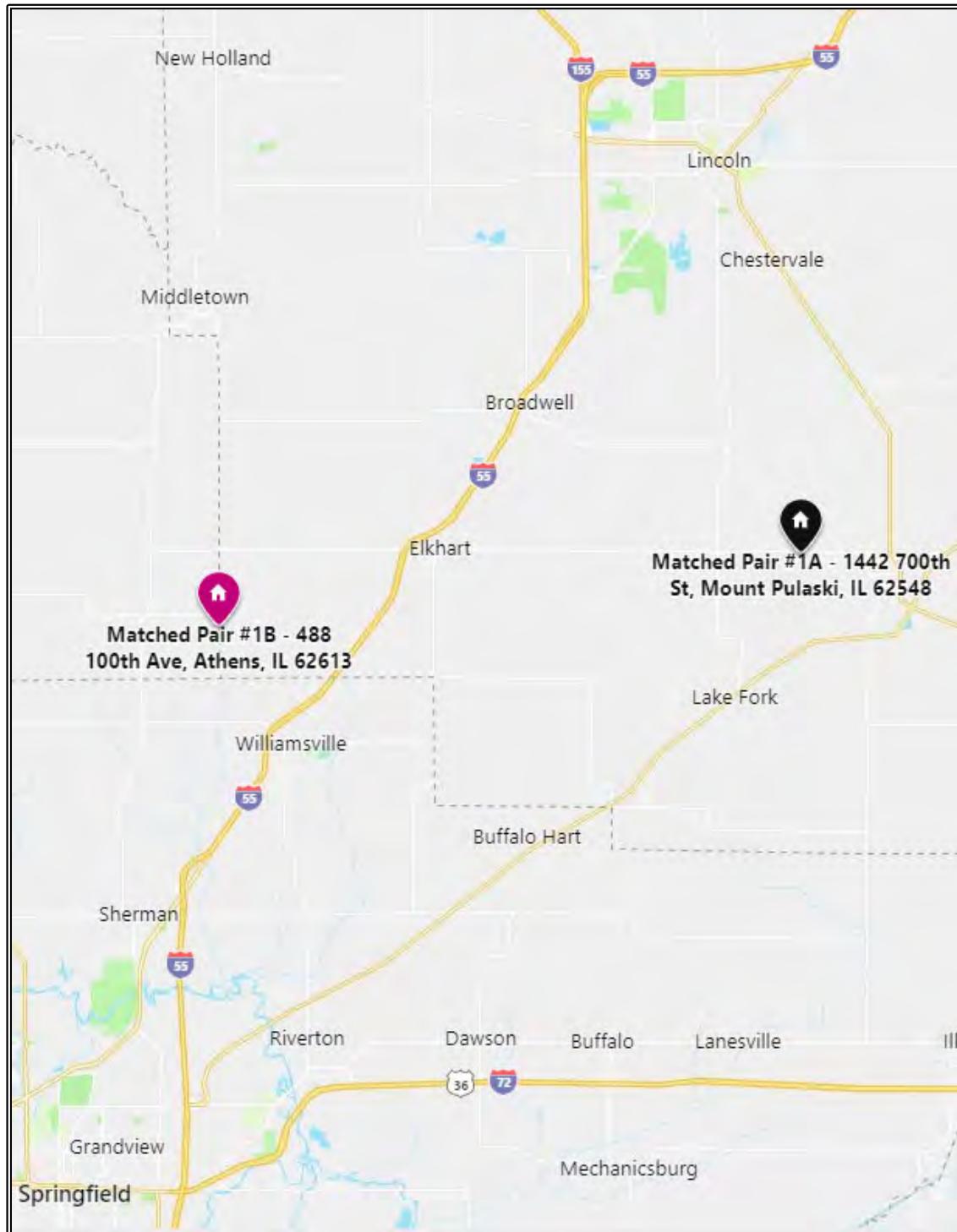


MACON COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP



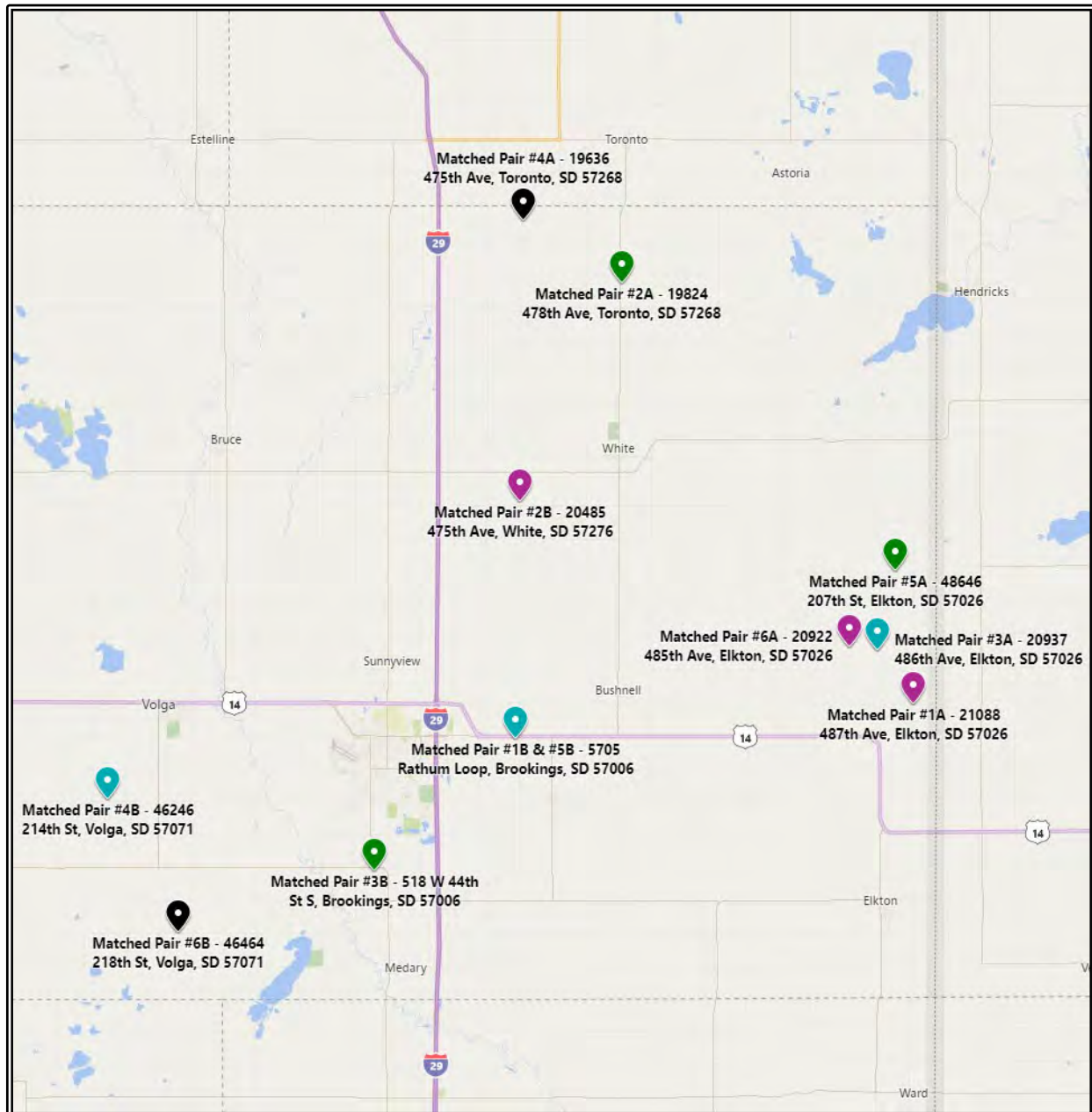
LIVINGSTON COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP



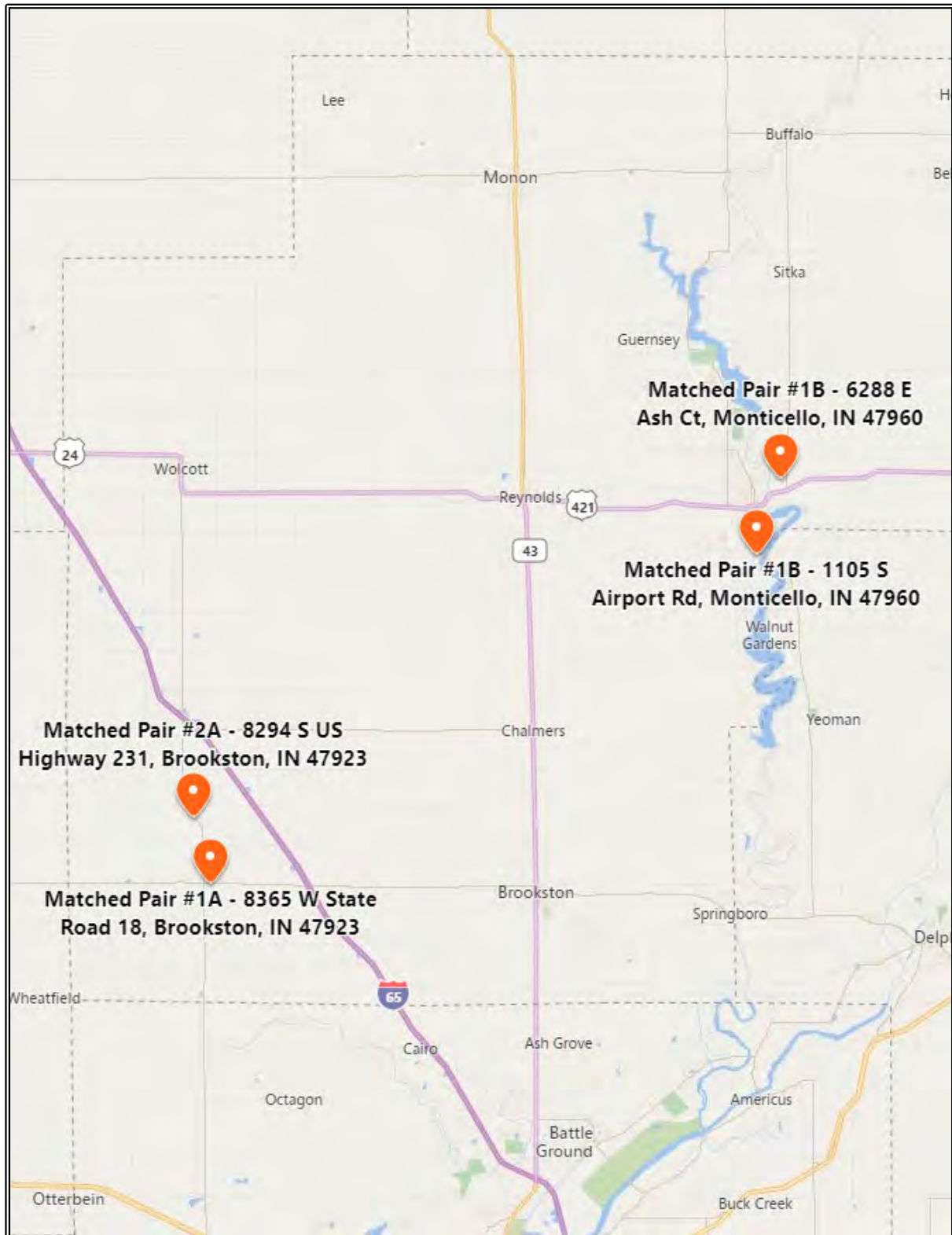


**LOGAN COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**

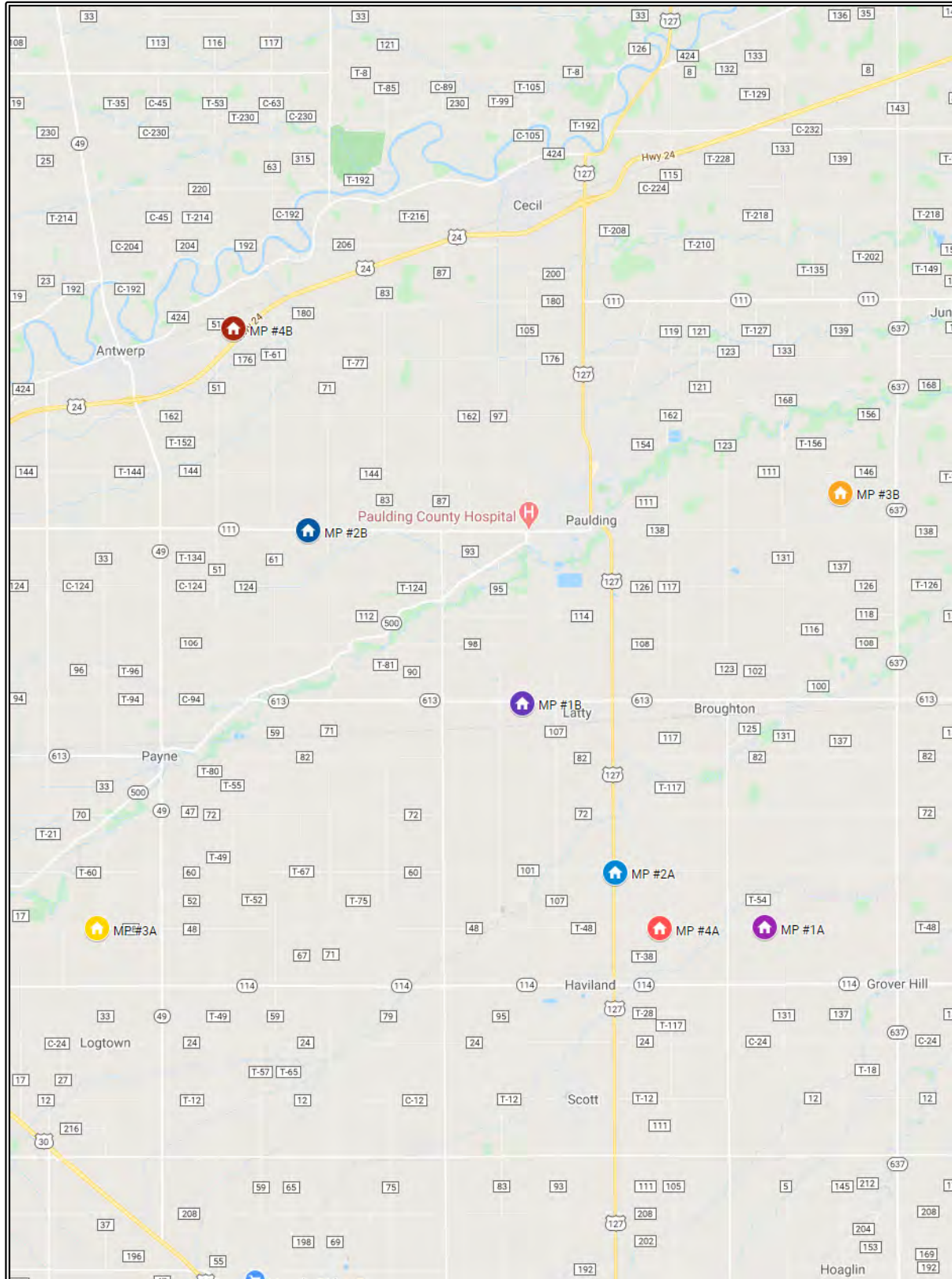




**BROOKINGS COUNTY, SOUTH DAKOTA MATCHED PAIR LOCATION MAP**

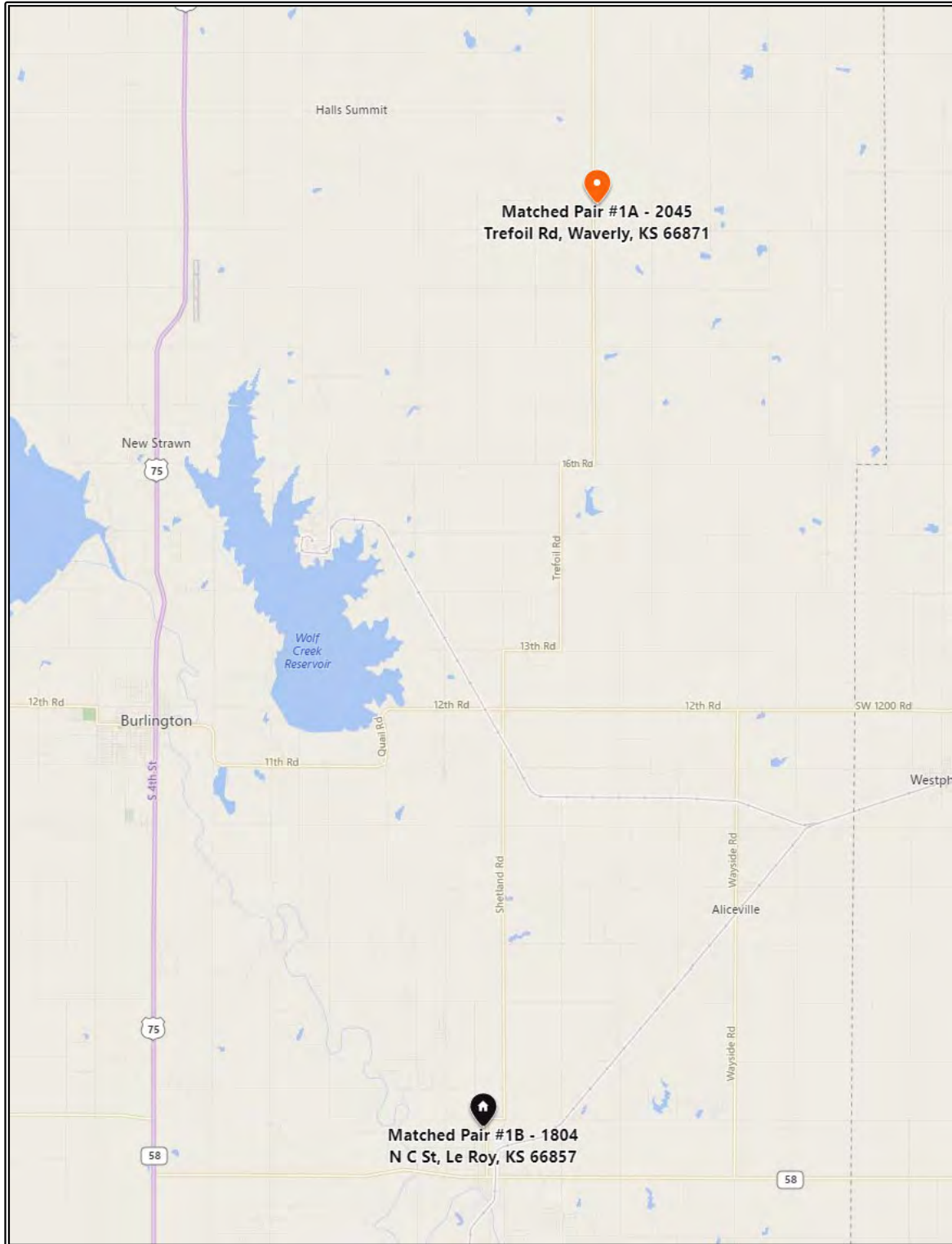


**WHITE COUNTY, INDIANA MATCHED PAIR LOCATION MAP**

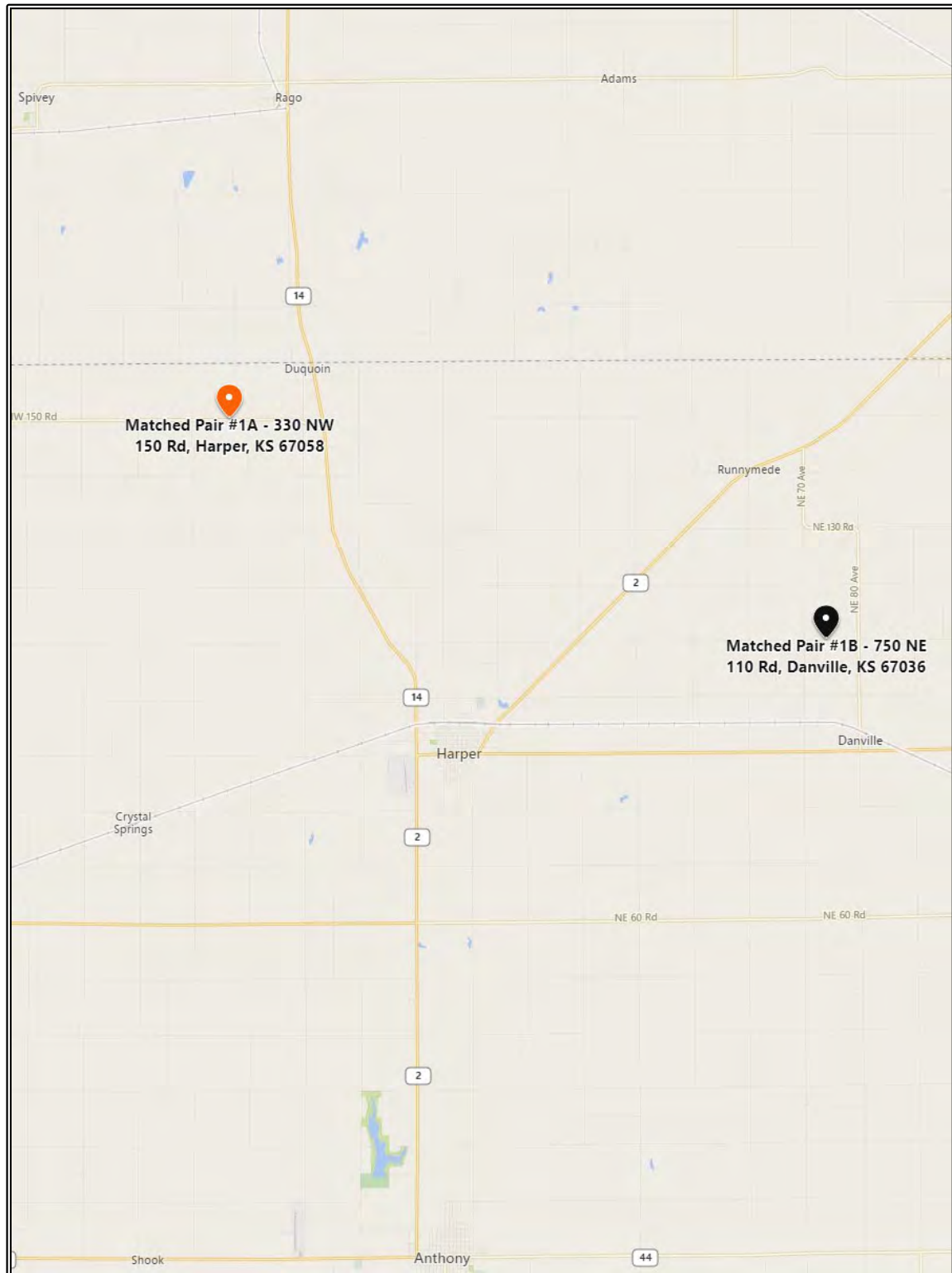


**PAULDING COUNTY, OHIO MATCHED PAIR LOCATION MAP**



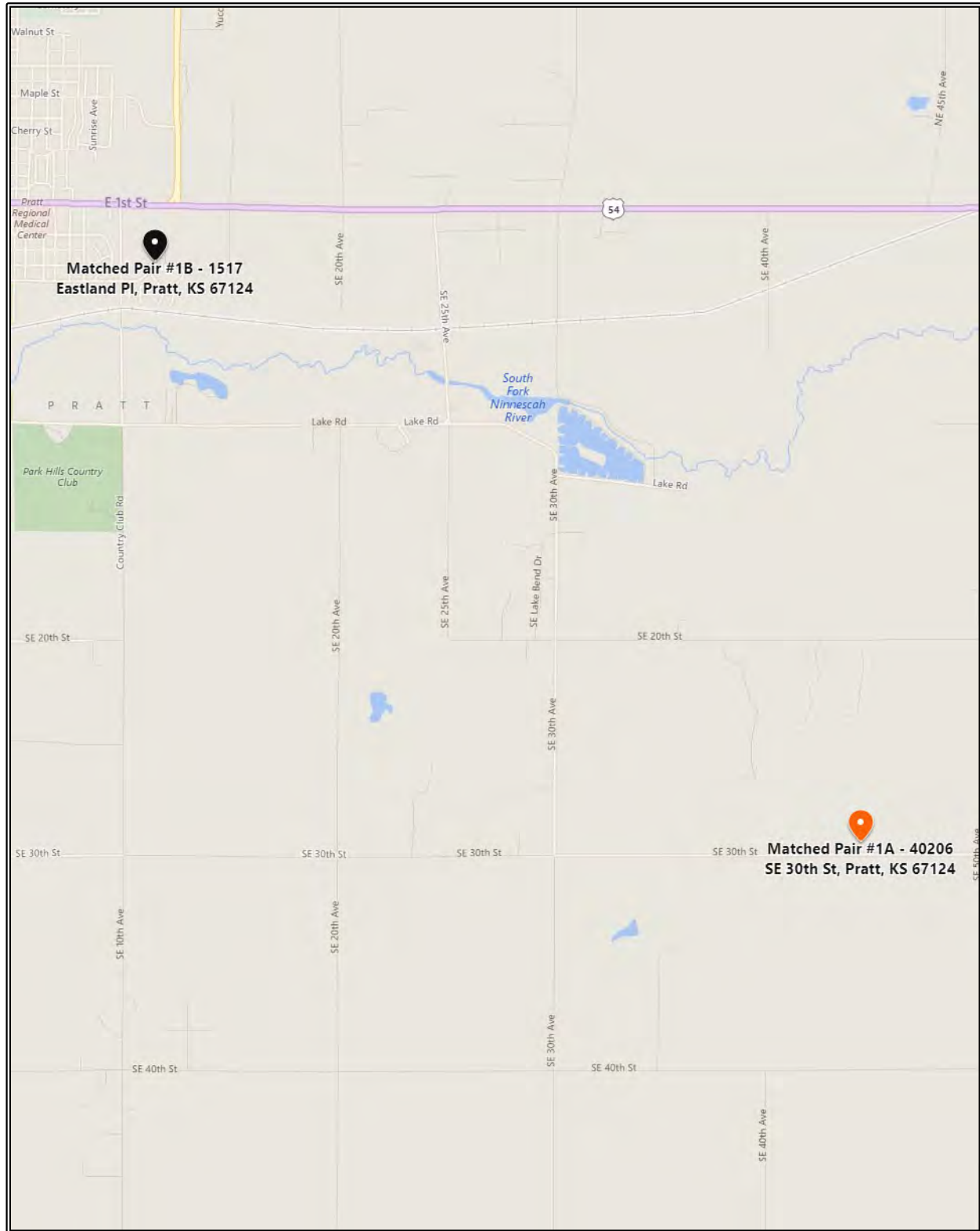


**COFFEY COUNTY, KANSAS MATCHED PAIR LOCATION MAP**



**HARPER COUNTY, KANSAS MATCHED PAIR LOCATION MAP**





**PRATT COUNTY, KANSAS MATCHED PAIR LOCATION MAP**

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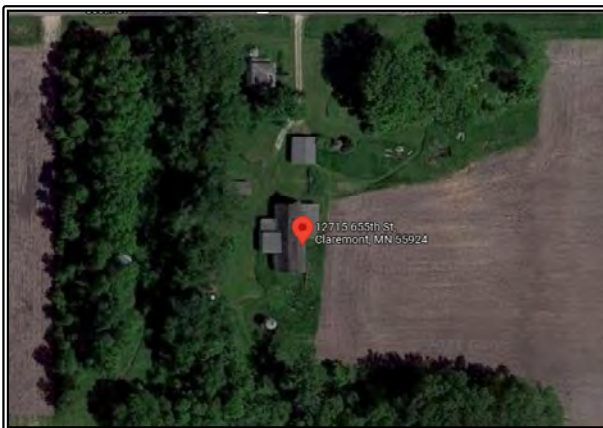
## **IMPROVED SALE PHOTOGRAPHS**



10551 89<sup>th</sup> Avenue SE



8496 SE 38<sup>th</sup> Street



12715 655<sup>th</sup> Street

16739 660<sup>th</sup> Street



4452 SE 84<sup>th</sup> Avenue

66091 130<sup>th</sup> Avenue



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## **MINNESOTA COUNTY ASSESSOR SURVEY ANALYSIS**



A survey of assessors in 11 counties in Minnesota which wind projects currently are operational has been undertaken. The supervisors or deputy supervisors of assessments were interviewed. The interviews were intended to allow the assessment officials to share their experiences regarding the impact of the wind project(s) upon the market values and/or the assessed values of surrounding properties. The interviews were conversational, but thoroughly discussed residential and agricultural values and impacts. The interviews were conducted in January 2017 and updated in October 2021.

## **Conclusions of the Study**

Based on these interviews:

- ∴ Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of, and the proximity to, a wind project facility. In some counties, this results from the very rural nature of the area in which the projects are located.
- ∴ There have been no successful tax appeals in any county based upon wind project-related concerns.
- ∴ In the past 18 months, the assessor's offices have not experienced successful real estate tax appeals based upon wind project-related concerns. There have been no reductions in assessed valuations related to wind turbines.
- ∴ As of the July 2021, The Wind Power database reported there were 137 wind projects online with 2,819 wind turbines in the state with additional farms being added each year.
- ∴ Residential assessed values have fluctuated consistently countywide as influenced by market conditions, with no regard for proximity to a wind project.
- ∴ Agricultural properties are taxed based upon a productivity formula that is not impacted by market data and by external influences.

## Scope of Project

The supervisors or deputy supervisors of assessments were interviewed. Each of the interviewees was familiar with the wind project(s) located within their respective county. The following is the list of County Supervisors of Assessments contacted:

County	County Assessor	CA Phone #	Wind Farm (Over 25 Turbines)	Turbine Count	Capacity (MW)	Year Online
Becker	Lisa Will	(218) 846-7300	Lakeswind	32	48.0	2014
Clay	Nancy Gunderson	(218) 299-5017	Lakeswind	32	48.0	2014
Cottonwood	Gale Bondus	(507) 831-2458	Odell	100	200.0	2016
Dodge	Ryan DeCook	(507) 635-6245	Pleasant Valley	100	200.0	2015
Freeborn	Jaci Koeppen	(507) 377-5176	Freeborn	100	200.0	2021
Jackson	Karla Ambrose	(507)-847-4033	Elm Creek	66	99.0	2008
			Odell	100	200.0	2016
Lincoln	Jean Nelson	(507) 694-1441	Blazing Star Wind Farm I	100	200.0	2020
			Buffalo Ridge	73	26.3	1994
			Minn-Dakota Wind Farm	64	96.0	2007
			Red Pine	100	200.0	2018
Mower	Joy Kanne	(507) 437-9440	High Prairie Wind Farm I	43	98.9	2006
			Prairie Star	60	99.0	2007
			Pleasant Valley	100	200.0	2015
Murray	Marcy Barritt	(507) 836-1104	Moraine II	33	49.5	2009
Pipestone	Joyce Schmidt	(507) 825-1150	Lake Benton II	44	101.2	2019
			Moraine II	33	49.5	2009
Stearns	Jake Pidde	(320) 656-3682	Black Oak Wind Farm	39	78.0	2016

A map indicating the number of wind projects in each of these counties is included in this memorandum. A second map illustrates the number of the wind projects located in each of these counties.

## Residential Market Values

Without exception, the interviewees reported that there was no market evidence to support a negative impact upon residential property values as a result of the development of, and the proximity to, a wind farm facility. Either as a request by a county board, in an attempt to appropriately assess newly constructed residences, or to support current assessed values, the supervisors of assessments have been particularly attentive to market activity in the area of the wind farms.

Mower County's Supervisor of Assessments, Ms. Joy Kanne, stated that Mower County is, as of the date of this survey, in the process of approving the repowering of older wind projects within the county. She has not found any indication of negative impact to residences due to proximity to wind turbines throughout the approval process.

## **Residential Assessed Values, Complaints/Tax Appeal Filings**

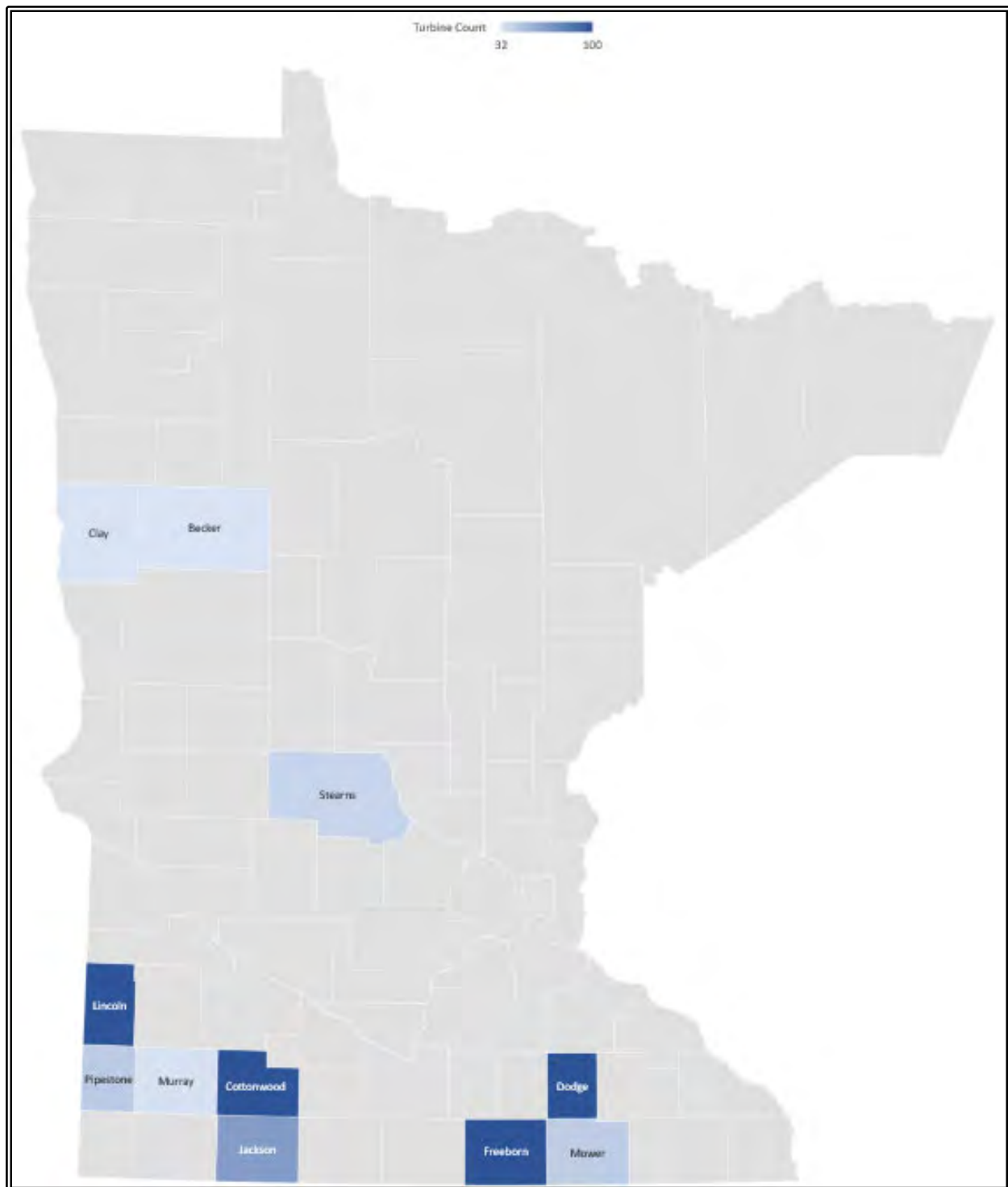
All of the assessors have stated that they continue to track and study sales near wind farms and conclude that there have not been any indications of negative impact. The assessors reported that there have been no successful tax appeal filings based upon wind farm issues.

Consistently, the assessors reported that whatever initial concern there may have been regarding property values during the planning and approval stages of the various wind farms dissipated once the wind farm was constructed. Repeatedly, the assessors would state that the revenue that would come into the county and to each individual farmer would outweigh any initial concern that the residents would have about the wind farms joining their communities.

## **Agricultural Values/Assessed Values**

The assessed values of agricultural properties are established based upon a productivity formula and are not driven by market data. Reportedly, assessed values of agricultural properties have been steady or increasing in recent years and are projected to continue increasing for the near future. The assessors reported that no major complaints have been received and/or no tax appeal filings have been filed for agricultural properties within the wind farm project area.

Based on this survey, it does not appear that the Supervisors of Assessments in the 11 counties surveyed in Minnesota have reason to believe that the location of wind turbines in their county has had a negative impact on property values.



**MAP OF MINNESOTA COUNTIES SURVEYED**



**Note:** As depicted on this map, as of the date of this survey, the locations of certain wind farms are approximations. In some instances, the wind farms are incorrectly shown to be located in adjacent counties. This map also shows the locations of smaller wind farms, but for the accuracy of this study we have only focused on the farms with 25 turbines or higher.



## **MICHAEL S. MAROUS** **STATEMENT OF QUALIFICATIONS**

Michael S. MaRous, MAI, CRE, is president and owner of MaRous and Company. He has appraised more than \$15 billion worth of primarily investment-grade real estate in more than 25 states. In addition to providing documented appraisals, he has served as an expert witness in litigation proceedings for many law firms; financial institutions; corporations; builders and developers; architects; local, state, county, and federal governments, and agencies; and school districts in the Chicago metropolitan area. His experience in partial interest, condemnation, damage impact, easement (including aerial and subsurface), marital dissolutions, bankruptcy proceedings, and other valuation issues is extensive. He has provided highest and best use, marketability, and feasibility studies for a variety of properties. Many of the largest redevelopment areas and public projects, including Interstate 355, the Chicago O'Hare International Airport expansion, the Chicago Midway International Airport expansion, and the McCormick Place expansion, are part of Mr. MaRous' experience. Mr. MaRous also has experience in regard to mediation and arbitration proceedings. Also, he has purchased and developed real estate for his own account.

### **APPRAISAL AND CONSULTATION EXPERIENCE**

Business Parks Distribution Centers	<b>Industrial Properties</b> Manufacturing Facilities Research Facilities	Self-storage Facilities Warehouses
Auto Sales/Service Facilities Banquet Halls Big Box Stores	<b>Commercial Properties</b> Gasoline Stations Hotels and Motels Office Buildings	Restaurants Shopping Centers Theaters
Bowling Alleys Cemeteries Farms Golf Courses Lumber Yards	<b>Special-Purpose Properties</b> Nurseries Riverboat Gambling Facilities Schools Stadium Expansion Issues Solar Farms	Tank Farms Underground Gas Aquifers Utility Corridors Waste Transfer Facilities Wind Farms
Apartment Complexes Condominium Conversions	<b>Residential Properties</b> Condominium Developments Single-family Residences	Subdivision Developments Townhouse Developments
Agricultural Alleys Commercial	<b>Vacant Land</b> Easements Industrial Residential	Rights of Way Streets Vacations
Corporations Financial Institutions	<b>Clients</b> Law Firms Not-for-profit Associations	Private Parties Public Entities

### **EDUCATION**

B.S., Urban Land Economics, University of Illinois, Urbana-Champaign  
Continuing education seminars and programs through the Appraisal Institute  
and the American Society of Real Estate Counselors, and real estate brokerage classes

### **PUBLIC SERVICE**

Mayor, City of Park Ridge, Illinois (2003-2005)  
Alderman, City of Park Ridge, including Liaison to the Zoning Board of Appeals and Planning and Zoning and  
Chairman of the Finance and Public Safety Committees (1997-2005)

## PROFESSIONAL AFFILIATIONS AND LICENSES

Appraisal Institute, MAI designation, Number 6159  
Counselors of Real Estate, CRE designation  
Illinois Certified General Real Estate Appraiser, License Number 553.000141 (9/23)  
Indiana Certified General Real Estate Appraiser, License Number CG41600008 (6/22)  
Wisconsin Certified General Real Estate Appraiser, License Number 1874-10 (12/21)  
Minnesota Certified General Real Estate Appraiser, License Number 40330656 (8/22)  
Iowa Certified General Real Estate Appraiser, License Number CG03468 (6/24)  
South Dakota Certified General Real Estate Appraiser, License Number 1467CG (9/22)  
West Virginia Certified General Real Estate Appraiser, License Number TEMP21-112 (1/22)  
Licensed Real Estate Broker (Illinois)

## PROFESSIONAL ACTIVITIES

Mr. MaRous is past president of the Chicago Chapter of the Appraisal Institute. He is former chair and vice chair of the National Publications Committee and has sat on the board of The Appraisal Journal. In addition, he has served on and/or chaired more than 15 other committees of the Appraisal Institute, the Society of Real Estate Appraisers, and the American Institute of Real Estate Appraisers.

Mr. MaRous served as chair of the Midwest Chapter of the Counselors of Real Estate in 2006 and 2007 and has served on the National CRE Board since 2011. He sat on the Midwest Chapter Board of Directors, the Editorial Board of Real Estate Issues, and on various other committees.

Mr. MaRous also is past president of the Illinois Coalition of Appraisal Professionals. He also has been involved with many other professional associations, including the Real Estate Counseling Group of America, the Northwest Suburban Real Estate Board, the National Association of Real Estate Boards, and the Northern Illinois Commercial Association of Realtors.

## PUBLICATIONS AND PROFESSIONAL RECOGNITION

Mr. MaRous has spoken at more than 20 programs and seminars related to real estate appraisal and valuation.

### Author

"Low-income Housing in Our Backyards," *The Appraisal Journal*, January 1996  
"The Appraisal Institute Moves Forward," *Illinois Real Estate Magazine*, December 1993  
"Chicago Chapter, Appraisal Institute," *Northern Illinois Real Estate Magazine*, February 1993  
"Independent Appraisals Can Help Protect Your Financial Base," *Illinois School Board Journal*, November-December 1990  
"What Real Estate Appraisals Can Do for School Districts," *School Business Affairs*, October 1990

### Awards

Appraisal Institute - George L. Schmutz Memorial Award, 2001  
Chicago Chapter of the Appraisal Institute – Heritage Award, 2000  
Chicago Chapter of the Appraisal Institute - Herman O. Walther, 1987 (Distinguished Chapter Member)

### Reviewer or Citation in the Following Books

*Rural Property Valuation*, 2017  
*Real Estate Damages*, 1999, 2008, and 2016  
*Golf Property Analysis and Valuation*, 2016  
*Dictionary of Real Estate Appraisal*, Fourth Edition, 2002 and Sixth Edition, 2015  
*Market Analysis for Real Estate*, 2005 and 2014  
*Appraisal of Real Estate*, Twelfth Edition, 2001, Thirteenth Edition, 2008, Fourteenth Edition, 2013  
*Shopping Center Appraisal and Analysis*, 2009  
*Subdivision Valuation*, 2008  
*Valuation of Apartment Properties*, 2007  
*Valuation of Billboards*, 2006  
*Appraising Industrial Properties*, 2005  
*Valuation of Market Studies for Affordable Housing*, 2005  
*Valuing Undivided Interest in Real Property: Partnerships and Cotenancies*, 2004  
*Analysis and Valuation of Golf Courses and Country Clubs*, 2003  
*Valuing Contaminated Properties: An Appraisal Institute Anthology*, 2002  
*Hotels and Motels: Valuation and Market Studies*, 2001  
*Land Valuation: Adjustment Procedures and Assignments*, 2001  
*Appraisal of Rural Property*, Second Edition, 2000  
*Capitalization Theory and Techniques, Study Guide*, Second Edition, 2000  
*Guide to Appraisal Valuation Modeling Land*, 2000  
*Appraising Residential Properties*, Third Edition, 1999  
*Business of Show Business: The Valuation of Movie Theaters*, 1999  
*GIS in Real Estate: Integrating, Analyzing and Presenting Locational Information*, 1998  
*Market Analysis for Valuation Appraisals*, 1995

## **REPRESENTATIVE WORK OF MICHAEL S. MAROUS**

### **Headquarters/Corporate Office Facilities in Illinois**

Fortune 500 corporation facility, 200,000 sq. ft., Libertyville  
Corporate headquarters, 300,000 sq. ft. and 500,000 sq. ft., Chicago  
Fortune 500 corporation facility, 450,000 sq. ft., Northfield  
Major airline headquarters, 1,100,000 sq. ft. on 47 acres, Elk Grove Village  
Former communications facility, 1,400,000 sq. ft. on 62 acres, Skokie and Niles  
Corporate Headquarters, 1,500,000+ sq. ft., Lake County  
Former Sears Headquarters Redevelopment Project, Chicago

### **Office Buildings in Chicago**

401 South LaSalle Street, 140,000 sq. ft.  
134 North LaSalle Street, 260,000 sq. ft.  
333 North Michigan Avenue, 260,000 sq. ft.  
171 West Randolph Street, 360,000 sq. ft.  
20 West Kinzie Street, 405,000 sq. ft.  
55 East Washington Street, 500,000 sq. ft.  
10 South LaSalle Street, 870,000 sq. ft.  
222 West Adams Street, 1,000,000 sq. ft.  
141 West Jackson Boulevard, 1,065,000 sq. ft.  
333 South Wabash Avenue, 1,125,000 sq. ft.  
155 North Wacker Drive, 1,406,000 sq. ft.  
70 West Madison Street, 1,430,000 sq. ft.  
111 South Wacker Drive, 1,454,000 sq. ft.  
175 West Jackson Boulevard, 1,450,000 sq. ft.  
227 West Monroe Street, 1,800,000 sq. ft.  
10 South Dearborn Street, 1,900,000 sq. ft.

### **Hotels in Chicago**

One West Wacker Drive (Renaissance Chicago Hotel)  
10 East Grand Avenue (Hilton Garden Inn)  
106 East Superior Street (Peninsula Hotel)  
120 East Delaware Place (Four Seasons)  
140 East Walton Place (The Drake Hotel)  
160 East Pearson Street (Ritz Carlton)  
301 East North Water Street (Sheraton Hotel)  
320 North Dearborn Street (Westin Chicago River North)  
401 North Wabash Avenue (Trump Tower)  
505 North Michigan Avenue (Hotel InterContinental)  
676 North Michigan Avenue (Omni Chicago Hotel)  
800 North Michigan Avenue (The Park Hyatt)

### **Large Industrial Properties in Illinois**

Large industrial complexes, 400,000 sq. ft., 87th Street and Greenwood Avenue, Chicago  
Distribution warehouse, 580,000 sq. ft. on 62 acres, Champaign  
Publishing house, 700,000 sq. ft. on 195 acres, U.S. Route 45, Mattoon  
AM Chicago International, 700,000± sq. ft. on 41 acres, 1800 West Central Road, Mount Prospect  
Nestlé distribution center, 860,000 sq. ft. on 153 acres, DeKalb  
U.S. Government Services Administration distribution facility, 860,000 sq. ft., 76th Street and Kostner Avenue,  
Chicago Fortune 500 company distribution center, 1,000,000 sq. ft., Elk Grove Village  
Caterpillar Distribution Facility, 2,231,000 sq. ft., Morton  
Self-storage facilities, various Chicago metropolitan locations

### **Airport Related Properties**

Mr. MaRous has performed valuations on more than 100 parcels in and around Chicago O'Hare International Airport, Chicago Midway International Airport, Palwaukee Municipal Airport, Chicago Aurora Airport, DuPage Airport, and Lambert-St. Louis International Airport

#### **Vacant Land in Illinois**

15 acres, office, Northbrook	250 acres, Island Lake
20 acres, residential, Glenview	450 acres, residential, Wauconda
25 acres, Hinsdale	475± acres, various uses, Lake County
55 acres, mixed-use, Darien	650 acres, Hawthorne Woods
68 acres, Roosevelt Road and the Chicago River	650 acres, Waukegan/Libertyville
75 acres, I-88 at I-355, Downers Grove	800 acres, Woodridge
100± acres, various uses, Lake County	900 acres, Matteson
100 acres, Western Springs	1,000± acres, Batavia area
140 acres, Flossmoor	2,000± acres, Northern Lake County
142 acres, residential, Lake County	5,000 acres, southwest suburban Chicago area
160 acres, residential, Cary	Landfill expansion, Lake County
200 acres, mixed-use, Bartlett	

#### **Retail Facilities**

20 Community shopping centers, various Chicago metropolitan locations  
Big box uses, various Chicago metropolitan locations and the Midwest  
Gasoline Stations, various Chicago metropolitan locations  
More than 50 single-tenant retail facilities larger than 80,000 sq. ft., various Midwest metropolitan locations

#### **Residential Projects**

Federal Square townhouse development project, 118 units, \$15,000,000+ sq. ft. project, Dearborn Place, Chicago  
Marketability and feasibility study, 219 East Lake Shore Drive, Chicago  
Riverview II, Chicago; Old Town East and West, Chicago; Museum Park Lofts II, Museum Park Tower 4, University Commons, Two River Place, River Place on the Park, Chicago, Timber Trails, Western Springs, Illinois

#### **Market Impact Studies**

Land-fill projects in various locations  
Quarry expansions in Boone and Kendall counties  
Commercial development and/or parking lots in various communities  
Zoning changes in various communities  
Waste transfer stations in various communities

#### **Business and Industrial Parks**

Chevy Chase Business Park, 30 acres, Buffalo Grove  
Carol Point Business Center, 300-acre industrial park, Carol Stream, \$125,000,000+ project  
Internationale Centre, approximately 1,000 acre-multiuse business park, Woodridge

#### **Properties in Other States**

330,000 sq. ft., Newport Beach, California  
Former government depot/warehouse and distribution center, 2,500,000 sq. ft. on 100+ acres, Ohio  
Shopping Center, St. Louis, Missouri, Office Building, Clayton, Missouri  
Condominium Development, South Dakota, South Dakota  
Hormel Foods, various Midwest locations  
Wisconsin Properties including Lowes, Menards, Milwaukee Zoo, CVS Pharmacy's in Milwaukee, Dairyland Racetrack, Major Industrial Property in Manawa, Class A Office Buildings and Vacant Land

#### **Energy Related Projects**

Oakwood Hills Energy Center, McHenry County, Illinois  
Lackawanna Power Plant, Lackawanna County, Pennsylvania  
Commonwealth Edison, high tension lines

## Wind Projects

### Illinois

*Alta Farms Wind Project II, Dewitt County*  
*Bennington Wind Project, Marshall County*  
*Goose Creek Wind, Piatt County*  
*Harvest Ridge Wind Farm, Douglas County*  
*Lincoln Land Wind Farm, Morgan County*  
*Midland Wind Farm, Henry County*  
*McLean County Wind Farm, McLean County*  
*Otter Creek Wind Farm, LaSalle County*  
*Pleasant Ridge Wind Farm, Livingston County*  
*Radford's Run Wind Farm, Macon County*  
*Shady Oaks II, Lee County*  
*Twin Groves Wind Farm, McLean County*  
*Walnut Ridge Wind Farm, Bureau County*

### Indiana

*Roaming Bison Wind Farm, Montgomery County*  
*Tippecanoe County Wind Farm, Tippecanoe County*

### Iowa

*Great Pathfinder Wind Project, Boone & Hamilton County*  
*Ida Grove II Wind Farm, Ida County*

### Kansas

*Neosho Ridge Wind Farm, Neosho County*  
*Jayhawk Wind, Bourbon County & Crawford County*

### New York

*Alle-Catt Wind, Allegany County, Cattaraugus County, & Wyoming County*  
*Orangeville Wind Farm, Wyoming County*

### Ohio

*Seneca Wind, Seneca County*  
*Republic Wind, Seneca County & Sandusky County*

### South Dakota

*Deuel Harvest Wind Farm, Deuel County*  
*Dakota Range Wind Project I-III, Codington County, Grant County, & Roberts County*  
*Crocker Wind Farm, Clark County*  
*Crowned Ridge Wind II, Deuel County*  
*Prevailing Wind Park, Bon Homme County, Charles Mix County, & Hutchinson County*  
*Sweet Land Wind Farm, Hand County*  
*Triple H Wind Farm, Hyde County*  
*Tatanka Ridge Wind Project, Deuel County*

## Solar Projects

### Illinois

*Hickory Point Solar Energy Center, Christian County*  
*Mulligan Solar, Logan County*

### Indiana

*Lone Oak Solar Farm, Madison County*

### Maryland

*Dorchester County Solar Farm, Dorchester County*

### Wisconsin

*Badger Hollow Solar Farm, Iowa County*  
*Darien Solar Energy Center, Rock County & Walworth County*  
*Grant County Solar, Grant County*  
*Paris Solar Energy Center, Kenosha County*

### South Dakota

*Brookhaven Solar Energy Production Facility, Brookings County*  
**Western Regions of the United States of America**  
*Southwest Region – Arizona, Colorado, Nevada, New Mexico, & Utah*  
*Northwest Region – Idaho and Oregon*  
*Southern Great Plains Region – Texas*  
*Northern Great Plains Region – General Research*



## REPRESENTATIVE CLIENT LISTING OF MICHAEL S. MAROUS

### Law Firms

Alschuler, Simantz & Hem LLC Ancel,  
Glink, Diamond, Bush,  
DiClanni & Krafthefer  
Arnstein & Lehr LLP  
Berger, Newmark & Fenchel P.C.  
Berger Schatz  
Botti Law Firm, P.C.  
Carmody MacDonald P.C.  
Carr Law Firm  
Crane, Heyman, Simon, Welch & Clar  
Daley & Georges, Ltd.  
Day, Robert & Morrison, P.C. Dentons  
US LLP  
DiMonte & Lizak LLC  
DLA Piper  
Dreyer, Foote, Streit, Furgason &  
Slocum, P.A.  
Drinker, Biddle & Reath LLP Figliulo &  
Silverman, P.C.  
Foran, O'Toole & Burke LLC Franczek  
Radelet P.C.  
Fredrikson & Byron, P.A.  
Freeborn & Peters LLP

Gould & Ratner LLP  
Greenberg Traurig LLP  
Helm & Wagner  
Robert Hill Law, Ltd.  
Hinshaw & Culbertson LLP  
Holland & Knight LLP  
Ice Miller LLP  
Jenner & Block  
Katz & Stefani, LLC  
Kinnally, Flaherty, Krentz, Loran,  
Hodge & Mazur PC  
Kirkland & Ellis LLP  
Klein, Thorpe & Jenkins, Ltd.  
McDermott, Will & Emery  
Mayer Brown  
Michael Best & Friedrich LLP  
Morrison & Morrison, Ltd.  
Bryan E. Mraz & Associates  
Neal, Gerber & Eisenberg, LLP  
Neal & Leroy LLC  
O'Donnell Haddad LLC  
Prendergast & DelPrincipe  
Rathje & Woodward, LLC

Righeimer, Martin & Cinquino, P.C.  
Robbins, Salomon & Patt, Ltd.  
Rosenfeld Hafron Shapiro & Farmer  
Rosenthal, Murphey, Coblenz &  
Donahue Rubin & Associates, P.C.  
Ryan and Ryan, P.C.  
Reed Smith LLP  
Sarnoff & Baccash  
Scariano, Himes & Petrarca, Chtd.  
Schiff Hardin LLP  
Schiller, DuCanto & Fleck LLP  
Schirott, Luetkehans & Garner, LLC  
Schuyler, Roche & Crisham, P.C.  
Sidley Austin LLP  
Storino, Ramello & Durkin  
Thomas M. Tully & Associates  
Thompson Coburn, LLP  
Tuttle, Vedral & Collins, P.C.  
Vedder Price  
von Briesen & Roper, SC  
Winston & Strawn LLP  
Worsek & Vihon LLP

### Financial Institutions

AmericaUnited Bank Trust  
BMO Harris Bank  
Charter One  
Citibank  
Cole Taylor Bank  
First Bank of Highland Park  
First Financial Northwest Bank

First Midwest Bank  
First State Financial  
Glenview State Bank  
Itasca Bank & Trust Co.  
Lake Forest Bank & Trust Co.  
MB Financial Bank

Midwest Bank  
Northern Trust  
Northview Bank & Trust  
The Private Bank  
Wintrust

### Corporations

Advocate Health Care System  
Alliance Property Consultants  
American Stores Company  
Archdiocese of Chicago  
Arthur J. Rogers and Company  
Avangrid Renewables, LLC  
BHE Renewables  
BP Amoco Oil Company  
Christopher B. Burke Engineering,  
Ltd. Cambridge Homes  
Canadian National Railroad  
Capital Realty Services, Inc.  
Chicago Cubs  
Children's Memorial Hospital  
Chrysler Realty Corporation

Citgo Petroleum Corporation  
CorLands  
CVS  
Edward R. James Partners, LLC  
Enterprise Development Corporation  
Enterprise Leasing Company  
Exxon Mobil Corporation  
Hamilton Partners  
Hollister Corporation  
Imperial Realty Company  
Invenergy LLC  
Kimco Realty Corporation  
Kinder Morgan, Inc.  
Lakewood Homes

Lowe's Companies, Inc.  
Loyola University Health System  
Marathon Oil Corporation  
Meijer, Inc.  
Menards  
Mesirow Stein Real Estate, Inc.  
Paradigm Tax Group  
Prime Group Realty Trust  
Public Storage Corporation  
RREEF Corporation  
Shell Oil Company  
Union Pacific Railroad Company  
United Airlines, Inc.

### **Public Entities**

#### **Illinois Local Governments and Agencies**

Village of Arlington Heights  
Village of Barrington  
Village of Bartlett  
Village of Bellwood  
Village of Brookfield  
Village of Burr Ridge  
City of Canton  
Village of Cary  
City of Chicago  
Village of Deer Park  
City of Des Plaines  
Des Plaines Park District  
Downers Grove Park District  
City of Elgin  
Elk Grove Village  
City of Elmhurst  
Village of Elmwood Park  
City of Evanston  
Village of Forest Park  
Village of Franklin Park

Village of Glenview  
Glenview Park District  
Village of Harwood Heights  
City of Highland Park  
Village of Hinsdale  
Village of Inverness  
Village of Kenilworth  
Village of Kildeer  
Village of Lake Zurich  
Leyden Township  
Village of Lincolnshire  
Village of Lincolnwood  
Village of Morton Grove  
Village of Mount Prospect  
Village of North Aurora  
Village of Northbrook  
City of North Chicago  
Village of Northfield  
Northfield Township  
Village of Oak Brook

Village of Orland Park  
City of Palos Hills  
City of Peoria  
City of Prospect Heights  
City of Rolling Meadows  
Village of Rosemont  
City of St. Charles  
Village of Schaumburg  
Village of Schiller Park  
Village of Skokie  
Village of South Barrington  
Village of Streamwood  
Metropolitan Water Reclamation  
District of Greater Chicago  
City of Waukegan  
Village of Wheeling  
Village of Wilmette  
Village of Willowbrook  
Village of Winnetka  
Village of Woodridge

#### **County Governments and Agencies**

Boone County State's Attorney's  
Office Forest Preserve of Cook County  
Cook County State's Attorney's Office  
DuPage County Board of Review

Forest Preserve District of DuPage County  
Kane County  
Kendall County Board of Review  
Lake County

Lake County Forest Preserve District  
Lake County State's Attorney's Office  
Morton Township  
Peoria County

#### **State and Federal Government Agencies**

Federal Deposit Insurance Corporation  
U.S. General Services Administration

Illinois Housing Development Authority  
Illinois State Toll Highway Authority

Internal Revenue Service  
The U.S. Postal Service

### **Schools**

Argo Community High School  
District No. 217  
Arlington Heights District No. 25  
Township High School District No. 214,  
Arlington Heights  
Barrington Community Unit District  
No. 220  
Chicago Board of Education  
Chicago Ridge District No. 127½  
College of Lake County  
Community Consolidated School  
District No. 15  
Community Consolidated School  
District No. 146  
Community School District No. 200  
Consolidated High School  
District No. 230  
Darien District No. 61  
DePaul University

Elk Grove Community Consolidated  
District No. 59  
Elmhurst Community Unit School  
District No. 205  
Glen Ellyn School District No. 41  
Glenbard High School District No. 87  
Indian Springs School District No. 109  
LaGrange School District No. 105  
Lake Forest Academy  
Leyden Community High School  
District No. 212  
Loyola University  
Lyons Township High School District  
No. 204  
Maine Township High School District  
No. 207  
Niles Elementary District No. 71  
North Shore District No. 112, Highland  
Park

Northwestern University  
Orland Park School District No. 135  
Palatine High School District #211  
Rhodes School District No. 84-1/2  
Riverside-Brookfield High School  
District No. 208  
Rosalind Franklin University  
Roselle School District No. 12  
Schaumburg Community Consolidated  
District No. 54  
Sunset Ridge School District No. 29  
Township High School District No. 211  
Township High School District No. 214  
Triton College  
University of Illinois  
Wheeling Community Consolidated  
District No. 21  
Wilmette District No. 39

## JOSEPH M. MaROUS STATEMENT OF QUALIFICATIONS

Joseph M. MaRous is an Energy Consultant with MaRous and Company, with a focus on the renewable and alternative energy industry.

For more details visit: [linkedin.com/in/joemarous](https://www.linkedin.com/in/joemarous)

### EDUCATION

Purdue University - *West Lafayette, Indiana*  
Bachelor of Science – *Building Construction Management*  
Focus in residential and green build construction

### CERTIFICATIONS

OSHA Safety Certified  
Certified Green Build Professional  
USPAP Qualified

### CONSTRUCTION

Professional in the construction industry for 10 years

- Residential
- Commercial
- Industrial
- Municipal
- Tenant Improvement
- Schools
- Media Studios
- Automobile Dealerships

### MaROUS & COMPANY

#### **Appraisal Assistance**

- Vacant Land
- Industrial
- Commercial
- Office
- Retail
- Residential
- Auto Dealerships
- Religious Facilities
- Hotel/Motel

### **Wind Projects**

- Illinois
  - Alta Farms Wind Project II, *Dewitt County*
  - Bennington Wind Project, *Marshall County*
  - Crescent Ridge Wind Farm, *McLean County*
  - Goose Creek Wind, *Piatt County*
  - Harvest Ridge Wind Farm, *Douglas County*
  - Lincoln Land Wind Farm, *Morgan County*
  - Midland Wind Farm, *Henry County*
  - McLean County Wind Farm, *McLean County*
  - Osagroves Flats Wind Project, *LaSalle County*
  - Radford's Run Wind Farm, *Macon County*
  - Shady Oaks II, *Lee County*
- Indiana
  - Roaming Bison Wind Farm, *Montgomery County*
  - Tippecanoe County Wind Farm, *Tippecanoe County*
- Iowa
  - Great Pathfinder Wind Project, *Boone & Hamilton County*
  - Ida Grove II Wind Farm, *Ida County*
  - Three Waters Wind, *Dickinson County*
  - Worthwhile Wind, *Worth County*
- Kansas
  - Jayhawk Wind, *Bourbon & Crawford County*
  - Neosho Ridge Wind Farm, *Neosho County*
- Minnesota
  - Dodge County Wind, *Dodge & Steele County*
  - Three Waters Wind, *Jackson County*
- New York
  - Alle-Catt Wind, *Allegany, Cattaraugus, & Wyoming County*
  - Orangeville Wind Farm, *Wyoming County*
- Ohio
  - Emerson Creek Wind Farm, *Erie, Huron & Seneca County*
  - Republic Wind, *Seneca & Sandusky County*
  - Seneca Wind, *Seneca County*
- South Dakota
  - Crocker Wind Farm, *Clark County*
  - Crowned Ridge Wind II, *Codington, Deuel, & Grant County*
  - Dakota Range Wind Project I-III, *Codington, Grant, & Roberts County*
  - Deuel Harvest Wind Farm, *Deuel County*
  - Prevailing Wind Park, *Bon Homme, Charles Mix, & Hutchinson County*
  - Sweet Land Wind Farm, *Hand County*
  - Triple H Wind Farm, *Hyde County*
  - Tatanka Ridge Wind Project, *Deuel County*

## Solar Projects

- Illinois
  - Black Diamond Solar, *Christian County*
  - Double Black Diamond Solar, *Sangamon & Morgan County*
  - Hickory Point Solar Energy Center, *Christian County*
  - Mulligan Solar, *Logan County*
  - Osagrove Flats Solar, *LaSalle County*
  - Pleasant Grove Solar, *Boone & McHenry County*
  - South Dixon Solar, *Lee County*
- Indiana
  - Hardy Hills Solar, *Clinton County*
  - Lone Oak Solar Farm, *Madison County*
  - Mammoth Solar, *Pulaski & Starke County*
- Maryland
  - Dorchester County Solar Farm, *Dorchester County*
- Western Regions of the United States of America
  - Southwest Region – *Arizona, Colorado, Nevada, New Mexico, & Utah*
  - Northwest Region – *Idaho and Oregon*
  - Southern Great Plains Region – *Texas*
  - Northern Great Plains Region – *General Research*
- Wisconsin
  - Badger Hollow Solar Farm, *Iowa County*
  - Darien Solar Energy Center, *Rock & Walworth County*
  - Grant County Solar, *Grant County*
  - Koshkonong Solar, *Dane County*
  - Paris Solar Energy Center, *Kenosha County*
  - St. Croix Solar, *St. Croix County*

## Transmission Lines

- Iowa
  - Heartland Divide, *Adair, Audubon & County*

## Data Centers

- Illinois
  - Itasca Country Club Data Center, *Itasca*
  - United Airlines Data Center – CloudHQ O'Hare Campus, *Mount Prospect*