

**MARKET IMPACT ANALYSIS**  
**GREAT PATHFINDER WIND**  
**BOONE AND HAMILTON COUNTY, IOWA**

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March 27, 2020

Great Pathfinder Wind, LLC  
Apex Clean Energy, Inc.  
310 4<sup>th</sup> Street Northwest – Suite 200  
Charlottesville, Virginia 22902

Attention: Bipin Thapa – Project Developer

Subject: Market Impact Analysis  
Great Pathfinder Wind  
Boone and Hamilton County, Iowa

Dear Mr. Thapa,

In accordance with your request, the proposed development of the Great Pathfinder Wind in Boone and Hamilton County, Iowa, 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 39 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:

- ∴ **Iowa** - Ida County Wind Farm in Ida County and Palo Alto County Wind Farm in Palo Alto 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, and Goose Creek Wind in Piatt County.
- ∴ **Indiana** - Tippecanoe County Wind Farm in Tippecanoe County and Roaming Bison Wind Farm in Montgomery County.
- ∴ **Minnesota** - Freeborn County Wind Farm in Freeborn County.
- ∴ **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.

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- ∴ **New York** - Orangeville Wind Farm in Wyoming County and Alle-Catt Wind Farm in Allegany County, Cattaraugus County, and Wyoming County.
  - ∴ **Ohio** - Seneca Wind in Seneca County and Republic Wind in Seneca County and Sandusky County.

The solar-related projects include the following by state:

- ∴ **Illinois** - Hickory Point Solar Energy Center in Christian County.
- ∴ **Indiana** - Lone Oak Solar Farm in Madison County.
- ∴ **Wisconsin** - Badger Hollow Solar Farm in Iowa County, Paris Solar Energy Center in Kenosha County, Darien Solar Energy Center in Darien County, and Grant County Solar in Grant 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

<b>Project Information</b>	
Project Name	Great Pathfinder Wind, LLC
Location	Boone and Hamilton County, Iowa
<i>Townships</i>	Dodge, Harrison, and Marion
Property Type	Wind Farm
Project Developer	Apex Clean Energy, Inc.
<b>Wind Farm Description</b>	
Footprint Land Acreage	≈ 19,743 Acres
<i>Actual Land Acreage Used by Turbines</i>	≈ 20 to 40 Acres
Number of Turbines	Up to 74 Turbines
Turbine Specifications	
<i>Type</i>	Vestas – V150 Nordex – N149 General Electric – GE140 Siemens/Gamesa – SG145
<i>Capacity</i>	3.03-5.6 Megawatts
<i>Tip Height</i>	551.2-598.6 Feet
Total Capacity	Up to 225 Megawatts
Setbacks/Sound/Shadow Flicker	<b>Setbacks:</b> ∴ 1,250 Feet – <i>Non-Participating Occupied Structures, Participating Occupied Structures, Businesses, Churches, Schools, and Hospitals</i> ∴ 1.25x Tip Height – <i>Non-Participating Parcels</i> ∴ 1.1x Tip Height – <i>Highways, Interstates, Main Roads, County Roads, Major Unoccupied Buildings</i> <b>Sound:</b> ∴ Sound restrictions of a maximum of 50dBA at any structure will be met <b>Shadow Flicker:</b> ∴ The project is designed to prevent shadow flicker from exceeding 40 hours per year on non-participating occupied structures within the project area
Number of Participants	≈ 171 Landowners
Participant Acreage	≈ 16,025 Acres
<b>Ancillary Construction</b>	
Project substation	Operations and maintenance building
Underground collector lines	Fiber optic cable and junction boxes
Meteorological towers	Gravel access roads
<b>Total Cost</b>	≈ \$306,000,000

## **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. Specifically, this study is designed to address the question of whether the development of the wind farm 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, I 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 Iowa 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.
- ∴ The wind farm 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.
- ∴ 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.
- ∴ A survey of County Assessors in 26 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 18 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 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 survey of County Assessors in 8 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 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; and
- ∴ A summary of the findings in literature on peer-reviewed studies of wind farms in North America, although not specific to Iowa, 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 Boone County Wind Energy Ordinance, and other public documents.
- ∴ Review and analysis of the demographics in the area of the proposed wind farm.
- ∴ Review and analysis of data on the general market area of the wind farm, and on the other areas in Iowa and/or Boone and Hamilton 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 Boone and Hamilton County and/or Iowa 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.
- ∴ Inspections were performed of the project area and the areas in nearby counties with existing wind farms by Michael S. MaRous on March 9, 2020.

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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)

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, I have considered the following:

- ∴ The character and the value of the residential and agricultural properties in the general area of the proposed wind farm.
- ∴ Agricultural land values in Boone and Hamilton County, and in other Iowa 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 would have on the larger community; and
- ∴ The potential impact on the value of the surrounding residential and agricultural properties.

## Description of Area Demographics and Development Area Analysis

<b>Great Pathfinder Wind Location</b>	
<b>Boone, Iowa</b>	
2010 Population	16,319 Persons
2019 Population	16,402 Persons
Median Household Income in 2019	\$54,356
Number of Households in 2019	6,907 Households
Number of Housing Units in 2019	7,620 Units
Number of Vacant Housing Units in 2019	713 Units
Unemployment Rate	2.8%
<b>Stratford, Iowa</b>	
2010 Population	1,312 Persons
2019 Population	1,290 Persons
Median Household Income in 2019	\$63,238
Number of Households in 2019	528 Households
Number of Housing Units in 2019	590 Units
Number of Vacant Housing Units in 2019	62 Units
Unemployment Rate	1.3%
<b>Stanhope, Iowa</b>	
2010 Population	711 Persons
2019 Population	688 Persons
Median Household Income in 2019	\$61,039
Number of Households in 2019	299 Households
Number of Housing Units in 2019	344 Units
Number of Vacant Housing Units in 2019	45 Units
Unemployment Rate	2.1%
<b>Boone County, Iowa</b>	
2010 Population	26,306 Persons
2019 Population	26,826 Persons
Median Household Income in 2019	\$57,773
Number of Households in 2019	11,045 Households
Number of Housing Units in 2019	12,112 Units
Number of Vacant Housing Units in 2019	1,067 Units
Unemployment Rate	3.1%
<b>Hamilton County, Iowa</b>	
2010 Population	15,673 Persons
2019 Population	15,219 Persons
Median Household Income in 2019	\$56,283
Number of Households in 2019	6,375 Households
Number of Housing Units in 2019	7,219 Units
Number of Vacant Housing Units in 2019	844 Units
Unemployment Rate	1.6%
<b>Main Roadway Arterials</b>	
North/South	IA-17 extend along the eastern boundary of the footprint
East/West	IA-175 extends along the northern boundary of the footprint

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**Nearest Cities within the Market Area of Great Pathfinder Wind**

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**Ames, Iowa** *≈ 9 Miles Southeast of Project Footprint*

2010 Population	59,080 Persons
2019 Population	67,027 Persons

**Ogden, Iowa** *≈ 9 Miles Southwest of Project Footprint*

2010 Population	2,039 Persons
2019 Population	2,152 Persons

**Story City, Iowa** *≈ 13.5 Miles West of Project Footprint*

2010 Population	3,431 Persons
2019 Population	3,600 Persons

**Webster City, Iowa** *≈ 13 Miles North of Project Footprint*

2010 Population	8,070 Persons
2019 Population	7,637 Persons

**Fort Dodge, Iowa** *≈ 19 Miles Northwest of Project Footprint*

2010 Population	25,206 Persons
2019 Population	24,902 Persons

**Nevada, Iowa** *≈ 19 Miles Southeast of Project Footprint*

2010 Population	6,802 Persons
2019 Population	7,249 Persons

**Des Moines, Iowa** *≈ 36 Miles South of Project Footprint*

2010 Population	204,695 Persons
2019 Population	229,062 Persons

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

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**Top Employers Near Boone and Hamilton County, Iowa**

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**Business Name**

**Business Type**

Iowa State University of Science and Technology	Education
Mary Greeley Medical Center	Healthcare
City of Ames	Municipality
Iowa Department of Transportation	Department of Transportation
Hy-Vee	Grocery
Danfoss	Building Products
Ames Community School District	Education
Ames Laboratory	Laboratory

8 Top Employers in Ames, IA - <https://livability.com/ia/ames/business/8-top-employers-in-ames-ia>

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## Other Existing Wind Farms Near the Project Area

The closest wind farm is Beaver Creek Wind Farm located in western Boone County, the project consists of 85 wind turbines and came online in 2017. Story County Wind located in northeast Story County, the project consists of 100 wind turbines and came online in 2008. Story County Wind II located in southwest Hardin County, the project consists of 100 wind turbines and came online in 2009. Lundgren Wind Farm is southern in Webster County, the project consists of 107 wind turbines and came online in 2014.

Century Wind Farm is in northern Hamilton County, the project consists of 145 wind turbines and came online in 2005. Franklin County Wind Farm is in southern in Franklin County, the project consists of 60 wind turbines and came online in 2012. Whispering Willow is in southern Franklin County, the project consists of 121 wind turbines and came online in 2009. Carroll Wind Farm is located in northern Carroll County, the project consists of 100 wind turbines and came online in 2008. Laurel Wind Farm is located in southern Marshall County, the project consists of 52 wind turbines and came online in 2011. Wellsburg Wind Farm is located in western Grundy County, the entire project consists of 60 wind turbines and came online in 2014.

## Residential Sales Nearest to the Project Area

Like the majority of Iowa, 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 Great Pathfinder Wind. A map illustrating the location of each of these sales is included in the addenda to this market impact study.

### MOST RECENT SINGLE-FAMILY RESIDENTIAL SALES SUMMARY NEAREST TO THE FOOTPRINT OF GREAT PATHFINDER WIND

No.	Location	Sale Price	Sale Date	Site Size (Acres)	Year Built	Building Size (Sq. Ft.)	Sale Price Per Sq. Ft. of Bldg. Area Incl. Land
1	1364 370 <sup>th</sup> Street Stratford, Iowa	\$90,000	12/05/17	5.00	1900	1,764	\$51.02
2	223 Nature Road Boone, Iowa	\$178,500	5/26/17	3.85	1964	1,652	\$108.05
3	1400 120 <sup>th</sup> Street Boone, Iowa	\$180,500	4/09/18	2.20	1941	1,396	\$129.30
4	1541 390 <sup>th</sup> Street Stratford, Iowa	\$180,000	7/19/19	3.80	1925	1,326	\$135.75
5	240 Q Avenue Boone, Iowa	\$185,000	7/23/19	0.67	1900	2,080	\$88.94
6	298 Q Avenue Boone, Iowa	\$200,000	6/24/18	1.69	1965	1,120	\$178.57
7	1644 120 <sup>th</sup> Street Boone, Iowa	\$270,000	1/17/18	1.00	1915	1,931	\$139.82
8	1830 120 <sup>th</sup> Street Boone, Iowa	\$434,000	6/15/17	4.18	1987	1,670	\$259.88

## Project Description

The project is proposed to consist of up to 74 turbines with an individual capacity of 3.0 up to 5.6 megawatts; the turbines have a tip height of 551.2 feet up to 598.6 feet. The total capacity of the wind farm will be approximately 225.0 megawatts, with a footprint covering approximately 19,743 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.

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. Decommissioning Phase road repairs will be undertaken.

The total project cost will be approximately \$306,000,000. Ancillary construction includes gravel access roads, underground collector lines, a project substation, an operations and maintenance building, and fiber optic cable and junction boxes.

## Project Benefits

<b>Taxes</b>	
Property Taxes	Estimated total to be approximately \$16,000,000 over the life of the project
Beneficiary Totals over the Life of the Project	Local Governments and Local School Districts
<b>Land Agreements</b>	
Participating Landowner Lease Payments	Individual participating landowner payments will total approximately \$42,075,000 over the first 30 years of the project
Good Neighbor Agreements	Individual good neighbor agreement payments will total approximately \$1,784,995 over the first 30 years of the project
<b>Job Creation</b>	
Temporary/Construction	≈ 270 Construction Jobs
Permanent	≈ 9 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 will have an effect on the value of residential uses and/or agricultural land in proximity to the turbines. This analysis includes:

- ∴ A matched pair analysis considering the impact on value of residential properties proximate to a wind farm in Iowa, 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, Illinois, Indiana, South Dakota, Minnesota, and Kansas;
- ∴ The value of agricultural land in Boone and Hamilton 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 Iowa, Illinois, Indiana, Kansas, South Dakota, and Minnesota, with existing wind farms in their respective jurisdictions.
- ∴ The results of several academic and peer-reviewed studies on the impact of wind turbines on residential property values.

## 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/>

### 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.



**BOONE COUNTY MATCHED PAIR NO. 1**

	<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



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	○	-	○	+	○	+	-	+	+
+	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									

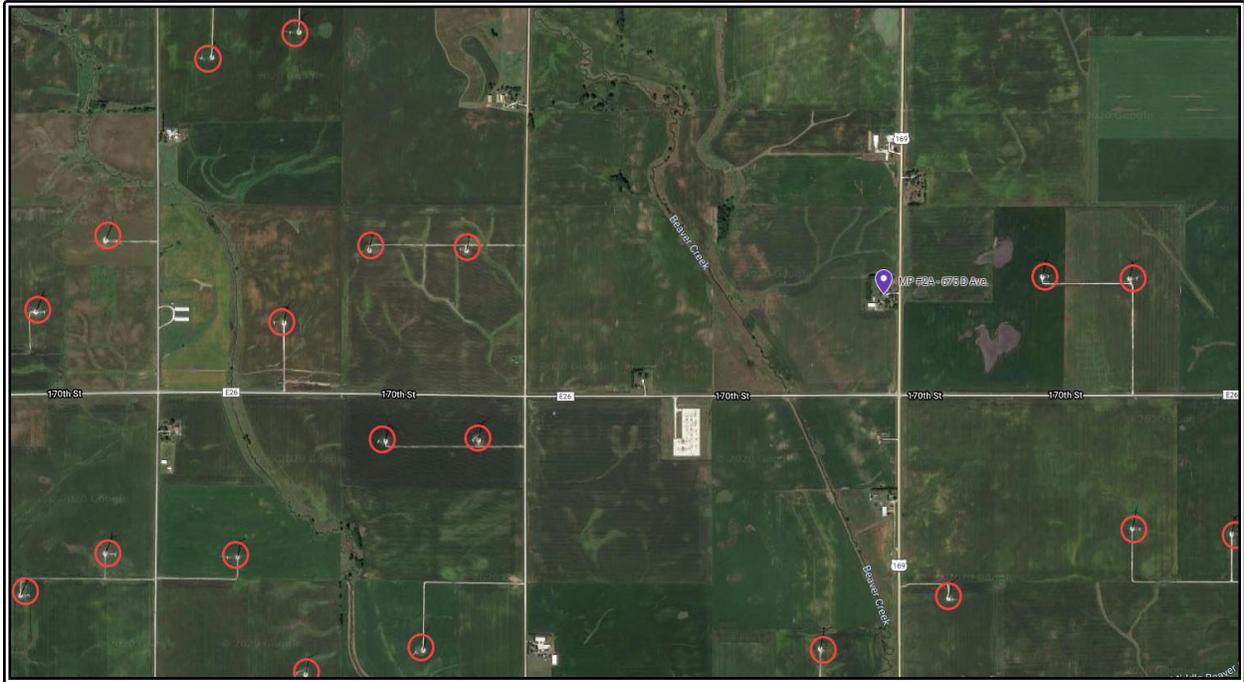
Upward adjustments are made to the 455 270<sup>th</sup> Street property for the superior lot size, style, utilities, and outbuildings of the 1002 B Avenue property. Downward adjustments are made for the superior age and basement of the 455 270<sup>th</sup> Street property compared to those features of 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**

	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
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



675 D Avenue



375 335<sup>th</sup> Street

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									

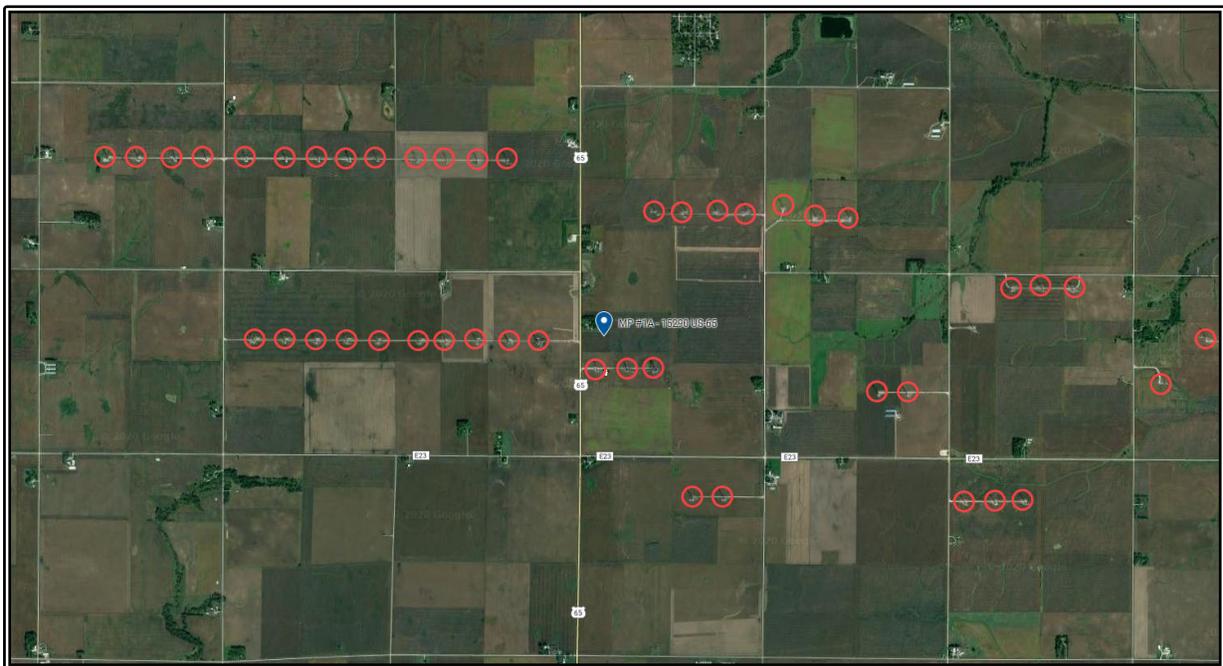
Upward adjustments are made to the 375 335<sup>th</sup> Street property for the superior lot size, style, and basement of the 675 D Avenue property. Downward adjustments are made for the superior age, building size, and utilities of the 375 335<sup>th</sup> Street property compared to those features 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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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	○	-	-	○	○	-	+	○	-
+	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									

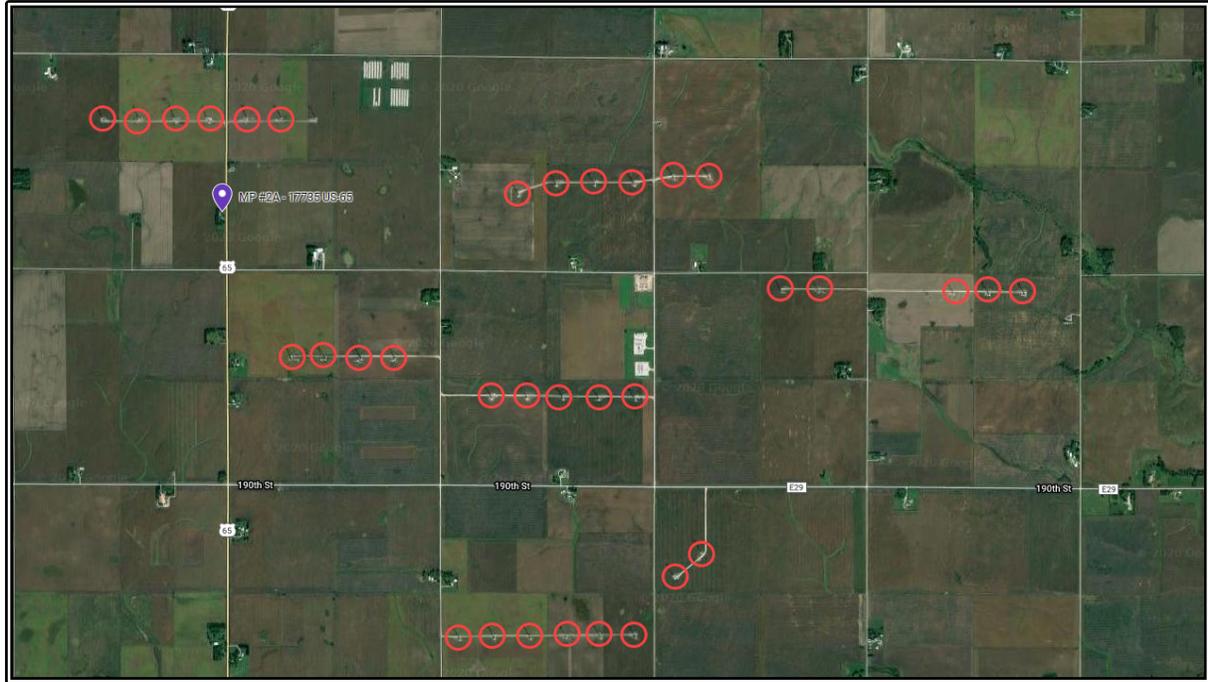
Upward adjustments are made to the 57576 East Lincoln Highway property for the superior basement of the 15290 U.S. Highway 65 property. Downward adjustments are made for the superior age, building size, style, and outbuildings of the 57576 East Lincoln Highway property compared to those features of the 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**

	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
Address	17735 U.S. Highway 65 Zearing, 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	○	+	-	-	○	-	+	-	+
+	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									

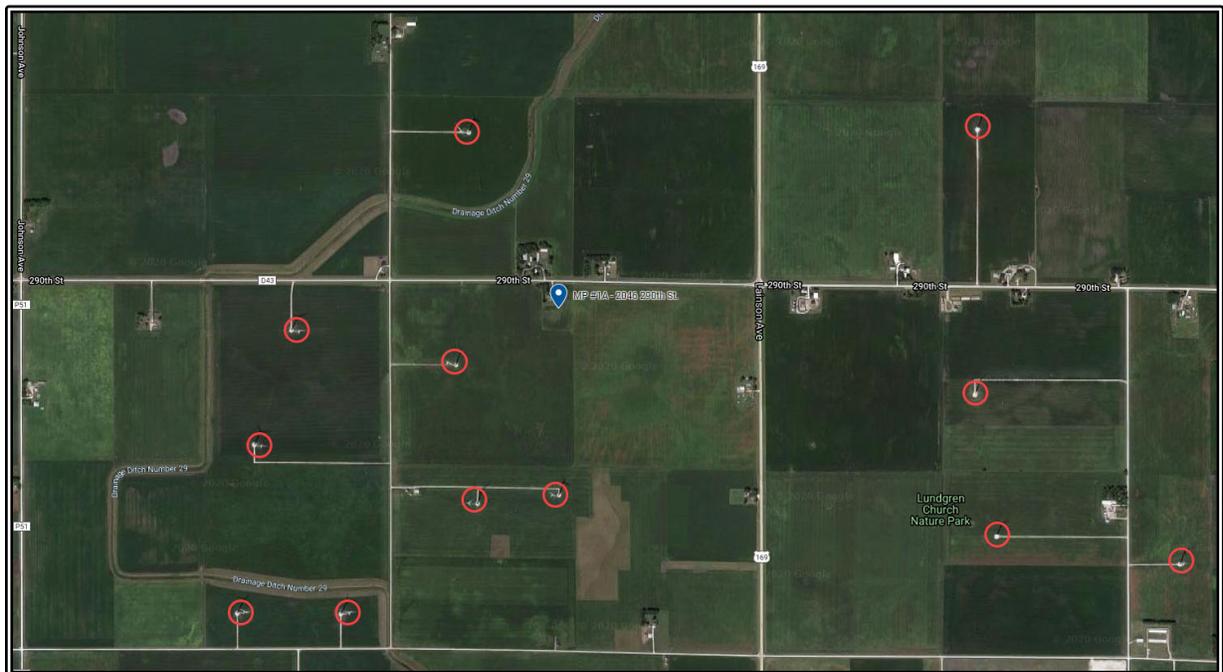
Upward adjustments are made to the 12894 530<sup>th</sup> Avenue property for the superior age, basement, and outbuildings of the 17735 U.S. Highway 65 property. Downward adjustments are made for the superior building size, lot size, style, and utilities of the 12894 530<sup>th</sup> Avenue property 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 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.



**WEBSTER COUNTY MATCHED PAIR NO. 1**

	<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



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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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									

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.

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

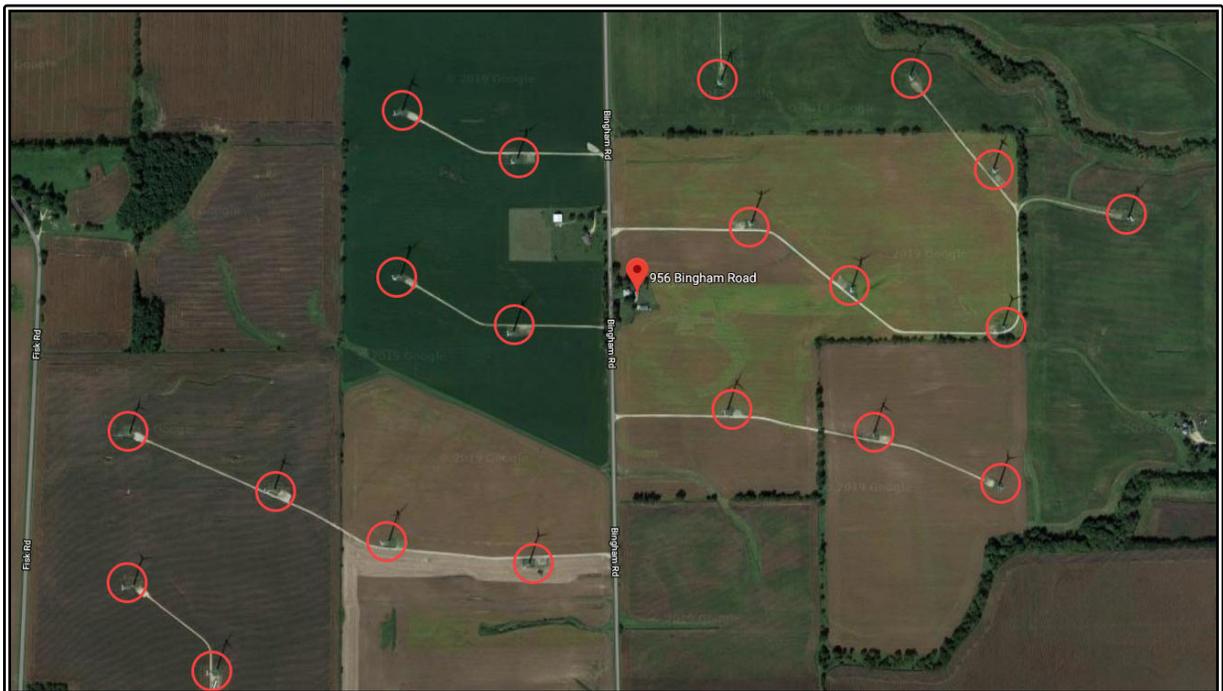
In addition to analyzing sales in the subject project area, we have researched sales in proximity to several existing wind farms in rural areas of Illinois, Indiana, South Dakota, Minnesota, and Kansas in order to discover whether residential property values in these areas were impacted by their locations.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

As with the research from Iowa, details of these sales are retained in my 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.

### 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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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**

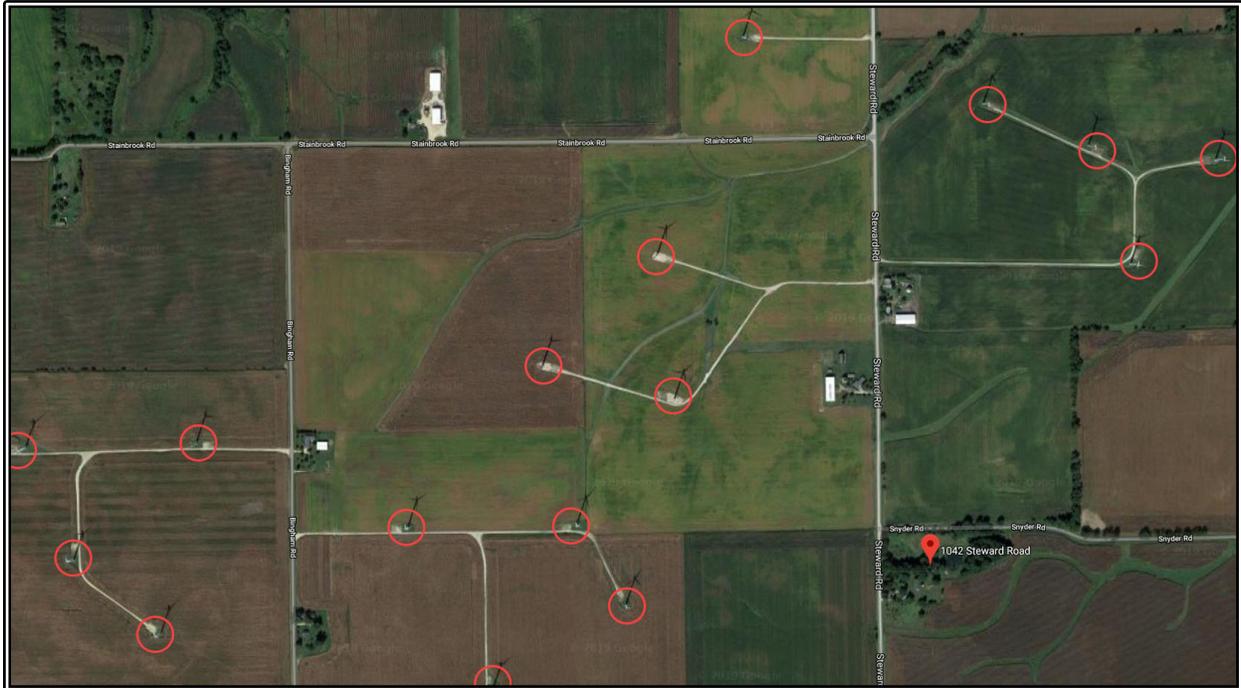
Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	3535 Elva Rd. Steward, IL 60553	0	-	-	0	0	+	0	+	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
0	No adjustment necessary									

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**

	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
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



3377 Willow Creek Road

1042 Steward 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.

**ADJUSTMENT GRID MATCHED PAIR NO. 2**

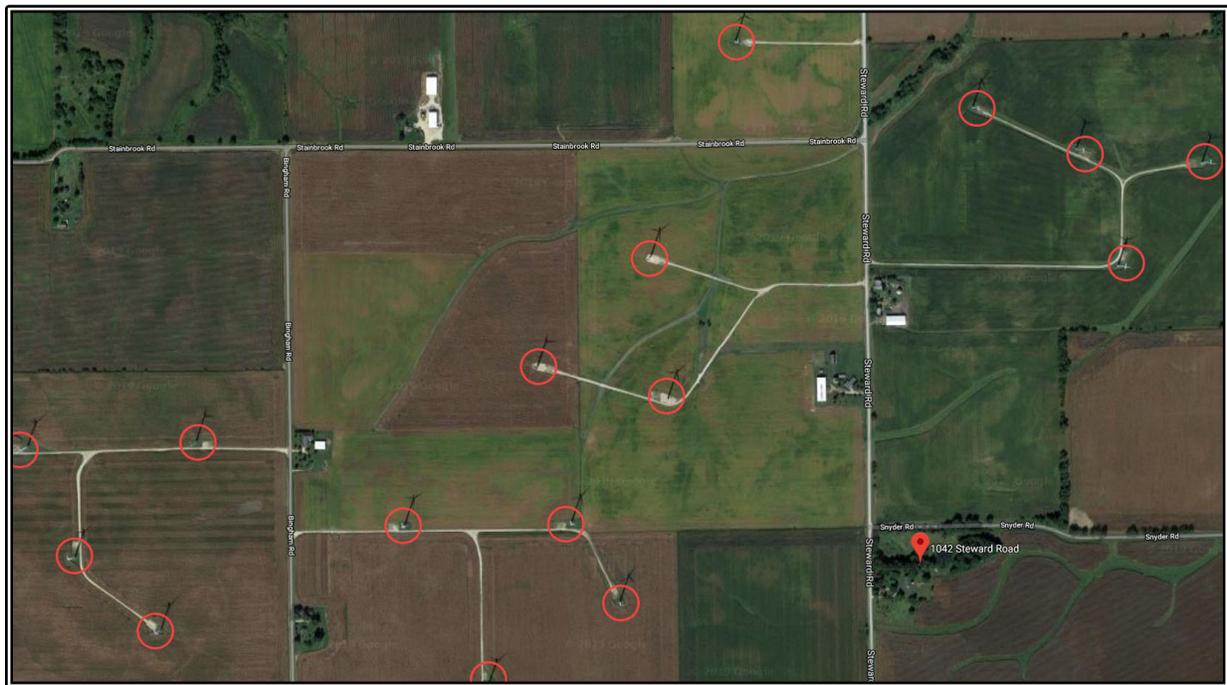
Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
2B	3377 Willow Creek Rd. Lee, IL 60530	o	-	-	+	o	-	-	-	-
	+ Positive adjustment based on comparable being inferior in comparison to property #1A									
	- Negative adjustment based on comparable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

Upward adjustments are made to the 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 property 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)**

	<b>3A - Proximate to a Wind Turbine</b>	<b>3B - Not Proximate to a Wind Turbine</b>	<b>3B - Not Proximate to a Wind Turbine</b>
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 and 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.

<b>MACON COUNTY MATCHED PAIR NO. 1</b>			
	<b>1A - Proximate to a Wind Turbine</b>	<b>1A - Prior Sale</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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								

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 - 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	1,865 Feet	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 Rd.



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	o	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									

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 Feet	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 ¾ acre larger than the E 1300 North Road house. Both factors are reflected in its higher sale price.

**ADJUSTMENT GRID MATCHED PAIR NO. 2**

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	o	o	+	+	o	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									

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.

**MCLEAN COUNTY MATCHED PAIR NO. 3**

	<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 Feet	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



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	-	o	o	-	o	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									

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 - 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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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**

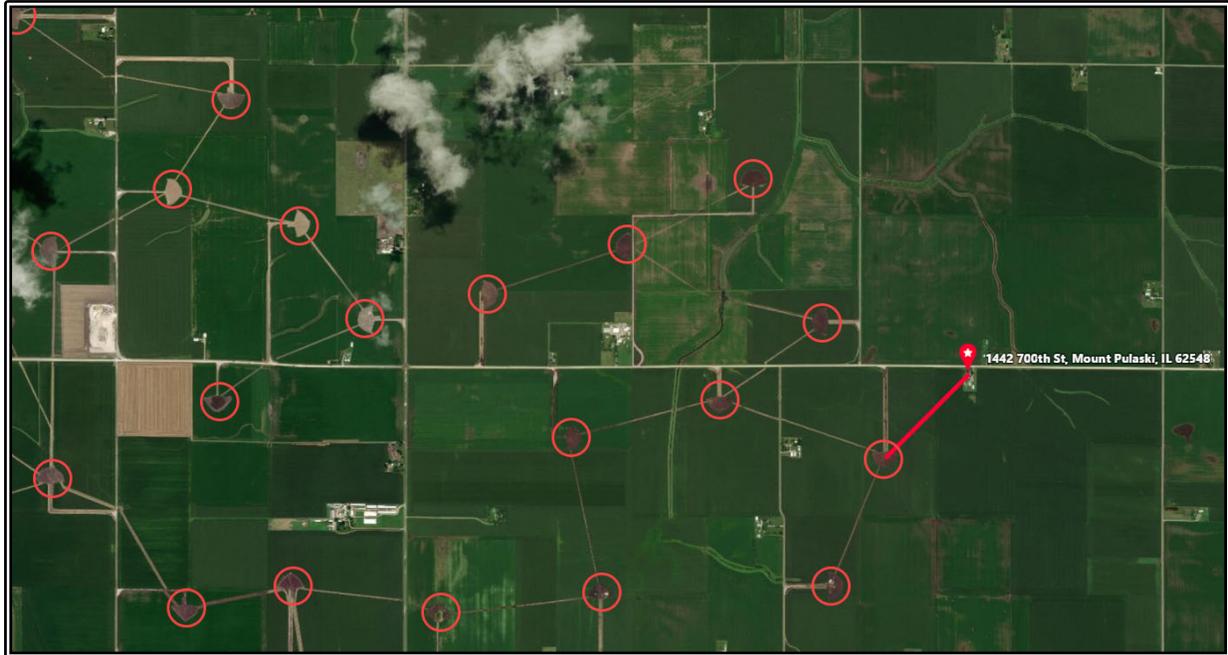
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	16101 E 1400 North Rd. Pontiac, Illinois	o	o	o	o	o	o	+	o	o
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable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

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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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**

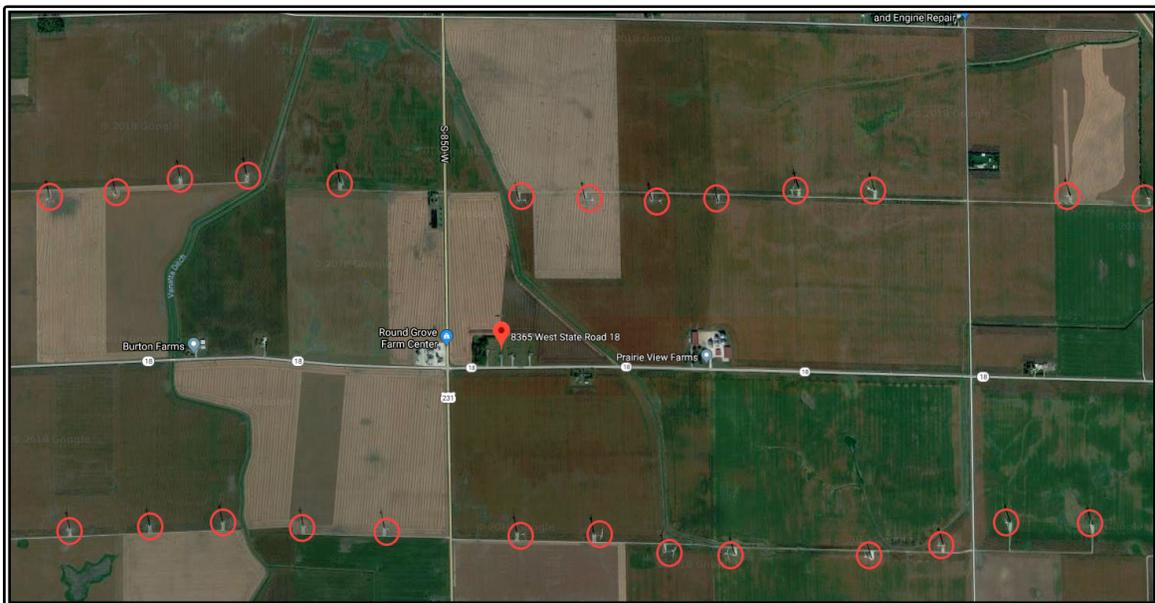
Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	488 100th Ave. Athens, IL 62613	+	o	o	-	o	o	-	o	o
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being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

### 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.



**WHITE COUNTY MATCHED PAIR NO. 1**

	<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



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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

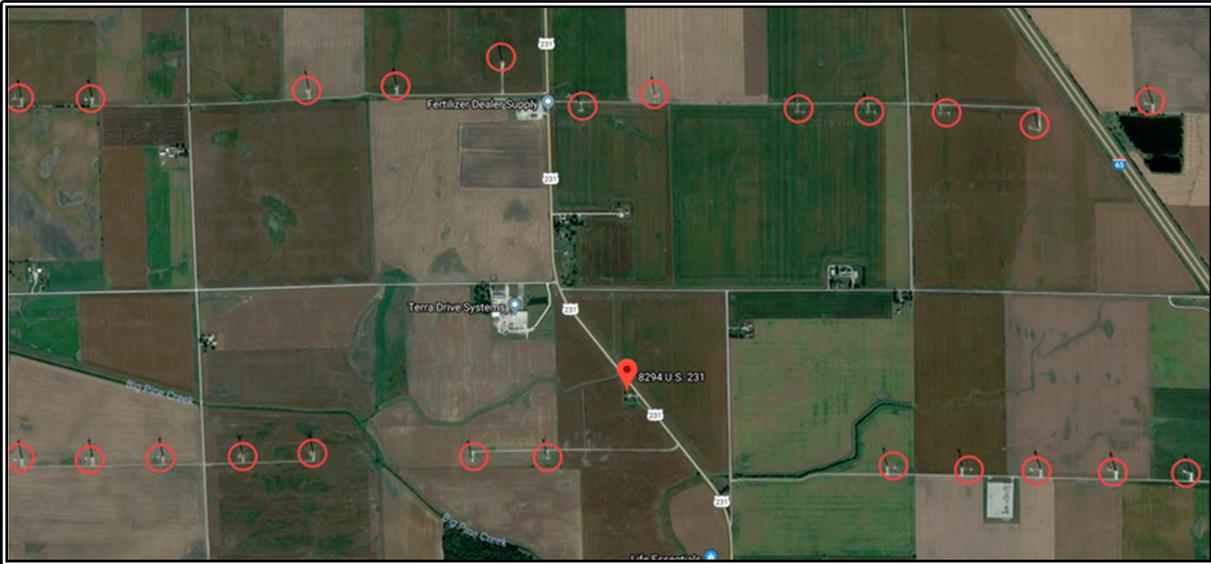
Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1105 S Airport Rd. Monticello, IN 47960	○	+	-	+	○	-	-	○	-
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable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

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**

	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
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) 5 bedrooms, 2 bath	Two-story; frame (vinyl/brick) 5 bedrooms, 2.5 bath
Basement	Crawlspace	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.

### 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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	21088 487 <sup>th</sup> Ave. Elkton, SD 57026	5705 Rathum Loop Brookings, SD 57006
Distance from Turbine	1,028 Feet	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.

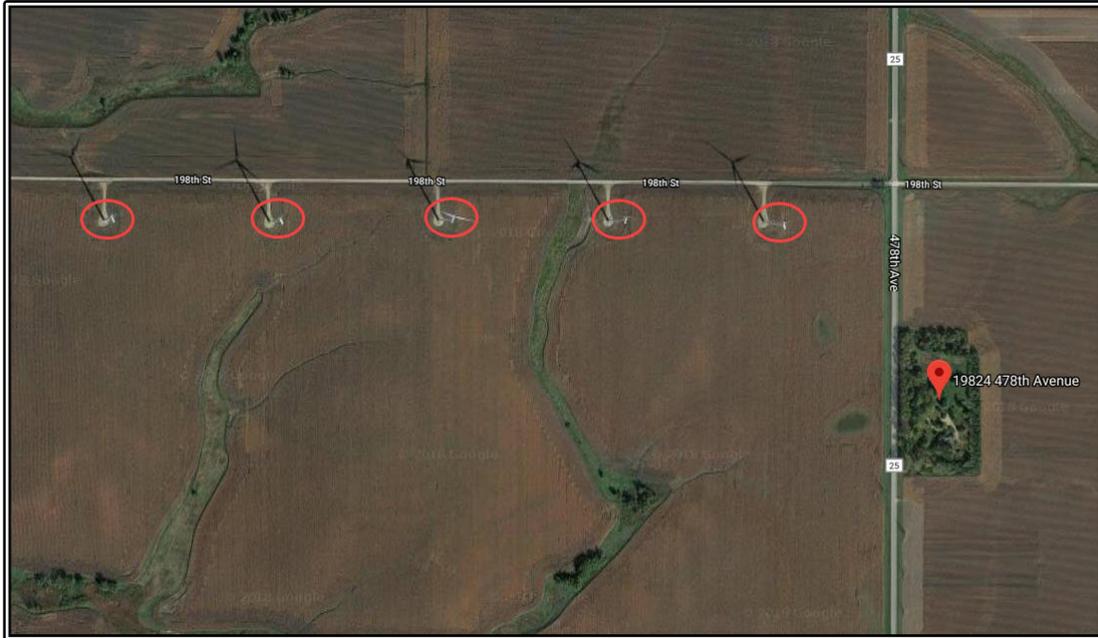
Considering the adjustments noted in the following table for the older age and smaller size of the Rathum Loop property and for the superior market conditions of the 487<sup>th</sup> Avenue property, the difference in the sale price does not support the conclusion that proximity to the wind turbines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

<b>ADJUSTMENT GRID MATCHED PAIR NO. 1</b>										
<b>SALE NO.</b>	<b>ADDRESS</b>	<b>SALE DATE</b>	<b>YEAR BUILT</b>	<b>BUILDING SIZE</b>	<b>LOT SIZE</b>	<b>LOCATION</b>	<b>STYLE</b>	<b>BASEMENT</b>	<b>UTILITIES</b>	<b>OUT-BUILDINGS</b>
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**

	<b>2A - Proximate to a Wind Turbine</b>	<b>2B - Not Proximate to a Wind Turbine</b>
Address	19824 478 <sup>th</sup> Ave. Toronto, SD 57268	20485 475 <sup>th</sup> Ave. Brookings, SD 57002
Distance from Turbine	1,548 Feet	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**

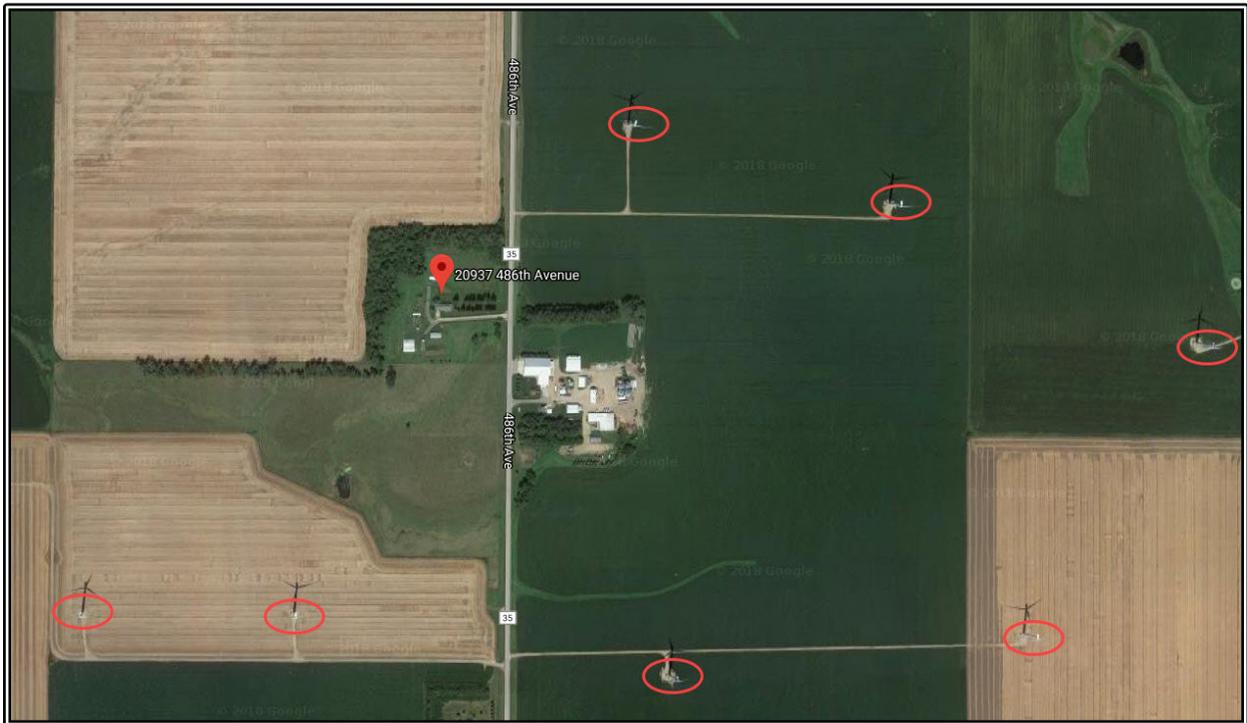
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
2B	20485 475 <sup>th</sup> Ave. Brookings, South Dakota	-	-	O	-	-	O	-	-	-
+	Positive adjustment based on comparable being inferior in comparison to property #2A									
-	Negative adjustment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

	<b>3A - Proximate to a Wind Turbine</b>	<b>3B - Not Proximate to a Wind Turbine</b>
Address	20937 486 <sup>th</sup> Ave. Elkton, SD 57026	518 W. 44 <sup>th</sup> St. S Brookings, SD 57006
Distance from Turbine	1,433 Feet	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.

<b>ADJUSTMENT GRID MATCHED PAIR NO. 3</b>										
<b>SALE NO.</b>	<b>ADDRESS</b>	<b>SALE DATE</b>	<b>YEAR BUILT</b>	<b>BUILDING SIZE</b>	<b>LOT SIZE</b>	<b>LOCATION</b>	<b>STYLE</b>	<b>BASEMENT</b>	<b>UTILITIES</b>	<b>OUT-BUILDINGS</b>
3B	518 W. 44 <sup>th</sup> St. S. Brookings, South Dakota	-	-	+	+	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									

### **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**

	<b>4A - Proximate to a Wind Turbine</b>	<b>4B - Not Proximate to a Wind Turbine</b>
Address	19636 475 <sup>th</sup> Ave. Toronto, SD 57268	46246 214 <sup>th</sup> St. Volga, SD 57071
Distance from Turbine	2,309 Feet	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									

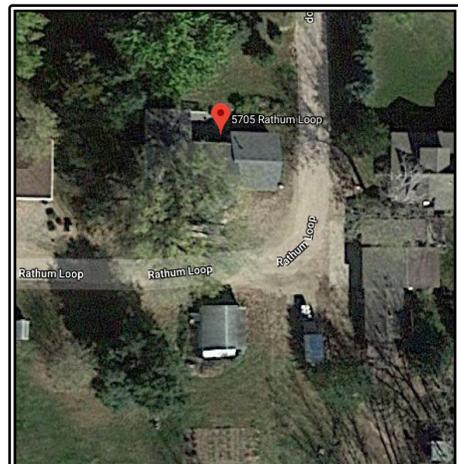


**BROOKINGS COUNTY MATCHED PAIR NO. 5**

	<b>5A - Proximate to a Wind Turbine</b>	<b>5B - Not Proximate to a Wind Turbine</b>
Address	48646 207 <sup>th</sup> St. Elkton, SD 57026	5705 Rathum Loop Brookings, SD 57006
Distance from Turbine	1,118 Feet	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.

**ADJUSTMENT GRID MATCHED PAIR NO. 5**

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									

**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**

	<b>6A - Proximate to a Wind Turbine</b>	<b>6B - Not Proximate to a Wind Turbine</b>
Address	20922 485 <sup>th</sup> Ave. Elkton, SD 57026	46464 218 <sup>th</sup> St. Volga, SD 57071
Distance from Turbine	1,959 Feet	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									

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

Freeborn County, Minnesota, is located north adjacent to central Iowa. Matched Pair #1 considers the sale of a property in the footprint of the Bent Tree Wind Farm in Freeborn County, which has been operational since February 2011. The house is located at 69525 305th Street, Hartland, sold in March 2016. This house is approximately 2,375 feet from the nearest turbine; there are several turbines located to the south and southeast.

This sale is compared with a similar property located at 70308 240th Street, Albert Lea, that sold in May 2016. Wind turbines are visible from the house, but the turbines are more than 1.5 miles away. The location is very rural in nature. Market conditions are considered to be substantially similar at the dates of sale. The salient details of these two properties are summarized in the table below.

<b>FREEBORN COUNTY MATCHED PAIR NO. 1</b>		
	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
Address	69525 305 <sup>th</sup> Street. Hartland, MN 56042	70308 240 <sup>th</sup> Street. Albert Lea, MN 56007
Distance from Turbine	2,375 Feet	NA
Sale Date	March 31, 2016	May 16, 2016
Sale Price	\$89,000	\$100,000
Sale Price/Sq. Ft. (A.G.)	\$57.12	\$61.80
Year Built	1880	1925
Building Size (Sq. Ft.)	1,558	1,618
Lot Size (Acres)	5.51	4.01
Style	Farmhouse; frame (vinyl) 3 or 4 bedrooms, 2 bath	Farmhouse; frame (vinyl) 3 bedrooms, 2 bath
Basement	Full, unfinished	Partial, unfinished
Utilities	No central air Propane heat Well & septic	Central air Natural gas heat Well & septic
Other	2-car detached garage Deck, outbuildings	2.5-car detached garage Deck, outbuildings



69525 305th Street



70308 240th Street

Both properties are older, farm-house style and of frame construction with vinyl siding. They are somewhat similar in size. However, the 240th Street house is superior to the 305th Street house in condition; it is classified by the Assessor as being in better condition and is described in the online listing as having been renovated recently. The 305th Street house does not have central air conditioning, and does not have natural gas available; however, the 240th Street house has both. Both the central air conditioning and the availability of natural gas are considered superior factors for 240<sup>th</sup> Street requiring a downward adjustment. An upward adjustment for the full basement of 305<sup>th</sup> Street compared to the partial basement of 240<sup>th</sup> Street.

The house on 240<sup>th</sup> Street has a site size approximately 1.5 acres smaller than that of the 305<sup>th</sup> Street house. However, this is more than offset by its location on a hard-surface road, as well as the proximity to Interstate 90 access and to the city of Albert Lea.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

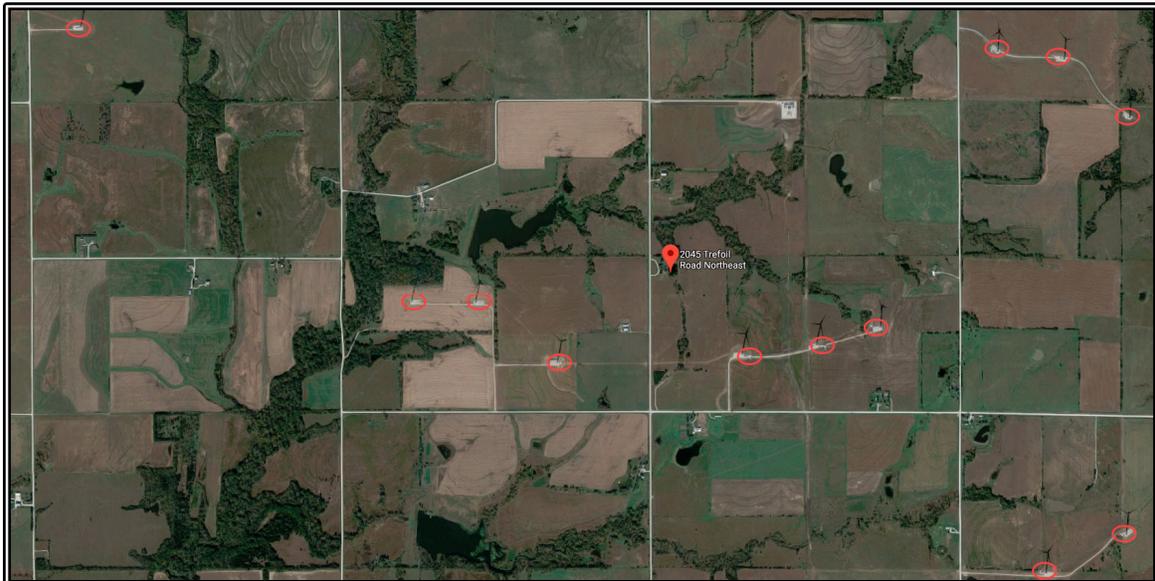
SALE NO.	ADDRESS	SALE DATE	YEAR BUILT	BUILDING SIZE	LOT SIZE	LOCATION	STYLE	BASEMENT	UTILITIES	OUT-BUILDINGS
1B	70308 240 <sup>th</sup> St. Albert Lea, Minnesota	○	-	○	○	-	○	+	-	○
+	Positive adjustment based on comparable being inferior in comparison to property #1A									
-	Negative adjustment based on comparable being superior in comparison to property #1A									
○	No adjustment necessary									

When the adjustments noted above for superior condition, air conditioning, and the availability of natural gas are made to the sale price of the 240th Street house, the two properties have essentially the same per square foot value. In other words, the higher per foot sale price for the 240th Street house is justified by its superior condition and amenities. Thus, the difference in the sale price does not support the conclusion that proximity to the wind turbines had a negative impact on the sale price of the property at 69525 305th Street.

### **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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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	Full, partial finished
Utilities	Central air Forced-air heat/heat pump Well & septic	Central air 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	○	-	-	+	○	-	○	○	-
+	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									

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.



**HARPER COUNTY MATCHED PAIR NO. 1**

	<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



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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

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								

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**

	<b>1A - Proximate to a Wind Turbine</b>	<b>1B - Not Proximate to a Wind Turbine</b>
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.

**ADJUSTMENT GRID MATCHED PAIR NO. 1**

Sale No.	Address	Sale Date	Year Built	Building Size	Lot Size	Location	Style	Basement	Utilities	Out-Buildings
1B	1517 Eastland Pl. Pratt, KS 67124	○	○	-	+	-	○	-	-	+
+	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									

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 Iowa and studies in rural counties of Illinois, Indiana, South Dakota, Minnesota, 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. The February 2020 edition of the *AgLetter*, published by the Federal Reserve Bank of Chicago from the Federal Reserve 7<sup>th</sup> District<sup>4</sup>, which includes Boone and Hamilton County, stated that agricultural land values for the Seventh Federal Reserve District as a whole remained stable in the fourth quarter of 2019, with average farmland values were generally unchanged from a year earlier. “With inflation taken into account, District farmland values had a yearly decrease of a little over 1 percent in 2019; in real terms, the decrease in 2019 was smaller than the one in 2018 because of a dip in inflation. This was the sixth straight annual real decline. District farmland values fell 13 percent in real terms from their peak in 2013 to the end of 2019. But the decrease in agricultural land values over this span was just 6 percent in nominal terms.”

According to the 2019 edition of the annual publication of the *Iowa State University Farmland Value Survey*<sup>5</sup>, “The 2019 ISU Land Value Survey shows a 2.3% increase in average Iowa farmland values from November 2018 to November 2019. The average statewide value of an acre of farmland is now estimated at \$7,432. This modest increase, which barely exceeds the pace of inflation, is the second rise over the past six years, but still represents a 15% decrease from the 2013 peak in nominal land values, or a 23% drop in inflation-adjusted values.

The recent increase is largely attributable to lower interest rates, limited land supply, strong yields, and to some extent the trade aid payments. At the same time, the magnitude of this rise is still very modest and represents an overall stable land market as opposed to one in rapid rebound. Many respondents still cited low commodity prices, weather, and trade uncertainty as negative factors influencing the land market. Two-thirds of the respondents reported no change or less sales compared to a year ago. In general, the survey respondents have an optimistic view regarding the strength of the future land market both one and five years from now.

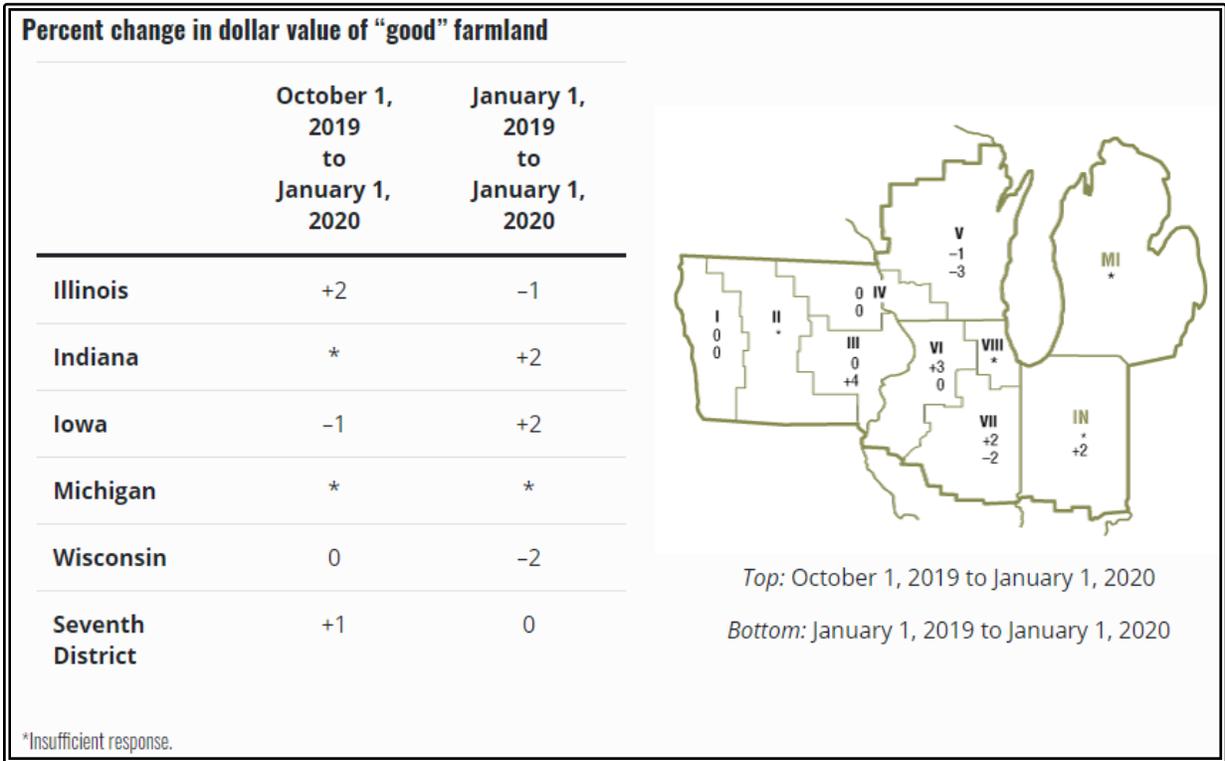
The 2019 ISU Land Value Survey revealed an overall positive, yet mixed, land value pattern across crop reporting districts, counties, and land quality classes. Local land supply and demand, as well as the local fluctuations in farm income, largely explain the variations across the state. All crop reporting districts, except for the Northeast district, reported an increase in land values: the largest percentage increase was in the East Central district, 5.9%, while the Northeast district reported a 2.9% loss, mainly due to financial stress in the dairy sector. Eighty-two of 99 counties in Iowa reported a rise in land value, while the remaining 17 counties saw a decline. The largest percentage increase, 5.4%, was reported in both Boone and Story Counties, while the highest percentage decrease (2.2%) was reported in Clayton and Allamakee Counties.”

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<sup>4</sup> <https://www.chicagofed.org/publications/agletter/2020-2024/february-2020>

<sup>5</sup> <https://www.extension.iastate.edu/agdm/wholefarm/html/c2-70.html>

The survey also reaches out to farmland owners for predictions they have concerning the future of Iowa farmland values and cash crop prices. “Respondents had mixed views regarding the strength of the farmland market one year from now, but in general expect higher land values five years from now. Forty-three percent of respondents forecasted an increase in their local land market in one year, while 26% expected a lower land value, and 31% forecasted no change. Looking five years ahead, a vast majority of the respondents (78%) expect a higher land value than current levels, with only 11% forecasting a decline. Respondents expect a slow-but-steady improvement in both the corn and soybean cash crop markets. In particular, the predicted state average cash corn prices for November 2020 and 2024 (five years from now) are \$3.76 per bushel and \$4.19 per bushel, respectively. The statewide average soybean price predictions are \$8.91 per bushel in one year and \$9.82 per bushel five years from now.”





**SUMMARY OF RECENT LAND SALES  
 NEAREST TO GREAT PATHFINDER WIND**

No.	Owner Mailing Address & Parcel Identification	Sale Price	Sale Date	Land Area (Acres)	CSR2	Sale Price Per Acre
2	1648 257 <sup>th</sup> Street Jefferson, Iowa 50129 Hamilton County, IA - 86N 26W – 29 APN: 40-86-26-29-100009 Land Sale #4 - 1 Field	\$309,250	11/26/19	19.43	88.4	\$15,916.11
3	1812 100 <sup>th</sup> Street Boone, Iowa 50036 Hamilton County, IA - 86N 26W – 28 APN: 40-86-26-28-300001 Land Sale #5 - 1 Field	\$547,375	11/06/18	39.20	86.5	\$13,963.65
4	3 Park Avenue South Jefferson, Iowa 50129 Hamilton County, IA - 86N 26W – 29 APN: 40-86-26-29-300002 Land Sale #6 - 1 Field	\$599,875	10/4/19	39.85	85.1	\$15,053.32
5	15 X Avenue Story City, Iowa 50248 Boone County, IA - 85N 25W – 6 APN: 088525064200001 Land Sale #7 - 1 Field	\$720,000	2/20/18	40.31	63.1	\$17,861.57
6	717 West Mamie Eisenhower Avenue, 202 Boone, Iowa 50036 Boone County, IA - 85N 27W – 13 APN: 088527131300001 Land Sale #8 - 1 Field	\$803,625	5/12/17	39.20	79.8	\$20,500.64
<b>Summary Averages:</b>					<b>80.6</b>	<b>\$16,659.06</b>
<b>Boone County Summary Averages:</b>					<b>71.5</b>	<b>\$19,181.11</b>
<b>Hamilton County Summary Averages:</b>					<b>86.7</b>	<b>\$14,977.69</b>

The above analysis includes land sales that are nearest to the project footprint in Boone and Hamilton County, Iowa. The above summary of land sales<sup>6</sup> in Boone County reveal that the agricultural land nearest to the area of the project footprint is of below-average quality for the county, with an average Corn Suitability Rating of 71.5 compared to the county's overall average Corn Suitability Rating of 75.2. The above summary of land sales<sup>7</sup> in Hamilton 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 Corn Suitability Rating of 86.7 compared to the county's overall average Corn Suitability Rating of 78.2. 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, 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>8</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.

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>9</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>10</sup>

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<sup>6</sup> *AcreValue Pro* - <https://www.acrevalue.com/>

<sup>7</sup> *AcreValue Pro* - <https://www.acrevalue.com/>

<sup>8</sup> Klein, David E., and Schnitkey, Gary, 2014 *Illinois Land Values and Lease Trends*, Illinois Society of Professional Farm Managers and Rural Appraisers

<sup>9</sup> [http://www.omaha.com/money/turning-to-turbines-as-commodity-prices-remain-low-wind-energy/article\\_2814e2cf-83a3-547d-a09e-f039e935f399.html](http://www.omaha.com/money/turning-to-turbines-as-commodity-prices-remain-low-wind-energy/article_2814e2cf-83a3-547d-a09e-f039e935f399.html) Accessed September 18, 2017.

<sup>10</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.

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>11</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>12</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>13</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> Klein, David E., and Schnitkey, Gary. *2016 Illinois Land Values and Lease Trends*, Illinois Society of Professional Farm Managers and Rural Appraisers, Page 38.

<sup>12</sup> *Ibid.* Page 42.

<sup>13</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 Surveys 2016-2020**

Real estate professionals from the surrounding market areas and in the Midwest 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 broker in Christian County, 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 states that during peak farming season, other energy systems, such as solar panels, essentially disappear behind the crops on the land. 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.

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 (which include modern energy sources, such as wind), 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 amount 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 Iowa 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.

### **Iowa Assessors Survey - August/September 2017**

In August and September 2017, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 26 counties in Iowa in which wind farms with more than 25 turbines currently are operational. As of the third quarter of 2018, the AWEA reported there were 107 wind projects online with 4,145 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.
- ∴ 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 2016

In March 2015, and updated in October 2016, MaRous & Company conducted a survey of the supervisor of assessments or a staff member in 18 counties in Illinois in which wind farms currently are operational. As of the third quarter of 2018, the AWEA reported there were 49 wind projects online with 2,632 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>14</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.

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<sup>14</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.

- ∴ 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.

### **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.

## Minnesota Assessors Survey - January 2017

In late January 2017, my office conducted a survey of the supervisor of assessments or a deputy supervisor in eight Minnesota counties where large numbers of wind turbines currently are operational. There are several counties with small numbers of wind turbines that were not included in the survey. As of the third quarter of 2018, the AWEA reported there were 98 wind projects online with 2,428 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:

- ∴ With one exception, the interviewees reported that there was no market evidence to support a finding that there has been 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, the assessors believed this to be the result of the very rural nature of the area in which the projects are located.
- ∴ The exception, the Dodge County Assessor, reported receiving two complaints from residential property owners regarding the value impact of proximity to wind turbines; however, the Assessor was unable to find data to support the contentions.
- ∴ Without exception, where there was sufficient data to analyze, the County Assessors reported that both residential and agricultural assessed property values within the wind farm footprints had fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.

Bruce Nielson, Lincoln County Assessor, reported a recent residential transaction in a township in which wind turbines are located that sold \$70,000 higher than the assessor's opinion of market value.

## 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.

## Literature Review

I am 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 Iowa. However the following studies are consistent with our findings in Iowa. 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. Theses 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>15</sup>

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<sup>15</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.

## Conclusions

As a result of the market impact analysis undertaken, I concluded that there is no market data indicating the wind farm will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, market data from Iowa, 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.
- ∴ The proposed wind farm 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 Iowa and other midwestern states, did not support any finding that proximity to a wind turbine had a negative impact on property values.
- ∴ An analysis of agricultural land values in Iowa did not support any finding that agricultural land values are negatively impacted by the proximity to wind turbines.
- ∴ Reports from Illinois, South Dakota, Iowa, Minnesota, Kansas, and Indiana indicate that wind turbine leases add value to agricultural land.
- ∴ A survey of County Assessors in 26 Iowa counties, 18 Illinois counties, 5 Indiana Counties, 21 Kansas counties, 8 South Dakota counties, 8 Minnesota counties, and 3 Ohio counties in which wind farms with more than 25 turbines 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 valuation.

This report is based on market conditions proposed as of March 9, 2020. This market impact study has been prepared specifically for the use of the client and to support the development of the Great Pathfinder Wind, in Boone and Hamilton County, Iowa. Any other use or user of this report is considered to be unintended.

Respectfully submitted,  
MaRous & Company



Michael S. MaRous, MAI, CRE  
Iowa Certified General - #CG03468 (6/21 expiration)  
Illinois Certified General - #553.000141 (9/21 expiration)

## CERTIFICATE OF REPORT

I do hereby certify that:

1. The statements of fact contained in this report are true and correct.
2. 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.
3. 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.
4. 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.
5. 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.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. 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.
9. My analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the *Uniform Standards of Professional Appraisal Practice*.
10. I have made a personal inspection of the subject of the work under review.
11. Joseph M. MaRous provided significant appraisal review assistance to the person signing this certification.
12. 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.
12. The use of the report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
13. 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.

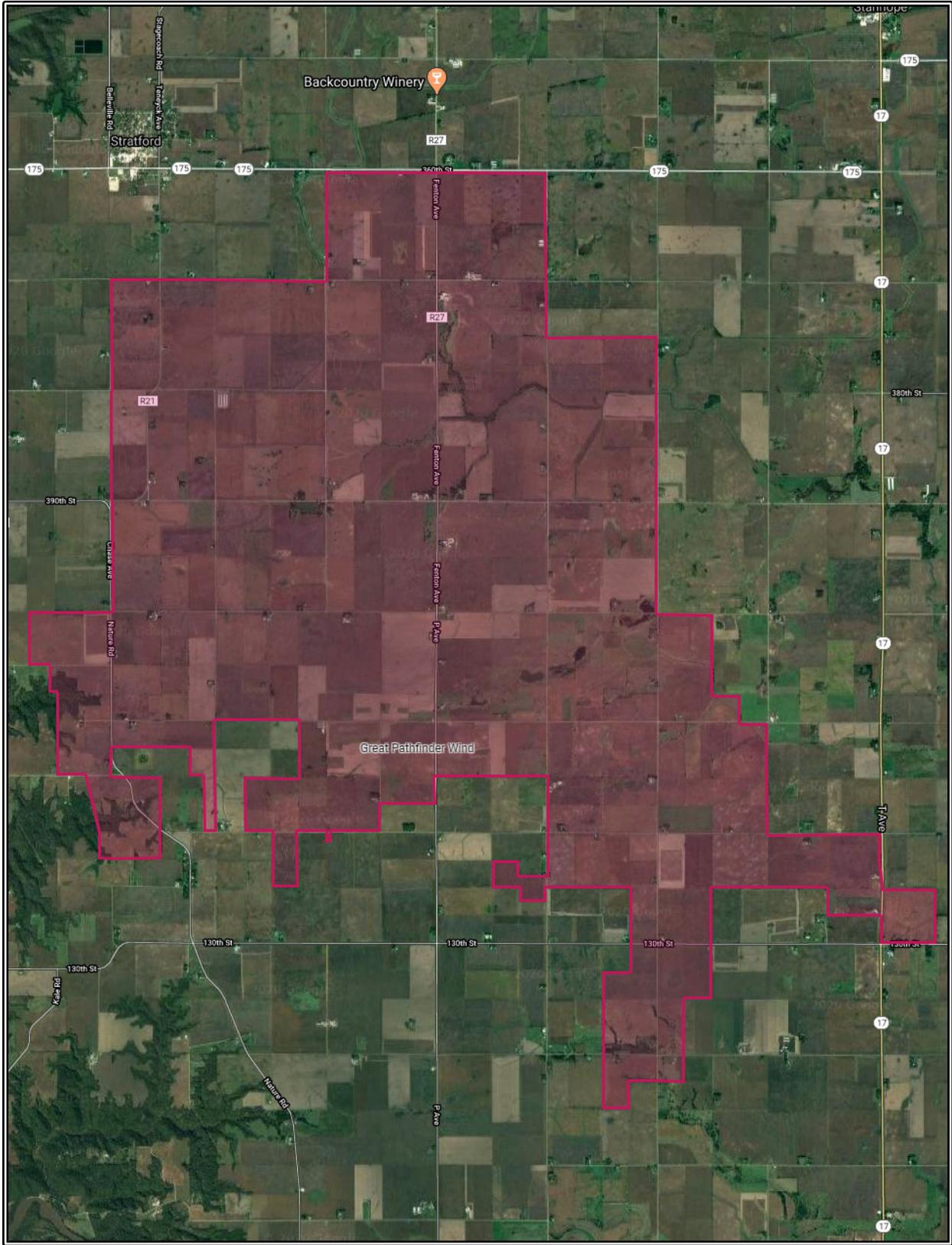
Respectfully submitted,  
MaRous & Company



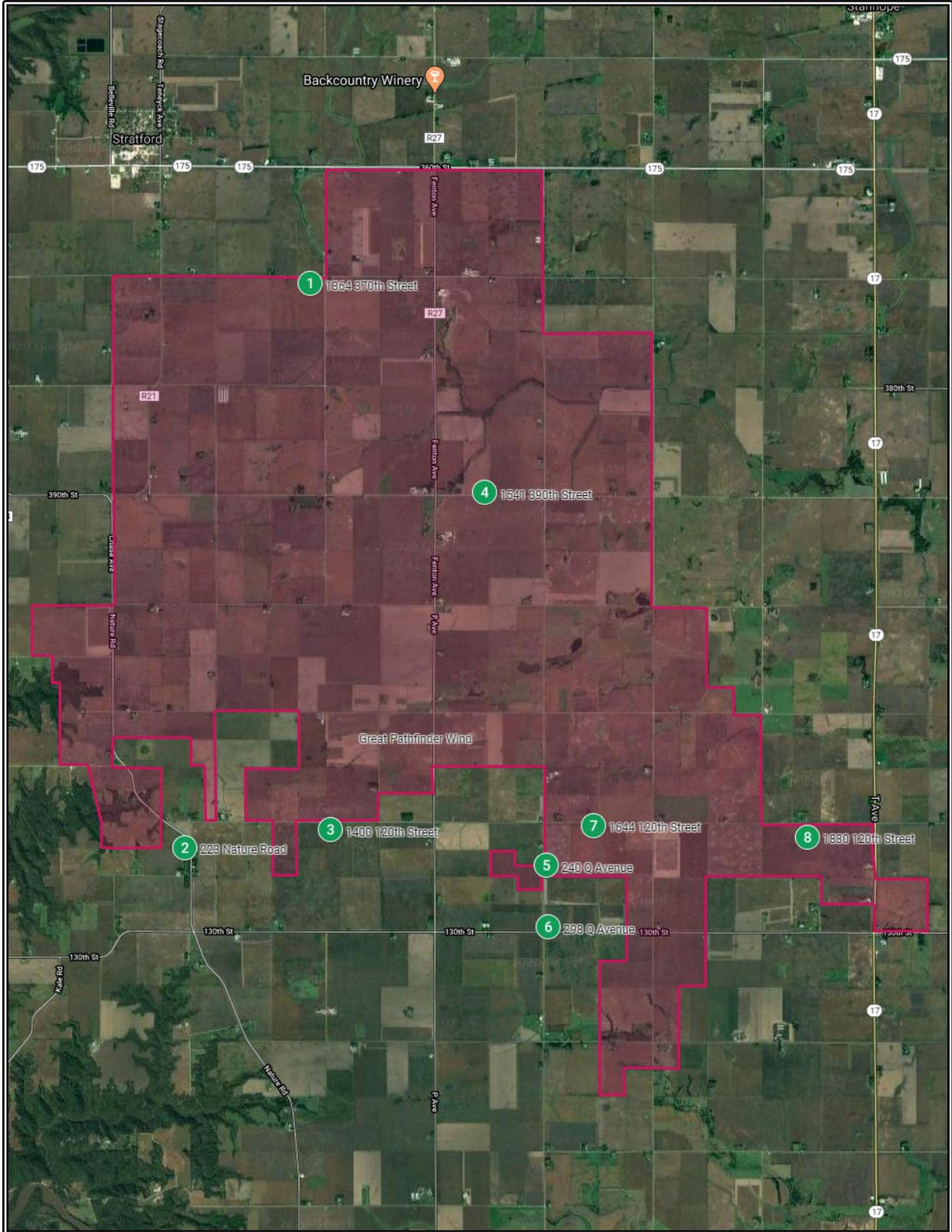
Michael S. MaRous, MAI, CRE  
Iowa Certified General - #CG03468 (6/21 expiration)  
Illinois Certified General - #553.000141 (9/21 expiration)

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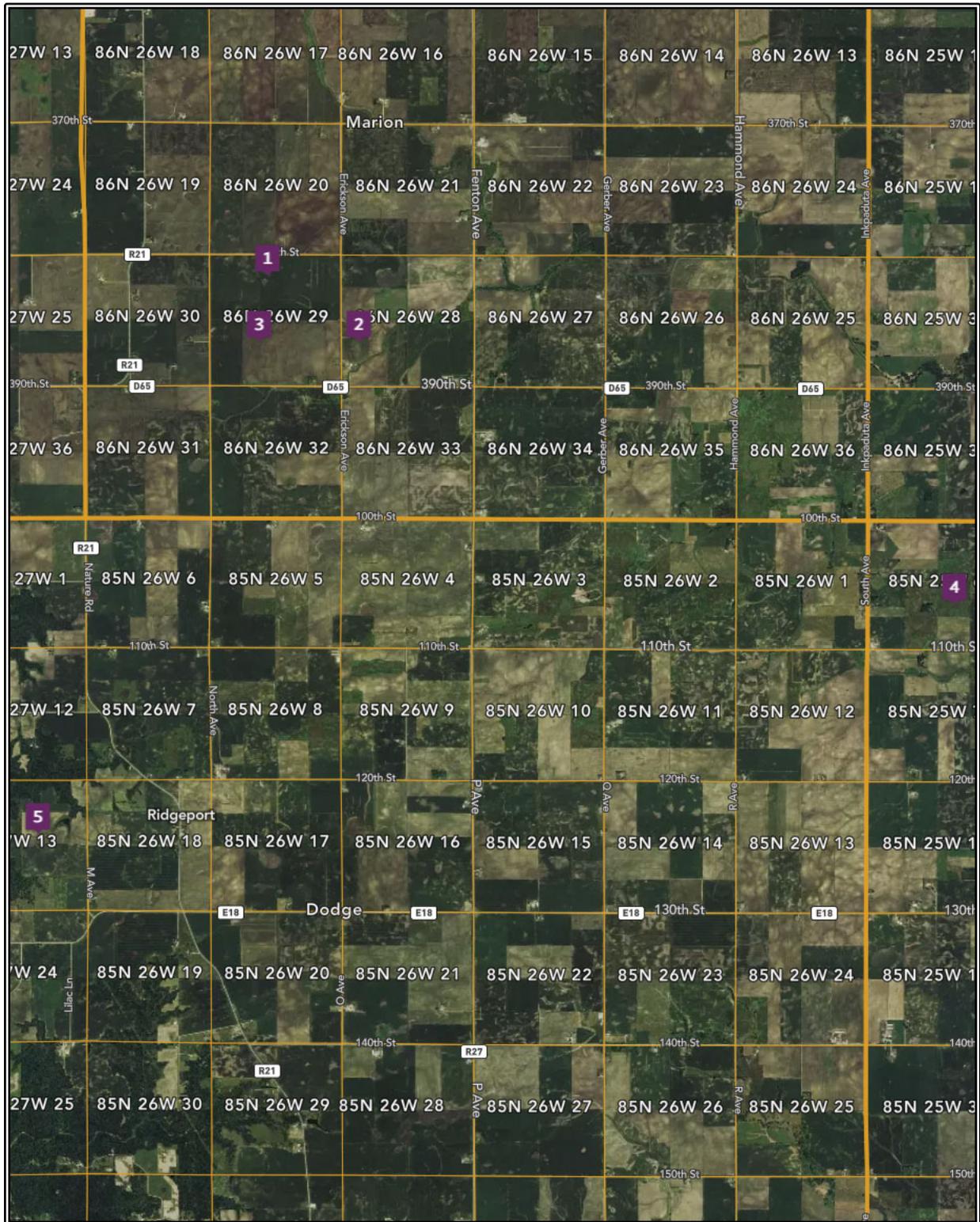
## ADDENDA



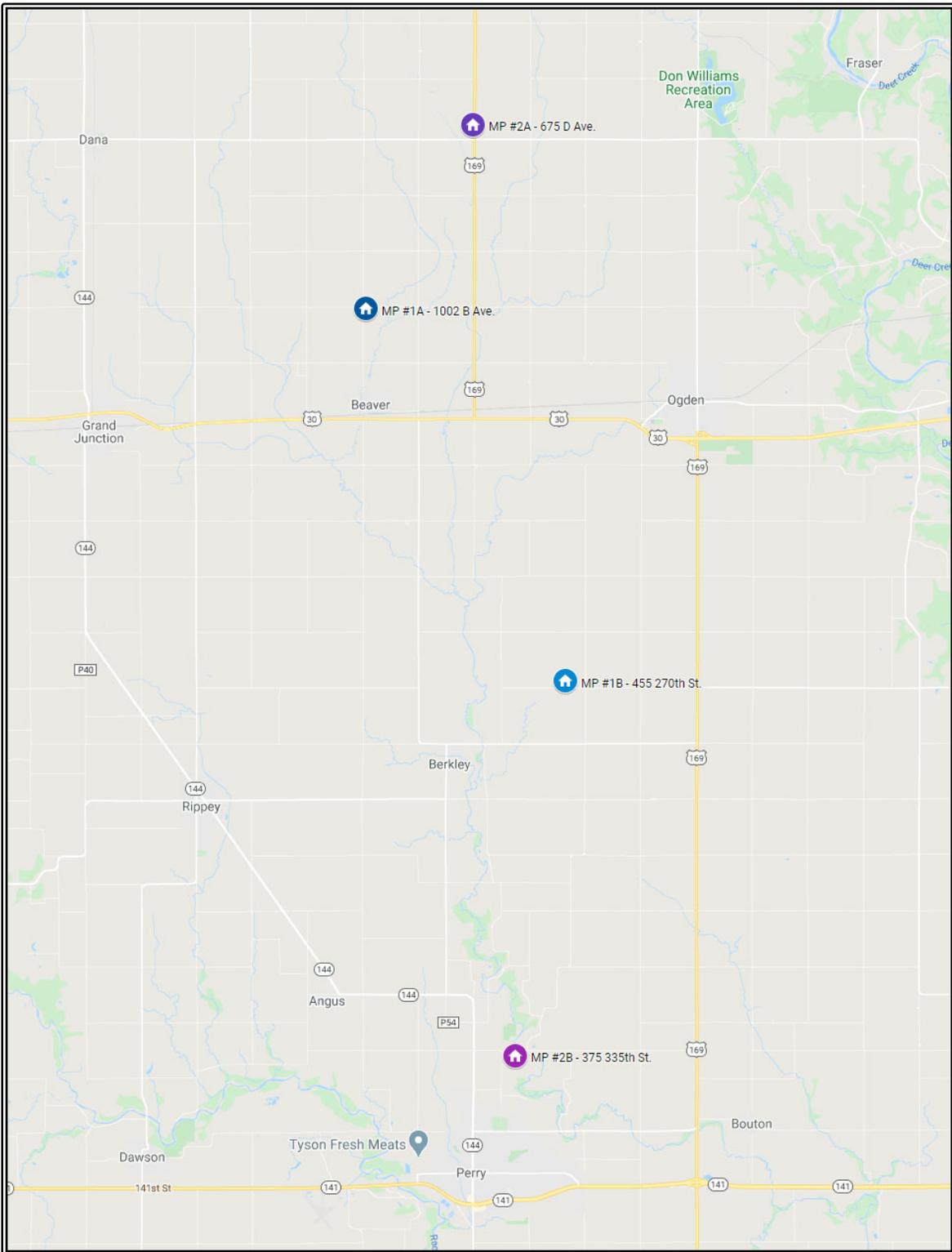
**GREAT PATHFINDER WIND FOOTPRINT**



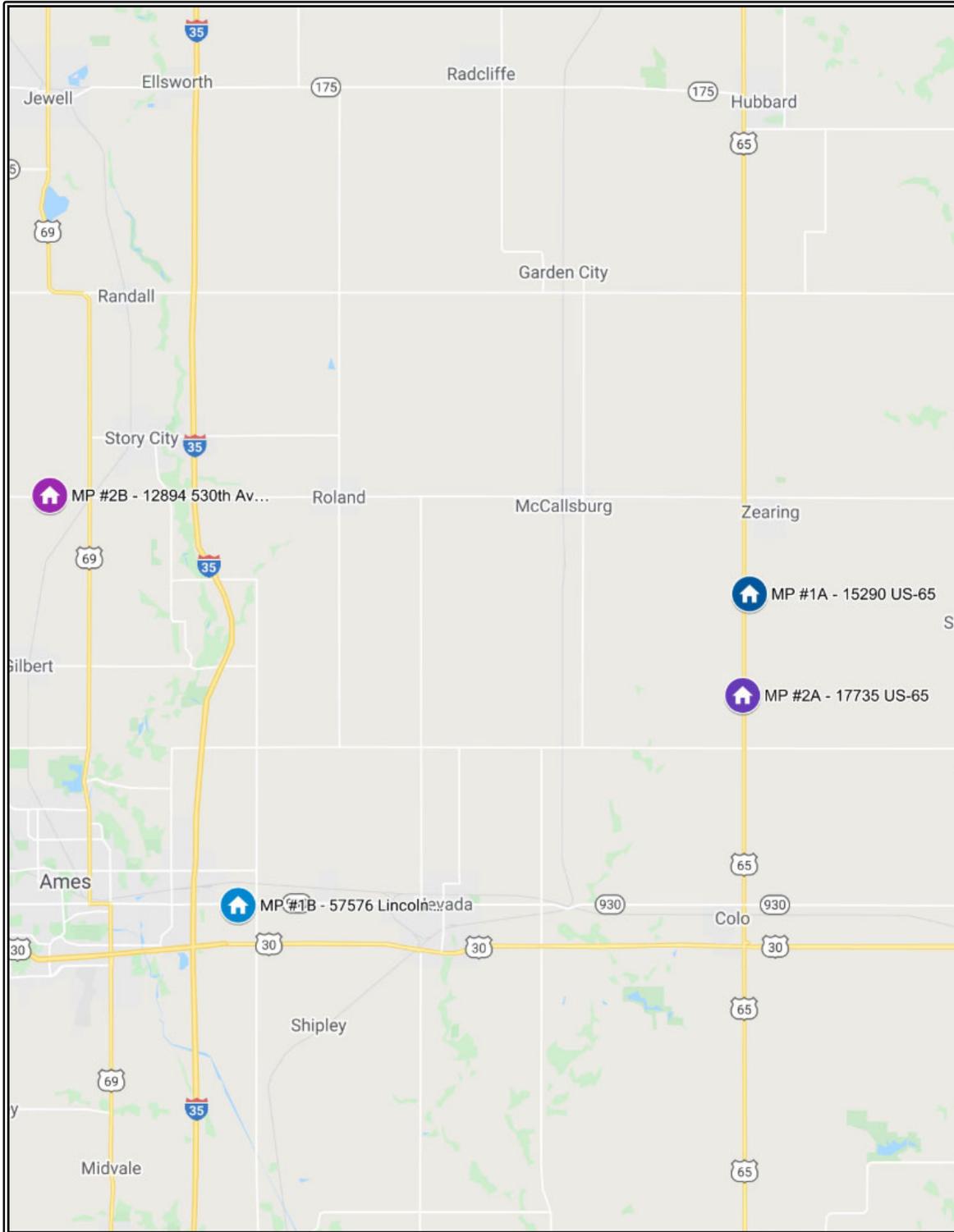
**RECENT SINGLE-FAMILY HOUSE SALES LOCATION MAP**



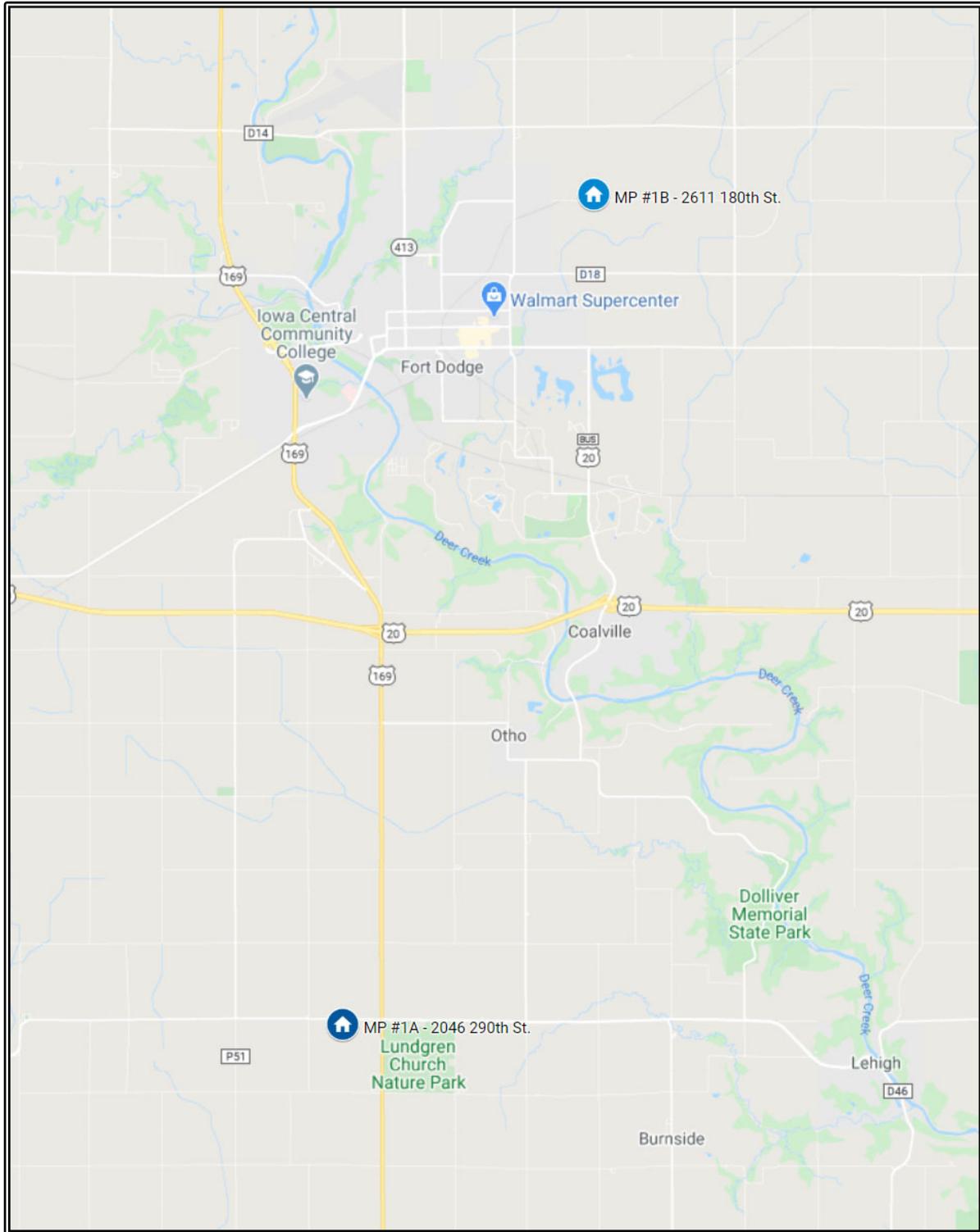
LAND SALES LOCATION MAP



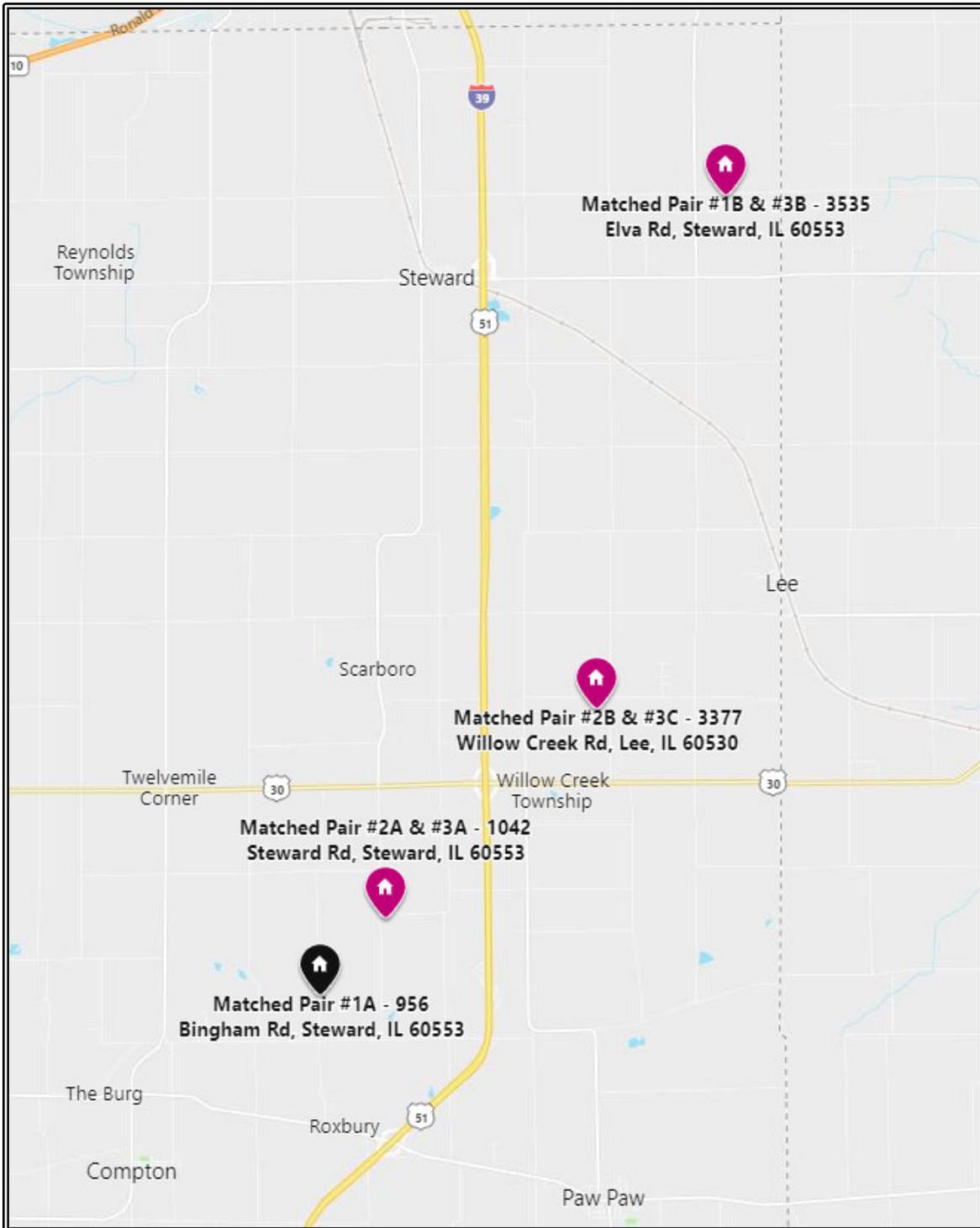
**BOONE COUNTY, IOWA MATCHED PAIR LOCATION MAP**



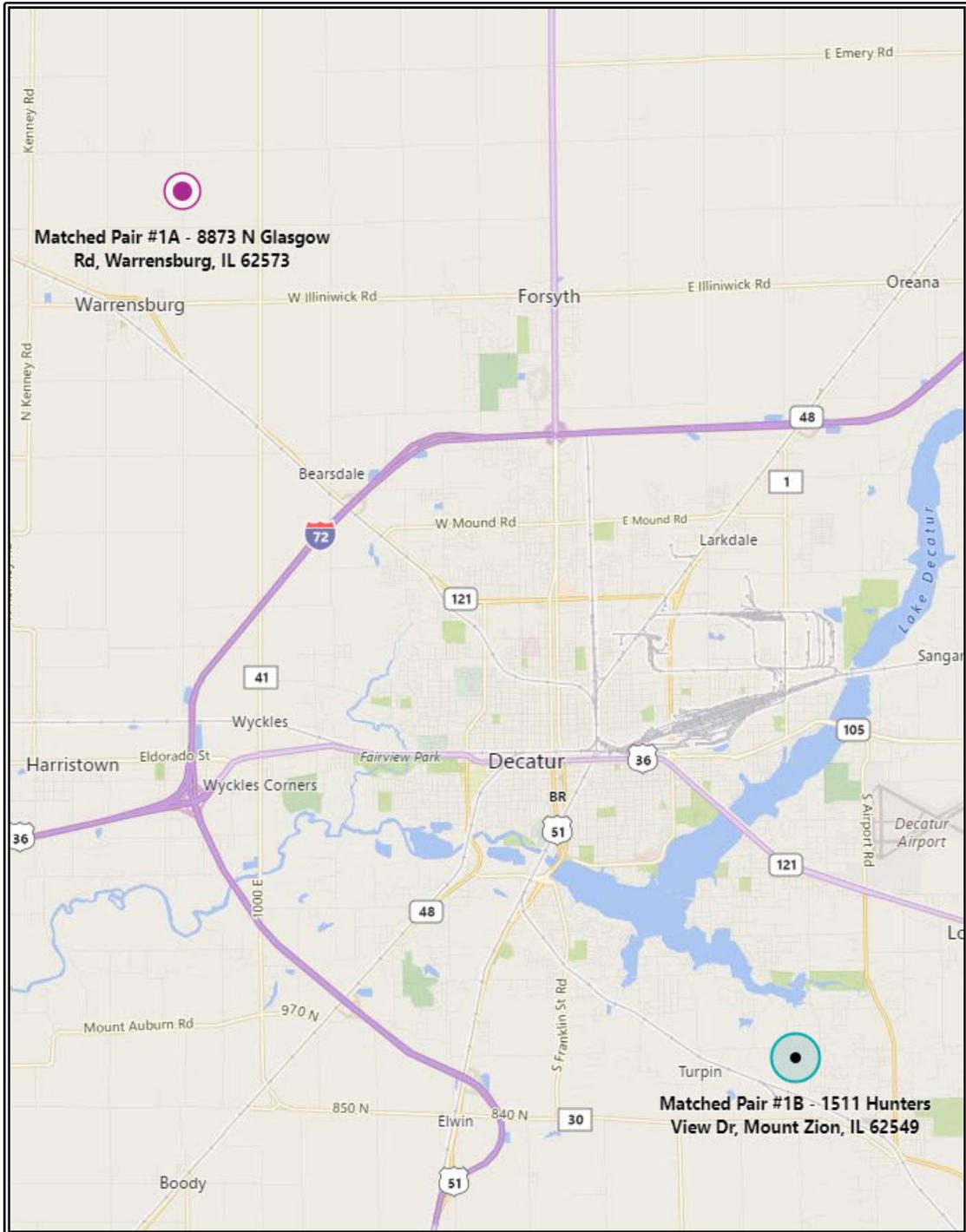
**STORY COUNTY, IOWA MATCHED PAIR LOCATION MAP**



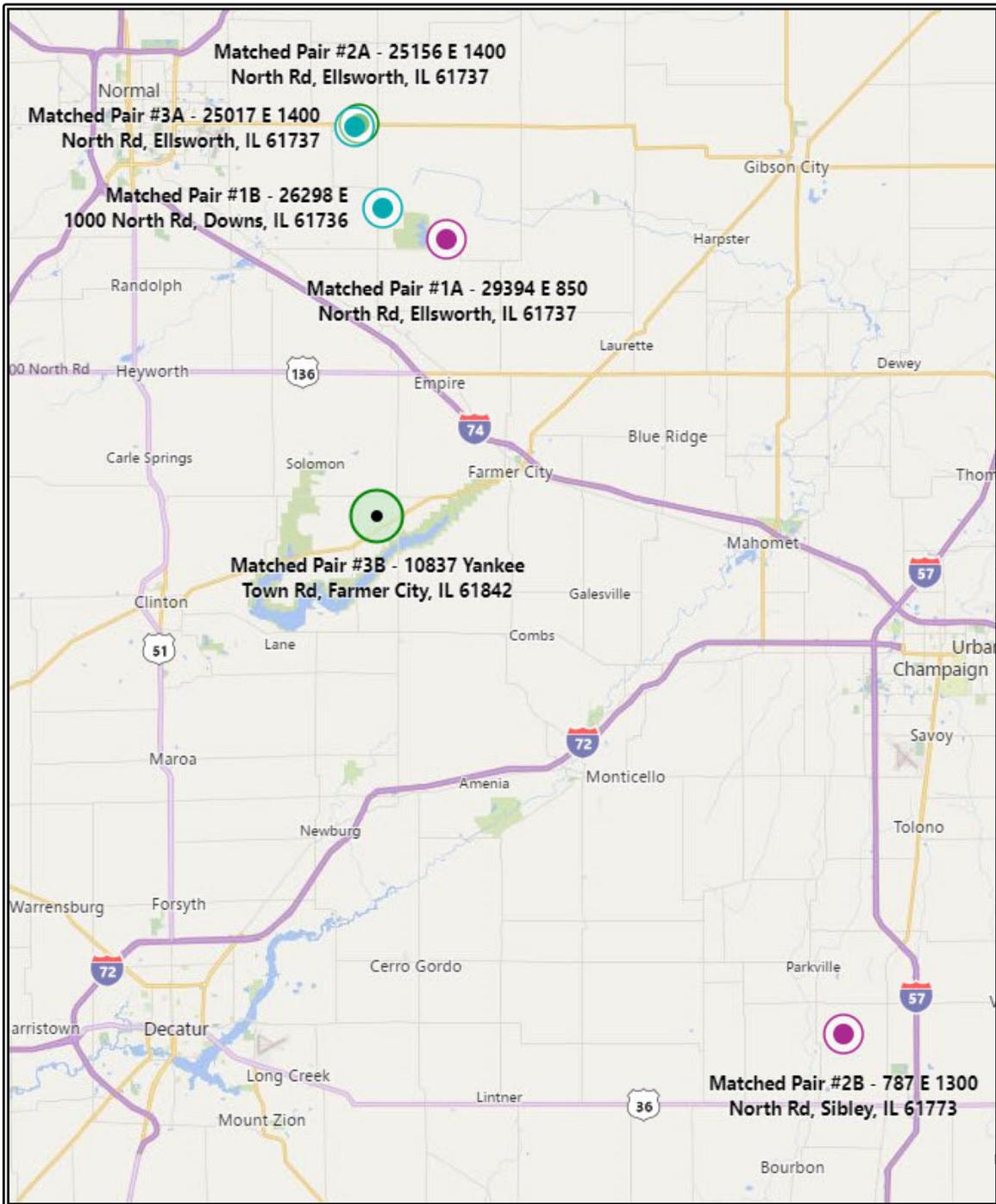
**WEBSTER COUNTY, IOWA MATCHED PAIR LOCATION MAP**



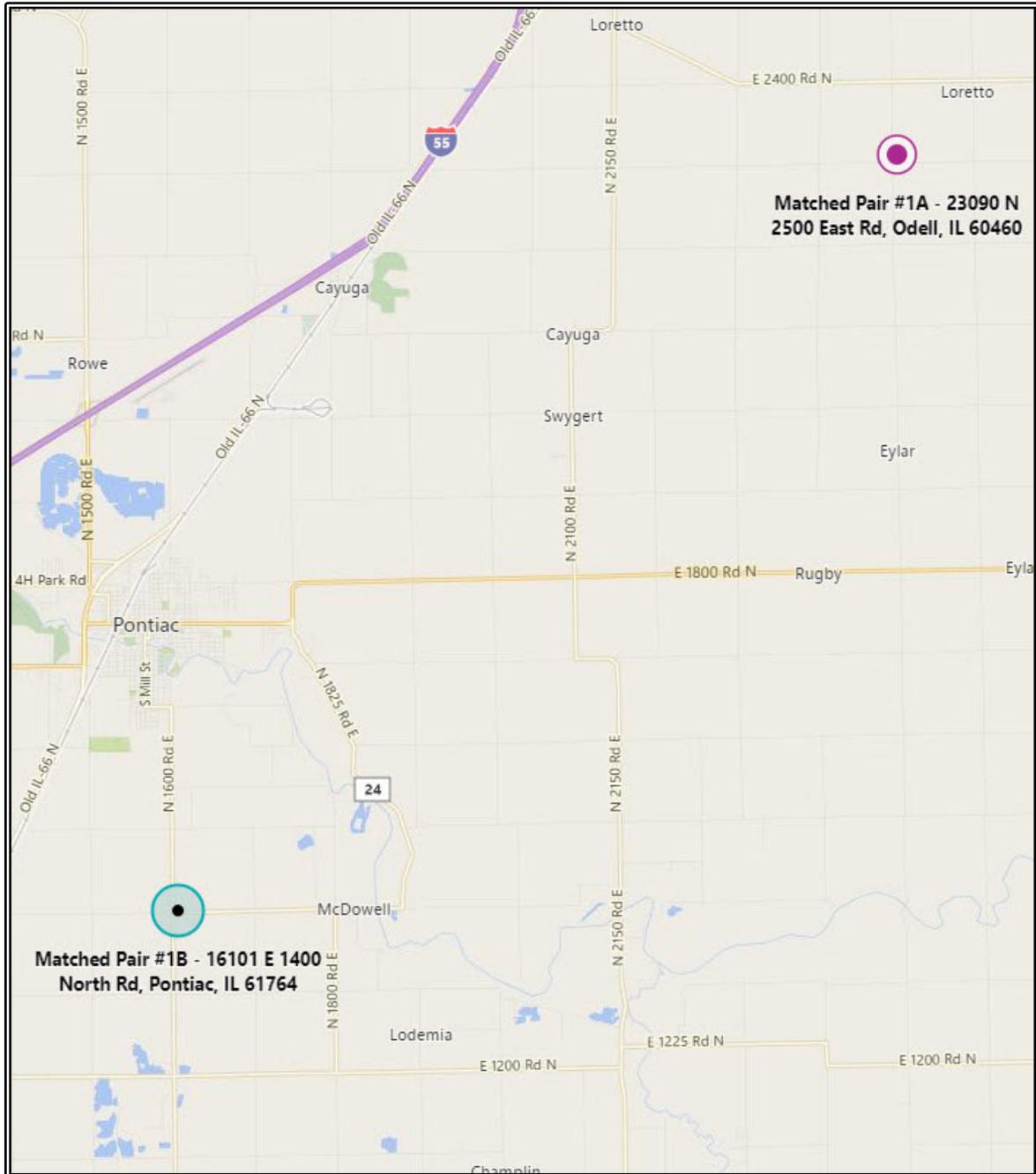
LEE COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP



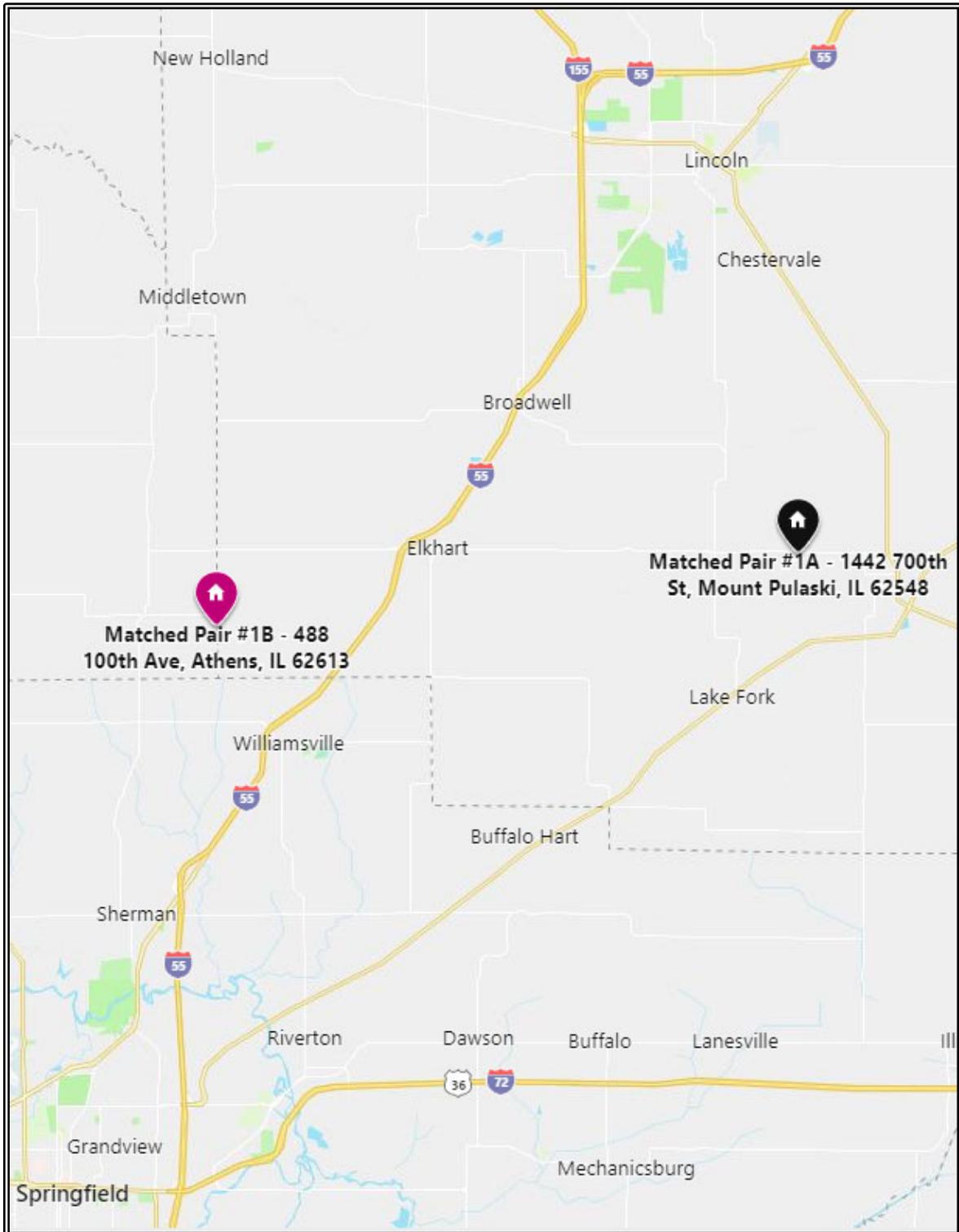
**MACON COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**



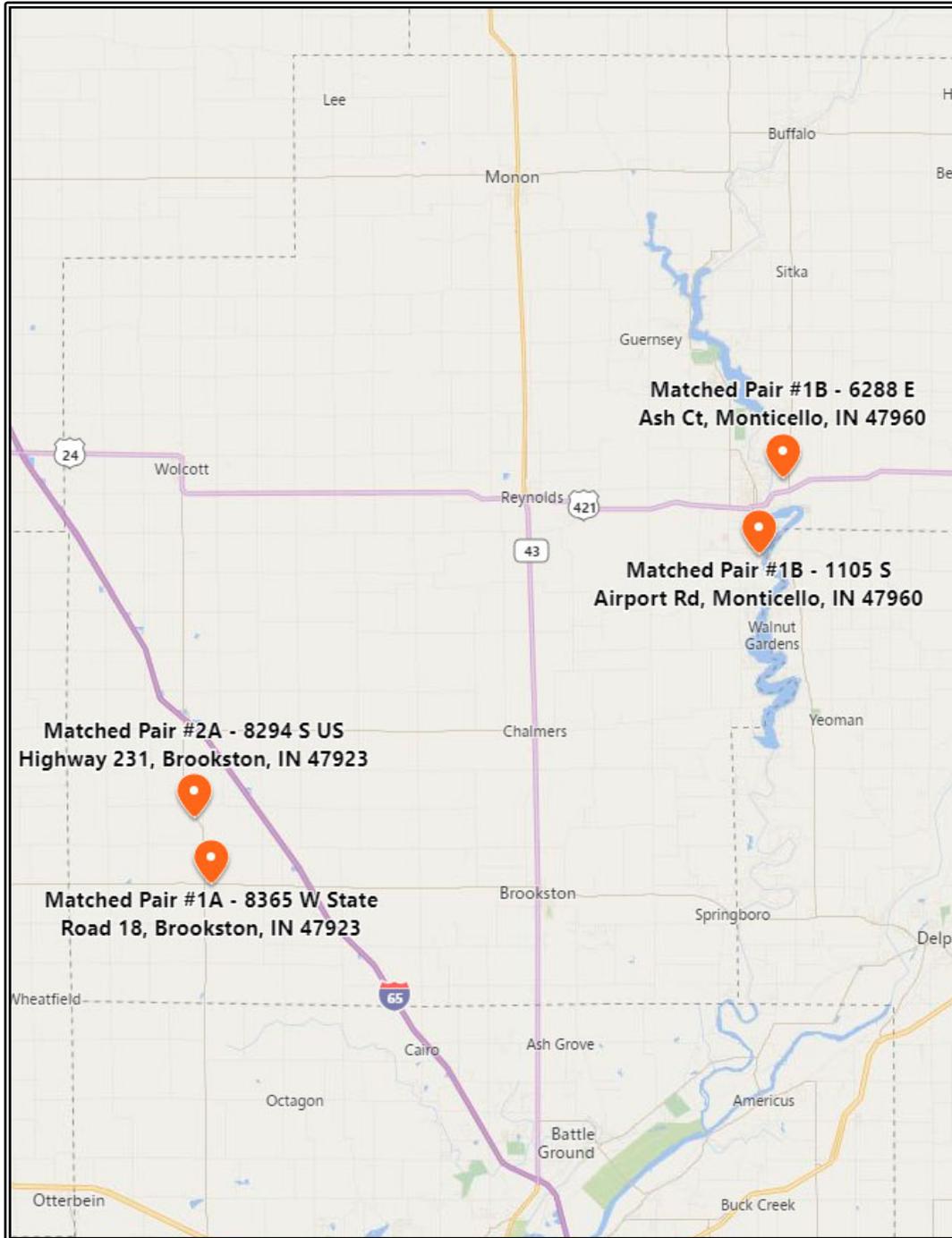
**MCLEAN COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**



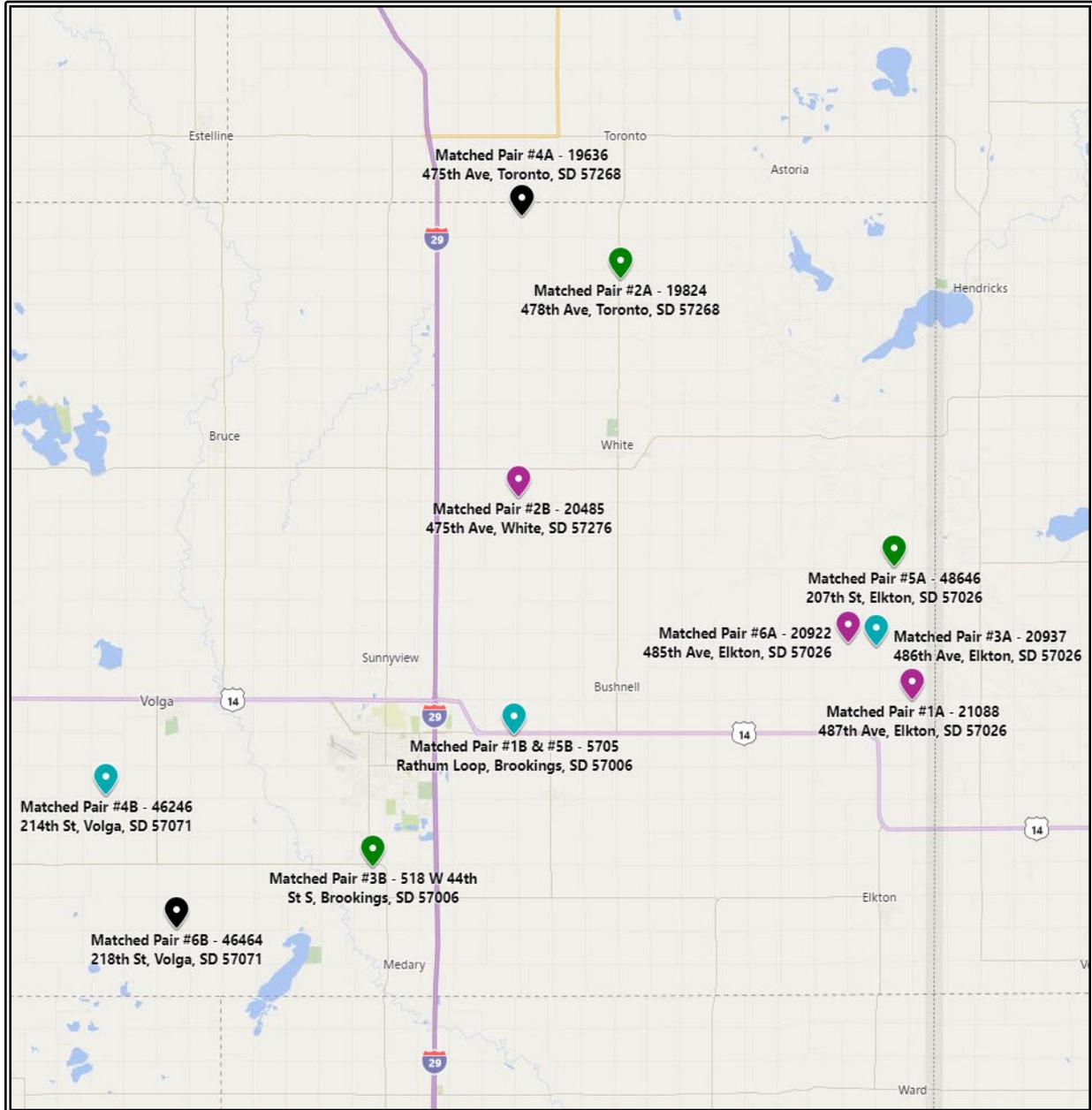
LIVINGSTON COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP



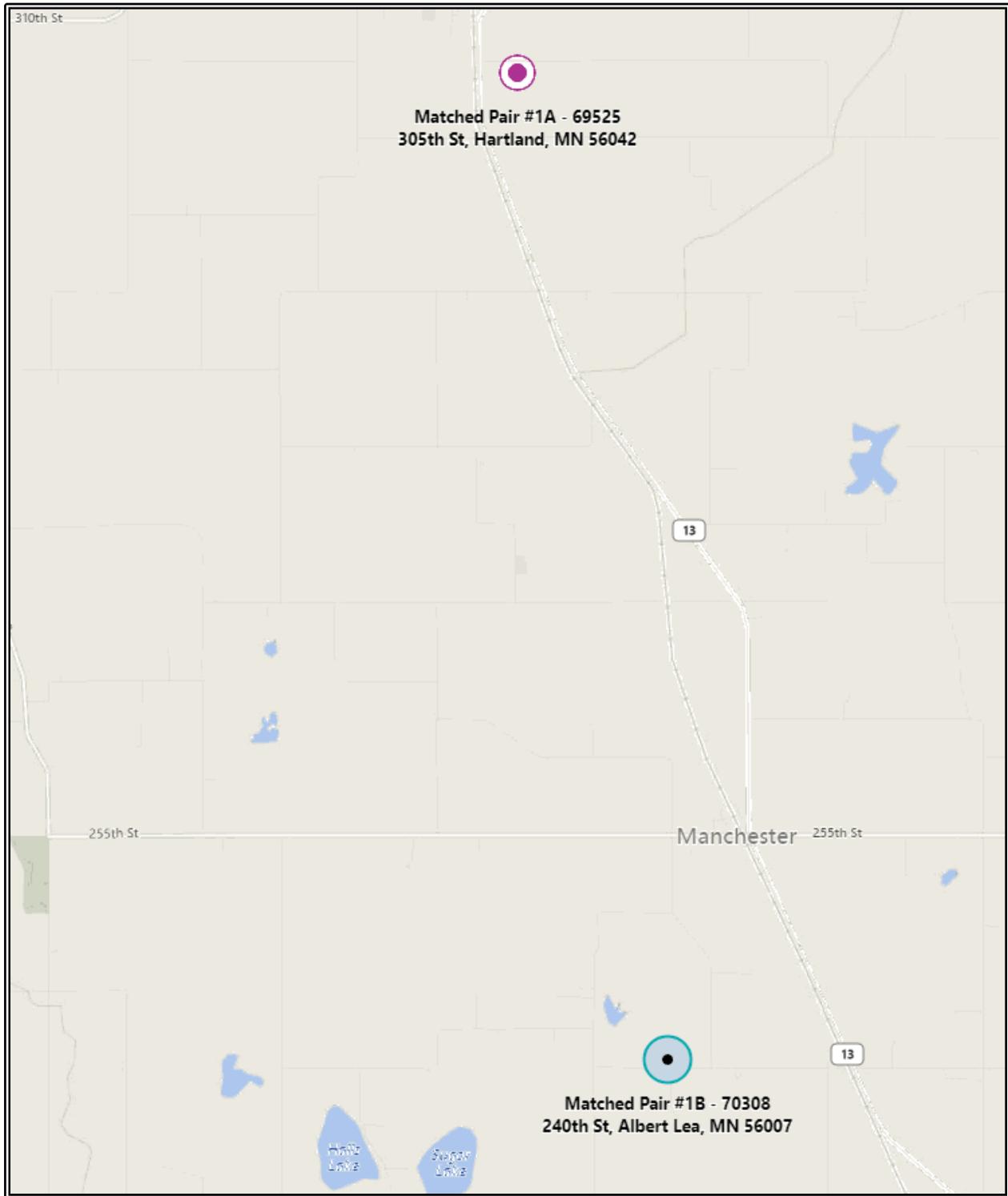
**LOGAN COUNTY, ILLINOIS MATCHED PAIR LOCATION MAP**



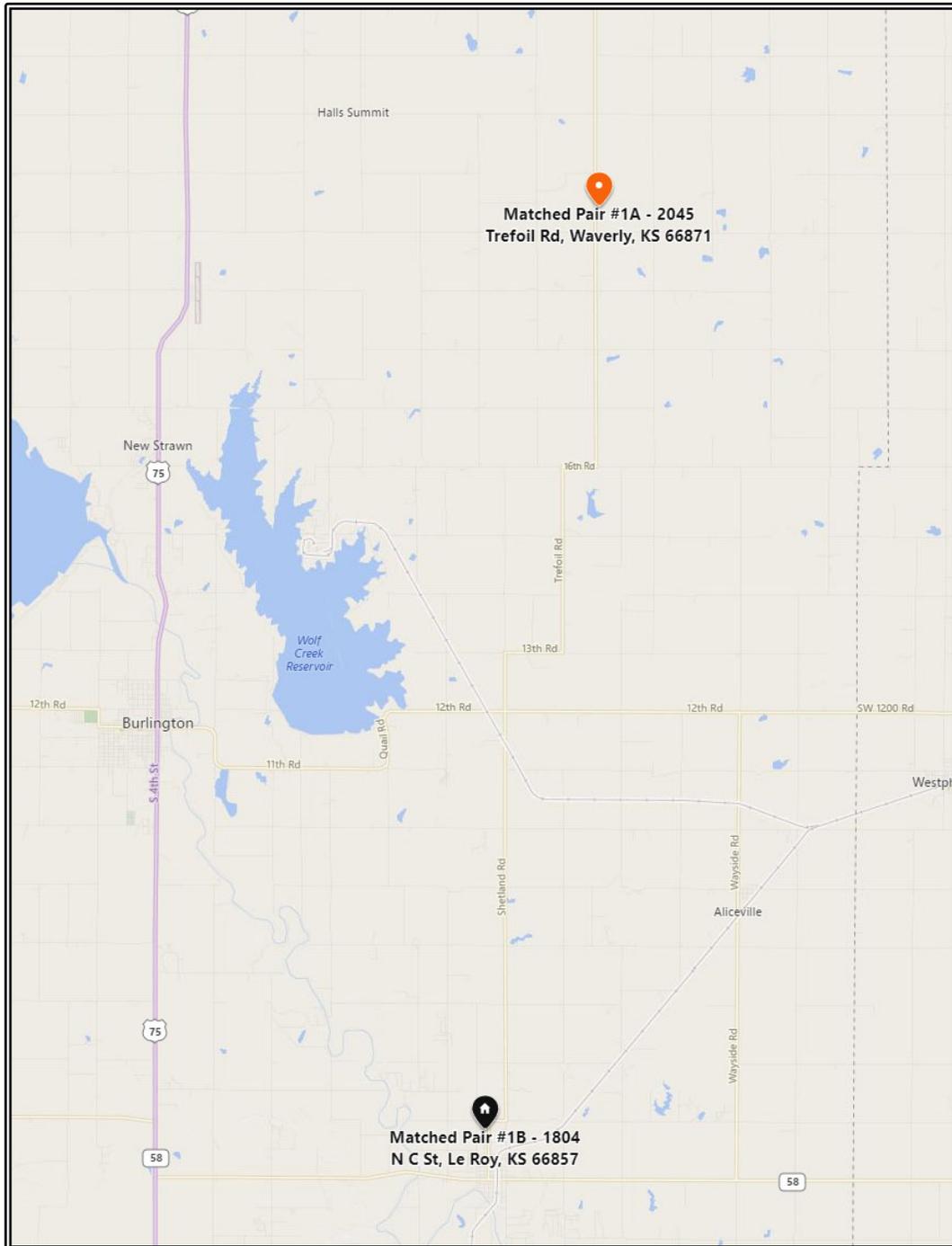
**WHITE COUNTY, INDIANA MATCHED PAIR LOCATION MAP**



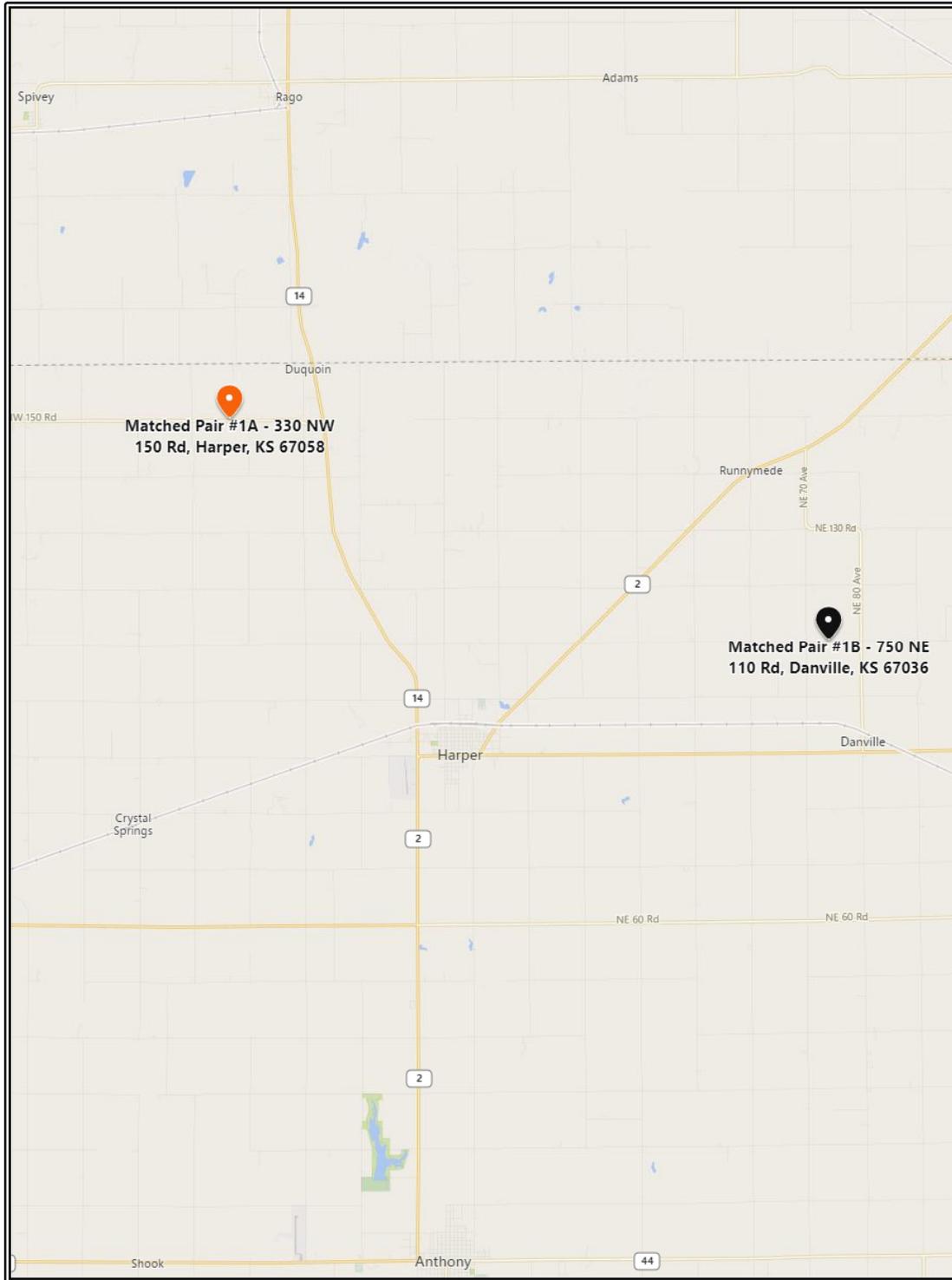
**BROOKINGS COUNTY, SOUTH DAKOTA MATCHED PAIR LOCATION MAP**



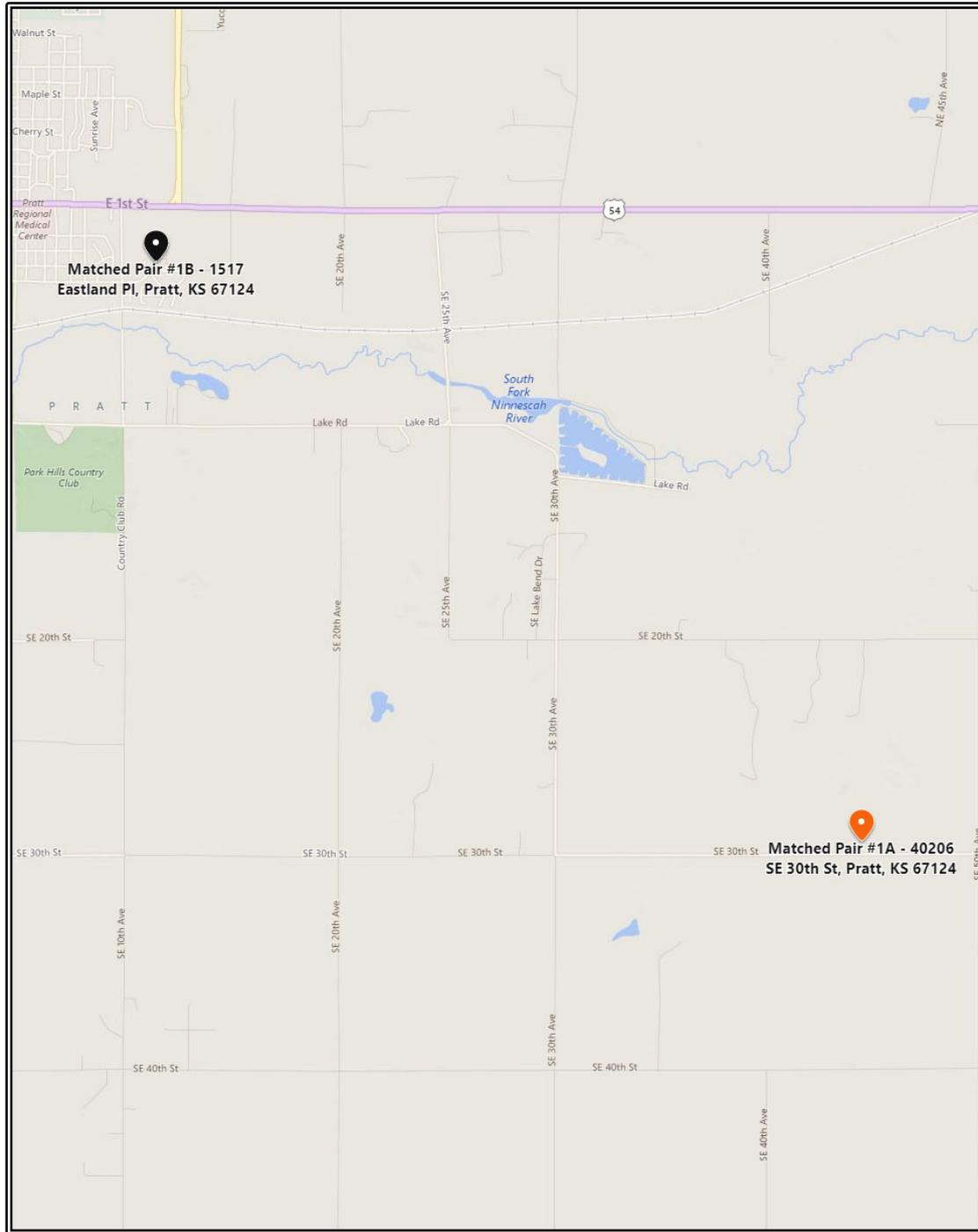
**FREEBORN COUNTY, MINNESOTA MATCHED PAIR LOCATION MAP**



**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



1364 370<sup>th</sup> Street



223 Nature Road



1400 120<sup>th</sup> Street

1541 390<sup>th</sup> Street





240 Q Avenue



298 Q Avenue



1644 120<sup>th</sup> Street

1830 120<sup>th</sup> Street



## **Iowa County Assessor Survey Analysis**

A survey of assessors in 26 counties in Iowa which wind farms 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 farm(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 between August 18, 2017 and September 19, 2017.

### **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 farm 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 farm-related concerns.
- ∴ In the past 18 months, the assessor's offices have not experienced a real estate tax appeal based upon wind farm-related concerns. As of the date of this report, there are more than 38 wind farms with 3,706 wind turbines within these counties. 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 farm.
- ∴ 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 farm(s) located within their respective county. The following is the list of County Supervisors of Assessments contacted:

Adair County	Tiffany Warrior (Deputy)
Adams County	Ben Mullen
Buena Vista County	Kim Carnine (Deputy)
Carroll County	Cindy Heuton
Cass County	Brenda Nelson
Cerro Gordo County	John Boedecker
Crawford County	Cindy Goslar (Deputy)
Dickinson County	Stephanie Sohn
Floyd County	Gary Vander Werf
Franklin County	Gwana Wirtjes
Grundy County	John Freese
Guthrie County	Nikki Carrick
Hamilton County	Kevin Bahrenfuss
Hancock County	Marianne Welsch
Howard County	Joe Kelly
Madison County	Joni Hopkins
Marshall County	Craig Madill
O'Brien County	Wesley Ray
Osceola County	Sharon Wolter
Pocahontas County	Sue Reigelsberger
Pottawattamie County	Penny Ravlin
Story County	Wayne Schwickerath
Tama County	Dixie Caloud (Deputy)
Webster County	Angie Vinson
Winnebago County	Susan McColloch
Worth County	Jody Jones

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

Buena Vista County's Deputy Supervisor of Assessments, Ms. Kim Carnine, stated that Buena Vista hired Mr. Terry Argotsinger, a now retired private appraiser, to appraise the county's wind farms roughly 10 years ago. He reported that in addition to the existence of little data to suggest an impact in Buena Vista, he had not found any evidence to support adjustments for proximity to turbines. The county had also participated in a market value study performed by Van Hoen, that confirmed that there was no evidence that value was affected by the proximity to wind farms

Marshall County Supervisor of Assessments Mr. Craig Madill stated that there was one major complaint due to proximity of the wind turbines. The resident was then approached by Exelon, the energy company that owns the Laurel wind farm, and offered an opportunity for a buy-out. The resident accepted graciously, and Exelon proceeded to put the residence on the market and it eventually sold. This was the first residential sale in Marshall that was tied to a wind farm, but it is also, to date, the county's largest residential sale at \$450,000. Mr. Madill also stated that the current owner of the residence is very happy with the property and its proximity to the turbines.

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

The assessors reported that there have been no tax appeal filings based upon wind farm issues.

Ms. Sharon Wolter, the Osceola supervisor of assessments, stated that one resident had complained, and was expecting a tax appeal for their home. The problem for the resident was that they had turbines on their own property and the complaint was aimed at the turbines on a nearby property. The tax appeal did not go through, but the resident was pacified in another capacity that was not related to the wind farms.

Mr. John Boedecker, the Cerro Gordo supervisor of assessments, made it a point to state that the Cerro Gordo wind farm was the second oldest wind farm in Iowa, having come online in 1999. The county has not had any complaints due to the turbines.

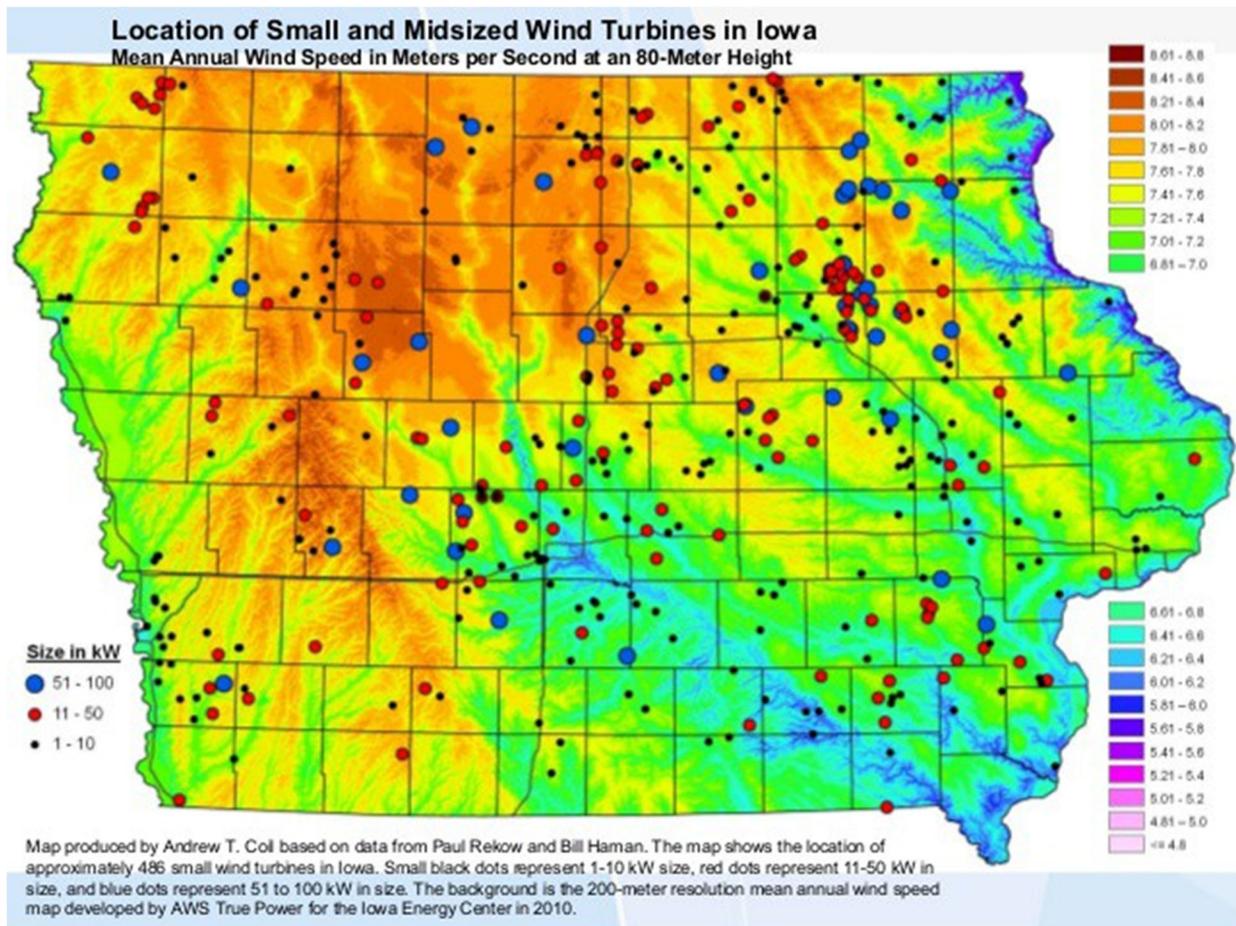
Consistently, the assessors reported that whatever initial concern there may have been regarding property values during the planning and approval stages of the various wind farms dissipated once the wind farm was constructed. Repeatedly, the assessors would state that the revenue that would come into 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 footprint.

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





**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 (9/21)  
Indiana Certified General Real Estate Appraiser, License Number CG41600008 (6/20)  
Wisconsin Certified General Real Estate Appraiser, License Number 1874-10 (12/21)  
Minnesota Certified General Real Estate Appraiser, License Number 40330656 (8/20)  
Pennsylvania Certified General Real Estate Appraiser, License Number GA004181 (6/21)  
Iowa Certified General Real Estate Appraiser, License Number CG03468 (6/21)  
South Dakota Certified General Real Estate Appraiser, License Number 1467CG (9/20)  
Kansas Certified General Real Estate Appraiser, License Number 20 TP.86 (4/20)  
Texas Certified General Real Estate Appraiser, License Number 1380817 (8/20)  
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 million sq. ft. on 47 acres, Elk Grove Village  
Former communications facility, 1,400,000 million 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

### **Energy Projects**

Oakwood Hills Energy Center, McHenry County, Illinois	Republic Wind, Seneca and Sandusky County, Ohio
Walnut Ridge Wind Farm, Bureau County, Illinois	Orangeville Wind Farm, Wyoming County, New York
Radford's Run Wind Farm, Macon County, Illinois	Alle-Catt Wind Farm, Allegany, Cattaraugus, and Wyoming County, New York
Twin Groves Wind Farm, McLean County, Illinois	Deuel Harvest Wind Farm, Deuel County, South Dakota
Otter Creek Wind Farm, LaSalle County, Illinois	Dakota Range Wind Project I-III, Codrington County, Grant County, & Roberts County, South Dakota
Pleasant Ridge Wind Farm, Livingston County, Illinois	Crocker Wind Farm, Clark County, South Dakota
Alta Farms Wind Project II, DeWitt County, Illinois	Prevailing Wind Park, Bon Homme County, Charles Mix County, & Hutchinson County, South Dakota
Harvest Ridge Wind Farm, Douglas County, Illinois	Brookhaven, South Dakota, solar energy production facility
Midland Wind Farm, Henry County, Illinois	Badger Hollow Solar Farm, Iowa County, Wisconsin
McLean County Wind Farm, McLean County, Illinois	Dorchester County Solar Farm, Dorchester County, Maryland
Ida Grove II Wind Farm, Ida County, Iowa	Lone Oak Solar Farm, Madison County, Indiana
Tippecanoe County Wind Farm, Tippecanoe County, Indiana	Lackawanna Power Plant, Lackawanna County, Pennsylvania
Roaming Bison Wind Farm, Montgomery County, Indiana	Commonwealth Edison, high tension lines
Neosho Ridge Wind Farm, Neosho County, Kansas	Solar Projects of the Western Regions of the United States of America, Southwest, Northwest, Southern Plain, and Northern Plains regions of the United States
Jayhawk Wind, Bourbon and Crawford County, Kansas	
Lincoln Land Wind, Morgan County, Illinois	
Bennington Wind Farm, Marshall County, Illinois	
Seneca Wind, Seneca County, Ohio	

### **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

### 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 & Ciquino, P.C. Robbins, Salomon & Patt, Ltd. Rosenfeld Hafron Shapiro & Farmer Rosenthal, Murphey, Coblentz & 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
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#### 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
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#### 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.
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**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 Certified

### CONSTRUCTION

Professional in the construction industry for 10 years

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

### MaROUS & COMPANY

#### Wind Projects

- Illinois
  - Alta Farms Wind Project II, *Dewitt County*
  - Bennington Wind Project, *Marshall County*
  - Harvest Ridge Wind Farm, *Douglas County*
  - Lincoln Land Wind Farm, *Morgan County*
  - Midland Wind Farm, *Henry County*
  - McLean County Wind Farm, *McLean County*
  - Radford's Run Wind Farm, *Macon County*
- Indiana
  - Tippecanoe County Wind Farm, *Tippecanoe County*
  - Roaming Bison Wind Farm, *Montgomery County*
- Iowa
  - Ida Grove II Wind Farm, *Ida County*
- Kansas
  - Neosho Ridge Wind Farm, *Neosho County*
- New York
  - 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*
  - Prevailing Wind Park, *Bon Homme County, Charles Mix County, & Hutchinson County*
  - Sweet Land Wind Farm, *Hand County*
  - Triple H Wind Farm, *Hyde County*
  - Tatanka Wind Project, *Deuel County*

#### Solar Projects

- Illinois
  - Hickory Point Solar Energy Center, *Christian County*
- Indiana
  - Lone Oak Solar Farm, *Madison County*
- Maryland
  - Dorchester County Solar Farm, *Dorchester County*
- Wisconsin
  - Badger Hollow Solar Farm, *Iowa County*
- Western Regions of the United States of America
  - Southwest Region – Arizona, Colorado, Nevada, New Mexico, and Utah
  - Northwest Region – Idaho and Oregon
  - Southern Great Plains Region – Texas
  - Northern Great Plains Region – General Research

#### Appraisal Assistance

- Vacant Land
- Auto Dealerships
- Religious Facilities
- Residential
- Commercial
- Retail