MaROUS & COMPANY

April 6, 2018

Apex Clean Energy, Inc.
8665 Hudson Boulevard North - Suite 110
Lake Elmo, Minnesota 55402

Attention: Mr. Mark Mauersberger, Senior Development Manager

Subject: Market Impact Analysis
Proposed Dakota Range Wind Project
Codington County and Grant County, South Dakota

Dear Mr. Mauersberger,

In accordance with your request, the proposal to develop a wind farm in Codington County and Grant County, South Dakota, 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 a number of different proposed developments over the last 30 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, land-fills, and quarries. We also have analyzed the impact of high-tension electric wires on adjacent residential uses. Energy-related projects include a number of proposed natural gas-fired electric plants in various locations, and the Grand Ridge V and Otter Creek wind farms, in LaSalle County, the Pleasant Ridge Wind Farm, in Livingston County, the Walnut Ridge Wind Farm, in Bureau County, the McLean County Wind Farm, in McLean County, the Twin Forks Wind Farm, in Macon County, all in Illinois; the Freeborn County Wind Farm, in Freeborn County, Minnesota; the Ida II Wind Farm, in Ida County, the Palo Alto County Wind Farm, in Palo Alto County, both in Iowa; the Orangeville Wind Farm, in Wyoming County, New York; the Dorchester County Solar Farms, in Dorchester County, Maryland; and the Badger Hollow Solar Farm, in Iowa County, Wisconsin. In addition, we are in the process of completing market impact studies for multiple wind projects in South Dakota.

In addition to this experience, MaRous & Company has appraised a variety of properties in the large market area of the proposed project in South Dakota, in North Dakota, in Iowa, and in Minnesota in the last 3 years, including: industrial facilities, food processing plants, and warehouse and distribution facilities ranging in size from 50,000 to 1,000,000 square feet, and more than 20 major retail facilities.

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## Purpose and Intended Use of the Study

The purpose of this appraisal assignment is to analyze the potential impact, if any, on the value of the surrounding rural residential and agricultural properties due to the development of the proposed wind farm. Specifically, this study is designed to address the question of whether the development of the proposed wind farm will have 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 South Dakota, as well as 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:

- The proposed use will meet or exceed all the required development and operating standards;
- Controls, such as setbacks and noise limits, are in place to insure on-going compliance;
- There are significant financial benefits to the local economy and to the local taxing bodies from the development of the proposed 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, which includes residential sales within three to 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 finding that the agricultural land values are negatively impacted by the proximity to wind turbines;
- Studies indicate that wind turbine leases add value to participant land owner's agricultural land;
- A survey of County Assessors in six South Dakota counties in which wind farms are located concluded 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 eight Minnesota counties in which wind farms are located concluded 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 26 Iowa counties in which wind farms are located concluded 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 survey of County Assessors in 18 Illinois counties in which wind farms are located concluded 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.

## 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; and
> - 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.[1]

## Scope of Work and Reporting Process

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

- Review of the Codington County Zoning Ordinance Chapter 5.22 and other public documents;
- Review of the Grant County Zoning Ordinance 2004-1 Chapter 11-2 and other public documents;

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1 *(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)*

- Review of the preliminary information for the proposed wind farm from Apex Clean Energy, Inc.,;
- Review of the *Application to the South Dakota Public Utilities Commission for a Facility Permit* for the proposed wind farm from Dakota Range I, LLC and Dakota Range II, LLC, including associated Appendices ;
- Review of the demographics in the area of the proposed wind farm, based on 2017 census data;
- Data on the general market area, or the geographical area where people buy goods or services, of the proposed wind farm, and on the other areas in South Dakota and/or Codington and Grant counties in which existing wind farms are located;
- Data on the market for single-family houses in the immediate area of the proposed wind farm and from other areas in the county from public sources, from the Codington County and Grant County public records, and public records from eight other counties in South Dakota[2];
- Local real estate professionals were interviewed 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 and Joseph M. MaRous on February 18-19, 2018. As well as inspections of nearby Deuel County by Michael S. MaRous on October 4-5, 2017.

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 and agricultural properties of the proposed 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 Codington County, Grant County, and in other South Dakota counties in which wind farms are located;
- Market trends for both residential and agricultural land up to the past 5 years;
- The economic impact on the larger community by the approval of the conditional use as proposed; and
- The impact on the value of the surrounding residential and agricultural properties by the approval of the proposed wind farm.

2 Deuel County, Day County, Clark County, Aurora County, Brookings County, Charles Mix County, Hyde County, and Jerauld County

## Description of Area and Proposed Development

### Area Analysis

Codington County and Grant County are located in the Northeast region of the state of South Dakota. The 2017 population for Codington County was estimated to be 28,572 persons, up from 27,227 in 2010. This population is situated in approximately 12,119 households as of 2017.[3] The median household income was estimated to be $50,501. Of the total approximately 13,145 housing units in the county, 1,026 or approximately 7.8 percent are vacant. The median single-family house value was $164,097.

The 2017 population for Grant County was estimated to be 7,237 persons, down from 7,356 in 2010. This population is situated in approximately 3,031 households as of 2017. The median household income was estimated to be $52,346. Of the total approximately 3,526 housing units in the county, 495 or approximately 14 percent are vacant. The median single-family house value was $126,829.

The total population directly within the footprint of the project is reported to be fewer than 1,000 persons, according to Apex's on-site supervisor, David Lau.

The unemployment rate in Codington County as of 2017 was 1.3 percent, and the median weekly household wage in 2017 was $971. The unemployment rate in Grant County as of 2017 was 1.9 percent, and the median weekly household wage in 2017 was $1,006.

The largest city in the northeast corner of the state is Watertown, with 22,172 persons, and it is approximately 15 miles south of the project's southern border. Watertown is also the Codington County Seat. Milbank is the largest city in Grant County, with 3,203 persons, and it is approximately 17 miles east of the project's eastern border. Milbank is also the Grant County Seat.

The proposed wind farm is located on the border of Codington County and Grant County, and will encompass the townships; Leola and Germantown, in Codington County; and, Lura and Mazeppa, in Grant County. A copy of a map of the proposed footprint of the wind farm is located in the addenda to this report.

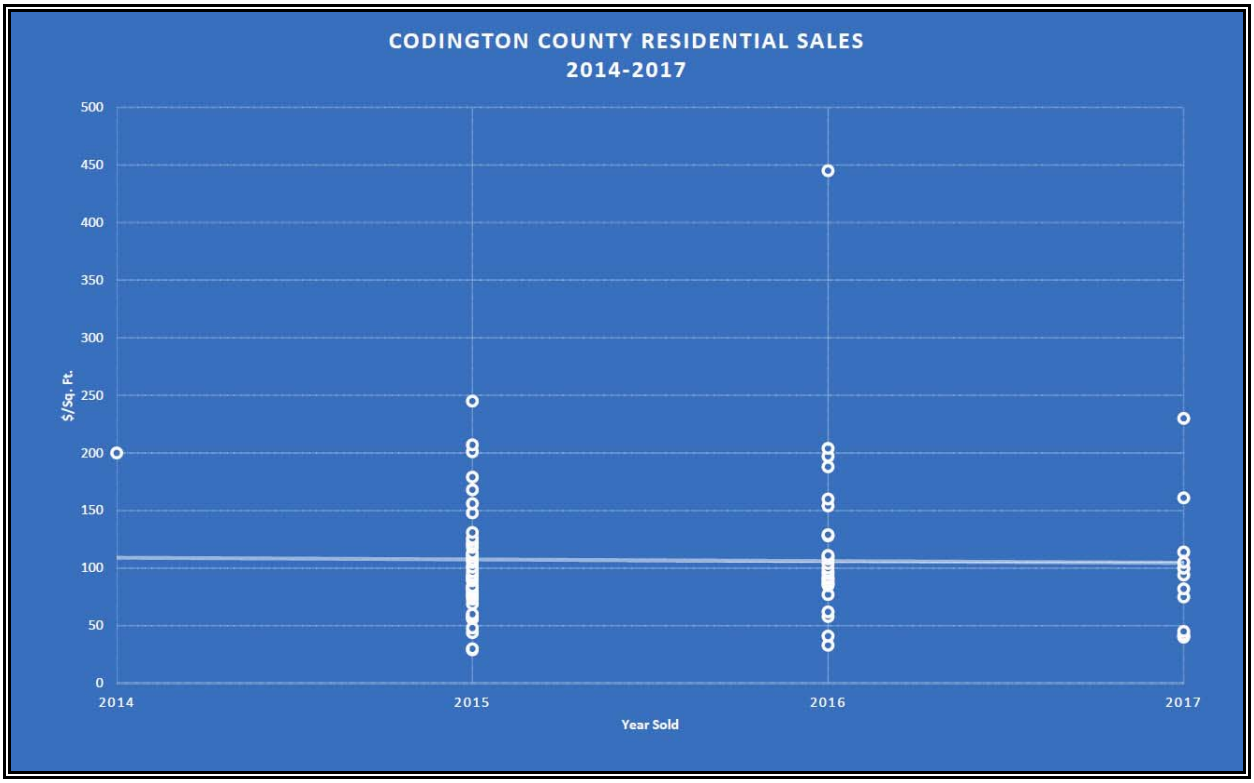
3 The demographic data included in this section of the report are taken from Site-to-do-Business, https://www.stdb.com. Unless otherwise indicated, the data is from 2017.

Like the majority of South Dakota, 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 recent sales of these types of residences in the general area of the proposed Dakota Range Wind Project. A map illustrating the location of each of these sales is included in the addenda to this market impact study.

**RECENT SINGLE-FAMILY RESIDENTIAL SALES SUMMARY IN THE AREA OF PROPOSED DAKOTA RANGE WIND PROJECT**

| 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 | 101 2nd Ave.<br>Waverly, South Dakota | $66,800 | 8/16 | 0.38 | 1900 | 2,016 | $33.13 |
| 2 | 46274 154th St.<br>South Shore, South Dakota | $135,000 | 9/15 | 5.28 | 1953 | 1,516 | $89.05 |
| 3 | 45624 165th St.<br>Watertown, South Dakota | $142,500 | 12/17 | 7.57 | N/A | 3,200 | $44.53 |
| 4 | 14419 468th Ave.<br>Twin Brooks, South Dakota | $145,000 | 9/15 | 5.25 | 1974 | 2,316 | $62.61 |
| 5 | 47724 144th St.<br>Milbank, South Dakota | $349,900 | 8/16 | 10.00 | 2002 | 3,224 | $108.53 |

A sample size of 90 residential sales throughout Codington County from year 2014 to 2017 also was compiled and was analyzed. Codington County was chosen to represent the market in this overall analysis due to the county's much larger population compared to that of Grant County. The sales were compiled from public sources and were broken down by price per square foot and year sold.




Noting the trend line, indicated in the data in the charts above, the overall residential market has been declining slowly throughout the past 4 years

## Proposed Project

The proposed project currently plans to generate approximately 300 megawatts from up to 72 wind turbines. Construction will begin in 2019 and is expected to be online in 2021. The turbines will Vestas V136-4.2MW that have a capacity of 4.2 megawatts each, with a total capacity of 302.4 megawatts, and will be approximately 492 feet to the top of the blade tip. The proposed wind farm is split between the border of Codington County and Grant County, South Dakota, covering approximately 44,500 acres of land. The proposed project footprint is described in a map in the addenda to this market study. All turbines will be new, and none will be experimental or prototype equipment. The turbine specifications are described in the following table.

| Manufacturer | Model | Diameter | Height | Capacity |
|---|---|---|---|---|
| Vestas | V136-4.2MW | 136 m (466') | 150 m (492') | 4.2 MW |

The total project cost is estimated to be $380,000,000 with a possible fluctuation of +/- 20 percent. Ancillary construction includes 16-foot to 36-foot wide gravel-covered access roads, a wind electrical collection system with 34.5 kV lines trenched 30 inches below ground, a collector substation that will increase voltage from 34.5 kV to 345 kV, an interconnection switching station adjacent to the Big Stone South-to-Ellendale 345 kV line, five permanent meteorological towers, a “SCADA” or Supervisory Control and Data Acquisition system, and an operations and maintenance building. Agreements with Codington and Grant counties and with townships impacted will identify roads to be used, and will require repairing of any damage caused by the project. The Codington and Grant counties’ setback standards of 110 percent of tip height or 1,000 feet, from nonparticipating residences and public roads, and 500 feet, from participating residences, will be met with the closest turbine to an residence at greater than 1,300 feet away. Dakota Range Wind Project has also agreed to a voluntary setback of 2 miles from the shoreline of Punished Woman’s Lake, which will be met with the closest turbine to be located approximately 2.75 miles away from the nearest residence. Both Codington County and Grant County also require the noise level at any residence, business, or government building to not exceed 50 dBA, at the property line for Codington County and at the specific structure for Grant County. The project will also implement a voluntary maximum annual shadow flicker level for nonparticipants of 30 hours per year or less. Per information reviewed these requirements will be met by the project.

## Project Benefits

In accordance with the State of South Dakota's property assessment requirements for wind turbines, local real estate tax benefits for the entire Dakota Range Wind Project are estimated to be greater than $1,000,000 per year if the full capacity of the project is constructed. The estimated breakdown of local tax allocation is described in the following table.

| | Yearly |
|---|---|
| School District Tax Revenue | $505,000 |
| Township Tax Revenue | $151,000 |
| County Tax Revenue | $360,000 |
| Total Local Tax | $1,016,000 |

Annual payments to participating landowners and good-neighbor agreements will add significantly to the local economy. Prior to construction, participating landowners will have received more than $500,000 in development payments. The project has acquired approximately 45 participating landowners within the project boundary of Codington County. As seen in the table above, the local community and school districts will receive sizable amounts of funding from the project taxes. Additionally, the project will generate approximately 300 temporary construction jobs and is expected to create approximately 10 permanent jobs when fully operational.

Further direct and indirect impacts from the construction of the project, including permits and construction jobs, as well as "induced impacts" from the increase in household spending also are anticipated.

## 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 analyzing the impact on value of residential properties proximate to a wind farm in Brookings County, South Dakota, as well as matched pairs developed in counties with similar demographics, land use, and economic characteristics, just east of this area in Minnesota, and in similarly rural counties in Iowa and Illinois;
- The value of agricultural land in Codington and Grant counties and in other counties with existing wind farms;
- Interviews of local real estate professionals;
- The results of a survey of assessors in South Dakota, Iowa, Minnesota, and Illinois with existing wind farms in their respective jurisdictions; and
- The results of several academic and peer-reviewed studies of 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.[4] 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 or, at most times, do not sell at full value. The research throughout Codington County and Grant County indicated that there were no sales proximate to wind turbines in either county. The only sale found in South Dakota that is located in the general market area of a wind farm, based on data research from the entire state, was a residence within four miles to the Buffalo Ridge Wind Farms in nearby Brookings County. This sale provided some basis for a comparison analysis due to the similar demographics and land use of the surrounding area. However, the sale is not close enough to a wind turbine to serve as a proximate sale. Thus, while a paired sales analysis is

4 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. The ideal is to review a sale and resale of a property in proximity to a selected characteristic, to compare it to a sale and resale of a similar property without such proximity, and to then analyze whether the proximity to the selected characteristic influenced the change in value. However, in rural areas it usually is not possible to find data for this type of "pure pair" analysis.

provided, it is not considered a proximate and not proximate matched pair for purposes of determining potential impact on value due to proximity to a wind farm.

Due to the lack of sales data proximate to wind turbines in South Dakota, data from nearby states that have a stronger presence of wind turbines, similar demographics, similar economics, and similar agricultural characteristics, have been analyzed.

Details of the sales included in this analysis are retained in my 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.

### Brookings County No. 1 - Residences Not Proximate to Wind Turbines

The Buffalo Ridge Wind Farms are located in Brookings County in the East-Central region of South Dakota and consists of 129 turbines that began commercial operations in 2009. Phases I and II are both 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 19937 473rd Avenue, White, South Dakota, sold in May 2015 for $169,500. The sale previously sold in July 2014 for $121,640. The nearest turbine is approximately 4 miles to the east of this property.

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 within 10 miles. The salient details of these two properties are summarized in the table below.

The following aerial map illustrates the relationship of the 473rd Avenue property to the closest wind turbines.

**BROOKINGS COUNTY NO. 1**

| | 1A - Within 4 Miles to a Wind Turbine | 1B - Over 10 Miles From a Wind Turbine |
|---|---|---|
| Address | 19937 473rd Ave.<br>White, SD 57276 | 5705 Rathum Loop<br>Brookings, SD 57006 |
| Distance from Turbine | 4 Miles (nearest) | 13 Miles |
| Sale Date | May 20, 2015 | June 5, 2015 |
| Sale Price | $169,500 | $142,000 |
| Sale Price/Sq. Ft. (A.G.) | $61.68 | $68.33 |
| Year Built | 1908 | 1973 |
| Building Size | 2,748 sq. ft. | 2,078 sq. ft. |
| Lot Size | 14.8 acres | 0.49 acre |
| Style | Two-story; frame (vinyl)<br>5 bdrms., 2.0 ba. | One-story; frame (vinyl)<br>9 rms., 3 bdrms. |
| Basement | Full, unfinished | Crawlspace |
| Utilities | Central air;<br>Electric & forced-air heat;<br>Well & septic | Central air;<br>Forced-air heat;<br>Well & septic |
| Other | Large detached barn;<br>Shed, utility buildings | 1-car attached garage<br>3-car detached garage<br>Patio, deck, utility buildings |

19937 473rd Avenue

5705 Rathum Loop

Although the 473rd Avenue property is a two-story farmstead, and the Rathum Loop property is technically a ranch-style house, both properties have similar amenities, and are situated in similar exterior surroundings. An upward adjustment for the superior building size of Rathum Loop is required. In the case of the 473rd Avenue property, there is a large detached barn, a shed, and utility buildings. The property is also in a very rural area of the county. In the case of the Rathum Loop property, there are two garages and a multiple utility buildings. The Rathum Loop building is of relatively newer construction, yet is still approximately 50 years old, compared to the 473rd Avenue property that is closer to 100 years old; both properties are considered to be in normal condition by the Brookings County Assessor. An upward adjustment is made for the basement area of Rathum Loop. The 473rd Avenue 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 pasture land, which mitigates the size differential to some degree.

**ADJUSTMENT GRID**

| SALE NO. | LOCATION | SALE DATE | YEAR BUILT | BUILDING SIZE | LOT SIZE | STYLE | BASEMENT | UTILITIES | OUT-BUILDINGS |
|---|---|---|---|---|---|---|---|---|---|
| 1B | 5705 Rathum Loop<br>Brookings, SD 57006 | ○ | - | + | + | + | + | ○ | ○ |

\+ 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 adjustments noted in the above table for newer construction, yet smaller size of the Rathum Loop property, the lower price of the 473rd property is justified by the factors noted in the above description.

## Matched Pair Analysis- Minnesota, Iowa, and Illinois Counties

In addition to analyzing sales in the subject project area, I have researched sales in proximity to several existing wind farms in rural areas of Minnesota, Iowa, and Illinois, to determine whether residential property values in these areas were impacted by their locations in relation to wind farms. The following are the results of the most recent of these studies.

As with the Brookings County research, 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.

## MINNESOTA MATCHED PAIR STUDY

### 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. A house 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. Although it is not located near wind turbines, several are visible from the house, but 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.

**FREEBORN COUNTY MATCHED PAIR NO. 1**

| | 1A - Proximate to a Wind Turbine | 1B - Not Proximate to a Wind Turbine |
|---|---|---|
| Address | 69525 305th St.<br>Hartland, MN 56042 | 70308 240th St.<br>Albert Lea, MN 56007 |
| Ft. from Turbine | 2,375 (nearest) | 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 | 1,558 sq. ft. | 1,618 sq. ft. |
| Lot Size | 5.51 acres | 4.01 acres |
| Style | Farm house; frame (vinyl)<br>3 or 4 bdrms., 2.0 ba. | Farm house; frame (vinyl)<br>3 bdrms., 2.0 ba. |
| Basement | Full, unfinished | Partial, unfinished |
| Utilities | No central air; propane heat;<br>Well & septic | Central air; natural gas heat;<br>Well & septic |
| Other | 2-car detached garage<br>Deck, outbuildings | 2.5-car detached garage<br>Deck, outbuildings |

* This is the sale price reported by the Assessor.

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 240th Street requiring a downward adjustment. An upward adjustment for the full basement of 305th Street compared to the partial basement of 240th Street.

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

**ADJUSTMENT GRID**

| Sale No. | Location | Sale Date | Year Built | Building Size | Lot Size | Style | Basement | Utilities | Out-Buildings |
|---|---|---|---|---|---|---|---|---|---|
| 1B | 70308 240th St.<br>Albert Lea, MN 56007 | ○ | - | ○ | ○ | ○ | + | - | ○ |

+ 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.

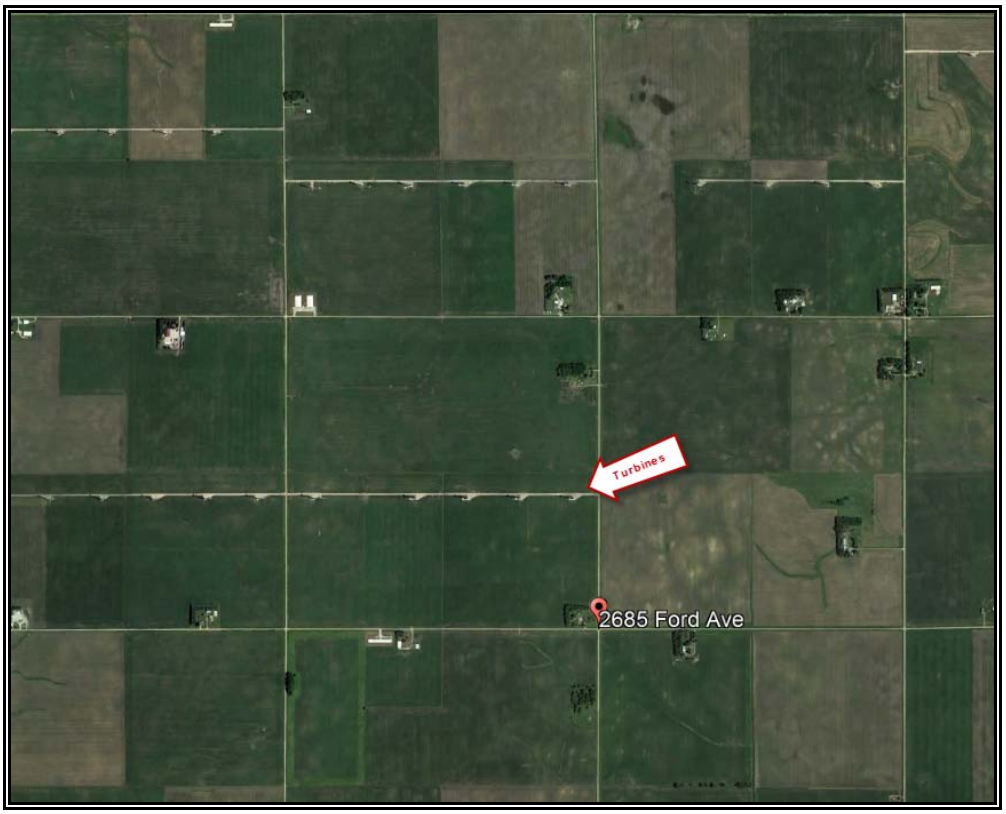
## IOWA MATCHED PAIR STUDY

Hancock County is located in northern Iowa and is a largely rural county, primarily agricultural in nature. The county has two areas of wind turbines, the Hancock County wind farm in the southeast portion of Hancock County and the Crystal Lake Energy Center in the northwest portion of Hancock County.

**Hancock County Matched Pair No. 1**

Crystal Lake I Wind Farm is located in Hancock County in north central Iowa and consists of 100 turbines that began commercial operations in 2008. Phases II and III were located primarily in Winnebago County; which added another 80 and 44 turbines, respectively, and began operations in approximately 2009. A property located at 2685 Ford Avenue, Britt, sold in May 2016, for $155,400. The sale previously sold in October 2012 for $150,000. The nearest turbine is approximately 2,000 feet to the north and west of this property.

The following aerial map illustrates the relationship of the Ford Avenue property to the closest wind turbines.




This property is compared with a similar property located at 2855 Taft Avenue that sold in December 2014, and is not located proximate to any wind turbines. Market conditions between December 2014 and May 2016 are considered to have been stable in this area of Iowa. The salient details of these two properties are summarized in the table below.

**HANCOCK COUNTY MATCHED PAIR NO. 1**

| | 1A - Proximate to a Wind Turbine | 1B - Not Proximate to a Wind Turbine |
|---|---|---|
| Address | 2685 Ford Ave.<br>Britt, IA 50423 | 2855 Taft Ave.<br>Garner, IA 50438 |
| Ft. from Turbine | 2,020 (nearest) | NA |
| Sale Date | May 20, 2016 | December 22, 2014 |
| Sale Price | $155,400 | $190,000 |
| Sale Price/Sq. Ft. (A.G.) | $81.62 | $94.25 |
| Year Built | 1959 | 1975 |
| Building Size | 1,904 sq. ft. | 2,016 sq. ft. |
| Lot Size | 2.08 acres | 1.22 acres. |
| Style | Ranch; frame (metal siding)<br>3 bdrms., 2.0 ba. | Split level; frame<br>3 bdrms., 2.0 ba. |
| Basement | Full, finished | None; slab |
| Utilities | Central air;<br>Well & septic | In-wall air; Electric heat<br>Well & septic |
| Other | 2-car attached garage;<br>1-car detached garage;<br>Patio, porch, shed | 2.5-car attached garage;<br>Patio, deck, utility buildings |

2685 Ford Avenue

2855 Taft Avenue

Although the Ford Avenue property technically is a ranch-style house, and the Taft Avenue property is a split-level-style house, both properties have lower levels that comprise a family room and an additional room. An upward adjustment for the superior market condition of Ford Avenue is made. In the case of the Ford Avenue property, the additional lower-level room is a kitchen, and the basement square footage is not included in the building size and an upward adjustment is made for this feature. In the case of the Taft Avenue property, the lower level is not below grade, and the area, which includes a family room and a bedroom, is included in the square footage. The Taft Avenue building is of newer construction and a downward adjustment is made; however, the Ford Avenue property has been adequately maintained; both properties are considered to be in normal condition by the Hancock County Assessor. An upward adjustment is made for the central air of Ford Avenue compared to the in-wall air of Taft Avenue. The Ford Avenue property is situated on a larger lot than that of the Taft Avenue property; however, both lots have wooded areas along the rear property line, which mitigates the size differential to a large degree.

**ADJUSTMENT GRID**

| Sale No. | Location | Sale Date | Year Built | Building Size | Lot Size | Style | Basement | Utilities | Out-Buildings |
|---|---|---|---|---|---|---|---|---|---|
| 1B | 2855 Taft Ave.<br>Garner, IA 50438 | + | - | ○ | ○ | ○ | + | + | ○ |

\+ 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 newer construction and the superior above-grade location of the second family room are made to the sale price of the Taft Avenue house, the two properties have essentially the same per square foot value. In other words, the higher per foot sales price for the Taft Avenue house is justified by its superior condition and location. Thus, the difference in the sales price does not support the conclusion that proximity to the wind turbines had a negative impact on the value of the Ford Avenue property.

## ILLINOIS MATCHED PAIR STUDY

### Macon County Matched Pair No. 1

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, Twin Forks Wind Farm, with approximately four additional turbines visible from the property to the north and west.

**MACON COUNTY MATCHED PAIRS NO. 1**

| | 1A<br>PROXIMATE<br>TO A WIND TURBINE | 1A<br>PRIOR SALE | 1C<br>NOT PROXIMATE<br>TO A WIND TURBINE |
|---|---|---|---|
| Address | 8873 North Glasgow Road<br>Warrensburg, IL 62573 | 8873 North Glasgow Road<br>Warrensburg, IL 62573 | 1511 Hunters View Drive<br>Mount Zion, Illinois 62549 |
| Ft. from Turbine | 1,855 (nearest) | N/A | N/A |
| 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 | 1,721 sq. ft. | 1,721 sq. ft. | 2,100 sq. ft. |
| Lot Size | 1.04 acres | 1.35 acres | 0.21 acres |
| Style | 1-story, frame (vinyl)<br>4 bdrms., 2 ba. | 1-story, frame (vinyl)<br>3 bdrms., 2 ba. | 2-story, frame (vinyl/brick)<br>4 bdrms.; 2.1 ba. |
| Basement | Full; partially finished | Full; unfinished | Full; finished |
| Utilities | Geothermal heat & cooling<br>Well & septic | Geothermal heat & cooling<br>Well & septic | Central Air;<br>Forced-air heat<br>Public Sewer |
| Other | 2.5-car attached garage;<br>Front porch and deck | 2.5-car attached garage;<br>Front porch | 3-car attached garage<br>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 percent during a period where 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 treat the problem. The yard is now back to normal condition. The broker also says 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, so the sellers put it on the market themselves and were able to sell it almost immediately for greater than the asking price. The broker stated that the turbine being installed proximate to the property is a possible reason for the quick sale at a higher price, so having a turbine close to this property potentially had a positive effect on the sale.

The house at 1511 Hunters View Drive, Mount Zion, has a similar, rural location, yet is settled in a suburban setting, and is approximately 4 miles south of Decatur. Although this house sits on a smaller lot than the Glasgow property, this is offset by the extra bedroom and the second floor. There is no lease for a wind turbine near this property.

**ADJUSTMENT GRID**

| Sale No. | Location | Sale Date | Year Built | Building Size | Lot Size | Style | Basement | Utilities | Out-Buildings |
|---|---|---|---|---|---|---|---|---|---|
| 1B | 1511 Hunters View Drive<br>Mount Zion, Illinois 62549 | + | ○ | - | + | ○ | ○ | + | ○ |

\+ 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

The comparison will be made to the March 2014 date of sale because it is most similar in time to the sale date of the Mount Zion property.

Upward adjustments are made for the superior market conditions, larger lot size, and geothermal heating and cooling system of the Glasgow property. Downward adjustments are made for the superior building size of the Mount Zion property. When the adjustments noted above are made to the sale price of the Glasgow house, the two properties have essentially the same per square foot value. In other words, although the Mount Zion house is larger, the higher per foot sales price for the Glasgow 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 property to wind turbines. This is further supported by the subsequent sale of the Glasgow property, where the 2017 sale price increased by $17.44 per square foot over the 2014 sale price.

## Logan County Matched Pair No. 1

Matched Pair #1 considers the recent sale of a property located at 2558 1254th Avenue, Emden, that is 2,200 feet from the nearest wind turbine located in the Rail Splitter Wind Farm, with approximately four additional turbines visible from the property to the northwest. Rail Splitter Wind Farm was constructed in 2008-2009 and came on line in July 2009.

**LOGAN COUNTY MATCHED PAIR NO. 1**

| | 1A<br>PROXIMATE<br>TO A WIND TURBINE | 1B<br>NOT PROXIMATE<br>TO A WIND TURBINE |
|---|---|---|
| Address | 2558 1254th Ave.<br>Emden, Illinois | 801 1250th Ave.<br>Lincoln, Illinois |
| Ft. from Turbine | 2,200 (nearest) | N/A |
| Sale Date | March 19, 2015 | January 15, 2015 |
| Sale Price | $108,000 | $97,900 |
| Sale Price/Sq. Ft. (A.G.) | $62.21 | $71.46 |
| Year Built | 1965 | 1970 |
| Building Size | 1,736 sq. ft. | 1,370 sq. ft. |
| Lot Size | 1.38 acres | 1.33 acres. |
| Style | Ranch; frame (brick)<br>3 bdrms., 2 ba. | Ranch; frame (vinyl/stone)<br>3 bdrms., 2 ba. |
| Basement | N/A | Full; unfinished |
| Other | 2-car 460 sq. ft. attached garage<br>enclosed porch | 2-car 672 sq. ft. attached garage |

2558 1254th Avenue

801 1250th Avenue

The house at 2558 1254th Avenue, Emden[5], is located approximately 8 miles north of Lincoln, in a rural area. According to the Logan County Assessor's records, this house previously sold in November 2011 for $102,500. This indicates an increase in value of approximately 5 percent during a period when residential sale prices generally were not increasing. There is no lease for a wind turbine on this property.

The house at 801 1250th Avenue, Lincoln, has a similar, rural location, approximately 8 miles south of Lincoln. According to the Logan County Assessor's records, this house sold in June 2010 for $128,500, and then was sold in July 2014 in a Sheriff's sale. The January 2015 sale is considered arm's length by the Assessor. The Lincoln house is approximately 20 percent smaller in size than the Emden property, a significant upward adjustment is considered appropriate. A downward adjustment is made for the full basement of the Lincoln property compared to the lack of a basement of the Emden property. The lack of an enclosed porch is offset by the larger garage size.

**ADJUSTMENT GRID**

| Sale No. | Location | Sale Date | Year Built | Building Size | Lot Size | Style | Basement | Utilities | Out-Buildings |
|---|---|---|---|---|---|---|---|---|---|
| 1B | 801 1250th Ave.<br>Lincoln, Illinois | ○ | ○ | + | ○ | ○ | - | ○ | ○ |

\+ Positive adjustment based on comparable being inferior in comparison to property #1A
\- Negative adjustment based on comparable being superior in comparison to property #1A
○ No adjustment necessary

5 This address is taken from the Logan County records; some maps indicate that this property is located at 2558 1250th Avenue, in either unincorporated Emden or Atlanta.

There is a $9.25 per square foot difference in sale price between the Emden house and the Lincoln house, in favor of the Emden house. However, when the adjustments noted above are taken into consideration, the difference in the per square foot sale price of the two properties is fully justified. 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 Emden property to wind turbines.

## Matched Pair Analysis Conclusions

Based on these matched pairs and sales/resales of properties proximate to wind turbines, there does not appear to have been any measurable negative impact on surrounding 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 soy beans. Other factors include favorable interest rates, and the supply of land compared to the number of buyers. The most recent "Ag Letter" for the 9th District, which includes South Dakota, and is published by the Federal Reserve of Minneapolis, indicated a modest 3 percent increase in agricultural land values after 3 years of mild downward year-over-year changes.

The South Dakota Agricultural Land Trends produced by South Dakota State University[6] reported agricultural land values in Deuel County averaged $4,613 per acre in 2016, and $5,066 per acre in 2015. A more recent survey covering the period between February 2016, and February 2017 supported the Fed's report of an increase in average land value with an average land value of $4,654 per acre.[7] The most likely buyer of agricultural land in South Dakota is an existing farmer, with neighboring farmers paying higher prices than investors. The prognosis appears to be for stable, if not slightly rising land values. The following table and map illustrates values as of February 1, 2017, by region, including Codington and Grant counties in the Northeast region.

6 https://igrow.org/up/resources/07-3007-2017.pdf, 2017 SDSU South Dakota Farm Real Estate Survey

7 https://igrow.org/up/resources/07-3007-2017.pdf, 2017 SDSU South Dakota Farm Real Estate Survey

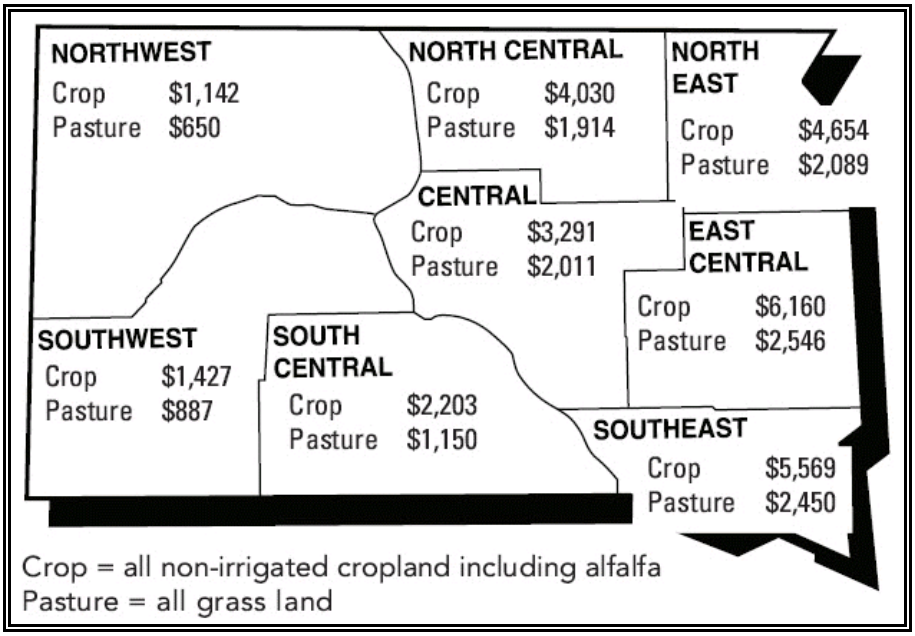



Table 3. Average reported value and annual percentage change in value of South Dakota agricultural land by type of land by region, February 2013-2017.

| Type of Land | Southeast | East Central | Northeast | North Central | Central | South Central | Southwest | Northwest | STATE |
|---|---|---|---|---|---|---|---|---|---|
| | dollars per acre | | | | | | | | |
| Nonirrigated Cropland | | | | | | | | | |
| Average value, 2017* | $5,569 | $6,160 | $4,654 | $4,030 | $3,291 | $2,203 | $1,427 | $1,142 | $3,903 |
| Average value, 2016 | $5,653 | $6,116 | $4,613 | $4,177 | $3,843 | $2,168 | $1,264 | $1,187 | $4,094 |
| Average value, 2015 | $5,887 | $6,329 | $5,066 | $4,275 | $3,895 | $2,283 | $1,347 | $1,193 | $4,265 |
| Average value, 2014 | $6,331 | $7,114 | $5,291 | $4,614 | $3,953 | $2,087 | $820 | $870 | $4,478 |
| Average value, 2013 | $5,903 | $6,828 | $4,843 | $4,562 | $3,580 | $1,994 | $900 | $792 | $4,249 |
| | | | | | | | | | |
| Annual % change 17/16 | -1.5% | 0.7% | 0.9% | -3.5% | -14.4% | 1.6% | 12.9% | -3.8% | -4.7% |
| | | | | | | | | | |
| Pasture/ Rangeland** | | | | | | | | | |
| Average value, 2017** | $2,450 | $2,546 | $2,089 | $1,914 | $2,011 | $1,150 | $887 | $650 | $1,215 |
| Average value, 2016 | $2,566 | $2,781 | $2,028 | $1,957 | $2,219 | $1,330 | $715 | $760 | $1,222 |
| Average value, 2015 | $2,719 | $2,727 | $2,136 | $1,758 | $2,100 | $1,338 | $851 | $630 | $1,187 |
| Average value, 2014 | $2,698 | $2,861 | $1,859 | $1,600 | $1,828 | $1,187 | $571 | $436 | $987 |
| Average value, 2013 | $2,308 | $2,765 | $1,759 | $1,473 | $1,636 | $994 | $529 | $444 | $909 |
| | | | | | | | | | |
| Annual % change 17/16 | -4.5% | -8.5% | 3.0% | -2.2% | -9.4% | -13.5% | 24.1% | -14.5% | -0.6% |

Source: 2017 and earlier South Dakota Farm Real Estate Market Surveys
*cropland now includes all alfalfa acres
** 2017 pasture land variable has been redefined and includes all grass acres
Statewide average land values are based on 2002 land use weights

The following table summarizes recent agricultural land sales larger than 10 acres in Codington County in or near the footprint of the proposed wind farm. There were no recent agricultural land sales in Grant County.

**LAND SALES SUMMARY**

| Sale No. | Location | Sale Price | Sale Date | Land Area (Acres) | NCCPIs* | Sale Price Per Acre |
|---|---|---|---|---|---|---|
| 1 | 15496 County Road 9 1/10<br>South Shore, South Dakota | $50,000 | 4/15 | 99.00 | 0.41 | $505.05 |
| 2 | 15629 457th Ave.<br>South Shore, South Dakota | $53,500 | 1/14 | 118.90 | 0.34 | $449.96 |
| 3 | 15511 460th Ave.<br>South Shore, South Dakota | $60,000 | 12/15 | 37.90 | 0.46 | $1,583.11 |
| 4 | 45323 157th St.<br>South Shore, South Dakota | $140,000 | 10/16 | 63.40 | 0.36 | $2,208.20 |
| 5 | 46156 155th St.<br>South Shore, South Dakota | $272,079 | 12/15 | 315.10 | 0.30 | $863.47 |

*National Commodity Crop Productivity Index - based on AcreValue.com GIS informational map. The NCCPI uses a scale of 0 to 1, with 0 having a lower productivity potential and 1 a higher potential. This scale was developed using soil chemical and physical properties, water availability, climate, and landscape values. The NCCPI has indexes for corn, wheat and cotton (USDA, 2008)

## Agricultural Land Sales and Wind Farms

The above land sales reveal that the agricultural land in the area of the project footprint is far below average for the northeast region of South Dakota, and adding wind turbines and land leases should only benefit the land prices and productivity. I was unable to discover any sales of South Dakota farmland in which the transaction included a wind turbine, and upon closer inspection, the existing wind farms are located in extremely remote areas of the state with few or no residential houses within 3 miles. However, there were a few sales in the neighboring state of Minnesota in Freeborn County, which is home to the Bent Tree Wind Farm and provides similar demographics to the project area of Dakota Range. The following table summarizes the three sales in 2015 and 2016 of farmland with turbine leases. Although this survey is not exhaustive, it appears that the turbines may have had a positive impact on the sale price.

**AGRICULTURAL LAND VALUES WITH TURBINES - FREEBORN COUNTY**

| | 2015 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | No. Of Sales | Range in Sale Price/Ac. | Average Sale Price/Ac. | No. Of Sales | Range in Sale Price/Ac. | Average Sale Price/Ac. |
| Bent Tree Wind Farm | 2 | $7,011 to $9,502 | $8,257 | 1 | $7,011 | $7,011 |
| County Average | | | $6,547 | | | $6,416 |

Wind turbines typically are considered to be of significant benefit to farmers; Iowa farmers interviewed by the *Omaha World Herald*, were positive about the stable income as opposed to the vicissitudes of commodity prices.[8] Franklin County 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.[9]

Although there has been no study of the impact of wind turbines on agricultural land sales for South Dakota that I could discover, a report in Illinois, the *2016 Illinois Land Values and Lease Trends*, indicated that the impact of wind turbine leases is being felt in McLean, Livingston, and Woodford counties, where turbine leases have provided "income diversification, beyond agriculture, which makes these tracts more attracting to an outside investor."[10] 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."[11] The report notes that the premium is related directly to the number of years left on the lease.

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 add to the marketability and value.

## Local Real Estate Professionals

Local real estate professionals 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. 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 area of the Dakota Range Wind Project. He stated that he contacted the assessors of Codington, Grant, and Roberts counties to discuss land prices in their respective county, and each of them informed Jim that although they have heard that the project is in production, they are not

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8 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, 2107.

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

10 Klein, David E., and Schnitkey, Gary, *2016 Illinois Land Values and Lease Trends*, Illinois Society of Professional Farm Managers and Rural Appraisers, Page 38.

11 Ibid. Page 42.

aware of any effect on land prices. He also stated that five years ago land prices were roughly $6,000 per acre, and now the average acre is approximately $4,000. The reduction in land prices, he mentions, is not due to the wind project, but due to the production of corn on the land.

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 Illinois 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.

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

## South Dakota Assessors Survey - November 2017

In November 2017 my office conducted a survey of the supervisor of assessments or a deputy supervisor in six counties in South Dakota in which wind farms with more than 25 turbines currently are operational, and South Dakota has more than seven wind farms with 400 wind turbines. As of 2016, the AWEA reported there were approximately 14 wind projects with approximately 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 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 do 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.

## Iowa Assessors Survey - August/September 2017

In August and September 2017 my office 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, and Iowa has more than 38 wind farms with 3,706 wind turbines. As of 2016, the AWEA reported there were approximately 107 wind projects with approximately 4,143 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 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.

## Minnesota Assessors Survey - January 2017

In late January 2017, my office conducted a survey of the Assessors or a staff member 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 2015, the AWEA reported there were approximately 97 wind projects with approximately 2,400 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 have fluctuated consistently within counties as influenced by market conditions, with no regard for proximity to a wind farm.

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

## Illinois Assessors Survey - Updated October 6 - 19, 2016

In March 2015, and updated in October 2016, my office 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 2016, the AWEA reported there were approximately 48 wind projects with approximately 2,579 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. As of the date of this report, there are more than 46 wind farms with 2,348 wind turbines and more than 1,000,000 properties in these counties. There have been no reductions in assessed valuations related to wind turbines.[12]
- 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.

12 A law suit 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.

## Literature Review

I am familiar with several academic and peer-reviewed studies of the impact of wind turbines on residential property values. There are no peer reviewed studies for the state of South Dakota, however the following studies are consistent with our findings in South Dakota.[13] These are summarized below:

### Municipal Property Assessment Corporation (MPAC) Study, 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, when analyzing sale prices." (Emphasis in original. IWT is Industrial Wind Turbine. 2012 Page 5) 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 Page 29) Further, Appendix G of the 2012 MPAC report states "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, Nationwide, 2009, and 2013

The 2009 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 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. Like the 2009 study, all were located in rural settings and near wind farms of more than 50 turbines. This 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, Rhode Island, 2013

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.

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13 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.

### University of Guelph, Melancthon Township, Ontario, Canada, 2013

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 "(T)hese results do not corroborate the concerns regarding potential negative impacts of turbines on property values."

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

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."

These studies had a combined number of 2,500 transactions within 1 mile of operating turbines and found no evidence of value impact.

## Conclusions

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 South Dakota, as well as 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:

- The proposed use will meet or exceed all the required development and operating standards;
- Controls, such as setbacks and noise limits, are in place to insure on-going compliance;
- There are significant financial benefits to the local economy and to the local taxing bodies from the development of the proposed wind farm;
- The proposed wind farm will create well-paid jobs in the area which will benefit overall market demand;
- An analysis of residential sales proximate to wind farms 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 Minnesota, Iowa, and Illinois indicate that wind turbine leases add value to agricultural land; and
- A survey of County Assessors in 6 South Dakota counties, 26 Iowa counties, 8 Minnesota counties, and 18 Illinois 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 existing as of January 29, 2018. This market impact study has been prepared specifically for the use of the client and to potentially support an application to allow the development of the Dakota Range Wind Project, in Codington County and Grant County, South Dakota. Any other use or user of this report is considered to be unintended.

Respectfully submitted,
MaRous & Company

Michael S. MaRous, MAI, CRE
South Dakota Certified General #1639-T-2018 (8/27/18 expiration)
Illinois Certified General - #553.000141 (9/19 expiration)

# CERTIFICATE OF REPORT

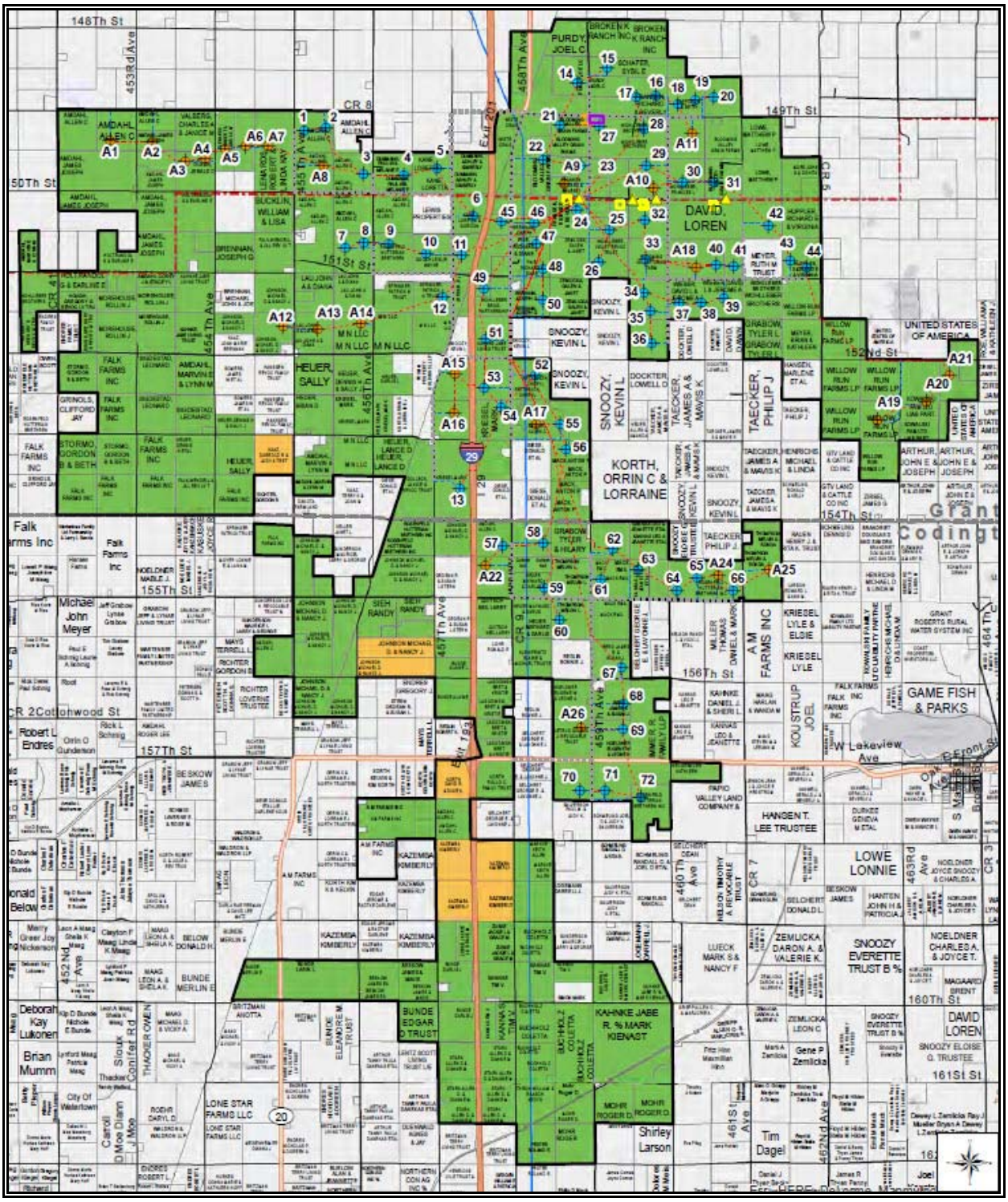
I do hereby certify that:

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; and
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.

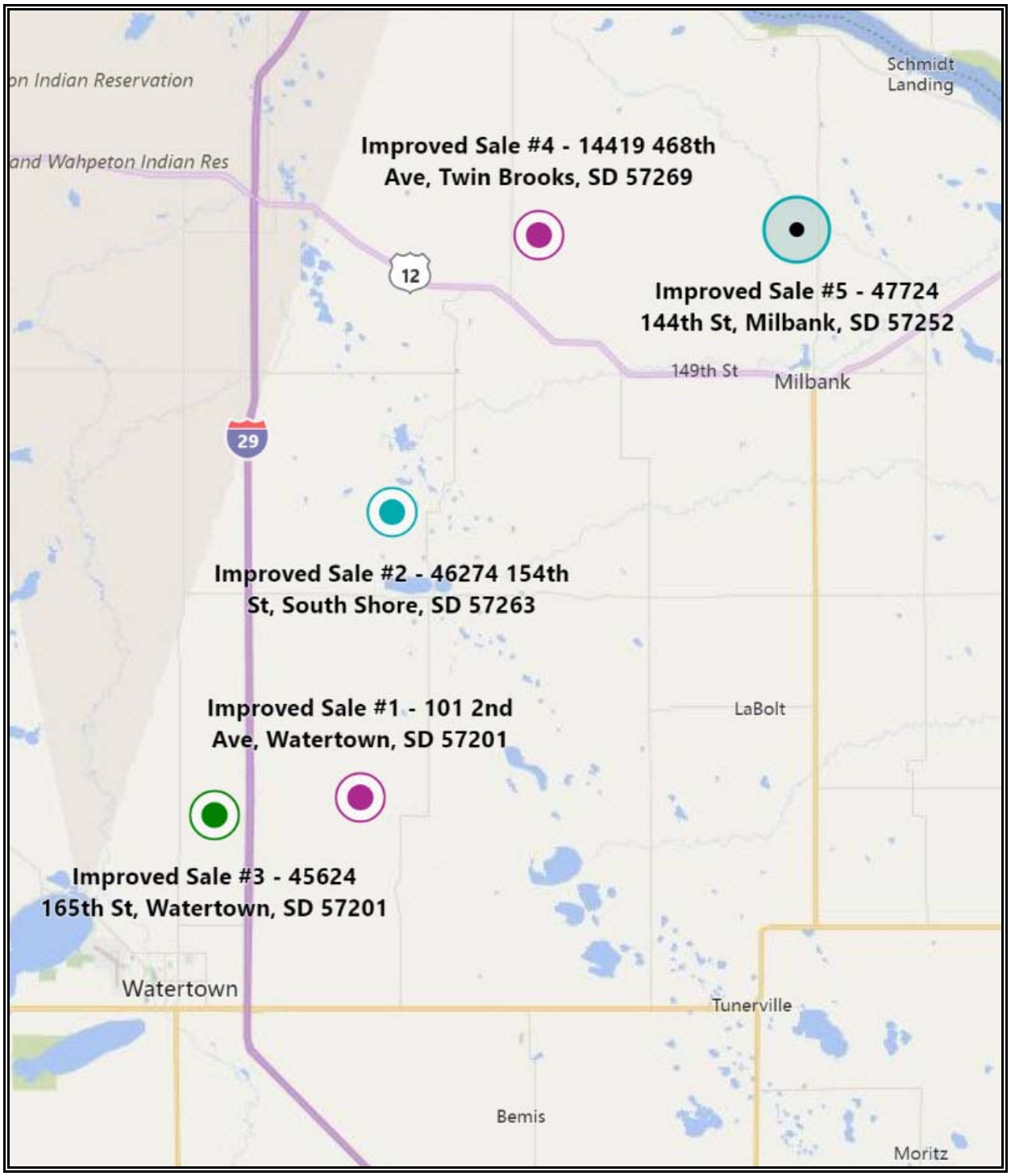
Respectfully submitted,
MaRous & Company

Michael S. MaRous, MAI, CRE
South Dakota Certified General #1639-T-2018 (8/27/18 expiration)
Illinois Certified General - #553.000141 (9/19 expiration)

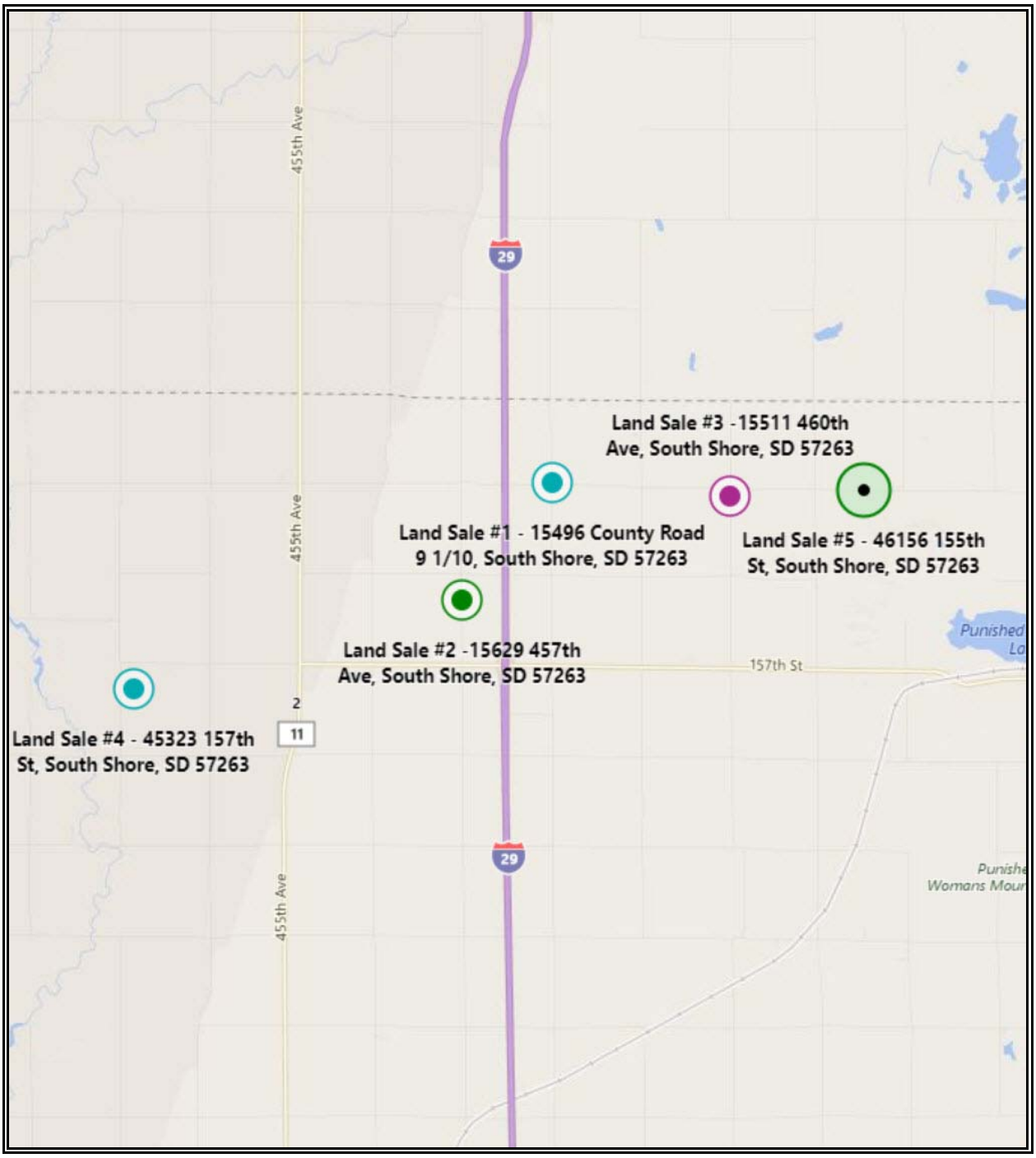
# ADDENDA



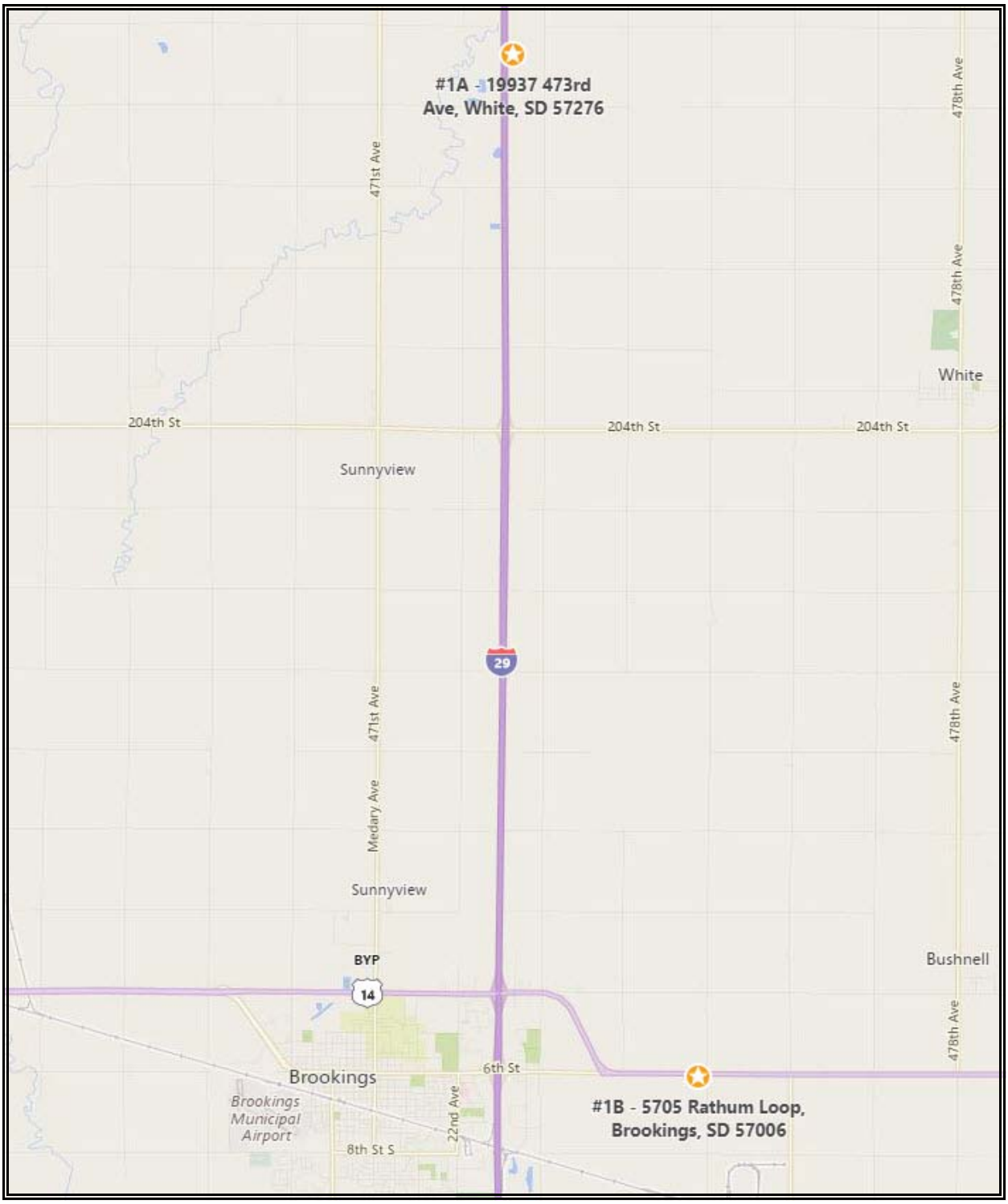

**DAKOTA RANGE WIND PROJECT FOOTPRINT**



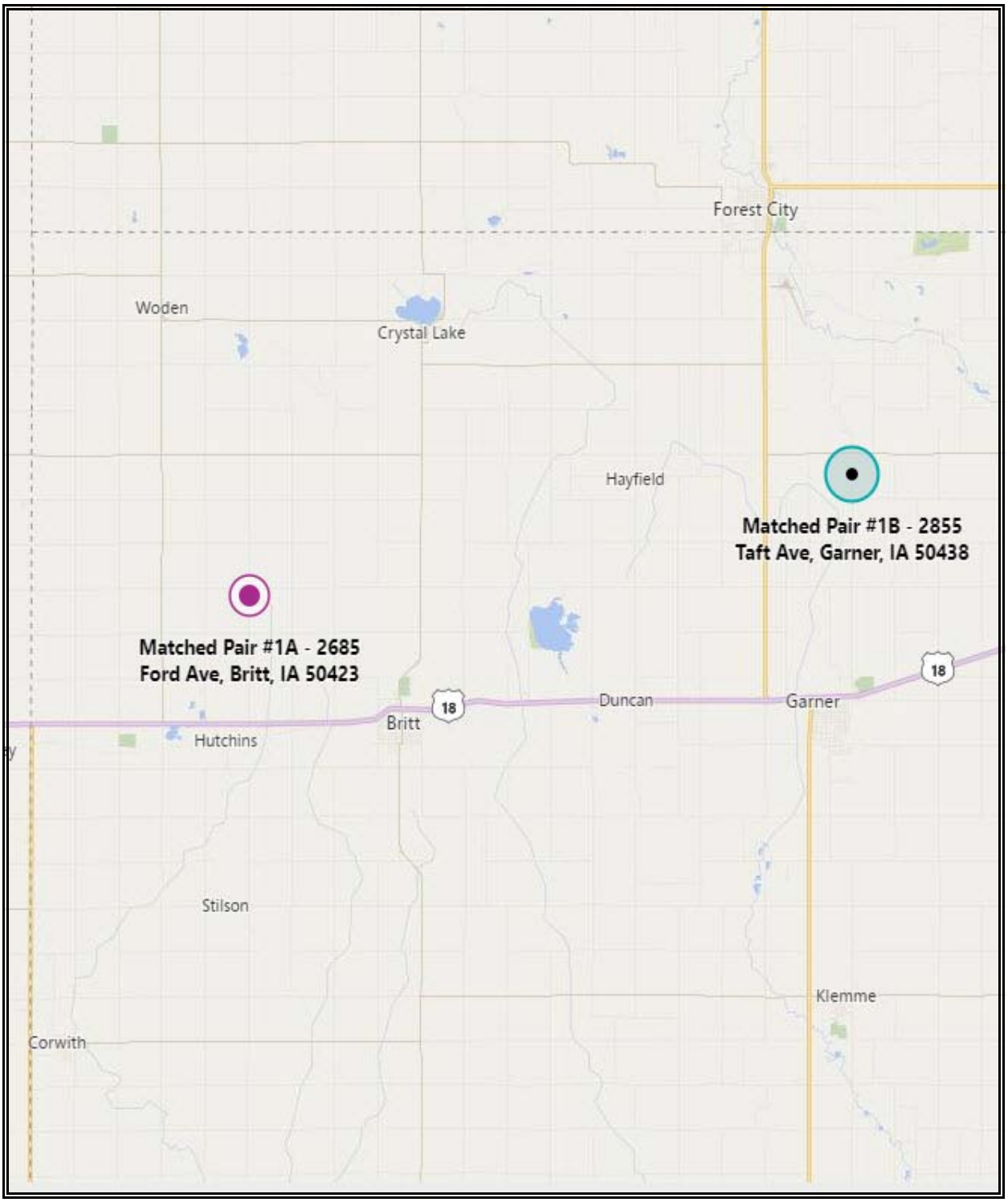

**RECENT SINGLE-FAMILY HOUSE SALES LOCATION MAP**



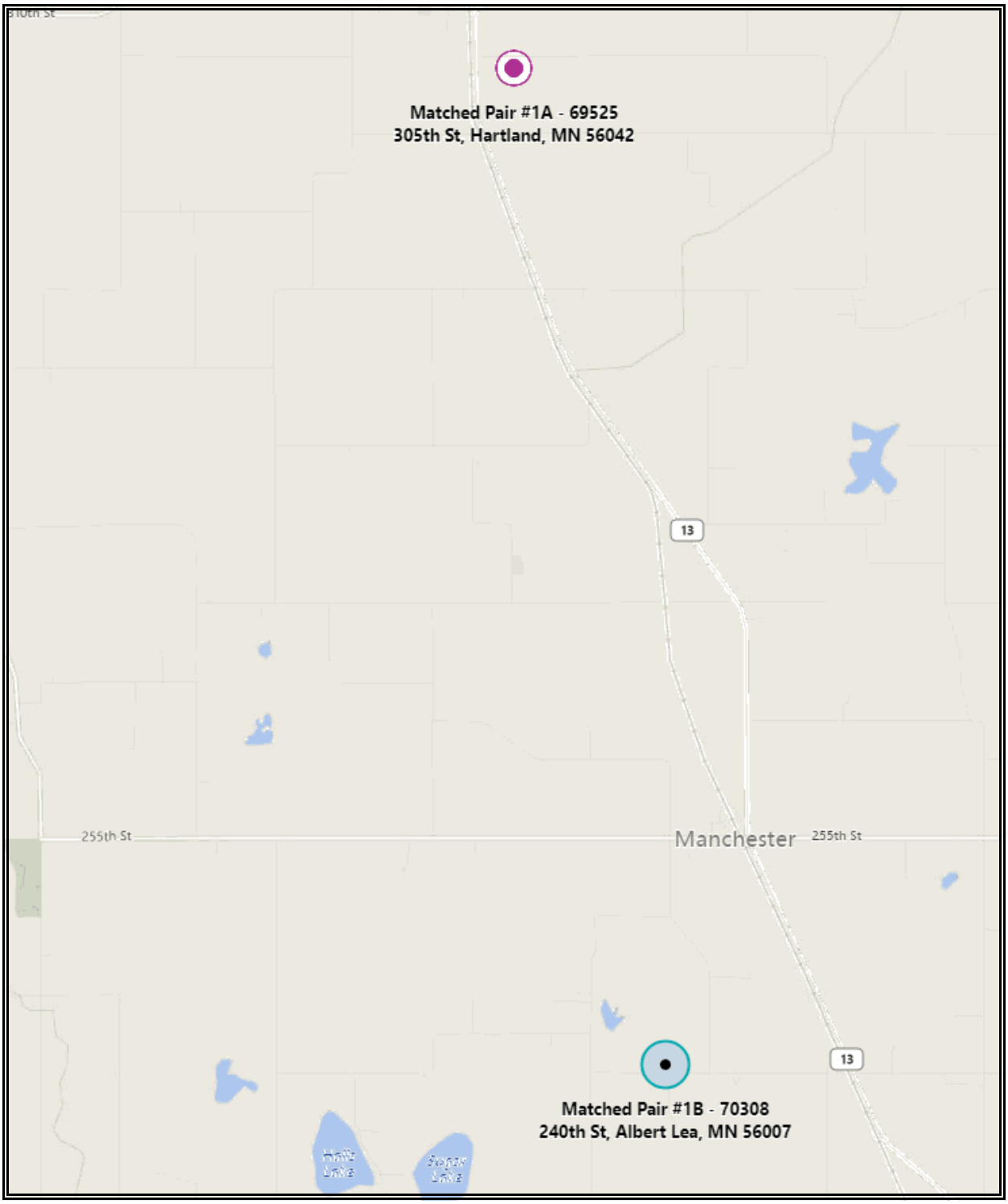

**LAND SALES LOCATION MAP**



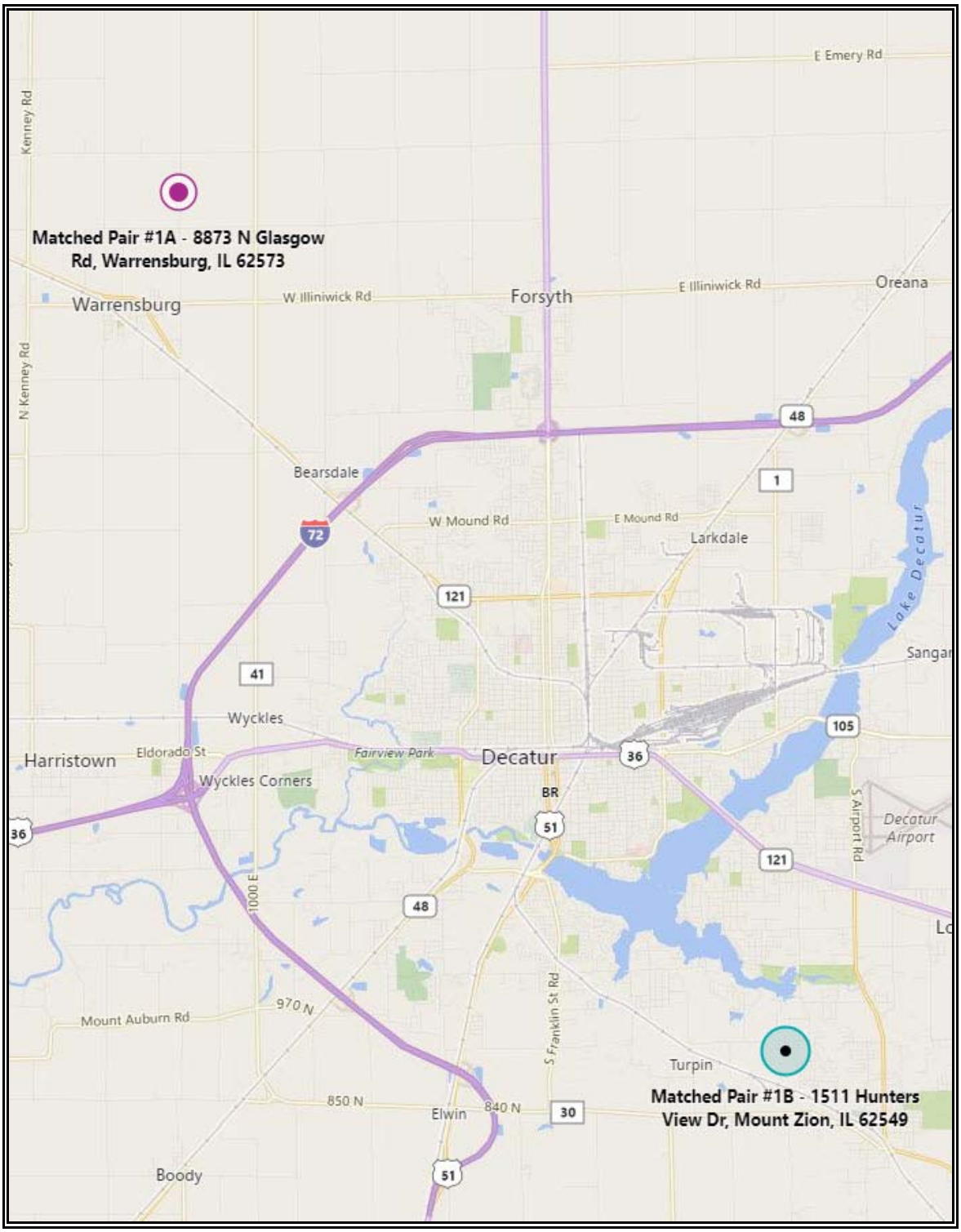

**BROOKINGS COUNTY, SOUTH DAKOTA RESIDENCE LOCATION MAP**



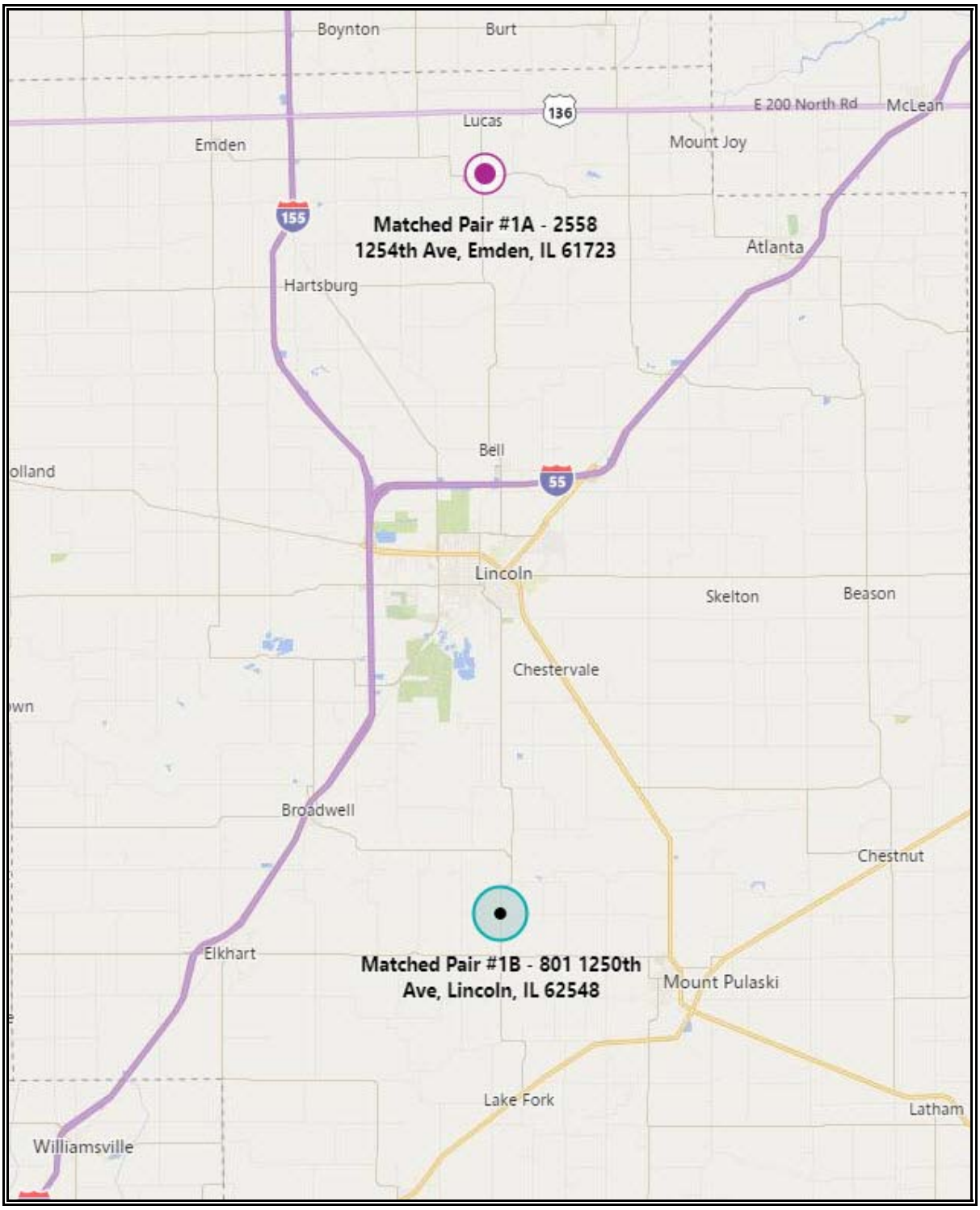

**HANCOCK COUNTY, IOWA MATCHED PAIR LOCATION MAP**




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




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




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

# IMPROVED SALE PHOTOGRAPHS

101 2nd Avenue, Waverly

46274 154th Street, South Shore

45264 165th Street, Watertown

14419 468th Avenue, Twin Brooks

47724 144th Street, Milbank

# South Dakota County Assessor Survey

## South Dakota County Assessor Survey Analysis

A survey of assessors in 6 counties in South Dakota 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 on November 7, 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 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 7 wind farms with 400 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:

| | | |
|---|---|---|
| 1. Aurora County | Ms. Leah Vissia | 605-942-7164 |
| 2. Brookings County | Mr. Jacob Brehmer (Deputy) | 605-696-8220 |
| 3. Charles Mix County | Ms. Denise Weber | 605-487-7382 |
| 4. Day County | Ms. Dari Schlotte | 605-345-9502 |
| 5. Hyde County | Ms. Carrie Stevenson | 605-852-2070 |
| 6. Jerauld County | Ms. Janice Bender | 605-539-9701 |

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.

Aurora, Brookings, and Day Counties' Supervisors of Assessments all stated that a majority of the wind turbines were place with grazing and pasture land used for raising cattle. Each one of the assessors made it a point to note that they had personally witnessed the cows grazing right alongside turbines, indicating that the turbines had no effect, of any kind, on the animals.

## Residential Assessed Values, Complaints/Tax Appeal Filings

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

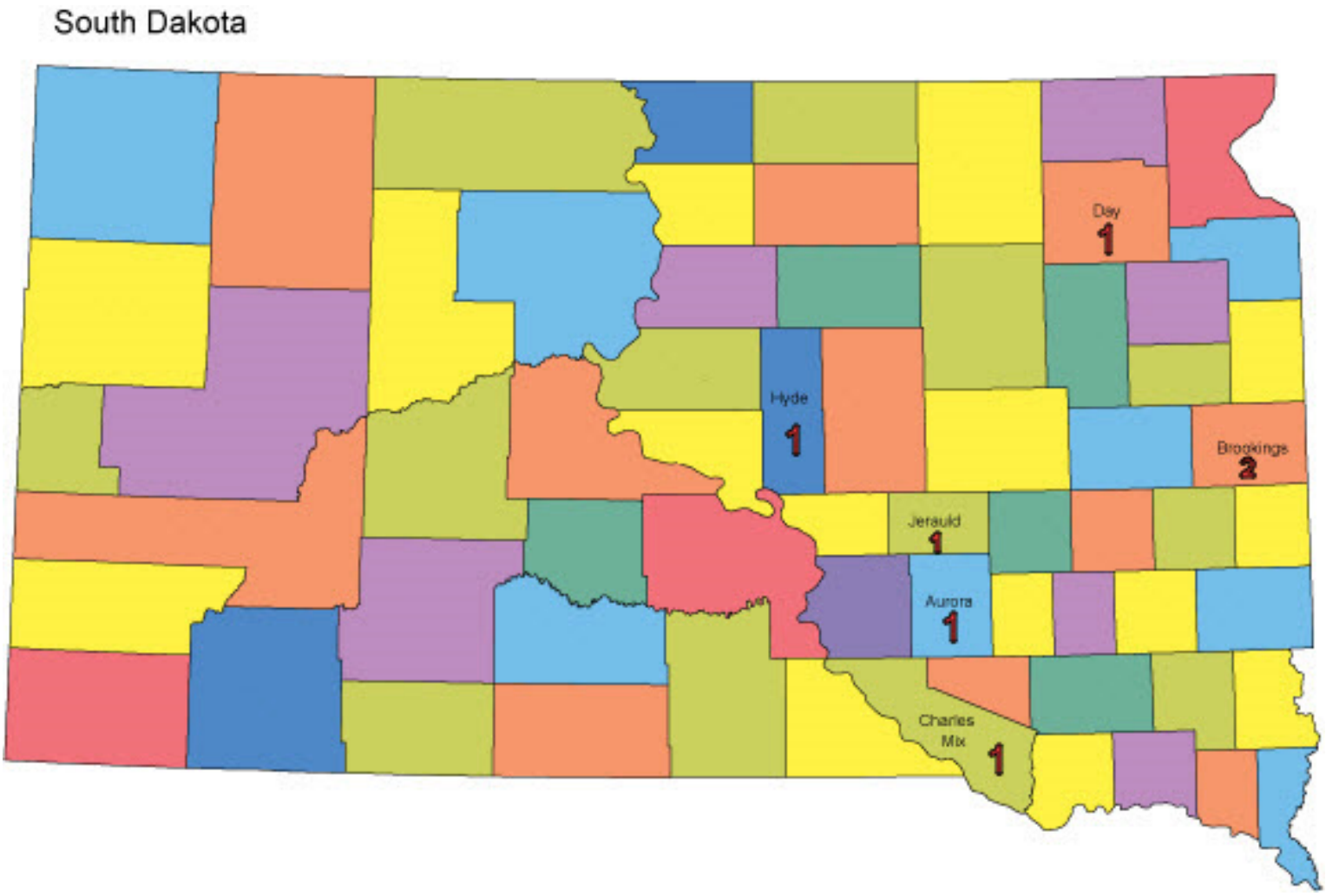
Ms. Carrie Stevenson, the Hyde County supervisor of assessments, did mention that the morning on the day the survey was taken Hyde County held its County Commissioners meeting. The topic of some of the meeting revolved around wind farms in the county. In attendance were approximately 30 residents, or a little over 2% of the total population of Hyde County. These residents showed up to voice their various complaints to the County Commissioners. The complaints were listened to and validated, yet in the end, there were no changes to property values given.

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 the 6 surveyed in South Dakota have reason to believe that the location of wind turbines in their county has had a negative impact on property values.




# Map of South Dakota Counties Surveyed

Wind Farm Count by County

*25 Turbines or Higher*

**Note:** As depicted on this map, 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, as of the date of this survey, 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

### Industrial Properties

Business Parks
Distribution Centers
Manufacturing Facilities
Research Facilities
Self-storage Facilities
Warehouses

### Commercial Properties

Auto Sales/Service Facilities
Banquet Halls
Big Box Stores
Gasoline Stations
Hotels and Motels
Office Buildings
Restaurants
Shopping Centers
Theaters

### Special-Purpose Properties

Bowling Alleys
Cemeteries
Farms
Golf Courses
Lumber Yards
Nurseries
Riverboat Gambling Facilities
Schools
Stadium Expansion Issues
Tank Farms
Underground Gas Aquifers
Utility Corridors
Waste Transfer Facilities
Wind Farms

### Residential Properties

Apartment Complexes
Condominium Conversions
Condominium Developments
Single-family Residences
Subdivision Developments
Townhouse Developments

### Vacant Land

Agricultural
Alleys
Commercial
Easements
Industrial
Residential
Rights of Way
Streets
Vacations

### Clients

Corporations
Financial Institutions
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 (9/19)
Indiana Certified General Real Estate Appraiser, License Number CG41600008 (6/18)
Wisconsin Certified General Real Estate Appraiser, License Number 1874-10 (12/19)
Minnesota Certified General Real Estate Appraiser, License Number 40330656 (8/18)
Pennsylvania Certified General Real Estate Appraiser, License Number GA004181 (6/19)
Iowa Certified General Real Estate Appraiser, License Number CG03468 (6/19)
South Dakota Certified General Real Estate Appraiser, Temporary License Number 1639-T-2018 (8/18)
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
20 acres, residential, Glenview
25 acres, Hinsdale
55 acres, mixed-use, Darien
68 acres, Roosevelt Road and the Chicago River
75 acres, I-88 at I-355, Downers Grove
100± acres, various uses, Lake County
100 acres, Western Springs
140 acres, Flossmoor
142 acres, residential, Lake County
160 acres, residential, Cary
200 acres, mixed-use, Bartlett
250 acres, Island Lake
450 acres, residential, Wauconda
475± acres, various uses, Lake County
650 acres, Hawthorne Woods
650 acres, Waukegan/Libertyville
800 acres, Woodridge
900 acres, Matteson
1,000± acres, Batavia area
2,000± acres, Northern Lake County
5,000 acres, southwest suburban Chicago area
Landfill expansion, Lake County

### 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, market impact analysis
Walnut Ridge Wind Farm, Bureau County, Illinois, market impact analysis
Twin Forks Wind Farm, Macon County, Illinois, market impact analysis
Twin Groves Wind Farm, McLean County, Illinois, market impact analysis
Otter Creek Wind Farm, LaSalle County, Illinois, market impact analysis
Pleasant Ridge Wind Farm, Livingston County, Illinois, consulting
Commonwealth Edison, high tension lines, market impact analysis
Lackawanna Power Plant, Lackawanna County, Pennsylvania, market impact analysis
Brookhaven, New York, solar energy production facility, consulting

### 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, New York, New York
Hormel Foods, various Midwest locations
Wisconsin Properties including Lowes, Menards, Milwaukee Zoo, CVS Pharmacys in Milwaukee, Dairyland Race Track, 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 & Cinquino, 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

### Financial Institutions

AmericaUnited Bank Trust
BMO Harris Bank
Charter One
Citibank
Cole Taylor Bank
First Bank of Highland Park
First Financial Northwest Bank
First Midwest Bank
First State Financial
Glenview State Bank
Itasca Bank & Trust Co.
Lake Forest Bank & Trust Co.
MB Financial Bank
Midwest Bank
Northern Trust
Northview Bank & Trust
The Private Bank
Wintrust

### Corporations

Advocate Health Care System
Alliance Property Consultants
American Stores Company
Archdiocese of Chicago
Arthur J. Rogers and Company
Avangrid Renewables, LLC
BHE Renewables
BP Amoco Oil Company
Christopher B. Burke Engineering, Ltd.
Cambridge Homes
Canadian National Railroad
Capital Realty Services, Inc.
Chicago Cubs
Children's Memorial Hospital
Chrysler Realty Corporation
Citgo Petroleum Corporation
CorLands
CVS
Edward R. James Partners, LLC
Enterprise Development Corporation
Enterprise Leasing Company
Exxon Mobil Corporation
Hamilton Partners
Hollister Corporation
Imperial Realty Company
Invenergy LLC
Kimco Realty Corporation
Kinder Morgan, Inc.
Lakewood Homes
Lowe's Companies, Inc.
Loyola University Health System
Marathon Oil Corporation
Meijer, Inc.
Menards
Mesirow Stein Real Estate, Inc.
Paradigm Tax Group
Prime Group Realty Trust
Public Storage Corporation
RREEF Corporation
Shell Oil Company
Union Pacific Railroad Company
United Airlines, Inc.

## Public Entities

### Illinois Local Governments and Agencies

Village of Arlington Heights
Village of Barrington
Village of Bartlett
Village of Bellwood
Village of Brookfield
Village of Burr Ridge
City of Canton
Village of Cary
City of Chicago
Village of Deer Park
City of Des Plaines
Des Plaines Park District
Downers Grove Park District
City of Elgin
Elk Grove Village
City of Elmhurst
Village of Elmwood Park
City of Evanston
Village of Forest Park
Village of Franklin Park
Village of Glenview
Glenview Park District
Village of Harwood Heights
City of Highland Park
Village of Hinsdale
Village of Inverness
Village of Kenilworth
Village of Kildeer
Village of Lake Zurich
Leyden Township
Village of Lincolnshire
Village of Lincolnwood
Village of Morton Grove
Village of Mount Prospect
Village of North Aurora
Village of Northbrook
City of North Chicago
Village of Northfield
Northfield Township
Village of Oak Brook
Village of Orland Park
City of Palos Hills
City of Peoria
City of Prospect Heights
City of Rolling Meadows
Village of Rosemont
City of St. Charles
Village of Schaumburg
Village of Schiller Park
Village of Skokie
Village of South Barrington
Village of Streamwood
Metropolitan Water Reclamation District of Greater Chicago
City of Waukegan
Village of Wheeling
Village of Wilmette
Village of Willowbrook
Village of Winnetka
Village of Woodridge

### County Governments and Agencies

Boone County State's Attorney's Office
Forest Preserve of Cook County
Cook County State's Attorney's Office
DuPage County Board of Review
Forest Preserve District of DuPage County
Kane County
Kendall County Board of Review
Lake County
Lake County Forest Preserve District
Lake County State's Attorney's Office
Morton Township
Peoria County

### State and Federal Government Agencies

Federal Deposit Insurance Corporation
U.S. General Services Administration
Illinois Housing Development Authority
Illinois State Toll Highway Authority
Internal Revenue Service
The U.S. Postal Service

### Schools

Argo Community High School District No. 217
Arlington Heights District No. 25
Township High School District No. 214, Arlington Heights
Barrington Community Unit District No. 220
Chicago Board of Education
Chicago Ridge District No. 127½
College of Lake County
Community Consolidated School District No. 15
Community Consolidated School District No. 146
Community School District No. 200
Consolidated High School District No. 230
Darien District No. 61
DePaul University
Elk Grove Community Consolidated District No. 59
Elmhurst Community Unit School District No. 205
Glen Ellyn School District No. 41
Glenbard High School District No. 87
Indian Springs School District No. 109
LaGrange School District No. 105
Lake Forest Academy
Leyden Community High School District No. 212
Loyola University
Lyons Township High School District No. 204
Maine Township High School District No. 207
Niles Elementary District No. 71
North Shore District No. 112, Highland Park
Northwestern University
Orland Park School District No. 135
Palatine High School District #211
Rhodes School District No. 84-1/2
Riverside-Brookfield High School District No. 208
Rosalind Franklin University
Roselle School District No. 12
Schaumburg Community Consolidated District No. 54
Sunset Ridge School District No. 29
Township High School District No. 211
Township High School District No. 214
Triton College
University of Illinois
Wheeling Community Consolidated District No. 21
Wilmette District No. 39

# JOSEPH M. MAROUS
# STATEMENT OF QUALIFICATIONS

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

## EDUCATION

Purdue University - West Lafayette, Indiana

Bachelor of Science – Building Construction Management

Focus in residential and green build construction

## CERTIFICATIONS

Certified Green Build Professional

OSHA Safety Certified

USPAP Certified

## CONSTRUCTION

Professional in the construction industry for 10 years

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

## APPRAISAL

**Wind Projects**
- Illinois
- Iowa
- South Dakota
- New York

**Solar Projects**
- Maryland
- Wisconsin

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

**For more details visit:** linkedin.com/in/joemarous