

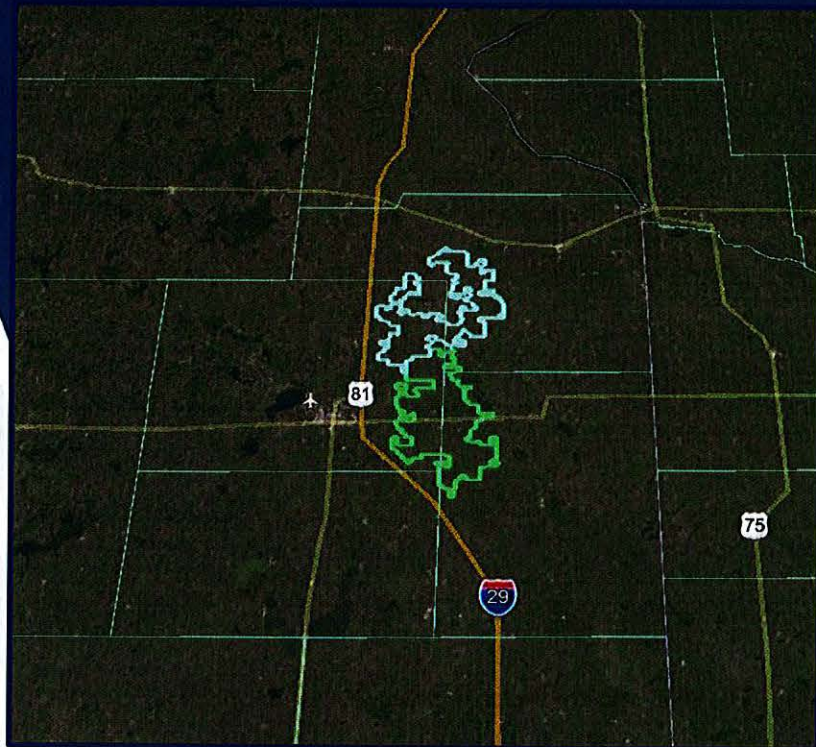


Valbridge
PROPERTY ADVISORS

Value Impact Study Report

Crowned Ridge Wind Farm
Grant County, Codington County, Deuel County
South Dakota

Report Date: December 13, 2018



FOR:
NextEra Energy Resources
Mr. Jamie Gentile
700 Universe Blvd., Bldg. E5023
Juno Beach, FL 33408

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December 13, 2018

Mr. Jamie Gentile
NextEra Energy Resources
700 Universe Blvd., Bldg. E5023
Juno Beach, FL 33408

RE: Value Impact Study
Crowned Ridge Wind Farm
South Dakota

Dear Mr. Gentile:

In accordance with your request, we have prepared a Value Impact Study of the proposed Crowned Ridge Wind Farm located in Grant, Codington, and Deuel Counties in northeastern South Dakota. The proposed project will contain approximately 260 wind turbines and provide 600 MW of energy when completed in 2020. This report sets forth the pertinent data gathered, the techniques employed, and the reasoning leading to our opinions. The purpose of this report is to examine the impact that the proposed Crowned Ridge Wind Farm will have on surrounding property values.

We developed our analyses, opinions, and conclusions and prepared this report in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation; the Interagency Appraisal and Evaluation Guidelines; the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute; and the requirements of our client as we understand them.

NextEra Energy Resources is the client in this assignment. We understand that NextEra Energy Resources may share this report with county officials. The intended use is to assist in obtaining zoning approval for the project. The value opinions reported herein are subject to the definitions, assumptions and limiting conditions, and certification contained in this report.



Mr. Jamie Gentile
NextEra Energy Resources
December 13, 2018
Page 2

Based upon our analysis, the report demonstrates the following:

The proposed Crowned Ridge Wind Farm will not measurably impact the value of surrounding properties located within Grant County, Codington County, or Deuel County.

This letter of transmittal is not considered valid if separated from this report, and must be accompanied by all sections of this report as outlined in the Table of Contents, in order for the value opinions set forth above to be valid.

Respectfully submitted,
Valbridge Property Advisors | Kansas City

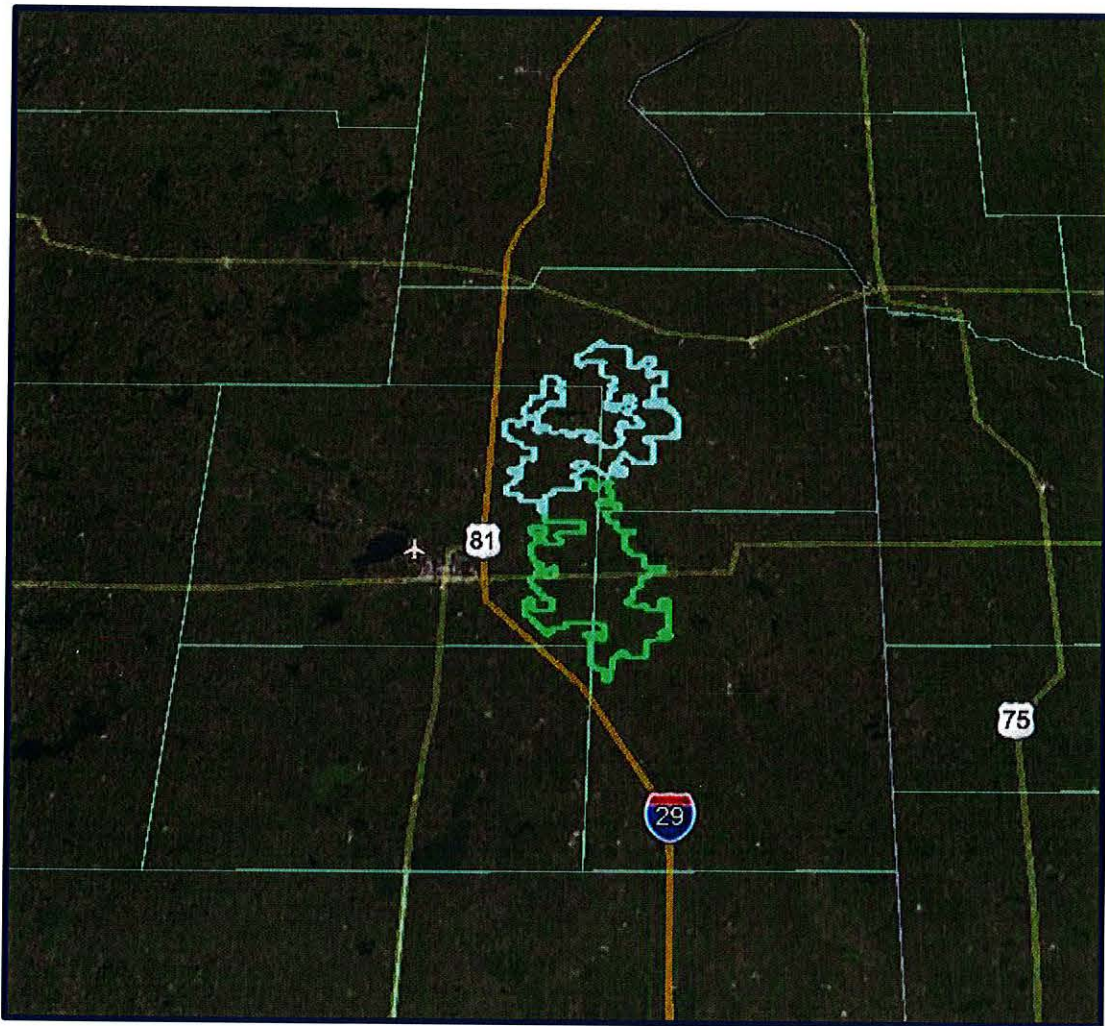
A handwritten signature in blue ink, appearing to read "Andrew Baker".

Andrew Baker, MAI
Senior Appraiser
South Dakota Appraiser Permit Number: 1729-T-2018

Table of Contents

Cover Page	
Letter of Transmittal	
Table of Contents	i
Location Map	ii
Introduction.....	1
Scope of Work	3
Regional Analysis.....	4
Description of Project	8
Zoning Requirements	14
Impact of the Project	16
Academic Literature.....	18
Paired Sales Analysis-Agricultural Land.....	21
Paired Sales Analysis-Residential Property	39
Conclusion.....	51
General Assumptions & Limiting Conditions.....	52
Certification – Andrew Baker, MAI.....	53
Addenda.....	54

Location Map





Introduction

Client of the Report

The client in this assignment is NextEra Energy Resources and no others.

Intended Users of the Report

The intended users of this report is NextEra Energy Resources. We understand that the client may share this report with public officials in Grant, Codington, and Deuel Counties as part of the zoning approval process.

Intended Use of the Report

The intended use of this report is to assist in zoning approval for the project.

Identification of the Project

Our identification of the project is based upon our on-site inspection, public records, news articles, as well as information provided to us by the client. The purpose of this report is to analyze the impact that the project will have on the value of surrounding property.

Type and Definition of Value

The purpose of this appraisal is to develop an opinion as to the impact that the proposed project will have on surrounding agricultural, business and residential property values. "Market Value," as used in this appraisal, is defined as "the most probable price that 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, each 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 sale concessions granted by anyone associated with the sale."*

(Source: The Dictionary of Real Estate Appraisal, Fifth Edition, page 123)

The "as is" value is the value of the property in its present condition under market conditions prevalent on the effective date of value.

Please refer to the Glossary in the Addenda section for further definitions of value type(s) employed in this report.



Valuation Scenarios and Effective Dates of Value

Per the scope of our assignment we developed opinions for how the value of surrounding properties will be impacted by the project.

Value Perspective	Value Premise	Effective Date
Current	As Is	December 5, 2018

Date of Report

The date of this report is December 13, 2018 which is the same as the date of the letter of transmittal.

Assumptions and Conditions of the Appraisal

If there are extraordinary assumptions and/or hypothetical conditions used in this report, the use of these extraordinary assumptions and hypothetical conditions might have affected the assignment results.

Extraordinary Assumptions

An extraordinary assumption is defined as "An assumption, directly related to a specific assignment, as of the effective date of the assignment results, which, if found to be false, could alter the appraiser's opinions or conclusions." There are no extraordinary assumptions assumed in this appraisal.

Hypothetical Conditions

A hypothetical condition is defined as "A condition, directly related to a specific assignment, which is contrary to what is known by the appraisers to exist on the effective date of the assignment results, but is used for the purposes of analysis." There are no hypothetical conditions assumed in this appraisal.



Scope of Work

The scope of work includes all steps taken in the development of the appraisal. These include 1) the extent to which the subject property is identified, 2) the extent to which the subject property is inspected, 3) the type and extent of data researched, 4) the type and extent of analysis applied, and the type of report prepared. These items are discussed as follows:

Extent to Which the Impacted Properties Was Identified

Economic Characteristics

Economic characteristics of the project were identified via a review of market surveys, academic literature, interviews with market participants, as well as a comparison to properties with similar locational and physical characteristics.

Physical Characteristics

The subject area was physically identified via our on-site inspection. We have also analyzed information sent to us by the client, including maps of the proposed project.

Extent to Which the Property Was Inspected

Andrew Baker, MAI inspected the area of the proposed project and the surrounding area on December 5, 2018. The purpose of this inspection was to determine the land uses in the area.

Type and Extent of Data Researched

We researched the project based upon information provided to us by the client. We reviewed the zoning codes for each of the three counties in which the project will be located. Based upon these factors, we analyzed the positive and negative externalities of the project and its impact on the surrounding property.

As part of the process, we conducted the following analysis:

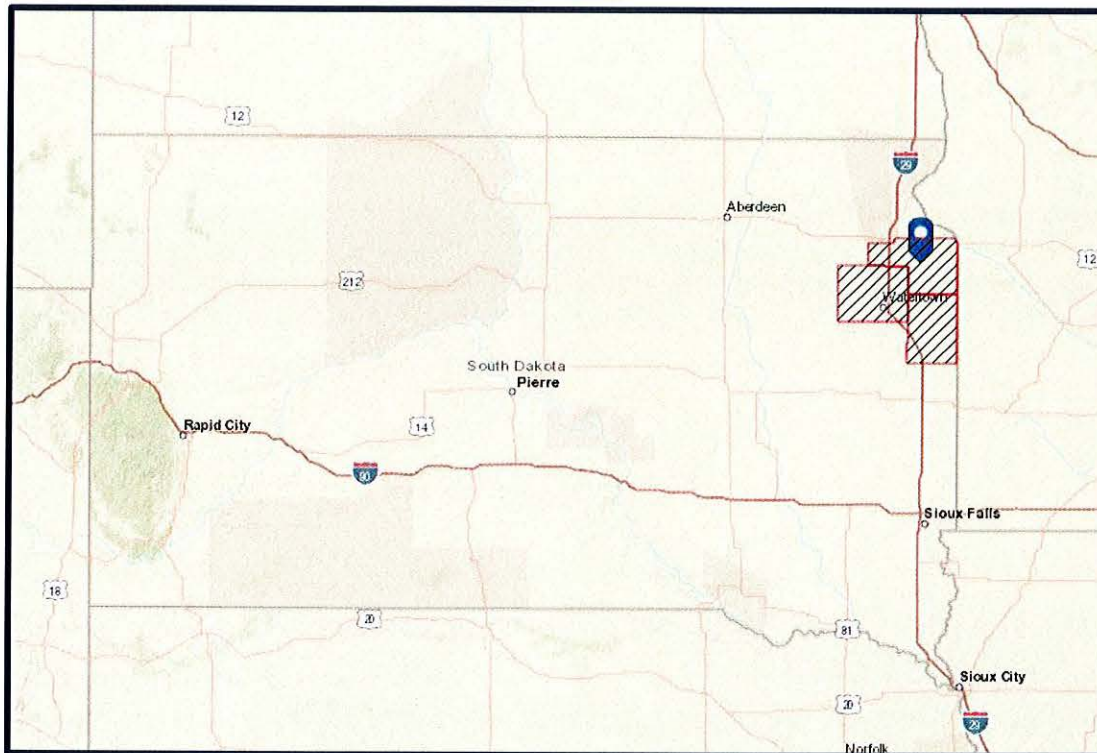
- 1) A review of the academic literature that relates to the impact of wind farms on surrounding property values.
- 2) A paired sales analysis of agricultural land located in Brookings County, South Dakota.
- 3) A paired sales analysis of residential properties located in Ford County, Kansas. We also examined a 16 year sales history of all residential properties located in Spearville, Kansas, a city that is surrounded by wind turbines.
- 4) Interviews with market participants in eastern South Dakota, including brokers and county assessors that have experience with the impact of wind farms on property values.

Appraisal Conformity

We developed our analyses, opinions, and conclusions and prepared this report in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation; the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute; and the requirements of our client as we understand them.

Regional Analysis

STATE MAP



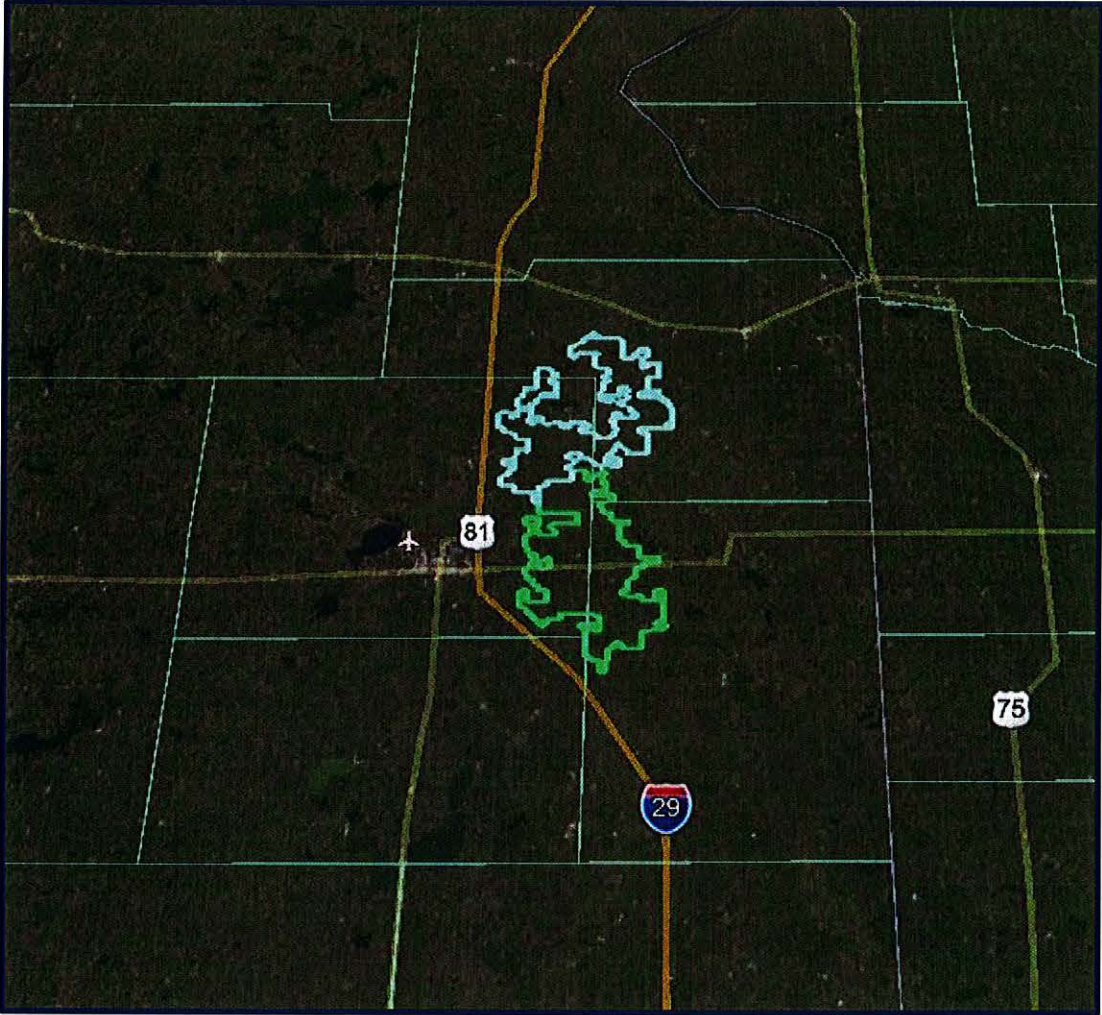
Overview

The proposed Crowned Ridge Wind Farm is located in southwestern Grant County, eastern Codington County, and northwestern Deuel County. The area is generally rural in nature and is located in northeastern South Dakota. The following analysis focuses on the social, economic, government, and environmental forces that form the elements of supply and demand and subsequently affect local real estate values.

Location and Boundaries

According to *Market Analysis for Real Estate*, published by the Appraisal Institute, the trade/market area is delineated by physical, political, and socioeconomic boundaries or by the time-distance relationship represented by travel times to and from common destinations. A market area is an area in which alternative, similar properties effectively compete with the Study Area in the minds of probable, potential users. For the purposes of this value impact study, the neighborhood boundaries are considered to be Grant County, Codington County, and Deuel County.

LOCAL MAP





Demographics

The following demographic information was obtained from the 2000 U.S. Census, 2010 U.S. Census, and Site to do Business (STDB) forecasts for 2018 and 2023. Unemployment information was provided by the Bureau of Labor Statistics (BLS). We have included the data from Grant County, Codington County, Deuel County, as well as the State of South Dakota.

Population

Since 2010, the population in Codington County has grown slightly. This is in contrast to the population in Grant County and Deuel County, which have each slightly decreased.

Population

Area	2000	2010	Annual %	Estimated	Projected	Annual %
			Change			2018
South Dakota	754,844	814,180	0.8%	889,876	937,436	1.1%
Grant County	7,847	7,356	-0.6%	7,263	7,181	-0.2%
Codington County	25,897	27,227	0.5%	28,673	29,532	0.6%
Deuel County	4,498	4,364	-0.3%	4,367	4,286	-0.4%

Source: Site to Do Business (STDB Online)

Household Income

STDB projects median household income to be between \$50,000 and \$54,000 in Grant County, Codington County and Deuel County. The median household income in these counties is generally in-line with the State of South Dakota.

Median Household Income

Area	Estimated	Projected	Annual % Change
	2018	2023	2018 - 23
South Dakota	\$54,091	\$59,888	2.1%
Grant County	\$53,306	\$57,072	1.4%
Codington County	\$50,972	\$55,747	1.9%
Deuel County	\$53,852	\$59,196	2.0%

Source: Site to Do Business (STDB Online)



Unemployment

Over the past several years, the unemployment rate in each of the counties as well as the State of South Dakota has been generally decreasing. The unemployment rate is now below 3.5% in the region and the State of South Dakota.

Unemployment Rates

Area	YE 2011	YE 2012	YE 2013	YE 2014	YE 2015	YE 2016	YE 2017	2018 YTD
United States	8.5%	7.9%	6.7%	5.6%	5.0%	4.7%	4.1%	3.8%
South Dakota	4.4%	4.0%	3.6%	3.3%	2.9%	3.2%	3.4%	3.0%
Grant County	5.2%	4.8%	4.3%	4.1%	3.8%	4.2%	4.1%	2.3%
Codington County	4.3%	3.7%	3.5%	3.6%	3.4%	3.5%	3.6%	2.5%
Deuel County	6.8%	7.0%	7.5%	6.8%	6.7%	5.8%	6.4%	3.5%

Source: Bureau of Labor Statistics - Year End - National & State Seasonally Adjusted

Transportation Routes

Within the region, the major Highway is Interstate 29, which runs along the eastern portion of South Dakota in a north/south direction. Major cities along Interstate 29 include Grand Forks and Fargo, North Dakota to the north, and Sioux Falls, South Dakota, Omaha, Nebraska, and Kansas City, Missouri to the south. The local area is on a grid system with roadways running every mile. The area has good highways which connect the cities in the area.

Major Employers

Major employers in the area include the Prairie Lakes Healthcare System, Terex Utilities, Premier Bankcard, local major retailers, as well as the local school districts. These employers are in the retail, health care, education and government industries and are considered to be stable.

The area is rural in nature and agriculture is the major demand driver. According to the United State Department of Agriculture, the main agricultural land uses in the area are corn, soybeans, wheat, and cattle ranching.

Land Uses

An approximate breakdown of the development in the areas is as follows:

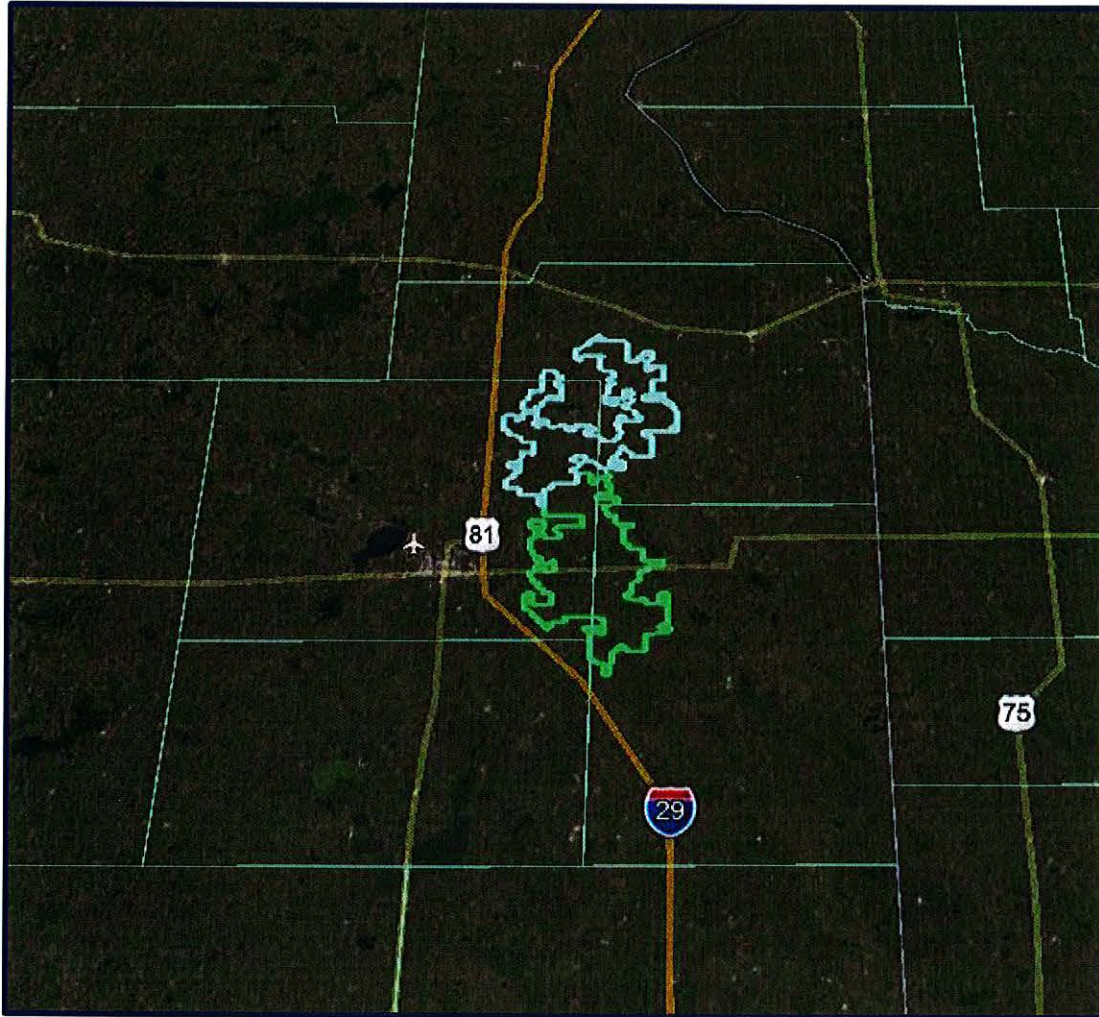
Predominant Age of Improvements	50+ years
Predominant Quality and Condition	Fair to average
Approximate Percent Developed	<5%
Life Cycle Stage	Second-stability

Conclusions

The subject is located in an area with stable population, and supply and demand factors are expected to be in balance for the foreseeable future. The area is rural in nature and agriculture is the primary demand driver. The subject has access to surrounding communities via Interstate 29 as well as local highways. Overall, it is our opinion that the outlook for the market area is continued stability with no major changes anticipated.

Description of Project

The following description is based on our property inspection, public records, and information provided by the client.



General Data

Approximate Location:	Generally bounded by 149 th Street to the north, 472 nd Avenue to the east, 182 nd Street to the south, and Interstate 29 to the west
Total Area:	Approximately 97,668 acres, or 152.60 square miles.
Shape:	Irregular
Area Location:	The area is located in the southeast portion of the county.

Access

Access to the area is provided by Interstate 29. The area is on a grid system, with every street interval representing one mile. Within the area, several of the roads are paved with asphalt. The remainder of the roads in the area are currently dirt roads that are in various conditions.



Turbines:

Total Number of Turbines:	260
Turbine Type:	GE 2.3 MW, GE 2.1 MW, and GE 1.7 MW. The vast majority of turbines will be GE 2.3 MW.
Turbine Density:	1.70 turbines per square mile
Turbine Height:	432 to 485 Feet

Municipalities

Within the project boundaries, there are a total of four municipalities, including Waverly which is not incorporated. In addition, South Shore is surrounded by the project boundaries in the northern portion of Codington County but is not located within the boundaries. The following table shows the counties on which these cities reside as well as the population reported in the 2010 census.

Name	County	Population
Stockholm	Grant	108
Waverly (Unincorporated)	Codington	37
Kranzburg	Codington	172
Goodwin	Deuel	146

Conclusion

The area of the proposed wind farm is located in northeastern South Dakota and includes portions of Grant, Codington, and Deuel County. The project will contain approximately 260 wind turbines, or an average of 1.70 turbines per square mile. The area is currently agricultural in nature and access to properties are mainly provided by dirt roads. Located within the project boundaries, there are a total of four municipalities.

PHOTOGRAPHS



Single-Family Homes-Kratzburg



Single-Family Homes-Kratzburg



Rural Residential



Agricultural Land



Agricultural Land



Street View



Street View



Street View

Zoning Requirements

We have reviewed the zoning code related to wind projects in each of the three counties. Overall, the zoning requirements are very similar in each of the counties. The zoning requires a 1,500 foot setback from any building structure, defined as home, business, church, school, or building owned or operated by a government entity. There is also at least a 1.0 mile setback from any city located within the counties. The zoning code also require measurable standards to minimize the effects of shadow flicker and sound on structures and non-participating landowners. In addition, the developer of the project must have a haul road agreement which will restore roads to their previous condition after construction of the project.

Grant County

The following information summarizes the ordinance for Grant County.

Setback Requirements

Building Structure:	1,500 feet
Municipal Boundaries:	1.0 Miles
Public Right-Of-Way:	500 Feet, or 110% of the vertical height of the turbine, whichever is greater
Distance From Property Line	500 Feet, or 110% of the vertical height of the turbine, whichever is greater

Noise Standards

The maximum sound level permitted cannot exceed 45 decibels for non-participating residences or 50 decibels for participating residences.

Shadow Flicker

The "Shadow Flicker" effect occurs during the early morning or late evening when the sun is low and the wind turbine creates a shadow. As the turbine blades rotate, a shadow moves and appears to flickers on and off. The developer will analyze the impact of shadow flicker on any building structure within one mile of a turbine. Shadow flicker is not allowed to exceed 30 hours per year on these structures, which is an average of less than five minutes per day.

Roads Requirement

The zoning requires that prior to construction, the developer identifies all haul roads that will be used for the project. The roads that will be subject to excess wear will be repaired after construction subject to a "haul road agreement" with the county. The developer also agrees to repair all private roads that may be damaged during construction and utilize reasonable measures to control dust.

Codington County

The following information summarizes the ordinance for Codington County

Setback Requirements

Building Structure:	1,500 feet
Municipal Boundaries:	1.0 miles
Public Right-Of-Way:	110% of the vertical height of the turbine (Up to 535 feet)
Distance From Property Line	110% of the vertical height of the turbine (Up to 535 Feet)



Noise Standards

The maximum sound level permitted cannot exceed 50 decibels for non-participating residences.

Shadow Flicker

The developer will analyze the impact of shadow flicker on any building structure within one mile of a turbine. Shadow flicker is not allowed to exceed 30 hours per year on these structures, which is an average of less than five minutes per day.

Roads Requirement

The zoning requires that prior to construction, the developer identifies all haul roads that will be used for the project. The roads that will be subject to excess wear will be repaired after construction subject to a "haul road agreement" with the county. The developer also agrees to repair all private roads that may be damaged during construction and utilize reasonable measures to control dust.

Zoning Requirements-Deuel County

The following information summarizes the ordinance for Deuel County.

Setback Requirements

Building Structure:	1,500 feet
Non-Participating Residents:	Four times the height of the turbine (Up to 1,940 feet, depending on the turbine)
Municipal Boundaries:	1.0 to 1.5 Miles. Goodwin requires a setback of 1.0 miles
Public Right-Of-Way:	110% of the vertical height of the turbine (Up to 535 feet)
Distance From Property Line	110% of the vertical height of the turbine (Up to 535 feet)

Noise Standards

The maximum sound level permitted cannot exceed 45 decibels for non-participating residences.

Shadow Flicker

The developer will analyze the impact of shadow flicker on any building within one mile of a turbine. Shadow flicker is not allowed to exceed 30 hours per year on these structures, which is an average of less than five minutes per day.

Roads Requirement

The zoning requires that prior to construction, the developer identifies all haul roads that will be used for the project. The roads that will be subject to excess wear will be repaired after construction subject to a "haul road agreement" with the county. The developer also agrees to repair all private roads that may be damaged during construction and utilize reasonable measures to control dust.

Impact of the Project

In this section, we discuss the impact of the project on the utility of surrounding properties. As discussed earlier, the area is primarily agricultural in nature with four cities located within the boundaries. Therefore, our analysis has focused on how the project will impact agricultural land and residential properties. Real estate markets are influenced by attitudes, interactions and the motivations of buyers and sellers in a particular market. Real estate values are affected by risk and future expectations. The proposed Crown Ridge Wind Project will represent an externality on the surrounding properties, which is defined as "1. The principle that economies outside a property have a positive effect on value while diseconomies outside a property have a negative effect on value. 2. In appraisal, off-site conditions that affect a property's value. Exposure to street noise or proximity to blighted property may exemplify negative externality, whereas proximity to attractive or well-maintained properties or easy access to mass transit may exemplify positive externalities." (Dictionary of Real Estate Appraisal, Sixth Edition). Below, we discuss both the positive and negative externalities that the proposed project will have on surrounding land uses.

Positive Externalities

The project will have several positive externalities that should improve the value of surrounding agricultural, and residential properties. These positive externalities include:

1. Job growth in the area, including temporary construction jobs that will last for about one year, and permanent jobs that are necessary for the maintenance of the project.
2. Annual payments made to local owners for the leasing of the land.
3. Additional property tax revenue that will be paid by the project. A large portion of this tax revenue will fund the local school districts. The quality of schools are an important consideration to the valuation of residential properties.

Agricultural

Agricultural land has specific characteristics that are important to value, according to The Appraisal of Real Estate, 14th Edition. These characteristics include location and distance to major markets, climate and potential crops that can be grown, crop values, soil quality, water rights, and environmental controls. Agricultural land values are determined by the future expected rate of return, either through the value of the crops sold or rental payments that can be collected through leases.

The zoning in each of the three counties requires the project to have as minimal impact as possible on the surrounding agricultural uses. The developer must mitigate any impact the construction will have on the surrounding topsoil, compaction of land during all phases of the projects life and only clear the site to the extent that it is necessary to ensure suitable access of construction and safe operation and maintenance of the project. Also, each of the three counties has a "road haul" agreement that the developer will repair all roadways after completion of construction of the project. The developer also agrees to repair all private roads that may be damaged during construction and utilize reasonable measures to control dust. In order to install the wind turbines, the developers will need to access public roadways in the area. The project will also require the construction of interior roadways that will provide access to the turbines themselves. Farm equipment will be able to cross these interior roads and they will not meaningfully interfere with the surrounding agricultural uses.

Residential

Major characteristics that affect residential values are location and distance to employment and support services, quality of schools, size, condition, number of bedrooms and bathrooms, and layout. Concerns about the nuisance impacts of wind projects on residential property values, can generally be categorized as follows:

1. **View:** Some people believe that the wind turbines are unattractive and tower over surrounding homes in the area. The issue of view is mitigated by the zoning requirements in each of the three counties. A turbine is not allowed to be constructed within 1,500 feet of a building structure such as a home, business, church, school, or building owned or operated by a government entity. A turbine also cannot be constructed within 1.0 miles (5,280 feet) of a municipality. The zoning requirements do permit participating landowners to construct turbines close to occupied structures, up to a distance of only 550 linear feet. However, an official and NextEra Energy Resources informed us that they try to minimize the construction of turbines closer than 1,500 linear feet for participating landowners.
2. **Sound:** The wind turbines can produce a whooshing sound during operation. The effect of this sound on the surrounding area is also mitigated by the zoning requirements. The maximum sound level permitted at the boundary of the district shall not exceed 50 decibels for a non-participating landowner in each of the three counties. Grant County and Deuel County requires that sound be not exceed 45 decibels for non-participating landowners.

The decibel is a logarithmic unit used to express the intensity of sound, where 10 db corresponds to a change in power by a factor of 10. 50 decibels is considered to be moderate noise and is approximately as loud as a typical dishwasher or a mid-size window air conditioner. The sound levels are considered to be low enough to have a minimal impact on residential use.

3. **Shadow Flicker:** The "Shadow Flicker" effect occurs during the early morning or late evening when the sun is low and the wind turbine creates a shadow. As the turbine blades rotate, a shadow moves and appears to flickers on and off. The location of the shadow varies by time of day and season, but usually only falls on a single location for a few minutes each sunny day. The issue of shadow flicker is mitigated by the zoning requirements in each of the three counties. The zoning requires that a shadow flicker analysis be conducted on any school church, business or occupied dwelling within a one-mile radius of turbine. Shadow flicker at any of these building shall not exceed 30 hours per year, which equates to an average of approximately five minutes per day.

Conclusion

The area surrounding the wind farms is mainly agricultural with a total of four cities within the project area. The project will have several positive externalities which should have a positive impact on property values, including job growth in the area, rental payments to other property owners, and additional tax revenue. The zoning requirements require the project to have as minimal impact as possible on the surrounding agricultural uses. Based upon our discussion with market participants, the project is not considered to have a major impact on the utility of agricultural use in the area. There is a concern in the market for nuisance impacts on residential uses, which include obstructed view, sound, and shadow flicker. However, these nuisance impacts are diminished by the zoning requirements at the project for each of the three counties.

Academic Literature

We have reviewed current academic literature that has examined if wind farms have an impact on surrounding residential, commercial or agricultural real estate values. We have searched Google Scholar and JSTOR, a digital library that contains full text for more than 2,000 academic journals. We have also reviewed articles from third party sources such as Realtor.com, American Wind Energy Association, and Wind-Watch.org, a website that is critical of Wind Energy Projects. Our standards require that the articles described below have been published in an academic peer-reviewed journal, and that the areas analyzed are located within the United States.

In all, we have reviewed three articles that are discussed in greater detail below. Each of the three articles found that the impact of wind farms on surrounding home values is not statistically significant. A result that is statistically significant is not likely to occur randomly, but rather is likely to be attributable to a specific cause. Before these tests were performed, a threshold value of 0.1, or 10%, was chosen as a significance level. In other words, none of the studies were able to predict with a 90% confidence that any decrease in property value was due to the presence of the wind farm, as opposed to other factors. The ability to find results that are statistically significant increases as the sample size increases. Within the past several years, there have been several studies that have analyzed a large number of sales over a much longer period that have added to our understanding of the affect that wind turbines have on surrounding property values. Below, we quote the abstract of these articles and briefly discuss the results.

1. Corey Lang, James J. Opaluch and George Sfinarolakis. "The windy city: Property value impacts of wind turbines in an urban setting." *Energy Economics* (June 2014)

"This paper examines the impact of wind turbines on house values in Rhode Island. In contrast to wind farms surrounded by sparse development, in Rhode Island single turbines have been built in relatively high population dense areas. As a result, we observe 48,554 single-family owner-occupied transactions within five miles of the turbine site, including 3,254 within one mile, which is far more than most related studies... Across a wide variety of specifications, the results suggest that wind turbines have no statistically significant negative impacts on house prices, in either the post public announcement phase or post construction phase. Further, the lower bound of statistically possible impacts is still outweighed by the positive externalities generated by CO2 mitigation."

The article used three models to examine the effects on property values within ½ mile, one mile, two miles and three miles during both the post-announcement pre-construction phase as well as the post-construction phase. For homes located within one half mile of a turbine, the study found an effect on value of less than 1% in both phases. For homes between one half mile and one mile from a turbine, the authors found an effect of -2% to -3% in the post announcement, pre-construction phase. However, there was essentially no effect on home values in the post construction phase. The following table shows the results of the study. The top line shows the impact on home values, while the line below in parenthesis shows the standard deviations. None of the results are statistically significant.



Difference-in-differences		Model 1	Model 2	Model 3
2 - 3 miles	PAPC	-0.008 (0.020)	-0.009 (0.020)	-0.008 (0.018)
	PC	0.007 (0.014)	0.008 (0.014)	0.006 (0.015)
1 - 2 miles	PAPC	-0.041 (0.037)	-0.040 (0.036)	-0.039 (0.036)
	PC	-0.002 (0.017)	-0.009 (0.019)	-0.010 (0.018)
0.5 - 1 miles	PAPC	-0.029 (0.030)	-0.032 (0.028)	-0.029 (0.028)
	PC	-0.001 (0.033)	0.003 (0.031)	0.002 (0.030)
0 - 0.5 miles	PAPC	-0.009 (0.060)	-0.001 (0.053)	-0.004 (0.054)
	PC	-0.004 (0.042)	-0.001 (0.039)	-0.004 (0.038)

2. Carol Atkinson-Palombo and Ben Hoen "Relationship between Wind Turbines and Residential Property Values in Massachusetts." *A Joint Report of University of Connecticut and Lawrence Berkeley National Laboratory* (January 2014)

"To determine if wind turbines have a negative impact on property values in urban settings, this report analyzed more than 122,000 home sales, between 1998 and 2012, that occurred near the current or future location of 41 turbines in densely-populated Massachusetts communities. The results of this study do not support the claim that wind turbines affect nearby home prices... Weak evidence suggests that the announcement of the wind facilities had a modest adverse impact on home prices, but those effects were no longer apparent after turbine construction and eventual operation commenced. The analysis also showed no unique impact on the rate of home sales near wind turbines."

This study was able to find the statistically significant effects from a variety of negative features, such as landfills and major roadways, as well as positive features such as beaches. In fact, the study found a small positive impact (0.5%) on value for single-family homes within a half mile of the turbine, although this impact was not statistically significant.

3. Ben Hoen, Jason P. Brown, Thomas Jackson, Ryan Wisner, Mark Thayer and Peter Capers. "A Spatial Hedonic Analysis of the Effects of Wind Energy Facilities on Surrounding Property Values in the United States." *Ernest Orlando Lawrence Berkeley National Laboratory* (August 2013)

This study "collected data from more than 50,000 home sales among 27 counties in nine states. These homes were within 10 miles of 67 different wind facilities, and 1,198 sales were within one miles of a turbine—many more than previous studies had collected. The data span the periods well before the announcement of the wind facilities to well after their construction...Regardless of model specification, we find no statistical evidence that home values near turbines were affected in the post-construction or post announcement/pre-construction periods."

The article used various models to examine the effects on property values within ½ mile and one mile during both the post-announcement pre-construction phase as well as the post-construction phase. The



models showed some moderate effects for home values, mostly in the range of a 0% to 4% decrease in home values. However, none of the results were statistically significant. For an effect in the post-construction period to be found for homes within one mile of a turbine, then a difference in value of 4.9%, either positive or negative, would have to be present. Therefore, it is highly unlikely that the average effect for homes located within one mile of a turbine is larger than +/-4.9%.

Conclusion

In all, we reviewed a total of three academic articles that have appeared in peer reviewed journals over the past five years. In each of the articles that we that we reviewed, the results of the study showed that the effects on wind farms on surrounding property value were not statistically significant. We would expect that the impact on property values to be the greatest on homes that are very close to a wind turbine, where the nuisances are most apparent. Many of the studies that we reviewed were in densely populated areas in the northeast. The area around the proposed project is generally rural in nature. It is typical for a single-family home to represent only a small portion of the total value of an agricultural farm. Therefore, we would expect the impact on value to be even less than in densely populated areas that have been discussed earlier. Considering the results of the academic literature, as well as the rural nature of the area, we would expect there to be no measurable impact on property values.



Paired Sales Analysis-Agricultural Land

Methodology

According to the The Appraisal of Real Estate, 14th Edition, published by the Appraisal Institute, paired data analysis is defined as follows:

A quantitative technique used to identify and measure adjustments to the sale prices or rents of comparable properties; to apply this technique, sales or rental data on nearly identical properties except for one characteristic is analyzed to isolate the single characteristic's effect on value or rent.¹

The text also cautions that *paired data analysis should be made with extreme care to ensure that the properties are truly comparable and that other differences do not exist.²*

The sales comparison approach is based on the premise that a buyer would pay no more for a specific property than the cost of obtaining a property with the same quality, utility, and perceived benefits of ownership. It is based on the principles of supply and demand, balance, substitution and externalities. In the sales comparison approach, an indication of market value is developed by analyzing closed sales of similar properties, using the most relevant units of comparison. The comparative analysis focuses on the difference between the comparable sales and the subject property using all appropriate elements of comparison.

Methodology

We have examined sales in Brookings County, South Dakota in order to determine the impact on wind turbines on agricultural land. Brookings County is the home of three wind farms that began operation between 2008 and 2010. The MinnDakota Wind Farm is located on the eastern edge of the county and contains a total of 36 turbines and began operation in 2008. The Buffalo Ridge I Wind Farm is located in the northern portion of the county and contains a total of 24 wind turbines. This wind farm began operation in 2009. The Buffalo Ridge II Wind Farm is located in the northern portion of the Brookings County and the southern portion of Deuel County. This wind farm contains a total of 105 turbines and began operation in 2010.

In total, we have reviewed all of the sales of agricultural land in Brookings County since the beginning of 2011. We have also reviewed all of the recent agricultural land sales in Deuel County and Day County. Each of these counties have wind farms that have been in operation for since 2009 and 2010 respectively. However, there have been very few sales in the areas around wind turbines in Day County and Deuel County, which have not permitted a paired sales analysis.

¹ The Appraisal of Real Estate, 14th Edition, Appraisal Institute, page 399

² Ibid, page 398



Paired Sales Analysis-Brookings County, South Dakota

Unit of Comparison

The primary unit of comparison selected depends on the appraisal problem and nature of the property. The primary unit of comparison in the market for agricultural land is price per acre.

Elements of Comparison

Elements of comparison are the characteristics or attributes of properties and transactions that cause the prices of real estate to vary. The main elements of comparison that should be considered in sales comparison analysis are as follows: (1) real property rights conveyed, (2) financing terms, (3) conditions of sale, (4) expenditures made immediately after purchase, (5) market conditions, (6) location and (7) physical characteristics.

Comparable Sales Data

In total, we have examined all of the agricultural land sales in Brookings County since the beginning of 2011, as provided to us by the Brookings County Assessor. We have confirmed the relevant details of each of the sales analyzed in this section with a knowledgeable party, such as a buyer, seller or listing broker.

We have completed a paired sales analysis on properties that are located adjacent to turbines (within 1/2 mile) and properties that are located at least two miles away from a turbine in order to estimate if there is any impact from the project. We have concentrated on properties that are closest to turbines because this is where the perceived negative effects of the wind turbine would be the greatest.



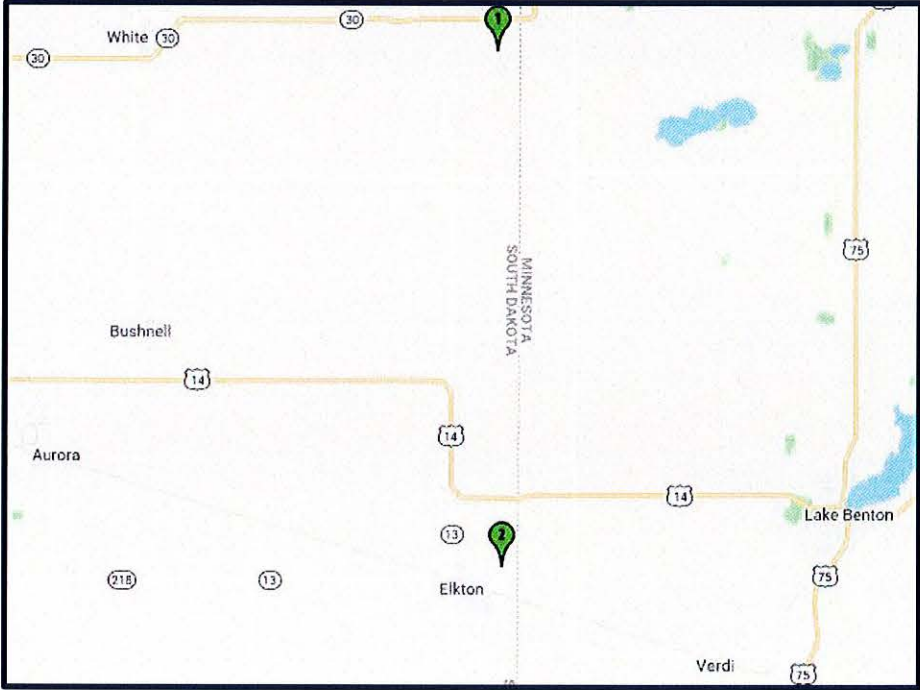
Pair A

The following table summarizes the sales that will be analyzed in Pair A. The subject is crop land located in Hendricks Township. This land has a wind turbines that are located within one half of a mile. Our paired sale is the crop land that is located two miles away from a turbine.

Land Sales Summary

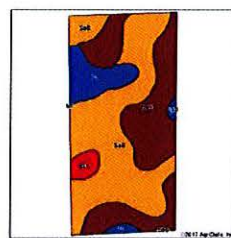
Comp. No.	Date of Sale	Usable Acres	Usable Sq. Ft.	% of Crop Land	Location	Township, County	Sales Price Actual	Per Acre
Sub	September-17	80.000	3,484,800	84%	20380 487th Avenue	Hendricks Township, Brookings County	\$340,000	\$4,250
1	October-17	80.000	3,484,800	58%	21674 487th Street	Elkton Township, Brookings County	\$304,000	\$3,800

COMPARABLE SALES MAP





LAND COMPARABLE 1



Parcel #	Area (Acres)	Color	Code
090001114710300	0.00	Blue	U-1
090001114710300	0.00	Orange	U-1
090001114710300	0.00	Red	U-1
090001114710300	0.00	Green	U-1
090001114710300	0.00	Yellow	U-1

Property Identification

Property/Sale ID	10240498/674492
Property Type	Agricultural Undeveloped
Property Name	Blackfork Land
Address	20380 487th Avenue
City, State Zip	Hendricks Township, South Dakota 57268
County	Brookings
MSA	0
Latitude/Longitude	44.429756/-96.463238
Tax ID	09000-11147-103-00

Transaction Data

Sale Date	09-19-2017	Conditions of Sale	Typical
Sale Status	Closed	Deed Book/Page	D151/814
Grantor	Sun Ray Acres	Sale Price	\$340,000
Grantee	Blackfork, LLC	Exp. Imm. After Sale	\$0
Property Rights	Fee Simple	Adjusted Price	\$340,000
Financing	Cash to Seller		

Property Description

Gross Acres	80.000	Utilities	Only Electric
Gross SF	3,484,800	Zoning Jurisdiction	AG
Usable Acres	80.000	Zoning Code	Agricultural
Usable SF	3,484,800		

Indicators

\$/Gross Acre	\$4,250	\$/Usable Acre	\$4,250
\$/Gross SF	\$.10	\$/Usable SF	\$.10

Verification

Confirmed With	Seller Broker-Heller Group Land Sales
Confirmation Date	12-12-2018

Remarks



Property was sold at auction. According to the listing broker, the wind turbines were not a significant concern during the listing. The buyer received a small amount of income for easement on the northern edge of their property so that the wind farm operator (MinnDakota Wind, LLC) could access a turbine located one quarter mile to the east. However, the listing broker did not believe that this small amount of income had an impact on the sales price.



LAND COMPARABLE 2



Property Identification

Property/Sale ID	10240538/674514
Property Type	Agricultural Undeveloped
Property Name	Xochitil Enterprises
Address	21674 487th Street
City, State Zip	Elkton Township, South Dakota 57026
County	Brookings
MSA	0
Tax ID	070001094715210

Transaction Data

Sale Date	10-10-2017	Financing	Typical
Sale Status	Closed	Conditions of Sale	Typical
Grantor	Henrietta Dezeeuw	Deed Book/Page	D151/872
Grantee	Xochitl Enterprises	Sale Price	\$304,000
Property Rights	Fee Simple	Adjusted Price	\$304,000

Property Description

Gross Acres	80.000	Utilities	Electric Only
Gross SF	3,484,800	Zoning Jurisdiction	AG
Usable Acres	80.000	Zoning Code	Agricultural
Usable SF	3,484,800		

Indicators

\$/Gross Acre	\$3,800	\$/Usable Acre	\$3,800
\$/Gross SF	\$.09	\$/Usable SF	\$.09

Verification

Confirmed With	Burlege Peterson Auctioneers and Realtors
Confirmed By	Andrew Baker
Confirmation Date	12-12-2018



Land Sales Comparison Analysis

We analyzed the sales and made adjustments for differences in the elements of comparison previously listed. The comparable sales are adjusted to the subject: if the comparable sale was superior to the subject, we applied a negative adjustment to the comparable sale. A positive adjustment to the comparable property was applied if it was inferior to the subject. A summary of the elements of comparison follows.

Transaction Adjustments

These items are applied prior to the application of property adjustments. Transaction adjustments include:

1. Real Property Rights Conveyed
2. Financing Terms
3. Conditions of Sale
4. Expenditures Made Immediately After Purchase
5. Market Conditions

Real Property Rights Conveyed

Before a comparable sale property can be used in the sales comparison approach, we must first ensure that the sale price of the comparable property applies to property rights that are similar to those being appraised. In the case of the subject property, a fee simple interest is being appraised. All of the sales should reflect a similar interest or an adjustment would be required for this element of comparison. Each of the sales was sold on the fee simple basis and no adjustment is required.

Financing Terms

The transaction price of one property may differ from that of an identical property due to different financial arrangements. Sales involving financing terms that are not at or near market terms require adjustments for cash equivalency to reflect typical market terms. A cash equivalency procedure discounts the atypical mortgage terms to provide an indication of value at cash equivalent terms. Each of the sales provided cash to the seller and no adjustment is required.

Conditions of Sale

When the conditions of sale are atypical, the result may be a price that is higher or lower than that of a normal transaction. Adjustments for conditions of sale usually reflect the motivations of either a buyer or a seller who is under duress to complete the transaction.

A review of the land sales did not indicate any condition of sale adjustments to be warranted for atypical conditions or for sale listings.

Expenditures Made Immediately After Purchase

A knowledgeable buyer considers expenditures that will have to be made upon purchase of a property because these costs affect the price the buyer agrees to pay. Such expenditures may include: (1) costs to cure deferred maintenance, (2) costs to demolish and remove any portion of the improvements, (3) costs to petition for a zoning change, (4) costs to remediate environmental contamination and/or (5) costs to occupy or lease-up the property to a stabilized occupancy

The relevant figure is not the actual cost incurred but the cost that was anticipated by both the buyer and seller. We have made no adjustment to any of the sales in order to account for expenditures made immediately after purchase.



Market Conditions Adjustment

Market conditions may change between the time of sale of a comparable property and the date of the appraisal of the subject property. Changes in market conditions may be caused by inflation, deflation, fluctuations in supply and demand, or other factors. Market conditions that change over time create the need for an adjustment. If market conditions have changed, an adjustment would be required for this element of comparison.

The subject sale (Sale 1) was sold in September 2017. The comparable sale (Sale 2) was sold in October 2018. The sales represent transactions near the same time and no adjustment is required.

Property Adjustments

Property adjustments are usually expressed quantitatively as percentages that reflect the increase or decrease in value attributable to the various characteristics of the property. In some instances, however, qualitative adjustments are used. These adjustments are based on locational and physical characteristics and are applied after the application of transaction adjustments. The adjustments include:

1. Location
2. Size
3. Shape/Depth
4. % Cropland
5. Soil Rating of Cropland

Location

Location adjustments may be required when the locational characteristics of a comparable are different from those of the subject. Each of the comparable sales are located in the eastern portion of Brookings County and no adjustment is considered to be necessary.

Size

The size adjustment identifies variances in the physical size of the comparables and the subject improvements. Typically, the larger a parcel, the lower the sale price per unit. This has to do, in part, with the fact that there is a larger pool of potential purchasers for smaller sites. We have made no adjustment to any of the sales in order to account for differences in size.

Shape

Each of the comparable sales have a rectangular shape and no adjustment is considered to be necessary.

Percent Cropland

The subject sale (Sale 1) has 84% of the total land area as cropland. The comparable sale (Sale 2) has 58% of the total land area as cropland. We have adjusted Sale 2 upward 10% in order to account for its inferior amount of cropland.

Soil Rating of Cropland

According to information provided by Surety AgriData, Sale 1 has a productivity index of 65.3 and Sale 2 has a productivity index of 67.3. The soil rating of the two sales is considered to be similar and no adjustment is required.



Summary of Adjustments

Based on the preceding analysis, we have summarized adjustments to the sale comparables on the following adjustment grid. These quantitative adjustments are based on our market research, best judgment, and experience in the appraisal of similar properties.

Land Sales Adjustment Grid

	Subject	Subject t	Comp 1
Sale ID		674492	674514
Date of Value & Sale		September-17	October-17
Unadjusted Sales Price		\$340,000	\$304,000
Usable Acres		80.000	80.000
Unadjusted Sales Price per Usable Acre		\$4,250	\$3,800
Transactional Adjustments			
Property Rights Conveyed			
		<i>Fee Simple</i>	<i>Fee Simple</i>
Adjusted Sales Price		\$4,250	\$3,800
Financing Terms			
		<i>Cash to Seller</i>	<i>Typical</i>
Adjusted Sales Price		\$4,250	\$3,800
Conditions of Sale			
		<i>Typical</i>	<i>Typical</i>
Adjusted Sales Price		\$4,250	\$3,800
Expenditures after Sale			
Adjusted Sales Price		\$0	
		\$4,250	\$3,800
Market Conditions Adjustments			
Elapsed Time from Date of Value			
		-117.80 years	-117.86 years
Market Trend Through		-	-
Analyzed Sales Price		\$4,250	\$3,800
Physical Adjustments			
Location			
		20380 487th Avenue	21674 487th Street
		Hendricks Township, South Dakota	Elkton Township, South Dakota
Adjustment		-	-
Size			
		80.000 acres	80.000 acres
Adjustment		-	-
Shape/Depth			
		Rectangular	Rectangular
Adjustment		-	-
% Cropland			
		84%	58%
Adjustment		-	10.0%
Soil Rating of Cropland			
		65.3	67.3
Adjustment		-	-
Net Physical Adjustment		-	10.0%
Adjusted Sales Price per Usable Acre		\$4,250	\$4,180



Conclusion-Analysis Pair A

From the market data, two sales in competitive market areas were selected as most comparable. The subject sale (Sale 1) is located within a half mile of a wind turbine has a sale price of \$4,250 per acre. The comparable sale (Sale 2) is not located near a wind turbine and had a sale price of \$3,800 per acre. We have adjusted our paired sale upward 10% as this property contains a lower percentage of cropland than the subject. The difference in adjusted sales price was a positive 1.7% for the subject sale.



Pair B

The following table summarizes the sales that will be analyzed in Pair B. The subject (Sale 3) is pasture land, which is located within one half mile of a wind turbine. Our paired sale (Sale 4) is also pasture land that is located about 2.5 miles away from the nearest wind turbine.

Land Sales Summary

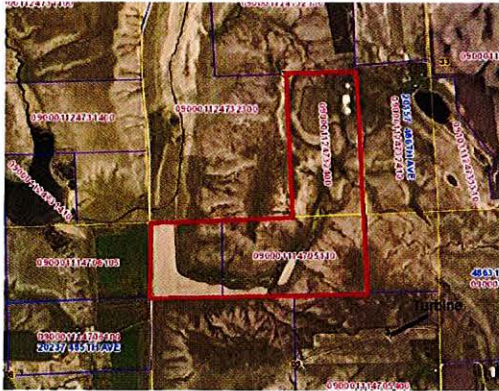
Comp. No.	Date of Sale	Usable Acres	Usable Sq. Ft.	% of Crop Land	Location	Township, County	Sales Price Actual	Per Acre
SUB	July-15	206.450	8,992,962	9%	20240 485th Avenue	Lake Hendricks Township, Brookings County	\$500,640	\$2,425
1	December-13	240.000	10,454,400	0%	48461 200th Street	Oaklake Township, Brookings County	\$679,200	\$2,830

COMPARABLE SALES MAP





LAND COMPARABLE 3



Property Identification

Property/Sale ID	10240513/674501
Property Type	Agricultural Undeveloped
Property Name	Pasture Land
Address	20240 485th Avenue
City, State Zip	Lake Hendricks Township, South Dakota 57268
County	Brookings
MSA	0
Latitude/Longitude	44.447185/-96.499529
Tax ID	09000-11147-052-00, 09000-11147-051-10, 09000-11247-324-00

Transaction Data

Sale Date	07-10-2015	Conditions of Sale	Typical
Sale Status	Closed	Deed Book/Page	D149/676
Grantor	Leona Moen Trust	Sale Price	\$500,640
Grantee	Eastview Farms, LLC	Exp. Imm. After Sale	\$0
Property Rights	Fee Simple	Adjusted Price	\$500,640
Financing	Cash to Seller		

Property Description

Gross Acres	206.450	Utilities	Electric Only
Gross SF	8,992,962	Zoning Jurisdiction	Ag
Usable Acres	206.450	Zoning Code	Agricultural
Usable SF	8,992,962		

Indicators

\$/Gross Acre	\$2,425	\$/Usable Acre	\$2,425
\$/Gross SF	\$.06	\$/Usable SF	\$.06

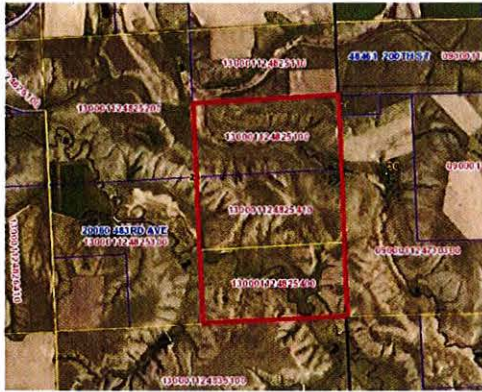
Verification

Confirmed With	Tyler Burlage-Burlage Peterson Auctions
Confirmed By	Andrew Baker
Confirmation Date	12-12-2018

Remarks



Property was sold at auction and purchased as pasture ground for cattle. According to the listing broker, the price was in-line with other pasture ground in the area, which was in the range of \$2,000 to \$2,500 as of 2015.

LAND COMPARABLE 4


zweep land

Property Identification

Property/Sale ID	10240643/674611
Property Type	Agricultural Undeveloped
Property Name	Zweep Land
Address	48461 200th Street
City, State Zip	Oaklake Township, South Dakota 57268
County	Brookings
MSA	0
Latitude/Longitude	44.475726/-96.531053
Tax ID	13000-11248-251-00, 13000-11248-254-00, 13000-11248-254-10

Transaction Data

Sale Date	12-06-2013	Financing	Cash to Seller
Sale Status	Closed	Conditions of Sale	Typical
Grantor	Emily Reitman Et Al	Deed Book/Page	D147/1093
Grantee	Thomas William Zweep Et Al	Sale Price	\$679,200
Property Rights	Fee Simple	Exp. Imm. After Sale	\$0
		Adjusted Price	\$679,200

Property Description

Gross Acres	240.000	Utilities	Electric Only
Gross SF	10,454,400	Zoning Code	Ag
Usable Acres	240.000	Zoning Description	Agricultural
Usable SF	10,454,400		

Indicators

\$/Gross Acre	\$2,830	\$/Usable Acre	\$2,830
\$/Gross SF	\$.06	\$/Usable SF	\$.06

Verification

Confirmed With	Dale Zweep (Representative of Buyer)
Confirmation Date	12-12-2018

Remarks



Property was purchased as pasture ground for cattle ranching.



Transaction Adjustments

We have made no adjustment to any of transaction adjustments that we have previously described. The subject sale (Sale 3) was sold in September 2017. The comparable sale (Sale 4) was sold in October 2018. The sales represent transactions near the same time and no adjustment is required.

Property Adjustments

Location

Each of the comparable sales are located in the eastern portion of Brookings County and no adjustment is considered to be necessary.

Size

The size adjustment identifies variances in the physical size of the comparables and the subject improvements. Typically, the larger a parcel, the lower the sale price per unit. This has to do, in part, with the fact that there is a larger pool of potential purchasers for smaller sites. The subject sale (Sale 3) contains 206.45 acres and the comparabl sale (Sale 3) contains 240.00 acres. The sales are considered to have a similar size and no adjustment is considered to be necessary.

Shape

The subject sale (Sale 2) has an irregular shape. In addition, the listing broker informed us that the fence around this property was in poor condition and the shape would increase the costs to replace this fence. The comparable sale (Sale 4) has a rectangular shape and has been adjusted downward 10% in order to account for its superior shape.


Land Sales Adjustment Grid

	Subject	Subject	Comp 1
Sale ID		674501	674611
Date of Value & Sale		July-15	December-13
Unadjusted Sales Price		\$500,640	\$679,200
Usable Acres		206.450	240.000
Unadjusted Sales Price per Usable Acre		\$2,425	\$2,830
Transactional Adjustments			
Property Rights Conveyed		<i>Fee Simple</i>	<i>Fee Simple</i>
Adjusted Sales Price		\$2,425	\$2,830
Financing Terms		<i>Cash to Seller</i>	<i>Cash to Seller</i>
Adjusted Sales Price		\$2,425	\$2,830
Conditions of Sale		<i>Typical</i>	<i>Typical</i>
Adjusted Sales Price		\$2,425	\$2,830
Expenditures after Sale		<i>\$0</i>	<i>\$0</i>
Adjusted Sales Price		\$2,425	\$2,830
Market Conditions Adjustments			
Elapsed Time from Date of Value			
Market Trend Through		-	-
Analyzed Sales Price		\$2,425	\$2,830
Physical Adjustments			
Location		20240 485th Avenue	48461 200th Street
		Lake Hendricks Township, South Dakota	Oaklake Township, South Dakota
Adjustment		-	-
Size		206.450 acres	240.000 acres
Adjustment		-	-
Shape/Depth		<i>Irregular</i>	<i>Rectangular</i>
Adjustment		-	-10.0%
Net Physical Adjustment		-	-10.0%
Adjusted Sales Price per Usable Acre		\$2,425	\$2,547

Analysis-Pair B

We have adjusted our paired sale downward 10% as this property contains a lower percentage of cropland than the subject. The difference in adjusted sales price was 1.0%.



Conclusion-Paired Sales B

The subject sale (Sale 3) is located within a half mile of a wind turbine has a sale price of \$2,425 per acre. The comparable sale (Sale 4) is not located near a wind turbine and had a sale price of \$2,830 per acre. We have adjusted our paired sale downward 10% due to its superior shape. The difference in adjusted sales price was a negative 4.8% for the subject sale.

Interviews with Market Participants in Brookings County

During the course of our research, we interviewed multiple individuals that had purchased or sold property in the area in order to determine what impact the wind turbines had on their marketing and sales prices.

David Bierman is a farmland manager for Capitaline, a company based in Brookings, South Dakota that invests in farmland throughout the region. He confirmed to us several sales of farmland that Capitaline had purchased near wind turbines in Brookings County. This included Sale 1 that was previously analyzed in this section. In addition, he confirmed the sale of 250.00 acres of cropland with four wind turbines that Capitaline had purchased for \$5,190 per acre in April 2018. He was not able to disclose the income that was received from these wind turbines. He said that the company did not see a negative impact for those properties located near turbines as it did not impact the agricultural uses at the site. He said that there may be a slight positive impact on value if there was the potential to add turbines to farmland in the future.

Tyler Burlege is a listing broker with Burlege Peterson Auctioneers. He confirmed to us the details of Sale 3 which were previously analyzed in this section. He estimated that at the time of this sale (July 2015) that pasture land in the region was selling in the range of \$2,000 to \$2,500 per acre. He said that he did not believe that the presence of the wind turbines had an impact on the sale price.

Pat Keltgen is an associate broker with Heller Group Land Sales. She confirmed to us the details of Sale 1, which was previously analyzed in this section. She informed us that this the buyer received a small amount of income from an easement to access a wind turbine directly to the east of this land. However, she did not believe that this additional income had a major impact on the sale price. Overall, she did not believe that the presence of the wind turbines had an impact on the sale price.

In addition to the sales analyzed in this section, we spoke with an official as the Brookings County Equalization Department. Based upon the sales that they have reviewed, Brookings County does not make any adjustment to property value for the presence of wind turbines.



Paired Sales Analysis-Residential Property

Methodology

In order to determine the impact of wind farms on residential property, we examined sales that were located in cities. Residences on large farms may only be a small portion of the overall value of the property, which makes precise adjustment difficult to measure. We have focused on repeat sales of homes that sold shortly before the construction of the wind farm and shortly after the construction of the wind. We have examined sales in the City of Toronto and City of Astoria, which are located in southern Deuel County near the Buffalo Ridge II wind farm. However, there have been very few sales in these cities and we were not able to find any repeat sales.

Our focus on the impact of wind turbines on residential properties have focused on two cities in Ford County, Kansas. Ford County is the home of the Speaville Wind Farm, which was constructed in three stages in 2006, 2008 and 2012. In total, this wind farm contains approximately 160 turbines. The windfarm completely surrounds the City of Speaville in all directions. There are multiple turbines that are located within a half mile of the municipality. This is closer than the zoning requirements in Grant County, Codington County and Deuel County, which each require a one mile setback from a municipality.

City of Spearville

The City of Spearville is located approximately 15 miles to the northeast of Dodge City, Kansas. As of the 2010 census, Spearville had a total population of 773 and the population has been steadily growing in recent years. This is in contrast to many of the small towns in the area, which typically have a stable or decreasing population. The following table shows basic demographic information for Spearville, Kansas.

Neighborhood Demographics

Demographics	Spearville, KS
Population Summary	
2000 Population	736
2010 Population	773
2016 Estimated Population	836
2021 Estimated Population	887
Annual % Change (2016 - 2021)	1.2%
Household Summary	
2016 Estimated Households	343
% Owner Occupied	72.3%
% Renter Occupied	21.6%
Income Summary	
2016 Estimated Median Household Income	\$59,788
2021 Estimated Median Household Income	\$71,604
Annual % Change	4.0%





Market Analysis-City of Spearville

The following is an analysis of the current residential market trends from 2001 to 2016 in the Spearville area. We have analyzed every valid residential sale that has been submitted to the Ford County Appraisers Office.

Sale Closings

In total, there have been 210 sales over the 16 year period, or an average of 13.1 sales per year. The data shows that years in which there has been additions to the wind farm (2006, 2008, and 2012) there have been a higher number of sale closings. The data does not show a significant change in the number of sale closings after the construction of the wind projects.

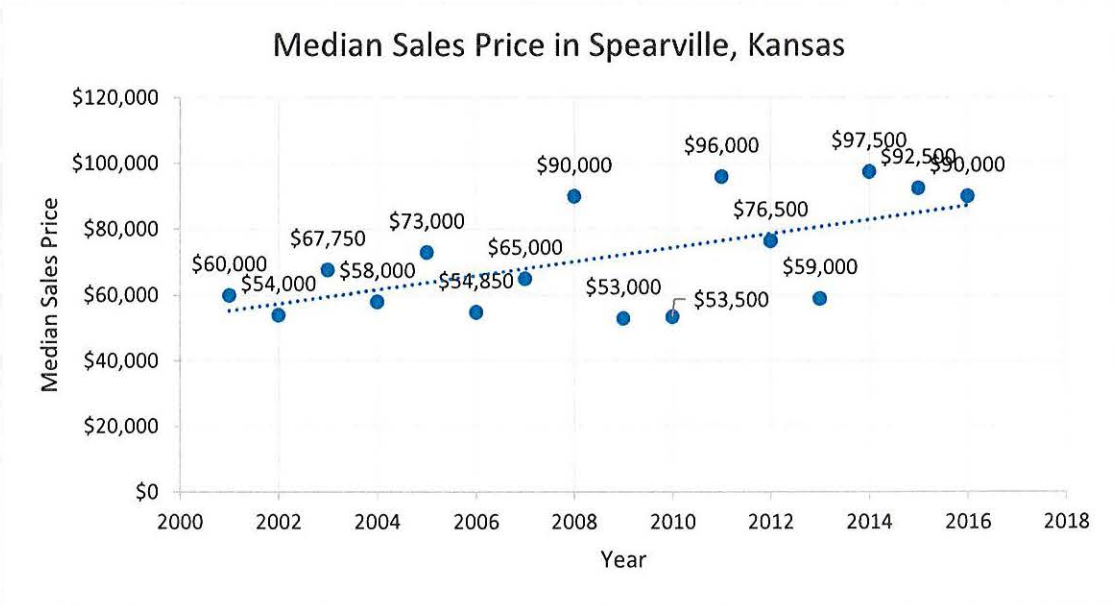
Number of Sales		
<i>Year</i>	<i>Number of Sales</i>	<i>% Change</i>
2001	12	
2002	26	117%
2003	10	-62%
2004	9	-10%
2005	12	33%
2006	18	50%
2007	16	-11%
2008	19	19%
2009	9	-53%
2010	11	22%
2011	7	-36%
2012	18	157%
2013	9	-50%
2014	12	33%
2015	12	0%
2016	10	-17%
Average:	13.1	
Total:	210	



Median Sale Price

During the 16 year period, sales prices for residential homes have varied between \$8,000 and \$266,000, with a total median sale price of \$67,950. In general, the median sale price of homes has increased steadily over the 16 year period. Median home prices were \$60,000 or less in the two years preceding the announcement of the first Spearville Windfarm (2001-2002). Over the previous three full years, median home price have been over \$90,000. The following table shows the median sale price each year.

Median Sale Price		
Year	Number of Sales	% Change
2001	\$60,000	
2002	\$54,000	-10%
2003	\$67,750	25%
2004	\$58,000	-14%
2005	\$73,000	26%
2006	\$54,850	-25%
2007	\$65,000	19%
2008	\$90,000	38%
2009	\$53,000	-41%
2010	\$53,500	1%
2011	\$96,000	79%
2012	\$76,500	-20%
2013	\$59,000	-23%
2014	\$97,500	65%
2015	\$92,500	-5%
2016	\$90,000	-3%
Total Median Price	\$67,950	



Pair A-102 Sill Street

The following table summarizes the sales that will be analyzed in Pair A. Pair A is a single-family home located at 102 Sill Street. This property sold for \$38,500 in August 2002, which was before the wind farm was approved by the zoning board. The property sold again in August 2006 for \$38,000, which indicated a 1% decrease in the sales price. Construction on the first phase of Spearville Wind Farm began in April 2006 and was completed in September 2006.

Physical Characteristics-102 Sill Street	
Address	102 Sill Street
City, State	Spearville, KS
Size (SF)	831
Year Built	1940
Number of Bedrooms	2
Number of Bathrooms	1



(102 Sill Street)


102 Sill Street Sale Information
Sale 1 Information

Date:	Aug-02
Sale Price:	\$38,500
Grantor:	Becki I. Stephenson
Grantee:	Kurt R. Peinter
Book/Page Number:	220/238
Property Rights:	Fee Simple
Financing:	Cash to Seller

Sale 2 Information

Date:	Aug-06
Sale Price:	\$38,000
Grantor:	Kurt R. & Ashley M. Peinter
Grantee:	William M. & Stephanie A. Hornug
Intrument Number:	228/543
Property Rights:	Fee Simple
Financing:	Cash to Seller

Difference in Price	-\$500
% Change in Price	-1%
Annual change in Price	0%

Property Adjustments Adjustments-Paired Sale 1

We have made no adjustment to any of transaction adjustments or physical property adjustment that we have previously described. We have also not made adjustment to the physical characteristics of the property. The subject sale (Sale 1) sold in August 2002 for \$38,500. The comparable sale (Sale 2) sold in August 2006 for \$38,000, which indicated a 1% change in value.

We spoke with the individual who purchased the property in 2002 and sold the property in 2006. He informed us that he got married in 2006 and was trying to quickly sell the house so that he could move to another town with his wife. He said that he believed if he had marketed the property longer in 2006 that he believed he could have gotten a higher sales price. During the time that he owned the property, he made no significant changes or renovations. He further stated that he grew up in Spearville, Kansas and wished to move back but could not due to the high real estate prices.



City of Wright, Kansas

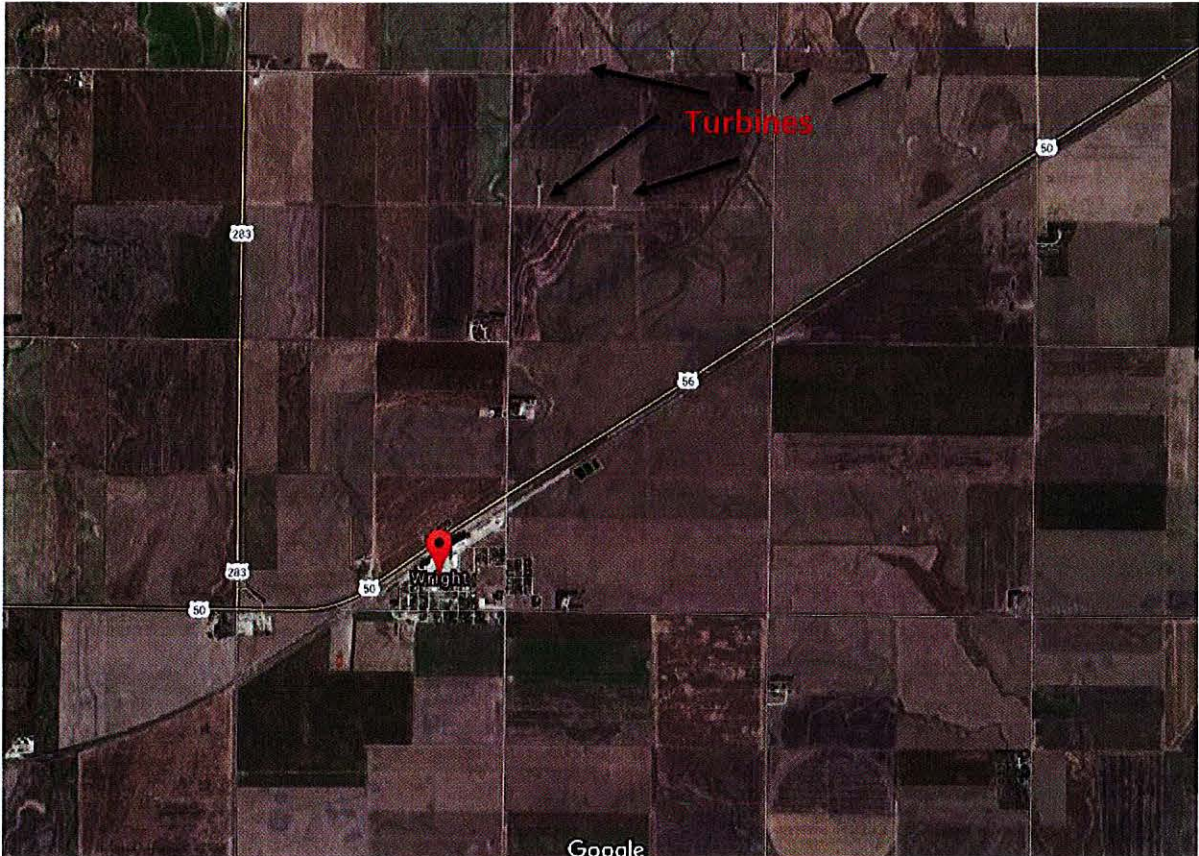
The City of Wright is located approximately five miles to the northeast of Dodge City, Kansas. As of the 2010 census, Wright had a total population of 163 and the population has been relatively stable in recent years. The following table shows basic demographic information for Wright, Kansas.

Neighborhood Demographics

Demographics	Wright, KS
Population Summary	
2010 Population	163
2016 Estimated Population	168
2021 Estimated Population	173
Annual % Change (2016 - 2021)	0.6%
Household Summary	
2016 Estimated Households	67
% Owner Occupied	69.6%
% Renter Occupied	26.1%
Income Summary	
2016 Estimated Median Household Income	\$62,932
2021 Estimated Median Household Income	\$73,040
Annual % Change	3.2%

Wright is located approximately one mile to the south of wind turbines in the Spearville 3 wind farm. This wind farm contains a total of 72 wind turbines. Construction for this wind farm began in the first quarter of 2012 and began operation in October 2012. The following aerial map shows Wright and the wind turbines that are located approximately one mile to the north.

In order to determine how the addition of the wind turbines has affected residential home values, we have examined repeat sales of homes in the City of Wright.





Pair B-11798 Wiseman Avenue

The following table summarizes the sales that will be analyzed in Pair B. Pair B is a single-family home located at 11796 Wiseman Avenue. This property sold for February 2012, which was shortly before the construction of the Spearville III Wind Farm. This property sold again in December 2014 which was after the completion of the windfarm.

Physical Characteristics-11796 Wiseman Ave	
Address	11796 Wiseman Ave.
City, State	Wright, KS
Size (SF)	1,012
Year Built	1928
Condition	Average
Number of Bedrooms	4
Number of Bathrooms	2



(11796 Wiseman Ave.)


11796 Wiseman Sale Information
Sale 1 Information

Date:	Feb-12
Sale Price:	\$65,000
Grantor:	James O. Slattery
Grantee:	Christopher A. & Katrina L. Hines
Book/Page Number:	239/277
Property Rights:	Fee Simple
Financing:	Cash to Seller

Sale 2 Information

Date:	Dec-14
Sale Price:	\$65,000
Grantor:	Christopher A. & Katrina L. Hines
Grantee:	Jenny A. Hirschfeld
Instrument Number:	244/418
Property Rights:	Fee Simple
Financing:	Cash to Seller

Difference in Price	\$0
% Change in Price	0%
Annual change in Price	0%

Property Adjustments Adjustments-Paired Sale B

We have made no adjustment to any of transaction adjustment that we have previously described. We have also not made adjustment to the physical characteristics of the property. This property sold for \$65,000 in February 2012, which was shortly before the construction of the Spearville III Wind Farm. This property sold for \$65,000 in February 2012, near the time when construction of the Spearville Wind Farm began. The property sold again in December 2014 for \$65,000, which indicates no change.

We spoke with the individual who purchased the property in February 2012 and sold the property in December 2014. He informed us that he had made no changes to the property except for some exterior paint work. He further stated that he did not believe that the construction of the wind farm had any effect on the marketing of the home or the eventual sales price.



Pair C-11970 Doll Street

The following table summarizes the sales that will be analyzed in Pair B. Pair B is a single-family home located at 11796 Wiseman Avenue. This property sold in March 2009 and was sold again in January of 2013.

Physical Characteristics-11790 Doll Street	
Address	11790 Doll Street
City, State	Wright, KS
Size (SF)	1,200
Year Built	1977
Condition	Average to Good
Number of Bedrooms	3
Number of Bathrooms	2



(11790 Doll Street)


11790 Doll Street Sale Information
Sale 1 Information

Date:	Mar-09
Sale Price:	\$93,000
Grantor:	Kirwin & Kimberly Ricke
Grantee:	Michael & Jamie Hartman
Book/Page Number:	234/50
Property Rights:	Fee Simple
Financing:	Cash to Seller

Sale 2 Information

Date:	Jan-13
Sale Price:	\$117,000
Grantor:	Michael & Jamie Hartman
Grantee:	David & Betty McClaren
Instrument Number:	241/336
Property Rights:	Fee Simple
Financing:	Cash to Seller

Difference in Price	\$24,000
% Change in Price	26%
Annual change in Price	7%

Property Adjustments Adjustments-Paired Sale C

We have made no adjustment to any of transaction adjustments adjustment that we have previously described. We have also not made adjustment to the physical characteristics of the property. This property sold for \$93,000 in March 2009, which was near the height of the financial crisis that had a negative impact on home values. The property sold again in January 2013 for \$117,000, which indicated a 26% change in value, or 7% per year.

We spoke with the individual who purchased the property in January 2013. She informed us that the previous owner had made no significant renovations to the property. Public records lists that a small shed was constructed on the property in 2011. There were no other permits for changes to the property in between the two sale dates. The buyer rented the property to a family member after the sale and did not have any concern about that the wind farm would impact the sales price.



Conclusion

In determining the affect that wind farms have on surrounding property values, we considered the academic literature, interviewed knowledgeable market participants, and analyzed sales data. Based upon all of the academic literature that we have reviewed, the presence of wind turbines does not have a statistically significant impact on surrounding home values. We conducted a paired sales analysis of properties located near wind turbines in Brookings County, South Dakota. The two paired sales that we analyzed did not show any significant impact on property value from the presence of the wind turbines. Interviews with local brokers in Brookings County also do not indicate that the wind turbines have impacted sales prices. Finally, we analyzed sales data for single-family homes in Wright, Kansas and Spearville, Kansas. This data did not show a measurable impact on value for repeat sales of home that occurred shortly before the construction of the wind farm and shortly after construction had been completed. Furthermore, interviews with buyers and sellers do not indicate that that the wind turbines are a significant consideration in determining the sales price.

Based upon our analysis, the report demonstrates the following:

The proposed Crowned Ridge Wind Farm will not measurably impact the value of surrounding properties located within Grant County, Codington County, or Deuel County.

Respectfully submitted,
Valbridge Property Advisors | Kansas City

A handwritten signature in blue ink, appearing to read "Andrew Baker".

Andrew Baker, MAI
Senior Appraiser
South Dakota Appraiser Permit Number: 1729-T-2018



General Assumptions & Limiting Conditions

This value impact study is subject to the following limiting conditions:

1. All information in this report has been obtained from reliable sources. We cannot, however, guarantee or be responsible for the accuracy of information furnished by others.
2. Possession of this report or a copy thereof does not imply the right of publication or use for any purpose by any other than the addressee, without the written consent of the appraiser. This report was prepared for the sole and exclusive use of the appraiser's client. No third parties are authorized to rely upon this report without the express written consent of the appraiser.
3. The appraiser is not required to give testimony or attendance in court by reason of this study, unless prior agreements have been made in writing.
4. Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the author, particularly as to the conclusions, the identity of the consultant or firm with which he is connected, or any reference to the Appraisal Institute.

Certification – Andrew Baker, MAI

I certify that, to the best of my knowledge and belief:

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, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. The undersigned has previously performed services regarding the impact of wind farms on surrounding property values 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 this report 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 a predetermined value or direction in value that favors the cause of the client, the amount of value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
8. My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
9. Andrew Baker has personally inspected the subject area.
10. No one provided significant real property appraisal assistance to the person signing this certification, unless otherwise noted.
11. The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
12. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
13. As of the date of this report, the undersigned has completed the continuing education program for Designated Members of the Appraisal Institute.



Andrew Baker, MAI
Senior Appraiser
South Dakota Appraiser Permit Number: 1729-T-
2018



Addenda



Glossary

Definitions are taken from the Dictionary of Real Estate Appraisal, 5th Edition (Dictionary), the Uniform Standards of Professional Appraisal Practice (USPAP) and Building Owners and Managers Association International (BOMA).

Absolute Net Lease

A lease in which the tenant pays all expenses including structural maintenance, building reserves, and management; often a long-term lease to a credit tenant. (Dictionary)

Additional Rent

Any amounts due under a lease that is in addition to base rent. Most common form is operating expense increases. (Dictionary)

Amortization

The process of retiring a debt or recovering a capital investment, typically through scheduled, systematic repayment of the principal; a program of periodic contributions to a sinking fund or debt retirement fund. (Dictionary)

As Is Market Value

The estimate of the market value of real property in its current physical condition, use, and zoning as of the appraisal date. (Dictionary)

Base (Shell) Building

The existing shell condition of a building prior to the installation of tenant improvements. This condition varies from building to building, landlord to landlord, and generally involves the level of finish above the ceiling grid. (Dictionary)

Base Rent

The minimum rent stipulated in a lease. (Dictionary)

Base Year

The year on which escalation clauses in a lease are based. (Dictionary)

Building Common Area

The areas of the building that provide services to building tenants but which are not included in the rentable area of any specific tenant. These areas may include, but shall not be limited to, main and auxiliary lobbies, atrium spaces at the level of the finished floor, concierge areas or security desks, conference rooms, lounges or vending areas food service facilities, health or fitness centers, daycare facilities, locker or shower facilities, mail rooms, fire control rooms, fully enclosed courtyards outside the exterior walls, and building core and service areas such as fully enclosed mechanical or equipment rooms. Specifically excluded from building common areas are; floor common areas, parking spaces, portions of loading

docks outside the building line, and major vertical penetrations. (BOMA)

Building Rentable Area

The sum of all floor rentable areas. Floor rentable area is the result of subtracting from the gross measured area of a floor the major vertical penetrations on that same floor. It is generally fixed for the life of the building and is rarely affected by changes in corridor size or configuration. (BOMA)

Certificate of Occupancy (COO)

A statement issued by a local government verifying that a newly constructed building is in compliance with all codes and may be occupied.

Common Area (Public) Factor

In a lease, the common area (public) factor is the multiplier to a tenant's useable space that accounts for the tenant's proportionate share of the common area (restrooms, elevator lobby, mechanical rooms, etc.). The public factor is usually expressed as a percentage and ranges from a low of 5 percent for a full tenant to as high as 15 percent or more for a multi-tenant floor. Subtracting one (1) from the quotient of the rentable area divided by the useable area yields the load (public) factor. At times confused with the "loss factor" which is the total rentable area of the full floor less the useable area divided by the rentable area. (BOMA)

Common Area Maintenance (CAM)

The expense of operating and maintaining common areas; may or may not include management charges and usually does not include capital expenditures on tenant improvements or other improvements to the property.

CAM can be a line-item expense for a group of items that can include maintenance of the parking lot and landscaped areas and sometimes the exterior walls of the buildings. CAM can refer to all operating expenses.

CAM can refer to the reimbursement by the tenant to the landlord for all expenses reimbursable under the lease. Sometimes reimbursements have what is called an administrative load. An example would be a 15 percent addition to total operating expenses, which are then prorated among tenants. The administrative load, also called an administrative and marketing fee, can be a substitute for or an addition to a management fee. (Dictionary)



Condominium

A form of ownership in which each owner possesses the exclusive right to use and occupy an allotted unit plus an undivided interest in common areas.

A multiunit structure, or a unit within such a structure, with a condominium form of ownership. (Dictionary)

Conservation Easement

An interest in real property restricting future land use to preservation, conservation, wildlife habitat, or some combination of those uses. A conservation easement may permit farming, timber harvesting, or other uses of a rural nature to continue, subject to the easement. In some locations, a conservation easement may be referred to as a conservation restriction. (Dictionary)

Contributory Value

The change in the value of a property as a whole, whether positive or negative, resulting from the addition or deletion of a property component. Also called deprival value in some countries. (Dictionary)

Debt Coverage Ratio (DCR)

The ratio of net operating income to annual debt service (DCR = NOI/Im), which measures the relative ability to a property to meet its debt service out of net operating income. Also called Debt Service Coverage Ratio (DSCR). A larger DCR indicates a greater ability for a property to withstand a downturn in revenue, providing an improved safety margin for a lender. (Dictionary)

Deed Restriction

A provision written into a deed that limits the use of land. Deed restrictions usually remain in effect when title passes to subsequent owners. (Dictionary)

Depreciation

1) In appraising, the loss in a property value from any cause; the difference between the cost of an improvement on the effective date of the appraisal and the market value of the improvement on the same date. 2) In accounting, an allowance made against the loss in value of an asset for a defined purpose and computed using a specified method. (Dictionary)

Disposition Value

The most probable price that a specified interest in real property is likely to bring under the following conditions:

- Consummation of a sale within a exposure time specified by the client;
- The property is subjected to market conditions prevailing as of the date of valuation;
- Both the buyer and seller are acting prudently and knowledgeably;

- The seller is under compulsion to sell;
- The buyer is typically motivated;
- Both parties are acting in what they consider to be their best interests;
- An adequate marketing effort will be made during the exposure time specified by the client;
- Payment will be made in 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. (Dictionary)

Easement

The right to use another's land for a stated purpose. (Dictionary)

EIFS

Exterior Insulation Finishing System. This is a type of exterior wall cladding system. Sometimes referred to as dry-vit.

Effective Date

1) The date at which the analyses, opinions, and advice in an appraisal, review, or consulting service apply. 2) In a lease document, the date upon which the lease goes into effect. (Dictionary)

Effective Rent

The rental rate net of financial concessions such as periods of no rent during the lease term and above- or below-market tenant improvements (TIs). (Dictionary)

EPDM

Ethylene Diene Monomer Rubber. A type of synthetic rubber typically used for roof coverings. (Dictionary)

Escalation Clause

A clause in an agreement that provides for the adjustment of a price or rent based on some event or index. e.g., a provision to increase rent if operating expenses increase; also called an expense recovery clause or stop clause. (Dictionary)

Estoppel Certificate

A statement of material factors or conditions of which another person can rely because it cannot be denied at a later date. In real estate, a buyer of rental property typically requests estoppel certificates from existing tenants. Sometimes referred to as an estoppel letter. (Dictionary)

Excess Land

Land that is not needed to serve or support the existing improvement. The highest and best use of the excess land



may or may not be the same as the highest and best use of the improved parcel. Excess land may have the potential to be sold separately and is valued separately. (Dictionary)

Expense Stop

A clause in a lease that limits the landlord's expense obligation, which results in the lessee paying any operating expenses above a stated level or amount. (Dictionary)

Exposure Time

1) The time a property remains on the market. 2) The estimated length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based on an analysis of past events assuming a competitive and open market. (Dictionary)

Extraordinary Assumption

An assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions. Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property such as market conditions or trends; or about the integrity of data used in an analysis. (Dictionary)

Fair Market Value

The price at which the property should change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts. [Treas. Reg. 20.2031-1(b); Rev. Rul. 59-60. 1959-1 C.B. 237]

Fee Simple Estate

Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat. (Dictionary)

Floor Common Area

Areas on a floor such as washrooms, janitorial closets, electrical rooms, telephone rooms, mechanical rooms, elevator lobbies, and public corridors which are available primarily for the use of tenants on that floor. (BOMA)

Full Service (Gross) Lease

A lease in which the landlord receives stipulated rent and is obligated to pay all of the property's operating and fixed expenses; also called a full service lease. (Dictionary)

Going Concern Value

- The market value of all the tangible and intangible assets of an established and operating business with an indefinite life, as if sold in aggregate; more accurately termed the market value of the going concern.
- The value of an operating business enterprise. Goodwill may be separately measured but is an integral component of going-concern value when it exists and is recognizable. (Dictionary)

Gross Building Area

The total constructed area of a building. It is generally not used for leasing purposes (BOMA)

Gross Measured Area

The total area of a building enclosed by the dominant portion (the portion of the inside finished surface of the permanent outer building wall which is 50 percent or more of the vertical floor-to-ceiling dimension, at the given point being measured as one moves horizontally along the wall), excluding parking areas and loading docks (or portions of the same) outside the building line. It is generally not used for leasing purposes and is calculated on a floor by floor basis. (BOMA)

Gross Up Method

A method of calculating variable operating expense in income-producing properties when less than 100 percent occupancy is assumed. The gross up method approximates the actual expense of providing services to the rentable area of a building given a specified rate of occupancy. (Dictionary)

Ground Lease

A lease that grants the right to use and occupy land. Improvements made by the ground lessee typically revert to the ground lessor at the end of the lease term. (Dictionary)

Ground Rent

The rent paid for the right to use and occupy land according to the terms of a ground lease; the portion of the total rent allocated to the underlying land. (Dictionary)

HVAC

Heating, ventilation, air conditioning. A general term encompassing any system designed to heat and cool a building in its entirety.

Highest & Best Use

The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest



and best use must meet are 1) legal permissibility, 2) physical possibility, 3) financial feasibility, and 4) maximally profitability. Alternatively, the probable use of land or improved –specific with respect to the user and timing of the use—that is adequately supported and results in the highest present value. (Dictionary)

Hypothetical Condition

That which is contrary to what exists but is supposed for the purpose of analysis. Hypothetical conditions assume conditions contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis. (Dictionary)

Industrial Gross Lease

A lease of industrial property in which the landlord and tenant share expenses. The landlord receives stipulated rent and is obligated to pay certain operating expenses, often structural maintenance, insurance and real estate taxes as specified in the lease. There are significant regional and local differences in the use of this term. (Dictionary)

Insurable Value

A type of value for insurance purposes. (Dictionary) (Typically this includes replacement cost less basement excavation, foundation, underground piping and architect's fees).

Investment Value

The value of a property interest to a particular investor or class of investors based on the investor's specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market. (Dictionary)

Just Compensation

In condemnation, the amount of loss for which a property owner is compensated when his or her property is taken. Just compensation should put the owner in as good a position as he or she would be if the property had not been taken. (Dictionary)

Leased Fee Interest

A freehold (ownership interest) where the possessory interest has been granted to another party by creation of a contractual landlord-tenant relationship (i.e., a lease). (Dictionary)

Leasehold Interest

The tenant's possessory interest created by a lease. (Dictionary)

Lessee (Tenant)

One who has the right to occupancy and use of the property of another for a period of time according to a lease agreement. (Dictionary)

Lessor (Landlord)

One who conveys the rights of occupancy and use to others under a lease agreement. (Dictionary)

Liquidation Value

The most probable price that a specified interest in real property should bring under the following conditions:

- Consummation of a sale within a short period.
- The property is subjected to market conditions prevailing as of the date of valuation.
- Both the buyer and seller are acting prudently and knowledgeably.
- The seller is under extreme compulsion to sell.
- The buyer is typically motivated.
- Both parties are acting in what they consider to be their best interests.
- A normal marketing effort is not possible due to the brief exposure time.
- Payment will be made in cash in U.S. dollars or in terms of financial arrangements comparable thereto.
- The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (Dictionary)

Loan to Value Ratio (LTV)

The amount of money borrowed in relation to the total market value of a property. Expressed as a percentage of the loan amount divided by the property value. (Dictionary)

Major Vertical Penetrations

Stairs, elevator shafts, flues, pipe shafts, vertical ducts, and the like, and their enclosing walls. Atria, lightwells and similar penetrations above the finished floor are included in this definition. Not included, however, are vertical penetrations built for the private use of a tenant occupying office areas on more than one floor. Structural columns, openings for vertical electric cable or telephone distribution, and openings for plumbing lines are not considered to be major vertical penetrations. (BOMA)

Market Rent

The most probable rent that a property should bring in a competitive and open market reflecting all conditions and restrictions of the lease agreement including permitted uses, use restrictions, expense obligations; term, concessions, renewal and purchase options and tenant improvements (TIs). (Dictionary)



Market Value

The most probable price which 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:

- a. Buyer and seller are typically motivated;
- b. Both parties are well informed or well advised, and acting in what they consider their own best interests;
- c. A reasonable time is allowed for exposure in the open market;
- d. Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and
- e. 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.

Market Value As If Complete

Market value as if complete means the market value of the property with all proposed construction, conversion or rehabilitation hypothetically completed or under other specified hypothetical conditions as of the date of the appraisal. With regard to properties wherein anticipated market conditions indicate that stabilized occupancy is not likely as of the date of completion, this estimate of value shall reflect the market value of the property as if complete and prepared for occupancy by tenants.

Market Value As If Stabilized

Market value as if stabilized means the market value of the property at a current point and time when all improvements have been physically constructed and the property has been leased to its optimum level of long term occupancy.

Marketing Time

An opinion of the amount of time it might take to sell a real or personal property interest at the concluded market value level during the period immediately after the effective date of the appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of an appraisal. (Advisory Opinion 7 of the Standards Board of the Appraisal Foundation and Statement on Appraisal Standards No. 6, "Reasonable Exposure Time in Real Property and Personal Property Market Value Opinions" address the determination of reasonable exposure and marketing time). (Dictionary)

Master Lease

A lease in which the fee owner leases a part or the entire property to a single entity (the master lease) in return for a stipulated rent. The master lessee then leases the property to multiple tenants. (Dictionary)

Modified Gross Lease

A lease in which the landlord receives stipulated rent and is obligated to pay some, but not all, of the property's operating and fixed expenses. Since assignment of expenses varies among modified gross leases, expense responsibility must always be specified. In some markets, a modified gross lease may be called a double net lease, net net lease, partial net lease, or semi-gross lease. (Dictionary)

Option

A legal contract, typically purchased for a stated consideration, that permits but does not require the holder of the option (known as the optionee) to buy, sell, or lease real property for a stipulated period of time in accordance with specified terms; a unilateral right to exercise a privilege. (Dictionary)

Partial Interest

Divided or undivided rights in real estate that represent less than the whole (a fractional interest). (Dictionary)

Pass Through

A tenant's portion of operating expenses that may be composed of common area maintenance (CAM), real estate taxes, property insurance, and any other expenses determined in the lease agreement to be paid by the tenant. (Dictionary)

Prospective Future Value Upon Completion

Market value "upon completion" is a prospective future value estimate of a property at a point in time when all of its improvements are fully completed. It assumes all proposed construction, conversion, or rehabilitation is hypothetically complete as of a future date when such effort is projected to occur. The projected completion date and the value estimate must reflect the market value of the property in its projected condition, i.e., completely vacant or partially occupied. The cash flow must reflect lease-up costs, required tenant improvements and leasing commissions on all areas not leased and occupied.

Prospective Future Value Upon Stabilization

Market value "upon stabilization" is a prospective future value estimate of a property at a point in time when stabilized occupancy has been achieved. The projected stabilization date and the value estimate must reflect the absorption period required to achieve stabilization. In addition, the cash flows must reflect lease-up costs,



required tenant improvements and leasing commissions on all unleased areas.

Replacement Cost

The estimated cost to construct, at current prices as of the effective appraisal date, a substitute for the building being appraised, using modern materials and current standards, design, and layout. (Dictionary)

Reproduction Cost

The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all of the deficiencies, super-adequacies, and obsolescence of the subject building. (Dictionary)

Retrospective Value Opinion

A value opinion effective as of a specified historical date. The term does not define a type of value. Instead, it identifies a value opinion as being effective at some specific prior date. Value as of a historical date is frequently sought in connection with property tax appeals, damage models, lease renegotiation, deficiency judgments, estate tax, and condemnation. Inclusion of the type of value with this term is appropriate, e.g., "retrospective market value opinion." (Dictionary)

Sandwich Leasehold Estate

The interest held by the original lessee when the property is subleased to another party; a type of leasehold estate. (Dictionary)

Sublease

An agreement in which the lessee (i.e., the tenant) leases part or all of the property to another party and thereby becomes a lessor. (Dictionary)

Subordination

A contractual arrangement in which a party with a claim to certain assets agrees to make his or her claim junior, or subordinate, to the claims of another party. (Dictionary)

Substantial Completion

Generally used in reference to the construction of tenant improvements (TIs). The tenant's premises are typically deemed to be substantially completed when all of the TIs for the premises have been completed in accordance with the plans and specifications previously approved by the tenant. Sometimes used to define the commencement date of a lease.

Surplus Land

Land that is not currently needed to support the existing improvement but cannot be separated from the property and sold off. Surplus land does not have an independent highest and best use and may or may not contribute value to the improved parcel. (Dictionary)

Triple Net (Net Net Net) Lease

A lease in which the tenant assumes all expenses (fixed and variable) of operating a property except that the landlord is responsible for structural maintenance, building reserves, and management. Also called NNN, triple net leases, or fully net lease. (Dictionary)

(The market definition of a triple net leases varies; in some cases tenants pay for items such as roof repairs, parking lot repairs, and other similar items.)

Usable Area

The measured area of an office area, store area or building common area on a floor. The total of all the usable areas on a floor shall equal floor usable area of that same floor. The amount of floor usable area can vary over the life of a building as corridors expand and contract and as floors are remodeled. (BOMA)

Value-in-Use

The value of a property assuming a specific use, which may or may not be the property's highest and best use on the effective date of the appraisal. Value in use may or may not be equal to market value but is different conceptually. (Dictionary)



Qualifications

Qualifications of Andrew Baker, MAI
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 Market Analysis and Highest and Best Use
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 Report Writing and Case Studies
 Appraisal Review
 Apartment Appraisal, Concepts and Applications
 Advanced Income Capitalization
 Advanced Concepts & Case Studies
 Advanced Market Analysis and Highest & Best Use

Experience:

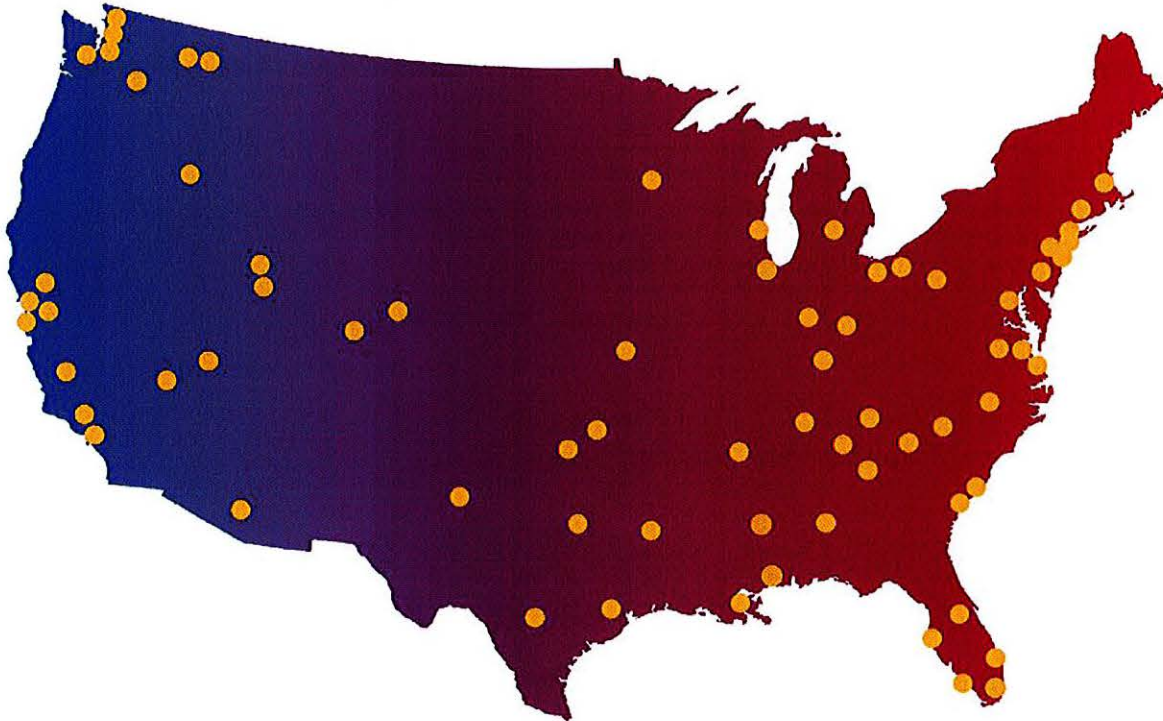
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Appraisal/valuation and consulting assignments have included many different property types including retail, office, industrial and multifamily. Assignments also include tax appeal valuations and rent comparability studies. Assignments have been concentrated in the Kansas City Metropolitan area.



FAST FACTS

COMPANY INFORMATION

- Valbridge is the largest independent national commercial real estate valuation and advisory services firm in North America.
 - Total number of MAI-designated appraisers (200+ on staff)
 - Total number of office locations (70+ across U.S.)
 - Total number of staff (675+ strong)
- Valbridge covers the entire U.S. from coast to coast.
- Valbridge services all property types, including special-purpose properties.
- Valbridge provides independent valuation services. We are not owned by a brokerage firm or investment company.
- Every Valbridge office is led by a senior managing director who holds the MAI designation of the Appraisal Institute.
- Valbridge is owned by our local office leaders.
- Valbridge welcomes single-property assignments as well as portfolio, multi-market and other bulk-property engagements.



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