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**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

THE APPLICATION OF	)	
TILLMAN INFRASTRUCTURE LLC	)	
A DELAWARE LIMITED LIABILITY COMPANY, AND	)	
NEW CINGULAR WIRELESS PCS, LLC,	)	
A DELAWARE LIMITED LIABILITY COMPANY,	)	
D/B/A AT&T MOBILITY	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2017-00435
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF MARSHALL	)	

SITE NAME: HANSEN

\*\*\*\*\*

**RESPONSE TO LETTER FROM SCOTT NORMAN**

Tillman Infrastructure LLC (“Tillman”), a Delaware limited liability company, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility (“AT&T”) (collectively, “Applicants”), by counsel, timely make this Response to the letter submitted by Scott Norman in the within proceeding. The Kentucky Public Service Commission Executive Director has requested Applicants respond to such letter.

Applicant respectfully states, as follows:

1. Scott Norman, by letter to the Kentucky Public Service Commission, has voiced generalized concerns regarding property values, aesthetics, and need for the facility proposed in the within Application. However, as presented in the subject Application and as discussed herein below, there is no ground for denial of the subject application, and substantial evidence supports approval of the requested Certificate of Public Convenience and Necessity (“CPCN”).

2. Mr. Norman raises generalized concerns regarding aesthetics and property values but fails to inform the Commission that he owns the adjoining parcel to the west where SBA has constructed a tower. Since Mr. Norman contracted for construction of a communications tower on his own adjoining property without apparent concern for aesthetics or property values, he cannot now voice those concerns for the tower proposed by Applicants.

3. The U.S. Court of Appeals for the Sixth Circuit has upheld that lay opinion or generalized aesthetic concerns are not substantial evidence justifying a rejection of this application. Any decision rendered by state or local authorities must be in writing and supported by substantial evidence in a written record. Federal Courts in the 6th Circuit has defined "substantial evidence" in previous cases. For example, the locality's own zoning requirements are an example of substantial evidence. Cellco Partnership v. Franklin Co., KY, 553 F. Supp. 2d 838, 845-846 (E.D. Ky. 2008). Of course, in this instance Marshall County has not adopted zoning requirements. Courts in the 6th Circuit have found that lay opinion is not substantial evidence. Cellco Partnership at 852 and T-Mobile Central, LLC v. Charter Township of West Bloomfield, 691 F.3d 794, 804 (6<sup>th</sup> Cir. 2012). They have also found that unsupported opinion is not substantial evidence. Cellco Partnership at 849. Generalized expressions of concerns with "aesthetics" are not substantial evidence. Cellco Partnership at 851. Claims the tower is unsightly are generalized expressions of aesthetical concerns and the same objection could be made by any resident in any area in which a tower is placed. Cellco Partnership at 852. General concerns that the tower is ugly or unwanted near an individual's residence are not sufficient to meet the 6th Circuit substantial evidence test. T-Mobile Central at 800.

Finally, anyone who opposes a tower which is figuratively “in their backyard” can claim it would be bad for the community, not aesthetically pleasing, or is otherwise objectionable, but such claims would not constitute substantial evidence. T-Mobile Central at 801.

4. In further response to Mr. Norman’s generalized concerns regarding property values, Applicant has attached a report from Glen D. Katz, MAI, SRA, AI-GRS, AI-RRS, a property valuation expert, concluding that the proposed tower will not have an impact on surrounding property values as **Exhibit A**. In this instance, Marshall County has not adopted planning and zoning regulations, nor has it adopted regulations regarding the placement, construction and modification of wireless communications facilities. Any property purchased in Marshall County is acquired with the understanding that the surrounding neighbors are free to develop their property in any manner they desire without regulation from local government or input from area residents. This circumstance is factored into the sales price of all real estate in Marshall County. For this reason, area residents have no reasonable expectation of input into the land use of surrounding properties or the impact a proposed land use will have on their property values.

5. In response to Mr. Norman’s assertion that the SBA tower on his property is sufficient to meet AT&T’s service needs, as AT&T previously explained in its Response to the Motion to Intervene filed by SBA Communications Corporation (“SBA”) in the within proceeding, SBA’s tower does not provide a “reasonably available opportunity to collocate,” within the meaning of 807 K.A.R. 5:063-Section 1(s), because SBA does not make its tower available on reasonable terms.

**WHEREFORE**, there being no ground for denial of the subject application and substantial evidence in support of the requested CPCN, Applicants respectfully request

the Kentucky Public Service Commission:

- (a) Accept this Response for filing;
- (b) Issue a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein without further delay; and
- (c) Grant Applicant any other relief to which it is entitled.

Respectfully submitted,



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#### **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 13th day of February 2018, a true and accurate copy of the foregoing was sent by U.S. Postal Service first class mail, postage prepaid, to Scott Norman, 1923 Lee Burd Road, Benton, KY 42025-5288 and Ed Roach, VP-Associate General Counsel, SBA Communications Corporation, 8051 Congress Avenue, Boca Raton, FL 33487-1307.



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David A. Pike  
Attorney for Applicant

**EXHIBIT A**  
**PROPERTY VALUES IMPACT REPORT**

# **REAL ESTATE VALUE IMPACT STUDY**

**FOR**

**PROPOSED WIRELESS COMMUNICATIONS FACILITY  
TILLMAN INFRASTRUCTURE LLC, & NEW CINGULAR  
WIRELESS, PCS, LLC, D/B/A AT&T MOBILITY  
SITE NAME: HANSEN  
PSC CASE NO.: 2017-00435  
ASSESSOR PARCEL NUMBER: 07-00-00-017.01  
1641 LEE BURD ROAD  
BENTON, MARSHALL COUNTY, KY 42025**

## **DATE OF REPORT**

**February 10, 2018**

## **PREPARED FOR**

**Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40601**

## **PREPARED BY**

**Glen D. Katz, MAI, SRA, AI-GRS, AI-RRS  
Realty Solutions Co., Inc.  
3815 Stonyrun Circle  
Louisville, KY 40220**

February 10, 2018

Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40601

**Realty Solutions Co., Inc.**  
Finding Answers to Real Estate Questions

Subject: Real Estate Value Impact Study  
Proposed Wireless Communications Facility  
Tillman Infrastructure LLC, & New Cingular Wireless, PCS, LLC, d/b/a AT&T

Mobility

Site Name: Hansen  
PSC Case No.: 2017-00435  
Assessor Parcel Number: 07-00-00-017.01  
1641 Lee Burd Road  
Benton, Marshall County, KY 42025

Commissioners:

I have completed an impact study regarding potential influence of wireless communications tower facilities on market value of surrounding residential properties, specifically addressing the subject project low-density residential and agricultural neighborhood location. The study consists of analyzing sale prices and value trends of properties located in proximity to cell towers, as compared to properties which are not in proximity, but competitive in all other respects.

Based on investigation and analysis of reactions of market participants buying, occupying, and selling residential properties, it is clear that the proposed facility will not result in any diminution of value for low-density residential and agricultural properties located with proximity to the proposed facility, or the neighborhood in general. Consistently, market evidence supports the positive influences on value and demand for real estate due to expansion of public utilities, including wireless telecommunications tower infrastructure.

The attached report illustrates the research and analysis performed. Thank you for the opportunity to present this information. Please contact me if you have questions or comments.

Respectfully,



Glen D. Katz, MAI, SRA, AI-GRS, AI-RRS  
Realty Solutions Co., Inc.  
3815 Stonyrun Circle  
Louisville, KY 40220

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## SUMMARY OF FACTS AND CONCLUSIONS

### Problem Identification

Proximity impact is a frequent question in real estate. In the course of studying value influence due to proximity of private or public utility facilities to residential and commercial properties, I have performed impact analysis on wireless communications tower facilities, high-voltage overhead transmission lines, storage towers, oil pipelines, and federal interstates. For this report, my analysis consists of analyzing value trends of residential properties in proximity to public utility tower facilities.

The subject property is identified by a site and neighborhood analysis using aerial maps and government census data. Neighborhood and market characteristics are observed to understand the four forces that affect value; social forces, economic forces, governmental forces, and environmental forces.

Residential properties, whether urban, suburban, or rural, follow similar demand patterns. In a 2012 study article published in *The Appraisal Journal* 80, (no. 1 (Winter 2012): 30-45), James A. Chalmers identifies three general characteristic that drive property sensitivity to price effects: use, size, and uniqueness.

Rural residential properties are frequently part of agricultural or recreational environments. Site sizes are larger, or they may be adjacent to large land parcels. They are also unique; because of the low-density development characteristics, there are fewer available, and even fewer available with specific classes of features such as site size, quality, floor plan, or auxiliary buildings.

Rural residential properties are similar to urban and suburban properties in terms of use, but are superior in the sensitivity categories of site size and uniqueness/scarcity. In summary, they share the same demand characteristics, but are more resilient than other residential categories.

The subject neighborhood does not have land-use zoning regulations. This is a frequent occurrence in low-density development and rural areas, and there are accepted risks by property owners because of the lack of control on land uses. Without localized land-use regulations, all legal uses of land are available. Land uses with a high impact on surrounding properties or a community in general, typically are characterized as producing adverse noise, odor, traffic, lighting, view, or neglected construction.

As a result, there is a higher risk expectation by buyers when making purchase decisions, regarding the quality and type of use of neighboring un-zoned properties. These risks are reflected in prices paid and resulting value trends. Regardless of these risks, communities without land-use controls continue to expand and develop need and demand for public utilities. The neighborhoods and communities are still influenced by social, economic, governmental, and environmental forces. There is no difference in regards to impact on surrounding values from tower communication facilities if a neighborhood does not have land-use zoning regulations.

### **Facility Identification**

The facility will be located in a low-density residential and agricultural area. The construction improvements will be comprised of a 302' guyed tower structure with 12' lightning arrestor, totaling a structure height of 314 feet. The construction will be located on a leased site area with a 75' x 75' fenced compound. There will be supporting storage cabinets, and gravel paving. There will be space available for co-location of other cell service providers in the facility. The facility will be accessed by a gravel drive extending from Lee Burd Road. These characteristics are some of the most common for wireless communications facilities in similar areas of the United States.

### **Study Methodology**

The impact study applying to this project consists of studying real estate value trends at existing tower locations. The methodology is comprised of paired sales and sale/resale analyses, focusing on measurement of value change over time, and; direct comparison of properties with, and without, distance or view proximity exposure.

Specifically, the following steps comprise the analysis;

- Identify existing tower locations with surrounding developed land uses.
- Examine the surrounding neighborhood and market area to determine if there are compatible and competing properties with adequate sale activity to provide statistically reliable and valid results.
- Categorize property sales by proximity characteristics for measurement of influence. A distance of 500' to 750' is the threshold of measure for the close-proximity category. At further distances the category changes to non-proximity, as tower views become blurred or obscured by trees, roofs, or topography. Tower view may also be absorbed by other skyline features of power lines, towers or tanks.
- Track value change over time for the two proximity categories and compare the results to determine if there is a difference due to tower facility exposure, or;
- Track value change of properties before and after a facility is constructed, and compare the results to determine if there is a difference between the two categories due to tower facility exposure.

Based on the data and analysis for tower projects like the subject, the values and rates of value change for proximity and non-proximity residential properties are similar. This is not unusual or unexpected. The market forces that drive real estate value also create complimentary demand for public utility projects. These market forces are discussed as follows:

- Social forces are influenced by; population, education, and lifestyles. There is increasing need for communications facilities, and satisfying that demand as part of the core supply of public services is expected by the population. In particular, cellular phone service has become predominant in the functions of businesses, schools, healthcare providers, emergency services, and households. Anything less than adequate service is detrimental to value or demand for real estate.
- Economic forces are influenced by; employment, wages, business, regional and community development. With the increasing diversification of work forces and

efficiencies needed to be competitive, effective communications facilities are required. Cellular signal capacity creates a significant amount of positive externalities for its users and their communities.

- Governmental forces respond to community needs for; laws and policies; public services; zoning, and building codes. Many jurisdictions have specific guidelines requiring local government agencies to expand public utilities and services. The regulations that enable public services provided by communications facilities are a direct reaction to public needs. Another major impact of governmental influences in expansion of public services is developing wider choices through competition in the private sector. This helps erase the digital divide problem, which is the economic gap between those who have adequate access to services and those who do not. This gap can be influenced by income, location, and level of education among other factors, and can affect further development in areas where the divide exists.

As indicated prior, the subject neighborhood does not have land-use zoning regulations. Buyers have absorbed the risk associated with lack of zoning when making purchase decisions regarding the quality and type of use of neighboring un-zoned properties, and related influences on value. Regardless of these risks, communities without land-use controls continue to expand and develop need for public utilities.

- Environmental forces are the final determining factor. They deal with climate, topography/soil, natural barriers, transportation systems and linkages, and the nature and desirability of the neighborhood surrounding a property. These forces shape the location of a population, and where supporting infrastructure will be most effective and valuable as a resource.

### **Study Analysis Conclusion**

As illustrated by study results, the forces of value are consistent. Public utilities and related services are essential to meeting accepted standards of living. The benefits of modern communication facilities for economic and community development are clear. Without adequate services, there will be a tendency for decreasing demand and property values in a neighborhood. In order to meet population needs, telecommunications facilities have become a common part of the landscape in much the same way that power and telephone lines and other utilities have. Like all utilities, there is need for telecommunications facilities in strategic locations in any community.

Property owners near tower facilities, other highly visible utility structures, underground pipelines, associated easements, etc., are not penalized on value. Effectively, communications tower structures, like overhead electric distribution lines, signage, and buried utility easements, are beneficial. Due to expanding utilities and increased services, residential and commercial properties experience positive influences. Because of the increasing volume of similar structures over the past several decades, owners and buyers of residential properties expect service-related infrastructure. Cell towers satisfy demand and are absorbed by the landscape of a neighborhood and lifestyles of the population. Cell towers are much like other modern infrastructure. Although cell towers may initially be noticed, they quickly fade into the background and have no

appreciable negative effect on value – just as telephone poles, utility lines, streetlights, and the other infrastructure of modern life do not negatively affect real estate values.

Therefore, based on investigation and analysis of reactions of market participants buying, occupying, and selling real estate properties, it is clear that the proposed facility will not adversely impact the demand for, or value of, properties in the immediate or general area. Consistently, market evidence supports the positive influences on value and demand for real estate due to expansion of public utilities, including wireless telecommunications tower infrastructure.

## **REPORT DEVELOPMENT - SCOPE OF WORK**

### **Extent to which the property is identified**

- The subject property is identified by a site and neighborhood analysis using aerial maps and government census data. Neighborhood and market characteristics are observed to understand the four forces that affect value:
  - social forces;
  - economic forces;
  - governmental forces, and;
  - environmental forces

### **Extent to which the property is inspected**

- Reviewing aerial photography of the surrounding neighborhood to recognize land uses and development patterns.
- Reviewing the tower facility development plans

### **Type and extent of the data researched**

- Tower facilities; wireless communications, high tension electrical transmission, or water storage, are identified for analysis based on residential and commercial exposures.

### **Type and extent of analyses applied**

The data extraction is available through several econometric methods. Sales of residential properties are tracked to establish rates of change in value due to market conditions, and to determine potential influence from proximity to nearby tower facilities. Comparison is made between value trends of properties in proximity, and without proximity to tower facilities. Three methods of data extraction are discussed as follows:

- First is analyzing “before and after” sale data. This analyzes value trends before and after installation of a facility. Property sale data before a facility is installed is compared to sale data occurring after a facility is installed. This method will have limitations when a facility installation occurred in the distant past. When resold, older sales occurring before the installation frequently experience significant changes before they resell in a current market: physical changes such as renovation, updating, addition, and/or economic changes (i.e.; 2007-2009 recession, changes in highest and best use, etc.) In these cases, value change over a long time period would be attributed to multiple sources, and allocating value change solely to tower influence would be misleading.

- Next is “unit-value” comparison of neighborhood properties that are identical in all aspects except proximity. The unit value will typically be price per-square-foot of gross living area (sale price divided by above-grade living area). The information will identify any differences between the two proximity categories. This method has limitations due to the large number of property differences and related difficulty in matching properties that are adequately identical with the exception of proximity.
- The most common method is “timeline trend” analysis. This compares value trends of properties located in close proximity to existing tower facilities, to value trends of properties located without proximity. Rates of value change due to market conditions (time) are compared between the two property types to extract any differences due to proximity to a tower facility. This is most meaningful with sale data from the post-recession period beginning in 2010 to a current date.

In all cases, the methodologies allow controlling the physical and other market or locational attributes of the two sets of properties. In this way, price and value effects or differences due to the other characteristics of the properties are held constant, and the effect, if any, due to proximity is isolated. Because of the data currently available, the “before and after” and “timeline trend” methods are utilized.

#### **PURPOSE OF REPORT**

The purpose of this report is to develop an opinion of potential market value impact on surrounding properties from proximity to the identified wireless communications tower facility.

#### **INTENDED USER OF THE REPORT**

This report is intended solely for use by Pike Legal Group, PLLC, and the identified governmental approving panel for the project, Kentucky Public Service Commission.

#### **INTENDED USE OF THE REPORT**

The intended use of the appraiser’s opinions and conclusions is to assist Pike Legal Group, PLLC and the governmental approving panel, Kentucky Public Service Commission, in making permitting decisions regarding the subject property. This report is not intended for any other use.

#### **DEFINITION OF VALUE**

This report analysis is based on *market value* of real estate. The most common accepted definitions of *market value* include the following components.

- *The most probable price, as of a specified date,*
- *in cash, or in terms equivalent to cash, or in other precisely revealed terms,*
- *for which the specified property rights should sell*
- *after reasonable exposure in a competitive market under all terms requisite to a fair sale,*
- *with the buyer and seller each acting prudently, knowledgeably, and for self-interest,*
- *and assuming that neither party is under undue duress.*

## **CASE STUDY INTRODUCTION**

The following case studies are developed through researching market activity of residential properties in neighborhoods adjacent to tower facilities. After identification of a tower facility, whether wireless communications, high-tension electrical, or storage tower, sale activity of homes is analyzed.

### **Timeline Trend Method**

For projects that have been in place for a long period, timeline trend analysis is most applicable. The steps of analysis consist of:

- Research properties with tower proximity that have sold repeatedly in the identified period.
- Determine the annual rate of market value change, appreciation or depreciation, for properties in the proximity category.
- Research properties in the same neighborhood, without tower proximity, that have repeat or back-to-back sales.
- Determine the annual rate of market value change, appreciation or depreciation for properties in the non-proximity category.
- Compare value change trends between the two groups of properties to extract any value change differences related to proximity influence.

### **Before and After Method**

For projects recently constructed, the before and after method steps of analysis consists of:

- Research residential properties with tower proximity that sold prior to the tower installation, and then sold again after the tower installation.
- Determine the annual rate of market value change, appreciation or depreciation, for properties in the proximity category.
- Research properties in the same neighborhood without tower proximity that sold prior to the tower installation, and then sold again after the tower installation.
- Determine the annual rate of market value change, appreciation or depreciation, for properties in the non-proximity category.
- Compare value change trends between the two groups of properties to extract any value change differences related to proximity influence.

### **Methodology Summary**

The date range for sale data is from 2010 to the current date. This minimizes potential influence from the 2007-2009 recession. In order to track rates of value change during the period, repeat or back-to-back sales of individual residential properties inside and outside a proximity distance range of 500' to 750' from a facility are researched.

In order to focus on the influence on appreciation or depreciation from market conditions and proximity, emphasis is placed on properties with stable physical characteristics, and without unusual sale conditions or buyer/seller motivation influences. Specifically, sales involving properties with the following characteristics are discounted from analysis:

- Properties with significant physical changes that would influence value between the initial and subsequent transfers, such as renovation, construction addition, or deferred maintenance or neglect resulting in unusual physical deterioration.
- Properties with distress socioeconomic characteristics, such as foreclosure, short-sales, auctions, and sales of bank-owned homes.
- Properties with unusual buyer or seller motivations, such as family transactions, estate liquidation, or investor activity in a predominantly owner-occupied market.
- Properties close to interstates and limited access roads are avoided to ensure home sales were not affected by highway access or traffic noise variables.
- In the study, sale price is also adjusted by netting out seller-paid concessions if they occur.

If the above types of transfer activity are prevalent in a neighborhood, the facility and neighborhood is removed from consideration. Ultimately, the focus is to measure market activity that is not influenced by unusual property-specific or market-specific characteristics.

The following case studies illustrate analysis for two categories of tower facilities; high-tension electrical transmission lines, and wireless communications tower facilities. Two of the case studies compare rates of value change between proximity and non-proximity properties, and one case study has value change trends, and compares values of proximity and non-proximity properties before and after installation of a facility.

## **CASE STUDIES**

**Case Study 1** – This study involves a high-tension overhead electric power line corridor with lattice construction towers. The corridor traverses a residential single-family and condominium neighborhood. The tower structures and overhead electric lines in this location are located in easements in the middle of residential subdivision development, crossing a public street in a long diagonal direction, and continuing through residential subdivision development.

The project was installed pre-1993. The value evidence represents sales and resales of properties within 500' proximity to the facility, and outside 500' proximity to the facility. Rates of value change for each of the categories are developed, and the two categories of proximity are compared to analyze any potential impact.

**Case Study 2** – This study involves a wireless communications facility adjacent to a residential single-family and condominium neighborhood. The tower structure is 219' height, self-support construction.

Installation of the project occurred in 2002. The value evidence represents sales and resales of properties within 500' proximity to the facility, and outside 500' proximity to the facility. Rates of value change of each of the categories are developed, and the two categories are compared to analyze any potential impact.

**Case Study 3** – This study involves a wireless communications facility adjacent to a residential single-family detached neighborhood. The structure is 140' height, monopole construction.

Installation of the project occurred in 2016. The value evidence represents sales and resales of properties within 750' proximity to the facility, and outside 750' proximity to the facility. Rates of value change in each of the categories are developed, and the two categories are compared to analyze any potential impact.

For Case Study 3, it is important to note there are back-to-back sales in each category, before and after the installation, that illustrate consistent values and rates of value change.



**Case Study 1 - Proximity Sales**

- Facility: High tension overhead electric power lines and lattice construction towers, residential single-family detached and condominium subdivision location
- Address: Gutenberg Road, Louisville, Jefferson County, Kentucky
- FCC Identification: N/A
- Year of installation: Pre-1993
- Information source: Maps and individual research
- Neighborhood location: Jeffersontown
- Property Group Identification: Within 500' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 09/21/2017. Each of the properties transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is -0.21% to 6.73%. The average rate of appreciation is 2.66%, and the median or middle point of the range is 2.55%.

Street #	Street	St	Sale Date	Adj Sale Price	% Change	Months	% Change Annually
4707	Vinecliff	Pl	2/12/2010	\$218,000			
4707	Vinecliff	Pl	7/14/2017	\$259,900	19.22%	89	2.59%
4733	Ferrer	Way	7/26/2011	\$141,500			
4733	Ferrer	Way	5/22/2014	\$160,000	13.07%	34	4.63%
4800	Hat	Ct	10/26/2010	\$125,000			
4800	Hat	Ct	10/4/2016	\$175,000	40.00%	71	6.73%
4802	Burriss	Dr	8/10/2012	\$127,400			
4802	Burriss	Dr	2/17/2015	\$130,950	2.79%	30	1.10%
4904	Bova	Way	3/25/2010	\$140,000			
4904	Bova	Way	11/14/2014	\$141,000	0.71%	56	0.15%
8804	Loch Lea	Ln	12/6/2013	\$130,500			
8804	Loch Lea	Ln	12/2/2016	\$149,900	14.87%	36	4.97%
8919	Gutenberg	Rd	12/30/2011	\$160,000			
8919	Gutenberg	Rd	3/24/2017	\$175,500	9.69%	63	1.85%
9302	Villa Fair	Ct	4/29/2011	\$132,000			
9302	Villa Fair	Ct	6/10/2016	\$149,750	13.45%	61	2.63%
10509	Vintage Creek	Dr	4/15/2014	\$249,500			
10509	Vintage Creek	Dr	9/11/2015	\$255,000	2.20%	17	1.57%
10601	Vintage Creek	Dr	3/28/2012	\$211,500			
10601	Vintage Creek	Dr	11/25/2013	\$222,500	5.20%	20	3.13%
10603	Alderbrook	Pl	2/17/2012	\$216,000			
10603	Alderbrook	Pl	4/15/2015	\$247,000	14.35%	38	4.54%
10605	Vintage Creek	Dr	9/10/2010	\$217,000			
10605	Vintage Creek	Dr	8/25/2017	\$255,000	17.51%	84	2.52%
10608	Alderbrook	Pl	8/12/2011	\$237,900			
10608	Alderbrook	Pl	5/4/2015	\$236,000	-0.80%	45	-0.21%
10803	Vintage Creek	Dr	5/25/2010	\$239,000			
10803	Vintage Creek	Dr	11/15/2016	\$255,000	6.69%	78	1.03%
Annual Average Appreciation							2.66%
Annual Median Appreciation							2.55%

**Case Study 1 - Non-Proximity Sales**

- Facility: High tension overhead electric power lines and lattice construction towers, residential single-family detached and condominium subdivision location
- Address: Gutenberg Road, Louisville, Jefferson County, Kentucky
- FCC Identification: N/A
- Year of installation: Pre-1993
- Information source: Maps and research
- Neighborhood location: Jeffersontown
- Property Group Identification: Outside 500' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 09/21/2017. Each property transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is -0.41% to 5.97%. The average rate of appreciation is 2.91%, and the median or middle point of the appreciation range is 2.49%.

Street #	Street	St	Sale Date	Adj Sale Price	% Change	Months	% Change Annually
4409	Taft	Ct	10/15/10	\$135,000			
4409	Taft	Ct	03/03/16	\$150,000	11.11%	65	2.06%
4509	Marse	Pl	01/30/12	\$141,900			
4509	Marse	Pl	06/30/14	\$152,500	7.47%	29	3.09%
4608	Haeringdon	Dr	10/21/10	\$152,000			
4608	Haeringdon	Dr	03/06/17	\$184,900	21.64%	77	3.39%
4615	Stony Brook	Dr	05/10/13	\$159,900			
4615	Stony Brook	Dr	08/18/17	\$181,500	13.51%	51	3.16%
4704	Jolynn	Dr	03/28/13	\$147,500			
4704	Jolynn	Dr	06/01/16	\$159,500	8.14%	38	2.56%
4902	Stout	Blvd	08/24/12	\$140,000			
4902	Stout	Blvd	08/17/15	\$157,500	12.50%	36	4.19%
4904	Flora Springs	Cir	09/02/10	\$219,000			
4904	Flora Springs	Cir	11/05/15	\$242,000	10.50%	62	2.03%
4904	Flora Springs	Cir	12/13/16	\$258,000	6.61%	13	5.97%
4905	Roman	Dr	08/22/12	\$138,900			
4905	Roman	Dr	06/08/16	\$164,500	18.43%	46	4.85%
5001	Fairwood	Ln	09/17/10	\$136,000			
5001	Fairwood	Ln	02/08/16	\$138,000	1.47%	65	0.27%
5001	Volney	Ct	12/14/12	\$168,000			
5001	Volney	Ct	11/15/16	\$184,000	9.52%	47	2.43%
5003	Volney	Ct	08/26/11	\$145,000			
5003	Volney	Ct	07/15/14	\$150,200	3.59%	35	1.24%
5103	Flora Springs	Cir	10/10/12	\$247,500			
5103	Flora Springs	Cir	09/26/14	\$258,900	4.61%	24	2.35%

(table continued next page)

Street #	Street	St	Sale Date	Adj Sale Price	% Change	Months	% Change Annually
8607	Michael Edward	Dr	02/19/10	\$160,500			
8607	Michael Edward	Dr	07/31/14	\$176,000	9.66%	53	2.17%
8612	Longborough	Way	11/29/11	\$162,000			
8612	Longborough	Way	12/11/14	\$160,000	-1.23%	36	-0.41%
8708	Loch Lea	Ln	12/28/12	\$150,000			
8708	Loch Lea	Ln	03/20/15	\$157,500	5.00%	27	2.25%
8718	Loch Lea	Ln	08/02/11	\$147,000			
8718	Loch Lea	Ln	08/04/17	\$193,870	31.88%	72	5.30%
9002	Hatlerhall	Dr	08/15/14	\$135,000			
9002	Hatlerhall	Dr	03/09/17	\$153,000	13.33%	31	5.19%
9102	Marse Henry	Dr	03/15/13	\$152,335			
9102	Marse Henry	Dr	04/17/15	\$163,500	7.33%	25	3.51%
9115	Marse Henry	Dr	05/07/15	\$166,000			
9115	Marse Henry	Dr	05/15/17	\$183,000	10.24%	24	5.06%
9204	Marse Henry	Dr	09/27/12	\$150,000			
9204	Marse Henry	Dr	06/16/15	\$159,900	6.60%	33	2.43%
9307	Marse Henry	Dr	10/28/10	\$100,000			
9307	Marse Henry	Dr	02/03/17	\$110,100	10.10%	75	1.61%
9311	Marse Henry	Dr	07/13/12	\$189,000			
9311	Marse Henry	Dr	02/18/15	\$197,900	4.71%	31	1.81%
9402	Talitha	Dr	06/24/10	\$155,225			
9402	Talitha	Dr	11/21/16	\$180,000	15.96%	77	2.49%
9405	Marse Henry	Dr	03/22/13	\$157,000			
9405	Marse Henry	Dr	05/01/17	\$187,000	19.11%	49	4.65%
10404	Lark Park	Dr	12/13/13	\$150,000			
10404	Lark Park	Dr	08/21/15	\$159,900	6.60%	20	3.91%
10704	Vine Hill	Dr	05/17/12	\$197,900			
10704	Vine Hill	Dr	05/24/13	\$199,900	1.01%	12	0.99%
Annual Average Appreciation							2.91%
Annual Median Appreciation							2.49%

### **Case Study 1 Reconciliation**

The sale evidence represents sales and resales of residential properties in a neighborhood containing a high-tension overhead electric power lines with lattice construction towers. The facility existed prior to construction of homes in the neighborhood. There is volume sale evidence for analysis between 2010 and the current date. The non-proximity sales show a slightly higher average rate of appreciation, and the proximity sales show a slightly higher median rate. The difference between both indications is negligible and not statistically significant. Comparing all proximity sales to non-proximity sales in the neighborhood, both categories show a consistent trend of values on a dwelling size per square foot basis. In summary, there is no negative impact on value from the facility.

**Case Study 2 - Proximity Sales**

- Facility: Wireless Communications Facility, self-support construction, 219' height, residential single-family detached and condominium subdivision location
- Address: 8400 Bardstown Road, Louisville, Jefferson County, Kentucky
- FCC Registration: 1232839
- Year of installation: 03/7/2002
- Information source: FCC recordings, maps and individual research
- Neighborhood location: Fern Creek
- Property Group Identification: Inside 500' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 01/01/2018. Each property transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is 0.0% to 4.75%. The average appreciation is 2.37%, and the median or middle point of the range is 2.67%.

#	Street	St	Sold Date	Adj Sale Price	Total Value Change %	Annual Value Change %
8501	Missionary	Ct	5/21/2010	\$248,500		
8501	Missionary	Ct	2/17/2014	\$252,000	1.41%	0.38%
8505	Missionary	Ct	5/28/2010	\$210,475		
8505	Missionary	Ct	4/28/2015	\$225,000	6.90%	1.40%
8505	Missionary	Ct	8/25/2017	\$239,000	6.22%	2.67%
8509	Missionary	Ct	6/17/2010	\$245,000		
8509	Missionary	Ct	1/31/2017	\$271,000	10.61%	1.60%
8734	Lough	Dr	10/11/2013	\$205,000		
8734	Lough	Dr	6/29/2016	\$225,000	9.76%	3.59%
8925	Gentlewind	Way	8/30/2012	\$200,000		
8925	Gentlewind	Way	10/26/2017	\$249,000	24.50%	4.75%
8931	Gentlewind	Way	6/1/2010	\$232,000		
8931	Gentlewind	Way	7/13/2015	\$275,000	18.53%	3.62%
10612	Glenmary Springs	Dr	10/13/2015	\$179,900		
10612	Glenmary Springs	Dr	4/27/2016	\$179,900	0.00%	0.00%
10619	Glenmary Springs	Dr	11/24/2014	\$229,950		
10619	Glenmary Springs	Dr	11/14/2016	\$244,900	6.50%	3.29%
					Annual Average Appreciation	2.37%
					Annual Median Appreciation	2.67%

**Case Study 2 - Non-Proximity Sales**

- Facility: Wireless Communications Facility, self-support construction, 219' height, residential single-family detached and condominium subdivision location
- Address: 8400 Bardstown Road, Louisville, Jefferson County, Kentucky
- FCC Registration: 1232839
- Year of installation: 03/7/2002
- Information source: FCC recordings, maps and individual research
- Neighborhood location: Fern Creek
- Property Group Identification: Outside 500' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 01/01/2018. Each property transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is -8.25% to 6.36%. The average appreciation is 2.26%, and the median or middle point of the range is 3.16%.

#	Street	St	Sold Date	Adj Sale Price	Total Value Change %	Annual Value Change %
8607	Sanctuary	Ln	8/2/2010	\$227,000		
8607	Sanctuary	Ln	7/25/2014	\$231,000	1.76%	0.44%
8607	Sanctuary	Ln	3/30/2016	\$245,000	6.06%	3.60%
8614	Roberta	Ct	1/21/2013	\$147,000		
8614	Roberta	Ct	10/23/2017	\$187,500	27.55%	5.79%
8622	Sanctuary	Ln	6/21/2013	\$240,000		
8622	Sanctuary	Ln	7/13/2015	\$257,500	7.29%	3.54%
8622	Sanctuary	Ln	12/21/2017	\$265,000	2.91%	1.19%
8702	Lough	Dr	12/1/2011	\$161,635		
8702	Lough	Dr	9/9/2016	\$207,000	28.07%	5.87%
8702	Meadow Springs	Way	8/2/2012	\$148,600		
8702	Meadow Springs	Way	1/8/2016	\$165,500	11.37%	3.31%
8721	Lough	Dr	11/25/2013	\$165,000		
8721	Lough	Dr	7/29/2016	\$170,000	3.03%	1.13%
8815	Gentlewind	Way	2/23/2011	\$195,000		
8815	Gentlewind	Way	10/14/2016	\$218,900	12.26%	2.17%
8824	Gentlewind	Way	2/12/2010	\$262,500		
8824	Gentlewind	Way	6/1/2011	\$245,000	-6.67%	-5.13%
8903	Gentlewind	Way	8/1/2014	\$290,000		
8903	Gentlewind	Way	9/30/2016	\$307,500	6.03%	2.78%
8911	Gentlewind	Way	7/30/2010	\$240,000		
8911	Gentlewind	Way	2/26/2014	\$247,500	3.13%	0.87%
8919	Gentlewind	Way	11/22/2013	\$252,000		
8919	Gentlewind	Way	11/23/2015	\$273,000	8.33%	4.16%
8921	Gentlewind	Way	4/17/2012	\$244,000		
8921	Gentlewind	Way	6/22/2016	\$269,000	10.25%	2.45%

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#	Street	St	Sold Date	Adj Sale Price	Total Value Change %	Annual Value Change %
10229	Pine Glen	Cir	9/27/2010	\$227,500		
10229	Pine Glen	Cir	9/14/2012	\$224,000	-1.54%	-0.78%
10229	Pine Glen	Cir	3/3/2017	\$260,000	16.07%	3.60%
10305	Pine Glen	Cir	8/13/2010	\$208,000		
10305	Pine Glen	Cir	8/2/2013	\$197,000	-5.29%	-1.78%
10405	Pine Glen	Cir	11/2/2012	\$212,900		
10405	Pine Glen	Cir	1/19/2016	\$240,000	12.73%	3.96%
10423	Pine Glen	Cir	7/29/2010	\$170,000		
10423	Pine Glen	Cir	8/6/2014	\$185,450	9.09%	2.26%
10427	Pine Glen	Cir	2/28/2013	\$195,000		
10427	PINE GLEN	Cir	10/14/2016	\$230,000	17.95%	4.95%
10500	Parkhurst	Ct	4/4/2011	\$160,000		
10500	Parkhurst	Ct	10/11/2013	\$175,000	9.38%	3.72%
10502	Gentlewind	Ct	2/19/2014	\$267,500		
10502	Gentlewind	Ct	2/29/2016	\$270,000	0.93%	0.46%
10503	Gentlewind	Ct	10/1/2010	\$200,000		
10503	Gentlewind	Ct	4/6/2012	\$175,000	-12.50%	-8.25%
10504	Providence	Dr	7/8/2013	\$246,500		
10504	Providence	Dr	7/3/2014	\$248,700	0.89%	0.90%
10504	Providence	Dr	10/19/2017	\$254,000	2.13%	0.65%
10601	Providence	Dr	12/16/2011	\$232,000		
10601	Providence	Dr	7/2/2015	\$257,000	10.78%	3.04%
10601	Providence	Dr	8/9/2017	\$282,400	9.88%	4.69%
10605	Avenel	Ct	7/11/2013	\$145,000		
10605	Avenel	Ct	7/21/2017	\$175,000	20.69%	5.13%
10609	Providence	Dr	2/15/2013	\$225,000		
10609	Providence	Dr	11/8/2016	\$260,000	15.56%	4.17%
10611	Providence	Dr	9/7/2012	\$230,000		
10611	Providence	Dr	5/22/2017	\$272,500	18.48%	3.93%
10712	Glenmary Springs	Dr	6/27/2012	\$159,000		
10712	Glenmary Springs	Dr	11/22/2016	\$182,000	14.47%	3.28%
10720	Glenmary Springs	Dr	6/11/2014	\$174,000		
10720	Glenmary Springs	Dr	4/1/2016	\$194,000	11.49%	6.36%
					Annual Average Appreciation	2.26%
					Annual Median Appreciation	3.16%

### **Case Study 2 Reconciliation**

The sale evidence represents sales and resales of residential properties in a neighborhood containing a wireless communications facility. The tower existed prior to construction of homes in the project. There is volume sale evidence for analysis between 2010 and the current date. The rates of value change between the two categories are consistent. The non-proximity sales show a slightly higher median rate of appreciation, and the proximity sales show a slightly higher average rate. The difference between both indications is negligible and not statistically significant. Comparing all proximity sales to non-proximity sales in the neighborhood, both categories show a consistent trend of values on a dwelling size per square foot basis. In summary, there is no negative impact on value from the facility.

**Case Study 3 - Proximity Sales**

- Facility: Wireless Communications Facility, monopole construction, 140’ height, residential single-family detached location
- Address: 7200 Woodhaven Road, Louisville, Jefferson County, Kentucky
- FCC Registration: 1298049
- Year/Date of installation: 05/13/2016
- Information source: FCC recordings, maps and individual research
- Neighborhood location: Woodhaven
- Property Group Identification: Inside 750’ proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 01/01/2018. Each property transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is 2.79% to 9.47%. The average appreciation is 5.26%, and the median or middle point of the range is 4.16%. Note that the sales of 5900 Woodhaven Ridge Court 7118 occurred both before and after the facility installation. The rates of value change are consistent with the general trend.

#	Street	St	Sold Date	Adj Sale Price	Total Value Change %	Annual Value Change #
5900	Woodhaven Ridge	Ct	8/22/2011	\$180,000		
5900	Woodhaven Ridge	Ct	10/19/2017	\$211,000	17.22%	2.79%
5914	Woodhaven Ridge	Ct	12/14/2012	\$155,000		
5914	Woodhaven Ridge	Ct	8/1/2014	\$172,675	11.40%	7.00%
5921	Woodhaven Ridge	Ct	12/20/2011	\$125,000		
5921	Woodhaven Ridge	Ct	1/24/2013	\$138,000	10.40%	9.47%
5921	Woodhaven Ridge	Ct	10/22/2014	\$148,000	7.25%	4.16%
7215	Chestnut Tree	Ln	6/10/2011	\$131,000		
7215	Chestnut Tree	Ln	11/1/2013	\$140,000	6.87%	2.87%
Annual Average Appreciation						5.26%
Annual Median Appreciation						4.16%

**Case Study 3 - Non-Proximity Sales**

- Facility: Wireless Communications Facility, monopole construction, 140' height, residential single-family detached and condominium subdivision location
- Address: 7200 Woodhaven Road, Louisville, Jefferson County, Kentucky
- FCC Registration: 1298049
- Year/Date of installation: 05/13/2016
- Information source: FCC recordings, maps and individual research
- Neighborhood location: Woodhaven
- Property Group Identification: Outside 750' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 01/01/2018. Each property transferred two or more times in the period. The price difference between back-to-back transfers of each property is the amount of value change due to market conditions, or time. The range of annual value change is 2.31% to 6.67%. The average appreciation is 4.78%, and the median or middle point of the range is 5.21%. Note that the sales of 7118 and 7102 Ridge Creek Road occurred before and during the facility installation, and the sales of 7403 Covey Place occurred both before and after the facility installation. The rates of value change are consistent with the general trend.

#	Street	St	Sold Date	Adj Sale Price	Total Value Change %	Annual Value Change %
5904	Bluffington	Ct	7/28/2011	\$124,000		
5904	Bluffington	Ct	11/21/2012	\$130,685	5.39%	4.08%
7102	Ridge Creek	Rd	10/3/2011	\$135,500		
7102	Ridge Creek	Rd	5/6/2016	\$149,900	10.63%	2.31%
7118	Ridge Creek	Rd	3/28/2011	\$119,000		
7118	Ridge Creek	Rd	3/25/2016	\$150,000	26.05%	5.21%
7403	Covey	Pl	2/26/2014	\$135,500		
7403	Covey	Pl	10/31/2016	\$156,000	15.13%	5.65%
7404	Covey	Pl	2/8/2013	\$109,000		
7404	Covey	Pl	12/30/2015	\$130,000	19.27%	6.67%
Annual Average Appreciation						4.78%
Annual Median Appreciation						5.21%

**Case Study 3 Reconciliation**

The sale evidence represents sales and resales of residential properties in a neighborhood containing a wireless communications facility. Tower installation occurred after homes were constructed in the project. There is volume sale evidence for analysis between 2010 and the current date. The non-proximity sales show a slightly higher median rate of appreciation, and the proximity sales show a slightly higher average rate. The difference between both indications is negligible and not statistically significant. In addition, properties with sales both before and after the installation date illustrate consistent values and appreciation trends. Comparing all proximity sales to non-proximity sales in the neighborhood, both categories show a consistent trend of values on a dwelling size per square foot basis. In summary, there is no negative impact on value from the facility.



## **STUDY ANALYSIS CONCLUSION**

As illustrated by study results, the forces of value are consistent. Public utility infrastructure and related services are essential to meeting the accepted standard of living in municipal areas. Without adequate services, there will be a tendency for decreasing demand and property values in a neighborhood and market area. In order to meet needs of a neighborhood population, telecommunications tower facilities have become a common part of the landscape in much the same way that power and telephone lines and other utilities have. Like these other utilities, there is need for telecommunications facilities in locations throughout any community.

Property owners near tower facilities, other highly visible utility structures, underground pipelines, associated easements, etc., are not penalized on value. Effectively, communications tower structures, like overhead electric distribution lines, signage, and buried utility easements, are beneficial. Due to expanding utilities and increased services, residential and commercial properties experience positive influences. Because of the increasing volume of similar structures over the past several decades, owners and buyers of residential properties expect service-related infrastructure. Cell towers satisfy demand and are absorbed by the landscape of a neighborhood and lifestyles of the population. Cell towers are much like other modern infrastructure. Although cell towers may initially be noticed, they quickly fade into the background and have no appreciable negative effect on value – just as telephone poles, utility lines, streetlights, and the other infrastructure of modern life do not negatively affect real estate values.

Therefore, based on investigation and analysis of reactions of market participants buying, occupying, and selling residential properties, it is clear that the proposed facility will not result in any diminution of value for low-density residential and agricultural properties located with proximity to the proposed facility, or the neighborhood in general. Consistently, market evidence supports the positive influences on value and demand for real estate due to expansion of public utilities, including wireless telecommunications tower infrastructure.

**DISCLOSURE CERTIFICATION**

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

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions and conclusions are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- 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.
- I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined opinion that favors the cause of the client, the magnitude of the opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal consulting report.
- No one provided significant real property analysis assistance to the person signing this certification.

Glen D. KATZ

Glen D. Katz, MAI, SRA, AI-GRS, AI-RRS

## **GLEN D. KATZ, MAI, SRA, AI-GRS, AI-RRS**

3815 Stonyrun Circle, Louisville, KY 40220 · (502) 396-6664

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### **Professional Experience**

Glen Katz has been involved in the appraisal of real estate for over 25 years. Beginning in both the commercial and residential fields, he has transitioned to roles as consultant, reviewer, and expert witness. As owner of Realty Solutions Co. Inc., relationships have been developed with user clients, peer appraisers and appraisal firms. Resulting projects have been performed individually and as coordinating peer groups.

In general practice, Mr. Katz has achieved the Appraisal Institute MAI (general) designation, and SRA (residential) designation. In specialized practice, Mr. Katz has achieved the Appraisal Institute appraisal review designations of AI-GRS (general) and AI-RRS (residential), as well as completing the following Appraisal Institute Professional Development Programs:

- Litigation
- Valuation of the Components of a Business Enterprise
- Valuation of Conservation Easements
- Valuation of Sustainable Buildings: Residential

As a reviewer of appraisals, Mr. Katz serves clients in both the litigation and lending fields. Reports are commonly reviewed under Uniform Standards of Professional Appraisal Practice (USPAP), Uniform Appraisal Standards for Federal Land Acquisitions (Yellowbook), and local jurisdictional guidelines.

As an expert witness, Mr. Katz has participated in cases regarding land and building damage, insurance claims, value impact studies, property tax assessment, construction defects, divorce settlements, boundary disputes, zoning noncompliance, bankruptcy, and alleged fraud.

### **Areas of expertise include:**

- Commercial, industrial, residential, agricultural, special purpose properties
- Appraisal review, commercial and residential
- Value impact study
- Eminent domain
- Expert witness/litigation support
- Property damages
- Insurance claims and cost analysis
- Tax Appeal
- Estate valuation
- Complex residential housing
- High performance construction (sustainable/energy efficient)

### **Significant Achievements**

- Condemnation and right-of-way; 2008 to 2011 - Right of way value analysis for Keystone and Keystone XL pipeline segments in South Dakota, both East River and West River areas. The project included a market study on pipeline eased properties, sale book, and appraisals.
- Tax assessment appeal; 2014 – Representing Walgreen Co., appraised and testified as expert witness before the Kentucky Board of Tax Appeals (KBTA), regarding methodology in developing a value opinion for “Absolute NNN” properties for ad valorem tax purposes.
- Performing county-level tax appeals for Walgreen store properties in Kentucky.
- Development panel member for the Appraiser Supervisor and Associate Training program curriculum for the Kentucky Real Estate Appraisers Board, Commonwealth of Kentucky.

### **Education**

- Bachelor of Science in Business Administration, Marketing, 1984, University of Louisville
- Study focusing on real estate economics, 1990 to 1993, Eastern Kentucky University
- Ongoing real estate economics education since 1993 has been obtained through the Appraisal Institute, and from professional groups serving specific real estate related fields. (education reference attached)

### **Professional Qualifications and Memberships**

- Certified General Real Property Appraiser, Kentucky License #1533
- Certified General Real Estate Appraiser, Tennessee License #5312
- MAI designated Member, Appraisal Institute
  - \*(The MAI designation is held by individuals experienced in the valuation and evaluation of commercial, industrial, residential and other types of properties, and who advise clients on real estate investment decisions)
- SRA designated Member, Appraisal Institute
  - \*(The SRA designation is held by individuals experienced in the analysis and valuation of residential real property)
- AI-GRS designated Member, Appraisal Institute
  - \*(The AI-GRS designation is held by individuals experienced in commercial, industrial, residential and other types of properties appraisal review, to assist clients in satisfying issues related to due diligence and risk management)
- AI-RRS designated Member, Appraisal Institute
  - \*(The AI-RRS designation is held by individuals experienced in residential appraisal review, to assist clients in satisfying issues related to due diligence and risk management)
- Professional Development Programs – Appraisal Institute
  - Litigation
  - Valuation of the Components of a Business Enterprise
  - Valuation of Sustainable Buildings: Residential
  - Valuation of Conservation Easements
- Member, International Right of Way Association (IRWA)
- Marshall & Swift Valuation Service Commercial Cost Approach Certification #782092

### **Appraisal Institute Service**

- 2018 – President, Bluegrass Chapter, Appraisal Institute
- 2008 to 2017 – Education Chair, Bluegrass Chapter, Appraisal Institute
- 2014 to 2017 – Vice President, Bluegrass Chapter, Appraisal Institute
- 2012 to 2013 – Second Vice President, Bluegrass Chapter, Appraisal Institute
- 2015 to present – Region V Regional Nominating Committee, Member, Appraisal Institute
- 2013, 2014 and 2016 – Leadership Development & Advisory Council, Appraisal Institute
- 2009 - 2012, 2014 – Alternate Regional Representative, Bluegrass Chapter, Appraisal Institute
- 2007 – Membership Development/Retention Committee, Bluegrass Chapter, Appraisal Institute
- MAI, SRA, AI-GRS, and AI-RRS, Candidate Advisor, Appraisal Institute

**EDUCATION**

<b>PROVIDER/TITLE</b>	<b>YEAR</b>
<b>APPRAISAL INSTITUTE PROFESSIONAL DEVELOPMENT PROGRAMS</b>	
VALUATION OF SUSTAINABLE BUILDINGS: RESIDENTIAL - REGISTRY	2017
VALUATION OF THE COMPONENTS OF A BUSINESS ENTERPRISE - REGISTRY	2013
LITIGATION PROFESSIONAL DEVELOPMENT PROGRAM - REGISTRY	2010
VALUATION OF CONSERVATION EASEMENTS - REGISTRY	2008
GENERAL DEMONSTRATION REPORT - CAPSTONE PROGRAM	2014
INSTRUCTOR QUALIFYING CONFERENCE	2016
LEADERSHIP DEVELOPMENT AND ADVISORY COUNCIL - WASHINGTON D.C.	2013/14/16
<b>APPRAISAL INSTITUTE, COURSES</b>	
7 HOUR NATIONAL USPAP UPDATE	2017
UNIFORM APPRAISAL STANDARDS FOR FEDERAL LAND ACQUISITIONS	2017
RESIDENTIAL & COMMERCIAL VALUATION OF SOLAR	2017
APPLICATION & INTERPRETATION OF SIMPLE LINEAR REGRESSION	2016
CASE STUDIES IN APPRAISING GREEN RESIDENTIAL BUILDINGS	2016
REVIEW THEORY - GENERAL	2014
REVIEW THEORY - RESIDENTIAL	2014
INTRODUCTION TO GREEN BUILDINGS: PRINCIPLES AND CONCEPTS	2013
QUANTITATIVE ANALYSIS	2013
FUNDAMENTALS OF SEPARATING REAL PROPERTY, PERSONAL PROPERTY, AND INTANGIBLE BUSINESS ASSETS	2012
THE APPRAISER AS AN EXPERT WITNESS: PREPARATION AND TESTIMONY	2010
LITIGATION APPRAISING: SPECIALIZED TOPICS AND APPLICATIONS, COURSE 705GRE	2010
CONDEMNATION APPRAISING: PRINCIPLES & APPLICATIONS	2009
ADVANCED SALES COMPARISON & COST APPROACHES	2008
VALUATION OF CONSERVATION EASEMENTS CERTIFICATE PROGRAM	2008
ADVANCED RESIDENTIAL REPORT WRITING, PART II	2007
ADVANCED RESIDENTIAL APPLICATIONS & CASE STUDIES, PART I	2007
GENERAL MARKET ANALYSIS AND HIGHEST & BEST USE	2007
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