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NOV 16 2017

PUBLIC SERVICE  
COMMISSION

VIA FEDEX

November 15, 2017

Gwen R. Pinson, Executive Director  
Kentucky Public Service Commission  
211 Sower Blvd  
P.O. Box 615  
Frankfort, KY 40602-0615

Re: Response to Request for Intervention  
PSC Case No.: 2017-00368  
Site Name: Symsonia

Dear Ms. Pinson:

We have received and responded to comments from Jimmie Johnson concerning this tower site. Please find enclosed our response to their concerns and make this letter and its enclosures a part of the administrative record. Do not hesitate to contact us with any concerns regarding this matter

Sincerely,

A handwritten signature in blue ink, appearing to read 'DA', is written over a blue horizontal line.

David A. Pike  
Attorney for New Cingular Wireless PCS, LLC  
d/b/a AT&T Mobility

Enclosure

cc: Brittany Hayes Koenig, Div. of General Counsel

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NOV 16 2017

PUBLIC SERVICE  
COMMISSION

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

In the Matter of:

THE APPLICATION OF	)	
NEW CINGULAR WIRELESS PCS, LLC	)	
D/B/A AT&T MOBILITY	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2017-00368
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF GRAVES	)	

SITE NAME: SYMSONIA

\*\*\*\*\*

**RESPONSE TO COMMENTS OF JIMMIE JOHNSON**

Applicant New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility ("AT&T Mobility"), by counsel, makes this Response to the comments of Jimmie Johnson in the within proceeding. Applicant respectfully states, as follows:

1. Jimmie Johnson made a consumer web inquiry to the Kentucky Public Service Commission voicing generalized concerns regarding tower lighting, 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. In response to his generalized concern regarding the tower lighting, the FAA conducted an aeronautical study and determined that the tower must be lit with a med-dual system to insure air safety. The dual system is designed with an alternating white light in the day-time and a red light at night-time to minimize visibility to area residents.

3. In response to his generalized concern regarding property values, Applicant has attached a report from Glen D. Katz, MAI, SRA, AI-GRS, AI-RRS, a property valuation expert, as **Exhibit A**, concluding that the proposed tower will not have an impact on surrounding property values. In this instance, Graves 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 Graves 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 Graves 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.

4. In response to Mr. Johnson's generalized concerns regarding aesthetics, the proposed facility has been designed, configured, and located in such a manner that it will prevent or limit potential adverse effects on surrounding properties. The alternate site analysis report attached as **Exhibit B** demonstrates that the proposed location is the least intrusive available alternative. Furthermore, the tower will be galvanized steel to minimize its visibility.

5. 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 Graves 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 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.

6. In response to his generalized concerns regarding the need for the new communications facility, a report from a radio frequency engineer discussing the significant gap in AT&T Mobility’s wireless coverage that exists because there is insufficient wireless service infrastructure in this area of Graves County is attached hereto as **Exhibit C**. A new wireless communications facility must be located within the prescribed search area and at a specific elevation to close the coverage gap. There are no tall structures within the search area where antennas can be located to close the service gap. Furthermore, the location of the facility will maximize the availability of

wireless local loop broadband internet service in the subject area. AT&T Mobility is an FCC-licensed wireless communications service provider of essential wireless voice and data services to residential and commercial customers. AT&T Mobility delivers these services over a network of sites (i.e., antennas mounted on a support structure, with associated radio transmitting equipment) which are linked to one another and which transmit and receive signals to and from mobile phones and other wireless communication devices.

**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) Implement affirmative measures to prevent introduction and consideration of testimony and other evidence on radio frequency issues in any proceedings and from its deliberations on the subject application for approval of a wireless telecommunications facility, pursuant to KRS Chapter 100 and the Telecommunications Act of 1996;
- (c) Issue a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein without further delay; and
- (d) Grant Applicant any other relief to which it is entitled.

Respectfully submitted,



---

David A. Pike  
Pike Legal Group, PLLC

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P. O. Box 369  
Shepherdsville, KY 40165-0369  
Telephone: (502) 955-4400  
Telefax: (502) 543-4410  
Email: dpike@pikelegal.com

### **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 15th day of November 2017, a true and accurate copy of the foregoing was sent by U.S. Postal Service first class mail, postage prepaid, to Jimmie Johnson, 230 Banberry Bend, Paducah, KY 42002



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David A. Pike  
Attorney for Applicant

## LIST OF EXHIBITS

- A - Real Estate Valuation Report
- B - Alternate Site Analysis Report
- C - Radio Frequency Need Report

**EXHIBIT A**  
**REAL ESTATE VALUATION REPORT**



# **REAL ESTATE VALUE IMPACT STUDY**

**FOR**

**PROPOSED WIRELESS COMMUNICATIONS FACILITY  
NEW CINGULAR WIRELESS, LLC, D/B/A AT&T MOBILITY  
SITE NAME: SYMSONIA  
PSC CASE NO.: 2017-00368  
ASSESSOR PARCEL NUMBER: 146-00-00-026.00  
850 STATE ROUTE 348 EAST  
SYMSONIA, GRAVES COUNTY, KY 42082**

## **DATE OF REPORT**

**September 27, 2017**

## **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**

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

September 27, 2017

Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40601

Subject: Real Estate Value Impact Study  
Proposed Wireless Communications Facility  
New Cingular Wireless, LLC, d/b/a AT&T Mobility  
Site Name: Symsonia  
PSC Case No.: 2017-00368  
Assessor Parcel Number: 146-00-00-026.00  
850 State Route 348 East  
Symsonia, Graves County, KY 42082

Commissioners:

I have completed an impact study regarding potential effects of wireless communication tower facilities on market value of surrounding residential properties, specifically addressing the subject location. Attached is my analysis.

Based on investigation and analysis of market conditions, I conclude the proposed facility will not result in any diminution of value for properties located with proximity to the proposed facility, or the neighborhood in general. Consistently, market evidence supports the positive influences and expansion of wireless telecommunications tower infrastructure.

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

Office (502) 396-6664  
Email gkatz@usa.net

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## **SUMMARY OF FACTS AND CONCLUSIONS**

In the course of studying potential value influence due to proximity of private or public utility facilities to residential and commercial properties, I have performed impact analysis on wireless communication tower facilities, high voltage transmission lines, storage towers, oil pipelines, and federal interstates. For the subject property, my analysis consists of analyzing potential increased or decreased value trends of residential properties resulting from proximity to 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.

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 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. They are still influenced by social, economic, governmental and environmental forces.

The facility will be located in a residential and agricultural area. The construction improvements will be comprised of a 305' tower structure with 15' lightning arrestor, totaling a structure height of 320 feet. There will be supporting storage cabinets, protective fencing, and treed landscaping buffer. These characteristics are some of the most common for wireless communication tower facilities in Kentucky.

The impact study applying to this project consists of studying value influences at existing tower locations. The methodology is based on measurement of value change (appreciation or depreciation) over time, and direct comparison of properties with and without distance or view proximity exposure.

Specifically, the following steps are taken in analysis;

- Identify existing tower locations with an adequate density of surrounding developed land uses (residential and/or commercial)
- Identify the surrounding market area and neighborhood to determine if there are compatible and competing properties with adequate sale activity
- Categorize sales by proximity characteristics for measurement of influence, whether distance or visibility. Typically a distance of 500' to 1,000' is a threshold of measure for close-proximity sales. 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 of properties in close proximity and non-proximity, or; track value change before and after a facility is installed
- Compare the results to determine if there is a difference in value due to tower facility exposure

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

- Social forces are influenced by; population, education, and lifestyles. There is increasing need for communication facilities, and satisfying demand for communication facilities as part of the core supply of public services is expected by the population. Anything less is detrimental to value or demand.
- 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 communication facilities are required.
- Governmental forces respond to population needs for; laws and policies; public services; zoning, and building codes. The governmental regulations that result in enabling public services provided by communication facilities are a direct reaction to public needs.

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 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 immediate area surrounding a property. These forces shape the location of a population, and where supporting infrastructure will be most effective and valuable as a resource.

As illustrated by study results, the forces of value are consistent. Public utilities and related services are essential to meeting the accepted standard of living for neighborhood populations. Without adequate services, there will be a tendency for decreasing demand and property values in a neighborhood. In order to meet needs of a population, telecommunications towers 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, telecommunications towers are needed 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, tower structures, like overhead electric distribution lines, signage, and buried utility easements, are beneficial. Due to expanding utilities and increased services, 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. Any perceived negative proximity influences are absorbed by the landscape of a neighborhood and lifestyles of the population.

Therefore, based on market information, it is my opinion that the proposed facility will not adversely influence the value of properties in the immediate or general area.

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

Scope of work refers to the type and extent of research and analysis in an appraisal consulting assignment. Scope of work is an important component for fundamental development and communications of analyses, and is comprised of the following:

1. identify the problem to be solved;
2. determine and perform the scope of work necessary to develop credible assignment results; and
3. disclose the scope of work in the report.

The scope of work used in preparing this report is included throughout this report in the various descriptions and analysis. The following topics give a general overview of the 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

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

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

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

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

- First is “Before and After” data. This analyzes value trends for close proximity properties before and after installation of a facility. Sale data before a facility is installed

is directly compared to sale data after a facility is installed. This method has limitations when the facility installation occurred in the distant past. Older sales may have incurred significant physical changes (renovation, updating, addition) and/or economic changes (2007-2009 recession, changes in highest and best use). In these cases, value change over a long time period would be attributed to multiple sources, and allocating the change solely to tower influence would be misleading.

- Next is unit-value comparison of sales identical in all aspects, except proximity. This directly compares sales and values of substitute properties similar in physically marketable characteristics. The unit value will commonly be price per-square-foot of gross living area. The information will not only identify any price differentials but also value trend or change differences. This method has limitations due to the vast number of property differences and difficulty in matching properties that are identical with the exception of proximity.
- The most common method is timeline trend comparison. 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 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 2009 to the current date, as it is most recent, and reflects post-recession activity.

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 the potential market value effect on surrounding properties from proximity to the identified wireless communication tower facility.

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

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

### **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, in making permitting decisions regarding the subject property. This report is not intended for any other use.

## **DEFINITION OF VALUE**

### **Kentucky Definition of Market Value**

The Kentucky Constitution and the statutes define fair cash value, or fair market value as: “...estimated at the price it would bring at a fair voluntary sale...”

Fair Market Value (aka Fair Cash Value) is defined as the most probable price expressed in terms of money that a property would bring in an “arm’s-length transaction” between a willing seller and willing buyer, both of whom are knowledgeable concerning all the uses to which it is adapted and for which it is capable of being used. There are several requirements for a sale to be considered an “arm’s-length transaction:”

1. A willing buyer and a willing seller. Neither may be acting under duress with no advantage being taken by buyer or seller.
2. Property must be marketed for a reasonable amount of time to locate a willing buyer.
3. Both buyer and seller must be informed and knowledgeable about the property and its potential.
4. No unusual circumstances may be present in the transaction.

## **IDENTIFICATION OF PROJECT**

Proposed Wireless Communications Facility  
New Cingular Wireless, LLC, d/b/a AT&T Mobility  
PSC Case No.: 2017-00368  
Assessor Parcel Number: 146-00-00-026.00  
850 State Route 348 East  
Symsonia, Graves County, KY 42082

The facility will be located in a residential and agricultural area. The construction improvements will be comprised of a 305’ tower structure with 15’ lightning arrestor, totaling a structure height of 320 feet. There will be supporting storage cabinets, protective fencing, and treed landscaping buffer. These characteristics are some of the most common for wireless communication tower facilities in Kentucky.



## **CASE STUDY INTRODUCTION**

The following case studies are developed through researching and analyzing market activity of residential properties in neighborhoods adjacent to tower facilities. After identification of a tower facility, whether wireless communication, high tension electrical, or water storage tower, sale activity of homes are researched.

With the information available, both the before and after, and timeline trend methods are used.

For projects that have been in place for a lengthy time period, the timeline trend steps of analysis consist of:

- Research properties with tower proximity that have repeat, or back-to-back sales.
- Determine the monthly or annual rate of market value appreciation or depreciation over the time period for the individual properties and the property category.
- Research properties in the same neighborhood, without tower proximity, that have repeat or back-to-back sales.
- Determine the monthly or annual rate of market value appreciation or depreciation over the time period for the individual properties and the property category.
- Compare the value change trends of the two groups of property to extract potential value change differences related to proximity influence.

For projects that have been 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 monthly or annual rate of market value appreciation or depreciation over the time period for the individual properties and the property 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 monthly or annual rate of market value appreciation or depreciation over the time period for the individual properties and the property category.
- Compare the value change trends of the two groups of property to extract potential value change differences attributed to proximity.

The date range for sale data is from 2009 to the current date. This minimizes potential influence of 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 range of 500' to 1,000' 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, properties with the following characteristics are discounted from analysis:

- Properties with significant physical changes that would influence value between the original and subsequent transfers, such as renovation, addition, or deferred maintenance resulting in deterioration.

- Properties with distressed economic ownership characteristics, such as foreclosure or short-sale influence.
- Properties with other unusual buyer or seller motivations, such as family transactions, estate liquidation, or investor activity in a predominantly owner-occupied market.

If this type of non-arms-length activity is prevalent in a neighborhood, the facility and neighborhood is removed from consideration. Ultimately the focus is to measure general 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 communication towers. Two of the case studies compare rates of value change between proximity and non-proximity properties, and one case study 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 transmission towers. The line traverses a residential single-family detached 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 is presented by sales and resales of properties within 500' proximity to the utility, and outside 500' proximity to the utility. Rates of appreciation and depreciation of each of the two categories are developed, and the two categories are compared to analyze any potential influence.

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

The project was installed in 2002. The value evidence is presented by sales and resales of properties within 750' proximity to the utility, and outside 750' proximity to the utility. Rates of appreciation and depreciation of each of the two categories are developed, and the two categories are compared to analyze any potential influence.

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

The project was installed in 2016. The value evidence is presented by sales and resales of properties within 1,000' proximity to the utility, and outside 1,000' proximity to the utility. Rates of appreciation or depreciation in each of the two categories are extracted, and the two categories are compared to analyze any potential influence.

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 appreciation.

**Case Study 1 - Proximity Sales**

- Facility: High tension overhead electric power lines and lattice construction transmission towers, residential single-family detached and condominium subdivision location
- Address: Gutenberg Road, Louisville, Jefferson County
- FCC Identification: N/A
- Year of installation: Pre-1993
- Information source: Maps and individual research
- Neighborhood location: Fern Creek
- 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 time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation is -0.21% to 4.97%. The average 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	Burris	Dr	8/10/2012	\$127,400			
4802	Burris	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%

(continued next page)

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	2.66%
						Annual Median	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
- FCC Identification: N/A
- Year of installation: Pre-1993
- Information source: Maps and 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 09/21/2017. Each property transferred two or more times in the time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation 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%

(continued next page)

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%
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	2.91%
						Annual Median	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 transmission towers. There is volume sale evidence for analysis between 2010 and the current date. The rates of appreciation between the two categories are consistent. The sale evidence is consistent. 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 influence on value from the tower facility.

**Case Study 2 - Proximity Sales**

- Facility: Wireless Communication Facility, lattice construction, 219' height, residential single-family detached and condominium subdivision location
- Address: 8400 Bardstown Road, Louisville, Jefferson County
- 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 750' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 02/01/2017. Each property transferred two or more times in the time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation is 0.46% to 5.87%. The average appreciation is 2.80%, and the median or middle point of the range is 3.31%.

Address	Sale Date	Sale Price	% Change	Months	% Change /Month	% Change /Year
8505 Missionary Ct	04/28/15	\$225,000	6.90%	59	0.12%	1.40%
	05/28/10	\$210,475				
8509 Missionary Ct	01/31/17	\$271,000	10.61%	80	0.13%	1.60%
	06/17/10	\$245,000				
10500 Parkhurst Ct	10/11/13	\$175,000	9.38%	30	0.31%	3.71%
	04/04/11	\$160,000				
8919 Gentlewind Way	11/23/15	\$273,000	8.33%	24	0.35%	4.16%
	11/22/13	\$252,000				
8734 Lough Dr	06/29/16	\$225,000	9.76%	33	0.30%	3.59%
	10/11/13	\$205,000				
8721 Lough Dr	07/29/16	\$170,000	3.03%	32	0.09%	1.13%
	11/25/13	\$165,000				
8702 Meadow Springs Way	01/08/16	\$165,500	11.37%	41	0.28%	3.31%
	08/02/12	\$148,600				
8702 Lough Dr	09/09/16	\$207,000	28.07%	57	0.49%	5.87%
	12/01/11	\$161,635				
10502 Gentlewind Ct	02/29/16	\$270,000	0.93%	24	0.04%	0.46%
	02/19/14	\$267,500				
Average					0.23%	2.80%
Median					0.28%	3.31%



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

- Facility: Wireless Communication Facility, lattice construction, 219' height, residential single-family detached and condominium subdivision location
- Address: 8400 Bardstown Road, Louisville, Jefferson County
- 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 750' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2010 and 02/01/2017. Each property transferred two or more times in the time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation is 0.90% to 6.35%. The average appreciation is 3.44%, and the median or middle point of the range is 3.57%.

Address	Sale Date	Sale Price	% Change	Months	% Change /Month	% Change /Year
8607 Sanctuary Ln	03/30/16 07/25/14	\$245,000 \$231,000	6.06%	20	0.30%	3.60%
8622 Sanctuary Ln	07/13/15 06/21/13	\$257,500 \$240,000	7.29%	25	0.29%	3.54%
8607 Sanctuary Ln	07/25/14 08/02/10	\$245,000 \$227,000	7.93%	48	0.17%	1.99%
8903 Gentlewind Way	09/30/16 08/01/14	\$307,500 \$290,000	6.03%	26	0.23%	2.78%
10405 Pine Glen Cir	01/19/16 11/02/12	\$240,000 \$212,900	12.73%	39	0.33%	3.96%
10423 Pine Glen Cir	08/06/14 07/29/10	\$184,450 \$170,000	8.50%	48	0.18%	2.11%
10427 Pine Glen Cir	10/14/16 02/28/13	\$230,000 \$195,000	17.95%	44	0.41%	4.95%
10504 Providence Dr	07/03/14 07/08/13	\$248,700 \$246,500	0.89%	12	0.08%	0.90%
10609 Providence Dr	11/08/16 02/15/13	\$260,000 \$225,000	15.56%	45	0.35%	4.17%
10720 Glenmary Springs Dr	04/01/16 06/11/14	\$194,000 \$174,000	11.49%	22	0.53%	6.35%
Average					0.29%	3.44%
Median					0.30%	3.57%

**Case Study 2 Reconciliation**

The sale evidence represents sales and resales of residential properties in a neighborhood containing a wireless communication facility tower. The tower existed prior to construction of homes in the project. There is volume sale evidence for analysis between 2009 and the current date. The rates of appreciation between the two categories are consistent. While the non-

proximity sales show a slightly higher average rate of appreciation, the median rate difference is negligible. 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 influence on value from the tower facility.

**Case Study 3 - Proximity Sales**

- Facility: Wireless Communication Facility, monopole construction, 140' height, residential single-family detached location
- Address: 7200 Woodhaven Road, Louisville, Jefferson County
- 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 1000' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2009 and 02/01/2017. Each property transferred two or more times in the time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation is 0.78% to 5.98%. The average appreciation is 3.74%, and the median or middle point of the range is 3.81%. It is noted that the sales of 7306 Quail Ridge Court occurred both before and after the tower installation and the rate of appreciation is consistent with the general trend.

Address	Sale Date	Sale Price	% Change	Months	% Change/ Month	% Change/ Year
5904 Bluffington Ct	11/21/12 07/28/11	\$130,900 \$124,000	5.56%	16	0.35%	4.21%
6001 Hickory Tree Rd	05/28/15 02/10/11	\$128,200 \$102,000	25.69%	52	0.50%	5.98%
7118 Ridge Creek Rd	03/25/16 03/28/11	\$150,000 \$119,000	26.05%	60	0.43%	5.21%
7215 Chestnut Tree Ln	11/01/13 06/10/11	\$140,000 \$131,000	6.87%	29	0.24%	2.86%
7303 Chestnut Tree Ln	10/21/14 11/16/09	\$162,500 \$156,500	3.83%	59	0.06%	0.78%
7306 Quail Ridge Rd	09/02/16 07/21/10	\$145,000 \$120,000	20.83%	74	0.28%	3.40%
Average					0.31%	3.74%
Median					0.32%	3.81%

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

- Facility: Wireless Communication Facility, monopole construction, 140' height, residential single-family detached and condominium subdivision location
- Address: 7200 Woodhaven Road, Louisville, Jefferson County
- 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 1000' proximity to facility installation
- Reconciliation of analysis: The data represents sale activity between 01/01/2009 and 02/01/2017. Each property transferred two or more times in the time frame. The price difference between two back-to-back transfers of each property is the amount of appreciation or depreciation due to market conditions, or time. The range of annual appreciation is 0.39% to 6.66%. The average appreciation is 3.74%, and the median or middle point of the range is 3.98%. It is noted that the sales of 7102 Ridge Creek Road occurred before and during the tower construction, and the sales of 7403 Covey Place occurred both before and after the tower installation. The rates of appreciation are consistent with the general trend.

Address	Sale Date	Sale Price	% Change	Months	% Change /Month	% Change /Year
7102 Ridge Creek Rd	05/06/16	\$149,900	10.63%	55	0.19%	2.31%
	10/03/11	\$135,500				
7302 Bluffington Rd	03/22/13	\$139,000	0.98%	30	0.03%	0.39%
	09/24/10	\$137,650				
7403 Covey Pl	10/31/16	\$156,000	15.13%	32	0.47%	5.64%
	02/26/14	\$135,500				
7404 Covey Pl	12/30/15	\$130,000	19.27%	35	0.56%	6.66%
	02/08/13	\$109,000				
Average					0.31%	3.75%
Median					0.33%	3.98%

**Case Study 3 Reconciliation**

The sale evidence represents sales and resales of residential properties in a neighborhood containing a wireless communication facility tower. The tower was constructed after homes were constructed in the project. There is volume sale evidence for analysis between 2009 and the current date. The rates of appreciation between the two categories are very consistent. In addition, properties with sales on both sides of the tower 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 influence on value from the tower facility.

**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 for neighborhood populations. 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 towers 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, telecommunications towers are needed 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, tower structures, like overhead electric distribution lines, signage, and buried utility easements, are beneficial. Due to expanding utilities and increased services, 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. Any perceived negative proximity influences are absorbed by the landscape of a neighborhood and lifestyles of the population.

Therefore, based on market information, it is my opinion that the proposed facility will not adversely influence the value of properties in the immediate or general area.

**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 limited only by the reported assumptions and limiting conditions and 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, 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 D. 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. For litigation support, reports are reviewed under USPAP, UASFLA, and local jurisdictional guidelines.

As an expert witness, Mr. Katz has participated in cases regarding land and building damage, insurance claims, 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
- Eminent domain
- Expert witness/litigation support
- Property damages
- Insurance claims and cost analysis
- Bankruptcy
- Tax Appeal
- Estate valuation
- Agricultural land
- 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. The project included a market study on pipeline eased properties, sale book, and appraisals.
- Tax assessment appeal; 2014 – Representing Walgreen Co., performed an appraisal and testified as expert witness before the Kentucky Board of Tax Appeals regarding value methodology 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, 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
- 2014 to present – Vice President, Bluegrass Chapter, Appraisal Institute
- 2008 to present – Education Chair, 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
- 2012 to 2013 – Second Vice President, 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 LISTING**

<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>	
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
7 HOUR NATIONAL USPAP UPDATE	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
RESIDENTIAL MARKET ANALYSIS AND HIGHEST & BEST USE	2007
REPORT WRITING AND VALUATION ANALYSIS	2004
STANDARDS OF PROFESSIONAL PRACTICE, PART C	1999
CONDEMNATION APPRAISING; BASIC PRINCIPLES & APPLICATIONS	1999
STANDARDS OF PROFESSIONAL PRACTICE, PART B	1994
STANDARDS OF PROFESSIONAL PRACTICE, PART A	1994
EXAM 202 CHALLENGE, APPLIED INCOME PROPERTY VALUATION	1991
EXAM 201 CHALLENGE, PRINCIPLES OF INCOME PROPERTY APPRAISING	1991
EXAM 101 CHALLENGE, INTRODUCTION TO APPRAISING REAL PROPERTY	1990
<b>APPRAISAL INSTITUTE, SEMINARS</b>	
DRONE TECHNOLOGY AND ITS IMPACT ON THE APPRAISAL INDUSTRY	2017
RESIDENTIAL APPLICATIONS: USING TECHNOLOGY TO MEASURE AND SUPPORT APPRAISAL ASSIGNMENT RESULTS	2017
YELLOW BOOK CHANGES - OVERVIEW FOR APPRAISERS	2017
BUSINESS PRACTICE AND ETHICS	2016
RESIDENTIAL APPLICATIONS 2: USING MICROSOFT EXCEL TO ANALYZE AND SUPPORT APPRAISAL ASSIGNMENT RESULTS	2015
UNDERSTANDING COLLATERAL UNDERWRITER	2015
INCOME APPROACH FOR RESIDENTIAL APPRAISERS	2014
GENERAL DEMONSTRATION APPRAISAL REPORT WRITING	2014
MARKETABILITY STUDIES: ADVANCED CONSIDERATIONS AND APPLICATIONS	2013
APPRAISING THE APPRAISAL: APPRAISAL REVIEW-GENERAL	2012
ADVANCED SPREADSHEET MODELING FOR VALUATION APPLICATIONS	2011
THE UNIFORM APPRAISAL DATASET FROM FNMA AND FHLMC	2011
ONLINE COOL TOOLS: NEW TECHNOLOGY FOR REAL ESTATE APPRAISERS	2011
ONLINE APPRAISING MANUFACTURED HOUSING	2011
VALUATION OF GREEN RESIDENTIAL PROPERTIES	2010
AN INTRODUCTION TO VALUING COMMERCIAL GREEN BUILDINGS	2010
USING SPREADSHEET PROGRAMS IN REAL ESTATE APPRAISALS	2010
APPRAISING DISTRESSED COMMERCIAL REAL ESTATE: HERE WE GO AGAIN	2010
EVALUATING RESIDENTIAL CONSTRUCTION	2009
THE NEW RESIDENTIAL MARKET CONDITIONS FORM	2009

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<b>PROVIDER/TITLE</b>	<b>YEAR</b>
<b>APPRAISAL INSTITUTE, SEMINARS (continued)</b>	
REO APPRAISAL: APPRAISAL OF RESIDENTIAL PROPERTY FORECLOSURE	2009
REGRESSION ANALYSIS IN APPRAISAL PRACTICE: CONCEPTS AND APPLICATIONS	2008
SELF STORAGE ECONOMICS AND APPRAISAL	2007
APPRAISAL REVIEW – GENERAL	2007
SUBDIVISION VALUATION: A COMPREHENSIVE GUIDE	2007
APPRAISAL INSTITUTE AND INTERNET RESOURCES	2006
WHAT CLIENTS WOULD LIKE THEIR APPRAISERS TO KNOW, HOW TO MEET THEIR EXPECTATIONS	2006
MARKET ANALYSIS AND THE SITE TO DO BUSINESS	2006
APPRAISING CONVENIENCE STORES	2005
EVALUATING COMMERCIAL CONSTRUCTION	2005
SUBDIVISION ANALYSIS	2003
APPRAISAL CONSULTING: A SOLUTIONS APPROACH FOR PROFESSIONALS	2003
APPRAISING THE TOUGH ONES	2003
ATTACKING & DEFENDING AN APPRAISAL IN LITIGATION	2002
REAL ESTATE DISCLOSURE	2001
APPRAISAL OF NONCONFORMING USES	2000
EMINENT DOMAIN & CONDEMNATION APPRAISING	1998
DYNAMICS OF OFFICE BUILDING VALUATION	1998
ENVIRONMENTAL RISK AND THE APPRAISAL PROCESS	1995
THE INTERNET AND APPRAISING	1997
LITIGATION SKILLS FOR APPRAISERS	1997
APPRAISAL OF SPECIAL-PURPOSE PROPERTIES	1996
<b>MARSHALL &amp; SWIFT</b>	
COMMERCIAL COST APPROACH CERTIFICATION PROGRAM	2015
<b>KENTUCKY REAL ESTATE APPRAISERS BOARD</b>	
SUPERVISOR AND ASSOCIATE TRAINING COURSE, KENTUCKY	2015
<b>AMERICAN BANKERS ASSOCIATION</b>	
FEDERAL APPRAISAL POLICIES: HOTLINES, COMPLAINT FORMS AND REVISED POLICY STATEMENTS	2013
<b>CCIM INSTITUTE</b>	
COURSE CI-101, FINANCIAL ANALYSIS FOR COMMERCIAL INVESTMENT REAL ESTATE	2006
COURSE CI-103, USER DECISION ANALYSIS FOR COMMERCIAL INVESTMENT REAL ESTATE	2006
COURSE CI-104, INVESTMENT ANALYSIS FOR COMMERCIAL INVESTMENT REAL ESTATE	2006
COURSE 411, GAP ANALYSIS AND REAL ESTATE MARKET DYNAMICS	2006
COURSE 412, ECONOMICS OF COMMERCIAL LEASES, AND 1031 EXCHANGES	2006
<b>HUD/FHA</b>	
HUD/FHA APPRAISER TEST AND CERTIFICATION	2000
THE MODEL ENERGY CODE (MEC), U.S. DEPARTMENT OF ENERGY	1997
APPRAISING FHA PROPERTIES	1997
<b>EASTERN KENTUCKY UNIVERSITY</b>	
REAL ESTATE FINANCE, RST 330	1993
ADVANCED APPRAISAL APPLICATION/INCOME PROPERTY VALUATION, RST 410	1991
APPRAISAL OF RESIDENTIAL PROPERTY, RST 330	1990
<b>UNIVERSITY OF LOUISVILLE</b>	
B.S.B.A. MARKETING	1984
<b>HOME BUILDERS ASSOCIATION OF LOUISVILLE</b>	
SITE PLANNING	1997
BASICS OF BUILDING; BLUEPRINT READING, BUILDING CODES, SITING	1996
<b>CLE INTERNATIONAL</b>	
EMINENT DOMAIN, THE LAW OF CONDEMNATION AND LAND USE	2002

**EXHIBIT B**

**ALTERNATE SITE ANALYSIS REPORT**



September 26, 2017

Commonwealth of Kentucky  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

RE: Case No. 2017-00368  
Alternate Site Analysis Report  
Application for a Communications Facility  
Applicant: New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility  
Site Location: 850 State Route 348 East, Symsonia, KY (Graves County)  
Site Name: Symsonia

Dear Commissioners:

This report is provided to explain the site development process used by the Applicant to identify the site selected for the new wireless communications facility proposed in the accompanying Application.

**New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility**  
**Site Development Process**

**Step 1: Problem Identification.** New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility radio frequency engineers first identified a growing coverage and/or capacity gap in Graves County.

**Step 2: Search Area.** To help guide the site development team's task of identifying a suitable location for a new wireless communications facility site, New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility radio frequency engineers identified the geographic area where the antenna site must be located in order to close the gap and issued a map (called a Search Area) that identified the general area in which a new site must be located.

In this instance, the search area is a one-half mile radius centered at 36.914181°, -88.512144° (36°55'07.10" North latitude, 88°30'26.78" West longitude) and generally located south of the intersection of Hwy 348 and Hwy 1949. A map of the search area is below:



**Step 3: Co-location Review.** The site development team first reviewed the area within the Search Area for a suitable tall structure for co-location. The team performed an FCC and FAA database search within a one-mile (1.6 kilometers) radius of the location AT&T would like to construct a new telecommunications tower. As you can see from the search results below, there are no FCC registered towers located within one mile of the search coordinates:

**FCC** Federal Communications Commission

**Antenna Structure Registration**

[FCC](#) > [WTR](#) > [ASR](#) > [Online Systems](#) > [ASR Search](#)

ASR Registration Search

**Registration Search Results**

[New Search](#) [Refine Search](#) [Printable Page](#)

**Displayed Results**

**No matches found**

To try again, you can perform a [new search](#) or [refine your existing search](#).

**Specified Search**

Latitude='36-55-07.1 N', Longitude='88-30-26.7 W', Radius=1.6 Kilometers

The team also did a visual search of this location and area in which we did not see any communication towers. After these searches, the team concluded that no other communication towers are within one mile of the location AT&T wishes to build a new

tower. Since a new site must be located within a ½ mile of the search area coordinates to meet the radio frequency needs of the project, there are no existing towers where a new facility must be located to close the service gap.

**Step 4: Review of the Area's Zoning Classification.** Once the site development team determined that there are no available existing tall structures which are technically feasible and suitable for co-location, the team next reviewed the zoning regulations for the most suitable site that meets the engineering needs of the project and complies with the requirements of the zoning ordinance. It was determined that the search area is located in an area without planning and zoning regulations and subject to the jurisdiction of the Public Service Commission. Even though there are no zoning regulations to guide the search, the site acquisition team searched for the least intrusive alternative to locate a new communications facility.

**Step 5: Preliminary Inspection and Assessment of Suitable Parcels.** Once suitably zoned parcels are identified, the site development team visits the parcels and performs a preliminary inspection. The purpose of the preliminary inspection is: (1) to confirm the availability of sufficient land space for the proposed facility; (2) to identify a specific location for the facility on the parcel; (3) to identify any recognized environmental conditions that would disqualify the parcel from consideration; (4) to identify any construction issues that would disqualify the candidate; and, (5) to assess the potential impact of the facility on neighboring properties.

In this instance, the eastern portion of the search area is near the town of Symsonia and the southern portion of the search area has flood plain issues. The western portion of the search area is an agricultural area with large parcels that provide the greatest separation from the town of Symsonia.

#### **Rawland Alternatives Investigated**

Parcels within search area that were removed from consideration based on communications with landowner:

Landowner: Steven & Karon Cunningham Parcel # / Address: 131.01.00.079.02 / KY 348, Symsonia, KY 42082. Reasons for rejecting this parcel: Landowner was not interested.

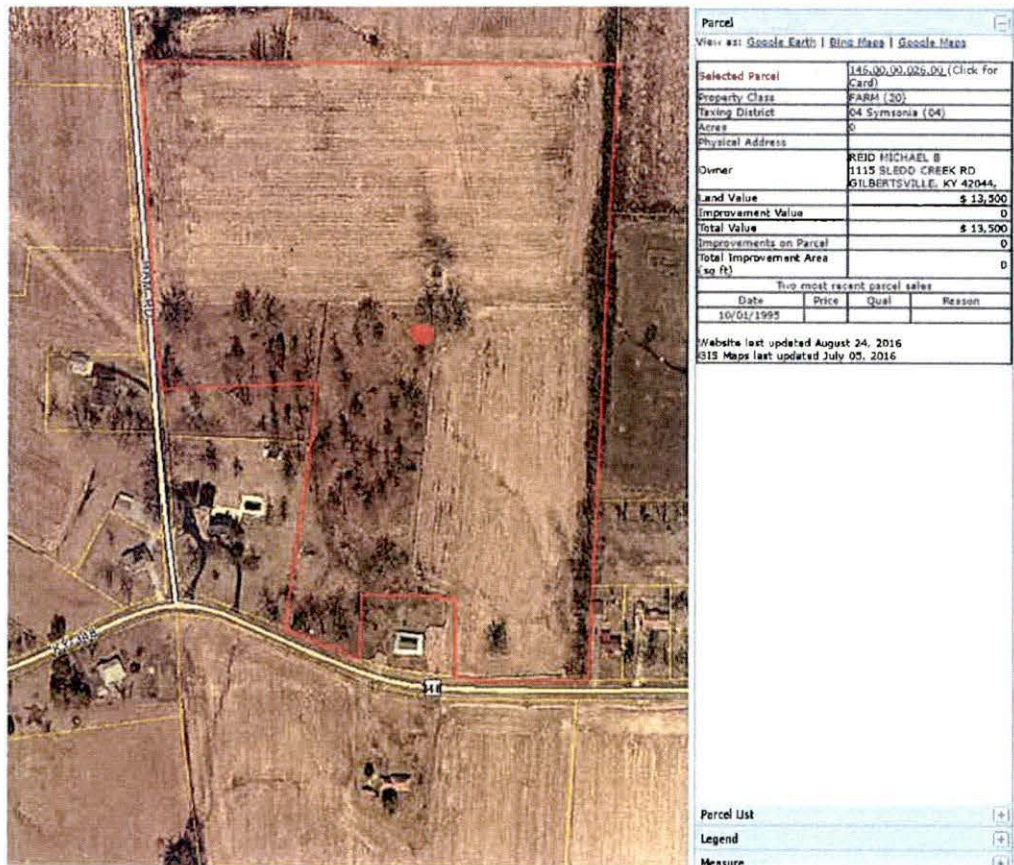
Landowner: Henry & Arlene Fowler Parcel # / Address: 147.00.00.135.00 / 596 St Rt 1949, Symsonia, KY. Reasons for rejecting this parcel: Landowner was not interested.

Parcels within search area that were removed from consideration based on superiority of site parcel:

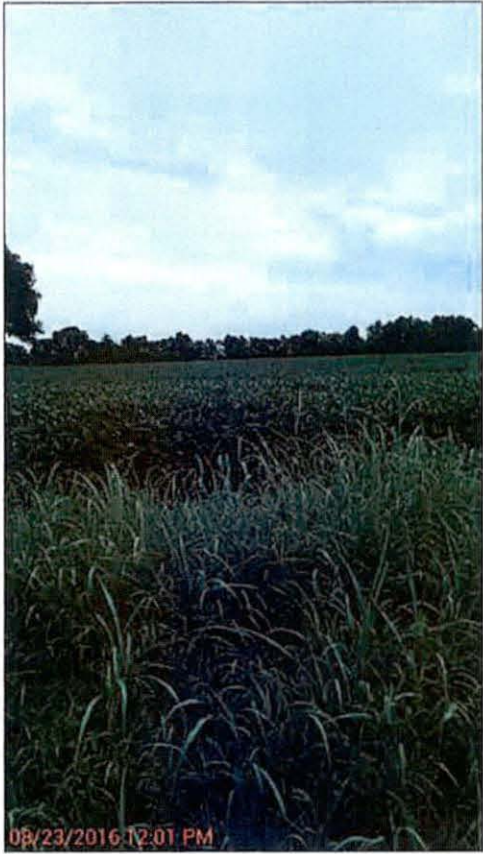
Landowner: Rodney & Strena Gamble Parcel # / Address: 131.01.00.047.00 / 4620 St Rt 534, Symsonia, KY. Reasons for rejecting this parcel: AT&T's radio frequency engineers chose the Reid property as the best alternative to close growing coverage and/or capacity gap.

Landowner: Jason & Megan Burgess Parcel # / Address: 147.00.00.098.00 Rt 534 & Angelia Ave, Symsonia, KY. AT&T's radio frequency engineers chose the Reid property as the best alternative to close growing coverage and/or capacity gap.

**Step 6: Candidate Evaluation and Selection.** After the preliminary site assessments were performed, the site development team ranked the candidates based on compliance with zoning regulations, the availability of ground space, topography, applicable environmental conditions, construction feasibility and the potential impact of the facility on neighboring properties. In this case, the proposed tower is located at 850 State Route 348 East, Symsonia, Kentucky on parcel number 146.00.00.026.00 as shown below:



This is a large agricultural parcel that provides good setbacks from property lines, roadways, and residential dwellings. Below are photograph of the site:







**Step 7: Leasing and Due Diligence.** Once a suitable candidate was selected, lease negotiations were commenced and site due diligence steps were performed, as described below.

Leasehold Due Diligence:

- A Title Report was obtained and reviewed to ensure that there are no limitations on the landowner's capacity to lease and to address any title issues.
- A site survey was obtained to identify the location of parcel features, boundaries, easements and other encumbrances revealed by the title search.
- Review of environmental conditions.

Engineering Due Diligence:

- Utility access identified.
- Grounding plan designed.
- Geotechnical soil analysis performed to determine foundation requirements.
- Foundations designed to meet the Kentucky Building Code lateral and subjacent support requirements.
- Site plan developed.

#### Federal Regulatory Due Diligence

- Federal Aviation Administration ("FAA")
- Federal Communication Commission ("FCC")

**Step 8: Application.** Once a lease is obtained and all site due diligence is completed, New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility prepared and filed the accompanying uniform application to construct, maintain and operate a communications facility.

#### Conclusion

Applicant's site identification and selection process aims to identify the least intrusive of all the available and technically feasible parcels in a service need area. In this case, a tower located 850 State Route 348 East, Symsonia, Kentucky on parcel number 146.00.00.026.00 will resolve the existing coverage or capacity gap in this area. The site is located on a large parcel to provide separation and buffering from surrounding land uses.

Thank you!



Jim Fairchild  
LCC Telecom Services

**EXHIBIT C**  
**RADIO FREQUENCY NEED REPORT**



# **Radio Frequency Engineering Statement**

**in support of Application for**

**Proposed AT&T Mobility Wireless Communications Facility**

**850 State Route 348 East, Symsonia, KY 42082**

**Site Name: Symsonia**

## **BACKGROUND**

AT&T Mobility (“AT&T”) is an FCC-licensed wireless communications service provider that provides essential wireless voice and data services to residential and commercial customers. AT&T delivers these services over a network of sites (i.e., antennas mounted on a support structure, with associated radio transmitting equipment) which are linked to one another and which transmit and receive signals to and from mobile phones and other wireless communication devices.

Each site provides coverage for users located in a particular area. The geographic area covered by a given site is determined by factors such as site elevation, local topography, relative location and elevation of adjacent sites and customer usage patterns for the area. The volume of usage that can be handled by an individual site is limited, and sites must be carefully located to provide sufficient coverage for users in a given area. Sites must also be located with reference to other sites in the network to provide seamless mobile connectivity while also avoiding interference with one another.

There is a significant gap in AT&T’s wireless coverage in the vicinity of the proposed site. The gap exists because there is insufficient wireless service infrastructure in the subject area. As part of AT&T’s overall plan for Graves County, a new wireless communications facility is needed to close this gap so that quality service may be provided to wireless service users.

To remedy this problem, new wireless communications antennas and associated equipment must be located within a prescribed area (as discussed further below) and at a specific elevation in order to be integrated into AT&T’s existing network to provide coverage in the subject area. Accordingly, AT&T proposes to install a 320-foot self-support lattice tower on property located at 850 State Route 348 East, Symsonia, KY 42082 (the “Proposed Facility”). The proposed tower height and selected location are necessary for the Proposed Facility to function properly within AT&T’s network to close the coverage gap.

## **BENEFIT TO THE COMMUNITY**

As wireless communications carriers have evolved, they have become a vital link as a wireless data provider in addition to voice communications. Phones, tablets and even laptop computers can now access the internet quickly and efficiently without the need to be connected to a cable or restricted to a small Wi-Fi hotspot as was the case in the past. This has brought about many new innovations, including devices such as parking meters that can report their status, vending machines that can report their inventory levels, delivery vehicles that report package delivery and receipt and the “connected car,” which will not only stream audio but also be able to share diagnostic information, provide real-time traffic updates, report accidents and caution its owner about speeding or aggressive driving.

Wireless carriers also provide real-time internet access for law enforcement, fire and medical transport vehicles, which not only allows immediate access to information when needed, but can also help determine the closest unit to an area of need and help determine the fastest route to the site of an emergency based on current conditions.

Expanded wireless communications services are also important to businesses that use these services to support their operations. It is becoming common for AT&T to receive service quality inquiries from businesses when they are planning to locate to a new area. They want to know what infrastructure and technology is in place prior to making a move decision. This has also been the case with convention groups when planning future meetings and expositions.

In addition to expanding capacity for voice service in the subject area, AT&T is also expanding its 4G LTE high speed data service, with the goal of providing the most advanced personal wireless experience available to AT&T customers. 4G LTE is capable of delivering mobile broadband speeds up to 10 times faster than industry-average 3G speeds and features lower latency (i.e., the processing time it takes to move data through a network), which will shorten the time it takes to start downloading a webpage or file once a customer has sent. Additionally, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

### **WIRELESS LOCAL LOOP**

In addition to expanding and improving voice and data service for AT&T mobile customers, this site will be equipped with wireless local loop (“WLL”) technology. As a participant in the FCC’s Connect America Fund Phase II (CAF II) program, AT&T is aggressively deploying WLL service infrastructure to bring expanded internet access to residential and business customers in rural and other underserved areas, including the area served by the proposed facility.

WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies. Broadband service via WLL will be delivered from the tower to a dedicated antenna located at the home or business receiving service and will support downloads at 10 Mbps and uploads at 1 Mbps. The proposed location of the facility will maximize the availability of wireless local loop broadband internet service in the subject area.

## SERVICE COVERAGE GAP

AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources, including terrain and clutter databases which simulate the environment and propagation models that simulate signal propagation in the presence of terrain and clutter variation.

The extent of service coverage provided by existing AT&T sites in the subject area is shown on the map included as Exhibit A (page 5) with this Report. The green shading indicates areas with a signal strength level that provides acceptable in-building service coverage (i.e., where users are able to place or receive a call on the ground floor of a building). The blue shading indicates areas with a signal strength level that provides acceptable in-transit service coverage (i.e., where users should be able to place or receive a call from within a vehicle). The red shading indicates areas with a signal strength level where a customer might have difficulty receiving consistently acceptable service, and white indicates areas where there is little or no measurable signal strength.

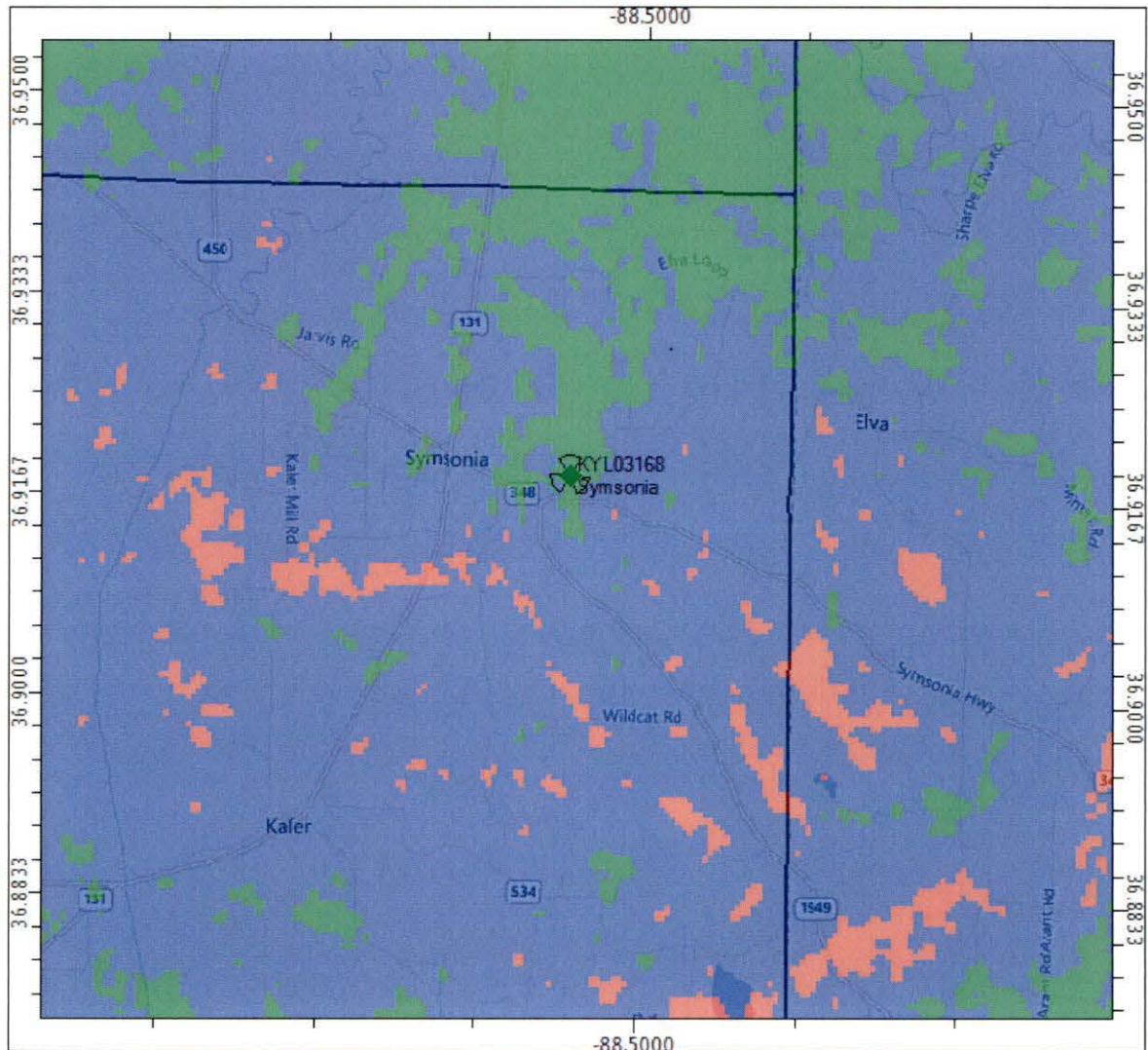
The quality of service experienced by any individual customer can differ greatly depending on whether the user is indoors, outdoors, stationary, or in transit. AT&T strives to provide consistent service to all users within a coverage area. Accordingly, the blue, red and white areas on Exhibit A are areas where there is currently inadequate service coverage, and a new facility is needed to close the coverage gaps that affect these areas.

AT&T proposes to construct the Proposed Facility to remedy the service issues and close the coverage gaps illustrated by Exhibit A. The map attached as Exhibit B (page 6) depicts coverage in the subject area once the Proposed Facility is built and integrated into AT&T's existing network. A comparison of Exhibit A (i.e., existing coverage) with Exhibit B (i.e., proposed coverage) clearly shows that gap areas will be significantly reduced once the Proposed Facility is operational, and this will expand coverage and improve service quality and availability in the subject area.

# EXHIBIT A

## Existing Service Coverage Without Proposed Site

This map illustrates existing coverage in the subject area. Note the clear gap in coverage in the vicinity of the Proposed Site location.



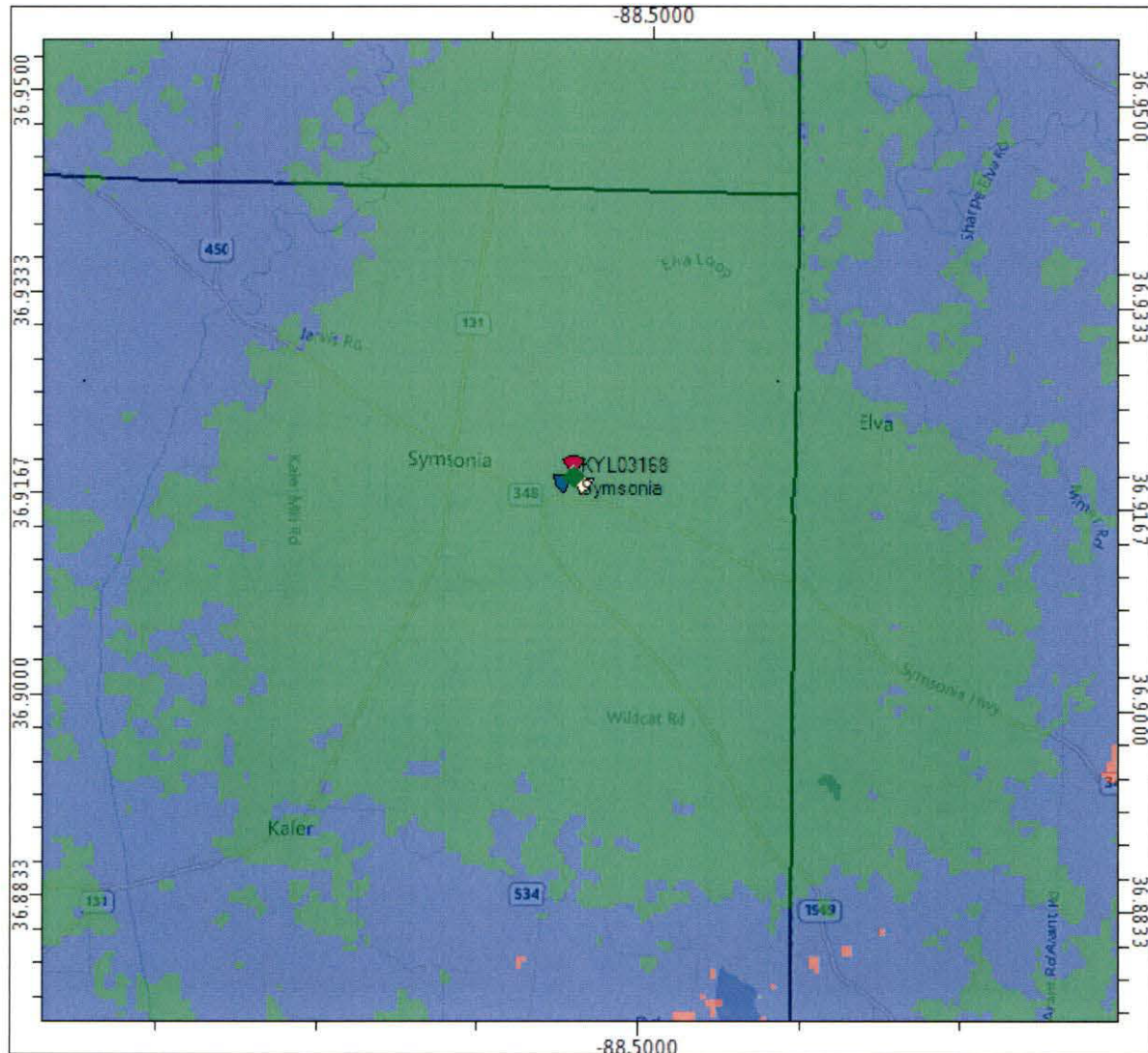
- Best Signal Level (dBm)  $\geq -75$
- Best Signal Level (dBm)  $\geq -85$
- Best Signal Level (dBm)  $\geq -95$



# EXHIBIT B

## Proposed Service Coverage With Proposed Site

This map illustrates coverage improvements that will be realized with the addition of the Proposed Facility.



Scale: 1:59,968  
0 0.5 1 1.5mi

- Best Signal Level (dBm)  $\geq -75$
- Best Signal Level (dBm)  $\geq -85$
- Best Signal Level (dBm)  $\geq -95$

### **AT&T SEARCH AREA**

The following Search Area map included as Exhibit C (page 8) shows the area where a new wireless communications facility is needed in order to fulfill the coverage objectives and network design criteria discussed herein. AT&T carefully examined the Search Area to select the Proposed Facility location and has concluded that there is no more suitable location reasonably available for the Proposed Facility.

Whenever possible, AT&T seeks to co-locate its equipment on existing structures, since co-location speeds deployment of new facilities and reduces tower proliferation. However, there are no reasonably available opportunities to co-locate AT&T's antennas on an existing structure that will satisfy the service objectives for this site.

# EXHIBIT C

## Search Area Map



Lat: 36.914181  
Lon: -88.512144  
Radius: .5 miles

Symsonia Search Area

## CONCLUSION

The Proposed Facility will provide a necessary link in AT&T's wireless network infrastructure. The location for the Proposed Facility was chosen to address the service issues described in this report, and the height of the tower proposed as part of the Proposed Facility is the minimum necessary to provide adequate service to the area. Once operational, the Proposed Facility will provide and improve the wireless communications services and broadband availability in the area.



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Mike Salvo  
Area Manager - RAN Engineering TN-KY  
AT&T Mobility