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OCT 05 2018

PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:

THE APPLICATION OF EAST KENTUCKY NETWORK)
LLC FOR THE ISSUANCE OF A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY TO) CASE NO. 2018-00320
CONSTRUCT A TOWER IN WHITLEY COUNTY,)
KENTUCKY)

East Kentucky Network, LLC d/b/a Appalachian Wireless, was granted authorization to provide cellular service in the KY-11 Cellular Market Area (CMA453) by the Federal Communications Commission (FCC). The FCC license is included as Exhibit 1. East Kentucky Network, LLC merger documents were filed with the Commission on February 2, 2001 in Case No. 2001-022. East Kentucky Network, LLC is a Kentucky limited liability company that was organized on June 16, 1998. East Kentucky Network, LLC is in good standing with the state of Kentucky.

In an effort to improve service in Whitley County, pursuant to KRS 278.020 Subsection 1 and 807 KAR 5:001, East Kentucky Network, LLC is seeking the Commission's approval to construct a 300 foot self-supporting tower on a tract of land located at 2552 Highway 11, Williamsburg, Whitley County, Kentucky (36°45'18.11"N 83°58'02.77"W). A map and detailed directions to the site can be found in Exhibit 7.

Exhibit 2 is a list of all Property owners or residents according to the Property Valuation Administrator's record who own property within 500 feet of the proposed Tower and all property owners that own property contiguous to the property upon which construction is proposed in accordance with the Property Valuation Administrator's record.

Pursuant to 807 KAR 5:063 Section 1(1)(l), Section 1(m) and Section 2, all affected property owners according to the Property Valuation Administrator's records who own property within 500 feet of the proposed Tower or who own property contiguous to the property upon which construction is proposed were notified by certified mail return receipt requested of East Kentucky Network, LLC's proposed construction and informed of their right to intervene. They were given the docket number under which this application is filed. Enclosed in Exhibit 2 is a copy of that notification.

Whitley County has no formal local planning unit. In absence of this unit, the Whitley County Judge Executive's office was notified by certified mail, return receipt requested of East Kentucky Network, LLC's proposal and informed of their right to intervene. The Whitley County Judge Executive's Office was also given the docket number under which this application is filed. Enclosed in Exhibit 3 is a copy of that notification.

Notice of the location of the proposed construction was published in the News Journal, October 3, 2018 edition. Enclosed is a copy of that notice in Exhibit 3. News Journal is the newspaper with the largest circulation in Whitley County.

A geologist was employed to determine soil and rock types and to ascertain the distance to solid bedrock. The geotechnical report is enclosed as Exhibit 4.

A copy of the tower design information is enclosed as Exhibit 5. The proposed tower has been designed by engineers at World Tower Company, Inc. and will be constructed under their supervision. Their qualifications are evidenced in Exhibit 5 by the seal and signature of the registered professional engineer responsible for this project.

The tower will be erected by S & S Tower Services of St. Albans, West Virginia. S & S Tower Services has vast experience in the erection of communications towers.

FAA and Kentucky Airport Zoning Commission approvals are included as Exhibit 6.

No Federal Communications Commission approval is required prior to construction of this facility. Once service is established from this tower we must immediately notify the Federal Communications Commission of its operation. Prior approval is needed only if the proposed facility increases the size of the cellular geographic service area. This cell site will not expand the cellular geographic service area.

East Kentucky Network, LLC will finance the subject Construction with earned surplus in its General Fund.

Estimated Cost of Construction	\$ 350,000.00
Annual Operation Expense of Tower	\$ 12,500.00

Two notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2), measuring at least two (2) feet in height and four (4) feet in width and containing all required language in letters of required height, have been posted, one at a visible location on the proposed site and one on the nearest public road. The two signs were posted on October 2, 2018, and will remain posted for at least two weeks after filing of this application as specified.

Enclosed in Exhibit 8 is a copy of East Kentucky Network, LLC's Memorandum of Lease for the site location along with a lot description.

The proposed construction site is on a mountaintop some feet from the nearest structure. Prior to construction, the site was wooded.

East Kentucky Network, LLC's operation will not affect the use of nearby land nor its value. No more suitable site exists in the area. A copy of the search area map is enclosed in Exhibit 7. No other tower capable of supporting East Kentucky Network, LLC's load exists in the general area; therefore, there is no opportunity for co-location of our facilities with anyone else.

Enclosed, and filed as Exhibit 9 is a survey of the proposed tower site signed by a Kentucky registered professional engineer.

Exhibit 10 is a map in one (1) inch equals 200 feet scale identifying every structure and every owner of real estate within 500 feet of the proposed tower and all property owners who own contiguous property to the property upon which construction is proposed

Exhibit 11 contains a vertical sketch of the tower supplied by James W. Caudill, Kentucky registered professional engineer.

Enclosed as Exhibit 12 is a list of utilities, corporations, or persons with whom the tower is likely to compete.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]

WHEREFORE, Applicant, having met the requirements of KRS 278.020(1), 278.650, 278.665, and all applicable rules and regulations of the PSC, respectfully requests that the PSC accept the foregoing Application for filing and grant a Certificate of Public Convenience and Necessity to construct and operate the proposed tower.

The foregoing document was prepared by Krystal Branham, Regulatory Compliance Attorney for East Kentucky Network, LLC d/b/a Appalachian Wireless. All related questions or correspondence concerning this filing should be mailed to East Kentucky Network, LLC d/b/a Appalachian Wireless, Attn: Regulatory Compliance Department, 101 Technology Trail, Ivel, KY 41642.

SUBMITTED BY: *Lynn Haney* DATE: 10/3/18
Lynn Haney, Regulatory Compliance Director

APPROVED BY: *W.A. Gillum* DATE: 10/3/18
W.A. Gillum, General Manager

ATTORNEY: *Krystal Branham* DATE: 10/3/18
Hon. Krystal Branham, Attorney

CONTACT INFORMATION:

W.A. Gillum, General Manager
Phone: (606) 477-2355, Ext. 111
Email: wagillum@ekn.com

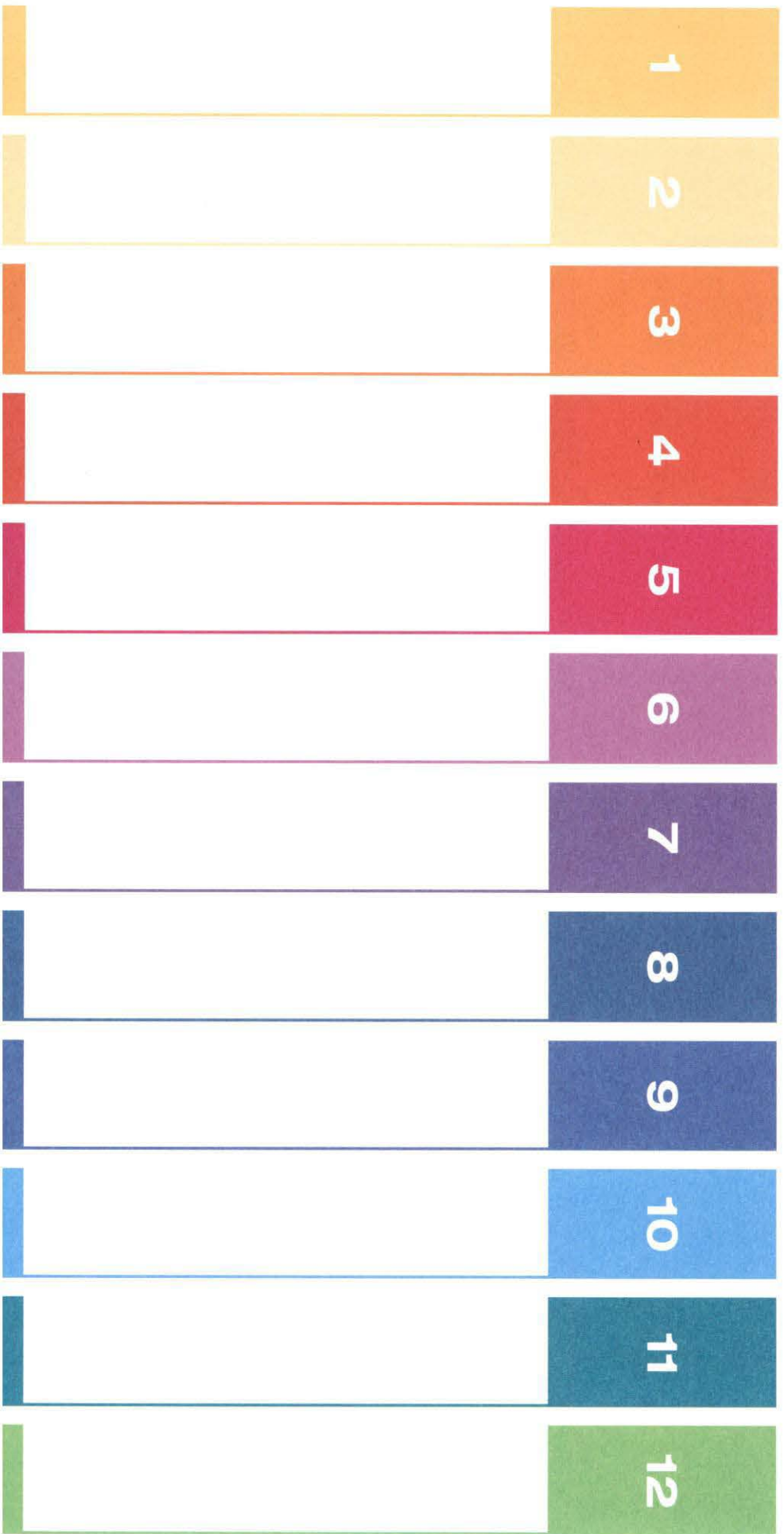
Lynn Haney, Regulatory Compliance Director
Phone: (606) 477-2355, Ext. 1007
Email: lhaney@ekn.com

Krystal Branham, Attorney
Phone: (606) 477-2355, Ext. 1009
Email: kbranham@ekn.com

Mailing Address:

**East Kentucky Network, LLC
d/b/a Appalachian Wireless
Attn: Regulatory Compliance Department
101 Technology Trail
Ivel, KY 41642**

1	FCC License
2	Copies of Cell Site Notices to Land Owners
3	Notification of County Judge Executive and Newspaper Advertisement
4	Universal Soil Bearing Analysis
5	Tower Design
6	FAA and KAZC Approvals
7	Driving Directions from County Court House and Map to Suitable Scale
8	Memorandum of Lease for Proposed Site with Legal Description
9	Survey of Site Signed/Sealed by Professional Engineer Registered in State of Kentucky
10	Site Survey Map with Property Owners Identified in Accordance with PVA of County
11	Vertical Profile Sketch of Proposed Tower
12	List of Competitors



ULS License

700 MHz Lower Band (Blocks C, D) License - WPWV284 - East Kentucky Network, LLC d/b/a Appalachian Wireless

Call Sign	WPWV284	Radio Service	WZ - 700 MHz Lower Band (Blocks C, D)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	CMA453 - Kentucky 11 - Clay	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000710.00000000-000716.00000000 000740.00000000-000746.00000000

Dates

Grant	01/24/2003	Expiration	06/13/2019
Effective	11/02/2013	Cancellation	

Buildout Deadlines

1st	06/13/2019	2nd	
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Notification Dates

1st		2nd	
-----	--	-----	--

Licensee

FRN	0001786607	Type	Limited Liability Company
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Licensee

East Kentucky Network, LLC d/b/a Appalachian Wireless 101 Technology Trail Ivel, KY 41642 ATTN W.A. Gillum, General Manager/CEO	P:(606)477-2355
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Contact

Lukas, Nace, Gutierrez & Sachs, LLP Pamela L Gist Esq 8300 Greensboro Drive McLean, VA 22102	P:(703)584-8665 F:(703)584-8695 E:pgist@fcclaw.com
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Ownership and Qualifications

Radio Service Type Fixed, Mobile, Radio Location
Regulatory Status Common Carrier, Interconnected Yes
Non-Common Carrier

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

EXHIBIT 2 – LIST OF PROPERTY OWNERS

Statement Pursuant to Section 1 (1) (I) 807 KAR 5:063

Section 1 (1)(I) 1. The following is a list of every property owner who according to property valuation administrator's records, owns property within 500 feet of the proposed tower and each have been: notified by certified mail, return receipt requested, of the proposed construction,

Section 1 (1)(I) 2. Every person listed below who, according to the property valuation administrator's records, owns property within 500 feet of the proposed tower has been: Given the Commission docket number under which the application will be processed: and

Section 1 (1)(I) 3. Every person listed below who, according to property valuation administrator's records owns property within 500 feet of the proposed tower has been: Informed of his right to request intervention.

Section 2. If the construction is proposed for an area outside the incorporated boundaries of a city, the application shall state that public notices required by Section 1(1)(L) have been sent to every person who, according to the property valuation administrator, owns property contiguous to the property upon which the construction is proposed

LIST OF PROPERTY OWNERS

Arnold Hamblin
145 Old Maple Creek Road
Williamsburg, KY 40769

James Teague
HC 73 Box 984
Barbourville, KY 40906

Keaton Smith
897 N KY 830
Corbin, KY 40701

Thelma Johns
2400 Union Mill Road
Nicholasville, KY 40356



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

October 4, 2018

Arnold Hamblin
145 Old Maple Creek Road
Williamsburg, KY 40769

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00320)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Whitley County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 2252 Highway 11, Williamsburg, Whitley County. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2018-00320 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,

A handwritten signature in cursive script that reads "Lynn Haney".

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

October 4, 2018

James Teague
HC 73 Box 984
Barbourville, KY 40906

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00320)

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Sincerely,

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

October 4, 2018

Keaton Smith
897 N KY 830
Corbin, KY 40701

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If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,

A handwritten signature in cursive script that reads "Lynn Haney".

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

October 4, 2018

Thelma Johns
2400 Union Mill Road
Nicholasville, KY 40356

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00320)


East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Whitley County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 2252 Highway 11, Williamsburg, Whitley County. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

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If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,

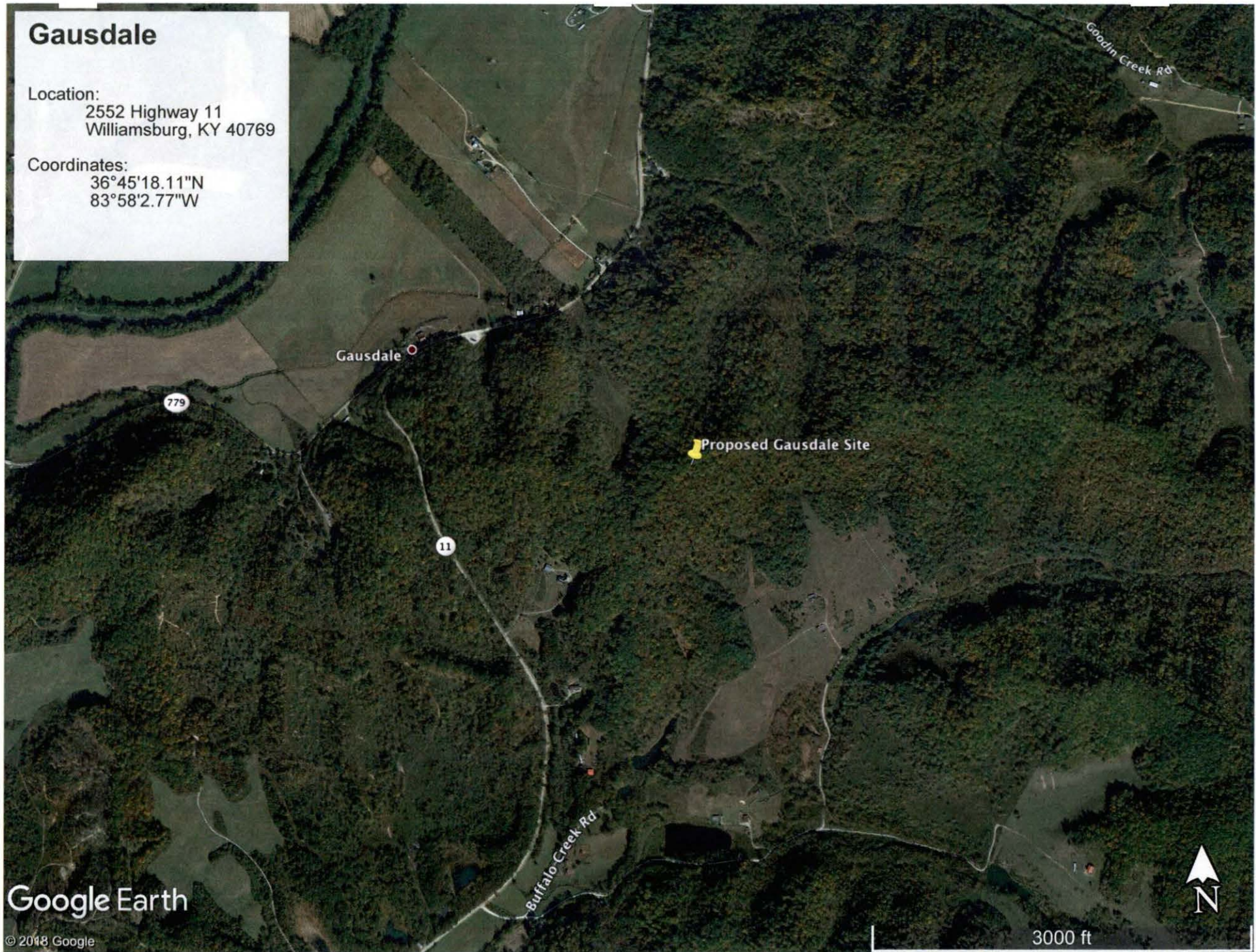


Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

Gausdale

Location:
2552 Highway 11
Williamsburg, KY 40769

Coordinates:
36°45'18.11"N
83°58'2.77"W



Google Earth

© 2018 Google

3000 ft



VIA: U.S. CERTIFIED MAIL

October 4, 2018

Pat White, Jr., Judge Executive
P.O. Box 237
Williamsburg, KY 40769

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00320)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Whitley County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land located at 2252 Highway 11, Williamsburg, Whitley County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you are the County Judge Executive of Whitley County.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2018-00320 in your correspondence.

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Sincerely,

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

dba Appalachian Wireless
101 Technology Trail
Ivel, KY 41642
Phone: 606-477-2355
Fax: 606-791-2225

EAST KENTUCKY
NETWORK



To: News Journal
Attn: Classifieds

From: Raina Helton
Regulatory Compliance Assistant

Email: jbenfield@corbinnewsjournal.com **Date:** September 28, 2018

Re: PUBLIC NOTICE ADVERTISEMENT **Pages:** 1

Please place the following Public Notice Advertisement in the News Journal to be ran on October 3, 2018

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2018-00320)

Public Notice is hereby given that East Kentucky Network, LLC, dba Appalachian Wireless has applied to the Kentucky Public Service Commission to construct a cellular telecommunications tower on a tract of land located at 2552 Highway 11, Williamsburg, Whitley County, Kentucky. The proposed tower will be a 300 foot self-supporting tower with attached antennas. If you would like to respond to this notice, please contact the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2018-00320.

If you have any questions about the placement of the above mentioned notice, please call me at 606-477-2355, ext. 1005.

Thank you,

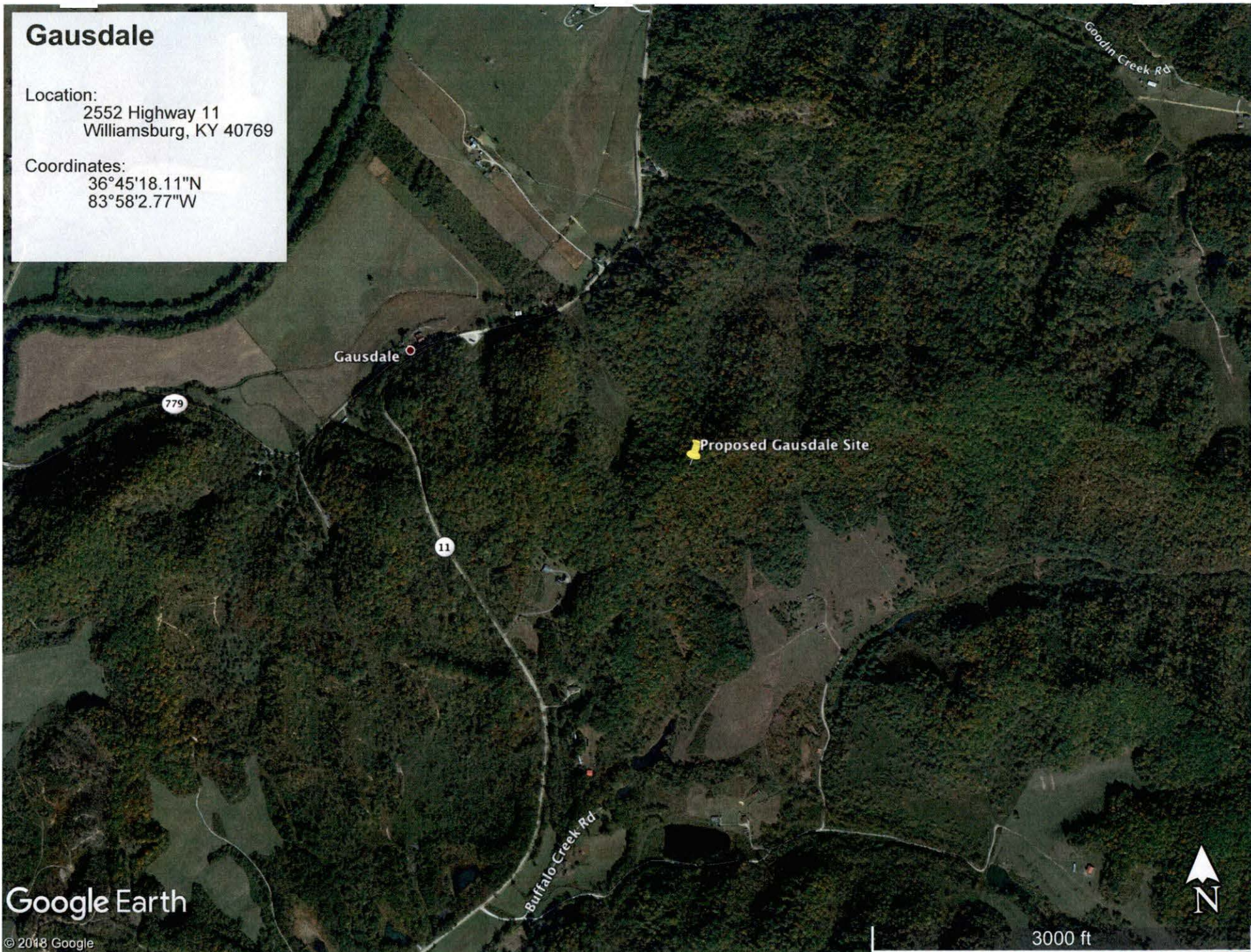
Raina Helton
Regulatory Compliance Assistant

The message above and the information contained in the documents transmitted are confidential and intended only for the person(s) named above. Dissemination, distribution or copying of this communication by anyone other than the person(s) named above is prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the address listed above via regular mail. Thank you.

Gausdale

Location:
2552 Highway 11
Williamsburg, KY 40769

Coordinates:
36°45'18.11"N
83°58'2.77"W



Google Earth

© 2018 Google

3000 ft



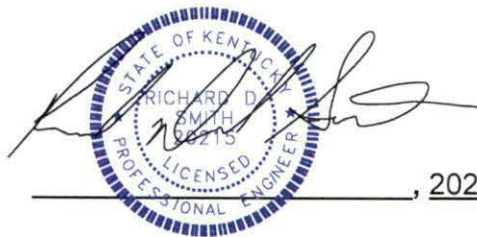
230 Swartz Drive • Hazard • Kentucky • 41701
Phone (606) 551-1050

EAST KENTUCKY ENGINEERING, LLC.

**APPALACHIAN WIRELESS
Geotechnical Investigation on the
Gausdale Tower Site
Whitley County, Kentucky
EKYENG Project No. 165-000-0073**

PREPARED FOR:
Appalachian Wireless.
101 Technology Trail
Ivel, Kentucky 41642

PREPARED BY:
Richard Dirk Smith PE, PLS
President
East Kentucky Engineering
230 Swartz Drive
Hazard, Kentucky 41701



_____, 20215, August 18th, 2018



EXECUTIVE SUMMARY

1.0 INTRODUCTION

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3.0 SITE DESCRIPTION

3.1 GENERAL INFORMATION

3.2 SURFACE MINING

3.3 UNDERGROUND MINING

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4.2 TRENCHING AND TEST HOLE DATA

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6.2 LABORATORY AND FIELD TESTS

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6.4 CONSTRUCTION MONITORING

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II – ENGINEERED FILL BENEATH STRUCTURES

III – GUIDELINES FOR EXCAVATIONS AND TRENCHING

IV – GENERAL CONCRETE SPECIFICATIONS

APPENDIX A – SEISMIC DATA

APPENDIX B – PHOTOGRAPHS

APPENDIX C – MAPS



EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Gausdale Tower Site, located in Whitley County, Kentucky. This site is not readily accessible. A location map is shown in Figure 1 of this report. Trenching was conducted with the assistance of Wendell Gay Construction. The following geotechnical considerations were identified:

- Trenching utilized for this study encountered soils and sandstone.
- A preliminary site plan was provided by the client for the location of the proposed tower.
- The estimated base elevation of tower mat foundation is 1,350 ft.
- This site is adjacent to an existing a ridgeline.
- **The allowable bearing capacities of the underlying rock is estimated at 6 TSF.**
- The 2015 International Building Code seismic site classification for this site is "A".
- If during the foundation design it becomes necessary to change the base of the footer, alternate design recommendations can be provided.
- One underground was found during our research that could impact this tower site. No visible signs of subsidence were seen during our site visit. It is in the Blue Gem Seam approximately 335 ft below the proposed tower foundation. There are two known sandstone units between the proposed tower and the mine. One approximately 25 feet thick immediately below this tower, and another immediately above the Blue Gem Seam, therefore no issues with subsidence is expected.
- Close monitoring of the construction operations discussed herein will be critical in achieving the design subgrade support. We, therefore, recommend that EKYENG is retained to monitor this portion of the work.



EAST KENTUCKY ENGINEERING, LLC.

This executive summary is included to provide a general overview of the project and should not be relied upon except for the purpose it was prepared. Please rely on the complete report for the information on the findings, recommendations, and all other concerns.



EAST KENTUCKY ENGINEERING, LLC.

1. INTRODUCTION

East Kentucky Engineering (EKYENG) was retained by Mr. Marty Thacker of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on the Gausdale Property, in Whitley County, Kentucky. A site location map is shown in Figure No. 1.

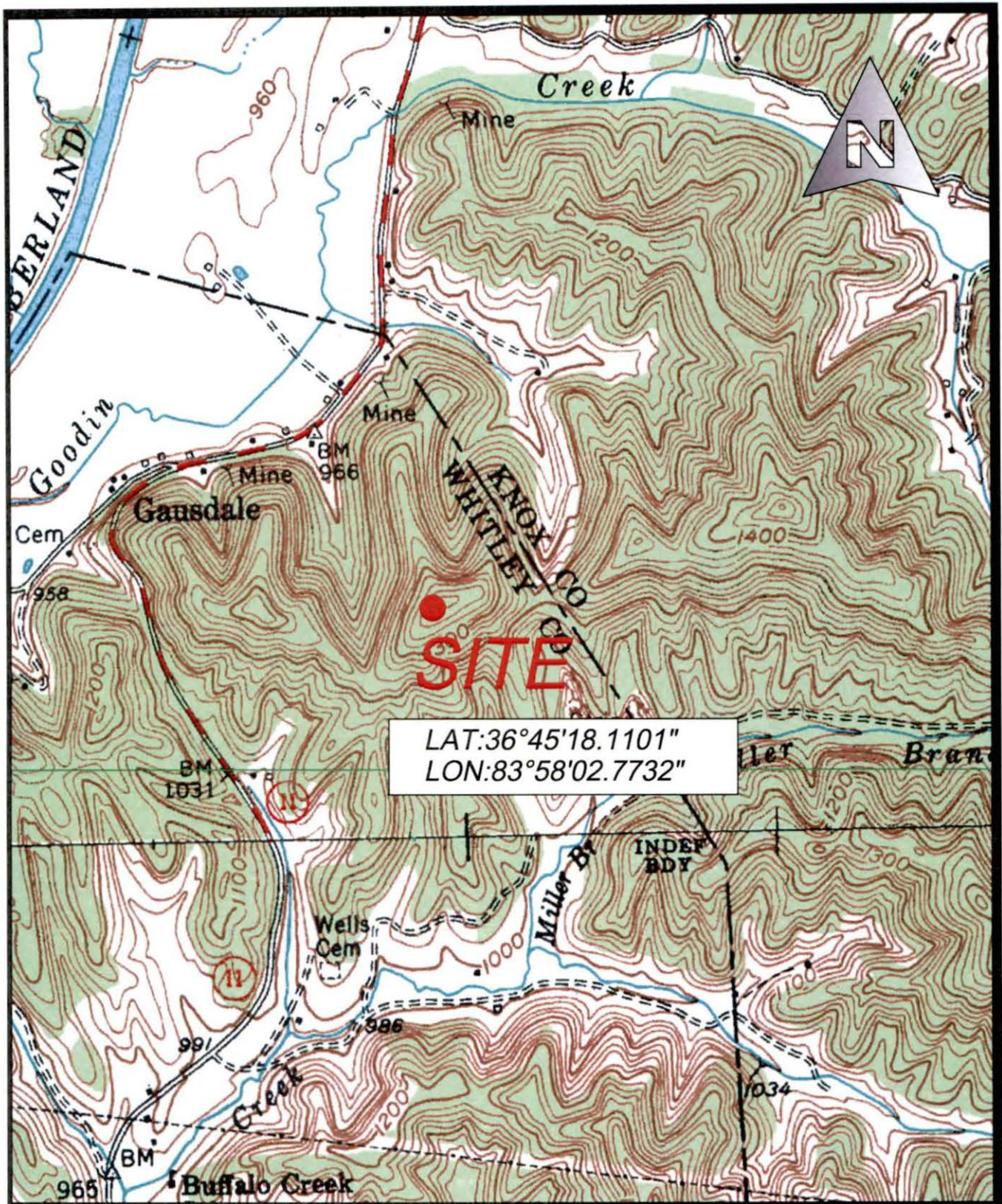
Trenching was conducted with the assistance from Wendall Gay Construction. The purpose of these services is to provide information and geotechnical engineering recommendations about subsurface conditions, earthwork, seismic considerations, groundwater conditions and foundation design.

2.0 PROJECT DESCRIPTION

The proposed communication facility will consist of a self-supporting tower of undetermined height and ancillary support areas. The footing area is estimated to be approximately 43.5 x 43.5 with an estimated base of the tower footer elevation at 1350.0 ft Based upon information provided; we estimate the structural loads will be similar to the following conditions;

CONDITION	LOAD
Total Shear	40 Kips
Axial Load	50 Kips

We anticipate that overturning will govern the structural design. If the loading is significantly different than these expected values, EKYENG should be notified to re-evaluate the recommendations provided in this report.



LAT:36°45'18.1101"
 LON:83°58'02.7732"

Drawn: RDS Date: 07/24/18
 Job:165-073 Scale: 1"=1000'

Appalachian Wireless
 USGS Quadrangle
 Location Map
 Gausdale Tower Site
 Figure No. 1

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606) 551-1050



EAST KENTUCKY ENGINEERING, LLC.

3.0 SITE DESCRIPTION

3.1 GENERAL INFORMATION

The site location is near a ridgeline. EKYENG reviewed available historical mine maps from the Kentucky Division of Mine Safety, Kentucky Mine Mapping Information System ("KMMIS"). Based on available data, no historical mining has occurred at or near this site.

3.2 SURFACE MINING

Surface mining has been conducted in the area, but well away from this tower site. No other nearby surface mining activities were found on our site investigation and during our research that would impact this site.

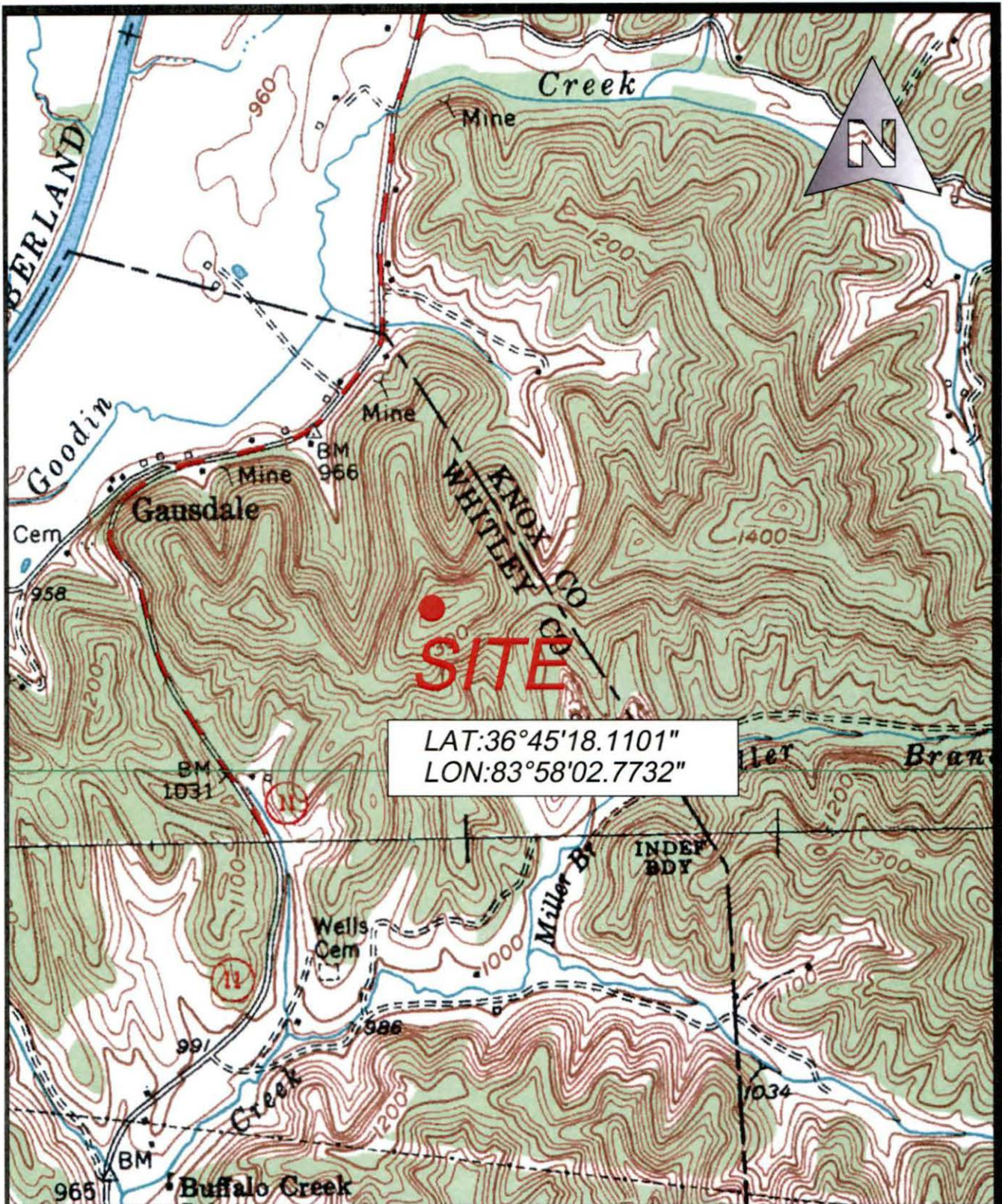
3.3 UNDERGROUND MINING

Our research found one underground mine that is directly beneath this site. Block Coal Company conducted room and pillar mining in the Blue Gem Seam at an approximate elevation of 1015 ft. The coal height was shown to be 25 Inches. No secondary mining was shown on the available maps. This mining is approximately 335 feet below the proposed tower foundation. There is one sandstone unit that is 25 ft thick immediately below the proposed footer and a boring found at the KGS Core hole data base (Coal Boring Hole No. BEBVLL0017_KY, that is approximately 1500 ft south of the proposed site, demonstrates a 38 ft sandstone unit that is immediately above the Blue Gem Seam. Given this information the potential for subsidence to propagate through these units to the surface is unlikely.

4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

A proposed tower pin location was placed on the Gausdale property and provided to EKYENG. The proposed tower location was established and tied to



LAT:36°45'18.1101"
 LON:83°58'02.7732"

Drawn: RDS Date: 08/18/18
 Job:165-073 Scale: 1"=1000'

Appalachian Wireless
 USGS Quadrangle
 Location Map
 Gausdale Tower Site
 Figure No. 1

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606) 551-1050



EAST KENTUCKY ENGINEERING, LLC.

the existing boundary. An estimated footer location was determined, and trenching was conducted through the slope at the proposed tower site.

4.2 TRENCHING & TEST HOLE DATA

This investigation was conducted with trenching with an excavator. The combinations of trenching and visual inspections were used to evaluate the site lithology and type of materials immediately below the proposed tower site. The following soils and rock properties were found.

TABLE NO. 2

Depth (Ft.)	Base Elevation (Ft.)	Strata
0.0	1,371.3	Surface
0.0 - 5.0	1366.3	Topsoil / Clays
5.0 – 30.3	1,341.0	Sandstone

A cross-section of this information is in Appendix C of this report

4.3 GROUNDWATER

Groundwater in Eastern Kentucky is characterized by water flowing through a system of internal fractures that lead to an alluvial aquifer near the bottom of valley floors. Large, defined aquifers other than the alluvium are not common, especially in higher elevations such as where this tower site is proposed. Therefore, groundwater should not be a concern in this area. During the site investigation, no groundwater resources were observed.

4.4 SEISMIC SITE CLASSIFICATION

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class A" per the 2015 Kentucky Building Code. In addition, an S_{DS} coefficient of 0.145 g was calculated, and an S_{D1} coefficient of



EAST KENTUCKY ENGINEERING, LLC.

0.056 g was also calculated for design based on the aforementioned building code.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

The structure will be a self-supporting freestanding tri-pole tower. Due to wind loading, lattice tower foundations can experience both vertical loads and horizontal loads. The vertical loads act in both an upward and downward direction as the tower attempts to overturn and can act in any directions.

5.2 FOUNDATIONS

This report demonstrates the different expected bearing capacities based upon the type of material encountered from the trenching and visible observations at the site. The approximate elevation of the surface of the site is 1,371.3 ft with an expected base of the footer at 1350 ft in elevation.

5.3 SHALLOW FOUNDATIONS

Based upon the laboratory and field testing, visual inspection of the materials, and practical experience we have estimated that the **allowable bearing capacity of the sandstone to be a minimum of 6 tsf**, between the elevations of 1,358.0 ft and 1344.0 ft. The upper limit is determined by the topography of the site to ensure that the entire footer is on the sandstone strata.

It is furthermore recommended that the slabs-on-grade be supported on 4 to 6-inch layer of relatively clean granular material such as sand and gravel or crushed stone. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Proper drainage must be incorporated into this granular layer to preclude future wet areas in the finished slab-on-grade. However, all topsoil and/or other deleterious materials encountered during site



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preparation must be removed and replaced with 4000 psi concrete below the foundation base. Provided that a minimum of 4 inches of granular material is placed below the new slab-on-grade, a modulus of subgrade reaction (k30) of 100 lbs./cu. in. can be used for design of the slabs.

Support structure for this tower can be placed as needed. It is recommended that test pits are examined to ensure that any of these structures are on the competent materials. If pockets of soft, loose, or otherwise unsuitable material are encountered in the footing excavations and it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed. The undercut excavation beneath each footing should extend to suitable bearing soils and the dimensions of the excavation base should be determined by imaginary planes extending outward and down on a 1 (vertical) to 1 (horizontal) slope from the base perimeter of the footing. The entire excavation should then be refilled with a well-compacted engineered fill, or lean concrete (Please note that the width of the lean concrete zone should be equal or wider than the width of the overlying footing element). Special care should be exercised to remove any sloughed, loose or soft materials near the base of the excavation slopes. In addition, special care should be taken to "tie-in" the compacted fill with the excavation slopes, with benches as necessary, to ensure that no pockets of loose or soft materials will be left in place along the excavation slopes below the foundation bearing level. All Federal, State, and Local regulations should be strictly adhered to relative to excavation side-slope geometry.

5.4 BURIED UTILITIES

Excavations for buried utility pipelines should follow the guidelines set forth in this report. Depending on the pipeline material, a minimum thickness of at least 0.5 feet of select fine-grained granular bedding material should be used beneath all



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below-grade pipes, with a minimum cover thickness of at least 3 feet to afford an "arching" effect and reduce stresses on the pipe. The cover thickness may be reduced if the external loading condition on the pipe is relatively light or if the pipe is designed to withstand the external loading condition. It is not recommended that "pea-gravel" or other "open-work" aggregates be used for trench backfill since these materials are nearly impossible to compact and tend to pond water within their interstices.

6.0 WARRANTY

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. No other warranty, express or implied, is made.

While the services of EKYENG are a valuable and integral part of the design and construction teams, we do not warrant, guarantee, or insure the quality or completeness of services provided by other members of those teams, the quality, completeness, or satisfactory performance of construction plans and specifications which we have not prepared, nor the ultimate performance of building site materials.

6.1 SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings, although test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report and is presented on the Boring Location Plan or on the boring log. The location and elevation of the boring should be considered accurate only to the degree inherent with the method used.



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The boring log includes sampling information, description of the materials recovered, approximate depth of boundaries between soil and rock strata and groundwater data. The boring log represents conditions specifically at the location and time the boring was made. The boundaries between different soil strata are indicated at specific depths; however, these depths are in fact approximate and are somewhat dependent upon the frequency of sampling (The transition between soil strata is often gradual). Free groundwater level readings are made at the times and under conditions stated on the boring logs (Groundwater levels change with time and season). The borehole does not always remain open sufficiently long enough for the measured water level to coincide with the groundwater table.

6.2 LABORATORY AND FIELD TESTS

Laboratory and field tests are performed by specific ASTM standards unless otherwise indicated. All determinations included in each ASTM standard are not always required and performed. Each test report indicates the measurements and determinations made.

6.3 ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the engineering design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it is not intended to determine the cost of construction or to stand alone as a construction specification.

Our engineering report recommendations are based primarily on data from test borings made at the locations shown in a boring location drawing included. Soil variations may exist between borings, and these variations may not become evident until construction. If significant variations are then noted, the geotechnical engineer should be contacted so that field conditions can be examined and recommendations revised if necessary.

The geotechnical engineering report states our understanding as to the location, dimensions and structural features proposed for the site. Any significant



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changes in the nature, design, or location of the site improvements MUST be communicated to the geotechnical engineer such that the geotechnical analysis, conclusions, and recommendations can be appropriately adjusted. The geotechnical engineer should be given the opportunity to review all drawings that have been prepared based on their recommendations.

6.4 CONSTRUCTION MONITORING

Construction monitoring is a vital element of complete geotechnical services. The field engineer/inspector is the owner's "representative" observing the work of the contractor, performing tests as required in the specifications, and reporting data developed from such tests and observations. The field engineer or inspector does not direct the contractor's construction means, methods, operations or personnel. The field inspector/engineer does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The field inspector/engineer is responsible for his own safety but has no responsibility for the safety of other personnel at the site. The field inspector/engineer is an important member of a team whose responsibility is to watch and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications.

6.5 GENERAL

The scope of our services did not include an environmental assessment for the presence or absence of hazardous or toxic materials in the soil, surface water, groundwater or air, on, within or beyond the site studied. Any statements in the report or on the boring logs regarding odors, staining of soils or other unusual items or conditions observed are strictly for the information of our client.

To evaluate the site for possible environmental liabilities, we recommend an environmental assessment, consisting of a detailed site reconnaissance, a record



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review, and report of findings. Additional subsurface drilling and samplings, including groundwater sampling, may be required.

This report has been prepared for the exclusive use of Appalachian Wireless, for specific application to the proposed cellular tower located on the Gausdale Property located in Whitley County, Kentucky. Specific design and construction recommendations have been provided in the various sections of the report. The report shall, therefore, be used in its entirety. This report is not a bidding document and shall not be used for that purpose. Anyone reviewing this report must interpret and draw their conclusions regarding specific construction techniques and methods that were chosen. EKYENG is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploratory and laboratory test data presented in this report.



SPECIFICATIONS

I – GENERAL

1.0 STANDARDS AND DEFINITIONS

1.1 STANDARDS - All standards refer to latest edition unless otherwise noted.

1.1.1 ASTM D-698-70 (Method C) "Standard Test Methods for Moisture, Density Relations of Soils and Soil Aggregate Mixtures Using 5.5-lb (2.5 kg.) Rammer and 12-inch (305-mm) Drop".

1.1.2 ASTM D-2922 "Standard Test Method for Density of Soil and Soil Aggregate in Place by Nuclear methods (Shallow Depth)".

1.1.3 ASTM D-1556 "Standard Test Method for Density of Soil in place by the Sand-Cone Method".

1.2 DEFINITIONS

1.2.1 Owner - In these specifications the word "Owner" shall mean Appalachian Wireless.

1.2.2 Engineer - In these specifications the word "Engineer" shall mean the Owner designated engineer.

1.2.3 Design Engineer - In these specifications the words "Design Engineer" shall mean the Owner designated design engineer.

1.2.4 Contractor - In these specifications the word "Contractor" shall mean the firm or corporation undertaking the execution of any work under the terms of these specifications.



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- 1.2.5** Approved - In these specifications the word "approved" shall refer to the approval of the Engineer or his designated representative.
- 1.2.6** As Directed - In these specifications the words "as directed" shall refer to the directions to the Contractor from the Owner or his designated representative.



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2.0 GENERAL CONDITIONS

- 2.1 The Contractor shall furnish all labor, material and equipment and perform all work and services except those set out and furnished by the Owner, necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction, grading as shown on the plans and as described therein.

This work shall consist of all mobilization clearing and grading, grubbing, stripping, removal of existing material unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications.

This work is to be accomplished under the observation of the Owner or his designated representative.

- 2.2 Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including, without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site; and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work.

If conditions other than those indicated are discovered by the Contractor, the Owner should be notified immediately. The material which the Contractor believes to be a changed condition should not be disturbed so that the owner can investigate the condition.



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- 2.3** The construction shall be performed under the direction of an experienced engineer who is familiar with the design plan.



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II - ENGINEERED FILL BENEATH STRUCTURES CLEARING AND GRADING SPECIFICATIONS

1.0 GENERAL CONDITIONS

The Contractor shall furnish all labor, materials, and equipment, and perform all work and services necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction and grading as shown on the plans and as described therein.

This work shall consist of all clearing and grading, removal of existing structures unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications.

This work is to be accomplished under the constant and continuous supervision of the Owner or his designated representative.

In these specifications, the terms "approved" and "as directed" shall refer to directions to the Contractor from the Owner or his designated representative.

2.0 SUBSURFACE CONDITIONS

Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site; and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work. Borings and/or soil investigations shall have been made. Results of these borings and studies will be made available by the Owner to the Contractor upon his request, but the Owner is not responsible for any interpretations or conclusions with respect thereto made by the Contractor based on such



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information, and the Owner further has no responsibility for the accuracy of the borings and the soil investigations.

If conditions other than those indicated are discovered by the Contractor, the Owner should be notified immediately. The material which the Contractor believes to be a changed condition should not be disturbed so that the Owner can investigate the condition.

3.0 SITE PREPARATION

Within the specified areas, all trees, brush, stumps, logs, tree roots, and structures scheduled for demolition shall be removed and disposed of.

All cut, and fill areas shall be properly stripped. Topsoil will be removed to its full depth and stockpiled for use in finish grading. Any rubbish, organic and other objectionable soils, and other deleterious material shall be disposed of off the site, or as directed by the Owner or his designated representative if on site disposal is provided. In no case shall such objectionable material be allowed in or under the fill unless specifically authorized in writing.

Prior to the addition of fill, the original ground shall be compacted to job specifications as outlined below. Special notice shall be given to the proposed fill area now. If wet spots, spongy conditions, or groundwater seepage is found, corrective measures must be taken before the placement of fill.

4.0 FORMATION OF FILL AREAS

Fills shall be formed of satisfactory materials placed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross-section. The depth of lift may be increased if the Contractor can demonstrate the ability to compact a larger lift. If compaction is accomplished using hand-tamping equipment, lifts will be limited to 4-inch loose lifts. Engineered fill placed below the structure bearing elevation shall be compacted to at least 95% of the maximum dry unit weight with a moisture content within 2% of the optimum moisture content as determined by the modified Proctor test. The top size of the material placed shall not exceed 4 inches.



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All material entering the fill shall be free of organic matter such as leaves, grass, roots, and other objectionable material.

The operations on earth work shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing weather, or other unsatisfactory conditions. The Contractor shall keep the work areas graded to provide the drainage always.

The fill material shall be of the proper moisture content before compaction efforts are started. Wetting or drying of the material and manipulation to secure a uniform moisture content throughout the layer shall be required. Should the material be too wet to permit proper compaction or rolling, all work thus affected shall be delayed until the material has dried to the required moisture content. The moisture content of the fill material should be no more than two (2) percentage points higher or lower than optimum unless otherwise authorized. Sprinkling shall be done with equipment that will satisfactorily distribute the water over the disced area. Any areas inaccessible to a roller shall be consolidated and compacted by mechanical tampers. The equipment shall be operated in such a manner that hardpan, cemented gravel, clay or other chunky soil material will be broken up into small particles and become incorporated with the other material in the layer.

In the construction of filled areas, starting layers shall be placed in the deepest portion of the fill, and as placement progresses, additional layers shall be constructed in horizontal planes. Original slopes shall be continuously, vertically benched to provide horizontal fill planes. The size of the benches shall be formed so that the base of the bench is horizontal, and the back of the bench is vertical. As many benches as are necessary to bring the site to final grade shall be constructed. Filling operations shall begin on the lowest bench, with the fill being placed in horizontal eight (8) inch thick loose lifts unless otherwise authorized. The filling shall progress in this manner until the entire first bench has been filled, before any fill is placed on the succeeding benches. Proper drainage shall be maintained always during benching and filling of the benches, to ensure that all water is drained away from the fill area.



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Frozen material shall not be placed in the fill nor shall the fill be placed upon frozen material.

The Contractor shall be responsible for the stability of all fills made under the contract, and shall replace any portion, which in the opinion of the Owner or his designated representative, has become displaced due to carelessness or negligence on the part of the Contractor. Fill damaged by inclement weather shall be repaired at the Contractor's expense.

5.0 SLOPE RATIO AND STORM WATER RUN-OFF

Slopes shall not be greater than 2 (horizontal) to 1 (vertical) in both cut and fill, or as illustrated on the construction drawings. Excavations shall be constructed in accordance with all Federal, State and local codes relative to slope geometry.

6.0 GRADING

The Contractor shall furnish, operate, and maintain such equipment as is necessary to construct uniform layers, and control smoothness of grade for maximum compaction and drainage.

7.0 COMPACTING

The compaction equipment shall be approved equipment of such design, weight, and quantity to obtain the required density in accordance with these specifications.

8.0 TESTING AND INSPECTION SERVICES

Testing and inspection services will be provided by the Owner.



III GUIDELINES FOR EXCAVATIONS AND TRENCHES

The following represents some general guidelines relative to the design and construction of excavations and trenches. It must be emphasized that these guidelines are not intended to represent a "safety plan," but rather are presented herein to provide general guidance regarding the design characteristics and safety measures for excavations and trenches.

1. Check with the following utilities prior to breaking ground:
 - Sewer
 - Telephone
 - Fuel
 - Electric
 - Water
 - Gas
 - Cable

When utility companies or owners do not respond to your request within 48 hours, the contractor may only then proceed provided the contractor does so with caution by using detection equipment or other acceptable means to locate utility installations.

Once the excavation is open, the contractor should protect and support the exposed underground utilities or remove installations to safeguard workers and prevent damage to exposed utilities.

2. Access and egress ramps must be designed by a "competent person" and structural ramps used for equipment must be designed by a "competent person" with qualified knowledge in structural design. In addition:
 - Ramps must be secured to prevent displacement;
 - Ramps used in lieu of steps must have cleats to prevent slipping; and



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- Trenching excavations four feet or greater in depth must have a stairway, ladder, ramps or other safe means to egress with lateral travel no more than 25 feet.
3. Workers must be provided with reflector garments, such as warning orange or red vests, when exposed to vehicular traffic.
 4. Contractors must not allow workers to work under or near equipment when there is danger of falling debris, spillage or equipment-related injuries.
 5. Mobile equipment, operating adjacent to an open excavation or approaching the edge of an excavation, must have one of the following when the operator's view is obstructed:
 - Warning System
 - Mechanical Signals
 - Barricades
 - Stop Logs
 - Hand Signals
 6. The contractor must check the atmosphere for hazardous gases and oxygen deficiencies when excavating four feet or greater around landfills, or when hazardous substances are stored nearby, and when the contractor expects there could be any exposure to the workers.
 7. When hazardous atmospheric conditions exist, or when conditions could change, the contractor must make emergency rescue equipment readily available including breathing apparatus, safety harnesses with life lines and a basket stretcher.
 8. When workers enter bell-bottom pier holes or other deep and confined excavations, the worker must wear (always while performing work in the confined space) a separate life line attached to a harness. The line must



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- D. Metal Reinforcement: Rebar shall be Grade 60 and with deformations conforming to ASTM Specification A305. Welded wire mesh shall conform to W4 x W4 size and be of Grade 60 steel.
- E. Admixtures: Except as herein noted, admixtures shall not be used.
1. Under adverse weather conditions only retarding or accelerating agents containing no chloride may be used.
 2. Air-Entraining Agent shall be used for all concrete will give an entrained air range of not less than 4 percent but no greater than 8 percent in the finished product. Under no circumstances shall the air-entraining be interground with cement.
 3. Approval in writing shall be required from Owner prior to the use of any admixture.

4.0 FORM

Forms shall be constructed with proper shoring and cross-bracing, safeguarding the total structure and specifically lateral stability and sufficiently strong to stand vibrations of concrete and to carry, without appreciable deflection or displacement, all dead and live loads to which they may be subjected.

5.0 INSERTS, ETC.

Anchors, bolts, dowels, conduit, water stops, vent pipes and other similar built-in or concreted-in items shall be properly located, accurately positioned and secured. The Contractor shall cooperate in placing of such items with other contractors who require a fastening device for their work and he shall maintain them in proper location during the progress of his work.



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6.0 REINFORCEMENT

Reinforcement at the time concrete is placed shall be free from rust, scale or other coatings that will destroy or reduce the bond.

Reinforcement shall be accurately placed and securely tied at intersections and shall be securely held in position during the placing of concrete by pacers, chairs, or other approved supports.

The reinforcement of foundations, footings and other principal structural members in which the concrete is deposited against the ground shall not have less than three (3) inches of concrete between it and the ground contact surface. If concrete surfaces after removal of the forms are to be exposed to the weather or to be in contact with the ground or rock, reinforcement shall be protected with not less than two (2) inches of concrete.

7.0 CONCRETE

Concrete for the various parts of the work shall be of 4000 pounds per square inch compressive strength with a minimum 28-day cure. Contractor is responsible to provide a mix of not less than 6 bags of cement per yard of concrete and not more than 7 gallons of water per bag of cement, producing a minimum slump of 2-1/2 inches and a maximum slump of 4-1/2 inches. Concrete that exceeds the above range of maximum or minimum slump requirements may be rejected by the Owner. All concrete shall be air-entrained. Contractors are required to furnish the name or names of the company(s) that will be providing the mix. The Owner reserves the right to disapprove any concrete supplier that has been known to supply an undesirable material to the Owner on previous occasions.

8.0 DEPOSITING CONCRETE

4.1. Preparation for Placing Concrete: Before depositing concrete, the Contractor shall:

1. Remove from space to be occupied by concrete all debris, including snow, ice, and water unless otherwise permitted by Owner.



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2. Provide diversion, satisfactory to Owner, of any flow of water to an excavation to avoid washing the freshly deposited concrete.
 3. Coat the forms prior to placing of reinforcing steel as required in formwork.
 4. Secure firmly in correct position, all reinforcement and other items to be encased and remove therefrom all coating including ice and frost.
- B. Transportation of Concrete from Batch Plant: The concrete shall be delivered to the site of the work and discharge shall be completed within 90 minutes after addition of the cement and water to the aggregates. Each batch of concrete delivered at the job site shall be accompanied by a time slip issued at the batching plant, bearing the time of charging of the mixer drum with the cement and aggregates.
- C. Transporting of Concrete from Mixer to Place of Final Deposit: Transportation shall be done as rapidly as practical by means which shall prevent the separation or loss of the ingredients. If chutes are used, they shall be at a slope not flatter than one vertical to two horizontal. Buggies or carts shall be equipped with pneumatic rubber tires or surfaces of runways shall be sufficiently smooth or both so as not to cause separation or segregation of concrete ingredients. Concrete shall not be allowed to drop freely more than 4 feet. Where greater drops are required, canvas "elephant trunks" or galvanized iron chutes equipped with suitable hopper heads shall be employed and a sufficient number placed to ensure that the concrete may be effectively compacted into



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horizontal layers not exceeding 12 inches in thickness with minimum lateral movements.

- D. Depositing of Concrete: Depositing of concrete shall:
1. Proceed continuously after once starting until reaching the end of a section of construction joint location shown on the drawings, or as approved by the Owner. The operations shall be conducted so that no concrete is deposited on concrete sufficiently hardened to cause formation of seams, and planes of weakness.
 2. Be as near as practical to its final position in the forms.
 3. Proceed to maintain constantly a top surface which is approximately level.
 4. Be placed before initial set has occurred, and in no event after it has contained its water content for more than 90 minutes.
 5. Be thoroughly worked and compacted by means of suitable tools to provide impermeability, durability and strength and shall be thoroughly worked around reinforcements and embedded items and into corners of forms and to be free from voids, pockets or honeycombing. Care shall be taken to provide impermeability.
- E. Vibration Equipment: Vibration equipment shall be of the appropriate type and shall, always, be adequate in number of units and power of each unit to properly consolidate all concrete.



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- F. Monolithic Pours: Proper delivery of concrete shall be the Contractor's responsibility to make a mono-lithic pour without delays and changes of cold joints.

9.0 CURING

All concrete work shall be protected from injurious action by the sun, rain, flowing water, frost and other injury and shall be covered with plastic after application of curing compound for three (3) days on pours located above ground.

Contractor shall not remove any formwork for a minimum period of 24 hours after a concrete pour without the written approval of the Owner.

10.0 CONCRETE FINISHES

Finishes of all exposed concrete shall be free of defects which impair its durability or adversely affect its appearance. All such surfaces when stripped, shall be uniform in appearance and any surfaces displaying any deviations from adjacent uniform surfaces shall be rejected and subject to removal.

Finished work shall be level and plumb, true to lines, and dimensions. Finished plane surfaces shall be smooth, and as nearly perfect as practical; however, deviations from a true plane shall not exceed 1/8 inch when measured from a 6-foot straight edge placed against the surface to any point on the surface and under the straight edge.

All exposed surfaces shall have defects corrected, protrusions removed, and holes filled.



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APPENDIX A SEISMIC DATA

USGS Design Maps Summary Report

User-Specified Input

Report Title Gausdale Tower Site
Wed August 22, 2018 19:34:50 UTC

Building Code Reference Document 2012/2015 International Building Code
(which utilizes USGS hazard data available in 2008)

Site Coordinates 36.75503°N, 83.96744°W

Site Soil Classification Site Class A – “Hard Rock”

Risk Category IV (e.g. essential facilities)

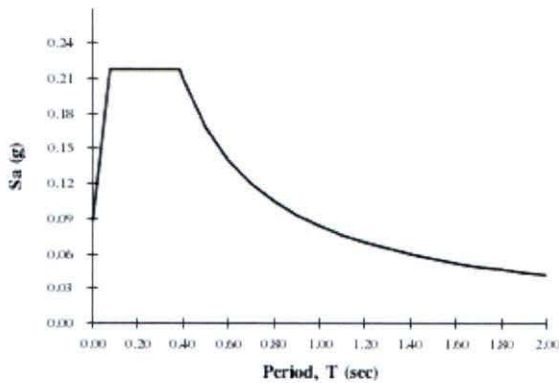


USGS-Provided Output

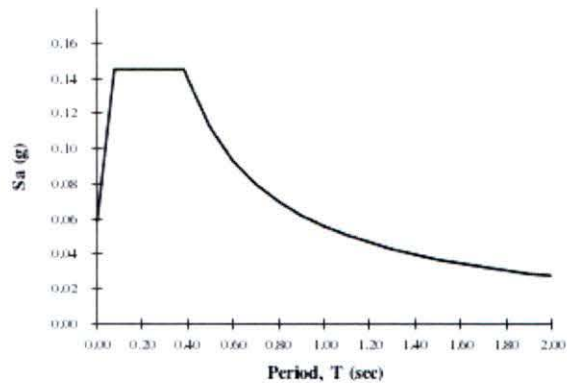
$S_s = 0.273 \text{ g}$	$S_{MS} = 0.218 \text{ g}$	$S_{DS} = 0.145 \text{ g}$
$S_1 = 0.105 \text{ g}$	$S_{M1} = 0.084 \text{ g}$	$S_{D1} = 0.056 \text{ g}$

For information on how the S_s and S_1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the “2009 NEHRP” building code reference document.

MCE_R Response Spectrum



Design Response Spectrum



Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.



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APPENDIX B PHOTOGRAPHS



Sandstone Bottom of Trench



Sandstone Bottom of Trench



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Site Area



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APPENDIX C MAPS

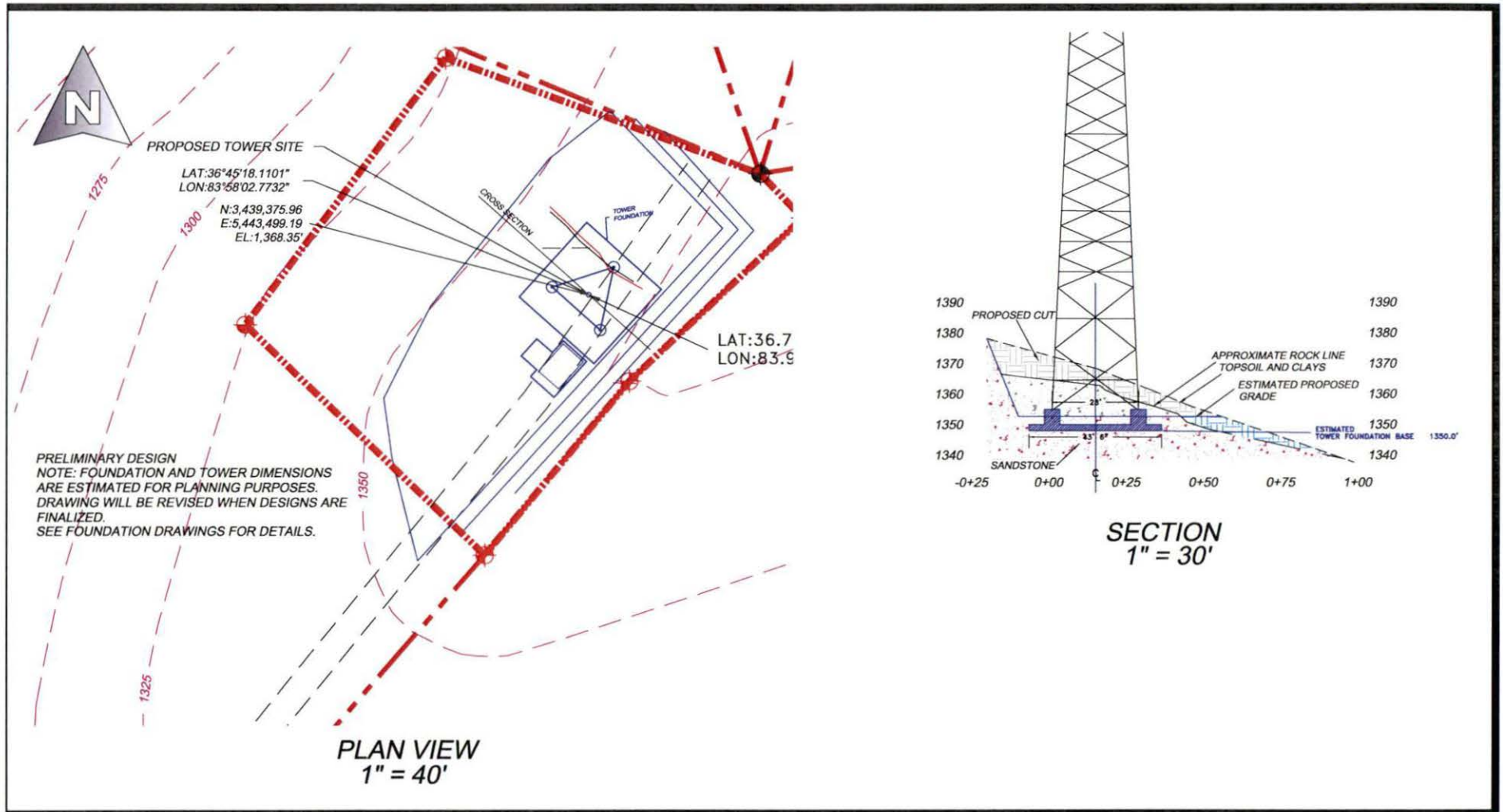


Drawn: RDS Date: 08/18/18

Job:165-073 Scale: 1"=200'

*Appalachian Wireless
Block Coal Corporation
Blue Gem Seam
Excerpt from Mine Map*

East Kentucky Engineering, LLC.
230 Swartz Drive
Hazard, KY 41701
(606) 551-1050



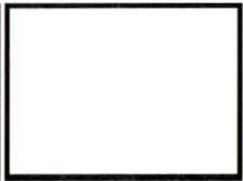
East Kentucky Engineering, LLC

Hazard Location
 230 Swartz
 Hazard, KY 41701
 (808) 551-1050
 Email: rdsekyeng@outlook.com

RICHARD D. SWARTZ
 LICENSED PROFESSIONAL ENGINEER
 8/18/2018

0' 30' 60'

Drawn by: RDS Date: 8/18/2018
 Job #: 165-0070 Scale: NOTED
 File Location:



**APPALACHIAN
 WIRELESS
 GAUSDALE SITE
 WHITLEY COUNTY KENTUCKY**

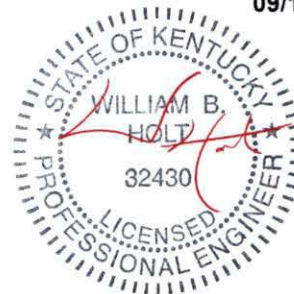


World Tower
COMPANY, INC.

1213 Compressor Drive
P.O. Box 508
Mayfield, KY 42066
270-247-3642
FAX: 270-247-0909
E-mail: worldtower@worldtower.com
Web: www.worldtower.com

**300' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: GAUSEDALE
WHITLEY COUNTY, KY
DESIGN PACKAGE**

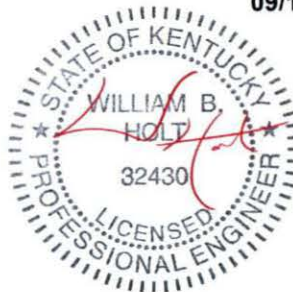
09/14/18



GENERAL NOTES

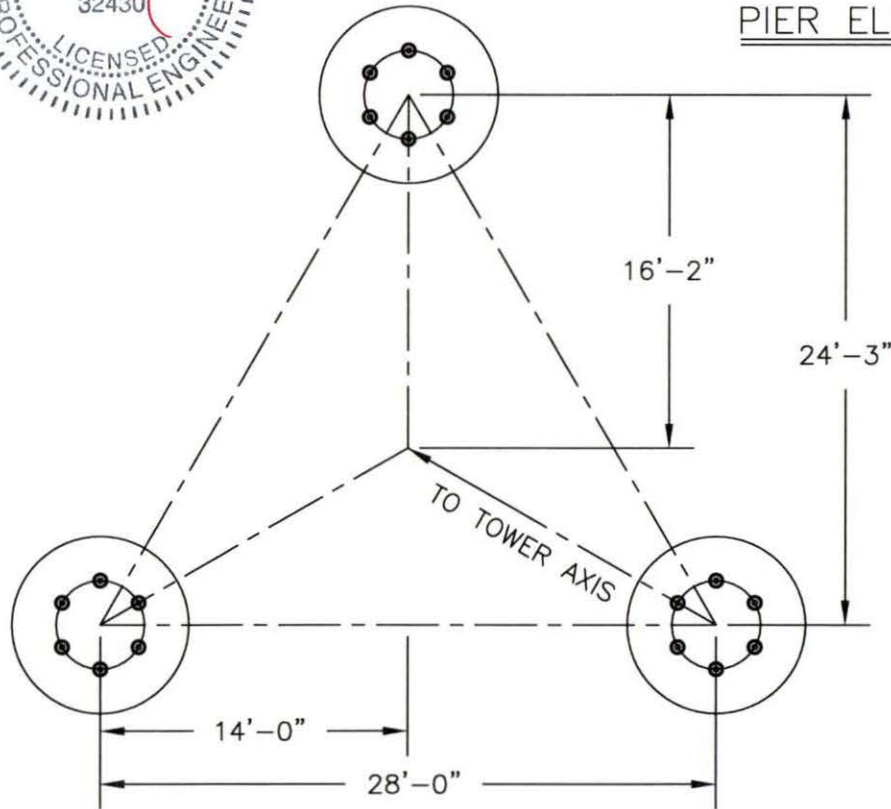
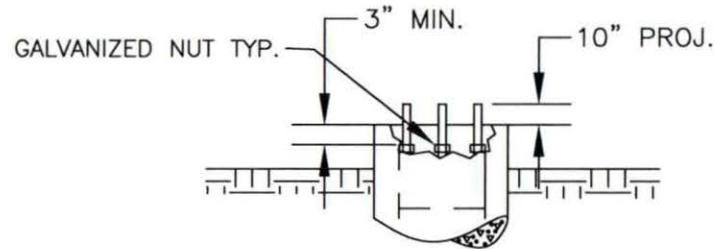
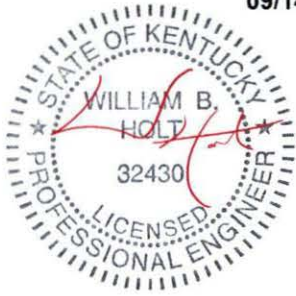
1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS. D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG STEEL IS 50 KSI MIN YIELD SOLID ROUND OR PIPE AND BRACING STEEL IS 36 KSI MIN YIELD SOLID ROUND OR STRUCTURAL ANGLE.
5. ALL STRUCTURAL BOLTS ARE ASTM A325X, THREADS EXCLUDED FROM SHEAR PLANE.
6. TOWER SHOULD BE INSPECTED IN ACCORDANCE WITH TIA-222-G EVERY 5 YEARS.
7. TOWER INSPECTION SHOULD ONLY BE PERFORMED BY EXPERIENCED QUALIFIED PERSONNEL. FOR ASSISTANCE IN PROPER MAINTENANCE OF YOUR TOWER, CALL WORLD TOWER AT 270-247-3642.

09/14/18

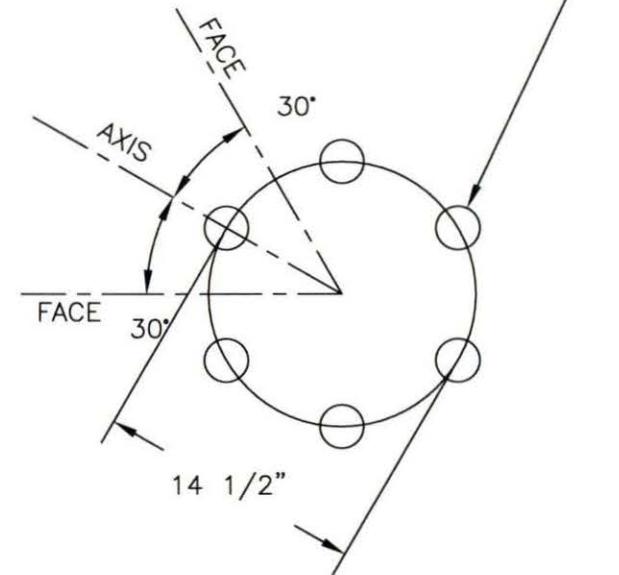


WORLD TOWER			
TITLE: 300' MODEL WSST TOWER FOR: APPALACHIAN WIRELESS SITE: GAUSEDALE WHITLEY COUNTY, KY			
SCALE	DWN. LKG	CKD.	DATE 9-13-18
FILE	DWG. NO. Q18763N		

09/14/18



ANCHOR BOLTS
(6) 2" ϕ X 78"
ASTM F1554-105
EQUALLY SPACED WITH
TOP TEMPLATE AND
EMBEDDED PLATE



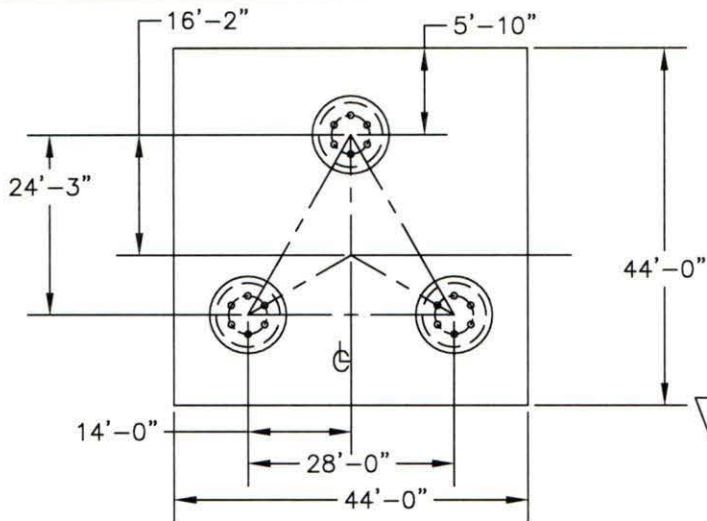
TITLE:

300' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: GAUSEDALE
WHITLEY COUNTY, KY

WORLD TOWER

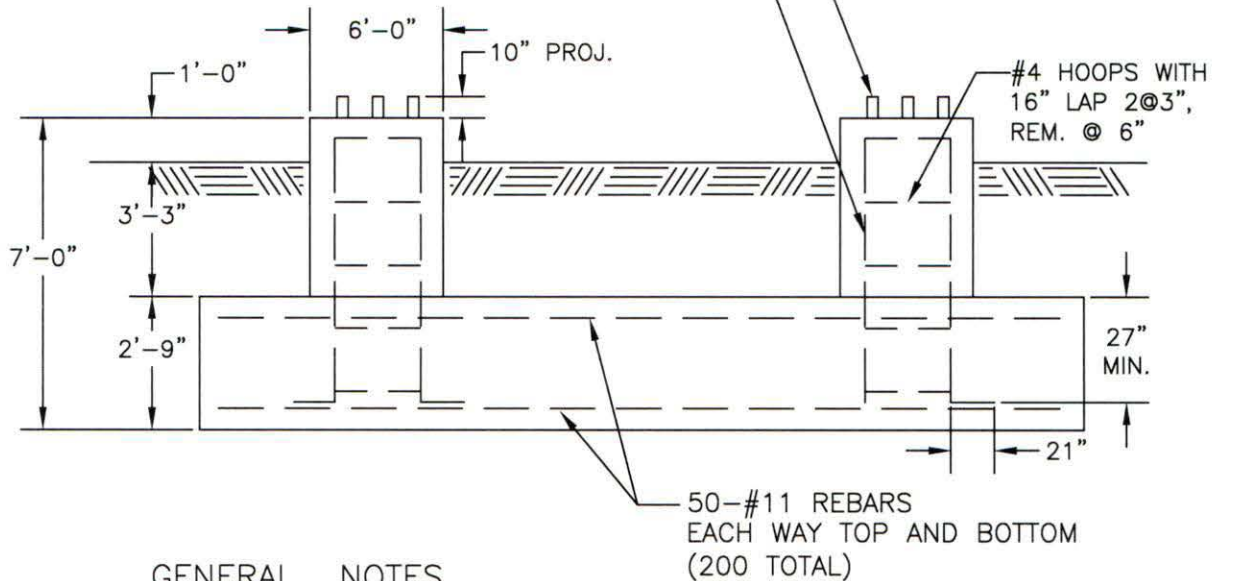
SCALE NONE DWN. LKG CKD. DATE 9-13-18

FILE DWG. NO. Q18763AB



210.6 CU. YDS.
CONCRETE REQ'D.

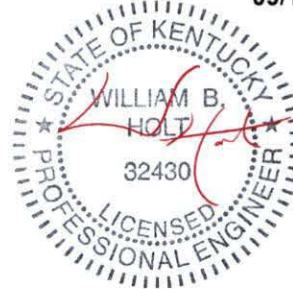
BASE REACTIONS	
OTM:	23551.0 FT. KIPS
COMP.	1016.0 KIPS
UPLIFT	881.0 KIPS
SHEAR (3 LEGS)	153.0 KIPS
WT. NO ICE	134.0 KIPS
WT. 3/4" ICE	401.0 KIPS



GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCEMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION DESIGN IS BASED ON CUSTOMER SUPPLIED SOIL DATA FROM EAST KENTUCKY ENGINEERING, LLC. PROJECT NUMBER 165-000-0073 DATED AUGUST 18, 2018.
5. FOUNDATION TO BEAR ON SANDSTONE LAYER.

09/14/18

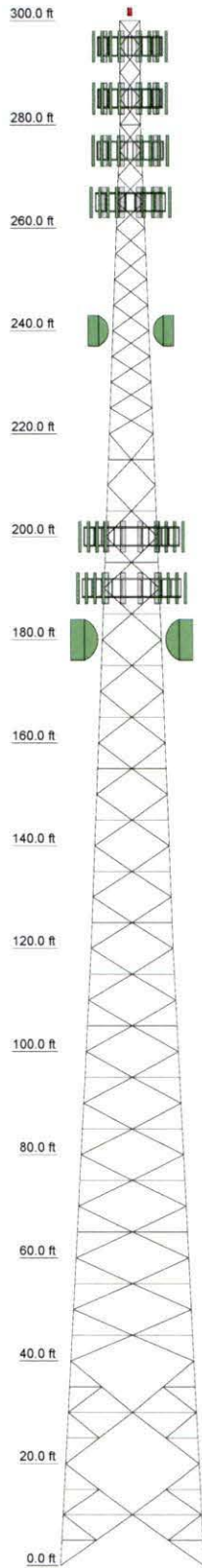


TITLE: FOUNDATION DETAIL
300' WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: GAUSEDALE
WHITLEY COUNTY, KY

WORLD TOWER

SCALE NONE	DWN.	LKG	CKD.	DATE 9-13-18
FILE	DWG. NO.		Q18763F	

Section	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	SR 5 3/4	SR 5 1/2	SR 5 1/4	SR 5 1/4	SR 5 1/4	SR 4 1/2	SR 4 3/4	SR 4 1/2	SR 4 1/4	SR 4	SR 3 3/4	SR 3 1/2	SR 3	SR 2 3/4	SR 2
Diagonals	L 5x5x5/16	L 4x4x3/8	L 4x4x3/8	L 4x4x3/8	L 4x4x1/4	L 5x5x5/16	L 4x4x1/4	L 3 1/2x3 1/2x1/4	L 3 1/2x3 1/2x1/4	L 3 1/2x3 1/2x1/4	L 3x3x1/4	A	L 2x2x1/4	L 2x2x3/16	
Diagonal Grade															
Top Girts															L 2x2x1/8
Horizontals	L 5x5x5/16	L 4x4x5/16	L 4x4x1/4	L 4x4x1/4	L 3 1/2x3 1/2x1/4	L 3x3x3/16	L 3x3x1/4	L 3x3x3/16	N.A.	A	L 2x2x3/16				N.A.
Red. Horizontals	L 3x3x1/4								N.A.						
Red. Diagonals	L 3x3x1/4								N.A.						
Inner Bracing	L 3 1/2x3 1/2x1/4								N.A.						
Face Width (ft)	26	24	22	20	18	16	14.5	13	11.5	10	8.5	7	5.5		
# Panels @ (ft)	4 @ 10								52 @ 5						
Weight (K)	82.5	10.1	9.0	8.6	7.3	6.6	5.9	5.1	4.6	4.1	3.4	2.8	2.2	1.9	1.1



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L2 1/2x2 1/2x3/16		

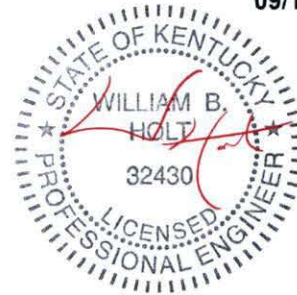
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Whitley County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 89.00 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 30.00 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Structure Class II.
7. Topographic Category 3 with Crest Height of 400.00 ft
8. Ultimate 3-second gust wind speed of 115 mph converted to a nominal 3-second gust wind speed of 89 mph
9. TOWER RATING: 99.4%

09/14/18

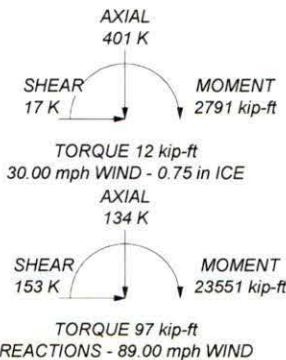


ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 1016 K
SHEAR: 94 K

UPLIFT: -881 K
SHEAR: 82 K



World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job: 300' WSST Tower / Run Q18763
	Project: Gausedale
	Client: Appalachian Wireless Drawn by: WBH App'd:
	Code: TIA-222-G Date: 08/23/18 Scale: NTS
Path: G:\World Tower\KY\Q18763 Gausedale\Analysis\Q18763.en	Dwg No. E-1



Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2018-ASO-14035-OE

Issued Date: 09/05/2018

Ali Kuzehkanani
 East Kentucky Network, LLC
 8300 Greensboro Drive, Suite 1200
 Tysons, VA 22102

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Tower Gausdale
 Location: Gausdale, KY
 Latitude: 36-45-18.11N NAD 83
 Longitude: 83-58-02.77W
 Heights: 1356 feet site elevation (SE)
 310 feet above ground level (AGL)
 1666 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, 24-hr med-strobes - Chapters 4,6(MIWOL),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

The use of a 24-hour medium intensity flashing white light system in urban and rural areas often results in complaints.

This determination expires on 03/05/2020 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licensee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as is necessary to eliminate the harmful interference. This condition expires after 1 year of interference-free operation.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (206) 231-2993, or lynette.farrell@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-ASO-14035-OE.

Signature Control No: 369473032-384238432

(DNE)

Lynette Farrell
Technician

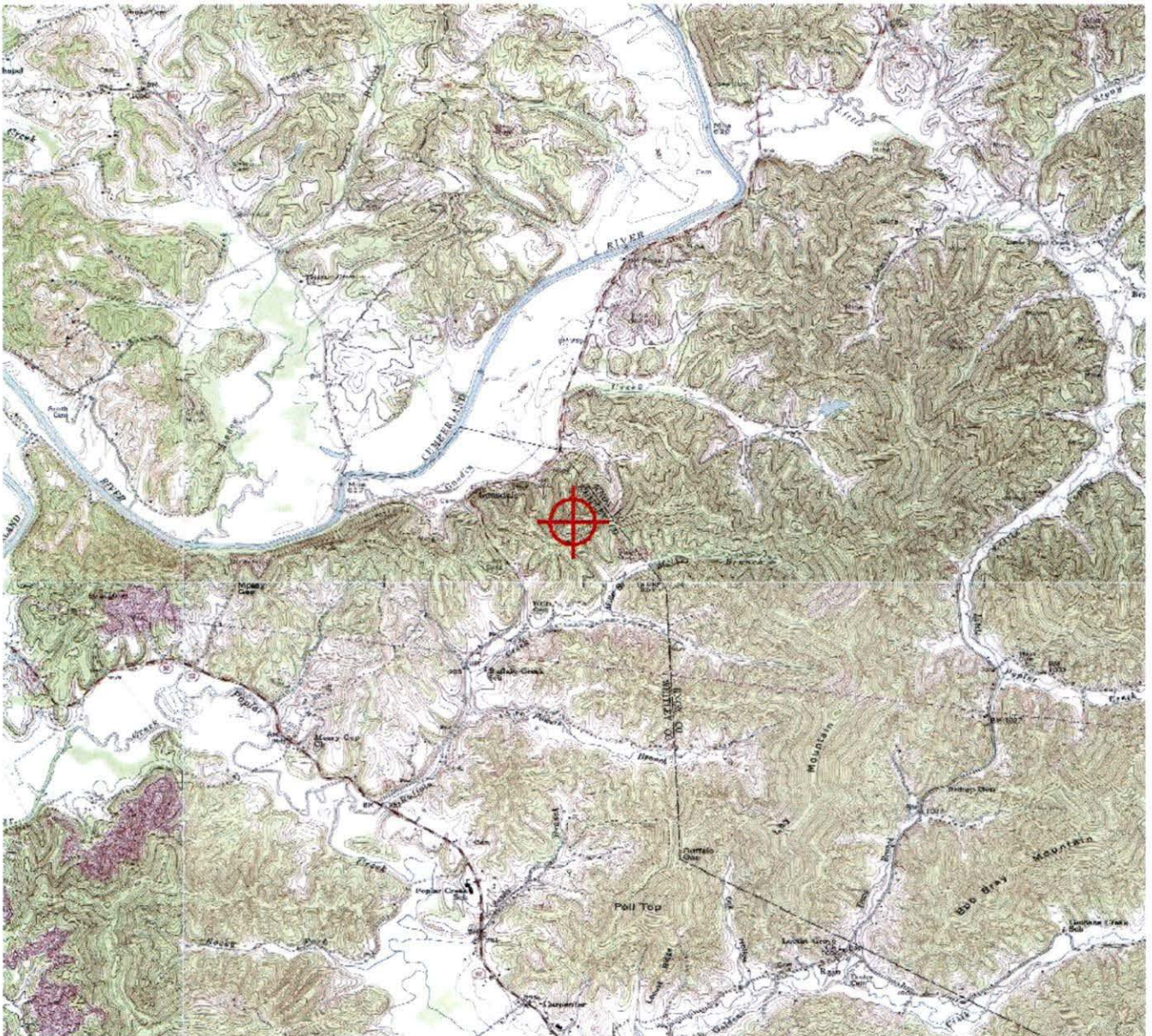
Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2018-ASO-14035-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

TOPO Map for ASN 2018-ASO-14035-OE





KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
859-341-2700

September 6, 2018

APPROVAL OF APPLICATION

APPLICANT:

East Kentucky Network, LLC.
East Kentucky Network, LLC.
8300 Greensboro Drive|Suite 1200
McLean, VA 22102

SUBJECT: AS-118-BYL-2018-068

STRUCTURE: Antenna Tower
LOCATION: Gausdale, KY
COORDINATES: 36° 45' 18.11" N / 83° 58' 2.77" W
HEIGHT: 310' AGL/1666' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 310' AGL/ 1666' AMSL Antenna Tower near Gausdale, KY 36° 45' 18.11" N / 83° 58' 2.77" W.

This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit.

A copy of the approved application is enclosed for your files.

Medium Intensity White Obstruction Lighting is required in accordance with 602 KAR 50:100.



John Houlihan
Administrator



An Equal Opportunity Employer M/F/D



KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
859-341-2700

CONSTRUCTION/ALTERATION STATUS REPORT

September 6, 2018

AERONAUTICAL STUDY NUMBER: AS-118-BYL-2018-068

East Kentucky Network, LLC.
East Kentucky Network, LLC.
8300 Greensboro Drive Suite 1200
McLean, VA 22102

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on September 6, 2018. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 421 Buttermilk Pike, Covington, KY, 41017. 859-341-2700.

STRUCTURE: Antenna Tower
LOCATION: Gausdale, KY
COORDINATES: 36° 45' 18.11" N / 83° 58' 2.77" W
HEIGHT: 310' AGL /1666' AMSL

CONSTRUCTION/ALTERATION STATUS

1. The project () is abandoned. () is not abandoned.

2. Construction status is as follows:

Structure reached its greatest height of _____ ft. AGL
_____ ft. AMSL on _____ (date).

Date construction was completed. _____

Type of obstruction marking/painting. _____

Type of obstruction lighting. _____

As built coordinates. _____

Miscellaneous Information. _____

DATE _____

SIGNATURE/TITLE _____



An Equal Opportunity Employer M/F/D

2018-068
2018-069



KENTUCKY TRANSPORTATION CABINET
KENTUCKY AIRPORT ZONING COMMISSION

TC 56-50
Rev. 07/2010
Page 2 of 2

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) East Kentucky Network, LLC c/o LLGS		PHONE 703-584-8667	FAX 703-584-8692	KY AERONAUTICAL STUDY # AS-118-BLY-2018-068
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY Tysons		STATE VA ZIP 22102
APPLICANT'S REPRESENTATIVE (name) Ali Kuzehkanani		PHONE 703-584-8667	FAX 703-584-8692	
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY Tysons		STATE VA ZIP 22102
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 08/15/18 End 08/20/18
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank <input type="checkbox"/> Landfill <input type="checkbox"/> Other		MARKING/PAINTING/LIGHTING PREFERRED <input type="checkbox"/> Red Lights & Paint <input checked="" type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other		
LATITUDE 36°45'18.11"		LONGITUDE 83°58'02.77"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other
NEAREST KENTUCKY City Gausdale County Whitley		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Williamsburg-Whitley County Airport		
SITE ELEVATION (AMSL, feet) 1356		TOTAL STRUCTURE HEIGHT (AGL, feet) 310		CURRENT (FAA aeronautical study #)
OVERALL HEIGHT (site elevation plus total structure height, feet) 1666				PREVIOUS (FAA aeronautical study #)
DISTANCE (from nearest Kentucky public use or Military airport to structure) 13.1 mi				PREVIOUS (KY aeronautical study #)
DIRECTION (from nearest Kentucky public use or Military airport to structure) ESE				
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Approx. 0.5 miles east of Gausdale (Whitley), KY				
DESCRIPTION OF PROPOSAL A new 300' tower with top-mounted antennas (overall height of 310' AGL)				
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 07/06/18				
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)				
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)				
NAME Ali Kuzehkanani	TITLE Dir of Engineering	SIGNATURE <i>Ali Kuzehkanani</i>		DATE 07/06/18
COMMISSION ACTION		<input type="checkbox"/> Chairperson, KAZC <input checked="" type="checkbox"/> Administrator, KAZC		
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved		SIGNATURE <i>[Signature]</i>		DATE 9-6-18

Driving Directions for Gausdale

Beginning in Williamsburg, Kentucky beside the Whitley County Courthouse at the intersection of North 2nd St. and Main St. drive through the traffic light to the intersection of KY 296 East and Cumberland Ave. Turn left onto Cumberland Avenue, drive .1 mile to the intersection of Cumberland Ave. and 25W. Turn right onto 25W, drive .8 miles to the intersection of 25W and Hwy 92. Turn left onto Hwy 92E. Drive 13.3 miles to the intersection of Hwy 92E and Hwy 11. Drive 1.9 miles and you will be at the intersection of Hwy 11 and Hwy 779, stay straight onto Hwy 11. Drive .5 miles and you will see an old gravel road to your right and a gate (sign will be posted). Go through the gate and walk .2 miles and just to your right you will see survey ribbon. If you follow the ribbon approximately .8 miles to the top of the hill you will have arrived. (sign will be posted)

Prepared by:

Daryl Bartley

CELL SITE COMPLIANCE AGENT

East Kentucky Network, LLC

D/b/a Appalachian Wireless

(606) 791-0310 (cell)


dbartley@ekn.com

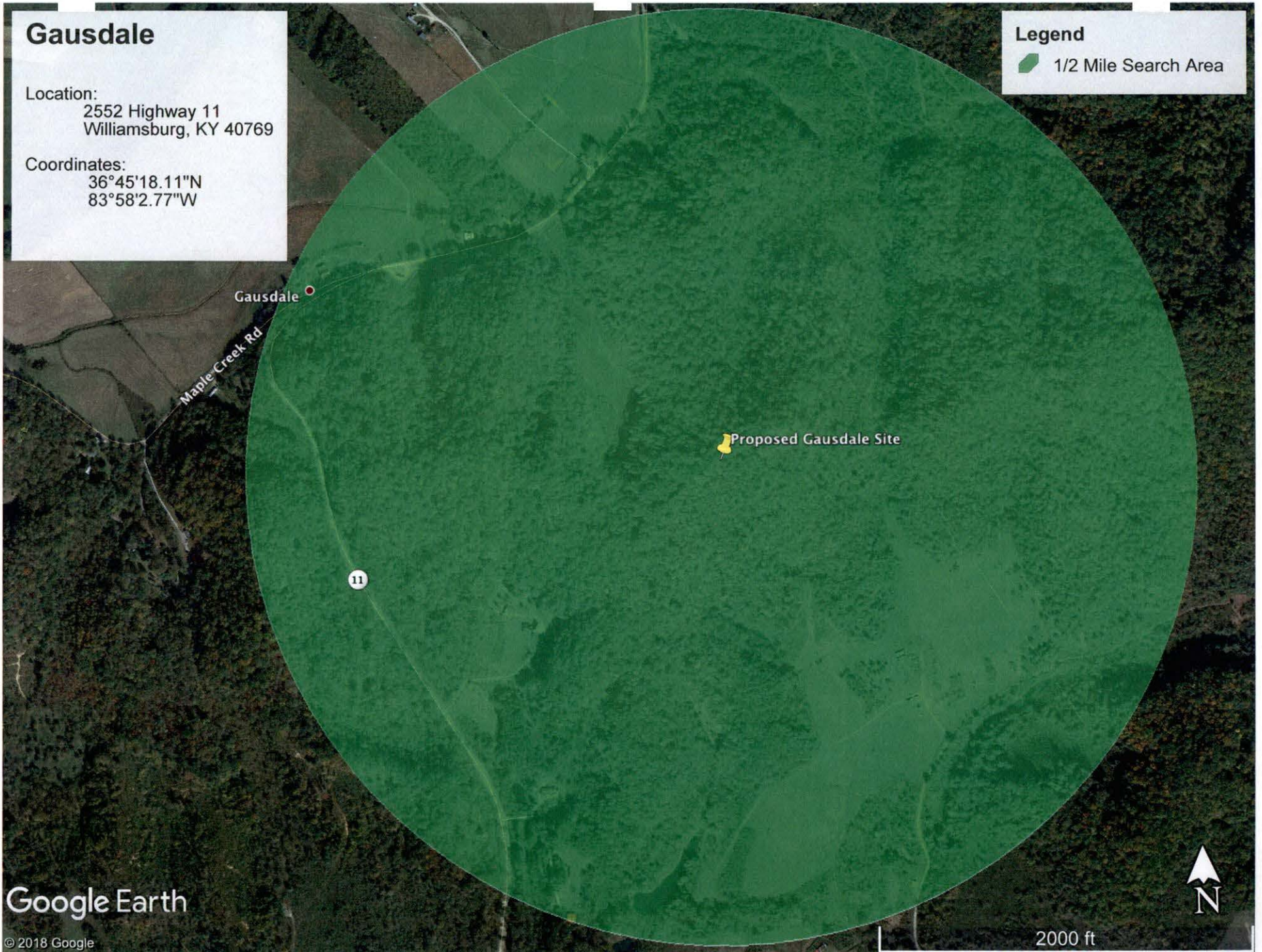
Gausdale

Location:
2552 Highway 11
Williamsburg, KY 40769

Coordinates:
36°45'18.11"N
83°58'2.77"W

Legend

 1/2 Mile Search Area



Google Earth

© 2018 Google

2000 ft

MEMORANDUM OF LEASE

THIS MEMORANDUM OF LEASE is made and entered into on this 22nd day of June, 2018, with a commencement date of July 1st, 2018 (the “**Commencement Date**”), by and between **ARNOLD HAMBLIN** and **SHIRLEY HAMBLIN**, a married couple, with an address of 145 Old Maple Creek Road, Williamsburg, Kentucky 40769, hereinafter referred to as “**Lessors**”, and **EAST KENTUCKY NETWORK, LLC D/B/A APPALACHIAN WIRELESS**, a Kentucky limited liability company, with a mailing address of 101 Technology Trail, Ivel, Kentucky, 41642, hereinafter referred to as “**Lessee.**”

WITNESSETH

1. **Demised Premises.** For good and valuable consideration, Lessors leased to Lessee, and Lessee has leased from Lessors that certain tract of real estate located in Whitley County, Kentucky, and being a portion of the same land conveyed to Lessors by Deed dated October 7, 1974, and recorded on April 3, 1976, in Deed Book 260, Page 33, in the Whitley County Clerk’s Office. Said property is more particularly described in the description **attached** hereto and made a part hereof as **Exhibit A** and the plat **attached** hereto and made a part hereof as **Exhibit B**, prepared by James W. Caudill, Licensed Professional Land Surveyor (hereinafter referred to as the “**Premises**”). The Lessors have also granted unto Lessee full and complete rights of ingress, egress and regress to and from the Premises over any property owned by Lessors, including that certain tract of real estate located in Whitley County, Kentucky conveyed to Lessors by Deed dated May 4, 2017, and recorded on December 4, 2017, of record in Deed Book 542, Page 638 in the Whitley County Clerk’s Office, and other associated rights for installation of utilities, maintenance, and other purposes.

2. **Term.** The initial term of the Lease is for a period of five (5) years from the Commencement Date set forth above.

3. **Renewals.** The Lease shall automatically renew for an additional seven (7) terms of five (5) years each, unless Lessee provides sixty (60) days written notice prior to the end of the current term that it does not wish to renew.

4. **Binding Effect.** All of the terms, conditions, and covenants hereof shall be binding and inure to the benefit of the parties and their respective heirs, representatives, successors, and assigns.

5. **Purpose.** This Memorandum of Lease is prepared solely for the purpose of recordation, and is not intended to, nor shall it be deemed to, modify any of the terms and conditions set forth in the Lease, nor to construe any of the rights, duties or responsibilities of Lessors and Lessee. In the event of any conflict between the terms and conditions of this Memorandum and the terms and conditions of the Lease, the terms and conditions of the Lease shall supersede and control.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, Lessors and Lessee have caused their names to be signed hereto, as of the date(s) indicated below.

LESSORS:

Arnold Hamblin
ARNOLD HAMBLIN

Shirley Hamblin
SHIRLEY HAMBLIN

COMMONWEALTH OF KENTUCKY,
COUNTY OF Whitley, TO WIT;

The foregoing instrument was acknowledged before me on this 22nd day of June, 2018, by Arnold Hamblin and Shirley Hamblin, Lessors.

Raina J. Helton
Notary Public

My Commission Expires FEB 6, 2020



LESSEE:

EAST KENTUCKY NETWORK, LLC D/B/A
APPALACHIAN WIRELESS

W.A. Gillum
By: W.A. Gillum
Its: CEO/ General Manager

COMMONWEALTH OF KENTUCKY
COUNTY OF Floyd

The foregoing instrument was acknowledged before me on this 27th day of June, 2018, by W.A. Gillum, CEO/General Manager of East Kentucky Network, LLC d/b/a Appalachian Wireless, Lessee.

Raina J. Helton
Notary Public

My Commission Expires FEB 6, 2020



This instrument was prepared by:

Krystal Branham

Krystal Branham, Attorney

101 Technology Trail

Ivel, Kentucky 41642

(606) 477-2355

LOT DESCRIPTION

Property of
Arnold and Shirley Hamblin
145 Maple Creek Road
Williamsburg, KY 40769
Off State Highway 11 Near Gausdale
in Whitley County, KY.
June 19, 2018



A certain tract or parcel of land lying in Whitley County, Kentucky, on waters of Cumberland River, and on Kentucky Highway 11, about 10 miles west of Barbourville, Kentucky and being a portion of the property conveyed to Arnold Hamblin by deed dated October 7, 1974, from James Killion, and wife, Marie Killion, of record in Deed Book 260 Page 33 of the Whitley County Clerk's Office, Williamsburg, Kentucky, and being more particularly described as follows:

Lot 1A

Beginning at a found marked hickory at an old fence and being a common corner to Arnold and Shirley Hamblin (Deed Book 260 page 33) and James Teague (Deed Book 368 page 30); thence up a knob, South 43 deg 48 min 49 sec East, a distance of 26.62 feet to a found black oak marked on top of the knob, also being a corner to Keaton Smith (Deed Book 543 page 213); thence down the ridge with an old wire fence and with the dividing line of Hamblin and Smith, South 46 deg 25 min 18 sec West, a distance of 103.08 feet to a found point on the fence on the ridge; thence continuing with said dividing line down the ridge with a fence, South 39 deg 31 min 06 sec West, a distance of 98.15 feet to a set iron pin with cap marked LS#2259 at the fence; thence leaving said dividing line and fence, severing the property of Hamblin, and down the hill, North 78 deg 36 min 44 sec, a distance of 128.46 feet to a set iron pin with cap marked LS#2259 on the side of the hill; thence up and around the side of the hill, North 16 deg 26 min 08 sec East, a distance of 78.19 feet to a set iron pin with cap marked LS#2259 on the side of the hill; thence continuing up the hill, North 36 deg 46 min 26 sec East, a distance of 145.04 feet to a set iron pin with cap marked LS#2259 on the side of the hill; thence back up the hill South 69 deg 34 min 05 sec East, a distance of 144.79 feet to the point of the beginning. Containing a calculated area of 31710.6 square feet, or .73 acres.

Also to be included is an access road from the public road to Lot 1A across the property of Arnold and Shirley Hamblin (Deed Book 260 Page 33, and Deed Book 542 Page 638).

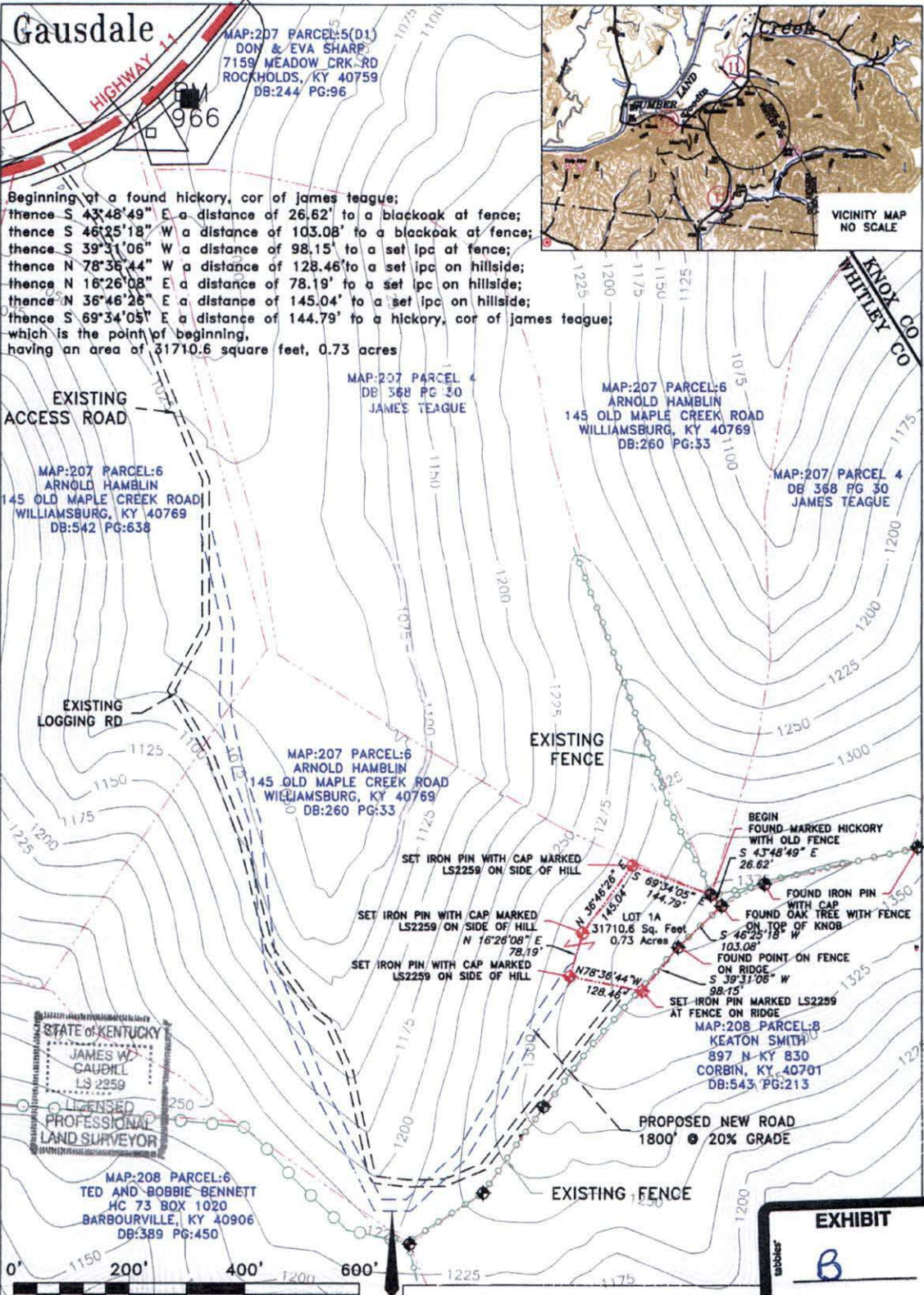
Also to be included is a right to install fiber and utility lines in or along said access road and/or such other location to be agreed upon by the parties.

Unless stated otherwise, any monument referred to herein as "set iron pin with cap" is a set 1/2" diameter rebar, at least eighteen (18") in length, with a plastic cap stamped "LS-2259". All bearings stated herein are referred to NAD83, KY single zone of the Kentucky state plane system.

This survey was performed on June 19, 2018 by James W. Caudill, a Kentucky Licensed Professional Land Surveyor No. 2259.

James W. Caudill
James W. Caudill, PLS #2259
6-19-18





Beginning of a found hickory, cor of James teague;
 thence S 43°48'49" E a distance of 26.62' to a blackoak at fence;
 thence S 46°25'18" W a distance of 103.08' to a blackoak at fence;
 thence S 39°31'06" W a distance of 98.15' to a set ipc at fence;
 thence N 78°36'44" W a distance of 128.46' to a set ipc on hillside;
 thence N 16°26'08" E a distance of 78.19' to a set ipc on hillside;
 thence N 36°46'26" E a distance of 145.04' to a set ipc on hillside;
 thence S 69°34'05" E a distance of 144.79' to a hickory, cor of James teague;
 which is the point of beginning,
 having an area of 31710.6 square feet, 0.73 acres

EXISTING ACCESS ROAD
 MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:542 PG:638

MAP:207 PARCEL 4
 DB 368 PG 30
 JAMES TEAGUE

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:260 PG:53

MAP:207 PARCEL 4
 DB 368 PG 30
 JAMES TEAGUE

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:260 PG:53

SET IRON PIN WITH CAP MARKED
 LS2259 ON SIDE OF HILL

SET IRON PIN WITH CAP MARKED
 LS2259 ON SIDE OF HILL
 N 16°26'08" E
 78.19'

SET IRON PIN WITH CAP MARKED
 LS2259 ON SIDE OF HILL

BEGIN FOUND-MARKED HICKORY
 WITH OLD FENCE
 S 43°48'49" E
 26.62'

FOUND IRON PIN
 WITH CAP
 ON TOP OF KNOB

FOUND OAK TREE WITH FENCE
 S 46°25'18" W
 103.08'

FOUND POINT ON FENCE
 ON RIDGE
 S 39°31'06" W
 98.15'

SET IRON PIN MARKED LS2259
 AT FENCE ON RIDGE
 MAP:208 PARCEL:8
 KEATON SMITH
 897 N-KY 830
 CORBIN, KY 40701
 DB:543 PG:213

PROPOSED NEW ROAD
 1800' @ 20% GRADE

STATE OF KENTUCKY
 JAMES W. CAUDILL
 LS 2259
 LICENSED
 PROFESSIONAL
 LAND SURVEYOR

MAP:208 PARCEL:6
 TED AND BOBBIE BENNETT
 HC 73 BOX 1020
 BARBOURVILLE, KY 40906
 DB:389 PG:450



SURVEY STA SET FOUND
 IRON PIN WITH CAP (18" X .5" REBAR PLASTIC CAP MARKED LS2259)
 BOUNDARY LINE
 ACCESS ROAD
 PARENT TR LINE

URBAN CLASS SURVEY
 I HEREBY CERTIFY THAT THIS PLAT DEPICTS A SURVEY, MADE
 BY ME, BY THE METHOD OF RANDOM TRAVERSE. THE
 BEARINGS SHOWN HEREON HAVE NOT BEEN ADJUSTED FOR
 CLOSURE. THIS SURVEY AND PLAT MEETS OR EXCEEDS
 THE MINIMUM STANDARDS OF GOVERNING AUTHORITIES.
 THE UNADJUSTED ERROR OF CLOSURE WAS > 1 IN 10000.

James W. Caudill 2259 6-19-18
 NAME PLS# DATE

PLAT OF SURVEY

DRAWN JWC	DATE 06/19/18	SUBDIVISION OF THE PROPERTY OF ARNOLD & SHIRLEY HAMBLIN NR GAUSDALLE IN WHITLEY CO DB 260 PG 33 DB 542 PG 638
APPROVED	DATE 06/19/18	
SCALE 1" = 200'	SHEET 1 OF 1	SURVEYED BY JAMES W. CAUDILL LS2259 2999 PERKINS/MADDEN ROAD AMBURGEY, KY 41773 PHONE 606-642-3217

EXHIBIT
 B

APPALACHIAN WIRELESS
 101 TECHNOLOGY TRAIL
 IVEL, KY. 41642
 PROPOSED TOWER SITE
 OFF HIGHWAY 11 NR GAUSDALE
 IN WHITLEY COUNTY, KY.

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:542 PG:638

MAP:207 PARCEL:4
 JAMES TEAGUE
 HC 73 BOX 980
 BARBOURVILLE, KY 40906
 DB:368 PG:30

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:260 PG:33

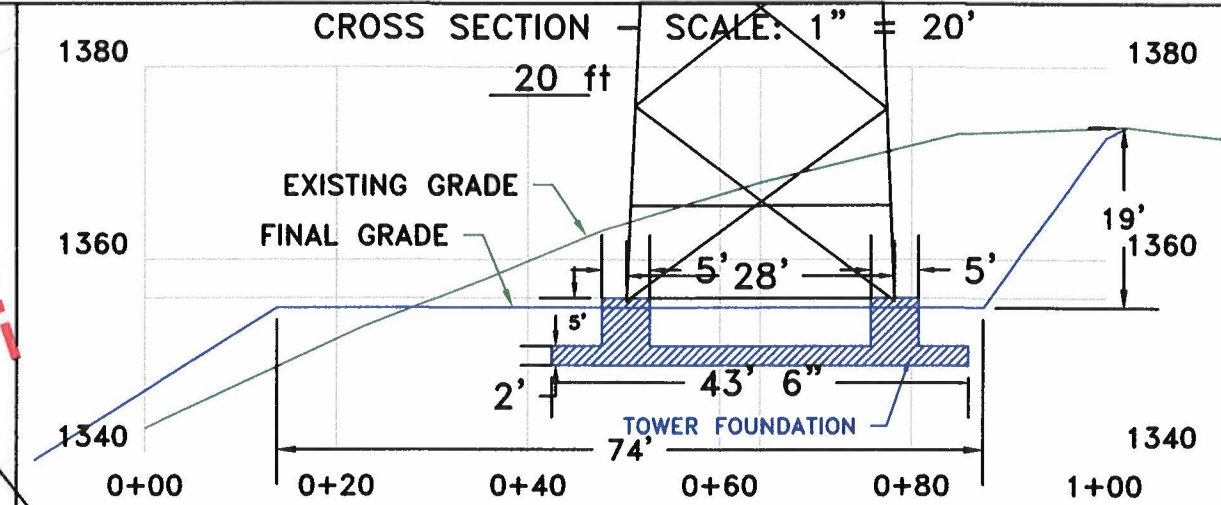
MAP:207 PARCEL:4
 JAMES TEAGUE
 HC 73 BOX 980
 BARBOURVILLE, KY 40906
 DB:368 PG:30

MAP:208 PARCEL:8
 KEATON SMITH
 897 N KY 830
 CORBIN, KY 40701
 DB:543 PG:213

PROPOSED TOWER SITE
 LAT:36°45'18.1101"
 LON:83°58'02.7732"
 N:3,439,375.96
 E:5,443,499.19
 EL:1,356'

N:3,439,362.95
 E:5,443,350.58

PRELIMINARY DESIGN
 NOTE: FOUNDATION AND TOWER DIMENSIONS
 ARE ESTIMATED FOR PLANNING PURPOSES.
 DRAWING WILL BE REVISED WHEN DESIGNS ARE
 FINALIZED.
 SEE FOUNDATION DRAWINGS FOR DETAILS.



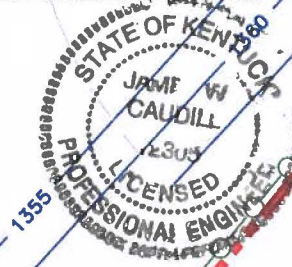
LINE	BEARING	DISTANCE
L1	S 87°12'22" E	126.31'
L3	S 79°38'10" E	125.53'
L4	S 83°35'10" E	151.84'
L5	S 76°39'33" E	137.30'
L6	S 74°13'03" W	77.79'
L7	S 62°46'17" W	116.91'
L8	S 54°33'06" W	90.72'
L9	S 49°25'56" W	111.71'
L10	S 42°30'07" W	110.82'
L11	S 40°14'05" W	65.83'
L12	S 83°30'38" E	120.24'

"I certify that the latitude N 36° 45' 18.11" and longitude W 83° 58' 02.77" are within +/- 50 feet horizontally; and the site elevation 1356.0 ft. MSL, is within +/- 20 feet vertically. With a structure height of 300 ft AGL, the overall height is 1656 ft. AMSL. The horizontal datum (coordinates) is in terms of the North American Datum Of 1983 (NAD 83). The vertical datum heights are in terms of the North American Vertical Datum of 1988, and are determined to the nearest foot."

SIGNED: *James W. Caudill* PE#12305 LS#2259 6-25-18

PRINTED: JAMES W. CAUDILL PE #12305 & LS #2259

- THE PROPOSED TOWER HAS BEEN LOCATED USING DUAL FREQUENCY GPS UNIT PROCESSED BY "OPUS"
- STATE PLANE COORDINATES NAD 83 KY SINGLE ZONE N:3439375.96, E:5443499.19, EL 1356' TOP OF FOUNDATION TOP OF PROPOSED TOWER ELEV. 1656'
- THIS SURVEY MEETS OBSTACLE ACCURACY CODE 2C.
- PROPERTY LINE INFORMATION TAKEN FROM DEEDS



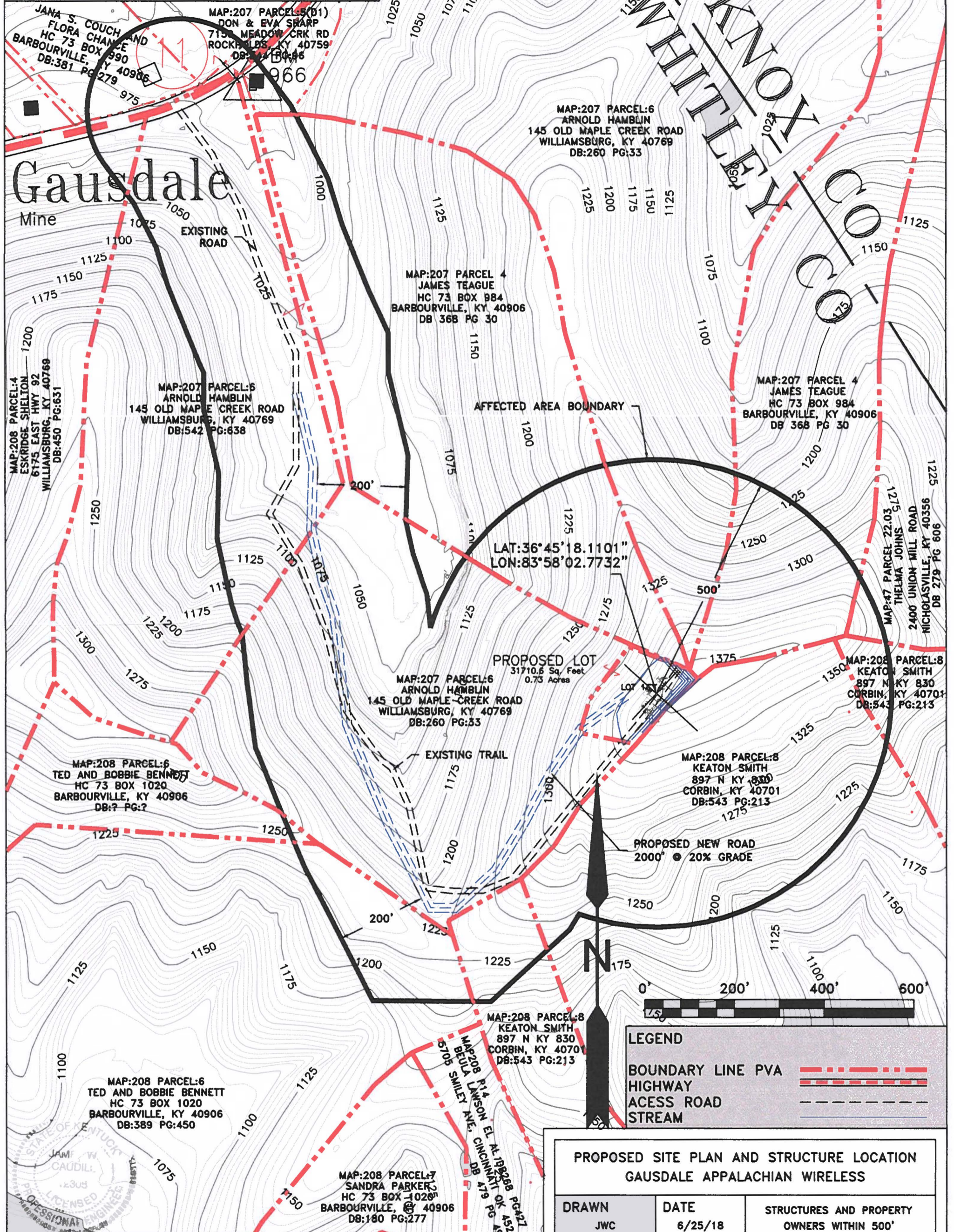
NAD83 KY SINGLE ZONE



**PROPOSED SITE PLAN AND STRUCTURE LOCATION
 GAUSDALE TOWER APPALACHIAN WIRELESS**

DRAWN JWC	DATE 06/25/18	GAUSDALE TOWER SITE ARNOLD HAMBLIN TRACT OFF HIGHWAYS 779 AND 11 NEAR GAUSDALE IN WHITLEY COUNTY, KY
APPROVED	DATE	
SCALE 1" = 20'	SHEET 2 OF 3	PROJECT NO. GAUSDALE/GASITE22C20

APPALACHIAN WIRELESS
 101 TECHNOLOGY TRAIL
 IVEL, KY. 41642
 PROPOSED TOWER SITE
 OFF HIGHWAY 11 NR GAUSDALE
 IN WHITLEY COUNTY, KY.



MAP:207 PARCEL:5(D1)
 DON & EVA SHARP
 7150 MEADOW CRK RD
 ROCKFORD, KY 40759
 DB:244 PG:86

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:260 PG:33

MAP:207 PARCEL 4
 JAMES TEAGUE
 HC 73 BOX 984
 BARBOURVILLE, KY 40906
 DB 368 PG 30

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:542 PG:638

MAP:207 PARCEL 4
 JAMES TEAGUE
 HC 73 BOX 984
 BARBOURVILLE, KY 40906
 DB 368 PG 30

MAP:208 PARCEL:4
 ESKRIDGE SHELTON
 6175 EAST HWY 92
 WILLIAMSBURG, KY 40769
 DB:450 PG:631

MAP:208 PARCEL:6
 TED AND BOBBIE BENNETT
 HC 73 BOX 1020
 BARBOURVILLE, KY 40906
 DB:7 PG:2

MAP:207 PARCEL:6
 ARNOLD HAMBLIN
 145 OLD MAPLE CREEK ROAD
 WILLIAMSBURG, KY 40769
 DB:260 PG:33

MAP:208 PARCEL:8
 KEATON SMITH
 897 N KY 830
 CORBIN, KY 40701
 DB:543 PG:213

MAP:208 PARCEL:8
 KEATON SMITH
 897 N KY 830
 CORBIN, KY 40701
 DB:543 PG:213

MAP:208 PARCEL:6
 TED AND BOBBIE BENNETT
 HC 73 BOX 1020
 BARBOURVILLE, KY 40906
 DB:389 PG:450

MAP:208 PARCEL:7
 SANDRA PARKER
 HC 73 BOX 1026
 BARBOURVILLE, KY 40906
 DB:180 PG:277

MAP:208 PARCEL:8
 KEATON SMITH
 897 N KY 830
 CORBIN, KY 40701
 DB:543 PG:213

LEGEND

BOUNDARY LINE PVA	
HIGHWAY	
ACCESS ROAD	
STREAM	

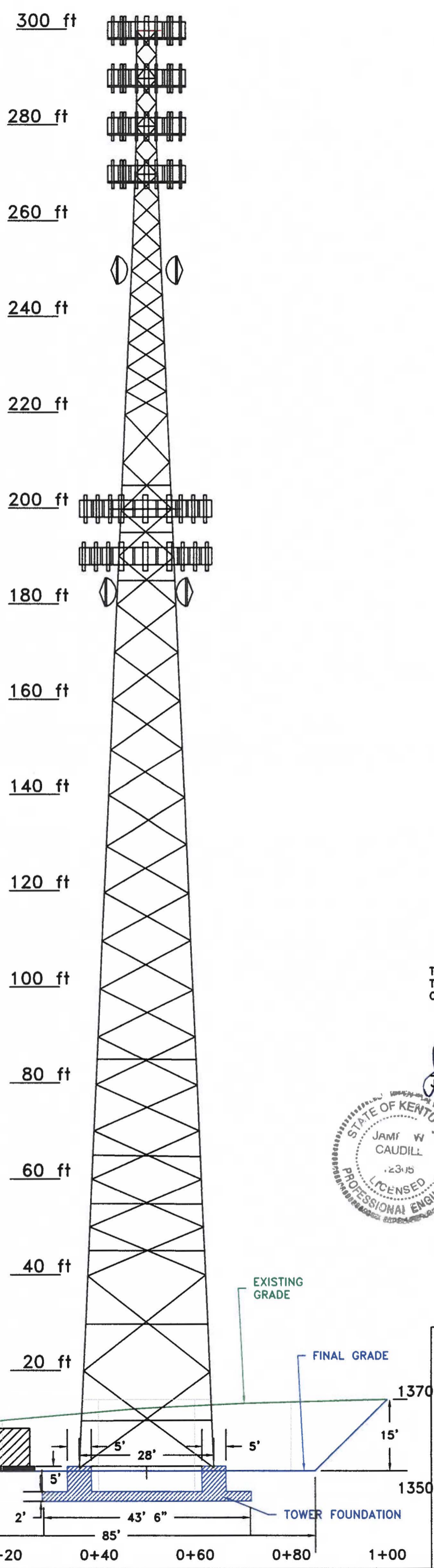
**PROPOSED SITE PLAN AND STRUCTURE LOCATION
 GAUSDALE APPALACHIAN WIRELESS**

DRAWN JWC	DATE 6/25/18	STRUCTURES AND PROPERTY OWNERS WITHIN 500' ARNOLD HAMBLIN TRACT OFF OF HIGHWAY 11 NR GAUSDALE IN WHITLEY CO.
APPROVED	DATE	
SCALE 1" = 200'	SHEET 1 OF 3	PROJECT NO. GAUSDALE/GASITE2PVA200

J W CAUDILL ENGINEERING
 9283 HWY 15 STE. C ISOM, KY 41824
 ENGINEER'S CERTIFICATE: I HEREBY CERTIFY THAT INFORMATION SHOWN REFLECTS THE INFORMATION OBTAINED AND PROVIDED BY THE WHITLEY COUNTY PROPERTY VALUATION ADMINISTRATION OFFICE IN WILLIAMSBURG, KY.
James W. Caudill
 JAMES W. CAUDILL
 12305 P.E.#
 6-25-18 DATE

MAP:208 PARCEL:7
 ZILLIE THOMAS
 BOX --
 LE, KY 40906
 7PG:407

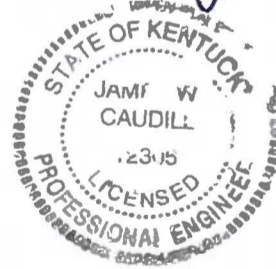
APPALACHIAN WIRELESS
 101 TECHNOLOGY TRAIL
 IVEL, KY. 41642
 PROPOSED TOWER SITE
 OFF HIGHWAY 779 NR GAUSDALE
 IN WHITLEY COUNTY, KY.



PROFILE WITH TOWER

THIS IS A VERTICAL PROFILE SKETCH OF THE TOWER INDICATING THE PROPOSED ANTENNA AND DISH ELEVATIONS. NO DESIGN CRITERIA WAS CONSIDERED IN THE PREPARATION OF THIS DRAWING.

James W. Caudill 12305 6-25-18
 JAMES W. CAUDILL PE #. DATE



PRELIMINARY DESIGN
 NOTE: FOUNDATION AND TOWER DIMENSIONS ARE ESTIMATED FOR PLANNING PURPOSES. DRAWING WILL BE REVISED WHEN DESIGNS ARE FINALIZED.
 NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS

06/25/18
 SCALE 1" = 20'



PROPOSED SITE PLAN AND STRUCTURE LOCATION GAUSDALE TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 06/25/18	GAUSDALE TOWER SITE ARNOLD HAMBLIN TRACT OFF HIGHWAYS 779 AND 11 NEAR GAUSDALE IN WHITLEY COUNTY, KY
APPROVED	DATE	
SCALE 1" = 20'	SHEET 3 OF 3	PROJECT NO. GAUSDALE/GASITE2PRO20

Utility ID	Utility Name	Utility Type	Class	City	State
4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
4109300	Access Point, Inc.	Cellular	D	Cary	NC
4108300	Air Voice Wireless, LLC	Cellular	A	Bloomfield Hill	MI
4110650	Alliant Technologies of KY, L.L.C.	Cellular	C	Morristown	NJ
44451184	Alltel Communications, LLC	Cellular	A	Basking Ridge	NJ
4110850	AltaWorx, LLC	Cellular	C	Fairhope	AL
4107800	American Broadband and Telecommunications Company	Cellular	C	Toledo	OH
4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
4110700	Andrew David Balholm dba Norcell	Cellular	C	Clayton	WA
4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
4108750	Blue Jay Wireless, LLC	Cellular	C	Carrollton	TX
4111050	BlueBird Communications, LLC	Cellular	C	New York	NY
4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
4107600	Boomerang Wireless, LLC	Cellular	B	Hiawatha	IA
4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
4110050	CampusSims, Inc.	Cellular	D	Boston	MA
4100700	Celco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
4111000	ComApp Technologies LLC	Cellular	C	Melrose	MA
4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
4001900	CTC Communications Corp. d/b/a EarthLink Business I	Cellular	D	Grand Rapids	MI
10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
4109600	Google North America Inc.	Cellular	A	Mountain View	CA
33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
4110600	Horizon River Technologies, LLC	Cellular	C	Atlanta	GA
4103100	i-Wireless, LLC	Cellular	A	Newport	KY
4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	OK
22215360	KDDI America, Inc.	Cellular	D	New York	NY
10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
4109750	Konatel, Inc. dba telecom.mobi	Cellular	D	Johnstown	PA
4110900	Lunar Labs, Inc.	Cellular	C	Detroit	MI
4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS

4001800	OnStar, LLC	Cellular	A	Detroit	MI
4110750	Onvoy Spectrum, LLC	Cellular	C	Plymouth	MN
4109050	Patriot Mobile LLC	Cellular	D	Southlake	TX
4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
4202100	Powertel/Memphis, Inc. dba T-Mobile	Cellular	A	Bellevue	WA
4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
4108700	Ready Wireless, LLC	Cellular	B	Hiawatha	IA
4110500	Republic Wireless, Inc.	Cellular	D	Raleigh	NC
4111100	ROK Mobile, Inc.	Cellular	C	Culver City	CA
4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
4106300	SI Wireless, LLC	Cellular	A	Carbondale	IL
4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	NJ
4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
4109550	Stream Communications, LLC	Cellular	D	Dallas	TX
4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	South Portland	ME
4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
4108900	Telrite Corporation dba Life Wireless	Cellular	D	Covington	GA
4108450	Tempo Telecom, LLC	Cellular	D	Kansas City	MO
4109950	The People's Operator USA, LLC	Cellular	D	New York	NY
4109000	Ting, Inc.	Cellular	A	Toronto	ON
4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ
4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
4002000	Truphone, Inc.	Cellular	D	Durham	NC
4110300	UVNV, Inc.	Cellular	D	Costa Mesa	CA
4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
4110800	Visible Service LLC	Cellular	C	Lone Tree	CO
4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
4110950	Wing Tel Inc.	Cellular	C	New York	NY
4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	D	Louisville	KY