

MAY 02 2018

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

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 2018-00136
 CONSTRUCT A REPLACEMENT TOWER IN LETCHER)
 COUNTY, KENTUCKY)

East Kentucky Network, LLC, d/b/a Appalachian Wireless, was granted authorization to provide cellular service in the KY-10 Cellular Market Area (CMA452) by the Federal Communications Commission (FCC). 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 Letcher 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 telecommunications tower on a tract of land located near 1739 Raven Rock, Jenkins, Letcher County, Kentucky (37°10'15.6701"N 82°36'53.3858"W). A map and detailed directions to the site can be found in Exhibit 7.

Construction of the proposed tower is required by public convenience and necessity. Due to increasing demand for telecommunications service, the proposed tower is necessary to provide adequate coverage. The proposed tower will improve service in Letcher County by providing an interconnection between East Kentucky Network, LLC's other sites thereby forming a cohesive network.

Exhibit 2 is a list of all Property owners or residents according to the Property Valuation Administrator's record who reside or own property within 500 feet of the proposed tower and all

property owners who own property contiguous to the property upon which construction is proposed in accordance with the Public Valuation Administrator's records.

Pursuant to 807 KAR 5:063 Section 1(1)(L), Section 1(1)(m), and Section 2, all affected property owners according to the Property Valuation Administrator's record who reside or 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.

Letcher County has no formal local planning unit. In absence of this unit, the Letcher County Judge Executive's office was notified by certified mail, return receipt requested of East Kentucky Network, LLC's proposal and informed of its right to intervene. The Letcher 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 Mountain Eagle, May 2, 2018 edition. Enclosed in Exhibit 3 is a copy of that notice. The Mountain Eagle is the newspaper with the largest circulation in Letcher 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 Allstate Tower, 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 April 24, 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 Deed for the site location along with a lot description.

The proposed construction site is on a rugged mountaintop in close proximity to the existing tower. There is an existing 180' tower owned by East Kentucky Network, LLC on the property which cannot meet the needs of East Kentucky Network, LLC and will be removed upon construction of the proposed tower.

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 Jonathan Newman, 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, and 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 at 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, 101 Technology Trail, Ivel, KY 41642.

SUBMITTED BY: Lynn Haney DATE: 4/30/18
Lynn Haney, Regulatory Compliance Director

APPROVED BY: W.A. Gillum DATE: 4/30/18
W.A. Gillum, General Manager

ATTORNEY: Krystal Branham DATE: 4/30/18
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
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 | Deed 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

Cellular License - KNKN809 - East Kentucky Network, LLC d/b/a Appalachian Wireless

| | | | |
|-----------|---------|---------------|---------------|
| Call Sign | KNKN809 | Radio Service | CL - Cellular |
| Status | Active | Auth Type | Regular |

Market

| | | | |
|-----------|-------------------------------|---------------|---|
| Market | CMA452 - Kentucky 10 - Powell | Channel Block | B |
| Submarket | 0 | Phase | 2 |

Dates

| | | | |
|-----------|------------|--------------|------------|
| Grant | 08/30/2011 | Expiration | 10/01/2021 |
| Effective | 10/10/2014 | Cancellation | |

Five Year Buildout Date

10/17/1996

Control Points

1 US Route 23, FLOYD, Harold, KY
P: (606)478-2355

Licensee

| | | | |
|-----|------------|------|---------------------------|
| FRN | 0001786607 | Type | Limited Liability Company |
|-----|------------|------|---------------------------|

Licensee

| | |
|---|-----------------|
| East Kentucky Network, LLC d/b/a Appalachian Wireless 101 Technology Trail Ivel, KY 41642 | P:(606)477-2355 |
|---|-----------------|

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 |
|---|--|

Ownership and Qualifications

| | | | |
|--------------------|----------------|----------------|-----|
| Radio Service Type | Mobile | | |
| Regulatory Status | Common Carrier | Interconnected | Yes |

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.

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

Joe Vanover and Robert Johnson
2365 North Street
Redding , CA 96001

Pike-Letcher Land
P.O. Box 39
Nevisdale, KY 40769

Gary N. and Cheryl Royalty
311 Peacock Road
Paris, KY 40361

Joe Eddie and Joe Ann Eversole
P.O. Box 28
Jenkins, KY 41537

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

May 1, 2018

Joe Vanover and Robert Johnson
2365 North Street
Redding, CA 96001

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00136)

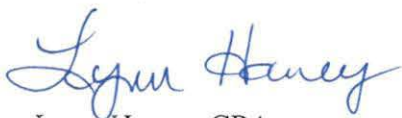
East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Letcher County. The facility will include a 300'-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 1739 Raven Rock, Jenkins, Letcher 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. 2018-00136 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,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

May 1, 2018

Joe Eddie and Joe Ann Eversole
P.O. Box 28
Jenkins, KY 41537

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00136)

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 Letcher 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 near 1739 Raven Rock, Jenkins, Letcher 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. 2018-00136 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,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

May 1, 2018

Gary N. and Cheryl Royalty
311 Peacock Road
Paris, KY 40361

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00136)

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 Letcher 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 near 1739 Raven Rock, Jenkins, Letcher 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. 2018-00136 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,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

May 1, 2018

Pike-Letcher Land
P.O. Box 39
Nevisdale, KY 40769

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00136)


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 Letcher 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 near 1739 Raven Rock, Jenkins, Letcher 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. 2018-00136 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,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

Jenkins Replacement


Location:

Near 1739 Raven Rock
Jenkins, KY 41537

Coordinates:

N 37°10'15.67"
W 82°36'53.39"

Legend

 1/2 Mile Search Area

Proposed Jenkins Replacement Tower

Google Earth

© 2018 Google



4000 ft

VIA: U.S. CERTIFIED MAIL

May 1, 2018

Jim T. Ward, Judge Executive
156 Main Street, Suite 107
Whitesburg, KY 41858

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2018-00136)

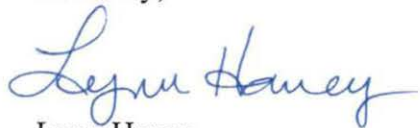
East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a replacement tower in Letcher County, Kentucky in order to improve cellular telecommunication service in Letcher 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 near 1739 Raven Rock, Jenkins, Letcher 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 Letcher 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. 2018-00131 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,



Lynn Haney
Regulatory Compliance Director
Enclosure

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

EAST KENTUCKY NETWORK



| | | | |
|---------------|-----------------------------|---------------|---------------------------------|
| To: | The Mountain Eagle | From: | Raina Helton |
| | Attn: Classifieds | | Regulatory Compliance Assistant |
| Email: | Pwalker_eagle@hotmail.com | Date: | April 24, 2018 |
| Re: | PUBLIC NOTICE ADVERTISEMENT | Pages: | 1 |

Please place the following Public Notice Advertisement in The Mountain Eagle to be ran on May 2, 2018.

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2018-00136)

Public Notice is hereby given that East Kentucky Network, LLC, dba Appalachian Wireless has applied to the Kentucky Public Service Commission to replace an existing cellular telecommunications tower on a tract of land located near 1739 Raven Rock, Jenkins, Letcher County, Kentucky. The proposed tower will be a 180 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. 2018-00136.

If you have any questions about the placement of the above mentioned notice, please call me at 606-477-2375, 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.

Jenkins Replacement


Location:

Near 1739 Raven Rock
Jenkins, KY 41537

Coordinates:

N 37°10'15.67"
W 82°36'53.39"

Legend

 1/2 Mile Search Area

Proposed Jenkins Replacement Tower

Google Earth

© 2018 Google



4000 ft



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

EAST KENTUCKY ENGINEERING, LLC.

**APPALACHIAN WIRELESS
Geotechnical Investigation on the
Jenkins Tower Site
Letcher County, Kentucky
EKYENG Project No. 165-000-0049**

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, November 10th, 2017



EAST KENTUCKY ENGINEERING, LLC.

EXECUTIVE SUMMARY

- 1.0 INTRODUCTION**
 - 2.0 PROJECT DESCRIPTION**
 - 3.0 SITE DESCRIPTION & HISTORICAL MINING**
 - 3.1 GENERAL INFORMATION
 - 4.0 FIELD EXPLORATION**
 - 4.1 SITE INFORMATION
 - 4.2 BORING DATA
 - 4.3 GROUNDWATER
 - 4.4 SEISMIC SITE CLASSIFICATION
 - 5.0 DISCUSSION AND RECOMMENDATIONS**
 - 5.1 GENERAL
 - 5.2 SHALLOW MAT FOUNDATIONS RECOMMENDATIONS
 - 5.3 BURIED UTILITIES
 - 6.0 WARRANTY**
 - 6.1 SUBSURFACE EXPLORATION
 - 6.2 LABORATORY AND FIELD TESTING
 - 6.3 ANALYSIS AND RECOMMENDATIONS
 - 6.4 CONSTRUCTION MONITORING
 - 6.5 GENERAL
- SPECIFICATIONS**
- I – GENERAL**
 - II – ENGINEERED FILL BENEATH STRUCTURES CLEARING AND GRADING SPECIFICATIONS**
 - III – GUIDELINES FOR EXCAVATIONS AND TRENCHES**
 - IV – GENERAL CONCRETE SPECIFICATIONS**
- APPENDIX A – BORING DATA AND TESTING**
- APPENDIX B – SEISMIC DATA**
- APPENDIX C – PHOTOGRAPHS**
- APPENDIX D – MAPS**



EAST KENTUCKY ENGINEERING, LLC.

EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Jenkins tower site, located in Letcher County, Kentucky. This site is readily accessible. A location map is shown in Figure 1 of this report. Two (2) borings were advanced to depths of 25 ft. The following geotechnical considerations were identified:

- Borings utilized for this study encountered sandy soils to a depth of 16 ft., then broken rock to a depth of 35 ft.
- The maximum estimated base elevation of tower mat foundation is 2780.0 ft.
- This site is adjacent to an existing tower on a ridge line on the Pine Mountain Thrust Fault.
- **The allowable bearing capacities of the underlying silty clay soils is estimated at 2500 psf.**
- The 2015 International Building Code seismic site classification for this site is "C".
- Due to the high moisture contents of the clay soils, it is recommended that the soils beneath the footer be over excavated three feet and backfilled with graded stone (dense grade aggregate) and compacted to 95 % of its maximum dry density (ASTM 698D).
- 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.

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 Jenkins Property, in Letcher County, Kentucky. A site location map is shown in Figure No. 1.

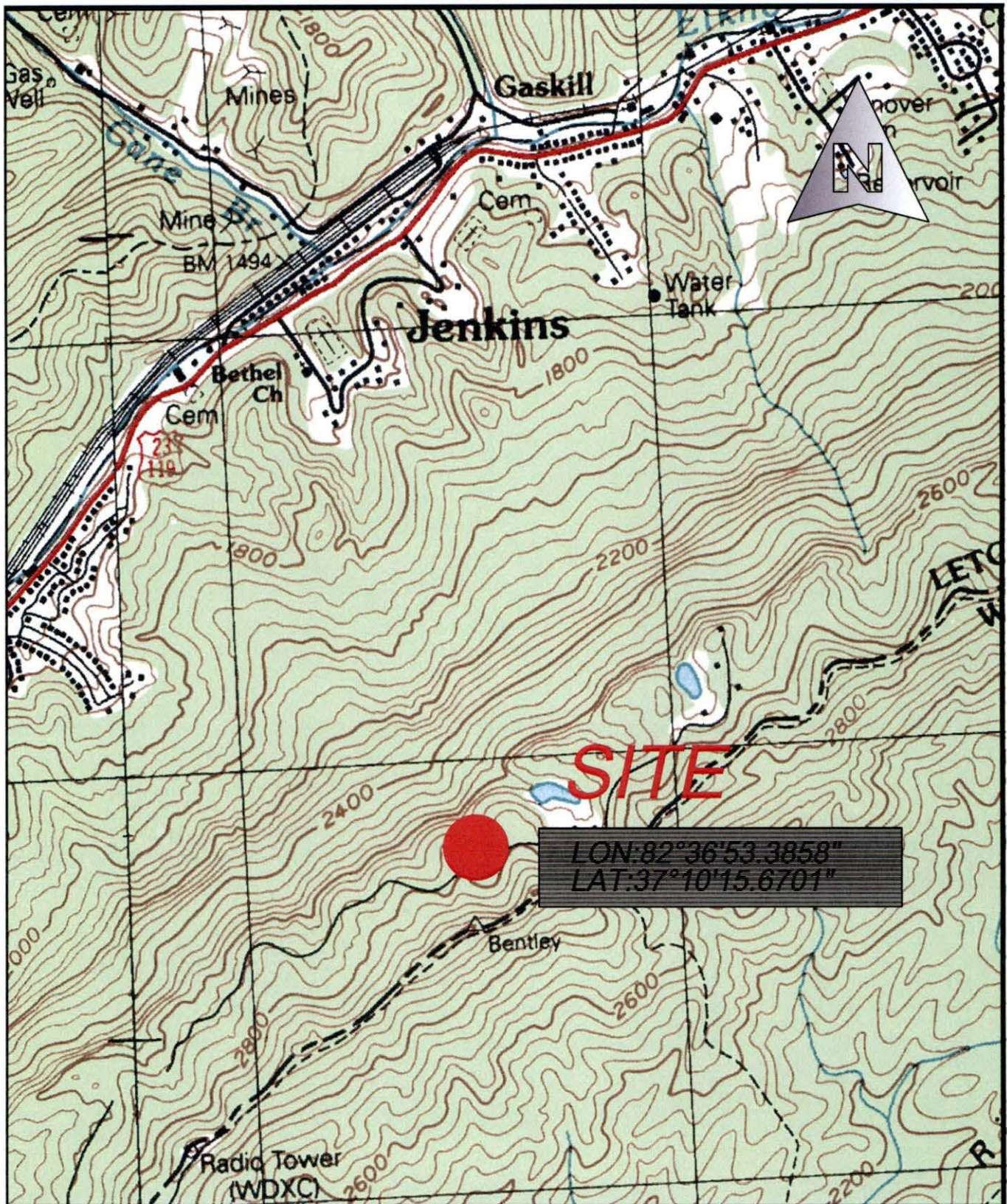
Two (2) borings were advanced to depths of 35 ft. Horn and Associates, Inc. provided drilling services to obtain these borings. Logs of the borings along with a boring location plan are included in Appendix A. The purpose of these services is to provide information and geotechnical engineering recommendations 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 40 ft. X 40 ft. or a large diameter pier with an estimated base of the tower footer elevation at 2783.40 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.



Drawn: RDS Date: 11/13/17

Job: 165-050 Scale: 1"=1000'

Appalachian Wireless
USGS Quadrangle
Location Map
Jenkins 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 & HISTORICAL MINING

3.1 GENERAL INFORMATION

The site location is on a ridge line adjacent to an existing tower site near Jenkins in Letcher County, Kentucky. The site is located on the Pine Mountain Thrust Fault. The current surface elevation is approximately 2778.6 ft. Research on the historical mining was conducted by obtaining previous mine license maps from the "Kentucky Mine Mapping Information System" (KMMIS). Other sources, photographs, and interviews were also used to assist in evaluation historical mining. No historical mining data was found that would adversely impact this site.

4.0 FIELD EXPLORATION

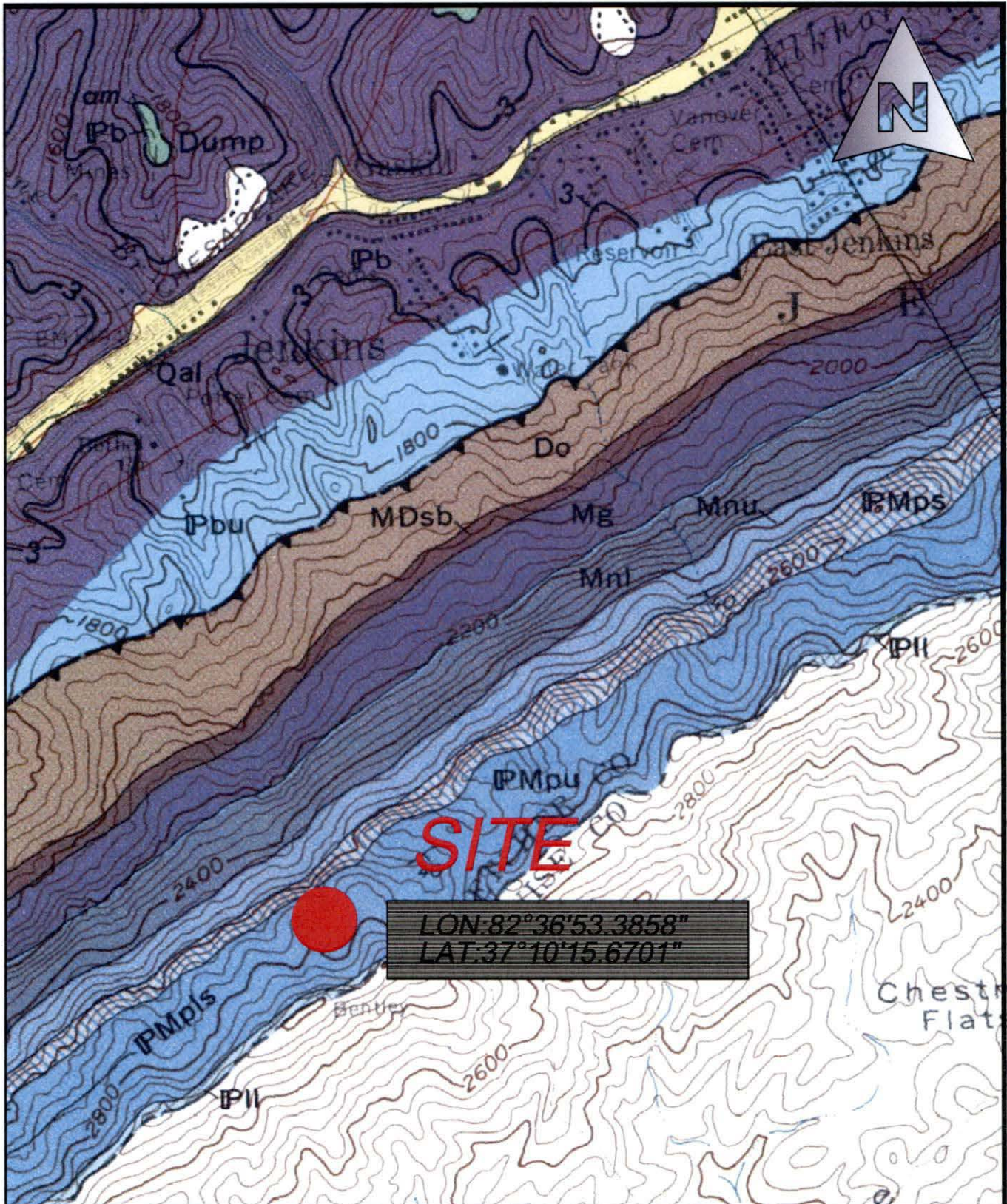
4.1 SITE INFORMATION

The proposed site is located on a ridge line in Letcher County, Kentucky. The site lies within the Jenkins East Quadrangle. The site is readily accessible by conventional exploratory equipment. An estimated pad location was determined based on the information provided. Foundation dimensions are estimated to be either a 40 ft. X 40 ft. mat or a large diameter pier for the purpose of this report.

Visual inspections were conducted 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. 1

| Depth ft. | Base Elevation ft. | Strata |
|-----------|--------------------|------------------------------|
| 15.0 | 2072 | Brown Stiff Silty Clay Soils |
| 20.2 | 2066.8 | SS W/ Clays interbedded |
| 25.2 | 2061.8 | SS W/ Clays and Shales |



SITE

LON: 82°36'53.3858"
LAT: 37°10'15.6701"

| | | | |
|--------------|-----------------|---|---|
| Drawn: RDS | Date: 11/13/17 | Appalachian Wireless GQ Quadrangle Location Map Jenkins Tower Site Figure No. 2 | East Kentucky Engineering, LLC. 230 Swartz Drive Hazard, KY 41701 (606) 551-1050 |
| Job: 165-050 | Scale: 1"=1000' | | |



EAST KENTUCKY ENGINEERING, LLC.

A cross section of this information is in Appendix D of this report.

4.2 BORING DATA

Two (2) borings were made in the relative positions shown on the Site Map in Appendix E. The boring logs and resulting data are included in Appendix E. These borings were made with a track mounted boring rig using hollow-stem augers and employing standard penetration resistance methods (ASTM D-1586, which includes 140-pound hammer, 30-inch drop, and two-inch-O.D. split-spoon sampler) at maximum depth intervals of five feet or at major changes in stratum, whichever occurred first. The disturbed split-spoon samples were visually classified, logged, sealed in moisture-proof jars, and taken to the EKYENG laboratory for study. The depths where these "A"-type split-spoon samples were collected are noted on the boring logs. The results of the natural moisture contents by boring and interval are shown in Table 2.

TABLE NO. 2

RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

| SAMPLE NO. | DEPTH INCREMENT, (FT.) | NATURAL MOISTURE CONTENT, % |
|------------|------------------------|-----------------------------------|
| B1-S-1 | 2.0-3.5 | 22.4% |
| B1-S-2 | 4.5-6.0 | 23.0% |
| B1-S-3 | 7.0-8.5 | 26.1% |



EAST KENTUCKY ENGINEERING, LLC.

| SAMPLE NO. | DEPTH INCREMENT, (FT.) | NATURAL MOISTURE CONTENT, % |
|------------|------------------------|-----------------------------------|
| B1-S-4 | 9.5-11.0 | 25.4% |
| B1-S-5 | 14.5-15.2 | 14.3% |
| B2-S-1 | 2.0-3.5 | 21.1% |
| B2-S-2 | 4.5-6.0 | 18.8% |
| B2-S-3 | 7.0-8.5 | 20.2% |
| B2-S-4 | 9.5-11.0 | 22.0% |
| B2-S-5 | 14.5-16.0 | 25.0% |
| B2-S-6 | 19.5-21.0 | 30.8% |

The position at which the core was taken is indicated on the boring logs and shown on the site map in Appendix C. The corresponding Blow counts are shown in Table No. 3.

TABLE NO. 3
STANDARD PENETRATIONS

| Boring | Run Interval | Blow Counts | Description |
|--------|--------------|-------------|-----------------------------------|
| B1 | 2.0-3.5 | 1-1-3 | Brown, silty clay, soft |
| B1 | 4.5-6.0 | 3-4-9 | Brown, silty clay, soft |
| B1 | 7.0-8.5 | 3-6-8 | Brown and red, Silty Clay, Stiff |
| B1 | 9.5-11.0 | 4-6-8 | Brown and red, Silty Clay, Stiff |
| B1 | 14.5-15.2 | 15-50/2 | Red and brown weathered sandstone |
| B2 | 2.0-3.5 | 1-2-4 | Brown Clay, soft into medium |
| B2 | 4.5-6.0 | 3-5-8 | Brown Clay, soft into medium |
| B2 | 7.0-8.5 | 4-7-10 | Brown and red clay, very stiff |
| B2 | 9.5-11.0 | 3-4-6 | Brown and red clay, very stiff |
| B2 | 14.5-16.0 | 3-5-9 | Weathered, clayey shale |
| B2 | 19.5-21.0 | 3-6-13 | Weathered, clayey shale |



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The borings encountered soils to a maximum depth of 24.5 ft. The 2 borings were extended by "NX" size rock core that were taken to confirm the presence of rock at the site and to determine its physical characteristics. The core was made with "NX" size diamond coring equipment. These borings were taken to depths of 25' and 36.5'. The position at which the core was taken are indicated on the boring logs and shown on the boring location map in Appendix D. The corresponding Rock Quality Data Ratings (RQD) are shown in Table No. 2. This boring demonstrates the full geologic column at the site. Rock-quality designation (RQD) is a rough measure of the degree of jointing or fracture in a rock mass, measured as a percentage of the drill core in lengths of 10 cm or more. High-quality rock has an RQD of more than 75%, low quality of less than 50%. Rock quality designation (RQD) has several definitions

TABLE NO. 4
ROCK QUALITY

| Boring | Run Interval | RQD Values % | Description |
|--------|--------------|-----------------|--|
| B-1 | 15.2-20.2 | 0 | Red and brown weathered sandstone |
| B-1 | 20.2-25.2 | 32% | Sandstone and sandy clay, interlayered |
| B-2 | 24.5-29.5 | 14% | Weathered shale and clay seams, interlayered |
| B-2 | 29.5-36.5 | 26% | Weathered shale and clay seams, interlayered |

Photographs of the cores are included in Appendix A 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 is not common, especially in higher elevations such as where this tower site is proposed.



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Therefore, groundwater should not be a concern in this area. During boring activities, 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 C" per the 2015 Kentucky Building Code. In addition, a S_{DS} coefficient of 0.179 g was calculated, and a S_{D1} coefficient of 0.102 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 free standing 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 SHALLOW MAT FOUNDATIONS RECOMMENDATIONS

If shallow foundations are used, we recommend that the site be placed in stiff clays. The proposed foundation is located on a narrow ridge line and care should be taken to insure the entire foundation is placed away from the edge of the slope. The allowable bearing capacity for these soils is 2500 psf. It is recommended that a minimum foundation design factor of safety of 2.5 is used on this stiff clay material.

Due to the high moisture contents of the clay soils, it is recommended that the soils beneath the footer be over excavated, three feet, and backfilled with graded stone (dense grade aggregate) and compacted to 95 % of its maximum dry density (ASTM 698D).



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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 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 (k_{30}) 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.



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5.3 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 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



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boring should be considered accurate only to the degree inherent with the method used.

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.



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



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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 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 Jenkins Property located in Letcher 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 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.



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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.

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.

- 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 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.



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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.

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
- 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.



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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 be attended by someone above while work is being performed. The worker must check for hazardous atmospheric conditions prior to entry.
9. The contractor must ensure that water does not accumulate in open excavations and must inspect the excavation prior to allowing workers to re-enter after heavy rains.
10. Adjacent structures (buildings, walls, etc.) must be supported or secured to prevent worker exposure to unsafe conditions and damage to existing structures.
11. A registered professional engineer must approve operations when a contractor underpins existing structures to ensure worker safety and prevent damage to existing structures.
12. Workers must not be exposed to loose soil and rock or materials in and around excavations. Materials, such as removed soil and rock, must not be stored closer than two feet from the edge of the excavation.
13. Daily inspections of the excavation, the adjacent areas and protective systems must be made by a "competent person" for evidence of possible cave-ins, indications of failure of protective systems, hazardous



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atmospheres or other hazardous conditions. The "competent person" must stop work immediately and remove workers from the excavation when conditions change and pose a threat to their safety.

14. Workers must not be exposed to fall hazards associated with excavations. Protective walkways or bridges with standard guard rails must be provided.
15. All wells, pits, shafts etc. must be barricaded or covered. After completion of work, all wells, pits, shafts etc. must be backfilled.



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IV - GENERAL CONCRETE SPECIFICATIONS

1.0 GENERAL

It is the intent of this specification to secure, for every part of the work, concrete of homogenous structure which, when hardened, will have the required strength and resistance to weathering. To this end, the limiting values of concrete and the requirements hereinafter specified must be met. Standard tests of the cement, aggregates, concrete and reinforcement will be made by the Owner as it sees fit. The Contractor shall furnish the material for all required samples plus such labor as required to obtain samples. The Contractor shall provide to authorized representatives of the Owner, convenient access to all parts of the work of all concreting operations for the purpose of sampling and inspection.

2.0 SCOPE

Contractor shall furnish all materials, labor, services, transportation, tools, equipment, and related items required to complete work indicated on the drawings and/or specified.

Unless otherwise noted or as modified by more stringent requirements specified herein, all plain and reinforced concrete work shall be performed in full compliance with applicable requirements of the Building Code Requirements for Reinforced Concrete ACI 318.

Contractor shall obtain Owner's approval of all subgrades, footing bottoms, forms, and reinforcement just prior to placing concrete.

Contractor shall coordinate the work specified in this section with that specified in other sections so that all anchors, pipes and other embedded items are properly installed before concrete is placed.

Contractor shall clean all exposed concrete surfaces and obtain approval of Owner for method of cleaning.

3.0 MATERIALS

All materials shall be of the respective quality specified herein, delivered, stored, and handled as to prevent inclusion of foreign matter and damage by dampness or breakage. Packaged material shall be stored in original container until ready for use. Materials showing evidence of dampness or other damage may be rejected.

A. Fine and Coarse Aggregates: Coarse and fine aggregates shall conform to ASTM Specification C33. The maximum size of aggregate shall not be larger than one-fifth (1/5) of the narrowest dimensions between forms, or larger than three fourths (3/4) of the minimum clear spacing between reinforcement.

1. Fine Aggregate: Sand shall be composed essentially of clean, hard, strong, durable grains free of structurally weak grains, organic matter, loam, clay, silt, salt, mica or other fine materials that may affect bonding of the cement paste.



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2. Coarse Aggregate: Cement concrete shall consist of crushed rock or screened gravel and shall be composed essentially of clean, hard, strong and impermeable particles, resistant to wear and frost and free from deleterious amounts of organic matter, loam, clay, salts, mica, and soft, thin, elongated, laminated or disintegrated stone, and shall be inert to water and cement.
- B. Portland Cement: Portland cement shall conform to ASTM Specification C150. Type I or Type II Portland Cement shall be used provided that they are not intermixed during any one batch. Type II Portland Cement shall not be used unless indicated on the plans.
- C. Water: Water for mixing and curing shall be clean, fresh, and free from deleterious materials.
- D. Metal Reinforcement: Rebar shall be Grade 60 and with deformations conforming to ASTH 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.
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 form work.
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



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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 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.



EAST KENTUCKY ENGINEERING, LLC.

- 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.
- 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 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.



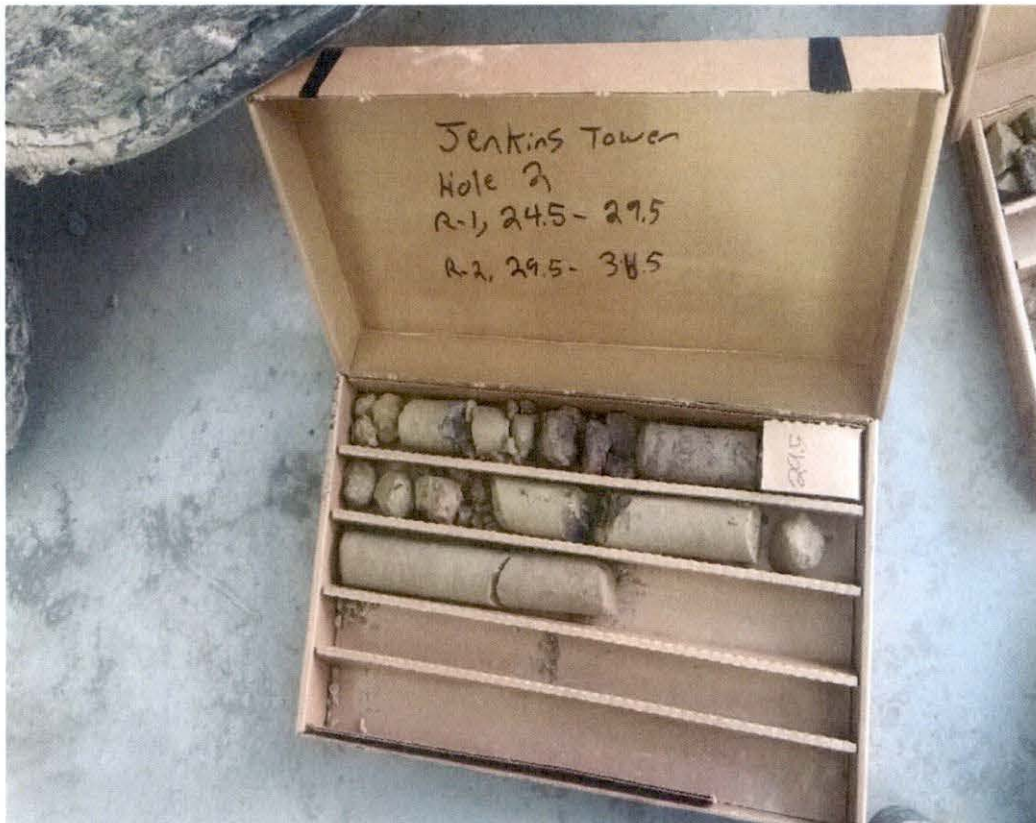
EAST KENTUCKY ENGINEERING, LLC.

APPENDIX A BORING DATA





EAST KENTUCKY ENGINEERING, LLC.



[illegible]

| | | | | | |
|------------------------|------------|--------------------|------------|-------------------|------------|
| Water Level @ Drilling | <u>Dry</u> | 24 Hr. Water Level | <u>N/A</u> | 7 Day Water Level | <u>N/A</u> |
| Moving/Delay Time | N/A | Hammer Weight | 140 lbs. | Hammer Drop | 30 in. |



EAST KENTUCKY ENGINEERING, LLC.

| |
|----------------------------------|
| APPENDIX B SEISMIC DATA |
|----------------------------------|

Design Maps Summary Report

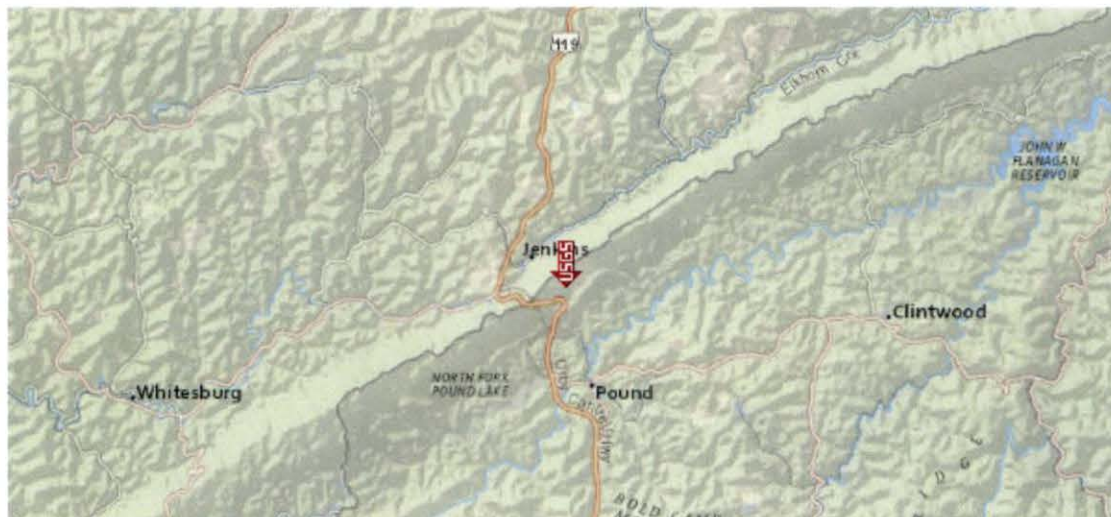
User-Specified Input

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

Site Coordinates 37.17102°N, 82.61483°W

Site Soil Classification Site Class C – “Very Dense Soil and Soft Rock”

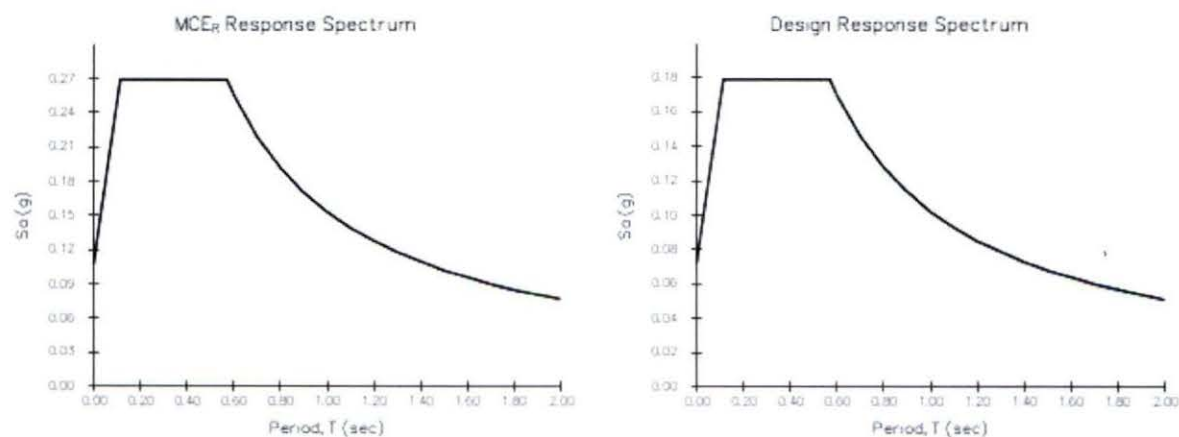
Risk Category IV (e.g. essential facilities)



USGS-Provided Output

| | | |
|-------------------------|----------------------------|----------------------------|
| $S_s = 0.224 \text{ g}$ | $S_{MS} = 0.269 \text{ g}$ | $S_{DS} = 0.179 \text{ g}$ |
| $S_1 = 0.090 \text{ g}$ | $S_{M1} = 0.153 \text{ g}$ | $S_{D1} = 0.102 \text{ g}$ |

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.



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.



EAST KENTUCKY ENGINEERING, LLC.

APPENDIX C PHOTOGRAPHS





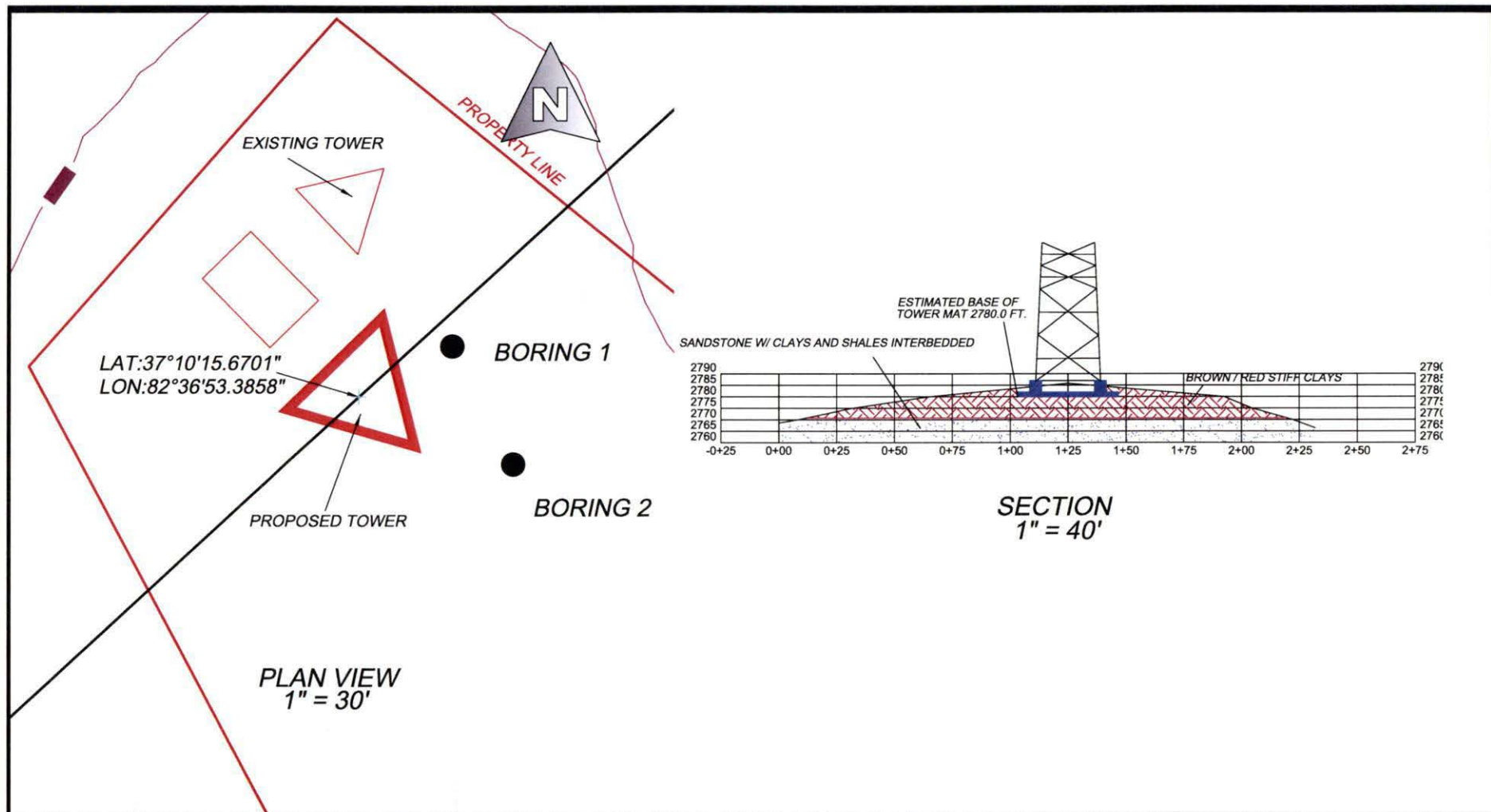
EAST KENTUCKY ENGINEERING, LLC.





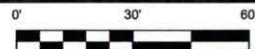
EAST KENTUCKY ENGINEERING, LLC.

| |
|---------------------------|
| APPENDIX D MAPS |
|---------------------------|



East Kentucky Engineering, LLC

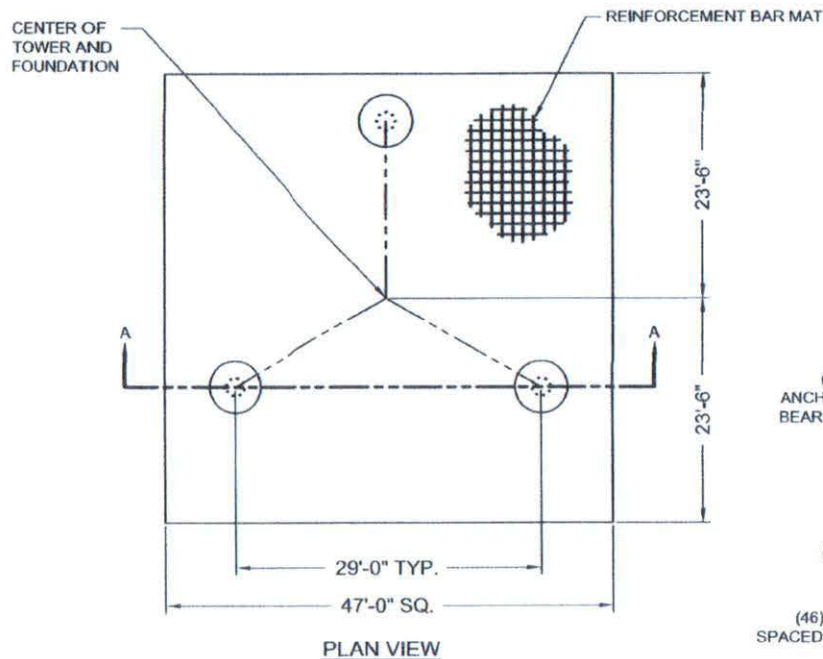
Hazard Location
230 Swartz
Hazard, KY 41701
(606) 551-1050
Email: rdsekyeng@outlook.com



| | |
|-----------------|------------------|
| Drawn by: RDS | Date: 12-03-2017 |
| Job #: 165-0042 | Scale: NOTED |
| File Location: | |

APPALACHIAN
WIRELESS
JENKINS TOWER
LETCHER COUNTY KENTUCKY

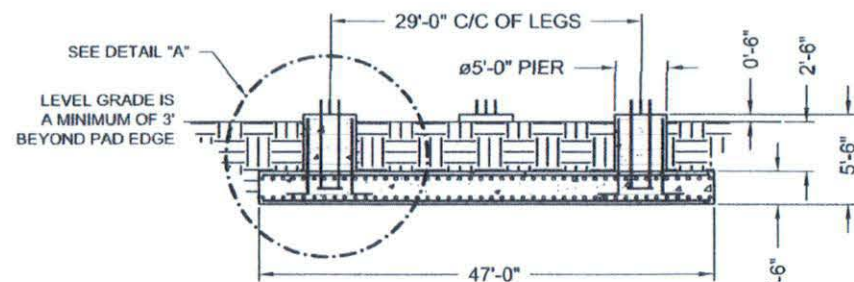
| | |
|----------------------------|-------------------|
| FILE NAME: FT071336-A - SD | SHEET A |
| DESIGN: FT071336r1 | |



TOTAL VOLUME OF CONCRETE = 211.1 YD³

FOUNDATION INSTALLATION/DESIGN NOTES:

1. THIS FOUNDATION IS DESIGNED TO MEET ALL STANDARDS SET FORTH BY ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ANSI/TIA/EIA 222-G: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. THIS FOUNDATION IS DESIGNED UTILIZING THE GEOTECHNICAL REPORT PERFORMED BY EAST KENTUCKY ENGINEERING, LLC.; DATED 11-10-2017; PROJECT #165-000-0049. THE FOUNDATION CONTRACTOR SHALL INSTALL THE FOUNDATIONS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
3. ALL WORK PERFORMED FROM THESE DRAWINGS SHOULD BE BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER FOUNDATION CONSTRUCTION.
4. ALL FOOTING EXCAVATIONS SHALL BE MANUALLY CLEANED PRIOR TO PLACING CONCRETE. COMPACT THE EXPOSED SOIL SURFACE AND ANY GRANULAR FILL UNDER THE FOUNDATION TO 80% OF THE MODIFIED PROCTOR DENSITY.
5. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AFTER 28 DAYS. COPIES OF THE CONCRETE CYLINDER TEST REPORTS SHALL BE SENT TO THE RESIDENT ENGINEER / INSPECTOR.
6. MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE 3". ALL REINFORCING BARS SHALL BE GRADE 60 REBAR (MIN YIELD = 60KSI).
7. FIELD BENDING OR WELDING OF REINFORCEMENT BARS IS NOT PERMITTED.
8. PROVIDE CHAMFERS AT ALL EXPOSED CORNERS OF CONCRETE.
9. BACKFILL NEAR AND AROUND THE FOUNDATIONS SHALL BE A WELL GRADED FILL MATERIAL PLACED IN 8" THICK LAYERS THAT HAS BEEN COMPACTED TO 90% OF THE MODIFIED PROCTOR DENSITY PER ASTM D1557.
10. SOME DETAIL HAS BEEN PURPOSELY OMITTED TO CLARIFY ILLUSTRATION.



SECTION A-A

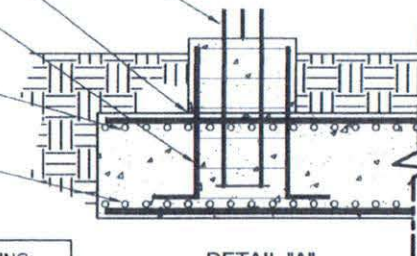
(10) ø1 3/4" X 6'-0" OVERALL LENGTH ANCHOR BOLTS (F1554-GR105) W/ 1" THK BEARING PLATE AT THE BOTTOM OF THE ANCHOR BOLT CLUSTER (5'-0" MIN. ANCHOR BOLT EMBEDMENT).

USE EPOXY BONDING AGENT WHEN POURED SEPERATELY

(32) #10 VERTICAL BARS w/ 6" HOOK WITH (4) #4 TIES EQUALLY SPACED

(46) #7 HORIZONTAL BARS X 46'-6" LONG SPACED 12" O.C. EACH WAY AT TOP OF MAT. (TOTAL=92)

(69) #9 HORIZONTAL BARS X 46'-6" LONG SPACED 8" O.C. EACH WAY AT BOTTOM OF MAT. (TOTAL=138)



DETAIL "A"

REINFORCEMENT BAR SPlicing:

1. ALL LAP SPLICES SHALL CONFORM TO ACI 318 REQUIREMENTS.
2. REFER TO CHART BELOW WHEN REINFORCEMENT BAR SPlicing IS NECESSARY.

| REINFORCING BAR SIZE | LAP SPLICE LENGTH |
|----------------------|-------------------|
| 3 | 15" |
| 4 | 17" |
| 5 | 21" |
| 6 | 26" |
| 7 | 30" |
| 8 | 36" |
| 9 | 46" |
| 10 | 58" |
| 11 | 71" |



Keith M. Eaton
4-18-2018

ALLSTATE TOWER

ALLSTATE TOWER INC.
P.O. BOX 25
HENDERSON, KY 42419
PHONE: (270) 830-8512
FAX: (270) 830-8475
WWW.PITG.COM

PROPRIETARY STATEMENT: THIS DRAWING IS THE PROPERTY OF ALLSTATE TOWER INC. IT IS NOT TO BE REPRODUCED OR COPIED IN ANYWAY WITHOUT PRIOR WRITTEN CONSENT OF ALLSTATE TOWER INC.

| REV# | DESCRIPTION | DATE | BY | UNLESS OTHERWISE NOTED DIMENSIONS ARE IN: INCHES | DESCRIPTION |
|------------|-------------|------|----|---|--|
| | | | | TOLERANCE BANDS: X +.30/-1.0 ANGLES +/- 2" XX +.30/-1.0 XXX +.10/-1.0 HOLES +.010/-1.0 | PAD & PIER FOUNDATION DESIGN APPALACHIAN WIRELESS "JENKINS" LETCHER CO., KY 300' SELF SUPPORT TOWER |
| SCALE: NTS | | | | DRAWN BY: JJT | FILE NAME: FT071336-A - B |
| | | | | DATE: 4/18/2018 | DESIGN: FT071336r1 |
| | | | | | SHEET B |



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

Aeronautical Study No.
2017-ASO-21200-OE

Issued Date: 11/28/2017

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 Jenkins |
| Location: | Jenkins, KY |
| Latitude: | 37-10-15.67N NAD 83 |
| Longitude: | 82-36-53.38W |
| Heights: | 2783 feet site elevation (SE) |
| | 310 feet above ground level (AGL) |
| | 3093 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 05/28/2019 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.

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 (202) 267-0105, or j.garver@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-21200-OE.

Signature Control No: 346809389-350018907

(DNE)

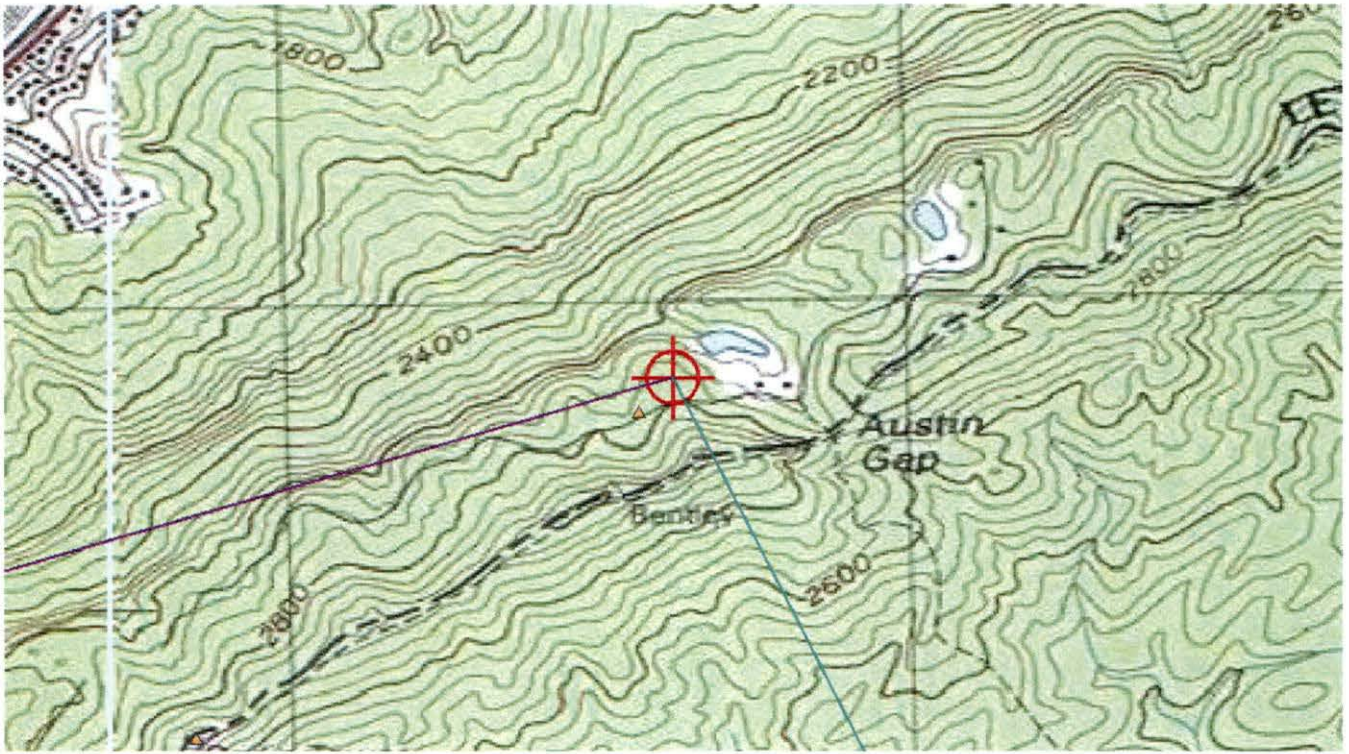
Jay Garver
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2017-ASO-21200-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 |





KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

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

December 28, 2017

APPROVAL OF APPLICATION

APPLICANT:

TV Services LLC c/o LNGS
TV Services LLC
8300 Greensboro Dr Suite 1200
Tysons, VA 22102

SUBJECT: AS-067-PBX-2017-119


STRUCTURE: Antenna Tower
LOCATION: Jenkins, KY
COORDINATES: 37° 10' 15.67" N / 82° 36' 53.38" W
HEIGHT: 310' AGL/3093' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 310' AGL/ 3093' AMSL Antenna Tower near Jenkins, KY 37° 10' 15.67" N / 82° 36' 53.38" 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



MATTHEW BEVIN
Governor

KENTUCKY AIRPORT ZONING COMMISSION

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

CONSTRUCTION/ALTERATION STATUS REPORT

December 28, 2017

AERONAUTICAL STUDY NUMBER: AS-067-PBX-2017-119

TV Services LLC c/o LINGS
TV Services LLC
8300 Greensboro Dr/Suite 1200
Tysons, VA 22102

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on December 28, 2017. 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: Jenkins, KY
COORDINATES: 37° 10' 15.67" N / 82° 36' 53.38" W
HEIGHT: 310' AGL / 3093' 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. _____


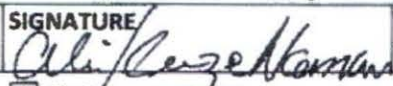
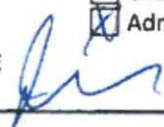
DATE _____

SIGNATURE/TITLE _____



An Equal Opportunity Employer M/F/D

2017-119

| | | | | |
|--|------------------------------------|---|-----------------------------|---|
|  | | KENTUCKY TRANSPORTATION CABINET | | TC 56-50 |
| | | KENTUCKY AIRPORT ZONING COMMISSION | | Rev. 07/2010 |
| | | | | Page 2 of 2 |
| APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE | | | | |
| APPLICANT (name) TV Services, LLC c/o LINGS | | PHONE 703-584-8667 | FAX 703-584-8692 | KY AERONAUTICAL STUDY # AS-067-PBX-2017-119 |
| 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 type="checkbox"/> New Construction <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Existing | | | WORK SCHEDULE | |
| DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days) | | | Start 11/15/17 End 11/20/17 | |
| 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 37°10'15.67" | | LONGITUDE 82°36'53.38" | | DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other |
| NEAREST KENTUCKY City Jenkins County Letcher ✓ | | NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Lonesome Pine | | |
| SITE ELEVATION (AMSL, feet) 2783 | | TOTAL STRUCTURE HEIGHT (AGL, feet) 310 | | CURRENT (FAA aeronautical study #) |
| OVERALL HEIGHT (site elevation plus total structure height, feet) 3093 | | | | PREVIOUS (FAA aeronautical study #) |
| DISTANCE (from nearest Kentucky public use or Military airport to structure) 13.5 mi | | | | PREVIOUS (KY aeronautical study #) |
| DIRECTION (from nearest Kentucky public use or Military airport to structure) SSE | | | | |
| 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. 0.9 miles east of Jenkins (Letcher), KY | | | | |
| DESCRIPTION OF PROPOSAL Replace the existing 180' structure with 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? 10/18/17 | | | | |
| 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  | DATE 10/18/17 | |
| COMMISSION ACTION | | <input type="checkbox"/> Chairperson, KAZC <input checked="" type="checkbox"/> Administrator, KAZC | | |
| <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved | | SIGNATURE  | | DATE 12-28-17 |

Driving Directions for Jenkins

From Jenkins take US 23 South to the Kentucky/Virginia State line. One hundred yards before entering Virginia turn left through a yellow gate. Drive 1.6 miles to the proposed tower site (signs will be posted).

Prepared By:

Daryl Bartley

606-791-0310

East Kentucky Network, LLC

dba Appalachian Wireless

Jenkins Replacement


Location:

Near 1739 Raven Rock
Jenkins, KY 41537

Coordinates:

N 37°10'15.67"
W 82°36'53.39"

Legend

 1/2 Mile Search Area

Proposed Jenkins Replacement Tower

Google Earth

© 2018 Google

2000 ft



DEED

This Deed of Conveyance, made and entered into this _____ day of _____, 1996 by and between MARY EVERSOLE, widow, a resident of P.O. Box 28, Jenkins, Kentucky 41537; and JOE E. EVERSOLE, and his wife, JOANNE EVERSOLE, residents of P.O. Box 28, Jenkins, Kentucky 41537, parties of the first part (hereinafter "Grantors"), and MOUNTAINEER CELLULAR GENERAL PARTNERSHIP, a partnership having mailing address of P.O. Box 1148, Hindman, Kentucky 41822, party of the second part (hereinafter "Grantee"),

WITNESSETH:

That said Grantors, for and in consideration of the sum of Ten Thousand Dollars (\$10,000.00), cash in hand paid, the receipt and adequacy of which is hereby acknowledged, have bargained and sold and by these presents do hereby bargain, sell, grant and convey unto Grantee, its successors and assigns forever, a tract of land lying and being on the waters of Elkhorn Creek in Letcher County, Kentucky, and more particularly described as follows:

Beginning on a #4 rebar on the right-of-way of a 16 feet wide access road, and a corner to Mary Eversole, said point being 1.5 miles northeast of the intersection of said road and State Route 23; thence leaving the right-of-way and down the side of a point with said Eversole NW 20 08 17, 156.97 feet to a #4 rebar at the base of a two inch dogwood; thence NE 49 36 02, 95.56 feet to a #4 rebar at the base of a twenty-two inch black oak and the center of the point; thence SE 43 05 27, 100.91 feet to a #4 rebar at the base of a ten inch cucumber; thence SE 00 54 12, 123.70 feet to a #4 rebar and the access road right-of-way; thence with said right-of-way NW 52 22 34, 27.43 feet to a power pole (#382-227); thence SW 67 06 13, 73.70 feet to the beginning, containing .45 acres.



SOURCE OF TITLE: Being a part of the same property conveyed to Joe Eversole by deed from Jesse Bates, et ux, dated August 16, 1967 and recorded at Deed Book 180, page

146 in the Letcher County Clerk's Office. Grantors inherited the property upon the death of Joe Eversole as evidenced by the Affidavit of Descent recorded at Deed Book 246, page 194 in the Letcher County Clerk's Office.

RIGHT OF WAY AND EASEMENT

For the consideration paid herein, Grantors further grant and convey to Grantee, its successors and assigns, a permanent right of way and easement across Grantors' adjacent properties for purposes of (i) ingress to and egress from the above-described property along an existing roadway located on Grantors' property, and (ii) placement of utility lines and poles on Grantors' property. This right of way and easement shall be "appurtenant" to the above described .45-acre tract. The right of way and easement are portions of the property described in the deed of conveyance to Joe Eversole recorded at Deed Book 180, page 146 in the Letcher County Clerk's Office.

TO HAVE AND TO HOLD the same, together with the appurtenances thereunto belonging unto Grantee, its successors and assigns forever, with covenants of General Warranty.

IN TESTIMONY WHEREOF, witness the signatures of Grantors on this the day and year first above written.

GRANTORS:

Mary Eversole
Mary Eversole
Joe E. Eversole
Joe E. Eversole
Joanne Eversole
Joanne Eversole

CERTIFICATE OF PARTIES

We, the undersigned Grantors and Grantee, do hereby certify, pursuant to KRS Chapter 382, that the above stated consideration in the amount of \$10,000.00 is the true, correct and full consideration paid for the property herein conveyed. We further certify our understanding that falsification of the stated consideration or sale price of the property is a Class D felony, subject to one to five years imprisonment and fines up to \$10,000.00.

GRANTORS:

Mary Eversole
Mary Eversole

Joe E. Eversole
Joe E. Eversole

Joanne Eversole

GRANTEE:

**MOUNTAINEER CELLULAR
GENERAL PARTNERSHIP**

BY: William K. Grigsby
William K. Grigsby,
Managing Partner

STATE OF KENTUCKY)
) SS
COUNTY OF LETCHER)

I hereby certify that the foregoing deed was produced to me and duly acknowledged before me by Mary Eversole, party thereto, to be her act and deed, and that the foregoing Certificate of Parties was duly subscribed and sworn to before me by Mary Eversole on this the 9th day of Feb, 1996.

Islen Polley
Notary Public

My commission expires 6-20-97.

STATE OF KENTUCKY)
)SS
COUNTY OF LETCHER)

I hereby certify that the foregoing deed was produced to me and duly acknowledged before me by Joe E. Eversole and his wife, Joanne Eversole, parties thereto, to be their act and deed, and that the foregoing Certificate of Parties was duly subscribed and sworn to before me by Joe E. Eversole and his wife, Joanne Eversole, on this the 27 day of Feb, 1996.

Glen Folley
Notary Public

My commission expires 6-20-97.

STATE OF KENTUCKY)
)SS
COUNTY OF Bullitt)

I hereby certify that the foregoing Certificate of Parties was duly subscribed and sworn to before me by William K. Grigsby, managing partner of Mountaineer Cellular General Partnership, on this the 27th day of February, 1996.

Glen Folley
Notary Public

My commission expires 6-20-97.

STATE OF KENTUCKY)

) SS

COUNTY OF LETCHER)

I, Charlie Wright, Clerk of Letcher County, do hereby certify that the foregoing instrument was on the 15th day of March, 1996, lodged in my office for record and that it, the foregoing, and this my certificate have been duly recorded in my said office in Deed Book 324, page 554.

Witness my hand on this the 18th day of March,
1996.

CHARLIE WRIGHT, CLERK

By: Lucille Bates Pelley D.C.

This instrument prepared by:

Robin J. Collins
ROBIN JOHNSON COLLINS
ATTORNEY AT LAW
P.O. BOX 1006
HINDMAN, KY 41822
(606)785-0933

A:4123MC

ATT:








PVA Listing
027-00-00-032.00
Gary N. & Cheryl Royalty
311 Peacock Road
Paris, KY 40361
D.B. 359 P. 331

Adjoining Property Owner
Pike-Letcher Land Co.
P.O. Box 39
Nevisdale, KY 40769
D.B. 301 P. 555

PVA Listing
Joe Eddie & Joe Ann Eversole
P.O. Box 28
Jenkins, KY 41637
D.B. 180 P. 146

1/2" re-bar set with a plastic cap
Stamped Summit Engineering, L.S. #2661
Unless otherwise noted.

Ø **Utility Pole**

 **Boundary Line**
 **Property Line from PVA Office**
 **Electric & Phone Line**
 **Chain Link Fence**
 **Underground Electric & Phone**

Electric Power
American Electric Power
Perry Farmer, PE
3249 North Mayo Trail
Pikeville, KY 41501
(606) 437-3812

Proposed Tower Location:
LAT: 37°10'15.6701"
LON: 82°36'53.3858"
N: 3,601,196.47
E: 5,834,577.02
EL: 2,783.40+/-

The tract of land shown hereon is the same tract of land conveyed to Mountaineer Cellular General Partnership by Mary Eversole, widower, Joe E. Eversole, and his wife Joane Eversole by Deed of Conveyance dated February 27th, 1986 which is recorded in Deed Book 324 Page 554 which is in the records of the Letcher County Court Clerk's office.

Property lines shown hereon are based on a retracement survey of the Mountainmeier Cellular General Partnership property and information from the Letcher County P.V.A. Office.

Access from the intersection of U.S. Route 23 and Kentucky State Route 119, near Payne Gap, continue South on U.S. Route 23 South for 1.43 miles to the intersection of U.S. 23 and the intersection of County Road 1891, turn left on County Road 1891, continue on County Road 1891 for 1.68 miles and tower site is on the left.

Topography of the area surrounding the tower site is forest covered mountainist terrain with slopes ranging from $\pm 35\%$ - $\pm 60\%$. Land use within the 500' radius is undisturbed hillside property.

Contours shown hereon were taken from Lidar Mapping.
Contour interval = 5'

Summit Engineering, Inc. makes no warranty as to the title or ownership of property.

Adjoining land owners listed are based on Property Valuation Administration (PVA) records issued by a representative from Letcher County, to be in compliance with all statutory and regulatory requirements before the Kentucky Public Service Commission and for telecommunication.

Proposed tower site IS NOT in the 100 year flood hazard area and has a average elevation of 2,783'. Letcher County Firm Map 21133C0161C Map Effective: 3/18/2008

The utility lines shown hereon represent the utilities as they were observed in the field during the survey. The knees and structures have not been marked therefor, the exact locations of all utilities may not be shown.

File Name: Jenkins Property Map 200.dwg

I hereby certify that the information depicted by this map is correct to the best of my knowledge and is in accordance with the record data as found in the office of the Property Valuation Administrator of Letcher County, Kentucky.

Steven E. Haywood, PLS #2661

Date _____

East Kentucky Network
d/b/a Appalachian Wireless
101 Technology Trail, Ivel, KY 41642

Jenkins Tower Site
Property Owner Map
Located in Jenkins Letcher County, Kentucky

**SUMMIT
ENGINEERING
INC.**



265 Homblay BLVD
PO Box 3007
Pikeville, KY 41502
606-432-1447

Pikeville, KY
Lexington, KY
S. Charleston, WV

The tract of land shown hereon lies within the Corporate Boundary of the City of Jenkins, Pike County, Kentucky and may be subject to code and zoning regulations.

0' 200' 400' 600'

1" = 200'

DATE: 04/27/2018

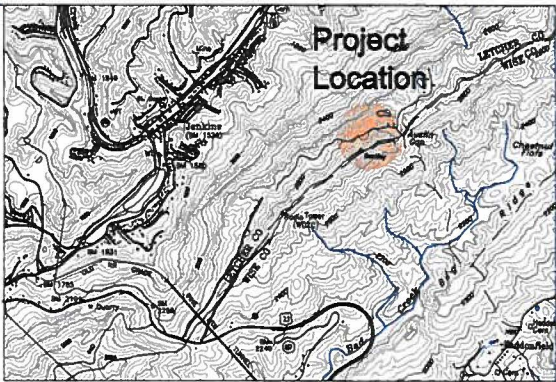
FILENAME:
See Above

SCALE: 1"=200'

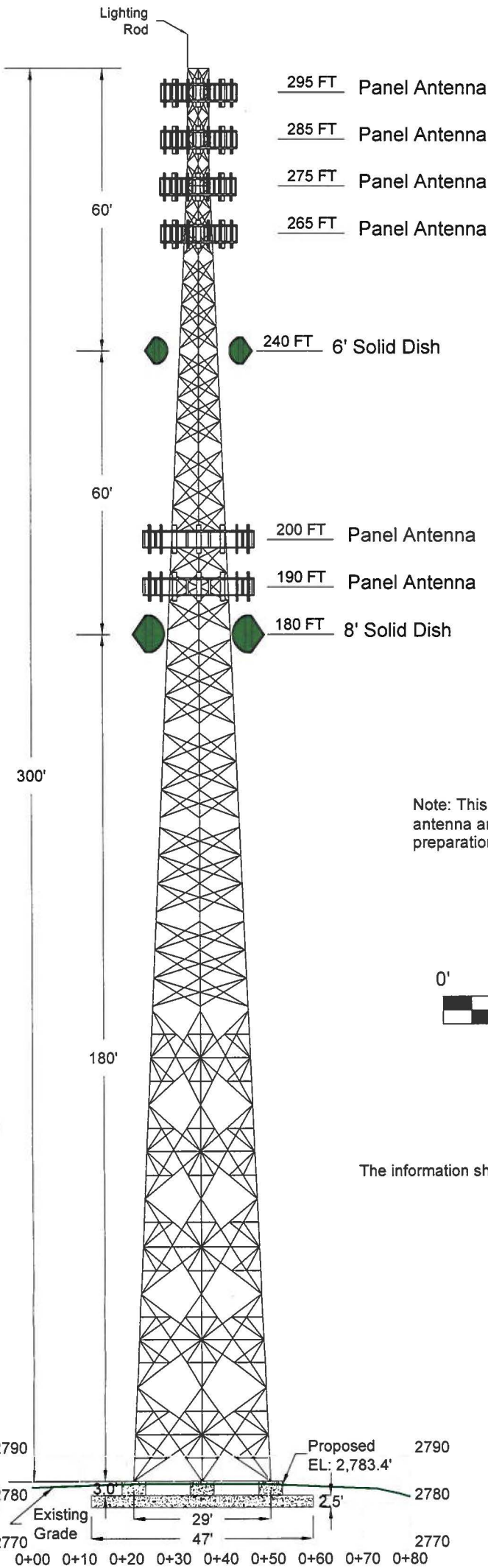
DISK NO.

DRAWN BY: SEH/DLM

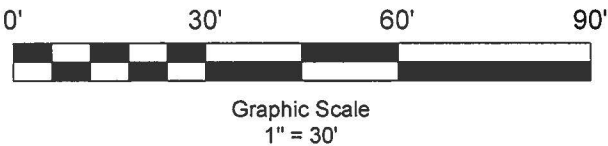
JENKINS FORK TOWER
VERTICAL PROFILE SKETCH
APPALACHIAN WIRELESS



Vicinity Map
Not to Scale
Jenkins East KY 7 1/2"
Quadrangle Map

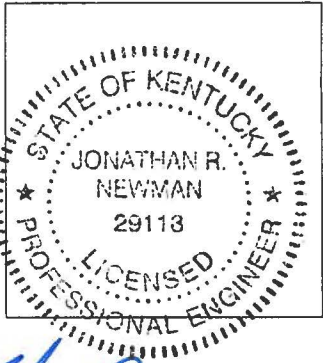


Note: This is a vertical sketch of the tower indicating the proposed antenna and dish elevations. No design criteria was considered in the preparations of this drawing.




The information shown hereon is correct to the best of my knowledge

Jonathan Newman, PE #29118
265 Hambley Blvd.
Pikeville, KY 41501
606-432-1447



Jonathan Newman 4-24-18
Jonathan Newman PE #29118 Date

| | | | |
|---------------|---------------|--|--|
| DATE: 4/24/18 | SCALE: 1"=30' | East Kentucky Network D/B/A/ Appalachian Wireless 101 Technology Trail, Ivel, KY 41642 Vertical Profile Sketch Jenkins Tower | SUMMIT ENGINEERING, INC. 265 HAMBLEY BLVD. PIKEVILLE, KY. 41501 (606) 432-1447  LEXINGTON, KY PIKEVILLE, KY SOUTH CHARLESTON, WV |
| DRAWN BY: DLM | | | |

File Name: Z:\East Ky Network\As Built Sites\Jenkins\Vertical Tower Drawing\Jenkins Tower Drawing.dwg

| 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 | Cellco 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 |