

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

In the matter of:

THE APPLICATION OF EAST KENTUCKY NETWORK, )  
LLC FOR THE ISSUANCE OF A CERTIFICATE OF )  
PUBLIC CONVENIENCE AND NECESSITY TO ) CASE NO. 2020-00051  
CONSTRUCT A TOWER IN MAGOFFIN COUNTY, )  
KENTUCKY. )

East Kentucky Network, LLC d/b/a Appalachian Wireless, was granted authorization to provide cellular service in the KY-9 Cellular Market Area (CMA451) by the Federal Communications Commission (FCC). The FCC license is included as Exhibit 1. East Kentucky Network, LLC merger documents were filed with the Commission on February 2, 2001 in Case No. 2001-022. East Kentucky Network, LLC is a Kentucky Limited Liability Company that was organized on June 16, 1998. East Kentucky Network, LLC is in good standing with the state of Kentucky.

In an effort to improve service in Magoffin 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 400 foot guyed tower on a tract of land located near 4371 East Mountain Parkway, Salyersville, Magoffin County, Kentucky (37°43'09.31"N 82°58'42.09"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 Magoffin County by providing an interconnection between East Kentucky Network, LLC other sites thereby forming a cohesive network.

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

Pursuant to 807 KAR 5:063 Section 1(1)(l), Section 1(m) and Section 2, all affected property owners according to the Property Valuation Administrator's record who own property within 500 feet of the proposed Tower or 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.

Magoffin County has no formal local planning unit. In absence of this unit, the Magoffin County Judge Executive's office was notified by certified mail, return receipt requested of East Kentucky Network, LLC's proposal and informed of their right to intervene. They were 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 Salyersville Independent, September 3, 2020, edition. Enclosed is a copy of that notice in Exhibit 3. The Salyersville Independent is the newspaper with the largest circulation in Magoffin County.

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

A copy of the tower design information is enclosed as Exhibit 5. The proposed tower has been designed by engineers at World Tower 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. Their qualifications are included as Exhibit 13.

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 August 24, 2020, 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 Lease Agreement 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 400-foot 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 James W. Caudill, Kentucky registered professional engineer.

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

**[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]**

**Mailing Address:**

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

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

The foregoing document was prepared by Cindy McCarty, Staff Attorney for East Kentucky Network, LLC d/b/a Appalachian Wireless. All related questions or correspondence concerning this filing should be mailed to East Kentucky Network, LLC d/b/a/ Appalachian Wireless, 101 Technology Trail, Ivel, KY 41642.

SUBMITTED BY: *Lynn Haney* DATE: *8/28/2020*  
Lynn Haney, Regulatory Compliance Director

APPROVED BY: *W.A. Gillum* DATE: *8/28/2020*  
W.A. Gillum, General Manager

ATTORNEY: *Krystal Branham* DATE: *8/28/2020*  
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**

1	FCC License
2	Copies of Cell Site Notice to Land Owners
3	Notifications of County Judge Executive and Newspaper
4	Universal Soil Bearing Analysis
5	Tower Design
6	FAA and KAZC Determination
7	Driving Directions from County Court House and Map to Suitable Scale
8	Lease Agreement 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
13	Qualifications
14	
15	

# Exhibit 1



ULS License

# Cellular License - KNKN880 - East Kentucky Network, LLC d/b/a Appalachian Wireless

Call Sign	KNKN880	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

**Market**

Market	CMA451 - Kentucky 9 - Elliott	Channel Block	B
Submarket	0	Phase	2

**Dates**

Grant	08/30/2011	Expiration	10/01/2021
Effective	09/04/2014	Cancellation	

**Five Year Buildout Date**

10/23/1996

**Control Points**

**1** U.S. 23, HAROLD, KY

**Licensee**

FRN	0001786607	Type	Limited Liability Company
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**Licensee**

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

**Contact**

Lukas, Nace, Gutierrez & Sachs, LLP	P:(703)584-8665
Pamela L Gist Esq	F:(703)584-8696
8300 Greensboro Drive	E:pgist@fcclaw.com
McLean, VA 22102	

**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**

**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

Walter Collins  
Brady, Astor Estate  
9901 Windfall Trace  
Louisville, KY 40223

Meredith Holbrook  
180 Adams Street  
Salyersville, KY 41465

Mary L. and Hershel Spradlin  
Box 213  
Stanville, KY 41659

Lorena Johnstone Estate  
C/O William Johnstone  
P.O. Box 112  
Betsy Layne, KY 41605

Magoffin County Mobile Homes  
Et. Al.  
106 Adams Street  
Salyersville, KY 41465

Paul D. Gearheart and  
Susan Gearheart Schmoltd  
P.O. Box 401  
Harold, KY 41653

Emma and Callie Risner  
5530 East Mountain Parkway  
Salyersville, KY 41465

Wampum Hardware Co.  
636 Paden Road  
New Galilee, PA 16141

Meredith Holbrook  
180 Adams Street  
Salyersville, KY 41465



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Wampum Hardware Co.  
636 Paden Road  
New Galilee, PA 16141

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

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 Magoffin County. The facility will include a 400-foot guyed tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 4371 East Mountain Parkway, Salyersville, Magoffin 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. 2020-00051 in your correspondence.

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

Sincerely,

A handwritten signature in blue ink that reads "Lynn Haney".

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Emma and Callie Risner  
5530 East Mountain Parkway  
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

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Sincerely,

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Paul D. Gearheart and  
Susan Gearheart Schmoldt  
P.O. Box 401  
Harold, KY 41653

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Sincerely,

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1





VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Magoffin County Mobile Homes  
Et. Al.  
106 Adams Street  
Salyersville, KY 41465

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Sincerely,

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Lorena Johnstone Estate  
C/O William Johnstone  
P.O. Box 112  
Betsy Layne, KY 41605

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

Sincerely,

A handwritten signature in blue ink that reads "Lynn Haney".

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Mary L. and Hershel Spradlin  
Box 213  
Stanville, KY 41659

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

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Sincerely,



Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Meredith Holbrook  
180 Adams Street  
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

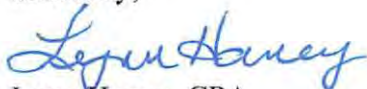
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Sincerely,



Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

August 28, 2020

Walter Collins  
Brady, Astor Estate  
9901 Windfall Trace  
Louisville, KY 40223

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

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Sincerely,

A handwritten signature in blue ink that reads "Lynn Haney".

Lynn Haney, CPA  
Regulatory Compliance Director  
Enclosure 1

# Salyersville Replacement

Location:

4371 East Mountain Parkway  
Salyersville, KY 41465

Coordinates:

37° 43' 9.24"  
82° 58' 42.15"



Google Earth

© 2020 Google

4000 ft

# Exhibit 3

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

EAST KENTUCKY  
NETWORK



**To:** Salyersville Independent  
Attn: Classifieds

**From:** Raina Helton  
Regulatory Compliance Assistant

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**Email:** jo@salyersvilleindependent.com  
**Date:** August 26, 2020

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

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**Please place the following Public Notice Advertisement in the Salyersville Independent to be ran on September 3,2020.**

**PUBLIC NOTICE:**

RE: Public Service Commission of Kentucky (CASE NO. 2020-00051)

Public Notice is hereby given that East Kentucky Network, LLC, dba Appalachian Wireless has applied to the Kentucky Public Service Commission to construct a cellular telecommunications tower on a tract of land located at 4371 East Mountain Parkway, Salyersville, Magoffin County, Kentucky. The proposed tower will be a 400 foot guyed 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. 2020-00051.

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, CKP  
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.





VIA: U.S. CERTIFIED MAIL

August 28, 2020

Matthew C. Wireman  
P. O. Box 430  
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2020-00051)

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

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Regulatory Compliance Director  
Enclosure

# Salyersville Replacement

Location:

4371 East Mountain Parkway

Salyersville, KY 41465

Coordinates:

37° 43' 9.24"

82° 58' 42.15"



Google Earth

© 2020 Google

4000 ft

# Exhibit 4

230 Swartz Drive • Hazard • Kentucky • 41701

Phone (606) 551-1050



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**EAST KENTUCKY ENGINEERING, LLC.**

**APPALACHIAN WIRELESS  
Geotechnical Investigation on the  
Salyersville Tower Site  
Magoffin County, Kentucky  
EKYENG Project No. 165-000-0097**

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, February 16<sup>th</sup>, 2020



# EAST KENTUCKY ENGINEERING, LLC.

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## **EXECUTIVE SUMMARY**

### **1.0 INTRODUCTION**

### **2.0 PROJECT DESCRIPTION**

### **3.0 SITE DESCRIPTION & HISTORICAL MINING**

#### 3.1 GENERAL INFORMATION

#### 3.2 SURFACE MINING

#### 3.3 UNDERGROUND MINING

#### 3.4 FLOOD HAZARD

### **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 ANCHORS

#### 5.4 BURIED UTILITIES

### **6.0 WARRANTY**

#### 6.1 SUBSURFACE EXPLORATION

#### 6.2 LABORATORY AND FIELD TEST

#### 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 TRENCHING**

### **IV – GENERAL CONCRETE SPECIFICATIONS**

### **V – DRILLED PIER INSTALLATION**

## **APPENDIX A – BORING LOGS**

## **APPENDIX B – CORE PHOTOGRAPHS**

## **APPENDIX C – SEISMIC DATA**

## **APPENDIX D – PHOTOGRAPHS**

## **APPENDIX E – MAPS**



## EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Salyersville Tower Site, located in Magoffin County, Kentucky. This site is readily accessible. A location map is shown in Figure 1 of this report. Four (4) borings were advanced to a maximum depth of 25.0 ft. The following geotechnical considerations were identified:

- Borings utilized for this study encountered thin soils with broken rock and clays to a depth of 7.5 ft., then a band of coal from 7.5 to 8.2 ft., then sandstone to a depth of 25.0 ft.
- The estimated maximum base elevation of tower mat foundation is 1253 ft which is below the existing small coal band.
- This site is on a forested knob, next to an existing tower.
- **The allowable bearing capacities is estimated at 5 tsf on this shale unit from 1253' to 1247'.**
- **Additional recommendations for the guy anchor locations are included in section 5 of this report.**
- The 2015 International Building Code seismic site classification for this site is "A".
- If during the foundation design it becomes necessary to lower or raise the footer, alternate design recommendations can be provided by EKYENG.
- 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. Stanton Neece of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on the Salyersville Property, in Magoffin County, Kentucky. A site location map is shown in Figure No. 1.

Four (4) borings were advanced to a maximum depth of 25.0 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 and Appendix D. 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 12.5 ft. X 12.5 ft. with an estimated base of the tower footer elevation at 1253.0 ft. Based on information provided, we estimate the structural loads will be like 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.

## 3.0 SITE DESCRIPTION & HISTORICAL MINING



Drawn: RDS 2/14/2020  
 Job:165-097 Scale: 1"=1000

**APPALACHIAN WIRELESS**  
 EXCERPT FROM USGS QUAD  
 LOCATION MAP  
 SALYERSVILLE TOWER SITE  
 FIGURE NO 1

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





### **3.1 GENERAL INFORMATION**

The site location is on a forested knob, next to an existing tower in Magoffin County, Kentucky. The current surface elevation is approximately 1258.0ft. Research on the historical mining was conducted by obtaining previous mine license maps from the “Kentucky Mine Mapping Information System” (KMMIS).

### **3.2 SURFACE MINING**

No issues from surface mining activities are expected at this site location.

### **3.3 UNDERGROUND MINING**

No underground mines were found within the vicinity of this site. Therefore, no subsidence issues are anticipated.

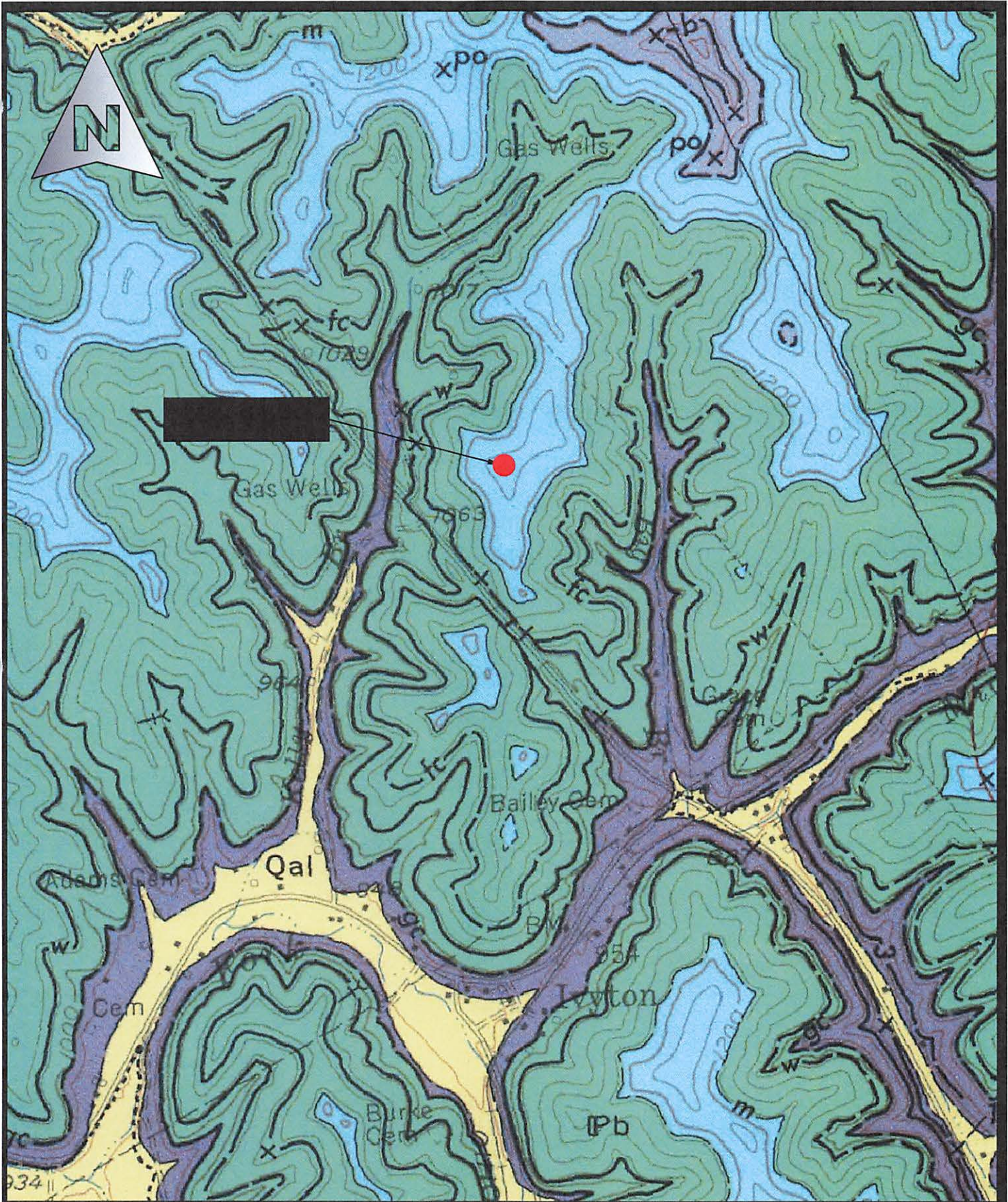
### **3.4 FLOOD HAZARD**

A potential flood determination was conducted by EKYENG. For this determination, the FEMA Flood Map Service was reviewed for this location. The flood map for the selected area is number **21153CO230E-210158**. The flood zone for this area is Zone X and is an area of minimal flood hazard. A FIRMette map is included in Appendix E of this report.

## **4.0 FIELD EXPLORATION**

### **4.1 SITE INFORMATION**

The proposed site is located on a forested knob, next to an existing tower in Magoffin County, Kentucky. The site lies within the Ivyton Quadrangle. The site is readily accessible by conventional exploratory equipment. An estimated pad location was determined based on the information provided. Foundation dimensions were estimated to be a 12.5 ft. X 12.5 ft. footer for this report.



Drawn: RDS	2/14/2020
Job:165-097	Scale: 1"=1000'

**APPALACHIAN WIRELESS**  
**EXCERPT FROM GEOLOGIC QUAD**  
**LOCATION MAP**  
**SALYERSVILLE TOWER SITE**  
**FIGURE NO 2**

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



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### 4.2 BORING DATA

Four (4) borings were made in the relative positions shown on the Site Map in Appendix D. The boring logs and resulting data are included in Appendix A. 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 2  
RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

SAMPLE NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
B1 S-1	0.0 – 1.5	17.4%
B1 S-2	2.0 – 3.5	11.2%
B1 S-3	4.0 – 5.5	20.9%
B1 S-4	6.5 – 7.2	COAL
B2 S-1	0.0 – 1.5	14.0%
B2 S-2	2.0 – 3.5	20.9%
B2 S-3	4.0 – 5.5	14.0%
B3 S-1	0.0 – 0.4	16.7%
B4 S-1	0.0 – 1.5	13.7%



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B4 S-2	2.0 – 3.5	17.1%
B4 S-3	4.5 – 5.6	13.3%

The position at which the core was taken is indicated on the boring logs and shown on the sitemap in Appendix D. The corresponding blow counts are shown in Table No. 3.

TABLE NO. 3  
STANDARD PENETRATIONS

SAMPLE NO.	DEPTH INCREMENT	BLOW COUNT / RQD *	DESCRIPTION
B-1	0.0-1.5	2-3-4	Topsoil, Br. Clay, Rock Fragments
B-1	2.0-3.5	5-7-11	Brown Clay, Rock Fragments
B-1	4.0-5.5	7-15-10	Weathered Shale
B-1	6.5-8.2	14-35-50/2	Coal
B-1	9.0-16.0	4.0*	Gray Sandy Shale
B-1	16.0-25.0	5.5*	Gray, Brown Sandstone
B-2	0.0-1.5	1-3-3	Topsoil, Clay
B-2	2.0-3.5	2-3-4	Clay
B-2	4.0-5.5	7-12-16	Weathered Shale
B-2	6.5-6.7	50/2	Weathered Shale
B-2	9.0-15.0	0*	Weathered Shale
B-2	15.0-20.0	1.7*	Brown Shale
B-3	0.0-0.4	50/4	Topsoil
B-3	2.0-2.1	50/1	Weathered Sandstone
B-3	4.0-14.0	2.0*	Gray Shale
B-3	14.0-20.0	1.9*	Gray Shale, Sandstone
B-4	0.0-1.5	2-2-3	Topsoil, Brown Clay



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SAMPLE NO.	DEPTH INCREMENT	BLOW COUNT / RQD *	DESCRIPTION
B-4	2.0-3.5	4-6-15	Brown Clay
B-4	4.5-5.6	15-26-50/1	Weathered Shale
B-4	6.0-16.0	2.5*	Weathered Shale
B-4	16.0-20.0	2.0*	Weathered Shale

The borings encountered clays and broken rock to a depth of 4.1 ft. The four 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 are between 4.0 ft and 25.0 ft in depth. The position at which the core was taken is indicated on the boring logs and shown on the boring location map in Appendix D.

### 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. Therefore, groundwater should not be a concern in this area. During the site investigation, no groundwater resources were observed.

### 4.4 SEISMIC SITE CLASSIFICATION

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class A" per the 2015 Kentucky Building Code. In addition, an  $S_{Ds}$  coefficient of 0.097 g was calculated, and an  $S_{D1}$  coefficient of 0.044 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 guyed 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

It is expected that shallow foundations will be used at the base of the proposed tower. It should be noted that the material type and bearing capacity can vary significantly due to the inconsistency of the underlying material. Based on the laboratory and field testing, visual inspection of the materials and practical experience we have estimated that the **allowable bearing capacity at this site will be 5 tsf within the shale unit immediately below a small coal seam from an elevation of 1253 ft to 1247 ft.**

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 (k30) of 100 lbs./cu. in. can be used for design of the slabs.

Support structure for this tower can be placed as needed. It is recommended that test pits are examined to ensure that any of these structures are on the competent



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

### **5.3 ANCHORS**

There are currently three anchors associated with this tower. The existing depths and dimensions are unknown. Anchor blocks used to restrain the tower are designed to resist both vertical (uplift) and horizontal components of tensile forces in the guy wires. Uplift forces are resisted by the dead weight of the anchor block and friction between the sides of the anchor block and surrounding soils, provided the sides of the block were cast in direct contact with undisturbed natural materials or properly compacted and approved fill.

The horizontal component can be resisted by the passive pressure of soil acting on the vertical side of the block facing the tower and friction between the block and the underlying soil. Allowable coefficient of friction values of 0.2 and 0.4 times the effective normal force (in excess of uplift force) transferred by the block to the



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subgrade can be used to determine allowable frictional sliding resistance for the underlying natural soils and highly weathered sandstone, respectively.

The following table presents the allowable design criteria for the tower's anchor blocks. In the table, the allowable side friction and lateral pressure values have safety factors of approximately 2. Design parameters shown in the table are applicable to the natural, undisturbed soils and engineered backfill, but should not be applied to disturbed materials or newly placed fill materials. Engineered backfill is considered on-site soils that are placed in standard Proctor dry density (ASTM D-698). The backfill should be placed at a workable percent compaction. Because soil strength varies due to frost action and moisture variation, and the proximity to rock, we recommend neglecting passive and frictional resistances for the soils within three (4) feet of the ground surface.

TABLE NO. 4

Guy No. (Depth) FT.	Eff Unit Weight (PSF)	Allowable Side Friction		Allowable Passive Pressure		Estimated Shear Strength
		Initial Value	Increase Per Foot of Depth	Initial Value	Increase Per Foot of Depth	Angle of Friction (Degrees)
<b>B2</b>						
0.0-4.1	120	30	---	---	---	---
4.1-17.7	140	1000	---	3500	120	22
17.7-20	140	1500	---	12000	120	27
<b>B3</b>						
0.0-4.0	120	30	---	---	---	---
2.1-14.0	140	1000	50	2500	120	22
14.0-20.0	150	2000	100	12000	150	30
<b>B3</b>						
0.0-4.0	120	30	---	---	---	---
4.0-15.0	140	1000	50	2500	120	22
15.0-20.0	140	1500	100	12,000	120	27





## 5.4 BURIED UTILITIES

Excavations for buried utility pipelines should follow the guidelines set forth in this report. Depending on the pipeline material, a minimum thickness of at least 0.5 feet of select fine-grained granular bedding material should be used beneath all below-grade pipes, with a minimum cover thickness of at least 3 feet to afford an "arching" effect and reduce stresses on the pipe. The cover thickness may be reduced if the external loading condition on the pipe is relatively light or if the pipe is designed to withstand the external loading condition. It is not recommended that "pea-gravel" or other "open-work" aggregates be used for trench backfill since these materials are nearly impossible to compact and tend to pond water within their interstices.

## 6.0 WARRANTY

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

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

## 6.1 SUBSURFACE EXPLORATION

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



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

### **6.2 LABORATORY AND FIELD TESTS**

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

### **6.3 ANALYSIS AND RECOMMENDATIONS**

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

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



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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 report or on the boring logs regarding odors, staining of soils or other unusual items or conditions observed are strictly for the information of our client.

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



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

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



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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



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provided. In no case shall such objectionable material be allowed in or under the fill unless specifically authorized in writing.

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

### **4.0 FORMATION OF FILL AREAS**

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

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





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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.

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.



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## 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.



## EAST KENTUCKY ENGINEERING, LLC.

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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 lifeline 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 atmospheres or other hazardous conditions. The "competent person" must



## EAST KENTUCKY ENGINEERING, LLC.

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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.



# EAST KENTUCKY ENGINEERING, LLC.

## 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.



## EAST KENTUCKY ENGINEERING, LLC.

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.

### 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.



## EAST KENTUCKY ENGINEERING, LLC.

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 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.



## EAST KENTUCKY ENGINEERING, LLC.

- 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.
- 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





## EAST KENTUCKY ENGINEERING, LLC.

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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.

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APPENDIX A BORING LOGS

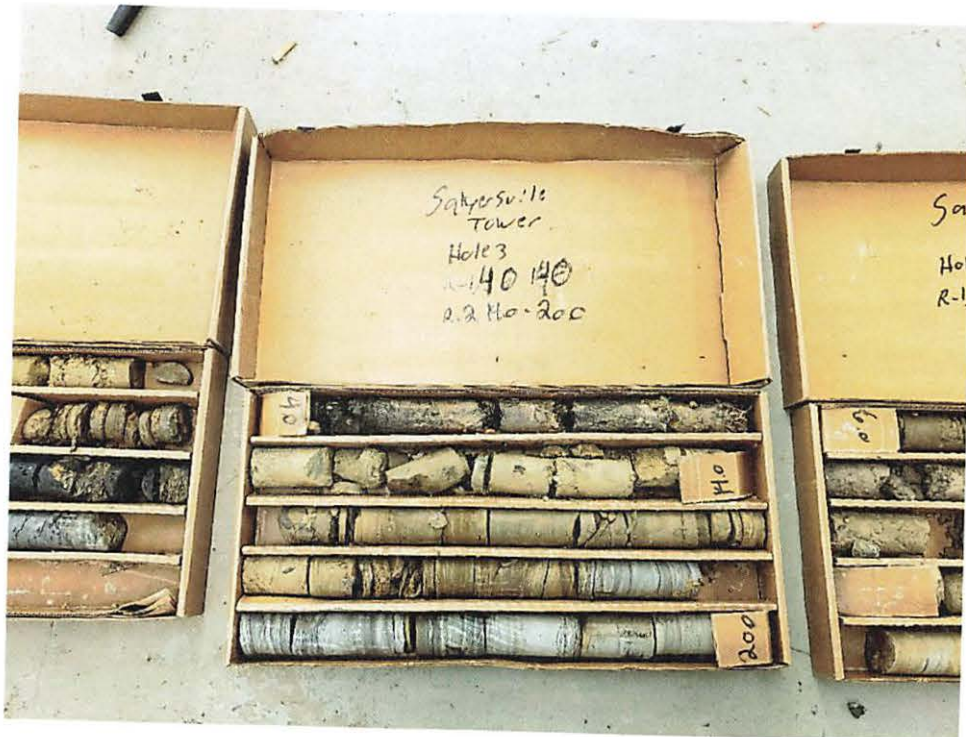


APPENDIX B CORE PHOTOGRAPHS





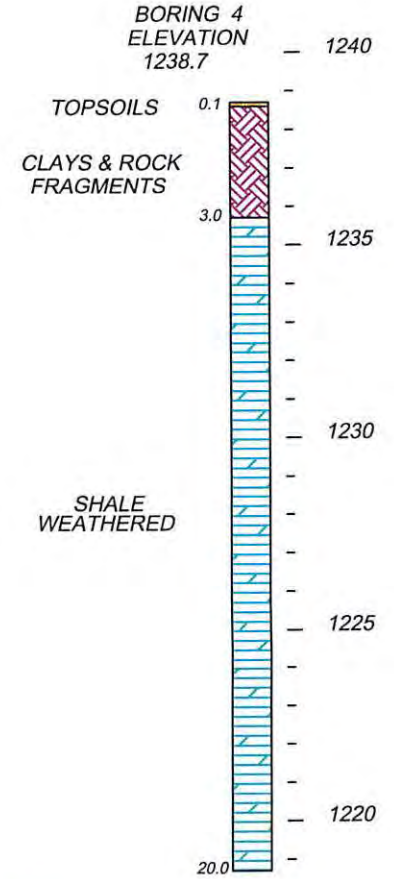
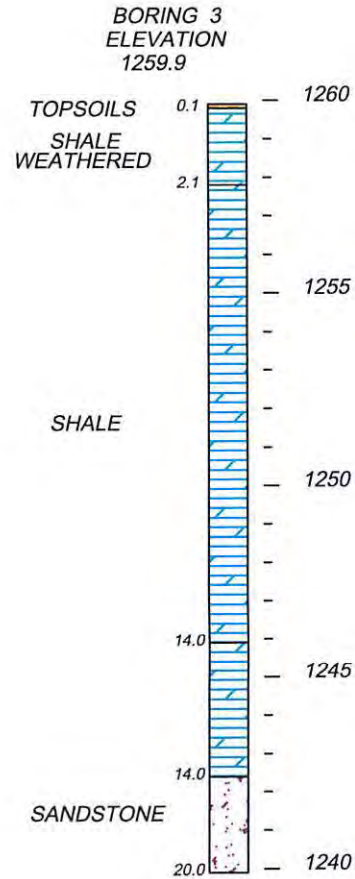
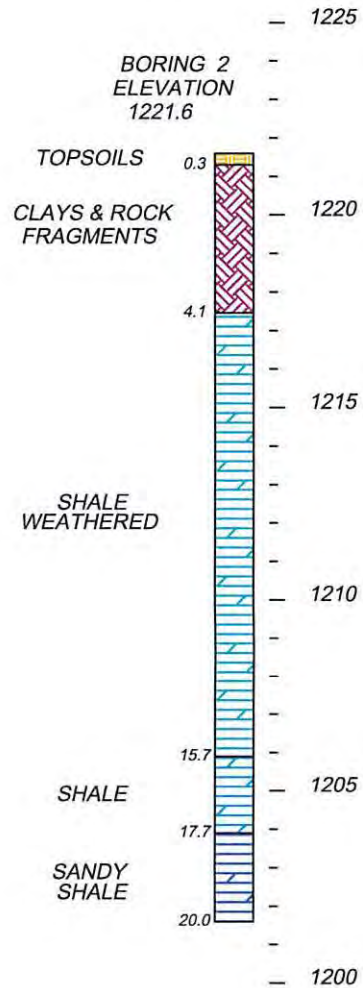
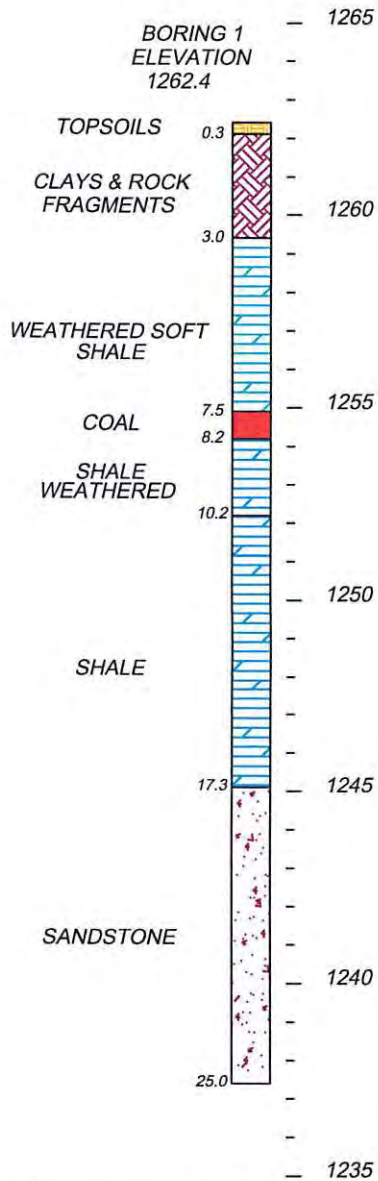
# EAST KENTUCKY ENGINEERING, LLC.





# EAST KENTUCKY ENGINEERING, LLC.





Drawn:	Date: 2/14/20
Job:	Scale: 1"=5'



**SALYERSVILLE TOWER SITE  
APPALACHIAN WIRELESS  
GEOLOGIC LOGS  
MAGOFFIN COUNTY, KENTUCKY**

**East Kentucky Engineering, LLC**



230 Swartz Drive  
Hazard, KY 41701  
(606) 551-1050



# EAST KENTUCKY ENGINEERING, LLC.

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APPENDIX C SEISMIC DATA
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Latitude, Longitude: 37.719283, -82.978383

114

Kelly Branch Rd



114

Map data ©2020

<b>Date</b>	2/16/2020, 3:29:50 PM
<b>Design Code Reference Document</b>	IBC-2015
<b>Risk Category</b>	IV
<b>Site Class</b>	A - Hard Rock

Type	Value	Description
$S_S$	0.182	$MCE_R$ ground motion. (for 0.2 second period)
$S_1$	0.083	$MCE_R$ ground motion. (for 1.0s period)
$S_{MS}$	0.145	Site-modified spectral acceleration value
$S_{M1}$	0.067	Site-modified spectral acceleration value
$S_{DS}$	0.097	Numeric seismic design value at 0.2 second SA
$S_{D1}$	0.044	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	A	Seismic design category
$F_a$	0.8	Site amplification factor at 0.2 second
$F_v$	0.8	Site amplification factor at 1.0 second
PGA	0.086	$MCE_G$ peak ground acceleration
$F_{PGA}$	0.8	Site amplification factor at PGA
$PGA_M$	0.069	Site modified peak ground acceleration
$T_L$	12	Long-period transition period in seconds
$S_{sRT}$	0.182	Probabilistic risk-targeted ground motion. (0.2 second)
$S_{sUH}$	0.197	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
$S_{sD}$	1.5	Factored deterministic acceleration value. (0.2 second)
$S_{1RT}$	0.083	Probabilistic risk-targeted ground motion. (1.0 second)
$S_{1UH}$	0.092	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
$S_{1D}$	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.6	Factored deterministic acceleration value. (Peak Ground Acceleration)
$C_{RS}$	0.922	Mapped value of the risk coefficient at short periods
$C_{R1}$	0.905	Mapped value of the risk coefficient at a period of 1 s



## DISCLAIMER

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# EAST KENTUCKY ENGINEERING, LLC.

## APPENDIX D PHOTOGRAPHS





EAST KENTUCKY ENGINEERING, LLC.

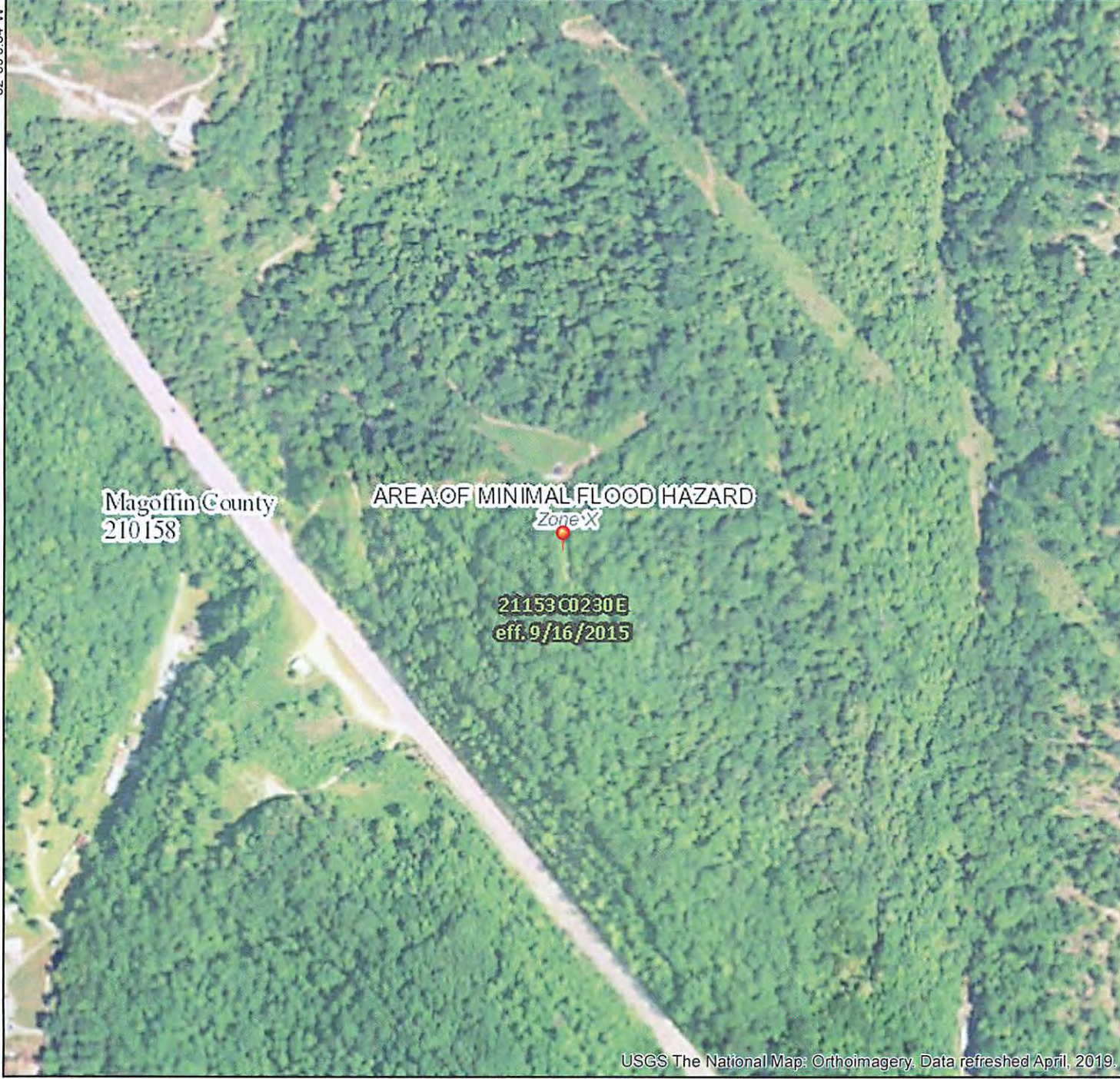
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APPENDIX E  
MAPS

# National Flood Hazard Layer FIRMette



37°43'21.92"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                             |                      |   |
|-----------------------------|----------------------|---|
| SPECIAL FLOOD HAZARD AREAS  |                      | Without Base Flood Elevation (BFE)<br>Zone A, V, A99  |
|                             |                      | With BFE or Depth<br>Zone AE, AO, AH, VE, AR  |
|                             |                      | Regulatory Floodway   |
| OTHER AREAS OF FLOOD HAZARD |                      | 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile<br>Zone 7 |
|                             |                      | Future Conditions 1% Annual Chance Flood Hazard<br>Zone X   |
|                             |                      | Area with Reduced Flood Risk due to Levee. See Notes.<br>Zone X   |
|                             |                      | Area with Flood Risk due to Levee<br>Zone D   |
| OTHER AREAS                 |                      | Area of Minimal Flood Hazard<br>Zone X  |
|                             |                      | Effective LOMRs   |
|                             |                      | Area of Undetermined Flood Hazard<br>Zone 6   |
| GENERAL STRUCTURES          |                      | Channel, Culvert, or Storm Sewer  |
|                             |                      | Levee, Dike, or Floodwall   |
| OTHER FEATURES              |                      | Cross Sections with 1% Annual Chance Water Surface Elevation  |
|                             |                      | Coastal Transect  |
|                             |                      | Base Flood Elevation Line (BFE)   |
|                             |                      | Limit of Study  |
|                             |                      | Jurisdiction Boundary   |
|                             |                      | Coastal Transect Baseline   |
|                             |                      | Profile Baseline  |
|                             | Hydrographic Feature |   |
| MAP PANELS                  |                      | Digital Data Available  |
|                             |                      | No Digital Data Available   |
|                             |                      | Unmapped  |

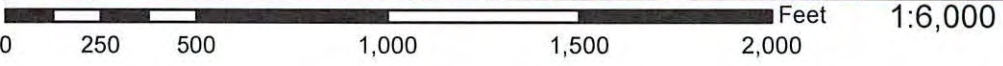
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/3/2020 at 2:23:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

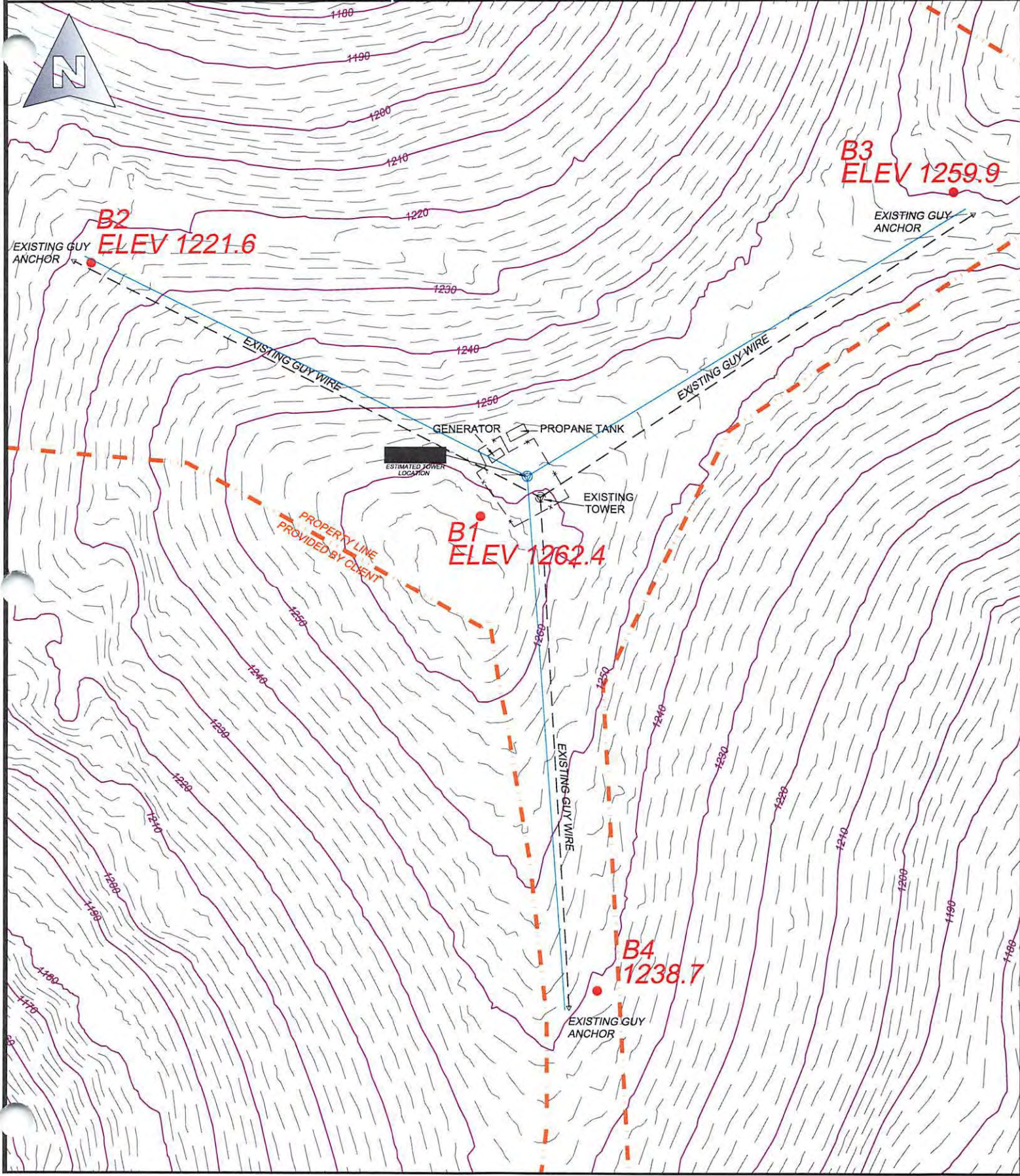


37°42'53.46"N

82°58'23.88"W

STATE OF KENTUCKY  
 ARCHITECT & ENGINEER  
 20215 2/14/2020  
 HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH 405 KAR 7:042, SECTION 10, THAT THIS DOCUMENT IS CORRECT AS DETERMINED BY ACCEPTED ENGINEERING PRACTICES.

LEGEND  
 - - - - - EXISTING STRUCTURES  
 ——— PROPOSED STRUCTURES



**EKY ENG** East Kentucky Engineering, LLC  
 230 Swartz Drive  
 Hazard, KY 41701  
 (606) 551-1100

0' 30' 60'  
 Drawn by: RDS Date: 2/14/2020  
 Job #: 165-000-0097 Scale: 1"= 30'

SALYERSVILLE GUYED TOWER  
 APPALACHIAN WIRELESS  
 MAGOFFIN COUNTY, KENTUCKY

# Exhibit 5



World Tower  
COMPANY, INC.

---

1213 Compressor Drive  
P.O. Box 508  
Mayfield, KY 42066  
270-247-3642  
FAX: 270-247-0909  
E-mail: [worldtower@worldtower.com](mailto:worldtower@worldtower.com)  
Web: [www.worldtower.com](http://www.worldtower.com)

---

400' TYPE 36SR TOWER  
FOR: APPALACHIAN WIRELESS  
SITE: SALYERSVILLE  
MAGOFFIN COUNTY, KY  
DESIGN PACKAGE

02/27/2020



*Fabrication, Installation, and Maintenance of TV, AM, FM, & Wireless Communications Towers*

GUY WIRE DATA

ELEV.	SIZE	BREAK STRENGTH	INITIAL TENSION	CUT LENGTH			SHACKLE	THIMBLE	TURN BUCKLE
				300'(-3')	300'(-22')	300'(-46')			
380'	3/4 EHS	58300	5830	515'	530'	550'	1	7/8	1 1/4 X 24
340'	9/16 EHS	35000	3500	485'	500'	520'	3/4	3/4	1 X 18
270'	9/16 EHS	35000	3500	435'	450'	465'	3/4	3/4	1 X 18
2@210'	1/2 EHS	26900	2690	2@395'	2@410'	2@425'	5/8	5/8	7/8 X 18
140'	9/16 EHS	35000	3500	360'	370'	380'	3/4	3/4	1 X 18
70'	1/2 EHS	26900	2690	340'	340'	350'	5/8	5/8	7/8 X 18

GENERAL NOTES

1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS.D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG STEEL IS 50 KSI MIN. YIELD SOLID ROUND AND BRACING STEEL IS 36 KSI MIN. YIELD SOLID ROUND.
5. ALL STRUCTURAL BOLTS ARE ASTM A325.
6. GUY LENGTHS SHOWN ARE CHORD LENGTHS PLUS 30'.
7. TOWER SECTIONS ARE NUMBERED CONSECUTIVELY FROM BASE TO TOP.
8. TOWER SHOULD BE INSPECTED IN ACCORDANCE WITH TIA-222-G EVERY 3 YEARS.
9. TOWER INSPECTION SHOULD ONLY BE PERFORMED BY EXPERIENCED QUALIFIED PERSONNEL. FOR ASSISTANCE IN PROPER MAINTENANCE OF YOUR TOWER, CALL WORLD TOWER @ 270-247-3642.

02/27/2020



TITLE: 400' TYPE 36SR TOWER  
FOR: APPALACHIAN WIRELESS  
SITE: SALYERSVILLE  
MAGOFFIN COUNTY, KY

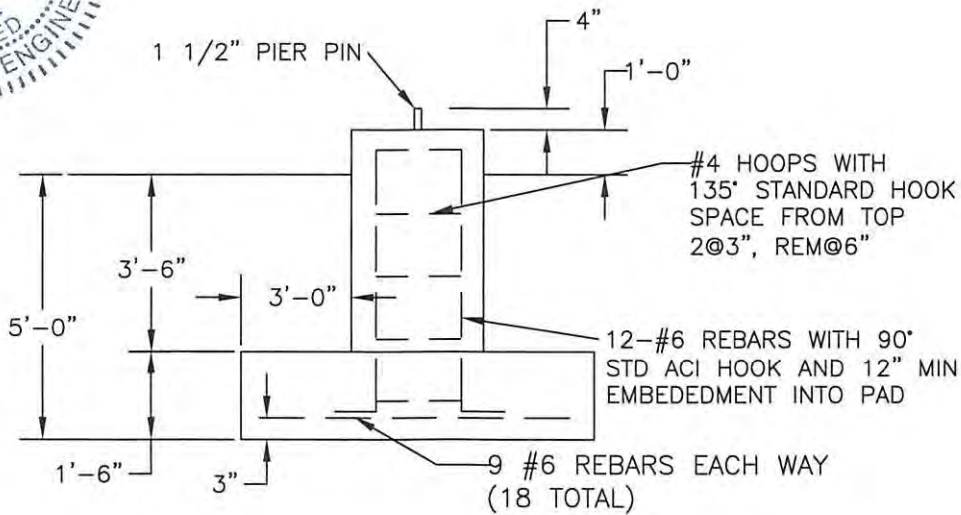
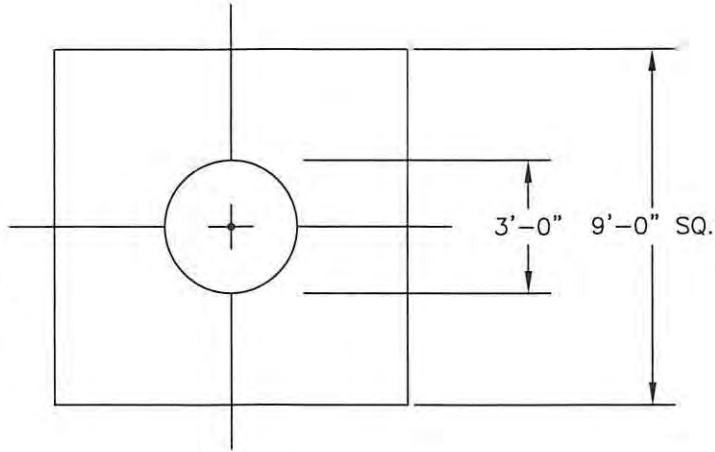
**WORLD TOWER**

SCALE NONE	DWN. LKG	CKD.	DATE 2-24-20
FILE	DWG. NO. Q200158T		



5.7 CU. YDS.  
CONCRETE REQ'D.

02/27/2020



GENERAL NOTES

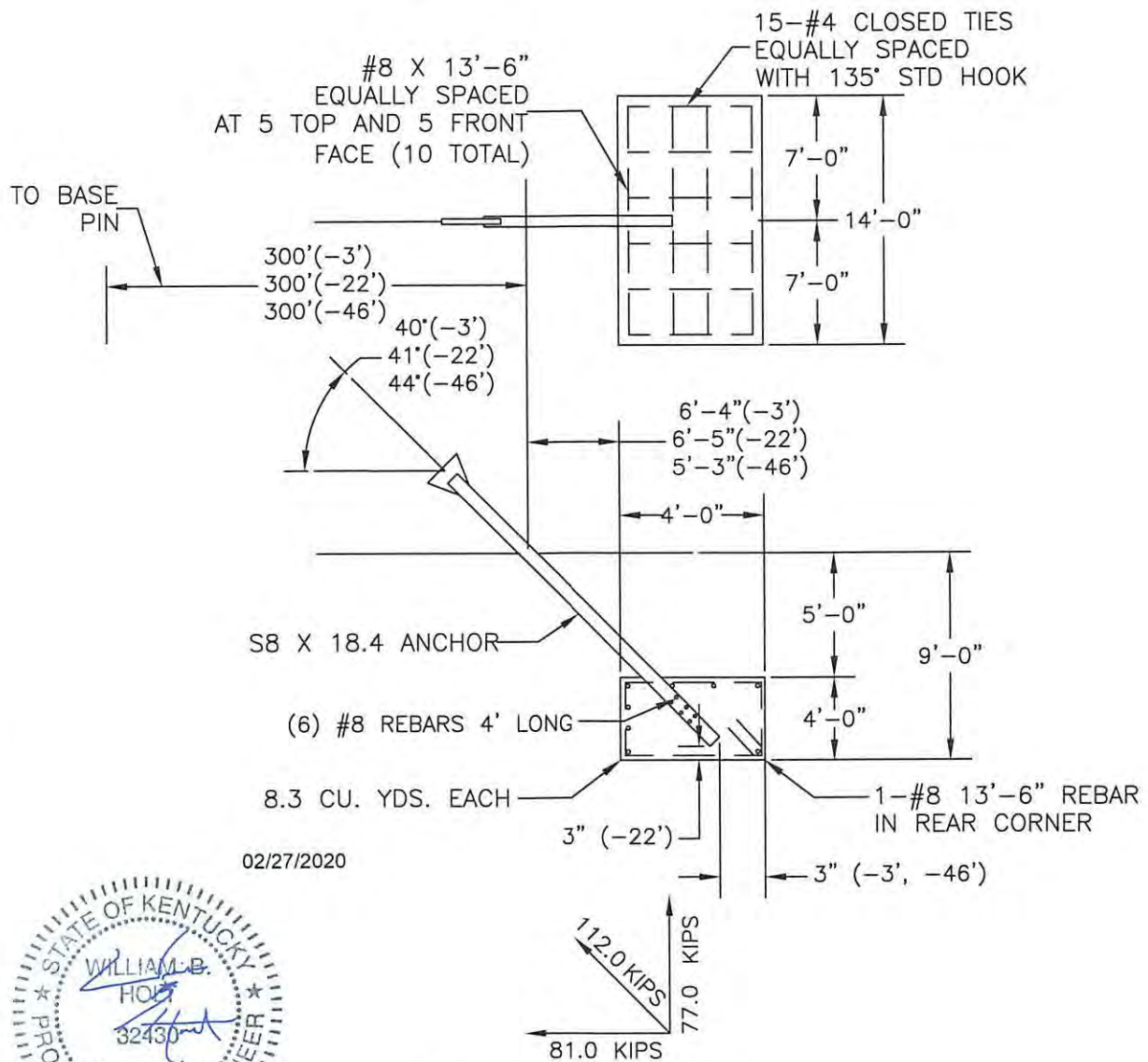
1. CONCRETE TO HAVE 4500 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCEMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION IS BASED UPON CUSTOMER SUPPLIED SOILS REPORT BY EAST KENTUCKY ENGINEERING, LLC. PROJECT NUMBER 165-000-0097 DATED FEBRUARY 16, 2020.

REACTIONS	
SHEAR	1.0 MAX KIPS
DOWNLOAD	382.0 KIPS

TITLE: BASE DETAILS  
400' TYPE 36SR TOWER  
FOR: APPALACHIAN WIRELESS  
SITE: SALYERSVILLE  
MAGOFFIN COUNTY, KY

**WORLD TOWER**

SCALE	NONE	DWN.	LKG	CKD.	DATE	2-24-20
FILE					DWG. NO.	Q200158B



02/27/2020



### GENERAL NOTES

1. CONCRETE TO HAVE 4500 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. REINFORCEMENT STEEL IS DEFORMED AND MEETS THE REQUIREMENTS OF ASTM A615 GRADE 60.
3. CENTER LINE OF ANCHOR BEAM TO PASS THROUGH CENTROID OF BLOCK.
4. EMBEDDED STEEL TO HAVE A MIN. 3" COVER.
5. FOUNDATION IS BASED UPON CUSTOMER SUPPLIED SOILS REPORT BY EAST KENTUCKY ENGINEERING, LLC. PROJECT NUMBER 165-000-0097 DATED FEBRUARY 16, 2020.

TITLE: ANCHOR DETAILS  
400' TYPE 36SR TOWER  
FOR: APPALACHIAN WIRELESS  
SITE: SALYERSVILLE  
MAGOFFIN COUNTY, KY

## WORLD TOWER

SCALE	NONE	DWN.	LKG	CKD.	DATE	2-24-20
FILE					DWG. NO.	Q200158A



**Exhibit 6**



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
transportation.ky.gov

Andy Beshear  
GOVERNOR

Jim Gray  
SECRETARY

June 11, 2020

APPLICANT:  
East Kentucky Network, LLC  
East Kentucky Network, LLC  
101 Technology Trail  
Ivel, KY 41642

SUBJECT: AS-MAGOFFIN-9KY9-2020-026

STRUCTURE: Antenna Tower (Lighting Change)  
LOCATION: Ivyton, KY  
COORDINATES: 37° 43' 09.25" N / 82° 58' 42.1531" W  
HEIGHT: 410' AGL/1671' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 410' AGL/1671' AMSL Antenna Tower near Ivyton, KY 37° 43' 09.25" N / 82° 58' 42.1531" 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.

Medium Intensity White Obstruction Lighting is required.

***Randall S. Royer***

Randall S. Royer, Acting Administrator  
Kentucky Transportation Cabinet  
Division of Road Fund Audits  
200 Mero Street – 4<sup>th</sup> Floor East  
Frankfort, Kentucky  
[Randall.Royer@ky.gov](mailto:Randall.Royer@ky.gov)  
[Jason.Salazar-Munoz@ky.gov](mailto:Jason.Salazar-Munoz@ky.gov)



An Equal Opportunity Employer M/F/D



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

Aeronautical Study No.  
 2020-ASO-4436-OE  
 Prior Study No.  
 2009-ASO-2946-OE

Issued Date: 02/11/2020

Cindy D. McCarty  
 East Kentucky Network, LLC  
 101 Technology Trail  
 Ivel, KY 41642

**\*\* 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: Antenna Tower Salyersville  
 Location: Ivyton, KY  
 Latitude: 37-43-09.25N NAD 83  
 Longitude: 82-58-42.15W  
 Heights: 1261 feet site elevation (SE)  
 410 feet above ground level (AGL)  
 1671 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 2, 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 08/11/2021 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 is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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

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

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

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

If we can be of further assistance, please contact our office at (817) 222-5928, or [chris.smith@faa.gov](mailto:chris.smith@faa.gov). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ASO-4436-OE.

**Signature Control No: 429893881-430425918**

( DNE )

Chris Smith  
Specialist

Attachment(s)  
Frequency Data  
Map(s)

cc: FCC





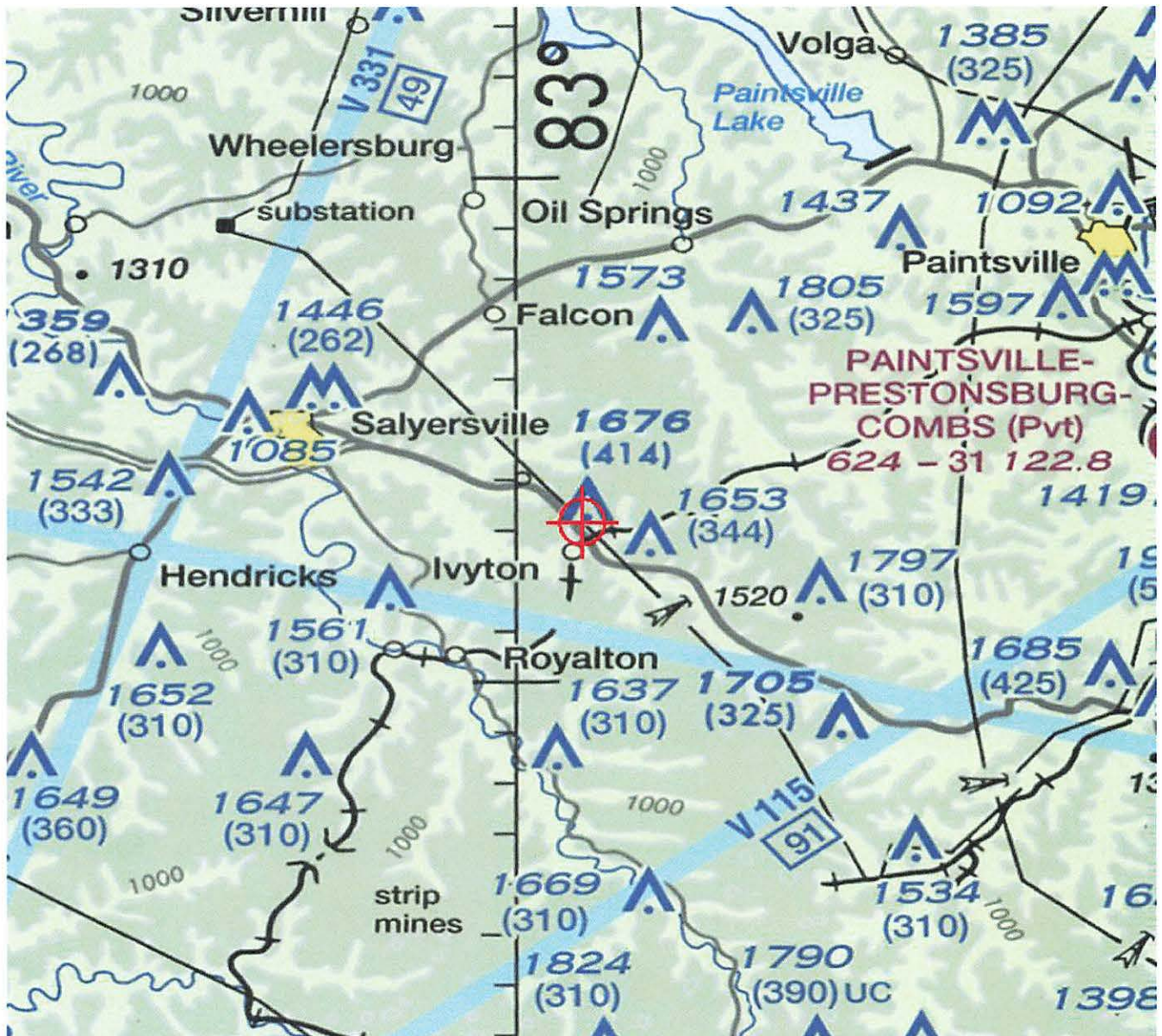
Frequency Data for ASN 2020-ASO-4436-OE

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

TOPO Map for ASN 2020-ASO-4436-OE



Sectional Map for ASN 2020-ASO-4436-OE



# Exhibit 7

# Salyersville Replacement


Location:

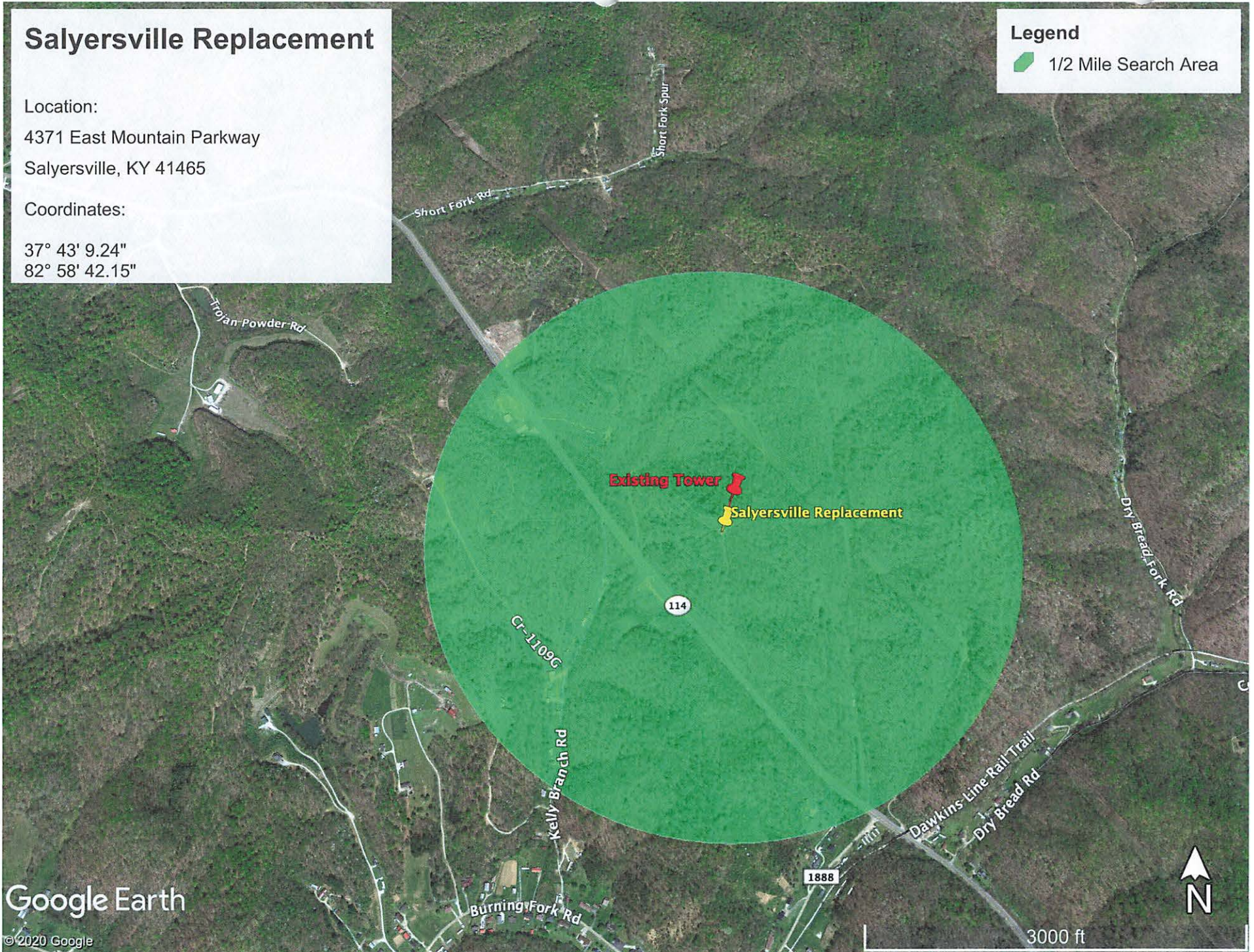
4371 East Mountain Parkway  
Salyersville, KY 41465

Coordinates:

37° 43' 9.24"  
82° 58' 42.15"

## Legend

 1/2 Mile Search Area



Google Earth

© 2020 Google

3000 ft

**Exhibit 8**

LEASE AGREEMENT

THIS LEASE, made and entered into this the 20<sup>th</sup> day of March, 1992, by and between Paul R. Gearheart and Elaine Gearheart, his wife, P. O. Box 38, Harold, Floyd County, KY 41635, herein referred to as ("LESSOR") and HAROLD TELEPHONE COMPANY, INC.: MOUNTAIN TELECOMMUNICATIONS, INC.: CELLULAR SERVICES, INC.: AND THACKER-GRIGSBY TELEPHONE COMPANY, INC., CORPORATE PARTNERS d/b/a APPALACHIAN CELLULAR GENERAL PARTNERSHIP, P. O. Box 520, Harold, KY 41635, herein referred to as ("LESSEE").

RECITALS

A. Lessor is the owner of land located adjacent to KY Route 114 approximately one (1) mile northeast of Ivyton, Magoffin County, KY and more particularly described as follows:

TRACT NO 6 - Beginning on an Iron pin, on the north side of R.O.W. line of KY RT 114; thence a course N. 44 -00 E. for a distance at 188.31 to a tack in a hub; thence on a course N 70 - 20' E. for a distance of 97.22 to a tack in a hub; thence on a course S - 83 - 25 E. for a distance of 121.31 to a tack in a hub; thence on a course S-82 - 27 E. for a distance 173.89 to a tack in a hub; thence on a course S 57 -20 E. for a distance of 174.95 to a tack in a hub; thence on a course N 46 -08' E. for a distance of 194.35 to a tack in a hub; thence on a course N 52 - 16 E. for a distance of 213.93 to a tack in a hub, being a corner of Tract No. 5; thence on a course N 55 - 24 W. for a distance of 1238.43 to a tack in a hub, being corner of Tract No. 5; thence on a course S23 - 28' W. for a distance of 121.32 to a tack in a hub; thence on a course S 21 - 28 W. for a distance of 159.05 to a tack in a hub; thence on a course S 30 - 52 W. for a distance of 59.51 to a tack in a hub; thence on a course S 34 - 55 E. for a distance of 151.53 to a tack in a hub; thence on a course S-6 -53E for a distance of 209.04 to a tack in a hub; thence on a course S-7 -17E for a distance of 261.72 to a tack in a hub: thence on a course S-19 -33E for a distance of 97.93 to the beginning point. Containing 13.13 acres, more or less.

B. Lessee wishes to lease space to construct a tower, necessary anchors and guys, and building to house cellular facilities, with non-exclusive right of ingress and egress for the provision of public cellular radio telephone communications services.

C. Lessor hereby leases the premises to Lessee and permits the construction and operation of the facilities pursuant to this Agreement.

NOW THEREFORE in consideration of the premises and the mutual agreements hereinafter set forth, the parties hereto agree as follows:

1. LEASE OF PREMISES. Lessor hereby leases the premises to Lessee and Lessee hereby accepts said lease from Lessor pursuant to all of the terms and conditions set forth herein.

2. TERM. The premises shall be leased to the Lessee for a period of five (5) years from the date of this lease agreement. The Lessee shall have the option to renew the lease for three (5) additional periods of the same duration upon giving written notice to Lessor of its intent to exercise the option at lease sixty (60) days before expiration of the lease term. In no event shall the lease and renewals thereof exceed a total of twenty (30) years.

3. PAYMENT. Lessee shall pay the sum of One Hundred (\$100.00) Dollars per month during the initial five (5) year term. Subsequent renewals shall be subject to the following terms and conditions: Monthly payment of One Hundred (\$100.00) Dollars for the tower space and appurtenant facilities.

Provided, however, that if any renewal or extension of this Lease is effectuated, the rental fees applicable thereto shall be the above stated amount plus any increase or increases commensurate with any and all changes in the Consumer Price Index (CPI); provided, however, that in no event shall the rental fees applicable to any term, renewal, or extension of this Lease be less than One Hundred (\$100.00) Dollars per month. In no event shall any increase in monthly rental fees exceed twenty-five percent (25%) of the rental payable per month for the immediately preceding term - renewal or extension.

4. CONDITIONS. Lessor and Lessee herein agrees to the following conditions:

4.1 The Lessee shall be responsible for carrying casualty insurance for damage to the System caused by fire, wind or and other casualty, and the Lessee shall be responsible for maintaining sufficient insurance to protect both Lessor and Lessee from any and all claims for personal injury, including death, resulting directly or indirectly from installation, maintenance, operation or removal of the System.



5. NOTICE. All notices, requests, demands or other communications provided for herein or otherwise given shall be in writing and shall be deemed to have been given at a time when deposited in the United States mail, certified mail, postage prepaid, addressed to respective parties at the addresses stated below or at such other changed address which may be fixed by written notice:

LESSOR: Paul R. and Elaine Gearheart  
P. O. Box 38  
Harold, KY 41635

LESSEE: APPALACHIAN CELLULAR  
GENERAL PARTNERSHIP  
P. O. BOX 520  
HAROLD, KY 41635

IN WITNESS WHEREOF, the parties have executed this agreement, this the day and year first above written.

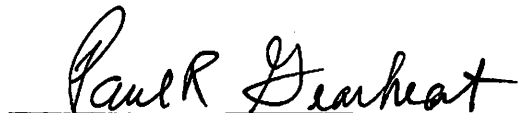
LESSOR:

  
\_\_\_\_\_  
PAUL R. GEARHEART

  
\_\_\_\_\_  
Elaine Gearheart

LESSEE:

APPALACHIAN CELLULAR GENERAL PARTNERSHIP

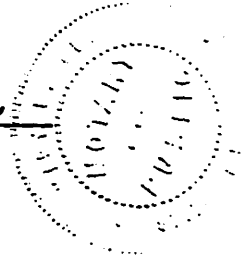
  
\_\_\_\_\_  
TITLE: MANAGING GENERAL PARTNER, PRESIDENT  
HAROLD TELEPHONE COMPANY, INC.

STATE OF KENTUCKY  
COUNTY OF Floyd

The foregoing Lease was acknowledged to before me by Paul R. Gearheart and Elaine Gearheart, his wife, to be their free act and deed, this the 20<sup>th</sup> day of March, 1992.

My commission expires: Oct 19, 1995

Mary E Bush  
NOTARY PUBLIC

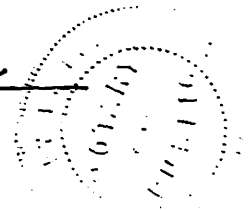


STATE OF KENTUCKY  
COUNTY OF FLOYD

The foregoing Lease was sworn and acknowledged before me by Lessee, Paul R. Gearheart, President, Harold Telephone Company, Inc., as General Partner for Appalachian Cellular General Partnership, to be his free act and deed, this 20<sup>th</sup> day of March, 1992.

My commission expires: Oct 19, 1995

Mary E Bush  
NOTARY PUBLIC



L E A S E

THIS LEASE made and entered into this 20 day of March, 1991, by and between EMMA RISNER MULLINS AND ROSCOE MULLINS, HER HUSBAND, JACKIE NIEL RISNER, BOX 5530, EAST MOUNTAIN PARKWAY, SALYERSVILLE, KENTUCKY 41465, Parties of the First Part and FOOTHILLS RURAL TELEPHONE COOPERATIVE CORPORATION, INC.; MOUNTAIN RURAL TELEPHONE COOPERATIVE CORPORATION, INC.; THACKER-GRIGSBY TELEPHONE CO., INC.; HAROLD TELEPHONE COMPANY, INC., CORPORATE PARTNERS d/b/a APPALACHIAN CELLULAR GENERAL PARTNERSHIP, ACTING BY AND THROUGH HAROLD TELEPHONE COMPANY, INC., THE GENERAL PARTNER, P. O. BOX 520, HAROLD, KENTUCKY 41635, COLLECTIVELY, Party of the Second Part and hereinafter referred to as ("ACGP"),

WITNESSETH:

WHEREAS, ACGP, through the Federal Communications Commission ("FCC"), has been awarded the right to construct facilities to provide a domestic public Cellular Radio Telephone System to serve the Kentucky 9-Elliott rural service area ("RSA"), comprising the counties of Elliott, Johnson, Lawrence, Martin, Magoffin, Morgan, Pike and Floyd and

WHEREAS, the parties of the First Part have consented to lease a portion of land to effect the establishment and construction of an intrical part of such system.

NOW, THEREFORE, in consideration of the sum of \$6,500.00, cash in hand paid, the receipt of which is hereby acknowledged, and in further consideration of the covenants and conditions

herein contained, said Parties of the First Part do hereby let, lease, demise and set over unto ACGP, its successors and assigns, that certain tract or parcel of land located in Magoffin County, Kentucky, on the waters of Big Branch and located adjacent to Kentucky Route 114 approximately one mile northeast of Ivyton, Magoffin County, Kentucky, and being a part of the same property acquired by Emma Risner and Jackie Neil Risner under the Last Will and Testament of Callie Risner, dated June 11, 1982, probated and recorded October 22, 1989, and appearing of record in Will Book 3, at page 578, Magoffin County Court Clerk's Office and more particularly described as follows:

Beginning at Point 656  
thence N 2 degrees 27' 15" E - 16.67 feet to Point 646  
thence N 2 degrees 27' E - 26.89 feet to Point 645  
thence N 1 degree 29' 08" W - 56.70 feet to Point 644  
thence N 5 degrees 48' 33" W - 14.84 feet to Point 643  
thence N 4 degrees 57' 04" W - 66.14 feet to Point 642  
thence N 9 degrees 40' 49" W - 73.56 feet to Point 641  
thence N 11 degrees 53' 16" W - 18.24 feet to Point 100  
thence N 8 degrees 41' 03" W - 35.92 feet to Point 101  
thence N 8 degrees 18' 60" - .76 feet to Point 792  
thence N 42 degrees 30' 15" E - 188.63 feet to Point 727  
thence N 48 degrees 38' 15" E - 127.59 feet to Point 791  
thence N 48 degrees 38' 15" E - 86.34 feet to Point 728  
thence S 44 degrees 34' 58" E - 62.78 feet to Point 654  
thence S 56 degrees 22' 57" W - 248.67 feet to Point 794  
thence S 26 degrees 22' 57" W - 148.21 feet to Point 793  
thence S 3 degrees 37' 03" E - 270.26 feet to Point 653  
thence S 86 degrees 22' 57" W - 47.81 feet  
to the point of beginning, containing 31390.0 sq. ft. or  
.721 acres.

IT IS FURTHER COVENANTED AND AGREED BY AND BETWEEN THE PARTIES hereto as follows:

1. The term of this Lease shall be for a period of twenty-

five years after the date hereof, with the exclusive option of ACGP to extend the leasehold period for an additional twenty-five years at the same rate of \$6,500.00 for said extended period. ACGP shall have the right to terminate this lease and abandon the premises under circumstances and conditions more fully set forth in numerical paragraph 5, herein. In the event of termination by ACGP during the initial twenty-five year term, the Parties of the First Part shall have no obligation to refund all or any portion of the leasehold rental payment.

2. ACGP shall use this property for the purpose of constructing buildings, towers, guy lines, anchors and other related facilities, including, but not limited to telephone lines, CATV lines, power lines and any and all other equipment deemed necessary by ACGP to receive and transmit cellular telephone signals to Third Parties in the RSA to be served by the facility. The parties hereto recognize that technology in the communications field is advancing at a rapid rate and that this site may be used for any other purpose now in the development stage or which may later be developed in the communications industry to carry out the objectives of ACGP, that being to transmit and receive signals and communications by wire, radio and satellite.

3. ACGP agrees to indemnify and save harmless the Party of the First Part from any liability by virtue of ACGP's activities on the demised premises, and to maintain and keep in full force and effect public liability and property damage insurance in an

amount of at least One Million Dollars.

4. The Parties of the First Part further grant unto ACGP full and complete right of ingress, egress and regress over the above described property or over any other abutting or adjacent properties owned by said First Parties for the purpose of constructing, operating and maintaining the facilities, above referred to, which shall include the construction of such access roads as may be necessary.

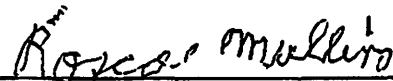
5. In the event that ACGP is unable to continue to provide domestic public cellular radio communications, through insolvency or through actions of the FCC or other regulatory agencies or for any other unforeseeable reason, then ACGP shall be permitted to remove all of the equipment and improvements placed on the demised premises and be further released from any and all obligations hereunder.

6. The Parties of the First Part state that they will warrant the title to the property herein demised under covenant of General Warranty.

IN WITNESS WHEREOF, the Parties have hereunto set their hand as of the day and year first above written.

PARTIES OF THE FIRST PART:

  
\_\_\_\_\_  
EMMA RISNER MULLINS

  
\_\_\_\_\_  
ROSCOE MULLINS

Jackie Niel Risner  
JACKIE NIEL RISNER

PARTY OF THE SECOND PART:

APPALACHIAN CELLULAR GENERAL  
PARTNERSHIP BY HAROLD TELEPHONE  
COMPANY, INC., GENERAL PARTNER

BY: Paul R. Gearheart  
PAUL R. GEARHEART, PRESIDENT  
HAROLD TELEPHONE COMPANY, INC.

STATE OF KENTUCKY  
COUNTY OF MAGOFFIN

The foregoing Lease was acknowledged to before me by Emma Risner, Roscoe Mullins and Jackie Niel Risner, Parties of the First Part, to be their free act and deed, this the 20<sup>th</sup> day of March, 1992.

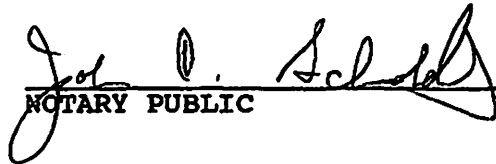
My commission expires: \_\_\_\_\_

Joe L. Sebold  
NOTARY PUBLIC

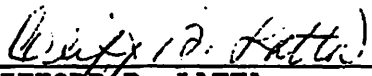
STATE OF KENTUCKY  
COUNTY OF FLOYD

The foregoing Lease was sworn and acknowledged before by Paul R. Gearheart, President, Harold Telephone Company, as General Partner for Appalachian Cellular General Partnership, to be his free act and deed, this the 20<sup>th</sup> day of March, 1992.

My commission expires: \_\_\_\_\_

  
\_\_\_\_\_  
NOTARY PUBLIC

The foregoing instrument  
was prepared by:

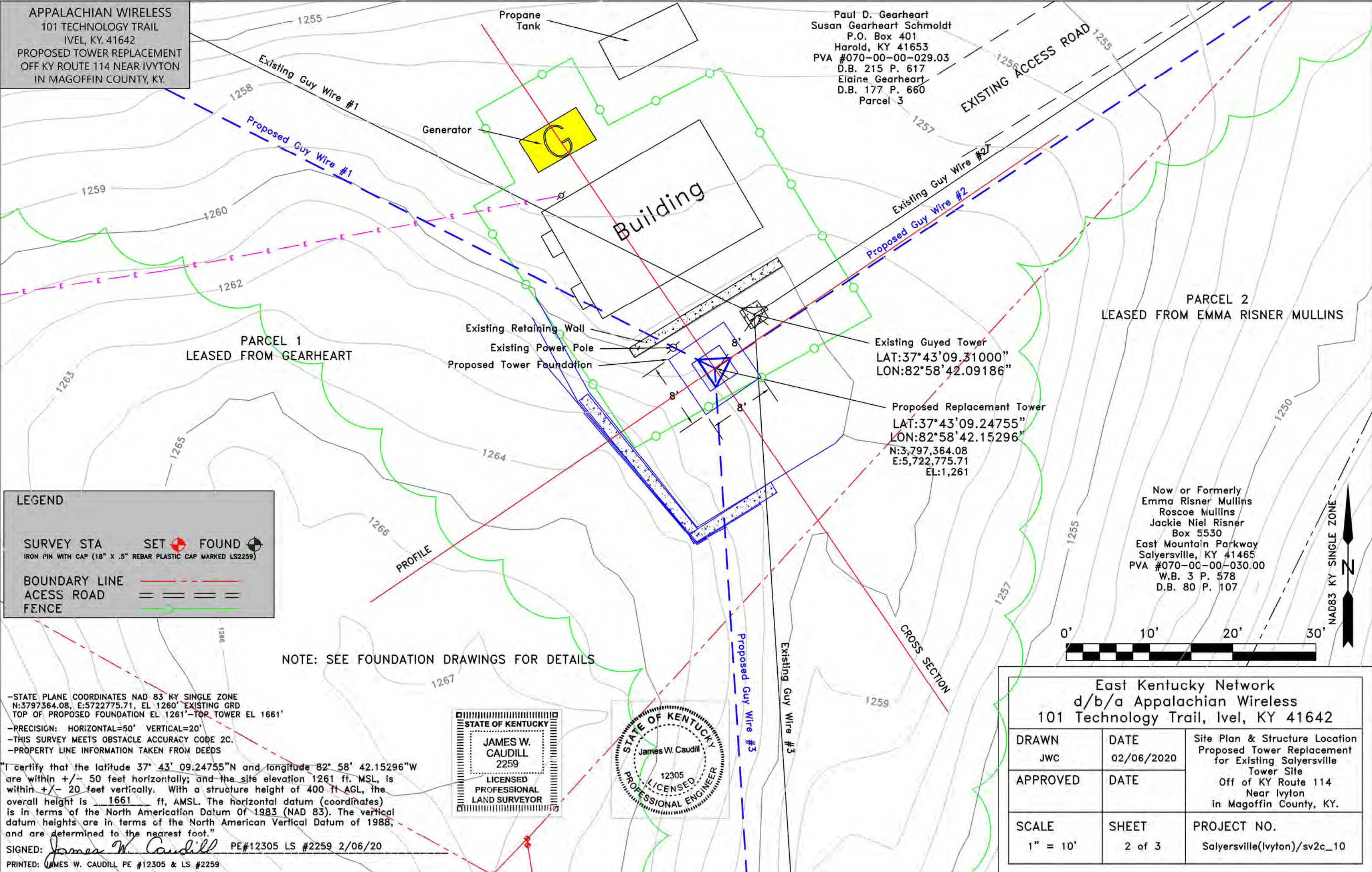
  
\_\_\_\_\_  
CLIFFORD B. LATTA  
LATTA & BROWN  
P. O. BOX 550  
PRESTONSBURG, KY 41653  
(606) 886-8132



# Exhibit 9

APPALACHIAN WIRELESS  
 101 TECHNOLOGY TRAIL  
 IVEL, KY. 41642  
 PROPOSED TOWER REPLACEMENT  
 OFF KY ROUTE 114 NEAR IVYTON  
 IN MAGOFFIN COUNTY, KY.

Paul D. Gearheart  
 Susan Gearheart Schmoltd  
 P.O. Box 401  
 Harold, KY 41653  
 PVA #070-00-00-029.03  
 D.B. 215 P. 617  
 Elaine Gearheart  
 D.B. 177 P. 660  
 Parcel 3



PARCEL 1  
 LEASED FROM GEARHEART

PARCEL 2  
 LEASED FROM EMMA RISNER MULLINS

Now or Formerly  
 Emma Risner Mullins  
 Roscoe Mullins  
 Jackie Niel Risner  
 Box 5530  
 East Mountain Parkway  
 Salyersville, KY 41465  
 PVA #070-00-00-030.00  
 W.B. 3 P. 578  
 D.B. 80 P. 107

**LEGEND**

SURVEY STA    SET    FOUND

IRON PIN WITH CAP (18" X .5" REBAR PLASTIC CAP MARKED LS2259)

BOUNDARY LINE    --- --- ---

ACCESS ROAD    = = = = =

FENCE    ---○---

NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS

-STATE PLANE COORDINATES NAD 83 KY SINGLE ZONE  
 N:3797364.08, E:5722775.71, EL 1260' EXISTING GRD  
 TOP OF PROPOSED FOUNDATION EL 1261'-TOP TOWER EL 1661'

-PRECISION: HORIZONTAL=50' VERTICAL=20'

-THIS SURVEY MEETS OBSTACLE ACCURACY CODE 2C.

-PROPERTY LINE INFORMATION TAKEN FROM DEEDS

"I certify that the latitude 37° 43' 09.24755"N and longitude 82° 58' 42.15296"W are within +/- 50 feet horizontally; and the site elevation 1261 ft. MSL, is within +/- 20 feet vertically. With a structure height of 400 ft. AGL, the overall height is 1661 ft, AMSL. The horizontal datum (coordinates) is in terms of the North American Datum Of 1983 (NAD 83). The vertical datum heights are in terms of the North American Vertical Datum of 1988, and are determined to the nearest foot."

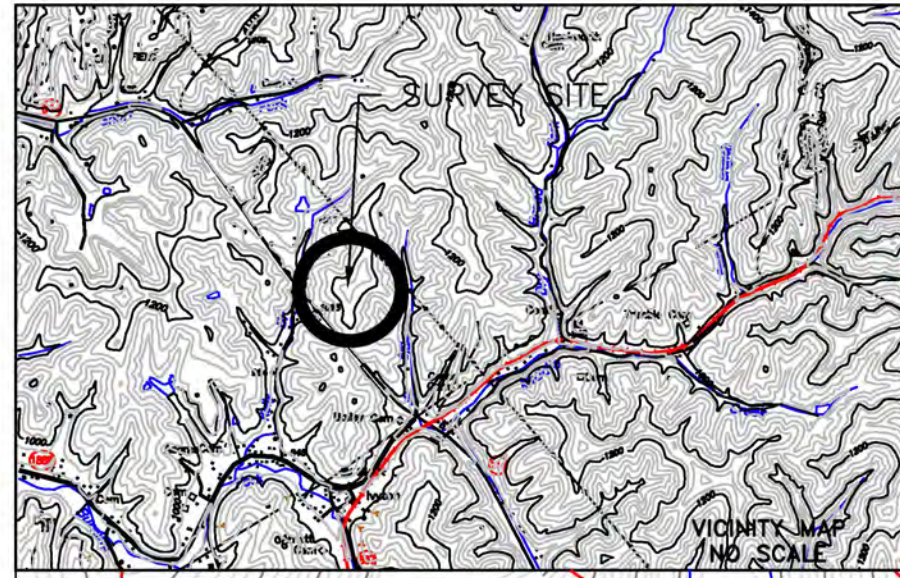
SIGNED: *James W. Caudill* PE#12305 LS #2259 2/06/20  
 PRINTED: JAMES W. CAUDILL PE #12305 & LS #2259

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

STATE OF KENTUCKY  
 James W. Caudill  
 12305  
 LICENSED PROFESSIONAL ENGINEER

East Kentucky Network d/b/a Appalachian Wireless 101 Technology Trail, Ivel, KY 41642		
DRAWN JWC	DATE 02/06/2020	Site Plan & Structure Location Proposed Tower Replacement for Existing Salyersville Tower Site Off of KY Route 114 Near Ivyton in Magoffin County, KY.
APPROVED	DATE	
SCALE 1" = 10'	SHEET 2 of 3	PROJECT NO. Salyersville(Ivyton)/sv2c_10

# Exhibit 10



**APPALACHIAN WIRELESS**  
 101 TECHNOLOGY TRAIL  
 IVEL, KY. 41642  
**PROPOSED TOWER SITE REPLACEMENT**  
 OFF KY ROUTE 114 NEAR IVYTON  
 IN MAGOFFIN COUNTY, KY.

Map 70 Parcel 29.01  
 Walter Collins  
 Brady Astor Estate  
 9901 Windfall Trace  
 Louisville, KY 40223  
 Deed Book 114  
 Page 242

Map 70 Parcel 32  
 Paul and  
 Lou Adams  
 637 Dry Bread Road  
 Salyersville, KY 41465  
 Deed Book 191  
 Page 507

Map 70 Parcel 29  
 Meredith Holbrook  
 180 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 210 Page 784

Map 70 Parcel 29  
 Meredith Holbrook  
 180 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 210 Page 784

Map 70 Parcel 30  
 Emma Risner and  
 Callie Risner  
 5530 East Mountain Parkway  
 Salyersville, Ky. 41465

Map 70 Parcel 29.04  
 Mary L. and  
 Herbert Spradlin  
 Box 213  
 Stanville, KY 41659  
 Deed Book 180  
 Page 527

Map 70 Parcel 29.02  
 Lorena Johnstone Estate  
 c/o William Johnstone  
 P.O. Box 112  
 Betsy Lane, KY 41605

Map 70 Parcel 29  
 Meredith Holbrook  
 180 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 210 Page 784

Map 70 Parcel 31  
 Wampum Hardware Co.  
 636 Paden Rd  
 New Gallilee, PA 16141  
 Deed Book 135 Page 411

Map 70 Parcel 24  
 Magoffin County Mobile Homes  
 -Et Al.-  
 106 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 219 Page 687  
 (Deed to Phillip Caudill)

Map 70 Parcel 29.03  
 Paul D. Gearheart and  
 Susan Gearheart Schmoldt  
 P.O. Box 401  
 Harold, Ky. 41653  
 Deed Book 215 Page 617

Map 70 Parcel 26  
 Greg and Paula Cole  
 475 Kelly Br. Rd.  
 Salyersville, KY 41465  
 Deed Book 186 Page 172

Map 70 Parcel 26.04  
 Janet and Harold Crace  
 15 Sycamore Crk Dr  
 Springboro, OH 45066  
 Deed Book 125 Page 136

Map 70 Parcel 59  
 Meredith Holbrook  
 180 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 210 Page 784

Map 70 Parcel 30  
 Emma Risner and  
 Callie Risner  
 5530 East Mountain Parkway  
 Salyersville, Ky. 41465

Map 70 Parcel 59  
 Meredith Holbrook  
 180 Adams Street  
 Salyersville, Ky. 41465  
 Deed Book 210 Page 784

**PROPOSED REPLACEMENT TOWER**  
 LAT: 37°43'09.24755"  
 LON: 82°58'42.15296"

NOTE:  
 PARCEL 1 & 3 IS THE LEASE  
 AREA FROM GEARHEART  
 PARCEL 2 IS THE LEASE AREA  
 FROM EMMA RISNER MULLINS.

Map 70 Parcel 31  
 Wampum Hardware Co.  
 636 Paden Rd  
 New Gallilee, PA 16141  
 Deed Book 135 Page 411

Map 70 Parcel 30  
 Emma Risner and  
 Callie Risner  
 5530 East Mountain Parkway  
 Salyersville, Ky. 41465

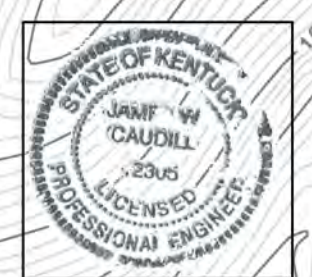
**LEGEND**

- SURVEY STA SET FOUND
- IRON PIN WITH CAP (18" x .5" REBAR PLASTIC CAP MARKED LS2299)
- PROPERTY LINE
- LEASE LINE
- RIGHT OF WAY
- HIGHWAY
- ACCESS ROAD
- CHAINLINK FENCE

0 200' 400' 600'



PROPOSED SITE PLAN AND STRUCTURE LOCATION SALYERSVILLE TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 02/06/2020	PROPERTY OF SUSAN G. SCHMOLDT OFF OF KY ROUTE 114 NEAR IVYTON IN MAGOFFIN CO., KY.
APPROVED	DATE	
SCALE 1" = 200'	SHEET 1 of 3	PROJECT NO. Ivyton/sv200pva18x24



**J W CAUDILL ENGINEERING**  
 9283 HWY 15 STE. C ISOM, KY 41824

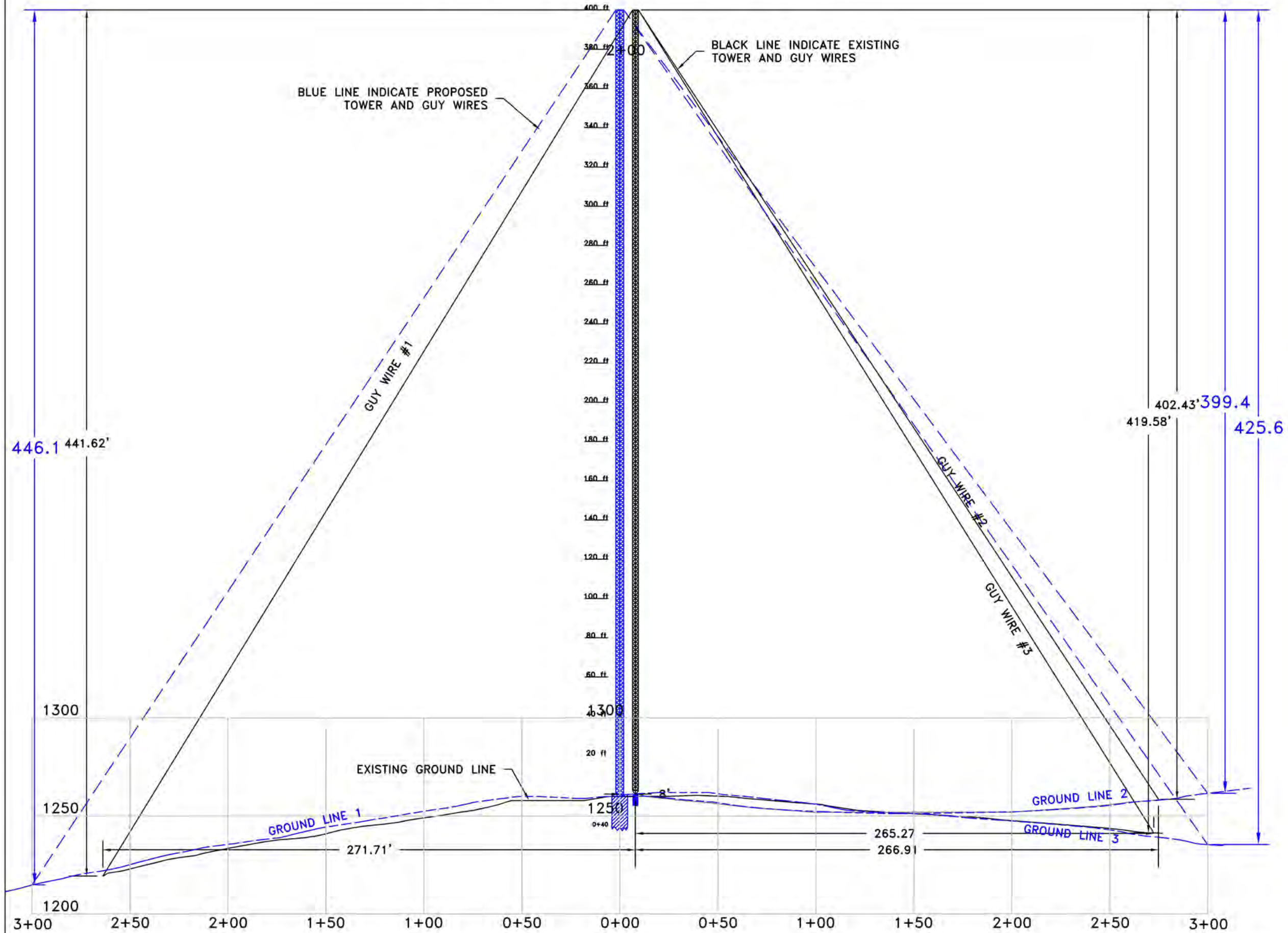
ENGINEER'S CERTIFICATE: I HEREBY CERTIFY THAT INFORMATION SHOWN  
 REFLECTS THE INFORMATION OBTAINED AND PROVIDED BY THE MAGOFFIN COUNTY  
 PROPERTY VALUATION ADMINISTRATION OFFICE IN SALYERSVILLE, KY.

James W. Caudill 12305 2/06/2020  
 JAMES W. CAUDILL P.E.# DATE

Grace Cem

# Exhibit 11

# PROFILE WITH TOWER



BLUE LINE INDICATE PROPOSED TOWER AND GUY WIRES

BLACK LINE INDICATE EXISTING TOWER AND GUY WIRES

EXISTING GROUND LINE

GROUND LINE 1

GROUND LINE 2

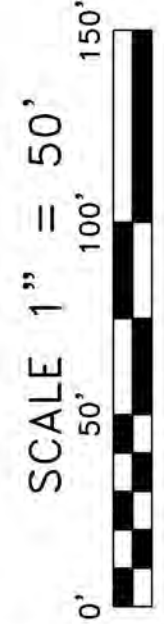
GROUND LINE 3

GUY WIRE #1

GUY WIRE #2

GUY WIRE #3

NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS



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



James W. Caudill  
 JAMES W. CAUDILL  
 PE #.  
 12305  
 02/06/2020  
 DATE

East Kentucky Network d/b/a Appalachian Wireless 101 Technology Trail, Ivel, KY 41642		Proposed Tower Replacement for Existing Salyersville Tower Site Off of KY Route 114 Near Iynton in Magoffin County, KY.		PROJECT NO. Salyersville(Iynton)/sv50
DRAWN JWC	DATE 02/06/2020	APPROVED	DATE	SHEET 2 of 2
SCALE 1" = 50'				

# Exhibit 12

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	AmeriVizion 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

# Exhibit 13

S & S Tower Services  
120 Branden Dr.  
Mousie, KY 41839

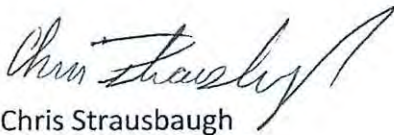
Kentucky Public Service Commission  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, KY 40602-0615

Dear Commissioners:

The Construction Manager for the proposed communications facility will be Dave Strausbaugh. His contact information is (606) 497-6730 or [dstrausbaugh010@gmail.com](mailto:dstrausbaugh010@gmail.com).

Dave has been in the industry completing civil construction and constructing towers since 1991. He has worked for S&S Tower Services since 2015 as Construction Manager overseeing the construction of telecommunications towers and sites.

Thank you,



Chris Strausbaugh  
Owner  
S&S Tower Services  
(606) 497-5798