

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

RECEIVED

MAR 8 2016

**PUBLIC SERVICE
COMMISSION**

In the matter of:

THE APPLICATION OF EAST KENTUCKY NETWORK)
LIMITED LIABILITY COMPANY FOR THE ISSUANCE)
OF A CERTIFICATE OF PUBLIC CONVENIENCE AND) CASE NO. 2016-00091
NECESSITY TO CONSTRUCT A TOWER IN MORGAN)
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). 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 Morgan County, East Kentucky Network, LLC pursuant to KRS 278.020 Subsection 1 and 807 KAR 5:001 is seeking the Commission's approval to construct a 300 foot self-supporting tower on a tract of land located at 1112 Cindas Creek, West Liberty, Morgan County, Kentucky (37°57'33.3839"N 83°02'32.4014"W). A map and detailed directions to the site can be found in Exhibit 7.

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(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.

Morgan County has no formal local planning unit. In absence of this unit, the Morgan 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 The Licking Valley Courier, March 3, 2016, edition. Enclosed is a copy of that notice in Exhibit 3. The Licking Valley Courier is the newspaper with the largest circulation in Morgan County.

Environmental Resources Management Consulting Company was employed to determine soil and rock types and to ascertain the distance to solid bedrock. The geotechnical report is enclosed as Exhibit 4.

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

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

FAA and Kentucky Airport Zoning Commission applications 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 February 25, 2016, and will remain posted for at least two weeks after filing of this application as specified.

Enclosed in Exhibit 8 are copies of East Kentucky Network LLC's Deeds for the site location along with a lot description.

The proposed construction site is on a very rugged mountaintop some feet from the nearest structure.

Due to the steep hillside surrounding the proposed site, the property in close proximity is unsuitable for any type of development. 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 11 contains a vertical sketch of the tower supplied by Mark D. Sanders, Kentucky registered professional engineer.

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: 3/3/2016
Lynn Haney, Regulatory Compliance Director

APPROVED BY: W.A. Gillum DATE: 3/4/2016
W.A. Gillum, General Manager

ATTORNEY: Cindy McCarty DATE: 3/3/2016
Hon. Cindy McCarty, 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

Cindy McCarty, Attorney
Phone: (606) 477-2355, Ext. 1006
Email: cmccarty@ekn.com

Mailing Address:

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

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

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	08/30/2011	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 Gerald Robinette, Manager	P:(606)477-2355 F:(606)874-7551
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Contact

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

Radio Service	Mobile		
Type			
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.

EXHIBIT II: 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

Norman and Louella Fox
17670 Hwy 172
West Liberty, KY 41472

David and Victoria Blanton
6829 Windham Parkway
Prospect, KY 40059



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

March 1, 2016

Norman and Louella Fox
17670 Hwy 172
West Liberty, KY 41472

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00091)

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 Morgan County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 1112 Cindas Creek, West Liberty, Morgan County, Kentucky. 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. 2016-00091 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". The signature is written in a cursive, flowing style.

Lynn Haney
Regulatory Compliance Director
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

March 1, 2016

David and Victoria Blanton
6829 Windham Parkway
Prospect, KY 40059

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00091)

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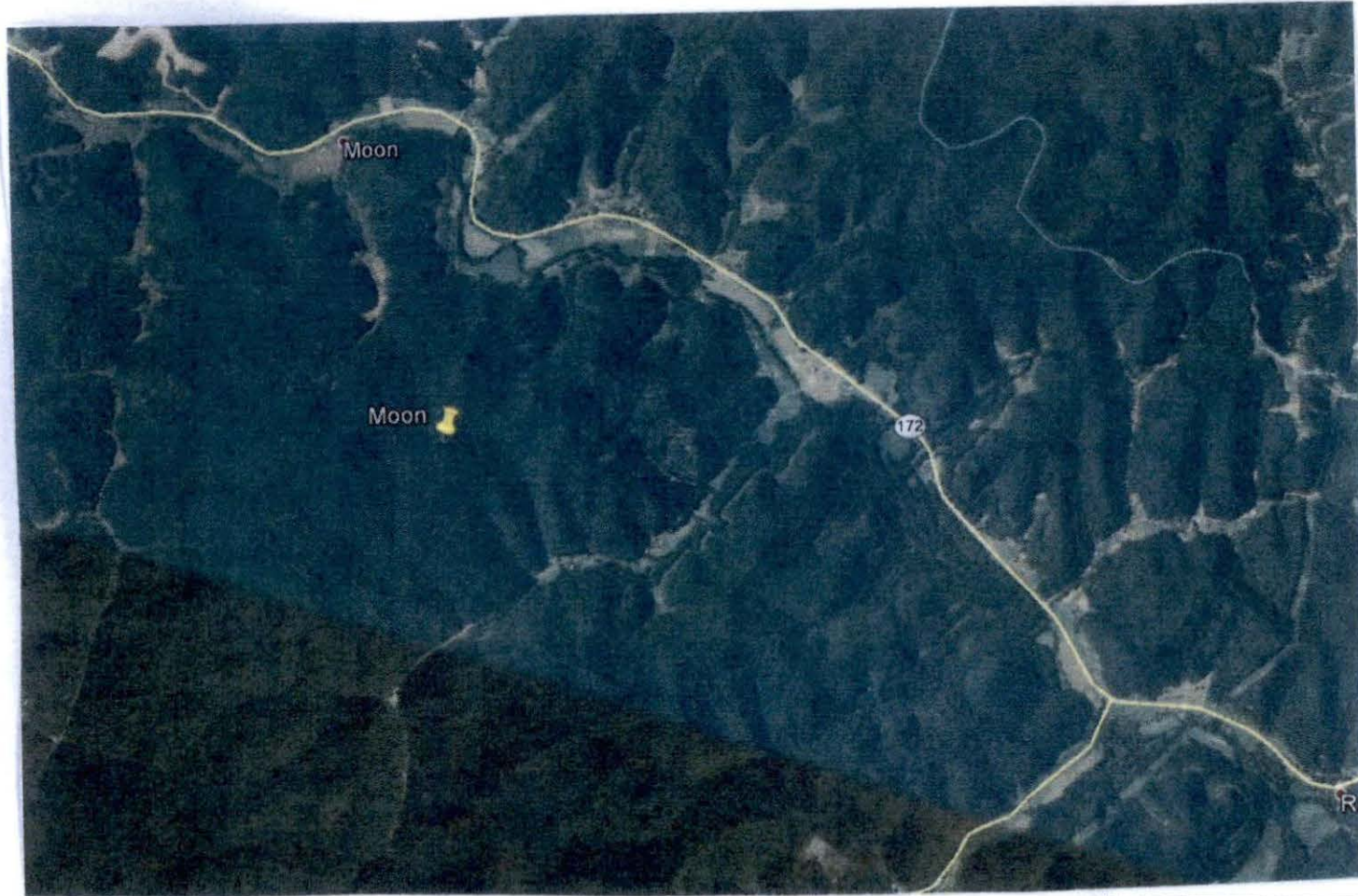
If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,

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

Lynn Haney
Regulatory Compliance Director
Enclosure 1

Appalachian Wireless Location Map



Site Name

Location

GPS Location

N 37 57 33.3839

W 83 02 32.4014

Moon Site

1112 1112 Cindas Creek , West Liberty KY.

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

EAST KENTUCKY
NETWORK



To: The Licking Valley Courier
Attn: Classifieds

From: Raina Helton
Regulatory Compliance Assistant

Email: courier@mrtc.com

Date: February 29, 2016

Re: PUBLIC NOTICE ADVERTISEMENT

Pages: 1

Please place the following Public Notice Advertisement in The Licking Valley Courier to be ran on March 3, 2016.

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2016-00091)

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 1112 Cindas Creek, West Liberty, Morgan County, Kentucky. The proposed tower will be a 300 foot self-supporting tower with attached antennas. If you would like to respond to this notice, please contact the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2016-00091.

If you have any questions about the placement of the above mentioned notice, please call me at 606-477-2375, ext. 1005.

Thank you,

Raina Helton
Regulatory Compliance Assistant

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



VIA: U.S. CERTIFIED MAIL

March 1, 2016

Stanley Franklin, Judge Executive
450 Prestonsburg Street
West Liberty, KY 41472

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00091)

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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.

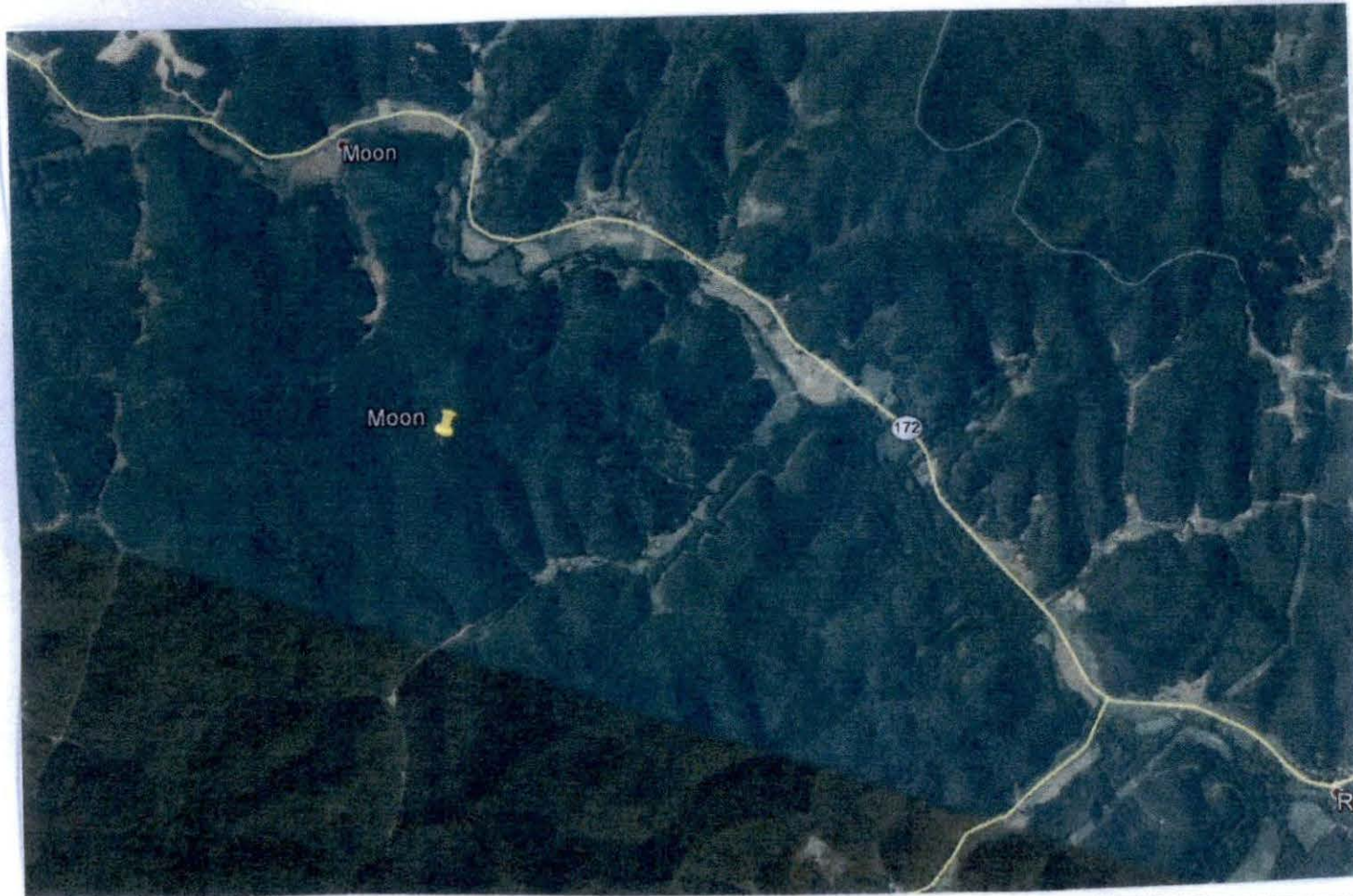
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If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,

Lynn Haney
Regulatory Compliance Director
Enclosure

Appalachian Wireless Location Map



Site Name

Moon Site

Location

1112 1112 Cindas Creek , West Liberty KY.

GPS Location

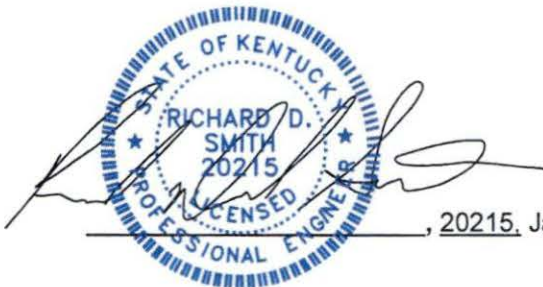
N 37 57 33.3839

W 83 02 32.4014

APPALACHIAN WIRELESS
Geotechnical Investigation on the
Moon Site
Morgan County, Kentucky
ERMC² Project No. 165-000-0019

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

PREPARED BY:
Richard Dirk Smith PE, PLS
General Manager Appalachian Region
ENVIRONMENTAL RESOURCES MANAGEMENT
CONSULTING COMPANY
230 Swartz Drive
Hazard, Kentucky 41701



_____, 20215, January 15th, 2016



EXECUTIVE SUMMARY

- 1.0 INTRODUCTION**
- 2.0 PROJECT DESCRIPTION**
- 3.0 SITE DESCRIPTION**
 - 3.1 GENERAL INFORMATION
 - 3.2 SURFACE MINING
 - 3.3 UNDERGROUND MINING
- 4.0 FIELD EXPLORATION**
 - 4.1 SITE INFORMATION
 - 4.2 TRENCHING AND FIELD OBSERVATIONS
 - 4.3 GROUNDWATER
 - 4.4 SEISMIC SITE CLASSIFICATION
- 5.0 DISCUSSION AND RECOMMENDATIONS**
 - 5.1 GENERAL
 - 5.2 FOUNDATIONS
 - 5.3 SUBSIDENCE
 - 5.4 SHALLOW FOUNDATIONS
- 6.0 DISCUSSION AND RECOMMENDATIONS**
 - 6.1 SUBSURFACE INVESTIGATION
 - 6.2 LABORATORY AND FIELD TESTING
 - 6.3 ANALYSIS AND RECOMMENDATIONS
 - 6.4 CONSTRUCTION MONITORING
 - 6.5 GENERAL

SPECIFICATIONS

- I - GENERAL**
- II – ENGINEERED FILL BENEATH STRUCTURES**
- III – GUIDELINES FOR EXCAVATIONS AND TRENCHING**
- IV – GENERAL CONCRETE SPECIFICATIONS**

APPENDIX A – SUPPORT DOCUMENTS

APPENDIX B – MAPS



EXECUTIVE SUMMARY

- A geotechnical investigation was performed on the Moon Tower Site, located north of Cindas Creek, in Morgan County, Kentucky. This site is not readily accessible. Numerous trees were fallen and some were too large cut and move which required observations to be taken at locations that were accessible. Based upon information provided the base of tower is proposed at an elevation of 1235 ft. in elevation. A location map is shown in Figure 1 of this report. Trenching was conducted with test pits and visual inspections were used to determine the lithology and type of materials immediately below the proposed tower site. The following geotechnical considerations were identified:
- This area is forested. The site has not been previously disturbed. Sandstone was encountered approximately 0.3 ft. to 5 ft. below the ground surface. Sandstone was encountered on all test pits that were taken from 1244 ft. to 1225 ft. in elevation.
- The bearing capacities of this sandstone unit is estimated to be **6 tsf**.
- The 2006 International Building Code seismic site classification for this site is B.
- Close monitoring of the construction operations discussed herein will be critical in achieving the design subgrade support. We therefore recommend that ERMC² be 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.



1. INTRODUCTION

Environmental Resources Management Consulting Company (ERMC²) was retained by Mr. Marty Thacker of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on new Cindas Creek in Morgan County, Kentucky. A site location map is shown in Figure No. 1.

Trenching and test pits were excavated with assistance from T & H contractors using a small excavator. Visual inspections and surveyed elevations were used to determine the lithology and type of materials immediately below the proposed tower site. The purpose of these services is to provide information and geotechnical engineering recommendations relative to subsurface conditions, earthwork, seismic considerations, groundwater conditions and foundation design.

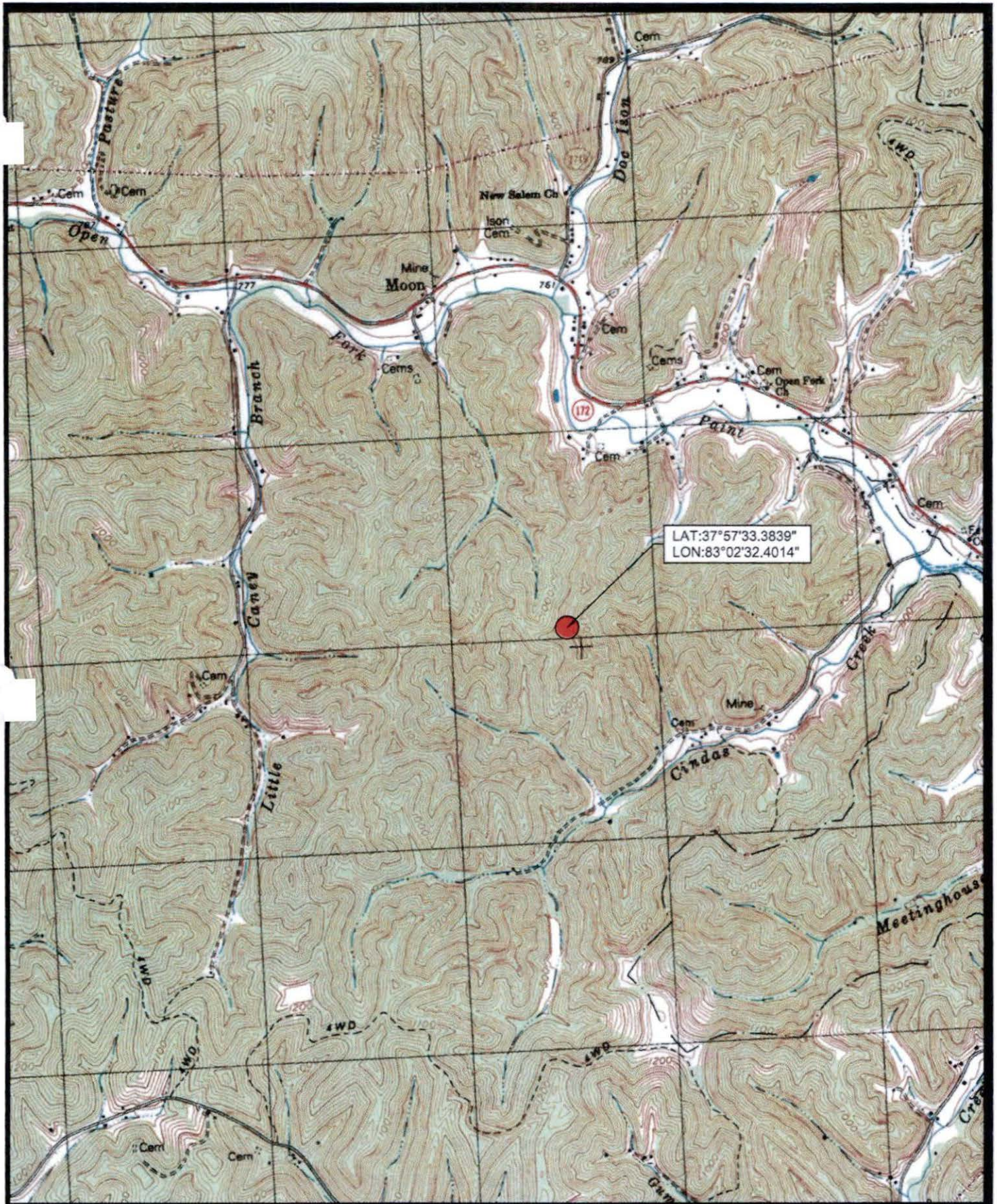
2.0 PROJECT DESCRIPTION

The proposed communication facility will consist of a self-supporting tower of undetermined height and ancillary support areas. We estimate the construction area to be approximately 40 ft. x 40 ft. Based upon information provided, we estimate the structural loads will be similar to the following conditions:

CONDITION	LOAD
Total Shear	40 Kips
Axial Load	50 Kips

We anticipate that overturning will govern the structural design. If the loadings are significantly different than these expected values, ERMC² should be notified to re-evaluate the recommendations provided in this report.





LAT:37°57'33.3839"
 LON:83°02'32.4014"

Date: 1/17/16
 Scale: 1"=2000'

Drawing:
 USGS QUAD LOCATION MAP

MOON TOWER SITE
 APPALACHIAN WIRELESS
 USGS SITE LOCATION MAP
 FIGURE NO. 1



921 Beasley Street, Suite 145
 Lexington, KY 40509
 (859)381-1000
 engineering@ermc2.us

3.0 SITE DESCRIPTION & HISTORICAL MINING

3.1 GENERAL INFORMATION

The site location is near the peak of an undisturbed ridge in Morgan County Kentucky. The current surface elevation is approximately 1244 ft. Research on the historical mining was conducted by obtaining previous mine license maps from the "Kentucky Mine Mapping Information System" (KMMIS). Other sources photographs were also used to try to better determine to what extents and which seams were taken.

3.2 SURFACE MINING

The Van Lear Seam was contour surface mined north of the site at an elevation of approximately 820 ft. No auger mining was found during our research or noted during our site visit therefore, no negative impact is expected on this site from this mining operation.

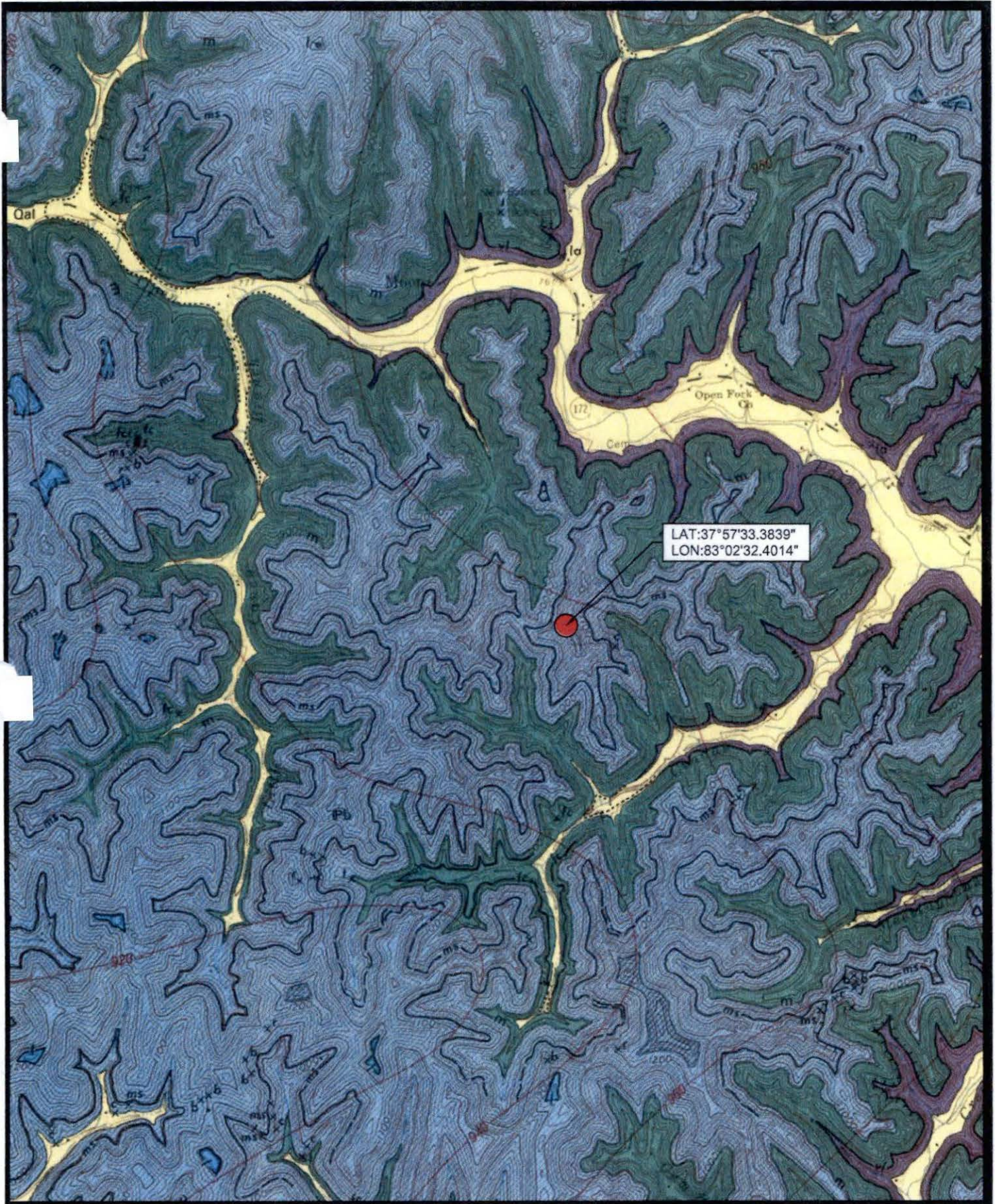
3.3 UNDERGROUND MINING

ErMC² reviewed available historical mine maps from the Kentucky Division of Mine Safety, Kentucky Mine Mapping Information System ("KMMIS"). Several underground mines were proposed in the vicinity in the review of the historical mine maps at KMMIS. Only one mine was found that had historical mining in the Van Lear Seam.

Mining in the Van Lear seam was conducted in Cindas Creek Mine No. 1. A mine license map was submitted (State File No.18513) in 2004. This mine is located south east of the tower site, near Cindas Road. Mine maps indicate projected mining near the tower site, however no mine maps are available showing that the projected mining was actually conducted. Other underground mines were proposed at this site but no records were found where mining had been conducted.

Analysis of aerial maps and field investigations did not yield any evidence that previous underground mining has resulted in surface impacts from subsidence.





LAT:37°57'33.3839"
 LON:83°02'32.4014"

Date: 1/18/16
 Scale: 1"=2000'

Drawing:
 GQ QUAD LOCATION MAP

MOON TOWER SITE
 APPALACHIAN WIRELESS
 GQ SITE LOCATION MAP

FIGURE 2



921 Beasley Street, Suite 145
 Lexington, KY 40509
 (859)381-1000
 engineering@ermc2.us

4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

The proposed site is located on an undisturbed ridge line in Morgan County, Kentucky. The proposed site lies within the Dingus Quad and is located north of Cindas Creek. The site is in a wooded area and is not readily accessible by conventional exploratory equipment. Numerous large trees were on the ground from previous storms. An estimated pad location was determined based upon the information provided. No foundations dimension were provided and we have estimated a 40 x 40 footer for this of this report.

4.2 TRENCHING AND FIELD OBSERVATIONS

This investigation was conducted with assistance from T & H Contracting with a small track excavator. Trenching, pit excavations and visual inspections of rock outcrop formations at this site were used to determine the lithology and type of materials immediately below the proposed tower site

Several holes were created around the expected limits of the proposed foundation area. At each location, sandstone was reached at a depth of range from 0.3 ft. to feet below the surface. The upper 3-4 inches of soil are dark/rich soil. Immediately below soil brown sandstone was encountered. The immediate sandstone surface was layered and weathered. Trenching and pits were excavated from 1244 ft to 1223 ft in elevation. All trenching encountered sandstone.

4.3 GROUNDWATER

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



4.4 SEISMIC SITE CLASSIFICATION

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class B Rock" per the Kentucky Building Code. In addition, a S_{DS} coefficient of 0.132g was calculated, and a S_{D1} coefficient of 0.04g was also calculated for design based on the aforementioned building code.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

The structure will be a self-supporting free standing 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 would attempt to overturn and can act in any directions.

5.2 FOUNDATIONS

It is our understanding that the foundations for these structures can be designed to bear on low bearing pressure soils. This report demonstrates the different expected bearing capacities based upon the type of material encountered from the boring logs and sampling taken at the site.

The proposed final surface elevation of the site is 1235 ft. Approximately 12 inches of topsoil and weathered sandstone is present at this site that is immediately above a sandstone formation which has a minimum thickness of approximately 30 ft. in thickness.

5.3 SUBSIDENCE

Based upon our research there has been historical underground mining in or near the area. The nearest mining was conducted in the Van Lear Coal Seam at an elevation of approximately 820 feet, or 424 ft. below the tower site. This mining is located on the south eastern side of the ridgeline, approximately 1300 feet from the tower location. Visual inspection of the area, as well as review of aerial photographs/elevation data did not reveal any evidence of existing subsidence



impacts from the mining operation.

5.4 SHALLOW FOUNDATIONS

We recommend a single spread footer foundation on competent rock. Based upon the site information drawing provided by our client the expected top of the tower pad will be at an elevation of 1235 ft. Field investigations found a sandstone unit of a minimum of 0 feet in thickness down to an elevation of approximately 1225ft. This sand stone should provide a bearing capacity of **6 tsf**.

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. 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.

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 ERMC² 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.

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 in accordance with specific ASTM standards unless otherwise indicated. All determinations included in a given ASTM standard are not always required and performed. Each test report indicates the measurements and determinations actually 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 on a boring location drawing included. Soil variations may exist between borings and these variations may not become evident until construction. If significant variations are then noted, the geotechnical engineer should be contacted so that field conditions can be examined and recommendations revised if necessary.



The geotechnical engineering report states our understanding as to the location, dimensions and structural features proposed for the site. Any significant 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 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 Moon Site in Morgan 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 own conclusions regarding specific construction techniques and methods chosen. ERMC² is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploratory and laboratory test data presented in this report.



SPECIFICATIONS

I – GENERAL

1.0 STANDARDS AND DEFINITIONS

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

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

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

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

1.2 DEFINITIONS

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

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

1.2.3 Design Engineer - In these specifications the words "Design Engineer" shall mean 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.



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.



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

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

3.0 SITE PREPARATION

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

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



shall such objectionable material be allowed in or under the fill unless specifically authorized in writing.

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 at this time. 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 at all times.

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

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



benches. Proper drainage shall be maintained at all times during benching and filling of the benches, to insure 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.



III GUIDELINES FOR EXCAVATIONS AND TRENCHES

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



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



and remove workers from the excavation when conditions change and pose a threat to their safety.

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



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 handles 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 effect bonding of the cement paste.

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, waterstops, 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.

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 so as 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.

- 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 insure 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 so as 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 so as to be free from voids, pockets or honeycombing. Particular care shall be taken to provide impermeability.
- E. Vibration Equipment: Vibration equipment shall be of the appropriate type and shall, at all times, 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 in order to make a mono-lithic pour without delays and changes of cold joints.



9.0 CURING

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

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

10.0 CONCRETE FINISHES

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

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

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



APPENDIX A SUPPORT DOCUMENTS



USGS Design Maps Summary Report

User-Specified Input

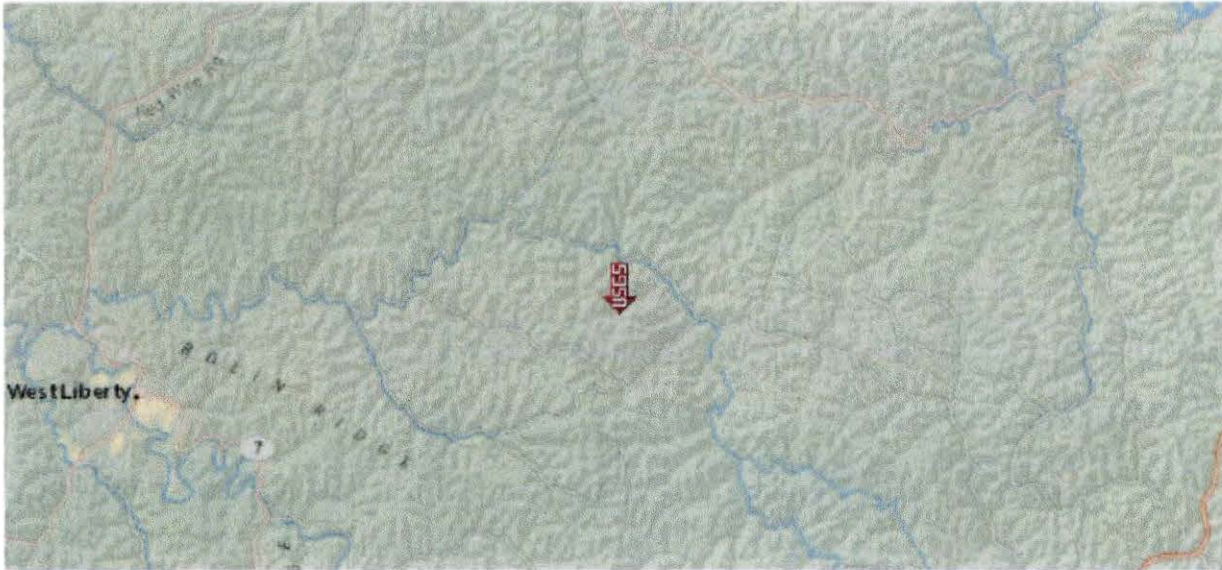
Report Title Moon Site

Sun January 17, 2016 21:28:42 UTC

building Code Reference Document 2009 AASHTO Guide Specifications for LRFD Seismic Bridge Design
(which utilizes USGS hazard data available in 2002)

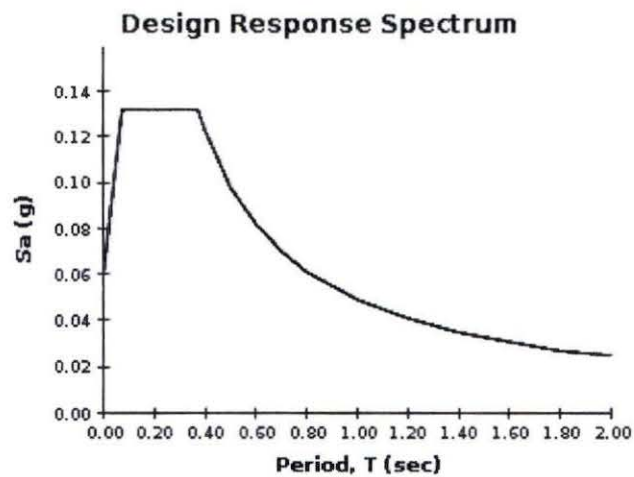
Site Coordinates 37.95927°N, 83.04233°W

Site Soil Classification Site Class B – "Rock"



USGS-Provided Output

PGA = 0.060 g	A_s = 0.060 g
S_s = 0.132 g	S_{DS} = 0.132 g
S₁ = 0.049 g	S_{D1} = 0.049 g



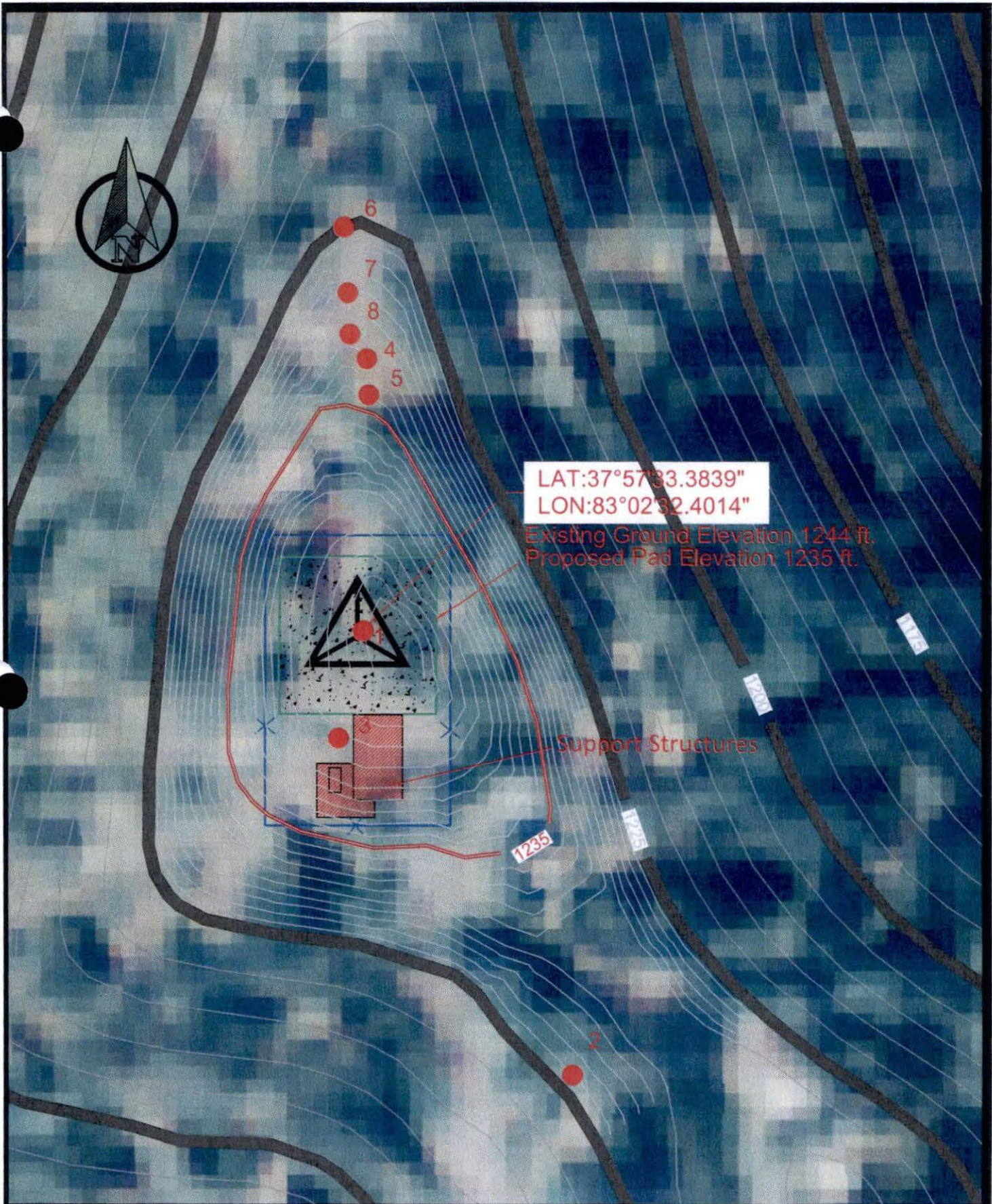
Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

Moon Site Test Pit Details

Locations	Ground Elevation	Rock Elevation	Depth To Rock	Rock Description
1	1244.1	1242.9	-1.15	Weathered Brown Sandstone
2	1232.9	1228.0	-4.85	Layered Brown Sandstone
3	1238.0	1237.5	-0.50	Layered Brown Sandstone
4	1230.4	1229.2	-1.20	Layered Brown Sandstone
5	1234.9	1234.6	-0.30	Layered Brown to Gray Sandstone
6	1225.9	1223.7	-2.20	Layered Brown Sandstone
7	1227.1	1226.4	-0.75	Layered Brown Sandstone
8	1228.5	1228.2	-0.30	Layered Brown Sandstone

APPENDIX B MAPS





LAT:37°57'33.3839"
LON:83°02'32.4014"

Existing Ground Elevation 1244 ft.
Proposed Pad Elevation 1235 ft.

Support Structures

1235

Drawn:	Date: 1/18/16
Job:	Scale: 1"=30'
Drawing: SITE LAYOUT DRAWING	

MOON TOWER SITE
APPALACHIAN WIRELESS
TRENCHING LOCATION MAP



921 Beasley Street, Suite 145
Lexington, KY 40509
(859)381-1000
engineering@ermc2.us



World Tower
COMPANY, INC.

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

300' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: MOON, KY
DESIGN PACKAGE



K. Hall

1-20-2016

GENERAL NOTES

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

1-20-2016



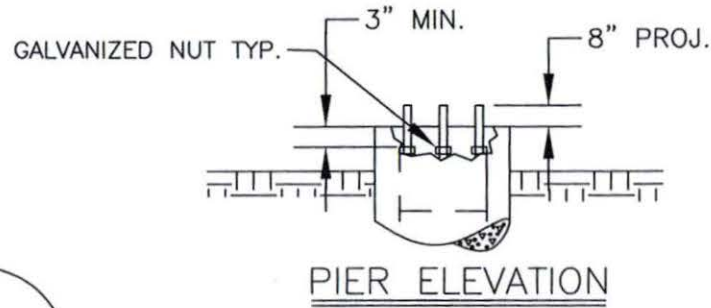
WORLD TOWER

TITLE:

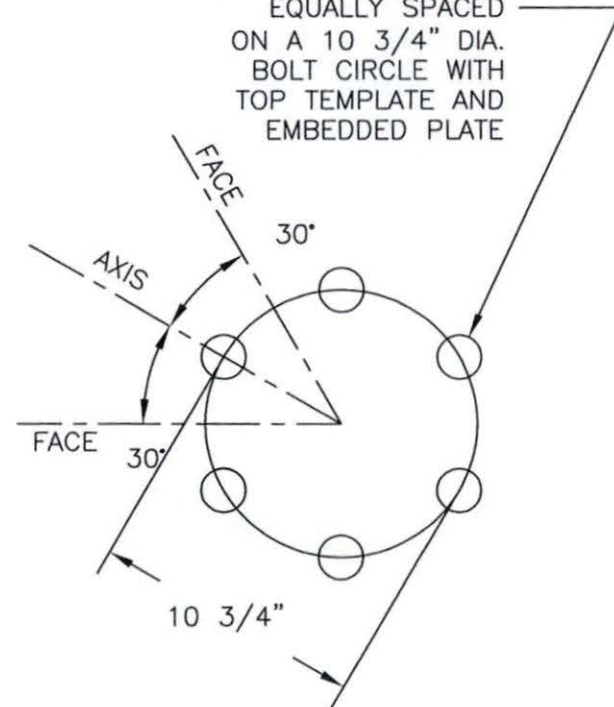
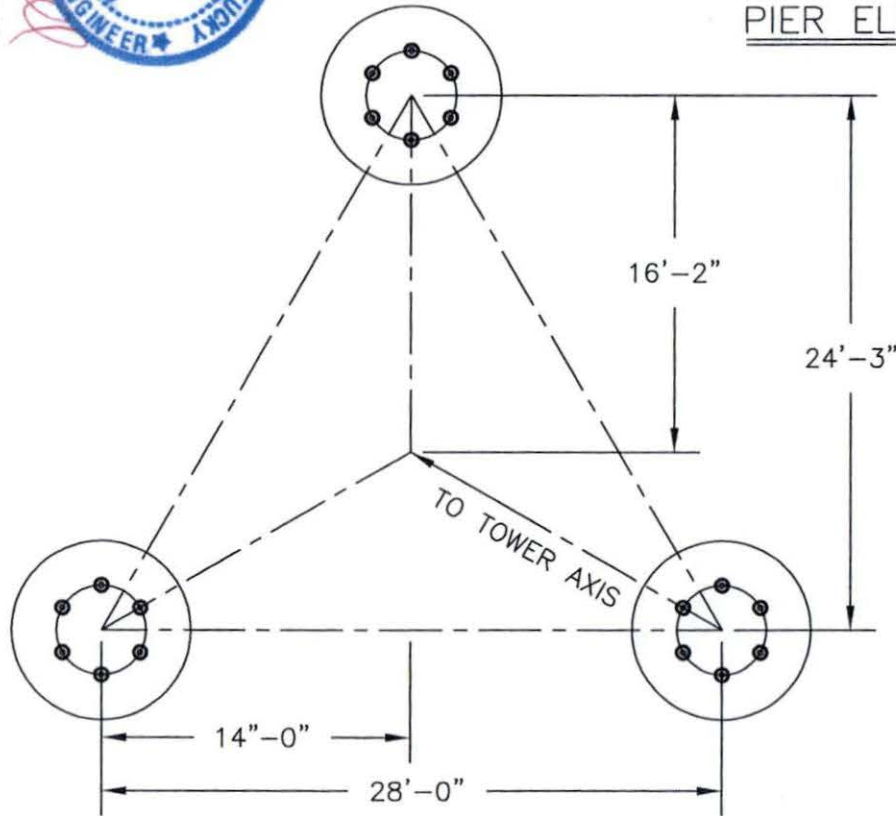
300' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: MOON, KY

SCALE	DWN.	LKG	CKD.	DATE 1-20-16
FILE	DWG. NO.			Q16001N

1-20-2016



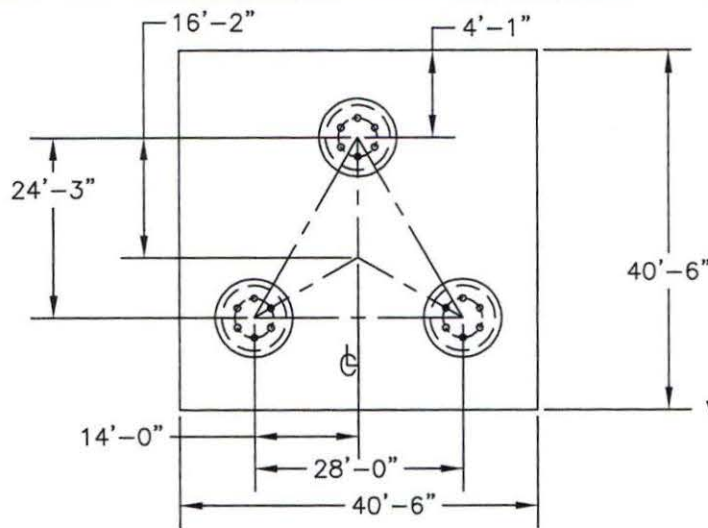
ANCHOR BOLTS
(6) 1 1/2" ϕ X 60"
(ASTM A354 GR. BC)
EQUALLY SPACED
ON A 10 3/4" DIA.
BOLT CIRCLE WITH
TOP TEMPLATE AND
EMBEDDED PLATE



TITLE:
300' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: MOON, KY

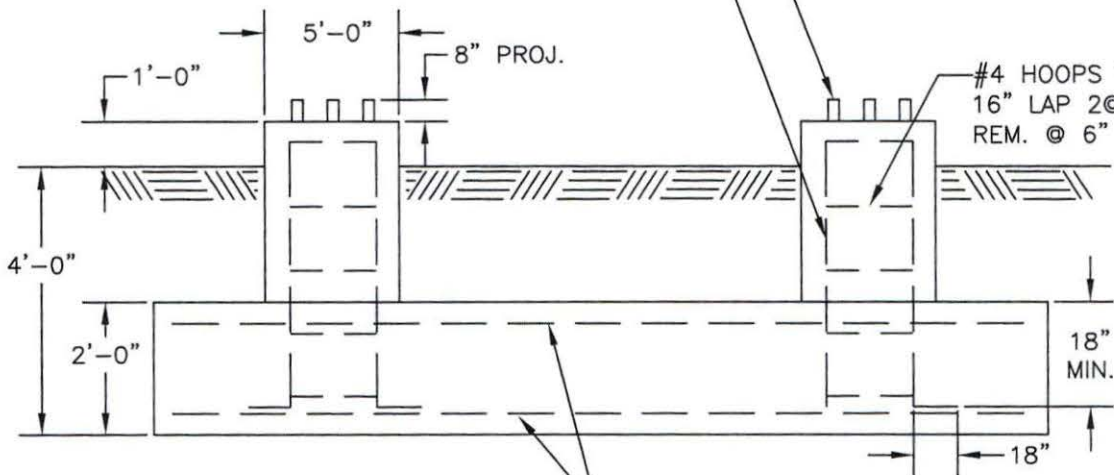
WORLD TOWER

SCALE	NONE	DWN.	LKG	CKD.	DATE	1-20-16
FILE					DWG. NO.	Q16001AB



128.0 CU. YDS.
CONCRETE REQ'D.

BASE REACTIONS	
OTM:	13612.0 FT. KIPS
COMP.	595.0 KIPS
UPLIFT	501.0 KIPS
SHEAR (3 LEGS)	87.0 KIPS
WT. NO ICE	100.0 KIPS
WT. 1/2" ICE	247.0 KIPS



20 #8 VERT. REBARS
WITH 90° A.C.I. BEND
AT BOTTOM

ANCHOR BOLTS
EMBEDDED PLATE AT BOTTOM

#4 HOOPS WITH
16" LAP 2@3",
REM. @ 6"

44-#11 REBARS
EACH WAY TOP AND BOTTOM
(176 TOTAL)



1-20-2016

GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCEMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION DESIGN IS BASED ON CUSTOMER SUPPLIED SOIL DATA FROM ERM2. PROJECT NUMBER 165-000-0019 DATED JANUARY 15, 2016.

TITLE:
FOUNDATION DETAIL
300' WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: MOON, KY

WORLD TOWER

SCALE NONE	DWN. LKG	CKD.	DATE 1-20-16
FILE	DWG. NO. Q16001F		



**Federal Aviation
Administration**

FAA Advisory Circular 70/7460-1L, Obstructed Obstacle Lighting was published on 12/4/2015, and is effective as of that date. The document may be viewed at

[http://www.faa.gov
/regulations_policies
/advisory_circulars/index.cfm
/go/document.information
/documentID/1028657](http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1028657)

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport


Project Name: EAST -000352253-15 **Sponsor:** East Kentucky Network, LLC

Details for Case : Moon

[Show Project Summary](#)

Case Status

ASN: 2015-ASO-22179-OE
Status: Accepted
Public Comments: None

Date Accepted: 12/24/2015
Date Determined:
Letters: None
Documents: 12/24/2015  Moon_2C Survey.pdf

Project Documents:
None

Construction / Alteration Information

Notice Of: Construction
Duration: Permanent
if Temporary : Months: Days:
Work Schedule - Start: 01/15/2016
Work Schedule - End: 01/20/2016

**For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.*

State Filing: Filed with State

Structure Summary

Structure Type: Tower
Structure Name: Moon
FDC NOTAM:
NOTAM Number:
FCC Number:
Prior ASN:

Structure Details

Latitude: 37° 57' 33.38" N
Longitude: 83° 2' 32.40" W
Horizontal Datum: NAD83
Site Elevation (SE): 1244 (nearest foot)
Structure Height (AGL): 310 (nearest foot)
Current Height (AGL): (nearest foot)

** For notice of alteration or existing provide the current*

Common Frequency Bands

Low Freq	High Freq	Freq Unit	ERP	ERP Unit
698	806	MHz	1000	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

AG Height of the existing structure.
Include details in the Description of Proposal

Minimum Operating Height (AGL): (nearest foot)
* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.

Nacelle Height (AGL): (nearest foot)
* For Wind Turbines 500ft AGL or greater

Requested Marking/Lighting: Dual-red and medium intensity

Other :

Recommended Marking/Lighting:

Current Marking/Lighting: N/A Proposed Structure

Other :

Nearest City: Moon

Nearest State: Kentucky

Description of Location: Approx. 1.0 mi SSE of Moon (Morgan), KY

On the Project Summary page upload any certified survey.

Description of Proposal: A new 300' tower with top-mounted antennas (overall height of 310' AGL).

930	931	MHz	3	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

Specific Frequencies



KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) East Kentucky Network, LLC c/o LNGS		PHONE 703-584-8667	FAX 703-584-8692	KY AERONAUTICAL STUDY #	
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICANT'S REPRESENTATIVE (name) Ali Kuzehkanani		PHONE 703-584-8667	FAX 703-584-8692		
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 01/20/16 End 01/25/16	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building		MARKING/PAINTING/LIGHTING PREFERRED			
<input checked="" type="checkbox"/> Antenna Tower		<input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity			
<input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank		<input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white			
<input type="checkbox"/> Landfill <input type="checkbox"/> Other		<input type="checkbox"/> Other			
LATITUDE 37°57'33.38"		LONGITUDE 83°02'32.40"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27	
		<input type="checkbox"/> Other			
NEAREST KENTUCKY City Moon County Morgan			NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT West Liberty Airport		
SITE ELEVATION (AMSL, feet) 1244		TOTAL STRUCTURE HEIGHT (AGL, feet) 310		CURRENT (FAA aeronautical study #)	
ERALL HEIGHT (site elevation plus total structure height, feet) 1554				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 11.8 miles				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) WSW					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Approx. 1.0 mile SSE of Moon (Morgan), KY					
DESCRIPTION OF PROPOSAL A new 300' tower with top-mounted antennas (overall height of 310' AGL)					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 12/24/15					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME Ali Kuzehkanani	TITLE Dir of Engineering	SIGNATURE 		DATE 12/24/15	
MISSION ACTION		<input type="checkbox"/> Chairperson, KAZC			
		<input type="checkbox"/> Administrator, KAZC			
<input type="checkbox"/> Approved	SIGNATURE			DATE	
<input type="checkbox"/> Disapproved					



KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) East Kentucky Network, LLC c/o LNGS		PHONE 703-584-8667	FAX 703-584-8692	KY AERONAUTICAL STUDY #	
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICANT'S REPRESENTATIVE (name) Ali Kuzehkanani		PHONE 703-584-8667	FAX 703-584-8692		
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 01/20/16 End 01/25/16	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building		MARKING/PAINTING/LIGHTING PREFERRED			
<input checked="" type="checkbox"/> Antenna Tower		<input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity			
<input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank		<input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white			
<input type="checkbox"/> Landfill <input type="checkbox"/> Other		<input type="checkbox"/> Other			
LATITUDE 37°57'33.38"		LONGITUDE 83°02'32.40"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27	
<input type="checkbox"/> Other					
NEAREST KENTUCKY City Moon County Morgan			NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT West Liberty Airport		
SITE ELEVATION (AMSL, feet) 244		TOTAL STRUCTURE HEIGHT (AGL, feet) 310		CURRENT (FAA aeronautical study #)	
ERALL HEIGHT (site elevation plus total structure height, feet) 1554				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 11.8 miles				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) WSW					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Approx. 1.0 mile SSE of Moon (Morgan), KY					
DESCRIPTION OF PROPOSAL A new 300' tower with top-mounted antennas (overall height of 310' AGL)					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 12/24/15					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME Ali Kuzehkanani	TITLE Dir of Engineering	SIGNATURE 		DATE 12/24/15	
MISSION ACTION		<input type="checkbox"/> Chairperson, KAZC			
<input type="checkbox"/> Approved		<input type="checkbox"/> Administrator, KAZC			
<input type="checkbox"/> Disapproved		SIGNATURE		DATE	

Driving Directions for Moon

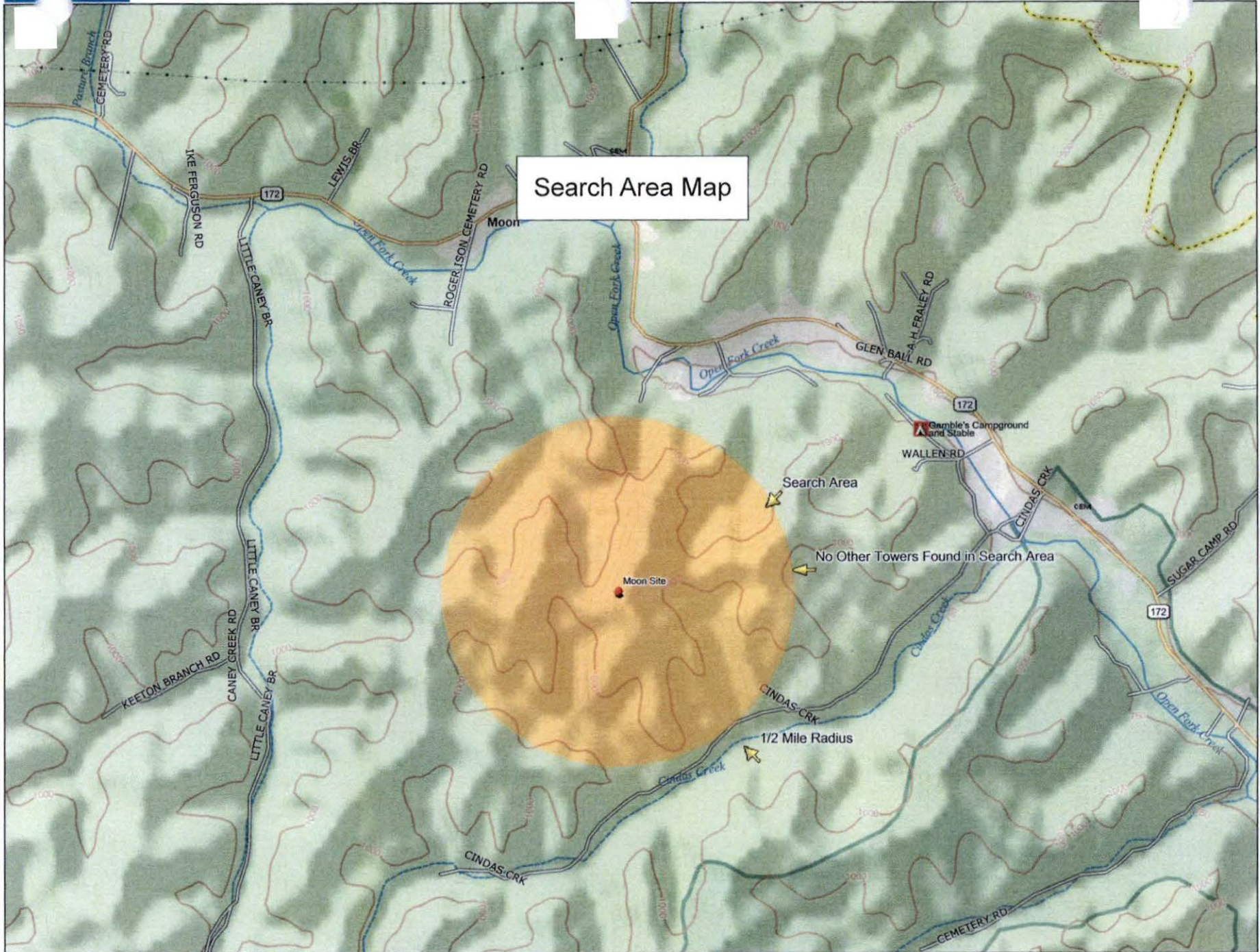
Starting in front of the Morgan County Courthouse, on the corner of Court Street and Main Street, go .1 mile, turn right on Prestonsburg Street (Rt. 460 East), then go .9 miles and turn left on HWY 172 East. Then go 18.1 miles, turn right on Cindas Creek Road, go 1.1 miles, tower site access road on the right (signs will be posted here).

Prepared By:

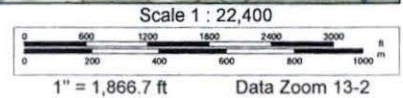
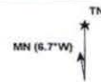
Jack Adkins

Appalachian Wireless

606-339-0531



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 www.delorme.com



DEED OF CONVEYANCE

THIS DEED OF CONVEYANCE, entered into this 17th day of December 2015, between **David I. Blanton and Victoria J. Blanton**, married, whose address is 6829 Windham Parkway, Prospect, Kentucky 40059, **GRANTORS**, and **East Kentucky Network, LLC d/b/a Appalachian Wireless**, of 101 Technology Trail, Ivel, Kentucky 41642, which is also the "in care of" address to which the property tax bill for 2016, if any, may be sent, **GRANTEE**;

WITNESSETH:

That said Grantors for and in consideration of the sum of Ten Thousand Dollars (\$10,000.00), cash in hand paid, the receipt and sufficiency of which is hereby acknowledged, do hereby grant, sell and convey to the Grantee, its successors and assigns, the following described property, situated on Cinda Creek, a tributary of Paint Creek in Morgan County, Kentucky, to-wit:

Being a portion of the property conveyed from David Ishmael Blanton, Executor of the Estate of Ruie C. Blanton aka Ruie Blanton, to David Ishmael Blanton and Victoria J. Blanton, husband and wife, dated November 9, 2006, recorded on July 26, 2007 in Deed Book 206, Page 361, Morgan County Clerk's Office.

BEING the same property described by metes and bounds in the description attached hereto and made a part hereof as Exhibit "A", and as shown on the plat dated day of November 5, 2015, prepared by Steven E. Haywood, LS 2661, Licensed Land Surveyor, and attached hereto and made a part hereof as Exhibit "B."

Grantors reserve and except all of the mineral, including coal, oil & gas, underlying the real property herein conveyed.

Grantors further grant and convey unto Grantee, its successors and assigns, the right to remove any trees, tree limbs, undergrowth or obstructions within 25' of the property boundary line that might interfere with or damage any towers or structures that Grantee, its successors or assigns, may place upon the above described tract of land.

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

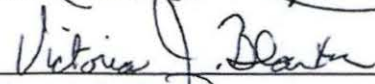
We, the undersigned, do hereby certify and swear pursuant to KRS Chapter 382, that the full and complete consideration paid for the transfer of the hereinabove described property was Ten Thousand Dollars (\$10,000.00).

IN TESTIMONY WHEREOF, the parties have hereunto subscribed their names, this day and year aforesaid.

GRANTORS:



David I. Blanton



Victoria J. Blanton

GRANTEE:

**EAST KENTUCKY NETWORK, LLC
d/b/a APPALACHIAN CELLULAR**

BY: 
ITS: CEO/GM

STATE OF KENTUCKY

COUNTY OF Jefferson

I, Laura Webb, a Notary Public in and for the County and State aforesaid, do hereby certify that the foregoing Deed of Conveyance and Consideration Certificate was this day produced, acknowledged, subscribed and sworn before me in the said County and State and signed by David I. Blanton and Victoria J. Blanton, **Grantors**, this 17th day of December, 2015.

Laura Webb
NOTARY PUBLIC
Commission Expires: 10-25-2018

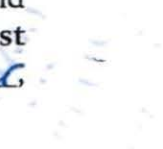


STATE OF KENTUCKY

COUNTY OF FLOYD

I, Raina L. Bradley, a Notary Public in and for the county and state aforesaid, do hereby certify that the foregoing Deed of Conveyance and Consideration Certificate was this day produced, acknowledged, subscribe and sworn to before me in said County and State and signed by W.A. Gillum AS CEO/Gm of East Kentucky Network, LLC, d/b/a Appalachian Cellular, this 21st day of December, 2015.

Raina L. Bradley
NOTARY PUBLIC
Commission Expires: Feb 3, 2016



This is to certify that this instrument was prepared by:

William S. Kendrick
WILLIAM S. KENDRICK, ATTORNEY
PENN, STUART & ESKRIDGE
119 East Court Street, Ste. 201
Prestonsburg, Kentucky 41653
606/263-4966

**STATE OF KENTUCKY
COUNTY OF MORGAN**

**Clerk's Certificate
of Lodgment and Record**

I, _____, Clerk of the County for the County and State aforesaid, certify that the foregoing Deed was on the ____ day of _____, 2015 lodged for record, whereupon the same, with the foregoing and this certificate have been duly recorded in my office.

WITNESS my hand, this ____ day of _____, 2015.

_____ Clerk

By _____ D.C.




David I. Blanton
Description of Purchase

A certain tract or parcel of land situated on Cinda Creek, a tributary of Paint Creek, in Morgan County, Kentucky and more particularly described as follows.

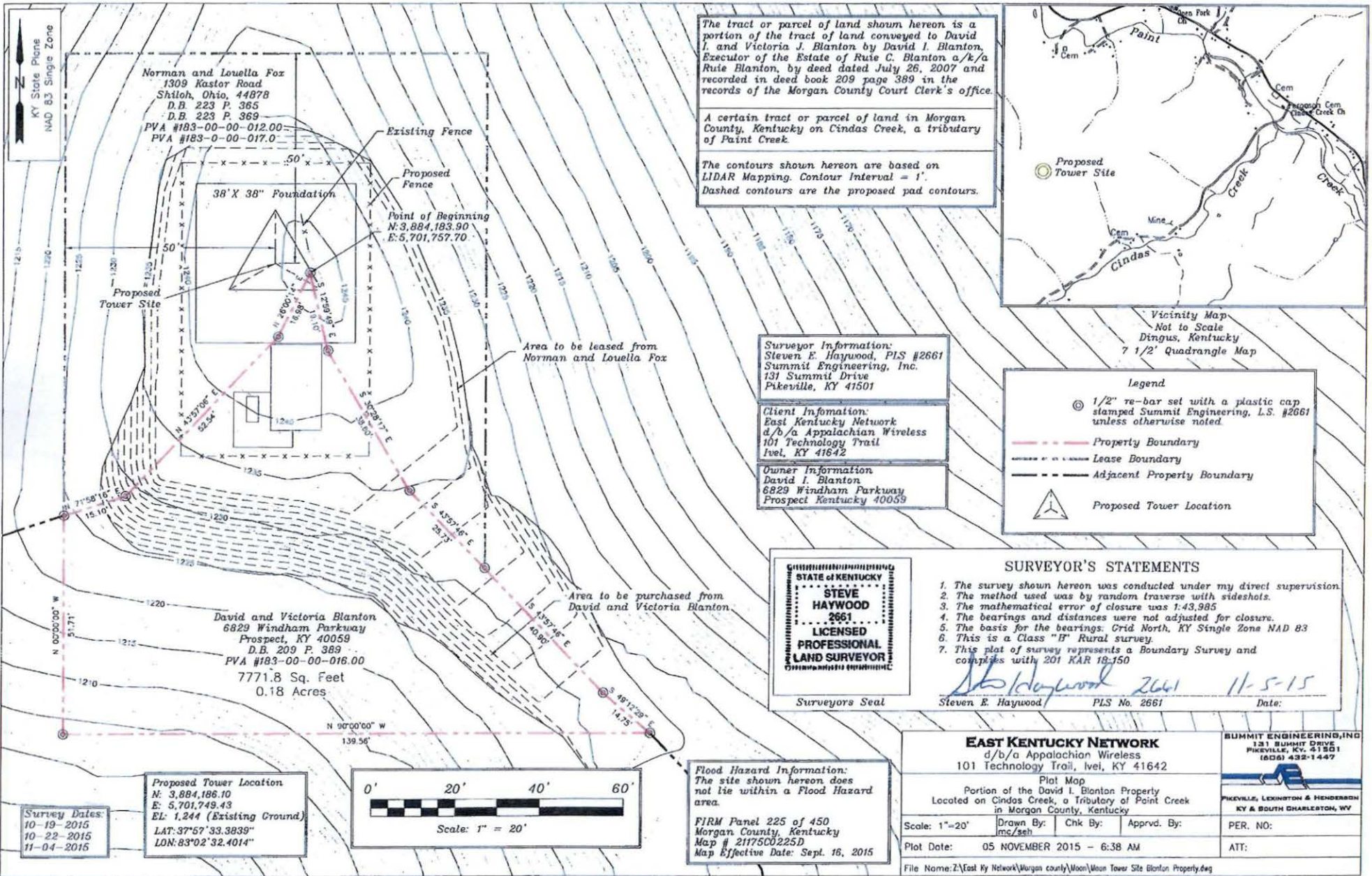
Unless stated otherwise any monument referred to herein as a re-bar is a Re-Bar and Cap is a set 1/2" steel re-bar eighteen (18") in length with a yellow plastic cap stamped Summit L.S. #2661. All bearings stated herein are referred to Grid North based on Kentucky Single Zone State Plane NAD 83 coordinates.

Beginning at a set re-bar on a high knob where Turkey Branch, the Jim Harve Branch and Smith Branch all join and being a corner to David I. Blanton (D.B. 209 P. 389) and Norman H. Fox D.B. 223 P. 365 & D.B. 223 P. 369) and having Kentucky Single Zone Coordinates of N:3,884,183.90 E:5,701,757.70;

Thence, running down the ridge between Turkey Branch and Jim Harve Branch S 12°59'49" E a distance of 19.10' to a set re-bar; Thence, S 30°28'17" E a distance of 38.60' to a set re-bar; Thence, S 43°57'46" E a distance of 25.73' to a set re-bar; Thence, S 43°57'46" E a distance of 40.90' to a set re-bar; Thence, S 49°12'29" E a distance of 14.75' to a set re-bar; Thence, leaving the ridge and the line of Norman H. Fox and running around the hill N 90°00'00" W a distance of 139.56' to a set re-bar; Thence, up the hill N 00°00'00" W a distance of 51.71' to a set re-bar on the ridge between Turkey Branch and Smith Branch on the line of Norman H. Fox (D.B. 223 P. 369); Thence, up the ridge N 71°58'16" E a distance of 15.10' to a set re-bar; Thence, N 43°57'06" E a distance of 52.54' to a set re-bar; Thence, N 26°00'14" E a distance of 16.98' to the point of beginning and containing 0.18 acres more or less according to a survey conducted by persons under the direct supervision of Steven E. Haywood, PLS #2661 with Summit Engineering on November 4th, 2015 and being a portion of Tract #1 of the land conveyed to David Ishmael Blanton and Victoria J. Blanton, husband and wife, by David Ishmael Blanton, Executor of the Estate of Ruie C. Blanton a/k/a Ruie Blanton by deed dated July 26th, 2007 which is recorded in Deed Book 209 Page 389 in the records of the Morgan County Court Clerk's office.


Steven E. Haywood, PLS #2661

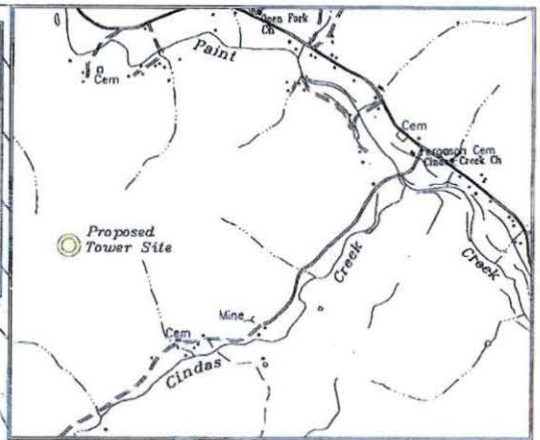
STATE of KENTUCKY
STEVE
HAYWOOD
2661
LICENSED
PROFESSIONAL
LAND SURVEYOR
Date: 11/5/2015



The tract or parcel of land shown hereon is a portion of the tract of land conveyed to David I. and Victoria J. Blanton by David I. Blanton, Executor of the Estate of Ruse C. Blanton a/k/a Ruse Blanton, by deed dated July 26, 2007 and recorded in deed book 209 page 389 in the records of the Morgan County Court Clerk's office.

A certain tract or parcel of land in Morgan County, Kentucky on Cindas Creek, a tributary of Paint Creek.

The contours shown hereon are based on LIDAR Mapping. Contour Interval = 1'. Dashed contours are the proposed pad contours.



Vicinity Map
Not to Scale
Dingus, Kentucky
7 1/2' Quadrangle Map

Surveyor Information:
Steven E. Haywood, PLS #2661
Summit Engineering, Inc.
131 Summit Drive
Pikeville, KY 41501

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

Owner Information:
David I. Blanton
6829 Windham Parkway
Prospect Kentucky 40059

Legend

- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted
- Property Boundary
- - - Lease Boundary
- Adjacent Property Boundary
- ▲ Proposed Tower Location

STATE OF KENTUCKY
STEVE HAYWOOD
2661
LICENSED PROFESSIONAL LAND SURVEYOR

Surveyors Seal

SURVEYOR'S STATEMENTS

1. The survey shown hereon was conducted under my direct supervision.
2. The method used was by random traverse with sideshots.
3. The mathematical error of closure was 1:43,985
4. The bearings and distances were not adjusted for closure.
5. The basis for the bearings, Grid North, KY Single Zone NAD 83
6. This is a Class "I" Rural survey.
7. This plat of survey represents a Boundary Survey and complies with 201 KAR 18:150

Steven E. Haywood, PLS No. 2661, Date: 11-5-15

Norman and Louella Foz
1309 Kastor Road
Shiloh, Ohio, 44878
D.B. 223 P. 365
D.B. 223 P. 369
PVA #183-00-00-012.00
PVA #183-0-00-017.0

David and Victoria Blanton
6829 Windham Parkway
Prospect, KY 40059
D.B. 209 P. 389
PVA #183-00-00-016.00
7771.8 Sq. Feet
0.18 Acres

Proposed Tower Location
N: 3,884,186.10
E: 5,701,749.43
EL: 1,244 (Existing Ground)
LAT: 37°57'33.3839"
LON: 83°02'32.4014"

Survey Dates:
10-19-2015
10-22-2015
11-04-2015

Flood Hazard Information:
The site shown hereon does not lie within a Flood Hazard area.

FIRM Panel 225 of 450
Morgan County, Kentucky
Map # 21175C0225D
Map Effective Date: Sept. 16, 2015

EAST KENTUCKY NETWORK
d/b/a Appalachian Wireless
101 Technology Trail, Ivel, KY 41642

Plot Map
Portion of the David I. Blanton Property
Located on Cindas Creek, a Tributary of Paint Creek
in Morgan County, Kentucky

Scale: 1"=20' Drawn By: jmc/seh Chk By: Apprvd. By: PER. NO:

Plot Date: 05 NOVEMBER 2015 - 6:38 AM ATT:

SUMMIT ENGINEERING, INC.
131 SUMMIT DRIVE
PIKEVILLE, KY 41501
(606) 432-1447

PIKEVILLE, LEXINGTON & HENDERSON
KY & SOUTH CHARLESTON, WV

LODGED FOR RECORD
MORGAN COUNTY CLERK

DEC 17 2015

TIME: 3:00PM
RANDY WILLIAMS CLERK

23
30
\$ 53
PD

DEED OF CONVEYANCE

THIS DEED OF CONVEYANCE, entered into this 4th day of December, 2015,
between **Norman H. Fox and Louella S. Fox**, married, whose address is 1309 Kastor
Road, Shiloh, Ohio 44878, **GRANTORS**, and **East Kentucky Network, LLC d/b/a**
Appalachian Wireless, of 101 Technology Trail, Ivel, Kentucky 41642, which is also the
"in care of" address to which the property tax bill for 2016, if any, may be sent, **GRANTEE**;

WITNESSETH:

That said Grantors for and in consideration of the sum of Thirty Thousand Dollars
(\$30,000.00), cash in hand paid, the receipt and sufficiency of which is hereby
acknowledged, do hereby grant, sell and convey to the Grantee, its successors and assigns,
the following described property, situated on Cinda Creek, a tributary of Paint Creek in
Morgan County, Kentucky, to-wit:

Being a portion of Tract #2 of the property conveyed from
Timothy G. Bergey and Ruth H. Bergey, husband and wife,
dated June 18, 2012, to Norman H. Fox and Louella S. Fox,
husband and wife, recorded in Deed Book 223, Page 365, and a
portion of the tract of land conveyed by deed from Timothy
G. Bergey and Ruth H. Bergey, husband and wife, dated June
18, 2012, to Norman H. Fox and Louella S. Fox, husband and
wife, recorded in Deed Book 223, Page 369, both of record in
the Morgan County Clerk's Office.

BEING the same property described by metes and bounds in
the description attached hereto and made a part hereof as
Exhibit "A", and as shown on the plat dated day of November
25, 2015, prepared by Steven E. Haywood, LS 2661, Licensed
Land Surveyor, and attached hereto and made a part hereof as
Exhibit "B."

Grantors grant and convey unto Grantee, its successors or assigns, a permanent
easement and right of way for a roadway of sufficient width for ingress and egress with

East Ky Network - ENV

men, vehicles, equipment and machinery over and across Grantors' retained surface property to the tract or parcel of land granted and conveyed herein to Grantee, its successors and assigns together with the right to reconstruct or use any existing roadways over Grantors' retained surface for such purposes.

Grantors grant and convey unto Grantee, its successors or assigns, an easement and right of way to construct and maintain any and all power lines, telephone lines, co-axial lines or any other utilities or related facilities needed and/or necessary for use by Grantee, its successors or assigns, over and across Grantors' retained surface property to the tract or parcel of land granted and conveyed herein to Grantee, its successor and assigns.

Grantors further grant and convey unto Grantee, its successors and assigns, the right to remove any trees, tree limbs, undergrowth or obstructions upon Grantors' retained surface property that might interfere with or damage any towers or structures that Grantee, its successors or assigns, may place upon the above described tract of land, or with the easements and rights of way granted herein.

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

We, the undersigned, do hereby certify and swear pursuant to KRS Chapter 382, that the full and complete consideration paid for the transfer of the hereinabove described property was Thirty Thousand Dollars (\$30,000.00).

IN TESTIMONY WHEREOF, the parties have hereunto subscribed their names,
this day and year aforesaid.

GRANTORS:

Norman H. FOX
Norman H. Fox

Louella S. Fox
Louella S. Fox

GRANTEE:

EAST KENTUCKY NETWORK, LLC
d/b/a APPALACHIAN WIRELESS

BY: W A Gillum
ITS: CEO/GM

^{Ohio}
STATE OF ~~KENTUCKY~~

COUNTY OF Richland

I, Sue A Cuppy, a Notary Public in and for the County and State
aforesaid, do hereby certify that the foregoing Deed of Conveyance and Consideration
Certificate was this day produced, acknowledged, subscribed and sworn before me in the
said County and State and signed by Norman H. Fox and Louella S. Fox, Grantors, this
4 day of Dec., 2015.



SUE A.
CUPPY
NOTARY PUBLIC.
STATE OF OHIO
My Commission
Expires
November 9, 2019

Sue A Cuppy
NOTARY PUBLIC
Commission Expires: 11-9-2019

STATE OF KENTUCKY

COUNTY OF FLOYD

I, Raina Bradley, a Notary Public in and for the county and state aforesaid, do hereby certify that the foregoing Deed of Conveyance and Consideration Certificate was this day produced, acknowledged, subscribe and sworn to before me in said County and State and signed by WA Coillum AS CEO/GM of East Kentucky Network, LLC, d/b/a Appalachian Wireless, this 8th day of December, 2015.

Raina S. Bradley
NOTARY PUBLIC
Commission Expires: Feb 3, 2016

This is to certify that this instrument was prepared by:

William S. Kendrick

WILLIAM S. KENDRICK, ATTORNEY
PENN, STUART & ESKRIDGE
119 East Court Street, Ste. 201
Prestonsburg, Kentucky 41653
606/263-4966

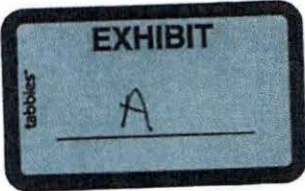
STATE OF KENTUCKY
COUNTY OF MORGAN

Clerk's Certificate
of Lodgment and Record

I, Randy Williams Clerk of the County for the County and State aforesaid, certify that the foregoing Deed was on the 17th day of Dec, 2015 lodged for record, whereupon the same, with the foregoing and this certificate have been duly recorded in my office.

WITNESS my hand, this 21 day of Dec, 2015.

Randy Williams Clerk
By Anthony Straco D.C.
4



Norman H. Fox
Description of Purchase

A certain tract or parcel of land situated on Cinda Creek, a tributary of Paint Creek, in Morgan County, Kentucky and more particularly described as follows.

Unless stated otherwise any monument referred to herein as a re-bar is a Re-Bar and Cap is a set 1/2" steel re-bar eighteen (18") in length with a yellow plastic cap stamped Summit L.S. #2661. All bearings stated herein are referred to Grid North based on Kentucky Single Zone State Plane NAD 83 coordinates.

Beginning at a set re-bar on a high knob where Turkey Branch, the Jim Harve Branch and Smith Branch all join and being a corner to David I. Blanton (D.B. 209 P. 389) and Norman H. Fox D.B. 223 P. 365 & D.B. 223 P. 369) and having Kentucky Single Zone Coordinates of N:3,884,183.90 E:5,701,757.70;

Thence, down the ridge between Turkey Branch and Smith Creek with David I. Blanton line (D.B. 209 P. 389) S 26°00'14" W a distance of 16.98' to a set re-bar; Thence, S 43°57'06" W a distance of 52.54' to a set re-bar; Thence, S 71°58'16" W a distance of 15.10' to a set re-bar; Thence, leaving the line of David I. Blanton the ridge and running around the hill N 00°00'00" W a distance of 109.97' to a set re-bar; Thence, up the hill N 90°00'00" E a distance of 50.00' to a set re-bar on the ridge between Jim Harve Branch and Smith Branch and being the line between Norman H. Fox property described in deed book 223 page 365 Tract #2 and deed book 223 page 369; Thence, down the hill N 89°59'34" E 48.77' to a set re-bar; Thence, around the hill S 89°59'35" E a distance of 51.23' to a set re-bar; Thence, S 00°00'00" E a distance of 72.60' to a set re-bar on the ridge between Jim Harve Branch and Turkey Branch and being on the line of David I. Blanton (D.B. 209 P. 389); Thence, up the ridge N 43°57'46" W a distance of 25.73' to a set re-bar; Thence, N 30°28'17" W a distance of 38.60' to a set re-bar; Thence, N 12°59'49" W a distance of 19.10' to the point of beginning and containing 0.21 acres more or less according to a survey conducted by persons under the direct supervision of Steven E. Haywood, PLS #2661 with Summit Engineering on November 4th, 2015 and being a portion of Tract #2 in the land conveyed to Norman H. Fox and Louella Fox, husband and wife, by Timothy G. Bergey and Ruth H. Bergey, husband and wife, by deed dated June 18th, 2012 and recorded in deed Book 223 page 365 and a portion of the tract of land convey to Norman H. Fox and Louella Fox, husband and wife, by Timothy G. Bergey and Ruth H. Bergey, husband and wife, by deed dated June 18th, 2012 and recorded in deed Book 223 page 369. Both reference deed are recorded in the records of the Morgan County court Clerk's office.


Steven E. Haywood, PLS #2661



Date: 11/25/2015

STATE OF KENTUCKY
COUNTY OF MORGAN

I, Randy Williams, Clerk Morgan County for the county and state aforesaid do hereby certify that the foregoing **DEED** was on the 17th day of Dec, 20 15 lodged for record, whereupon the foregoing and this certificate have been duly recorded in my office. Given under my hand this the 21 day of Dec 20 15
Randy Williams, Clerk

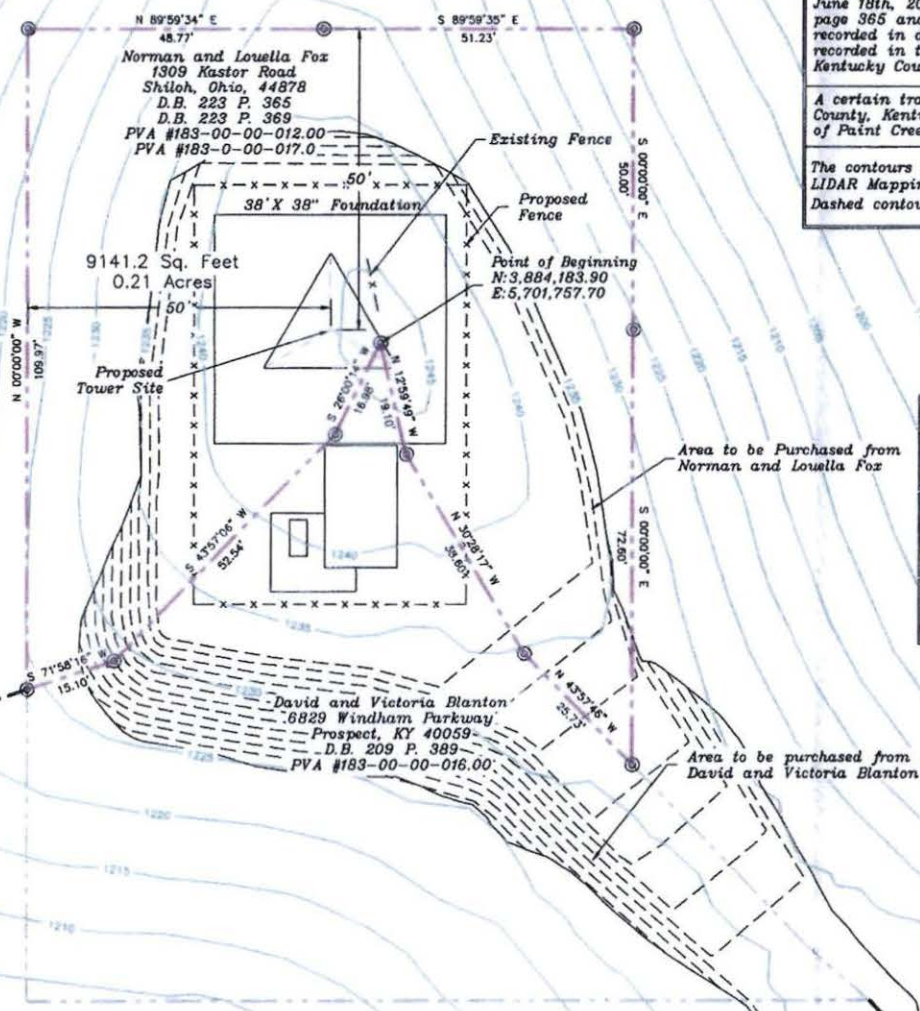
BY:  D.C.

DB 232 page 249



 KY State Plane

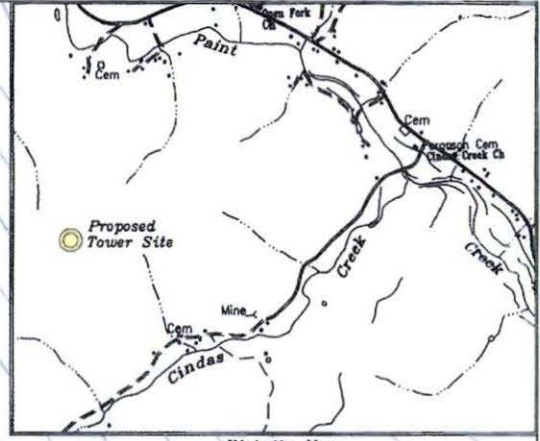
 NAD 83 Single Zone



The tract or parcel of land shown hereon is a portion of the tract of land conveyed to Norman and Louella Fox by Timothy C. Bergy by deed dated June 18th, 2012 and recorded in deed book 223 page 365 and deed dated June 18th, 2012 and recorded in deed book 223 page 369 and recorded in the records of the Morgan County, Kentucky Court Clerk's office.

A certain tract or parcel of land in Morgan County, Kentucky on Cindas Creek, a tributary of Paint Creek.

The contours shown hereon are based on LIDAR Mapping. Contour Interval = 1'. Dashed contours are the proposed pad contours.



Vicinity Map
 Not to Scale
 Dingus, Kentucky
 7 1/2' Quadrangle Map

Surveyor Information:
 Steven E. Haywood, PLS #2661
 Summit Engineering, Inc.
 131 Summit Drive
 Pikeville, KY 41501

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

Owner Information:
 Norman H. Fox
 1309 Kastor RD
 Shiloh, Ohio, 44878

Legend

- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted.
- Property Boundary (Fox)
- Property Boundary (Blanton)
- - - Adjacent Property Boundary
- △ Proposed Tower Location

STATE OF KENTUCKY
 STEVE HAYWOOD
 2661
 LICENSED
 PROFESSIONAL
 LAND SURVEYOR

Surveyors Seal

SURVEYOR'S STATEMENTS

- The survey shown hereon was conducted under my direct supervision.
- The method used was by random traverse with sideshots.
- The mathematical error of closure was 1:43,985
- The bearings and distances were not adjusted for closure.
- The basis for the bearings: Grid North, KY Single Zone NAD 83
- This is a Class "B" Rural survey.
- This plat of survey represents a Boundary Survey and complies with 201 KAR 18:150

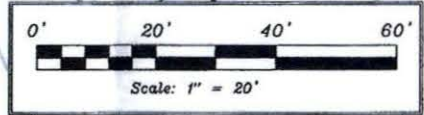
Steven E. Haywood 2661 11-25-14
 Steven E. Haywood PLS No. 2661 Date:

Survey Dates:
 10-19-2015
 10-22-2015
 11-04-2015

Flood Hazard Information:
 The site shown hereon does not lie within a Flood Hazard area.

FIRM Panel 225 of 450
 Morgan County, Kentucky
 Map # 21175C0225D
 Map Effective Date: Sept. 16, 2015

Proposed Tower Location
 N: 3,884,186.10
 E: 5,701,749.43
 EL: 1,244 (Existing Ground)
 LAT: 37°57'33.3839"
 LON: 83°02'32.4014"



EAST KENTUCKY NETWORK
 d/b/a Appalachian Wireless
 101 Technology Trail, Ivel, KY 41642

Plot Map Moon Tower Site
 Portion of the Norman and Louella Fox Property
 Located on Cindas Creek a Tributary of
 of Point Creek, Morgan County, Kentucky

Scale: 1"=20' Drawn By: mc/geb Chk By: Apprvd. By: PER. NO:
 Plot Date: 25 NOVEMBER 2015 - 7:17 AM ATT:
 File Name: Z:\East Ky Network\Morgan county\Moon Tower Site Fox Property.dwg

SUMMIT ENGINEERING, INC
 131 SUMMIT DRIVE
 PIKEVILLE, KY 41501
 (800) 422-1447

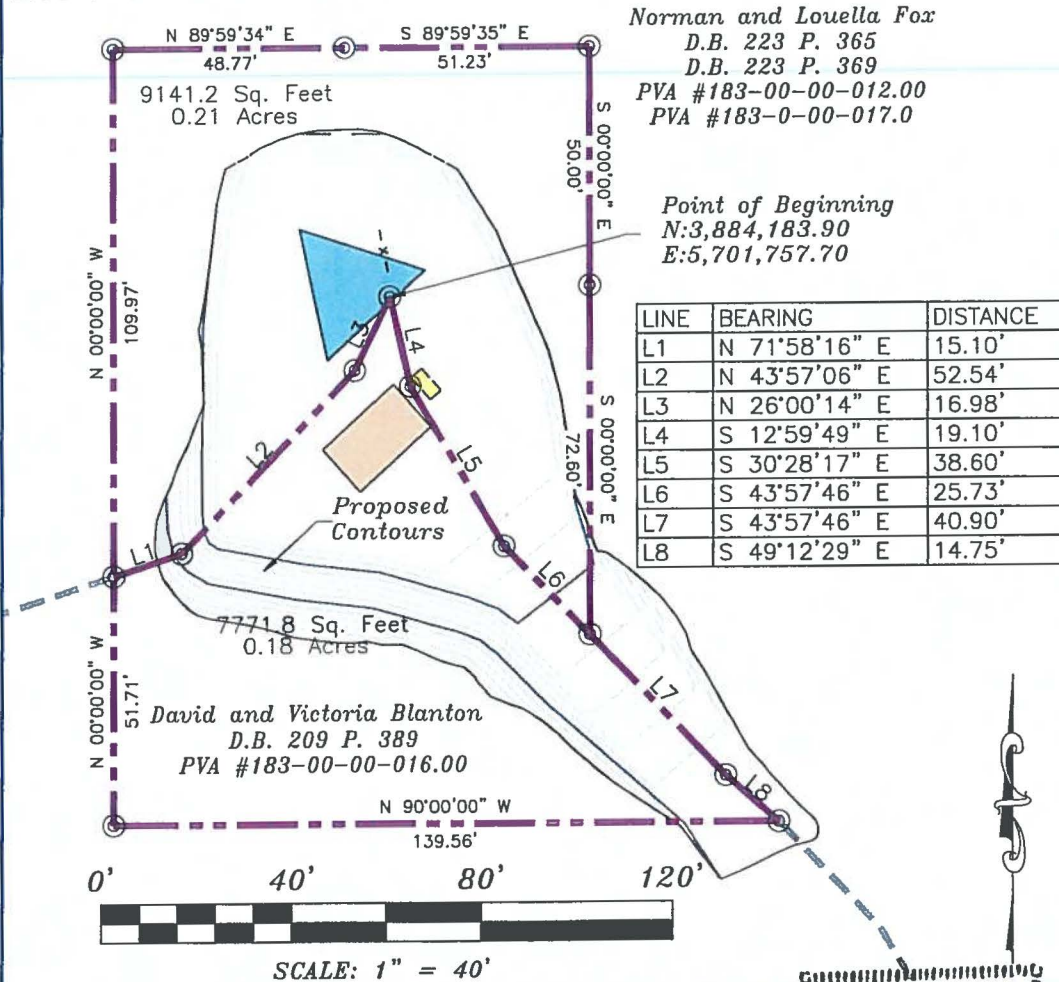
PIKEVILLE, LEITCHSPON & HENDERSON
 KY & SOUTH CHARLESTON, WV

MOON TOWER

SITE SURVEY WITH PROPOSED TOWER & BUILDING LOCATION

CENTER OF TOWER
 LAT: 37° 57' 33.38"
 LON: 83° 02' 32.40"

NOTE: Survey taken from Plat by Summit Engineering, Inc. dated 11-5-2015.



Legend

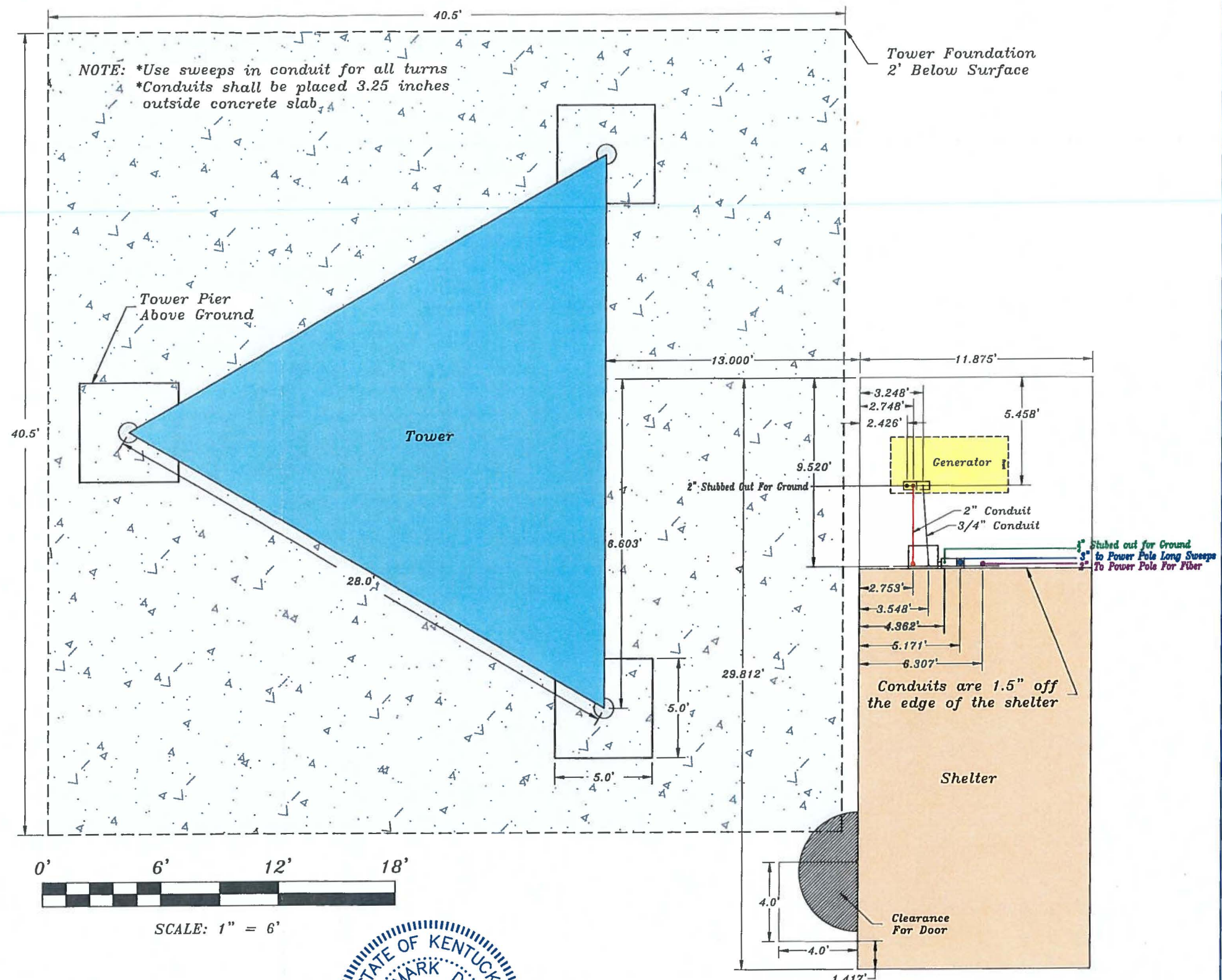
- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted.
- Boundary
- - - Adjoining Property Lines
- x - x - x - Fence
- ▲ Proposed Tower Location

FAA Certification

In Accordance with FAA Order 8260.19G, Appendix C, I hereby certify that the Obstacle Accuracy Codes for the proposed Tower meets or exceeds accuracy 2C (+50 ft Horizontal and +20 ft Vertical).

Steven E. Haywood #2661 2-26-16
 Steven E. Haywood, PLS #2661 Date

STATE OF KENTUCKY
STEVE HAYWOOD
 2661
 LICENSED
PROFESSIONAL LAND SURVEYOR
 - NAD 83 KY Single Zone State Plane Coordinates
 N: 3,884,186.10
 E: 5,701,749.43
 - EL: 1244 (Existing Ground)



STATE OF KENTUCKY
MARK D. SANDERS
 # 24236
 LICENSED
PROFESSIONAL ENGINEER

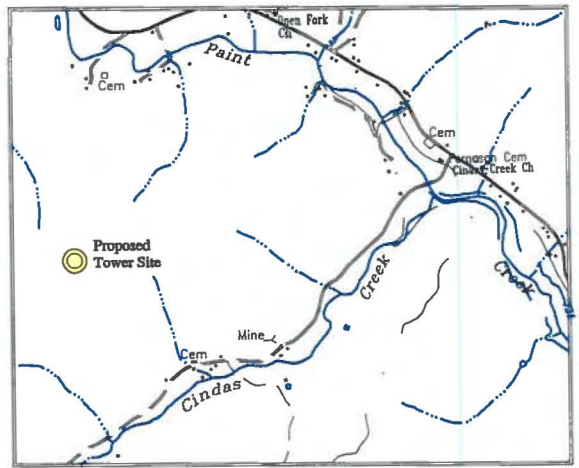
Mark Sanders 24236 2-26-16
 Mark Sanders PE# 24236 DATE

EAST KENTUCKY NETWORK D/B/A APPALACHIAN WIRELESS 101 TECHNOLOGY TRAIL, IVEL, KY 41643				SUMMIT ENGINEERING, INC. 131 SUMMIT DRIVE PIKEVILLE, KY. 41501 (606) 432-1447
Moon Tower Site Map Norman & Louella Fox Property David & Victoria Blanton Cindas Creek, a Tributary of Paint Creek, Morgan County, KY				PER. NO:
Scale: As Noted	Drawn By: MAC	Chk By: MAC	Apprvd. By:	ATT:
Plot Date: 26 FEBRUARY 2016 - 11:50 AM				
File Name: Z:\East Ky Network\Morgan county\Moon\Moon Site Plan.dwg				

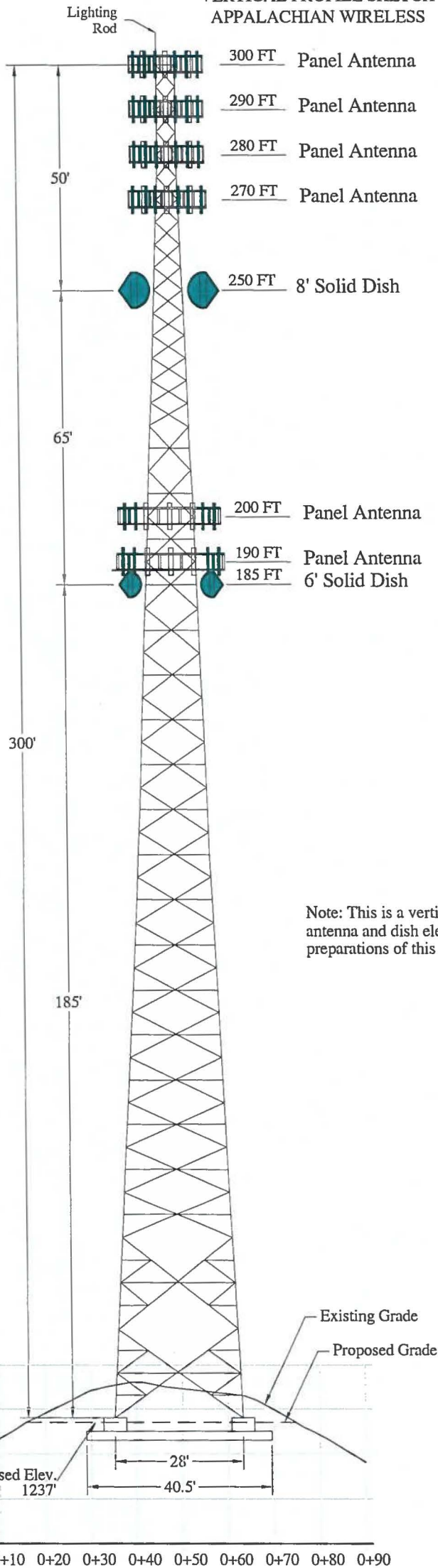
Application
CONTAINS
LARGE OR OVERSIZED
MAP(S)

RECEIVED ON:
03/08/2016

MOON TOWER
VERTICAL PROFILE SKETCH
APPALACHIAN WIRELESS



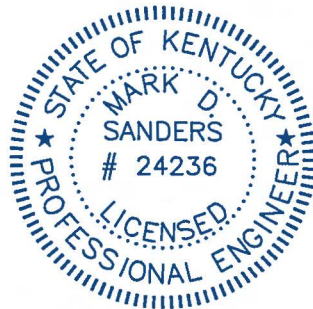
Vicinity Map
NTS



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



Graphic Scale
1" = 30'



MD 24236 2-26-16
 Mark Sanders PE #24236 Date

DATE: 2-26-2016	SCALE: 1"=30'	East Kentucky Network D/B/A/ Appalachian Wireless 101 Technology Trail, Ivel, KY 41642	SUMMIT ENGINEERING, INC. 131 SUMMIT DRIVE PIKEVILLE, KY. 41501 (606) 432-1447
DRAWN BY: MAC			
File Name: Z:\East Ky Network\Morgan county\Moon\Moon Tower Vertical Profile.dwg		LEXINGTON, KY BRUNDY, VA LOGAN, WV CHARLESTON, WV HAZARD, KY	