COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:

THE APPLICATION OF EAST KENTUCKY NETWORK, LLC FOR THE ISSUANCE OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A TOWER IN MAGOFFIN COUNTY, KENTUCKY.	)))))	CASE NO. 2016-00326

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

In an effort to improve service in Magoffin County, pursuant to KRS 278.020 Subsection 1 and 807 KAR 5:001, East Kentucky Network, LLC is seeking the Commission's approval to construct a 180 foot self-supporting tower on a tract of land located near 418 Burning Ford Road, Salyersville, Magoffin County, Kentucky (37°44'13.20"N 83°01'55.00"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(m) and Section 2, all affected property owners according to the Property Valuation Administrator's record who own property within 500 feet of the proposed Tower or contiguous to the property upon which construction is proposed were notified by certified mail return receipt requested of East Kentucky Network, LLC's proposed construction and informed of their right to intervene. They were given the docket number under which this application is filed. Enclosed in Exhibit 2 is a copy of that notification.

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

Notice of the location of the proposed construction was published in The Salyersville Independent, December 1, 2016, edition. Enclosed is a copy of that notice in Exhibit 3. The Salyersville Independent is the newspaper with the largest circulation in Magoffin County.

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

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

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

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

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

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

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

Two notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2), measuring at least two (2) feet in height and four (4) feet in width and containing all required language in letters of required height, have been posted, one at a visible location on the proposed site and one on the nearest public road. The two signs were posted on November 29, 2016, and will remain posted for at least two weeks after filing of this application as specified.

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

The proposed construction site is on a flat piece of land some feet from the nearest structure.

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 James W. Caudill, 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: 11/30/16
Lynn Haney, Regulatory Compliance Director

APPROVED BY: W A Gillum DATE: 11/30/2016
W.A. Gillum, General Manager

ATTORNEY: Cindy McCarty DATE: 11/30/16
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 Approvals
7. Driving Directions from County Court House and Map to Suitable Scale
8. Memorandum of 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.

1

2

3

4

5

6

7

8

9

10

11

12

ULS License

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

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

Market

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

Dates

Grant	08/30/2011	Expiration	10/01/2021
Effective	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

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

Contact

Lukas, Nace, Gutierrez & Sachs, LLP
Pamela L Gist Esq
8300 Greensboro Drive
McLean, VA 22102

P:(703)584-8665
F:(703)584-8695
E:pgist@fcclaw.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

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

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

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

Eagle Well Services
165 Ivyton Rd.
Salyersville, KY 41465

Darvin and Alene Allen
764 Burning Fork Rd.
Salyersville, KY 41465

Mark W. Salyer
656 Old Burning Fk. Rd.
Salyersville, KY 41465

William and Bertha Hylton
530 Old Burning Fk. Rd.
Salyersville, KY 41465

Commonwealth of Kentucky
c/o Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

MCPS Real Properties Inc.
109 Gardner Trail
Salyersville, KY 41465

Elorie and Don Risner
Route 77 Box 118
Royalton, KY 41464

Danny and Vickie Blanton
104 Howard Dr.
Salyersville, KY 41465

Thoman and Darrell Keith
61 Elk Crk. Rd.
Salyersville, KY 41465

Mount Caramel Church and School
Salyersville, KY 41465

Lonnie Collinsworth Et Al
356 Old Burning Fk. Rd.
Salyersville, KY 41465

Keith and Sharron Hopper
2335 St. Peter Rd.
Pottstown, PA 19465

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F[illegible]5) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Commonwealth of Kentucky
c/o Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE (606) 874-7550
F 6) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Eagle Well Services
165 Ivyton Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE (606) 874-7550
F (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Darvin and Alene Allen
764 Burning Fork Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE (606) 874-7550
F (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Mark W. Salyer
656 Old Burning Fk. Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F: (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

William and Bertha Hylton
530 Old Burning Fk. Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
FAX: (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

MCPS Real Properties Inc.
109 Gardner Trail
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F[illegible]6) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Elorie and Don Risner
Route 77 Box 118
Royalton, KY 41464

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F: (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Danny and Vickie Blanton
104 Howard Dr.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F: 51) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Thoman and Darrell Keith
61 Elk Crk. Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F: (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Mount Caramel Church and School
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
FA (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Lonnie Collinsworth Et Al
356 Old Burning Fk. Rd.
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE: (606) 874-7550
F 51 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

November 29, 2016

Keith and Sharron Hopper
2335 St. Peter Rd.
Pottstown, PA 19465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land near 418 Burning Fork Rd., Salyersville, Magoffin 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. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney, CPA
Regulatory Compliance Director
Enclosure 1

Appalachian Wireless Location Map

Site Name	Location	GPS Location
Burning Fork	418 Burning FK. RD. Salyersville KY. 41465	N 37 44 13.2046 W 83 01 55.0051

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

EAST KENTUCKY NETWORK

To:	Salyersville Independent Attn: Classifieds	**From:**	Raina Helton Regulatory Compliance Assistant
Email:	jo@salyersvilleindependent.com	**Date:**	November 29, 2016
Re:	PUBLIC NOTICE ADVERTISEMENT	**Pages:**	1

Please place the following Public Notice Advertisement in the Salyersville Independent to be ran on December 1, 2016.

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2016-00326)

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 418 Burning Fork Road, Salyersville, Magoffin County, Kentucky. The proposed tower will be a 180 foot self-supporting tower with attached antennas. If you would like to respond to this notice, please contact the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2016-00326.

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

Thank you,

Raina Helton, CKP
Regulatory Compliance Assistant

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
PHONE (606) 874-7550
F (606) 874-7551

EAST KENTUCKY NETWORK

VIA: U.S. CERTIFIED MAIL

November 29, 2016

Charles "Doc" Hardin, Judge Executive
P.O. Box 430
Salyersville, KY 41465

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2016-00326)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular telecommunications service in Magoffin County. The facility will include a 180-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 418 Burning Fork Road, Salyersville, Magoffin County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you are the County Judge Executive of Magoffin County.

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

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2016-00326 in your correspondence.

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

Sincerely,

Lynn Haney

Lynn Haney
Regulatory Compliance Director
Enclosure

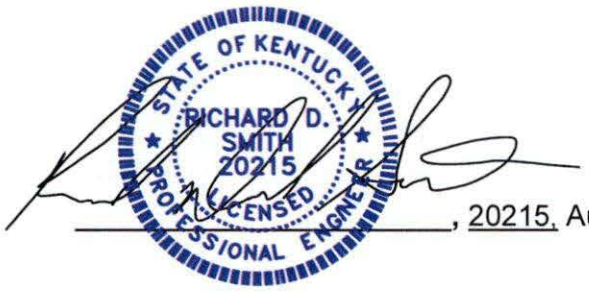
Appalachian Wireless Location Map

Site Name	Location	GPS Location
Burning Fork	418 Burning FK. RD. Salyersville KY. 41465	N 37 44 13.2046 W 83 01 55.0051

APPALACHIAN WIRELESS
Geotechnical Investigation on the Burning Fork Site Magoffin County, Kentucky ERMC^2 Project No. 165-000-0026

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, August 15th, 2016

EXECUTIVE SUMMARY
1.0 INTRODUCTION
2.0 PROJECT DESCRIPTION
3.0 SITE DESCRIPTION
4.0 FIELD EXPLORATION
4.1 SITE INFORMATION
4.2 BORING DATA
4.3 GROUNDWATER
4.4 SEISMIC SITE CLASSIFICATION
5.0 DISCUSSION AND RECOMMENDATIONS
5.1 GENERAL
5.2 FOUNDATIONS
5.3 SHALLOW FOUNDATIONS
5.4 BURIED UTILITIES
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

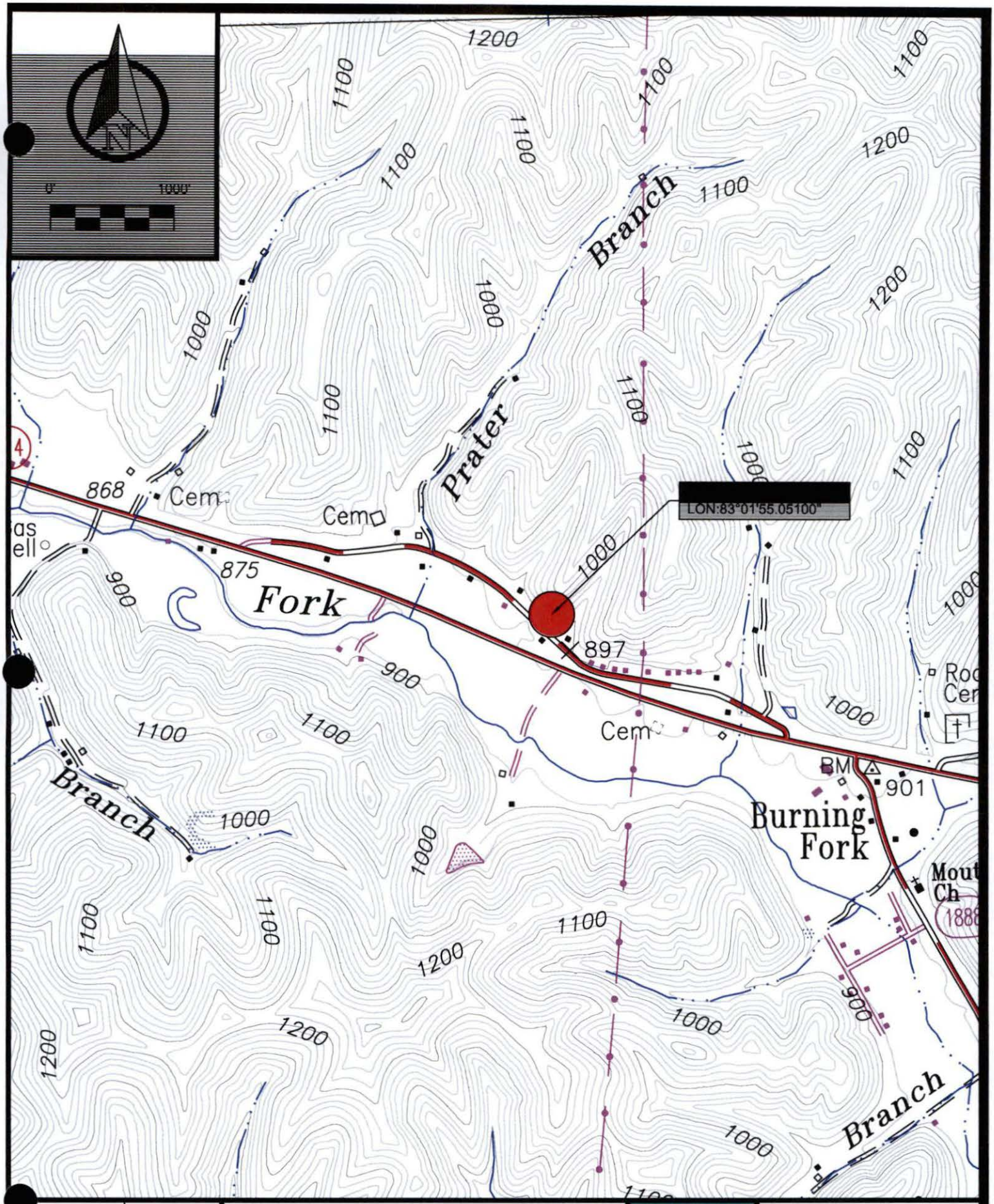
APPENDIX A – BORING DATA AND TESTING
APPENDIX B – SEISMIC DATA
APPENDIX C – PHOTOGRAPHS
APPENDIX D – MAPS

EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Burning Fork tower site, located near Salyersville, in Magoffin County Kentucky. This site is readily accessible. A location map is shown in Figure 1 of this report. Four (4) borings were advanced to depths ranging from 24.0 ft. to 27.0 ft. The following geotechnical considerations were identified:

- Borings utilized for this study encountered fill material to a depth of 4.7 ft. Underlying shales were encountered to a depth of 27 ft.
- This site is on an existing cut for a previously constructed building. There is an existing high wall and bench 60 ft. to 45 ft. wide.
- **The allowable bearing capacities of the underlying shales is estimated at 6 tsf.**
- The 2015 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 ErMC^2 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.



Drawn:	Date: 8/15/16
Job:	Scale: 1"=1000'
Drawing: USGS SITE LOCATION	

BURNING FORK SITE
APPALACHIAN WIRELESS
USGS LOCATION MAP
FIGURE NO.1

ErMC²

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

1. INTRODUCTION

Environmental Resources Management Consulting Company (ERMC^2) was retained by Mr. Marty Thacker of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on the Burning Fork Property, near Salyersville, in Magoffin County, Kentucky. A site location map is shown in Figure No. 1.

Four (4) borings were advanced to depths ranging from 24.0 ft. to 27.0 ft. Geo-drill Inc. provided drilling services to obtain these borings. Logs of the borings along with a boring location plan are included in Appendix A. The purpose of these services is to provide information and geotechnical engineering recommendations 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. The construction area will be approximately 35 ft. x 35 ft. Based upon information provided, we estimate the structural loads will be similar to the following conditions;

CONDITION	LOAD
Total Shear	40 Kips
Axial Load	50 Kips

We anticipate that overturning will govern the structural design. If the loading is significantly different than these expected values, ErMC^2 should be notified to re-evaluate the recommendations provided in this report.

3.0 SITE DESCRIPTION & HISTORICAL MINING

The site location is a relatively flat existing bench cut. The site has fair vegetative cover, with an existing high wall to the northeast. There is some minimal fill material on the existing bench with underlying shale rock beneath.

ErMC^2 reviewed available historical mine maps from the Kentucky Division of Mine Safety, Kentucky Mine Mapping Information System ("KMMIS"). Based on available data, no historical surface or underground mining has occurred.

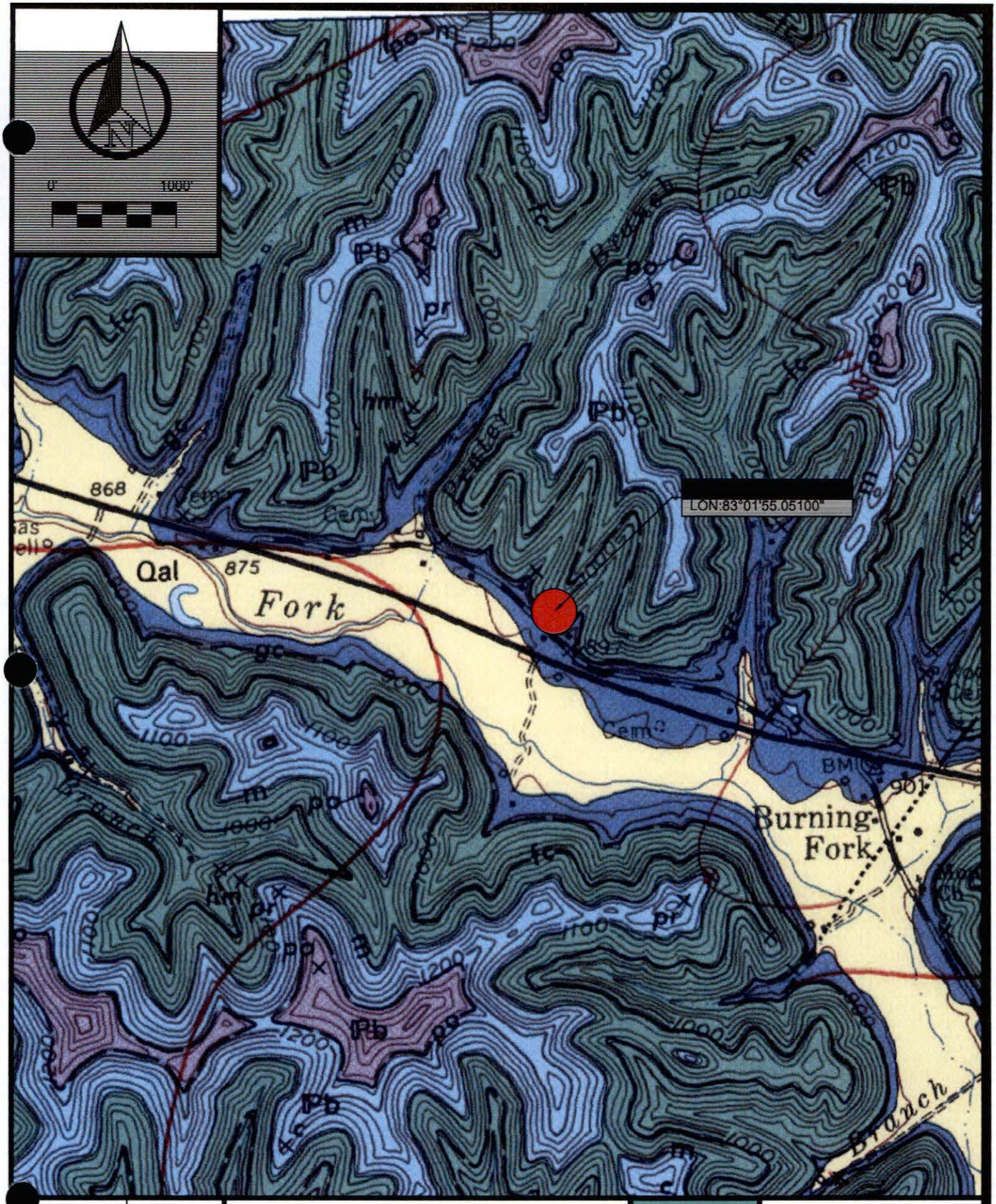
4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

A boundary retracement survey was conducted on the Burning Fork Property and provided to ErMC^2. A proposed lot drawing is included in the Appendix D of this report. The proposed tower lot was established and tied to the existing boundary. An estimated pad location was determined and boring locations were placed at the corners of proposed foundation for the towers support based upon this information.

4.2 BORING DATA

Four (4) borings were made in the relative positions shown on the Boring Location Map in Appendix A. The boring logs and resulting data are also included in Appendix A. The borings were made with a track mounted boring rig using hollow-stem augers and employing standard penetration resistance methods (ASTM D-1586, which includes 140-pound hammer, 30-inch drop, and two-inch-O.D. split-spoon sampler) at maximum depth intervals of five feet or at major changes in stratum, whichever occurred first. The disturbed split-spoon samples were visually classified, logged, sealed in moisture-proof jars, and taken to the ERMC^2 laboratory for study. The depths where these "A"-type split-spoon samples were collected are noted on the boring logs. The results of the natural moisture contents by boring and interval are shown in Table 1.



Drawn:	Date: 8/15/16
Job:	Scale: 1"=1000'
Drawing: GQ SITE LOCATION	

BURNING FORK SITE

APPALACHIAN WIRELESS

GQ LOCATION MAP

FIGURE NO. 2

ErMC²

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

TABLE 1

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

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
B1	1.5-3.0	11.5
B1	4.0-5.5	0.5
B2	0-1.5	8.5
B2	1.5-3.0	7.3
B2	4.0-5.5	7.9
B2	6.5-8.0	9.2
B3	0-1.5	11.5
B4	1.5-3.0	7.1
B4	4.0-5.5	7.4
B4	6.5-8.0	5.5

The borings encountered shale fill to a maximum depth of 4.7 ft. The 4 borings were extended by "NX" size rock core that were taken to confirm the presence of rock at the site and to determine its physical characteristics. The core was made with "NX" size diamond coring equipment. These borings range in depth from 2 ft. to 27 ft. The position at which the core was taken are indicated on the boring logs and shown on the boring location map in Appendix A. The corresponding Rock Quality Data Ratings (RQD) are shown in Table No. 2. This boring demonstrates the full geologic column at the site. Rock-quality designation (RQD) is a rough measure of the degree of jointing or fracture in a rock mass, measured as a percentage of the drill core in lengths of 10 cm or more. High-quality rock has an RQD of more than 75%, low quality of less than 50%. Rock quality designation (RQD) has several definitions

TABLE NO. 2

ROCK QUALITY

Boring	Run Interval	RQD Values %	Description
B1	5-10	7%	Completely Weathered Rock
B1	10-15	37%	Weathered Rock
B1	15-25	72%	Moderately Weathered Rock
B2	12-17	30%	Weathered Rock
B2	17-22	25%	Weathered Rock
B2	22-27	47%	Weathered Rock
B3	5-10	35%	Weathered Rock
B3	10-15	75%	Weathered Rock
B3	15-20	25%	Weathered Rock
B3	20-25	8%	Completely Weathered Rock
B4	9-14	13%	Completely Weathered Rock
B4	14-19	25%	Weathered Rock
B4	19-24	43%	Weathered Rock

Photographs of the cores are included in Appendix A of this report.

4.3 GROUNDWATER

Groundwater observations were made during the drilling operations (by noting the depth to water on the drilling tools) and in the open boreholes following withdrawal of the drilling augers. No groundwater levels were noted during drilling activities.

4.4 SEISMIC SITE CALSSIFICATION

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class B" per the 2015 International Building Code. In addition, a S_{DS} coefficient of 0.122 g was calculated, and a S_{D1} coefficient of 0.056 g was also calculated for design based on the aforementioned building code.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

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

5.2 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.

Approximately 0.3 to 4.7 feet of fill is present at this proposed location. It consists of mixture of shale and clay soils. Standard penetrations tests were conducted on five foot intervals in this material. Competent shale rock was found below the fill to a depth of 27 ft.

The approximate elevation of the surface of the site is 955 ft. with an expected base of the footer at 949 ft. in elevation. The standard penetration tests were conducted on five foot intervals within the fill material. The blow counts (N) ranged from 5 to 50/4" to the depth of 4.7 feet. The shale unit below was sampled for 20 ft. of vertical thickness. This formation exhibited rock quality designations (RQD) that range from 8% to 75%

5.3 SHALLOW FOUNDATIONS

We recommend a single spread footer foundation on shale rock. The proposed location on an existing bench ranging from 60 ft. to 45 ft. wide with 0.3 ft. to 4.7 ft. of fill material present. The upper rock strata are broken and weathered. Some rock excavation may be required in order to obtain a sufficient footing for the foundation and construction area.

Below the fill material is a relative hard shale with an **allowable bearing capacity of 6.0 tsf.** Care must be exercised to ensure that the foundation is bearing on rock. The

thickness of the fill material can vary on the outer edge of the bench. If this occurs, the base footer elevation will need to be adjusted to insure that it is on the shale formation.

It is furthermore recommended that the slabs-on-grade be supported on 4 to 6-inch layer of relatively clean granular material such as sand and gravel or crushed stone. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Proper drainage must be incorporated into this granular layer to preclude future wet areas in the finished slab-on-grade. However, all topsoil and/or other deleterious materials encountered during site preparation must be removed and replaced with 4000 psi. concrete below the foundation base. Provided that a minimum of 4 inches of granular material is placed below the new slab-on-grade, a modulus of subgrade reaction (k30) of 100 lbs./cu. in. can be used for design of the slabs.

Support structure for this tower can be placed on the bench areas as needed. It is recommended that test pits are preformed to insure that any of these structures are on the rock bench and not on soil pushover that is common near the out slopes of the existing old bench. If pockets of soft, loose or otherwise unsuitable material are encountered in the footing excavations and it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed. The undercut excavation beneath each footing should extend to suitable bearing soils and the dimensions of the excavation base should be determined by imaginary planes extending outward and down on a 1 (vertical) to 1 (horizontal) slope from the base perimeter of the footing. The entire excavation should then be refilled with a well-compacted engineered fill, or lean concrete (Please note that the width of the lean concrete zone should be equal or wider than the width of the overlying footing element). Special care should be exercised to remove any sloughed, loose or soft materials near the base of the excavation slopes. In addition, special care should be taken to "tie-in" the compacted fill with the excavation slopes, with benches as necessary, to insure that no pockets of loose or soft materials will be left in place along the excavation slopes below the foundation bearing level. All Federal, State, and Local regulations should be strictly adhered to relative to excavation side-slope geometry.

5.4 BURIED UTILITIES

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

6.0 WARRANTY

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

While the services of ErMC^2 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 Burning Fork Property located in Magoffin County, Kentucky. Specific design and construction recommendations have been provided in the various sections of the report. The report shall, therefore, be used in its entirety. This report is not a bidding document and shall not be used for that purpose. Anyone reviewing this report must interpret and draw

their own conclusions regarding specific construction techniques and methods chosen. ErMC^2 is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploratory and laboratory test data presented in this report.

SPECIFICATIONS

I – GENERAL

1.0 STANDARDS AND DEFINITIONS

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

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

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

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

1.2 DEFINITIONS

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

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

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

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

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 handled as to prevent inclusion of foreign matter and damage by dampness or breakage. Packaged material shall be stored in original container until ready for use. Materials showing evidence of dampness or other damage may be rejected.

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

1. Fine Aggregate: Sand shall be composed essentially of clean, hard, strong, durable grains free of structurally weak grains,

organic matter, loam, clay, silt, salt, mica or other fine materials that may affect bonding of the cement paste.

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. Coal 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.

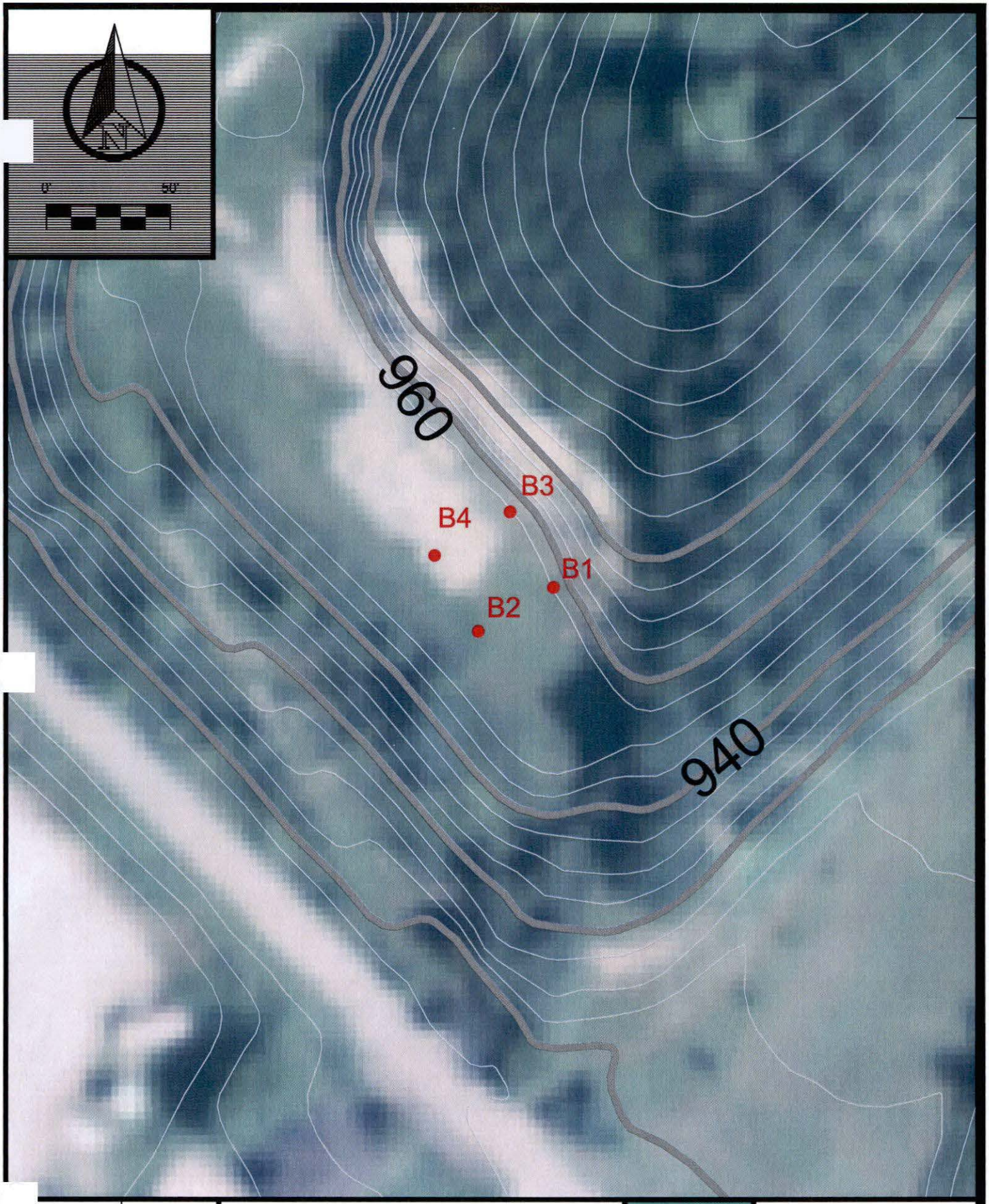
10.0 CONCRETE FINISHES

Finishes of all exposed concrete shall be free of defects which impair its durability or adversely affect is 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 deflects corrects, protrusions removed, and holes filled.

APPENDIX A BORING DATA



Drawn:	Date: 8/15/16
Job:	Scale: 1"=200'
Drawing: 2014 AERIAL IMAGE SITE LOCATION	

BURNING FORK SITE

APPALACHIAN WIRELESS

2014 AERIAL IMAGE WITH DEM

BORING LOCATION MAP

ErMC²

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

Environmental Resources Management Consulting Company, LLC
230 Swartz Drive
Hazard, KY 41701

CLIENT: Appalachian Wireless
REPORT NO. 165-000-0026
BORING NO: B-1
DATE STD: 8/12/2016
DATE FINISHED: 11/18/2015
PROJECT: Burning Fork
DRILLERS: Sam Anderson
GROUND ELEV: 955 ft.
LOCATION: As shown on the Location Map
METHOD: Boring

SCALE, FT	STRATUM DEPTH, FT	CLASSIFICATION OF MATERIAL	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT FROM	DEPTH OF SAMPLE, FT TO	BLOWS ON SAMPLER PER SPT (6" INTERAL) RQD	SPT "n" OR RECOVERY
		Major Soil Components: Gravel, Sand, Silt, Clay. Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%					
			1A	1.5	3	4-5-5	12"
0.0	0.5	Gravel	2A	4	5.5	50/4	3"
0.5	3.7	Shale Fill					
3.7	5.0	Weatered Rock Shale					
5.0	23.0	Gray Shale					
23.0	24.0	Soft Gray Shale					
24.0	25.0	Gray Shale					
		Core Run 5 to 10 — Recovery 100% — RQD 4/60	1B				
		Core Run 10 to 15 — Recovery 100% — RQD 22/60	2B				
		Core Run 15 to 25 — Recovery 100% — RQD 44/120	3B				

WATER LEVEL OBSERVATIONS
Noted on rods: N/A
At completion: N/A
After____hrs_____ft

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Aug
DC Driven casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A-Split Spoon
B-Rock Core
C-Shelby Tube
D-Grab Sample

Environmental Resources Management Consulting Company, LLC
230 Swartz Drive
Hazard, KY 41701

CLIENT: Appalachian Wireless
REPORT NO. 165-000-0026
BORING NO: B-2
DATE STD: 8/12/2016
DATE FINISHED: 8/12/2016
PROJECT: Burning Fork
DRILLERS: Sam Anderson
GROUND ELEV: 955 ft.
LOCATION: As shown on the Location Map
METHOD: Boring

SCALE, FT	STRATUM DEPTH, FT	CLASSIFICATION OF MATERIAL	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT		BLOWS ON SAMPLER PER SPT (6" INTERAL) RQD	SPT "n" OR RECOVERY
				FROM	TO		
			1A	0	1.5	4-3-2	15"
0.0	0.6	Gravel	2A	1.5	3	2-3-3	12"
			3A	4	5.5	5-8-12	15"
0.3	0.4	Topsoil	4A	6.5	8	24-29-41	18"
			5A	9	10.5	32-50/4	10"
0.4	4.7	Shale Fill					
4.7	12.0	Light Brown Weatherd Shale					
12.0	16.0	Brown Gray Shale					
16.0	17.0	Gray Shale					
17.0	23.3	Gray Shale					
23.3	23.8	Brown Layered Shale					
23.8	27.0	Gray Shale					

Major Soil Components: Gravel, Silt, Sand, Clay
Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%

Core Run	Recovery	RQD	
12 to 17	97%	4/60	1B
17 to 22	100%	22/60	2B
22 to 27	100%	44/120	3B

WATER LEVEL OBSERVATIONS
Noted on rods: N/A
At completion: N/A
After____hrs_____ft

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Auge
DC Driven casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A-Split Spoon
B-Rock Core
C-Shelby Tube
D-Grab Sample

Environmental Resources Management Consulting Company, LLC
230 Swartz Drive
Hazard, KY 41701

CLIENT: Appalachian Wireless
PROJECT: Burning Fork
LOCATION: As shown on the Location Map

REPORT NO. 165-000-0026
DATE STD: 8/12/2016
DRILLERS: Sam Anderson
METHOD: Boring

BORING NO: B-3
DATE FINISHED: 8/12/2016
GROUND ELEV: 955 ft.

SCALE, FT	STRATUM DEPTH, FT	CLASSIFICATION OF MATERIAL	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT		BLOWS ON SAMPLER PER SPT (6" INTERAL) RQD	SPT "n" OR RECOVERY
				FROM	TO		
0.0	0.3	Topsoil	1A	0	1.5	16-50/3	12"
			2A	4	5.5	50/1	3"
0.3	5.0	Gray Shale					
5.0	7.0	Weatherd Shale					
7.0	25.0	Gray Shale					
		Core Run 5 to 10 — Recovery 100% — RQD 21/60	1B				
		Core Run 10 to 15 — Recovery 100% — RQD 45/60	2B				
		Core Run 15 to 20 — Recovery 100% — RQD 15/60	3B				
		Core Run 20 to 25 — Recovery 100% — RQD 51/60	4B				

Major Soil Components: Gravel, Silt, Sand, Clay
Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%

WATER LEVEL OBSERVATIONS
Noted on rods: N/A
At completion: N/A
After____hrs_____ft

BORING METHOD
HSA Hollow Stem Auger
CFA Continuous Flight Aug
DC Driven casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE
A-Split Spoon
B-Rock Core
C-Shelby Tube
D-Grab Sample

Environmental Resources Management Consulting Company, LLC
230 Swartz Drive
Hazard, KY 41701

CLIENT: Appalachian Wireless	REPORT NO. 165-000-0026	BORING NO:	B-4
	DATE STD: 8/12/2016	DATE FINISHED:	8/12/2016
PROJECT: Burning Fork	DRILLERS: Sam Anderson	GROUND ELEV:	955 ft.
LOCATION: As shown on the Location Map	METHOD: Boring		

SCALE, FT	STRATUM DEPTH, FT	CLASSIFICATION OF MATERIAL	SAMPLE NUMBER & SAMPLE TYPE	DEPTH OF SAMPLE, FT		BLOWS ON SAMPLER PER SPT (6" INTERAL) RQD	SPT "n" OR RECOVERY
				FROM	TO		
0.0	0.3	Topsoil	1A	0	1.5	16-50/3	0"
			2A	1.5	3	50/1	0"
0.3	3.9	Shale Fill	3A	4	5.5		
			4A	6.5	8		
3.9	9.0	Lt. Brown Weatherd Shale					
9.0	14.0	Brown Shale					
14.0	24.0	Gray Shale					
		Core Run 9 to 14, Recovery 100%, RQD 8/60	1B				
		Core Run 15 to 19, Recovery 100%, RQD 8/60	2B				
		Core Run 19 to 24, Recovery 100%, RQD 25/60	3B				

Major Soil Components: Gravel, Silt, Sand, Clay

Minor Component Term: Trace 1-10%, Some 11-35%, And 36-50%

WATER LEVEL OBSERVATIONS

Noted on rods: N/A
At completion: N/A
After____hrs_____ft

BORING METHOD

HSA Hollow Stem Auger
CFA Continuous Flight Aug
DC Driven casing
MD Mud Drilling
RC Rock Coring
CA Casing Advancer

TYPE SAMPLE

A-Split Spoon
B-Rock Core
C-Shelby Tube
D-Grab Sample

Boring 1: Run 5ft. to 15 ft.

Boring 1: Run 15 ft. to 25 ft.

Boring 2: Run 12 ft to 22 ft.

Boring 2: Run 22 ft. to 27 ft.

Boring 3: Run 5 ft. to 15 ft.

Boring 3: Run 15ft to 25 ft.

Boring 4: Run 9ft. to 19 ft.

Boring B4: Run 19 ft. to 24 ft.

APPENDIX B SEISMIC

USGS Design Maps Summary Report

User-Specified Input

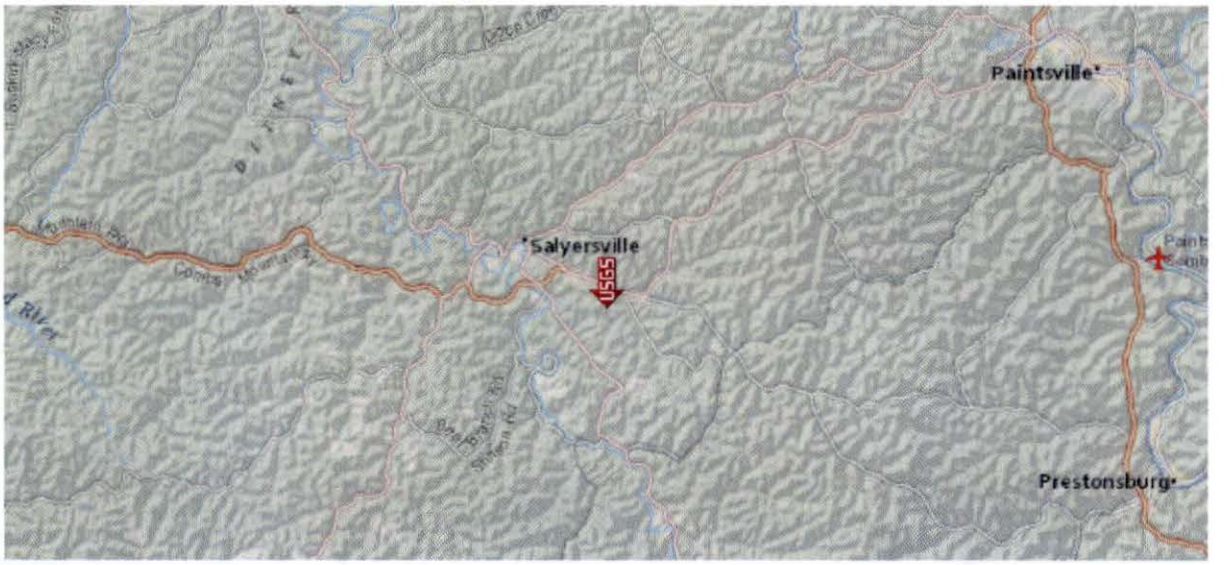
Report Title Burning Fork Tower SIte
Mon August 15, 2016 13:53:53 UTC

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

Site Coordinates 37.737°N, 83.03195°W

Site Soil Classification Site Class B – "Rock"

Risk Category IV (e.g. essential facilities)

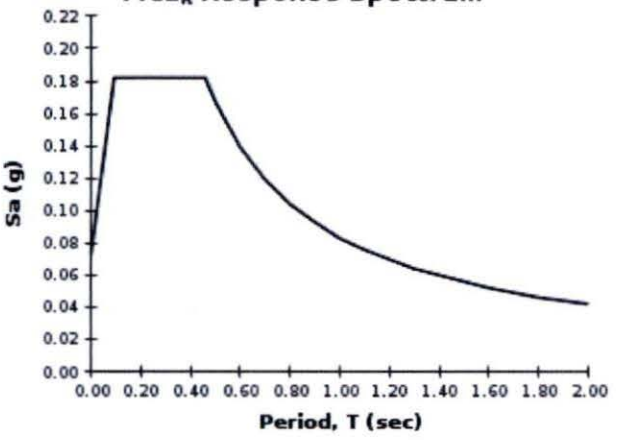


GS-Provided Output

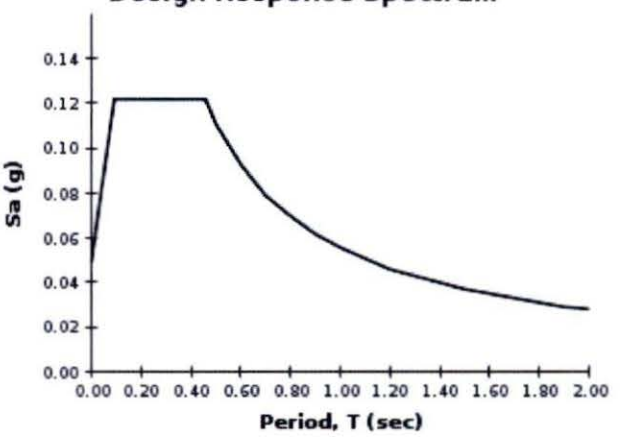
S_S =	0.182 g	S_{MS} =	0.182 g	S_{DS} =	0.122 g
S_1 =	0.083 g	S_{M1} =	0.083 g	S_{D1} =	0.056 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.

MCE_R Response Spectrum



Design Response Spectrum



APPENDIX C PHOTOS

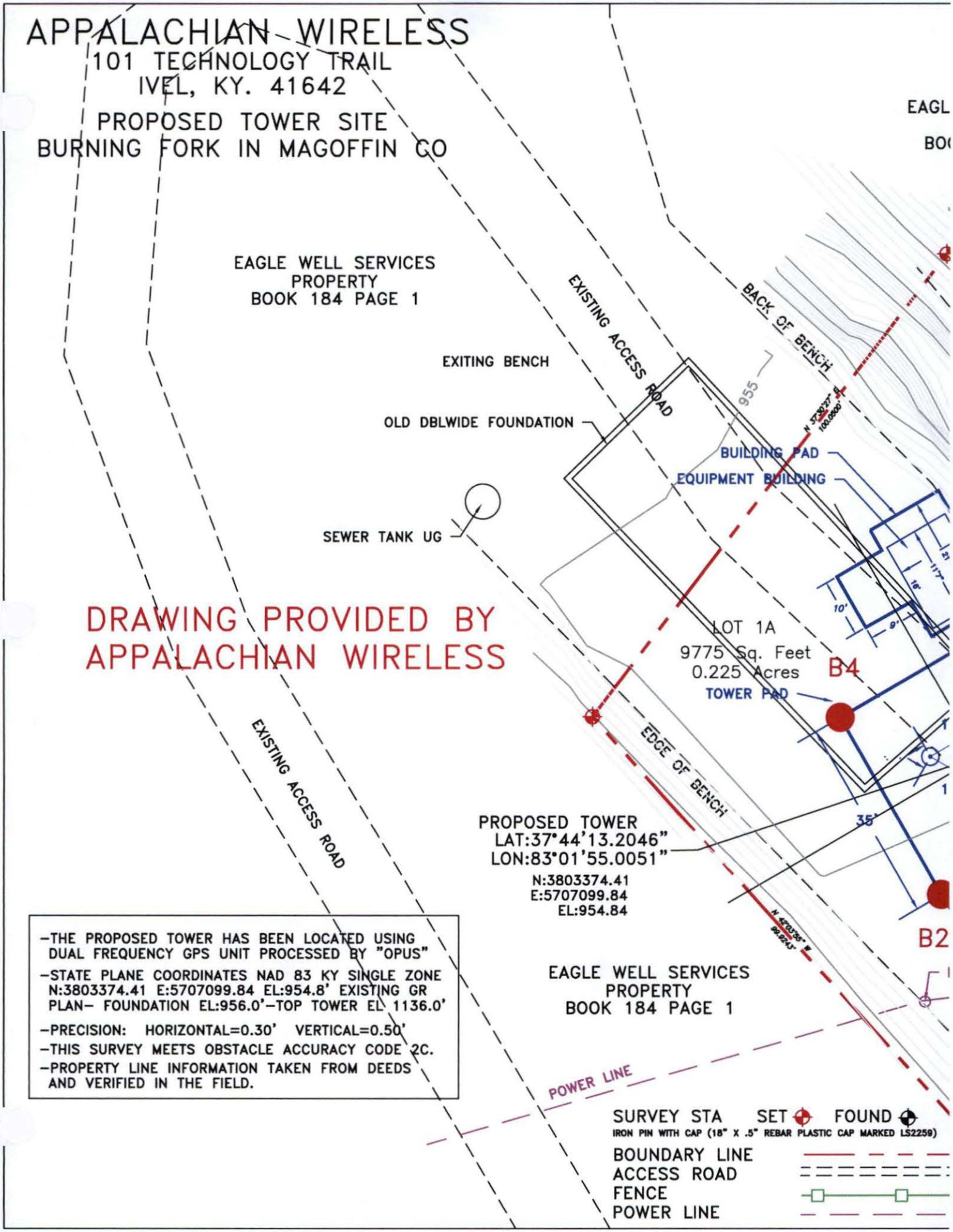

726

APPENDIX D MAPS

APPALACHIAN WIRELESS

101 TECHNOLOGY TRAIL
IVEL, KY. 41642

PROPOSED TOWER SITE
BURNING FORK IN MAGOFFIN CO



- THE PROPOSED TOWER HAS BEEN LOCATED USING DUAL FREQUENCY GPS UNIT PROCESSED BY "OPUS"
- STATE PLANE COORDINATES NAD 83 KY SINGLE ZONE N:3803374.41 E:5707099.84 EL:954.8' EXISTING GR PLAN– FOUNDATION EL:956.0'–TOP TOWER EL 1136.0'
- PRECISION: HORIZONTAL=0.30' VERTICAL=0.50'
- THIS SURVEY MEETS OBSTACLE ACCURACY CODE 2C.
- PROPERTY LINE INFORMATION TAKEN FROM DEEDS AND VERIFIED IN THE FIELD.

WORLD TOWER COMPANY, INC.

Fabrication, Installation and Maintenance of : FM, AM, FM, Meteorological & Wireless Communications Towers

Phone (270) 247-3042 · Fax (270) 247-6700
PO Box 708 · Mayfield, KY 42066

Page 1 of 2		Job Number:	23516-504
Eng: MFP		Customer Ref:	TP-14767
		Date:	11/28/2016
Structure:	180-FT MONOPOLE		
Site:	BURNING FORK		
Location:	MAGOFFIN CO., KY / 37°44'13.2", -83°1'55.05"		
Owner:	WORLD TOWER		
Revision No.:	Revision Date:		

DESIGN

Building Code:	2013 KENTUCKY BUILDING CODE		
Design Standard:	ANSI/TIA-222-G-2		
Wind Speed Load Cases:	3-SEC. GUSTED WIND SPEED		
Load Case #1:	90 MPH Design Wind Speed - V_{ASD} (V_{ULT} = 116 MPH)		
Load Case #2:	30 MPH Wind with 0.75" Ice Accumulation		
Load Case #3	60 MPH Service Wind Speed		
Structure Class	Exposure Cat.	Topography Cat.	Crest Height
II	B	1	

EQUIPMENT LIST

Elev.	Description
180	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
180	12-FT PLATFORM WITH HANDRAIL
170	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
170	12-FT PLATFORM WITH HANDRAIL
160	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
160	12-FT PLATFORM WITH HANDRAIL
150	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
150	12-FT PLATFORM WITH HANDRAIL
145	(2) 4-FT MICROWAVE DISHES
145	DUAL MICROWAVE MOUNT
140	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
140	12-FT PLATFORM WITH HANDRAIL
130	(9) WPA-800102/4CF + (3) BXA-70063/6CF + (3) RRU
130	12-FT PLATFORM WITH HANDRAIL

ANTENNA FEED LINES ROUTED ON THE INSIDE OF THE POLE

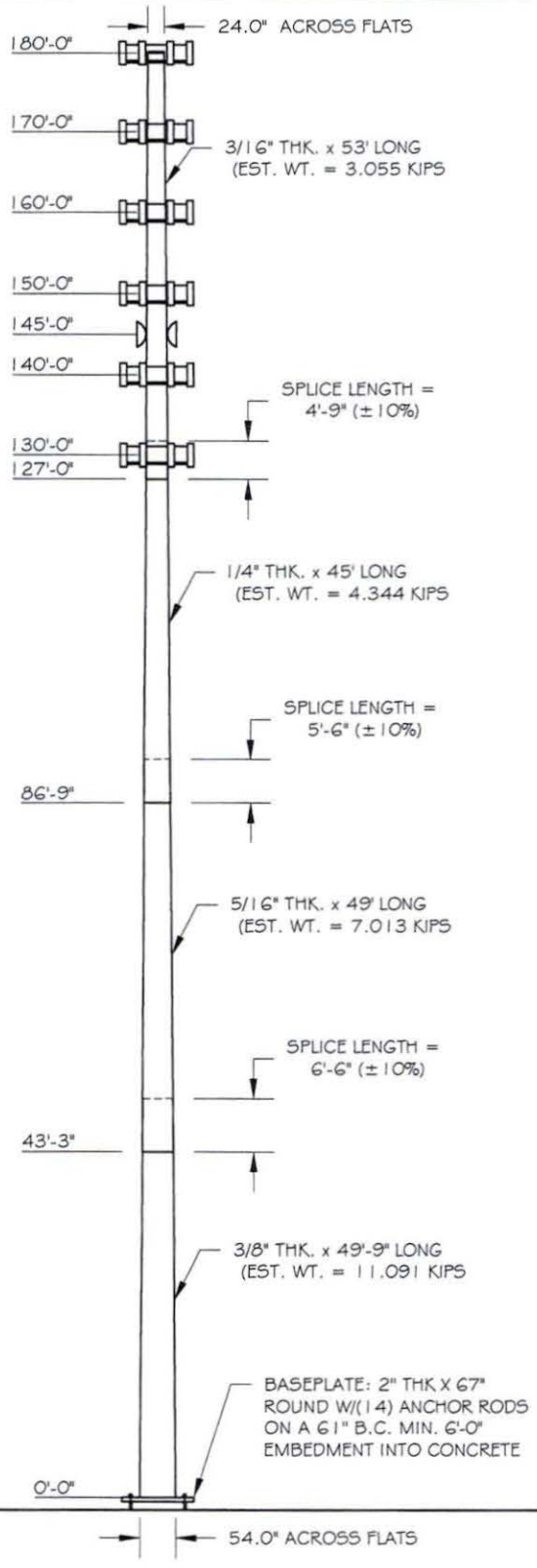
STRUCTURE PROPERTIES

Cross-Section: 18-SIDED — Taper: 0.17569 in/ft

Shaft Steel: ASTM A572 GR 65 — Baseplate Steel: ASTM A572 GR 60

Anchor Rods: 2.25 in. A615 GR. 75 X 7'-0" LONG

Sect.	Length (ft)	Thickness (in)	Splice (ft)	Top Dia. (in)	Bot Dia. (in)
1	53.00	0.1875	4.75	24.00	33.28
2	45.00	0.2500	5.50	32.07	39.94
3	49.00	0.3125	6.50	38.48	47.06
4	49.75	0.3750	0.00	45.29	54.00



STATE OF KENTUCKY
MICHAEL F. PLAHOVINSAK
25466
PROFESSIONAL ENGINEER

11.28.2016

MICHAEL F. PLAHOVINSAK, P.E. #25466
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com

BASE REACTIONS FOR FOUNDATION DESIGN

Moment:	4141 ft-kip
Shear:	30 kip
Axial:	66 kip

WORLD TOWER COMPANY, INC.

Fabrication, Installation and Maintenance of : FM, AM, FM, Meteorological & Wireless Communications Towers

Phone (270) 247-3042 Fax (270) 247-8009
P.O. Box 938 Mayfield, KY 42066

Page 2 of 2		Job Number:	23516-504
Eng: MFP		Customer Ref:	TP-14767
		Date:	11/28/2016
Structure:	180-FT MONOPOLE		
Site:	BURNING FORK		
Location:	MAGOFFIN CO., KY / 37°44'13.2", -83°1'55.05"		
Owner:	WORLD TOWER		
Revision No.:	Revision Date:		

FOUNDATION NOTES:

1. ALL FOUNDATION CONCRETE SHALL USE TYPE II CEMENT AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.46 AND SHALL BE AIR ENTRAINED 6% (±1.5%). ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.

2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 VERTICAL BARS SHALL BE GRADE 60, AND TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. THE PLACEMENT OF ALL REINFORCEMENT SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

3. THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS TO SUPPORT THE EXCAVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.

4. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT BY:
ENGINEER: RICHARD DIRK SMITH PE
REPORT NO.: N/A (DATED 8/15/16)

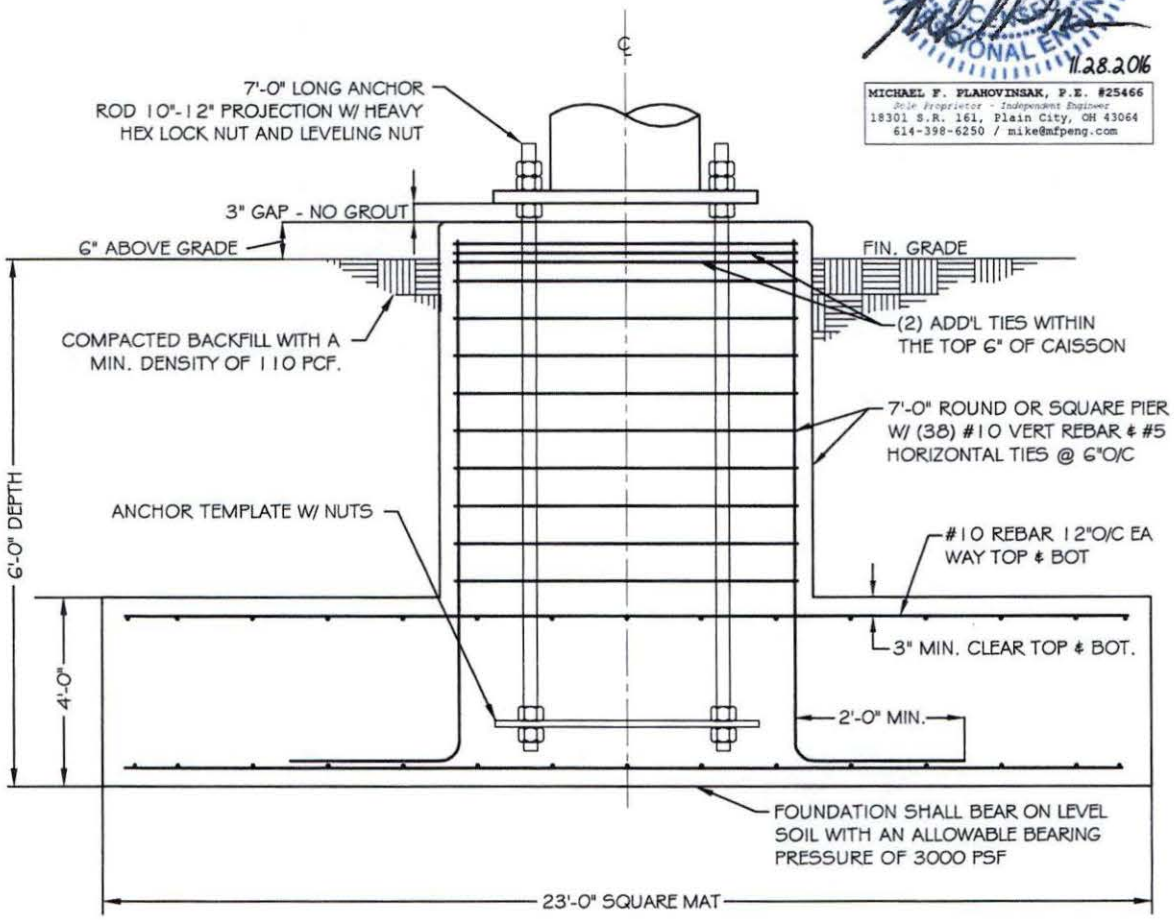
5. ESTIMATED CONCRETE VOLUME = 83 CUBIC YARDS.

6. THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS:
MOMENT: 4141 FT*KIPS
SHEAR: 30 KIPS
AXIAL: 66 KIPS

STATE OF KENTUCKY
MICHAEL F. PLAHOVINSAK
25466
PROFESSIONAL ENGINEER

11.28.2016

MICHAEL F. PLAHOVINSAK, P.E. #25466
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com



SPREAD FOOTING

NOT TO SCALE

Tower Input Data

This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Harlan County, Kentucky.
Basic wind speed of 90 mph.
Structure Class II.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.5000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 30 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	180.00-127.00	53.00	4.75	18	24.0000	33.2800	0.1875	0.7500	A572-65 (65 ksi)
L2	127.00-86.75	45.00	5.50	18	32.0733	39.9400	0.2500	1.0000	A572-65 (65 ksi)
L3	86.75-43.25	49.00	6.50	18	38.4785	47.0600	0.3125	1.2500	A572-65 (65 ksi)
L4	43.25-0.00	49.75		18	45.2966	54.0000	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	24.3702	14.1714	1015.2211	8.4534	12.1920	83.2694	2031.7780	7.0871	3.8940	20.768
	33.7934	19.6942	2724.7984	11.7478	16.9062	161.1712	5453.1822	9.8490	5.5273	29.479
L2	33.4113	25.2518	3230.8746	11.2973	16.2932	198.2954	6466.0004	12.6283	5.2049	20.82
	40.5561	31.4940	6267.9811	14.0900	20.2895	308.9270	12544.2098	15.7500	6.5894	26.358
L3	40.0502	37.8559	6966.6635	13.5489	19.5471	356.4042	13942.4939	18.9316	6.2222	19.911
	47.7860	46.3677	12801.7566	16.5954	23.9065	535.4932	25620.3580	23.1882	7.7326	24.744
L4	47.1501	53.4680	13631.4621	15.9472	23.0107	592.3969	27280.8609	26.7391	7.3122	19.499
	54.8330	63.8272	23188.7616	19.0369	27.4320	845.3179	46408.0356	31.9196	8.8440	23.584

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8"	C	No	Inside Pole	180.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	180.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	170.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	160.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	145.00 - 0.00	2	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	150.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	140.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail **	C	None		0.0000	180.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00	0.0000	170.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00						
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail	C	None		0.0000	170.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60
**									
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail	C	None		0.0000	160.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60
**									
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00	0.0000	150.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00						
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail	C	None		0.0000	150.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60
**									
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail	C	None		0.0000	140.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60
**									
(3) Antel WPA-800102-4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) Antel WPA-800102-4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	3.70 4.07	3.66 4.21	0.03 0.06
Antel BXA-70063/6CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	7.75 8.29	5.18 6.11	0.04 0.09
(3) RRU	C	From Face	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice	1.50 2.00	1.50 2.00	0.05 0.07
12' Platform w/ Handrail	C	None		0.0000	130.00	No Ice 1/2" Ice	24.00 26.00	24.00 26.00	1.80 2.60

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight K
4 ft standard	A	Paraboloid w/o Radome	From Face	1.00 0.00 0.00	0.0000		145.00	4.00	No Ice 1/2" Ice	12.57 13.10	0.10 0.18
4 ft standard	B	Paraboloid w/o Radome	From Face	1.00 0.00 0.00	0.0000		145.00	4.00	No Ice 1/2" Ice	12.57 13.10	0.10 0.18

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	180 - 127	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-39.84	0.00	-5.17
			Max. Mx	4	-18.98	-559.78	-9.34
			Max. My	6	-18.98	0.00	-562.38
			Max. Vy	4	20.52	-559.78	-9.34
			Max. Vx	6	20.45	0.00	-562.38
			Max. Torque	4			-2.67
L2	127 - 86.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-57.51	0.00	-7.00
			Max. Mx	4	-31.61	-1535.21	-26.50
			Max. My	6	-31.62	0.00	-1535.99
			Max. Vy	4	26.06	-1535.21	-26.50
			Max. Vx	6	26.00	0.00	-1535.99
			Max. Torque	4			-3.20
L3	86.75 - 43.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-73.34	0.00	-7.44
			Max. Mx	4	-45.66	-2693.96	-43.72
			Max. My	6	-45.67	0.00	-2691.83
			Max. Vy	4	28.24	-2693.96	-43.72
			Max. Vx	6	28.17	0.00	-2691.83

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	4			-3.18
L4	43.25 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-95.87	0.00	-7.41
			Max. Mx	4	-66.01	-4139.75	-62.66
			Max. My	6	-66.01	0.00	-4134.25
			Max. Vy	4	29.63	-4139.75	-62.66
			Max. Vx	6	29.56	0.00	-4134.25
			Max. Torque	4			-3.16

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	180 - 127	46.136	14	2.2140	0.0087
L2	131.75 - 86.75	24.906	14	1.8588	0.0044
L3	92.25 - 43.25	11.790	14	1.2490	0.0020
L4	49.75 - 0	3.334	14	0.6148	0.0008

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	46.136	2.2140	0.0087	39177
170.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	41.508	2.1629	0.0077	19588
160.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	36.942	2.1057	0.0068	9793
150.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	32.498	2.0364	0.0059	6528
145.00	4 ft standard	14	30.341	1.9953	0.0054	5595
140.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	28.238	1.9489	0.0050	4895
130.00	(3) Antel WPA-800102-4CF w/ mount pipe	14	24.224	1.8372	0.0042	4057

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	180 - 127	187.130	6	8.9732	0.0359
L2	131.75 - 86.75	101.321	4	7.5587	0.0175
L3	92.25 - 43.25	48.037	4	5.0908	0.0079
L4	49.75 - 0	13.589	4	2.5065	0.0030

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	(3) Antel WPA-800102-4CF w/ mount pipe	6	187.130	8.9732	0.0359	10187
170.00	(3) Antel WPA-800102-4CF w/ mount pipe	6	168.425	8.7724	0.0317	5092
160.00	(3) Antel WPA-800102-4CF w/ mount pipe	4	149.983	8.5468	0.0277	2542
150.00	(3) Antel WPA-800102-4CF w/ mount pipe	4	132.033	8.2714	0.0238	1691
145.00	4 ft standard	4	123.315	8.1072	0.0220	1448
140.00	(3) Antel WPA-800102-4CF w/ mount pipe	4	114.810	7.9213	0.0202	1265
130.00	(3) Antel WPA-800102-4CF w/ mount pipe	4	98.557	7.4718	0.0169	1044

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	180 - 127 (1)	TP33.28x24x0.1875	53.00	0.00	0.0	19.1992	-18.98	1168.89	0.016
L2	127 - 86.75 (2)	TP39.94x32.0733x0.25	45.00	0.00	0.0	30.7311	-31.62	1969.12	0.016
L3	86.75 - 43.25 (3)	TP47.06x38.4785x0.3125	49.00	0.00	0.0	45.2386	-45.66	2974.26	0.015
L4	43.25 - 0 (4)	TP54x45.2966x0.375	49.75	0.00	0.0	63.8272	-66.01	4231.46	0.016

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	180 - 127 (1)	TP33.28x24x0.1875	562.38	777.01	0.724	0.00	777.01	0.000
L2	127 - 86.75 (2)	TP39.94x32.0733x0.25	1535.99	1570.37	0.978	0.00	1570.37	0.000
L3	86.75 - 43.25 (3)	TP47.06x38.4785x0.3125	2694.31	2792.28	0.965	0.00	2792.28	0.000
L4	43.25 - 0 (4)	TP54x45.2966x0.375	4140.23	4670.07	0.887	0.00	4670.07	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	180 - 127 (1)	TP33.28x24x0.1875	20.45	584.44	0.035	0.00	1555.91	0.000
L2	127 - 86.75 (2)	TP39.94x32.0733x0.25	26.00	984.56	0.026	0.00	3144.58	0.000
L3	86.75 - 43.25 (3)	TP47.06x38.4785x0.3125	28.24	1487.13	0.019	3.16	5591.38	0.001
L4	43.25 - 0 (4)	TP54x45.2966x0.375	29.63	2115.73	0.014	3.16	9351.58	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	180 - 127 (1)	0.016	0.724	0.000	0.035	0.000	0.741 ✔	1.000	4.8.2 ✔
L2	127 - 86.75 (2)	0.016	0.978	0.000	0.026	0.000	0.995 ✔	1.000	4.8.2 ✔
L3	86.75 - 43.25 (3)	0.015	0.965	0.000	0.019	0.001	0.981 ✔	1.000	4.8.2 ✔
L4	43.25 - 0 (4)	0.016	0.887	0.000	0.014	0.000	0.902 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	180 - 127	Pole	TP33.28x24x0.1875	1	-18.98	1168.89	74.1	Pass
L2	127 - 86.75	Pole	TP39.94x32.0733x0.25	2	-31.62	1969.12	99.5	Pass
L3	86.75 - 43.25	Pole	TP47.06x38.4785x0.3125	3	-45.66	2974.26	98.1	Pass
L4	43.25 - 0	Pole	TP54x45.2966x0.375	4	-66.01	4231.46	90.2	Pass
							Summary	
							Pole (L2) 99.5	Pass
							RATING = **99.5**	**Pass**

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
email: mike@mfpeng.com

Job	Page
180-ft monopole - MFP #23516-504	BP-G
Project	**Date**
Burning Fork	11/23/2016
Client	**Designed by**
TAPP TP-14767	Mike

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:		***Pole Shape:***	***Anchor Rods:***	***Base Plate:***
Moment:	4141 ft-kips	18-Sided	(14) 2.25 in. A615 GR. 75	2 in. x 67 in. Round
Shear:	30 kips	***Pole Dia. (D_f):***	Anchor Rods Evenly Spaced	fy = 60 ksi
Axial:	66 kips	54.00 in	On a 61 in Bolt Circle	

Anchor Rod Calculation According to TIA-222-G section 4.9.9

ϕ = 0.80 TIA 4.9.9

I_{bolts} = 6511.75 in^2 Momet of Inertia

P_u = 233 kips Tension Force

V_u = 2 kips Shear Force

R_{nt} = 325.00 kips Nominal Tensile Strength

η = 0.50 for detail type (d)

The following Interation Equation Shall Be Satisfied:

$$\left(\frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$$0.912 \leq 1$$

Base Plate Calculation According to TIA-222-G

ϕ = 0.90 TIA 4.7

M_{PL} = 564.0 in-kip Plate Moment

L = 12.1 in Section Length

Z = 12.1 Plastic Section Modulus

M_P = 727.1 in-kip Plastic Moment

ϕM_n = 654.3 in-kip Factored Resistance

Calculated Moment vs Factored Resistance

563.98 in-kip $\leq$ 654 in-kip

Anchor Rods Are Adequate	**91.2%** ☑
Base Plate is Adequate	**86.2%** ☑

Monopole Spread Footing Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:		**Footing Dimensions:**		**Concrete:**
Moment:	4141 ft-kips	23 ft x 23 ft	7 ft Square Pier	f'c = 4000 psi
Shear:	30 kips	x 4 ft thick	w/6 in Reveal	Steel fy = 60 ksi
Axial:	66 kips	Bearing 6 ft B.G.	82.9 Yd3 Concrete	f = 0.75
Soil Backfill	110 pcf	Ultimate Bearing:	6000 psf	Water Table n/a

Foundation Weight

Weight of Pole	66.0 kips
Weight of Concrete	335.775 kips
Weight of Soil	105.6 kips
Bouyancy of Water	0.0 kips
Total	507.4 kips

Overturning Resistance:

Overturning Moment (M_u)	4336 ft-kips	4141 ft-kips + (30 kips x 6.5 ft)
Resisting Moment (R_s)	5834.8125 ft-kips	507.375 kips x 23 ft / 2
$\phi \times R_s > M_u$	$M_{overturning}$ / f M_{resist}	**99.1%** **OK**

Soil Bearing Pressure:

Eccentricity (e)	8.55 ft	4336 ft-kips / 507.375 kips
6(e)	51.3 ft >	23.0 ft 6e > 23
Maximum Soil Bearing	4430.7368 psf	Calculated across corners
Soil Overburden	-660 psf	
Net Soil Bearing	3770.7368 psf	
Resisting Soil Bearing (R_s)	6000 psf	
Net Soil Bearing < $\phi \times R_s$	Net Bearing / f R_s	**83.8%** **OK**

Bending Moment in Pier:

Bending Moment	4216 ft-kips	4141 ft-kips + (30 kips x 2.5 ft)
Pier Steel Req'd (Loads)	48.23 in^2	
Min. Pier Steel	35.28 in^2	1/2% (Based on Square Pier)

Bending Moment in Footing:

Max Bending Moment	2561.5675 ft-kips	Σ Moments about pier face
Footing Steel Req'd (Loads)	0.90 in^2/ft	
Min. Footing Steel	1.04 in^2/ft	0.18%

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

Aeronautical Study No.
2016-ASO-19205-OE

Issued Date: 09/28/2016

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

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

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

Structure:	Antenna Tower Burning Fork
Location:	Burning Fork, KY
Latitude:	37-44-13.20N NAD 83
Longitude:	83-01-55.00W
Heights:	955 feet site elevation (SE)
	190 feet above ground level (AGL)
	1145 feet above mean sea level (AMSL)

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

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

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

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 L.

This determination expires on 03/28/2018 unless:

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

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

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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

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

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

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

If we can be of further assistance, please contact our office at (718) 553-2611. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-ASO-19205-OE.

Signature Control No: 298995234-305878876 (DNE)
Angelique Eersteling
Technician

Attachment(s)
Frequency Data

cc: FCC

Frequency Data for ASN 2016-ASO-19205-OE

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

Ali Kuzehkanani

From: Houlihan, John F (KYTC) <John.Houlihan@ky.gov>
Sent: Tuesday, July 19, 2016 3:09 PM
To: Ali Kuzehkanani
Subject: RE: 638 - KAZC study request for a new tower at Burning Fork

Ali, no permit is required from the KAZC. Thank you

Aeronautical Study Result
The structure is not in KAZC's jurisdiction and does not require a permit.
Structure's Coordinates: 37°44'13.20"N, 83°1'55.00"W
Structure's Height :190ft
User-submitted ground elevation is 955 ft.
DEM's ground elevation is 954.59 ft (KYAPED 5-FT DEM).

Kentucky Airport Zoning Commission (KAZC)
John Houlihan, Administrator
200 Mero Street, 4th Floor Office of Audits
Frankfort, KY 40622
Office 502-782-4044, Cell 502-330-3955

KAZC webpage: http://transportation.ky.gov/Aviation/Pages/Zoning-Commission.aspx

From: Ali Kuzehkanani [mailto:AKuzehkanani@fcclaw.com]
Sent: Tuesday, July 19, 2016 3:02 PM
To: Houlihan, John F (KYTC) <John.Houlihan@ky.gov>
Cc: Krystal Branham <kbranham@ekn.com>; Lynn Haney (lhaney@ekn.com) <lhaney@ekn.com>; Raina Helton <rhelton@ekn.com>; m.thacker@tgtel.com; Pamela Gist <PGist@fcclaw.com>
Subject: 638 - KAZC study request for a new tower at Burning Fork

Dear John:

Forwarded herewith in accordance with KRS 183.990 and Chapter 50 of Title 602 of the Kentucky Administrative Regulations, is an "Application for Permit to Construct or Alter a Structure" (Form TC 56-50) for a 190-foot communications support structure (Burning Fork) proposed near Burning Fork (Magoffin) (Knox), KY. The site is located off of Old Burning Fork Rd, approximately 0.5 miles west of Burning Fork (Magoffin), KY at geographic coordinates (**NAD83**) N 37-44-13.20; W 83-01-55.00.

Attached is a copy of the electronic FAA 7460-1 filing. A copy of the final FAA determination will be provided to you as soon as it is issued.

Please let me know if you have any questions or require any additional information.

Thank you in advance for your help in this matter.

Regards,

Ali Kuzehkanani

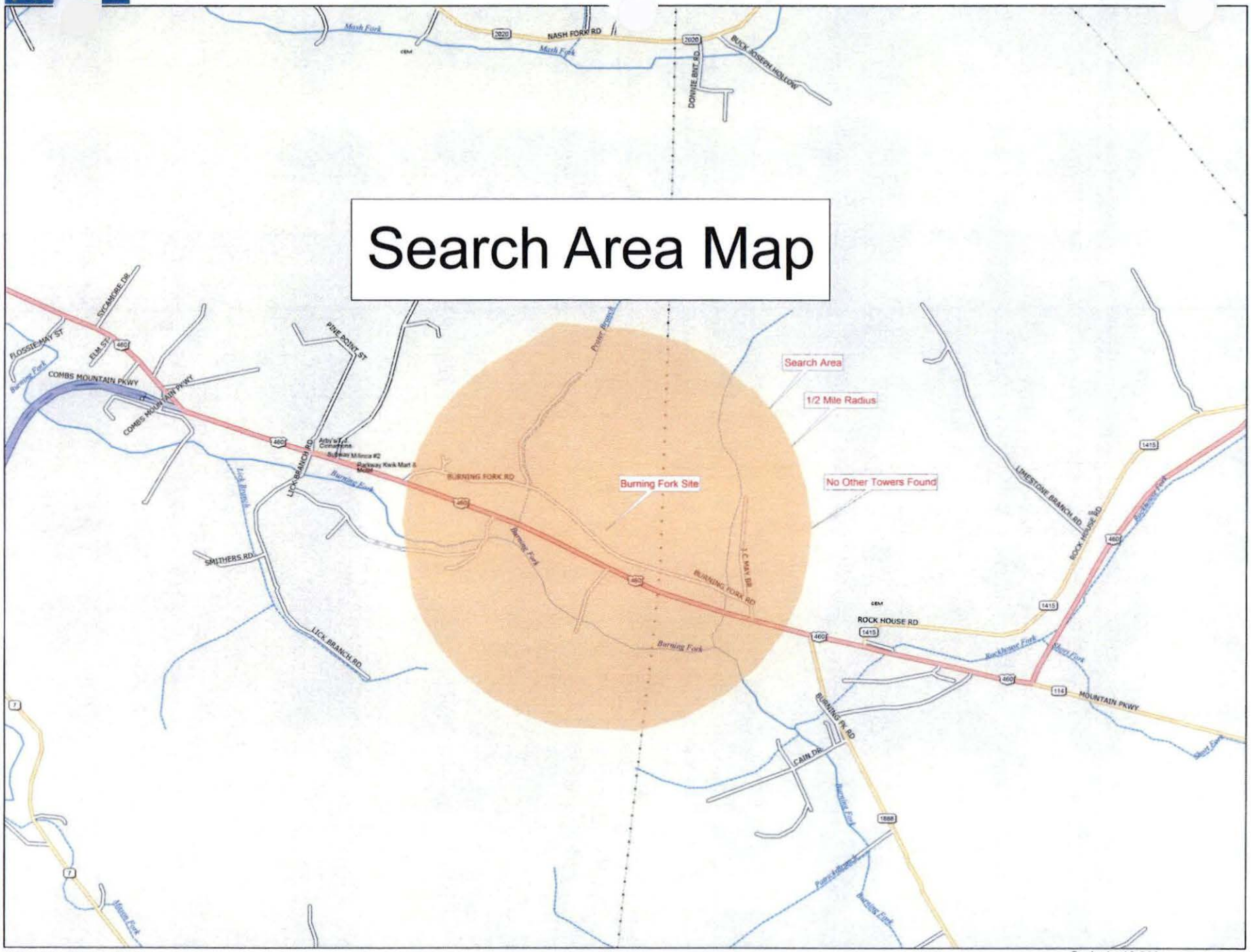
Director of Engineering
Lukas, Nace, Gutierrez & Sachs, LLP
8300 Greensboro Drive, Suite 1200
McLean, VA 22102
Direct (703) 584-8667
Mobile (703) 927-1961
Fax (703) 584-8696
Email ali@fcclaw.com
Email akuzehkanani@fcclaw.com

Driving Directions for Burning Fork

Starting at the Magoffin County courthouse in Salyersville, KY at the traffic light on KY Route 40, turn left onto US 460 east. Drive 1.3 miles and turn left. Staying on US 460 east, drive 0.5 miles and turn left onto Old Burning Fork road. Drive 0.4 miles to the access road located on the right. Signs will be posted here. Drive up the gravel hill approximately one hundred fifty feet and you will have arrived. A sign will be posted here, also.

Prepared By:
Daryl Bartley
Appalachian Wireless
606-477-2355

Search Area Map



TN
MN (6.7°W)

Scale 1 : 19,200
1" = 1,600.0 ft
Data Zoom 14-0

MEMORANDUM OF LEASE

THIS MEMORANDUM OF LEASE is made and entered into on this 1st day of May, 2016, with a commencement date of May 1, 2016, by and between Eagle Well Service, Inc., a Kentucky corporation, with a mailing address of 65 Ivyton Road, Salyersville, Kentucky 41465, hereinafter referred to as "Lessor", and East Kentucky Network, LLC d/b/a Appalachian Wireless, a Kentucky limited liability company, with a mailing address of 101 Technology Trail, Ivel, Kentucky, 41642, hereinafter referred to as "Lessee."

WITNESSETH

1. **Demised Premises**. For good and valuable consideration, Lessor leased to Lessee, and Lessee has leased from Lessor that certain tract of real estate located in Magoffin County, Kentucky, and being a portion of the same land conveyed to Eagle Well Service, by Deed dated September 29, 2005 and recorded on October 20, 2005 in Deed Book 184, Page 1, in the Magoffin County Clerk's Office. Said property is more particularly described in the description attached hereto and made a part hereof as Exhibit A and the plat attached hereto and made a part hereof as Exhibit B, prepared by James W. Caudill, Licensed Professional Land Surveyor (hereinafter referred to as the "Premises"). The Lessor has also granted unto Lessee full and complete right of ingress, egress and regress to the Premises over Lessors' property and other associated rights for installation of utilities and for maintenance. The Lessor has also granted Lessee permission to place a Cell On Wheels (C.O.W.) or other portable mobile cellular equipment on Lessor's property adjacent to the Premises until such time as Lessee completes the construction of its tower and related facilities and the installation of the equipment necessary to

begin operations from such tower and related facilities, along with full rights of ingress, egress, and regress to access same.

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

3. **Option to Renew.** Lessee has the right and option to renew the Lease for an additional seven (7) terms of five (5) years each.

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

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

IN WITNESS WHEREOF, Lessor and Lessee have caused their names to be signed hereto, as of the day and year first above written.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

LESSOR:

EAGLE WELL SERVICE, INC.

By: Russell Parsons
Its: President

COMMONWEALTH OF KENTUCKY
COUNTY OF Mason

The foregoing instrument was acknowledged before me on this 3 day of May, 2016, by Russell Parsons, President of Eagle Well Service, Inc., Lessor.

Notary Public

My Commission Expires July 3, 2016
ID 512964

LESSEE:

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

W A Gillum

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

COMMONWEALTH OF KENTUCKY
COUNTY OF Floyd

The foregoing instrument was acknowledged before me on this 6th day of May, 2016, by W.A. Gillum, CEO/General Manager of East Kentucky Network, LLC d/b/a Appalachian Wireless.

Raina L Helton
Notary Public

My Commission Expires Feb 6, 2020

RAINA L. HELTON NOTARY PUBLIC ID NO. 549406 MY COMMISSION EXPIRES 2/6/2020 STATE AT LARGE, KY.

This instrument was prepared by:

Cindy McCarty
Cindy D. McCarty, Attorney at Law
East Kentucky Network, LLC d/b/a Appalachian Wireless
101 Technology Trail
Ivel, Kentucky 41642


RAINA L. HELTON
NOTARY
PUBLIC
ID NO. 584608
MY COMMISSION
EXPIRES
STATE AT LARGE, KY.

LOT DESCRIPTION
Property of
Eagle Well Service
2170 Gun Creek Road
Salyersville, Ky 41465
Burning Fork of the Licking River
April 7, 2016

A portion of the property lying north of Old Burning Fork Road (CR-1100) in Magoffin County of Kentucky, on Burning Fork of Licking River on an old bench about 100' north of the road. Being a part of the same land conveyed by deed from Community Oil, Inc. to Eagle Well Service, by Deed dated September 24, 2005 and recorded in Deed Book 184 Page 1 of the Magoffin county Court Clerk.

Unless stated otherwise, any monument referred to herein as "set iron pin with cap" is a set ½" diameter rebar, at least eighteen (18") in length, with a plastic cap stamped "LS-2259". All bearings stated herein are referred to NAD83, KY single zone of the Kentucky state plane system. This survey preformed by James W. Caudill, LS2259, on April 7, 2016.

Lot 1A

Beginning on a set iron pin with cap marked ls2259 on the hillside near the top of a highwall at NAD83, Ky single zone coordinates of N:3803395.45 and E:5707152.61; being a point on the property line between Eagle Well Service (deed book 184, page 1) and Darvin & Alene Allen (deed book 164 page 406); thence running down the hill with this line South 06 deg 38 min 35 sec West, 26.76 feet to a set iron pin with cap marked ls2259 on the face of the highwall; thence leaving the property line and severing the property of Eagle Well Service by running across the bench South 38 deg 34 min 17 sec West, 79.25 feet to a set iron pin with cap marked ls2259 below the edge of the bench; thence running around the hillside below the edge of the bench North 42 deg 03 min 55 sec West, 99.92 feet to a set iron pin with cap marked ls2259; thence running back across the bench North 37 deg 30 min 27 sec East, 100.05 feet to a set iron pin with cap marked ls2259 on the hillside above the top of the highwall; thence running around the hillside above the top of the highwall South 42 deg 00 min 04 sec East, 87.48 feet to the beginning. Containing a calculated area of 9775 sq ft or 0.224 acres.

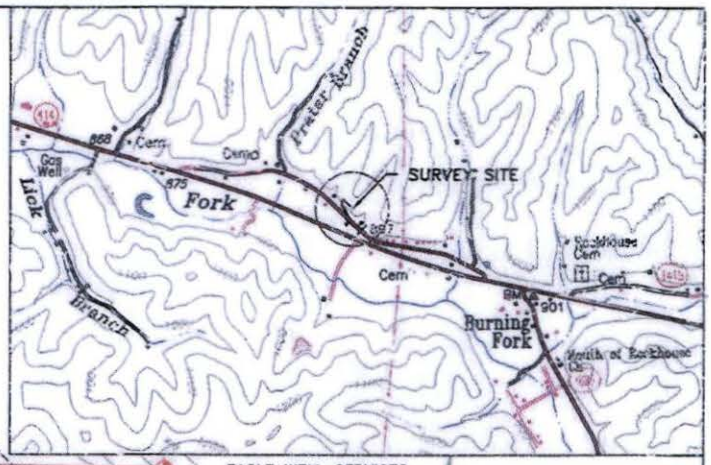
To be included with Lot1A is an access right of way from Old Burning Fork Road to the lot; being where the existing access road is now located. Should for any reason the existing access road become unusable or inadequate for the intended purpose, then additional area shall be provided to upgrade the access road or, if necessary, construct a new access road to the lot.

This survey was performed on April 7, 2016 by James W. Caudill, a Kentucky Licensed Professional Land Surveyor No. 2259.

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

James W. Caudill, PLS #2259
4-7-16

APPALACHIAN WIRELESS
101 TECHNOLOGY TRAIL
IVEL, KY. 41642
PROPOSED TOWER SITE
BURNING FK IN
MAGOFFIN COUNTY



EXITING BENCH

SET IRON PIN WITH CAP MARKED LS2259 ABOVE TOP OF HIGHWALL

EAGLE WELL SERVICES PROPERTY BOOK 184 PAGE 1

EXITING BENCH

OLD DBLWIDE FOUNDATION

SEWER TANK UG

BACK OF BENCH

N 37°30'27" E 100.05'

LOT 1A
9775 Sq. Feet
0.224 Acres

SET IRON PIN WITH CAP MARKED LS2259

EDGE OF BENCH

N 42°03'55" W 99.92'

POWER POLE

POWER LINE

SET IRON PIN WITH CAP MARKED LS2259 BELOW EDGE OF BENCH

EAGLE WELL SERVICES PROPERTY BOOK 184 PAGE 1

S 42°00'04" E 87.48' TOP OF HIGHWALL

OLD DEED LINE

DARVIN & ALENE ALLEN PROPERTY BOOK 164 PAGE 406

EXISTING WIRE FENCE

SET IRON PIN WITH CAP MARKED LS2259 TOP OF HIGHWALL

N:3803395.45
E:5707152.61
NAD83 KY SINGLE ZONE

S 06°38'35" W 26.76'

SET IRON PIN WITH CAP MARKED LS2259 ON FACE OF HIGHWALL

S 38°34'17" W 79.25'

EXITING BENCH

EAGLE WELL SERVICES PROPERTY BOOK 184 PAGE 1

DARVIN & ALENE ALLEN PROPERTY BOOK 164 PAGE 406

APPROXIMATE R.O.W.

EXISTING ACCESS ROAD

OLD BURNING FORK ROAD (CR-1100)

N
NAD83 KY SINGLE ZONE

0' 40' 80' 120'

Description of lot 1A
beginning at a set ipc marked ls2259;
thence S 06°38'35" W a distance of 26.76';
thence S 38°34'17" W a distance of 79.25';
thence N 42°03'55" W a distance of 99.92';
thence N 37°30'27" E a distance of 100.05';
thence S 42°00'04" E a distance of 87.48';
which is the point of beginning,
having an area of 9775.06 square feet, 0.224 acres

SURVEY STA SET ◆ FOUND ◆
IRON PIN WITH CAP (18" X .5" REBAR PLASTIC CAP MARKED LS2259)

BOUNDARY LINE
ACCESS ROAD
PARENT TR LINE

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

URBAN CLASS SURVEY
I HEREBY CERTIFY THAT THIS PLAT DEPICTS A SURVEY MADE BY ME, BY THE METHOD OF RANDOM TRAVERSE. THE BEARINGS SHOWN HEREON HAVE NOT BEEN ADJUSTED FOR CLOSURE. THIS SURVEY AND PLAT MEETS OR EXCEEDS THE MINIMUM STANDARDS OF GOVERNING AUTHORITIES. THE UNADJUSTED ERROR OF CLOSURE WAS 1 IN 13115

James W. Caudill 2259 4-7-16
NAME PLS# DATE

PLAT OF SURVEY

DRAWN BY	SURVEY DATE	SUB DIVISION
JWC	04/07/16	PROPERTY OF EAGLE WELL SERVICES 2170 GUN CREEK ROAD SALYERSVILLE, KY 41465 BURNING FORK OF LICKING RIVER DEED BOOK 184 PAGE 1
CHECKED BY	DRAWING DATE	
JWC	04/07/16	
SCALE	SHEET	SURVEYED BY JAMES W. CAUDILL LS2259 2999 PERKINS/MADDEN ROAD AMBURGEY, KY 41773 PHONE 606-642-3217
1" = 40'	1 OF 1	

APPALACHIAN WIRELESS
101 TECHNOLOGY TRAIL
IVEL, KY. 41642

PROPOSED TOWER SITE
BURNING FORK IN MAGOFFIN CO

EAGLE WELL SERVICES
PROPERTY
BOOK 184 PAGE 1

EAGLE WELL SERVICES
PROPERTY
BOOK 184 PAGE 1

EXISTING ACCESS ROAD

BACK OF BENCH

EXITING BENCH

OLD DBLWIDE FOUNDATION

SEWER TANK UG

BUILDING PAD

EQUIPMENT BUILDING

LOT LINE

TOP OF HIGHWALL

LOT 1A
9775 Sq. Feet
0.225 Acres

TOWER PAD

EDGE OF BENCH

PROPOSED TOWER
LAT:37°44'13.2046"
LON:83°01'55.0051"
N:3803374.41
E:5707099.84
EL:954.84

EAGLE WELL SERVICES
PROPERTY
BOOK 184 PAGE 1

POWER POLE

GUY WIRE

POWER LINE

EXISTING ACCESS ROAD

EXITING BENCH

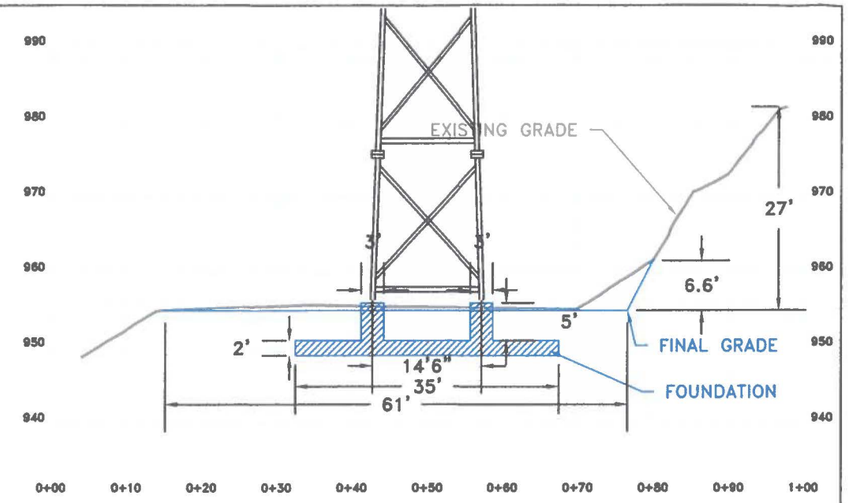
PROFILE

CROSS SECTION

FROM DEED PLOT

EXISTING WIRE FENCE

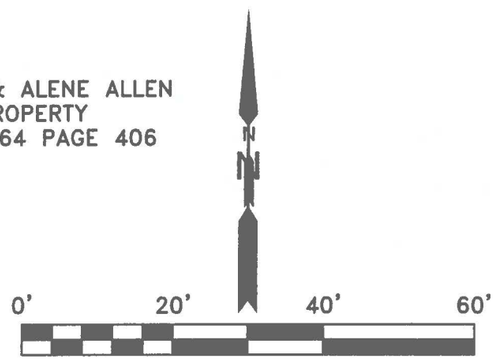
LINE	BEARING	DISTANCE
L1	N 56°11'35" E	57.54'
L2	N 60°13'26" E	48.42'
L3	N 71°52'56" E	49.49'
L4	N 76°39'32" E	60.07'
L5	S 89°54'01" E	42.63'
L6	S 63°13'02" E	67.39'
L7	S 88°38'55" W	25.91'
L8	N 83°40'13" W	50.00'
L9	N 55°39'11" W	52.61'
L10	N 54°35'58" W	56.75'
L11	N 48°02'25" W	76.35'



CROSS SECTION

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

DARVIN & ALENE ALLEN
PROPERTY
BOOK 164 PAGE 406



- THE PROPOSED TOWER HAS BEEN LOCATED USING DUAL FREQUENCY GPS UNIT PROCESSED BY "OPUS"
- STATE PLANE COORDINATES NAD 83 KY SINGLE ZONE N:3803374.41 E:5707099.84 EL:954.8' EXISTING GR PLAN- FOUNDATION EL:956.0'-TOP TOWER EL 1136.0'
- PRECISION: HORIZONTAL=0.30' VERTICAL=0.50'
- THIS SURVEY MEETS OBSTACLE ACCURACY CODE 2C.
- PROPERTY LINE INFORMATION TAKEN FROM DEEDS AND VERIFIED IN THE FIELD.

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECTION.

James W. Caudill 12305 6-27-16

JAMES W. CAUDILL PE# DATE

STATE OF KENTUCKY
JAMES WESLEY
CAUDILL
12305
LICENSED
PROFESSIONAL ENGINEER

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

PROPOSED SITE PLAN AND STRUCTURE LOCATION BURNING FORK TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 06/27/16	PROPOSED PAD & STRUCTURES EAGLE WELL SERVICES TRACT OFF HWY 114 NR SALYERSVILLE DETAIL SITE MAP
APPROVED	DATE	
SCALE 1" = 20'	SHEET 2 OF 3	PROJECT NO. BURNINGFORK/BURNINGFK2C20

J W CAUDILL ENGINEERING

9283 HWY 15 STE. C, ISOM, KY 41824

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

James W. Caudill 12305 6-27-16

JAMES W. CAUDILL P.E.# DATE

STATE OF KENTUCKY JAMES W CAUDILL 12305 LICENSED PROFESSIONAL ENGINEER

SALYERSVILLE SOUTH USGS QUAD

APPALACHIAN WIRELESS
101 TECHNOLOGY TRAIL
IVEL, KY. 41642
PROPOSED TOWER SITE
BURNING FORK
NR SALYERSVILLE IN MAGOFFIN CO.

PROPERTY OWNERS (SMALL LOTS)
049-046 EAGLE WELL SERVICE, 65 IVYTON RD, SALYERSVILLE, KY 41465
049-047.05 COMMONWEATH OF KY, C/O TRANSPORTATION CABINET
200 MERO STREET, FRANKFORT, KY 40622
049-048 MOUNT CARAMEL CHURCH & SCHOOL, SALYERSVILLE, KY 41465
049-049.01 ELORIE RISNER, DON RISNER, RT 77 BOX 118 ROYALTON, KY 41464
049-10-03-004 HENRIETTA PUCKETT, HC60 BOX 91, SALYERSVILLE, KY 41465
049-10-04-007.01 WILLIAM & BERTHA HYLTON 530 OLD BURNING FK RD SALYERSVILLE KY 41465
049-10-04-005 COMMONWEALTH OF KY, C/O TRANSPORTATION CABINET
200 MERO STREET, FRANKFORT, KY 40622
049-10-05-010 BERTHA MAE HYLTON, 530 OLD BURNING FK RD, SALYERSVILLE, KY 41465

MAP 49 PAR 41
KEITH & SHARRON HOPPER
2335 ST. PETER RD
POTTSTOWN, PA 19465

MAP 49 PAR 43
EAGLE WELL SERVICE
65 IVYTON RD
SALYERSVILLE, KY 41465

MAP 49 PAR 46
EAGLE WELL SERVICE
65 IVYTON RD
SALYERSVILLE, KY 41465

MAP 49 PAR 54
LONNIE COLLINSWORTH ET AL
356 OLD BURNING FK RD
SALYERSVILLE, KY 41465

MAP 49 PAR 49
DARVIN & ALENE ALLEN
764 BURNING FORK RD
SALYERSVILLE, KY 41465

049-052
MARK W SALYER
656 OLD BURNING FK RD
SALYERSVILLE, KY 41465

049-052
MARK W SALYER
656 OLD BURNING FK RD
SALYERSVILLE, KY 41465

1100

1000

500'

EXISTING ACCESS ROAD

CENTER OF PROPOSED TOWER
LAT:37°44'13.2046"
LON:83°01'55.0051"
N:3803374.41
E:5707099.84
EL:956'

049
046

049-047
THOMAN&DARRELL KEITH
61 ELK CRK RD
SALYERSVILLE, KY
41465

049-047.03
EAGLE WELL SERVICE
165 IVYTON RD
SALYERSVILLE, KY 41465

049-048

049
048

049-047.05

049-049.01

049-047.02
STL SALYERSVILLE DG LLC
211 NORTH LINDBERGH RD
SUITE 159
ST LOUIS MO 63141

049-047.01
DANNY & VICKIE BLANTON
104 HOWARD DR
SALYERSVILLE, KY 41465

049-060.02
MCPS REAL PROPERTIES INC
109 GARDNER TRAIL
SALYERSVILLE, KY 41465

049-060
MAGOFFIN CO SCHOOL DIST FINANCE CORP
109 GARDNER TRAIL
SALYERSVILLE,KY 41465

049-10-03-004

049-10-04-005

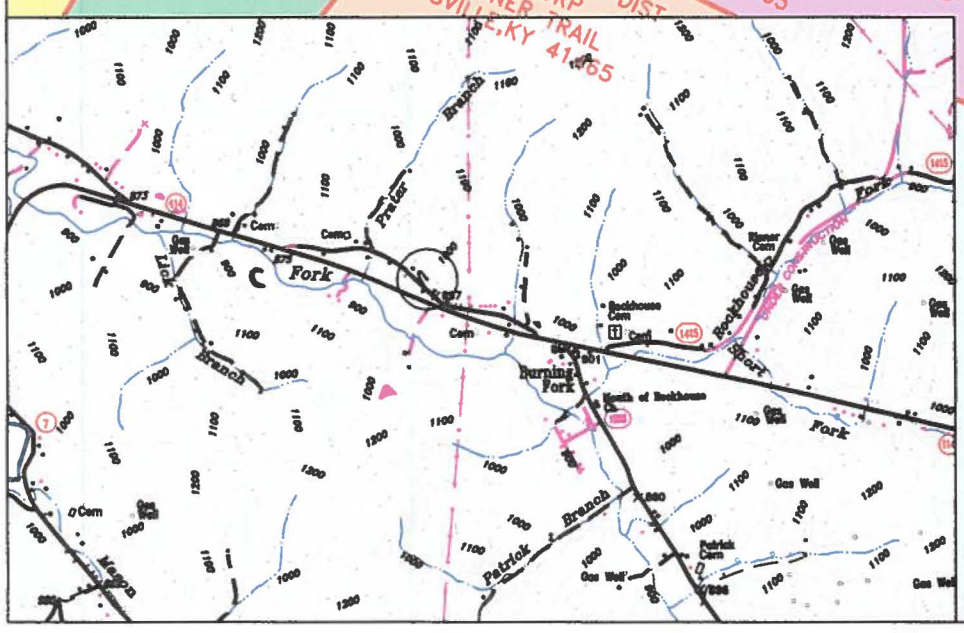
049-10-04-007.01

049-10-05-010

BOUNDARY LINE
ACCESS ROAD
AFFECTED AREA BOUNDARY
POWER LINE

0' 200' 400' 600'

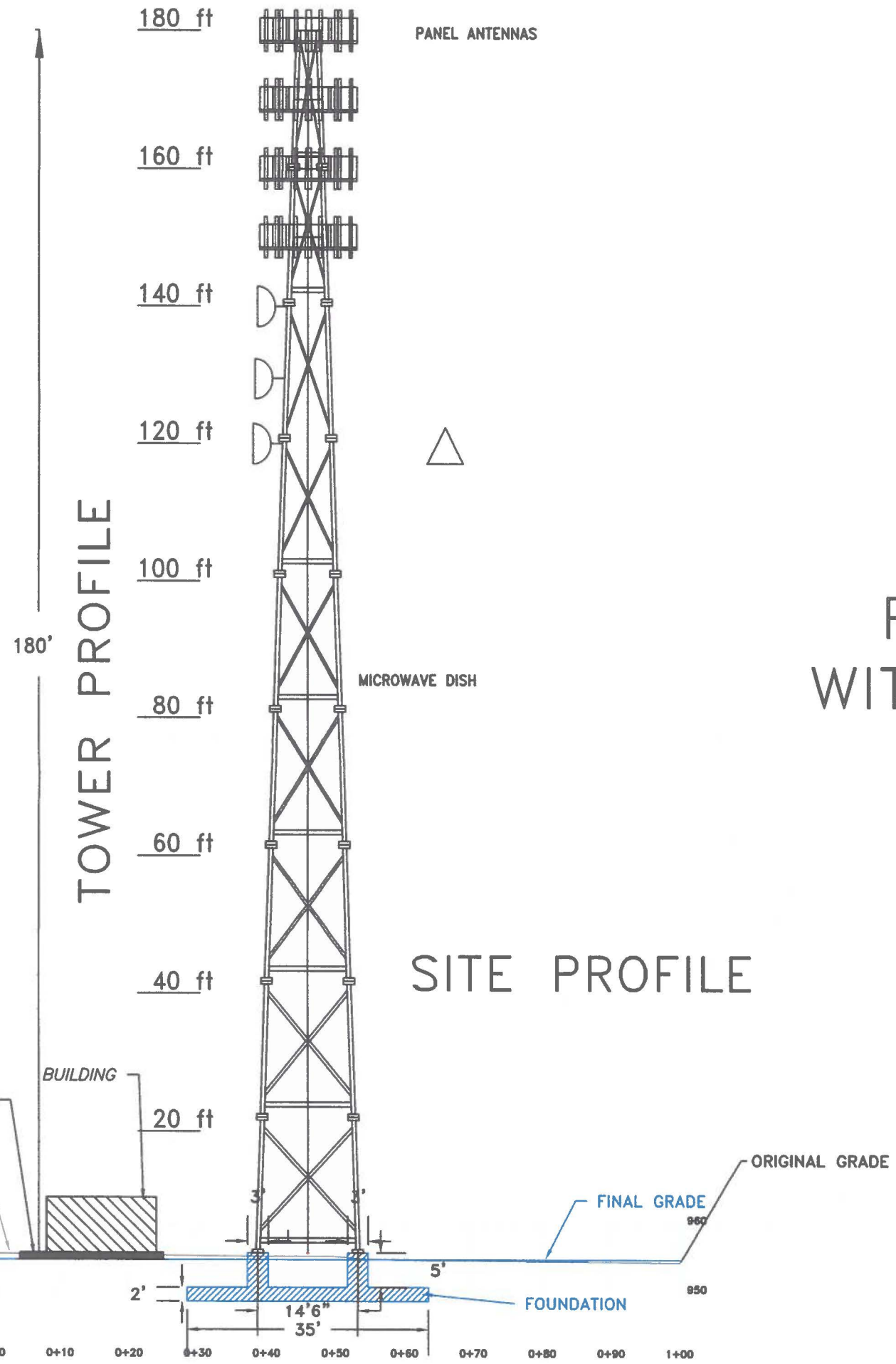
Burning Fork



PROPOSED SITE PLAN AND STRUCTURE LOCATION BURNING FORK TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 06/27/16	PROPOSED PAD & STRUCTURES EAGLE WELL SERVICES TRACT OFF HWY 114 NR SALYERSVILLE STRUCTURE & LAND OWNERS
APPROVED	DATE	
SCALE 1" = 200'	SHEET 1 OF 3	PROJECT NO. BURNINGFORK/BURNINGFKPVA200

APPALACHIAN WIRELESS
101 TECHNOLOGY TRAIL
IVEL, KY. 41642

PROPOSED TOWER SITE
BURNING FORK IN MAGOFFIN CO



PROFILE WITH TOWER

SITE PROFILE

NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS

06/27/16

SCALE 1" = 20'

0' 20' 40' 60'

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

James W. Caudill 12305 6-27-16

JAMES W. CAUDILL PE #. DATE

STATE OF KENTUCKY
JAMES W CAUDILL
12305
LICENSED PROFESSIONAL ENGINEER

PROPOSED SITE PLAN AND STRUCTURE LOCATION BURNING FORK TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 06/27/16	PROPOSED PAD & STRUCTURES EAGLE WELL SERVICES TRACT OFF HWY 114 NR SALYERSVILLE PROPOSED TOWER PROFILE
APPROVED	DATE	
SCALE 1" = 20'	SHEET 3 OF 3	PROJECT NO. BURNINGFORK/BURNINGFK2C20