COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF	)	
NEW CINGULAR WIRELESS PCS, LLC,	)	
A DELAWARE LIMITED LIABILITY COMPANY,	)	
D/B/A AT&T MOBILITY	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2018-00154
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF OHIO	)	

SITE NAME: ELMLICK CREEK

* * * * * * *

APPLICATION FOR
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
FOR CONSTRUCTION OF A WIRELESS COMMUNICATIONS FACILITY

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility ("Applicant"), by counsel, pursuant to (i) KRS §§ 278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submits this Application requesting issuance of a Certificate of Public Convenience and Necessity ("CPCN") from the Kentucky Public Service Commission ("PSC") to construct, maintain, and operate a Wireless Communications Facility ("WCF") to serve the customers of the Applicant with wireless communications services.

In support of this Application, Applicant respectfully provides and states the following information:

1. The complete name and address of the Applicant: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having a local address of Meidinger Tower, 462 S. 4th Street, Suite 2400, Louisville, Kentucky 40202.

2. Applicant proposes construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicant submits this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.

3. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant entity was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference.

4. The Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Applicant's FCC licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations.

5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the Applicant's communications network that is designed to meet the increasing demands

for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.

6. To address the above-described service needs, Applicant proposes to construct a WCF at 320 Wright Road, Beaver Dam, Kentucky (37°28'36.26" North latitude, 86°47'45.36" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by Robert Ling pursuant to a Deed recorded at Deed Book 323, Page 416 in the office of the Ohio County Clerk. The proposed WCF will consist of a 195-foot monopole tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 199-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicant's radio electronics equipment and appurtenant equipment. The Applicant's equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as **Exhibit D**.

8. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of the Applicant has also been included

as part of **Exhibit B**.

9. Foundation design plans signed and sealed by a professional engineer registered in Kentucky and a description of the standards according to which the tower was designed are included as part of **Exhibit C**.

10. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate Applicant's antennas on an existing structure. When suitable towers or structures exist, Applicant attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

11. A copy of the approval from the Federal Aviation Administration ("FAA") to construct the tower is attached as **Exhibit E**.

12. A copy of the approval from the Kentucky Airport Zoning Commission ("KAZC") to construct the tower is attached as **Exhibit F**.

13. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as **Exhibit G**. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this

exhibit.

14. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit H**. The name and telephone number of the preparer of **Exhibit H** are included as part of this exhibit.

15. Applicant, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit I**.

16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit C** bear the signature and stamp of a professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.

17. The Construction Manager for the proposed facility is Don Murdock and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibits B & C**.

18. As noted on the Survey attached as part of **Exhibit B**, the surveyor has determined that the site is not within any flood hazard area.

19. **Exhibit B** includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is

illustrated in **Exhibit B**.

20. Applicant has notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively.

21. Applicant has notified the applicable County Judge/Executive by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will be processed and informed the County Judge/Executive of his/her right to request intervention. A copy of this notice is attached as **Exhibit L**.

22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M**. A copy of the notice of the location of the proposed facility published in a newspaper of general circulation in the county in which the WCF is proposed to be located is included as part of **Exhibit M**.

23. The general area where the proposed facility is to be located is rural. There are no residential structures within 500' of the proposed tower site.

24. The process that was used by the Applicant's radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicant's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Applicant. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.

25. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area. In addition to expanding and improving voice and data service for AT&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service in the subject area. As a participant in the FCC's Connect America Fund Phase II (CAF II) program, AT&T is aggressively deploying WLL service infrastructure to bring expanded internet access to residential and business customers in rural and other underserved

areas. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies. Broadband service via WLL will be delivered from the tower to a dedicated antenna located at the home or business receiving service and will support downloads at 10 Mbps and uploads at 1 Mbps.

26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.

27. All responses and requests associated with this Application may be directed to:

David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400
Telefax: (502) 543-4410
Email: dpike@pikelegal.com

WHEREFORE, Applicant respectfully request that the PSC accept the foregoing Application for filing and having met the requirements of KRS §§ 278.020(1), 278.650, and 278.665 and all applicable rules and regulations of the PSC, grant a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein.

Respectfully submitted,

David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400
Telefax: (502) 543-4410
Email: dpike@pikelegal.com
Attorney for New Cingular Wireless PCS, LLC
d/b/a AT&T Mobility

LIST OF EXHIBITS

A - FCC License Documentation

B - Site Development Plan:

500' Vicinity Map
Legal Descriptions
Flood Plain Certification
Site Plan
Vertical Tower Profile

C - Tower and Foundation Design

D - Competing Utilities, Corporations, or Persons List

E - FAA

F - Kentucky Airport Zoning Commission

G - Geotechnical Report

H - Directions to WCF Site

I - Copy of Real Estate Agreement

J - Notification Listing

K - Copy of Property Owner Notification

L - Copy of County Judge/Executive Notice

M - Notice Sign and Newspaper Notice Text

N - Copy of Radio Frequency Design Search Area

EXHIBIT A
FCC LICENSE DOCUMENTATION

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
KNLH406	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
04-12-2017	06-14-2017	04-28-2027	

Market Number	Channel Block	Sub-Market Designator
BTA338	D	0

Market Name
Owensboro, KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
04-28-2002			

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLH406 **File Number:** **Print Date:**

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WPOI255	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
05-27-2015	06-14-2017	06-23-2025	

Market Number	Channel Block	Sub-Market Designator
MTA026	A	19

Market Name
Louisville-Lexington-Evansvill

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-23-2000	06-23-2005		

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI255 **File Number:** **Print Date:**

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918558.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918558, was terminated on 04/14/2005. See file number 0002135370.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WPTJ404	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
10-29-2009	06-14-2017	09-29-2019	

Market Number	Channel Block	Sub-Market Designator
BTA338	C	7

Market Name
Owensboro, KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
09-29-2004	09-29-2009		

Waivers/Conditions:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918563.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918563, was terminated on 04/14/2005. See file number 0002135370.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPTJ404 **File Number:** **Print Date:**

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQGD546	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
12-18-2006	06-14-2017	12-18-2021	

Market Number	Channel Block	Sub-Market Designator
CMA445	A	0

Market Name
Kentucky 3 - Meade

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQGT878	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
04-16-2007	06-14-2017	04-16-2022	

Market Number	Channel Block	Sub-Market Designator
BEA069	C	0

Market Name
Evansville-Henderson, IN-KY-IL

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQNE326	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
06-05-2015	06-14-2017	06-23-2025	

Market Number	Channel Block	Sub-Market Designator
MTA026	B	4

Market Name
Louisville-Lexington-Evansvill

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQNE326 **File Number:** **Print Date:**

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WPOI255	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
05-27-2015	06-14-2017	06-23-2025	

Market Number	Channel Block	Sub-Market Designator
MTA026	A	19

Market Name
Louisville-Lexington-Evansvill

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-23-2000	06-23-2005		

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI255 **File Number:** **Print Date:**

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918558.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918558, was terminated on 04/14/2005. See file number 0002135370.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WPTJ404	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
10-29-2009	06-14-2017	09-29-2019	

Market Number	Channel Block	Sub-Market Designator
BTA338	C	7

Market Name
Owensboro, KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
09-29-2004	09-29-2009		

Waivers/Conditions:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918563.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918563, was terminated on 04/14/2005. See file number 0002135370.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQGD546	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
12-18-2006	06-14-2017	12-18-2021	

Market Number	Channel Block	Sub-Market Designator
CMA445	A	0

Market Name
Kentucky 3 - Meade

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQGT878	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
04-16-2007	06-14-2017	04-16-2022	

Market Number	Channel Block	Sub-Market Designator
BEA069	C	0

Market Name
Evansville-Henderson, IN-KY-IL

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Call Sign	File Number
WQNE326	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
06-05-2015	06-14-2017	06-23-2025	

Market Number	Channel Block	Sub-Market Designator
MTA026	B	4

Market Name
Louisville-Lexington-Evansvill

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
April 2009

EXHIBIT B

SITE DEVELOPMENT PLAN:

500' VICINITY MAP
LEGAL DESCRIPTIONS
FLOOD PLAIN CERTIFICATION
SITE PLAN
VERTICAL TOWER PROFILE

SITE NAME:

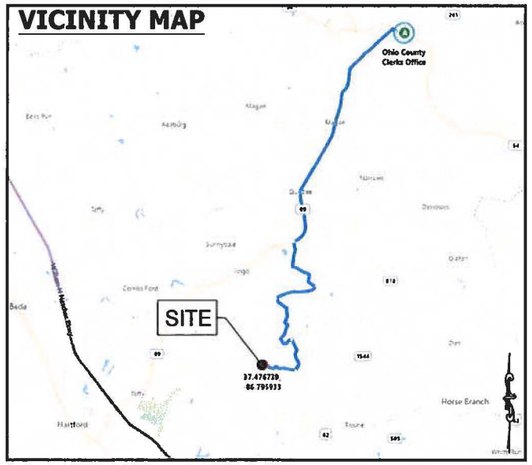
ELMLICK CREEK

SITE NUMBER:

KYL03664

PROPOSED RAW LAND SITE WITH PROPOSED 195' MONOPOLE TOWER WITH A 4' LIGHTNING ARRESTOR AND INSTALLATION OF A 80" x 80" WALK IN CABINET AND GENERATOR

VICINITY MAP



DIRECTIONS

FROM 8 E MAIN ST, FORDSVILLE, KY 42343

1. DEPART KY-54 / E MAIN ST TOWARD FREDERICA ST 0.4 MI
2. TURN LEFT ONTO KY-69 8.1 MI
3. TURN LEFT ONTO MOUNT VERNON RD 2.0 MI
4. TURN RIGHT ONTO KY-1164 / CEDAR GROVE RD 1.4 MI
5. TURN LEFT ONTO HALLS CREEK RD 2.2 MI
6. TURN RIGHT ONTO OLD HALLS CREEK RD 1.1 MI
7. TURN RIGHT ONTO WRIGHT RD 1.2 MI
8. ARRIVE AT 320 WRIGHT RD ON THE LEFT.

PROJECT SCOPE OF WORK

ZONING DRAWINGS FOR:
CONSTRUCTION OF A PROPOSED UNMANNED TELECOMMUNICATIONS FACILITY.
SITE WORK: PROPOSED TOWER, UNMANNED EQUIPMENT CABINET AND GENERATOR ON PLATFORMS, AND UTILITY INSTALLATIONS.

PROJECT INFORMATION

COUNTY:	OHIO
SITE ADDRESS:	320 WRIGHT RD BEAVER DAM, KY 42320
APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AT&T MOBILITY MEIDINGER TOWER 462 S. 4TH ST. SUITE 2400 LOUISVILLE, KY 40202
LATITUDE:	37° 28' 36.26"
LONGITUDE:	-86° 47' 45.36"

DRAWING INDEX

CONTACT INFORMATION

FIRE DEPARTMENT:
HARTFORD FIRE DEPARTMENT
PHONE: 270-298-4663

POLICE DEPARTMENT:
OHIO COUNTY SHERIFF'S OFFICE
PHONE: 270-298-4444

ELECTRIC COMPANY:
PENNYRILE RECC
PHONE: 270-259-3161

TELEPHONE COMPANY:
AT&T
PHONE: 855-293-7676

BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE LOCATION.

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

* AMERICAN CONCRETE INSTITUTE 318
* AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION
* TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222
* STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND SUPPORTING STRUCTURES TIA-601
* COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
* INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS IEEE-81, IEEE 1100, IEEE C62.41
* ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION
* 2014 KENTUCKY BUILDING CODE
* 2014 NEC

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN.

CAUTION

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

811 Know what's below. Call before you dig. www.call811.com

FOR EMERGENCIES CALL: 911

at&t

MasTec

IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING | PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77479
Voice: (281) 796-2651 | Fax: (866) 598-3136
irishtower.com

ZONING DRAWINGS
NOT FOR CONSTRUCTION

DRAWN BY:	DL
CHECKED BY:	JRG

REV	DATE	DESCRIPTION
0	06/08/18	ISSUED FOR ZONING

STATE OF KENTUCKY
JACOB GORALSKI
30896
LICENSED PROFESSIONAL ENGINEER
6/6/2018

FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320

SHEET TITLE
TITLE SHEET & PROJECT INFORMATION

SHEET NUMBER
T-1

PROPOSED LEASE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING IN THE COUNTY OF OHIO, STATE OF KENTUCKY, CONSISTING OF A 100 FEET BY 100 FEET LEASE AREA, COMMENCING AT A FOUND FENCE POST, THAT IS 2,100 FEET SOUTHEASTERLY OF THE INTERSECTION OF BETHEL CHURCH ROAD AND WRIGHT ROAD, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

THENCE SOUTH 31 DEGREES 47 MINUTES 50 SECONDS WEST, A DISTANCE OF 817.18 FEET TO THE POINT OF BEGINNING,
THENCE SOUTH 03 DEGREES 10 MINUTES 50 SECONDS WEST, A DISTANCE OF 100.00 FEET;
THENCE NORTH 86 DEGREES 49 MINUTES 10 SECONDS WEST, A DISTANCE OF 100.00 FEET;
THENCE NORTH 03 DEGREES 10 MINUTES 50 SECONDS EAST, A DISTANCE OF 100.00 FEET;
THENCE SOUTH 86 DEGREES 49 MINUTES 10 SECONDS EAST, A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

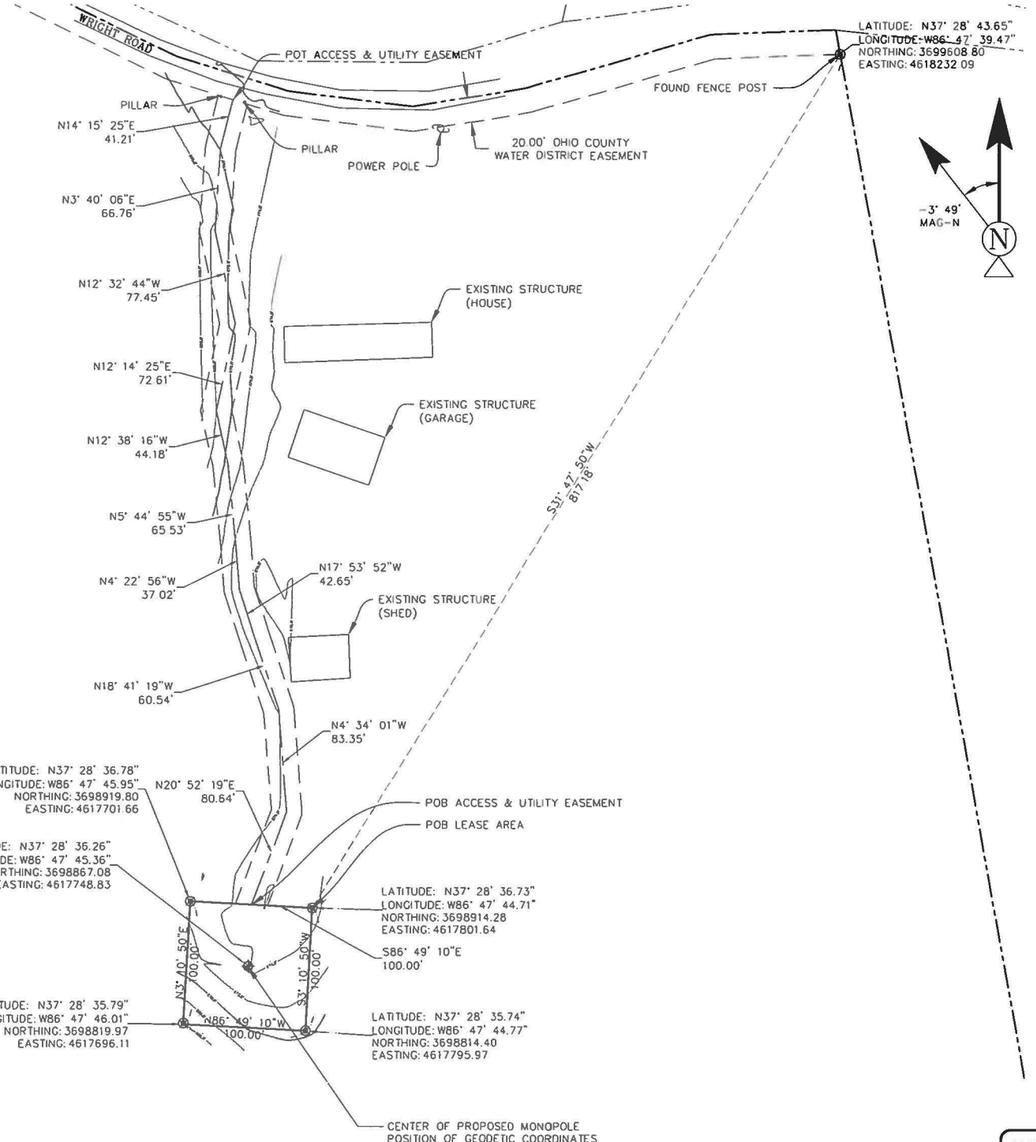
10,000 SQUARE FEET OR 0.2295 ACRES, MORE OR LESS

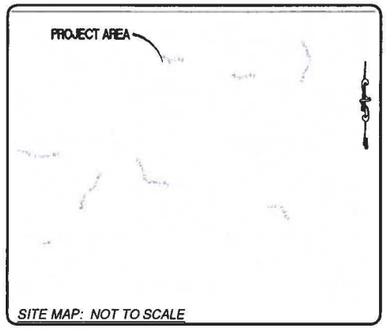
PROPOSED ACCESS & UTILITY EASEMENT

ALL THAT TRACT OR PARCEL OF LAND LYING IN THE COUNTY OF OHIO, STATE OF KENTUCKY, CONSISTING OF A 25 FEET WIDE ACCESS AND UTILITY EASEMENT COMMENCING AT A FOUND FENCE POST, THAT IS 2,100 FEET SOUTHEASTERLY OF THE INTERSECTION OF BETHEL CHURCH ROAD AND WRIGHT ROAD, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

THENCE SOUTH 31 DEGREES 47 MINUTES 50 SECONDS WEST, A DISTANCE OF 817.18 FEET; THENCE NORTH 86 DEGREES 49 MINUTES 10 SECONDS WEST, A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING OF A 25 FEET WIDE ACCESS AND UTILITY EASEMENT LYING 12.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE;

THENCE NORTH 20 DEGREES 52 MINUTES 19 SECONDS EAST, A DISTANCE OF 80.64 FEET;
THENCE NORTH 04 DEGREES 34 MINUTES 01 SECONDS WEST, A DISTANCE OF 83.35 FEET;
THENCE NORTH 18 DEGREES 41 MINUTES 19 SECONDS WEST, A DISTANCE OF 60.54 FEET;
THENCE NORTH 17 DEGREES 53 MINUTES 52 SECONDS WEST, A DISTANCE OF 42.65 FEET;
THENCE NORTH 04 DEGREES 22 MINUTES 56 SECONDS WEST, A DISTANCE OF 37.02 FEET;
THENCE NORTH 05 DEGREES 44 MINUTES 55 SECONDS WEST, A DISTANCE OF 65.53 FEET;
THENCE NORTH 12 DEGREES 38 MINUTES 16 SECONDS WEST, A DISTANCE OF 44.18 FEET;
THENCE NORTH 12 DEGREES 14 MINUTES 25 SECONDS EAST, A DISTANCE OF 72.61 FEET;
THENCE NORTH 12 DEGREES 32 MINUTES 44 SECONDS WEST, A DISTANCE OF 77.45 FEET;
THENCE NORTH 03 DEGREES 40 MINUTES 06 SECONDS EAST, A DISTANCE OF 66.76 FEET;
THENCE NORTH 14 DEGREES 15 MINUTES 25 SECONDS EAST, A DISTANCE OF 41.21 FEET TO THE POINT OF TERMINUS.





SITE MAP: NOT TO SCALE

BENCHMARK

ELEVATION ESTABLISHED FROM GPS OBSERVATIONS CONSTRAINED TO OPUS SOLUTIONS, APPLYING GEOID 12A SEPARATIONS NAVD88 DATUM.

BASIS OF BEARINGS

BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM ***KENTUCKY SINGLE ZONE US FOOT***, DETERMINED BY GPS OBSERVATIONS, COMPLETED ON 4.28.17

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT LOCAL 811 AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR NOTES

NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT PARCEL.

THIS SURVEY IS FOR THE PROPOSED LEASE AREA AND THE PROPOSED ACCESS AND UTILITY EASEMENT ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED

THIS PROPERTY IS SUBJECT TO ANY RECORD EASEMENTS AND/OR RIGHT OF WAY SHOWN HEREON OR NOT.

THIS SURVEY IS NOT INTENDED FOR LAND TRANSFER.

SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

THIS SURVEY PLAN WAS PERFORMED UNDER THE AUTHORITY OF KENTUCKY REVISED STATUTES (201 KAR 18, 150), AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS DEFINED WITH KENTUCKY REVISED STATUES. DIMENSIONS (IF SHOWN) ALONG THE PERIMETER OF THE LANDOWNER'S PROPERTY ARE PROVIDED UNDER THIS SURVEYOR'S SCOPE OF SERVICES WITH AT&T AND ARE TO BE CONSIDERED FOR REFERENCE ONLY. THE EXACT LOCATION OF THE LANDOWNER'S PROPERTY MAY DIFFER UPON THE PREPARATION OF A FULL BOUNDARY SURVEY IN ACCORDANCE WITH THE REQUIREMENTS ESTABLISHED BY THE STATE OF KENTUCKY.

THIS SURVEY WAS PERFORMED WITH A CARLSON BR×5+ DUAL FREQUENCY, REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM ROVER AND BASE STATION H/W B161301475011 33 & B161301475011 26 SERIAL NUMBERS. REDUNDANT AND REPETITIVE MEASUREMENTS WERE TAKEN TO INSURE CORRECT POSITIONS OF ALL DATA POINTS... A TOLERANCE OF 0.04' FOR POSITIONAL ACCURACY.

at&t

MasTec

IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77479
Voice: (281) 796-2651 | Fax: (866) 598-3136
irishtower.com

DRAWN BY:	MD
CHECKED BY:	JC/ACR

REV	DATE	DESCRIPTION
A	05.14.17	REVIEW

STATE OF KENTUCKY
A. CLAY ROBINSON
32...
LICENSED PROFESSIONAL LAND SURVEYOR

FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320
OHIO COUNTY

SHEET TITLE
TOPOGRAPHIC SITE SURVEY

SHEET NUMBER
B-1

SITE INFO

TAX PARCEL NO: 87-45

PROPERTY OWNER: ROBERT LING

SOURCE OF TITLE: DB 323-416

LAND SURVEYOR'S CERTIFICATE

I, A. CLAY ROBINSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATION AS STATES IN KAR 201-18:150.

SIGNED: A Clay Robinson 5.24.18
DATE

TITLE REPORT INFO

REFERENCE IS MADE TO THE TITLE REPORT ORDER #00300-20170083, ISSUED BY STEWART TITLE INSURANCE COMPANY, DATED 03.10.2017
ALL EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED (EXCEPT FOR ROOFTOPS).

SCHEDULE B ITEMS:

8. RIGHT OF WAY EASEMENT DATED 3.15.2002, TO OHIO COUNTY WATER DISTRICT, OF RECORD IN DEED BOOK 348, PAGE 633, IN THE OFFICE AFORESAID.

Know what's below. Call before you dig.

0 30 60 120
SCALE: 1 inch = 60 ft
PAPER SIZE 22x34
SCALE: 1 inch = 120 ft
PAPER SIZE 11x17

FAA COORDINATE POINT

CENTER OF PROPOSED MONOPOLE (NAD83)
LATITUDE 37° 28' 36.26" NORTH
LONGITUDE 86° 47' 45.36" WEST
ELEVATION 674.3' (NAVD88)

1-A ACCURACY CERTIFICATION

THE HORIZONTAL ACCURACY OF THE LATITUDE AND LONGITUDE OF THE GEODETIC COORDINATES FALL WITHIN TWENTY (20) FEET. THE ELEVATIONS (NAVD88) OF THE GROUND AND FIXTURES FALL WITHIN THREE (3) FEET.

FLOOD INFORMATION

THE PROPOSED LEASE AREA SHOWN HEREON IS NOT LOCATED IN A 100-YEAR FLOOD PLAIN PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NO. 21183C0095D, DATED 06.02.2011. THE PROPOSED LEASE AREA IS LOCATED IN ZONE "X".

LEGEND

POB	POINT OF BEGINNING	0000.0 NG	SPOT ELEVATION
POT	POINT OF TERMINUS		POSITION OF GEODETIC COORDINATES
PUE	PUBLIC UTILITY EASEMENT	WV	WATER CONTROL VALVE
ROW	RIGHT OF WAY		FIRE HYDRANT
DW	DRIVEWAY		POWER POLE
SW	SIDEWALK	EMH	ELECTRIC MANHOLE
	SET ½"x24" IR CAPPED: #3219 OR FOUND AS NOTED	T	TELCO MANHOLE

OHE — OHE — OHE — OVERHEAD ELECTRIC
PROPERTY LINE
BARBED WIRE FENCE

Ⓐ PARCEL ID: 87-45
OWNER: LING ROBERT E
320 WRIGHT RD
BEAVER DAM KY 42320

Ⓑ PARCEL ID: 87-20
OWNER: SKIPWORTH D WAYNE & TRACY
890 LEWIS CREEK LN
BEAVER DAM KY 42320

Ⓒ PARCEL ID: 87-20A
OWNER: SKINNER DAN III
143 MCCONNELL DR
CENTRAL CITY KY 42330

Ⓓ PARCEL ID: 88-7
OWNER: BURDEN WILLIE LOUIS
C/O ALLENE LAMAR
3564 BETHEL CHURCH RD
BEAVER DAM KY 42320

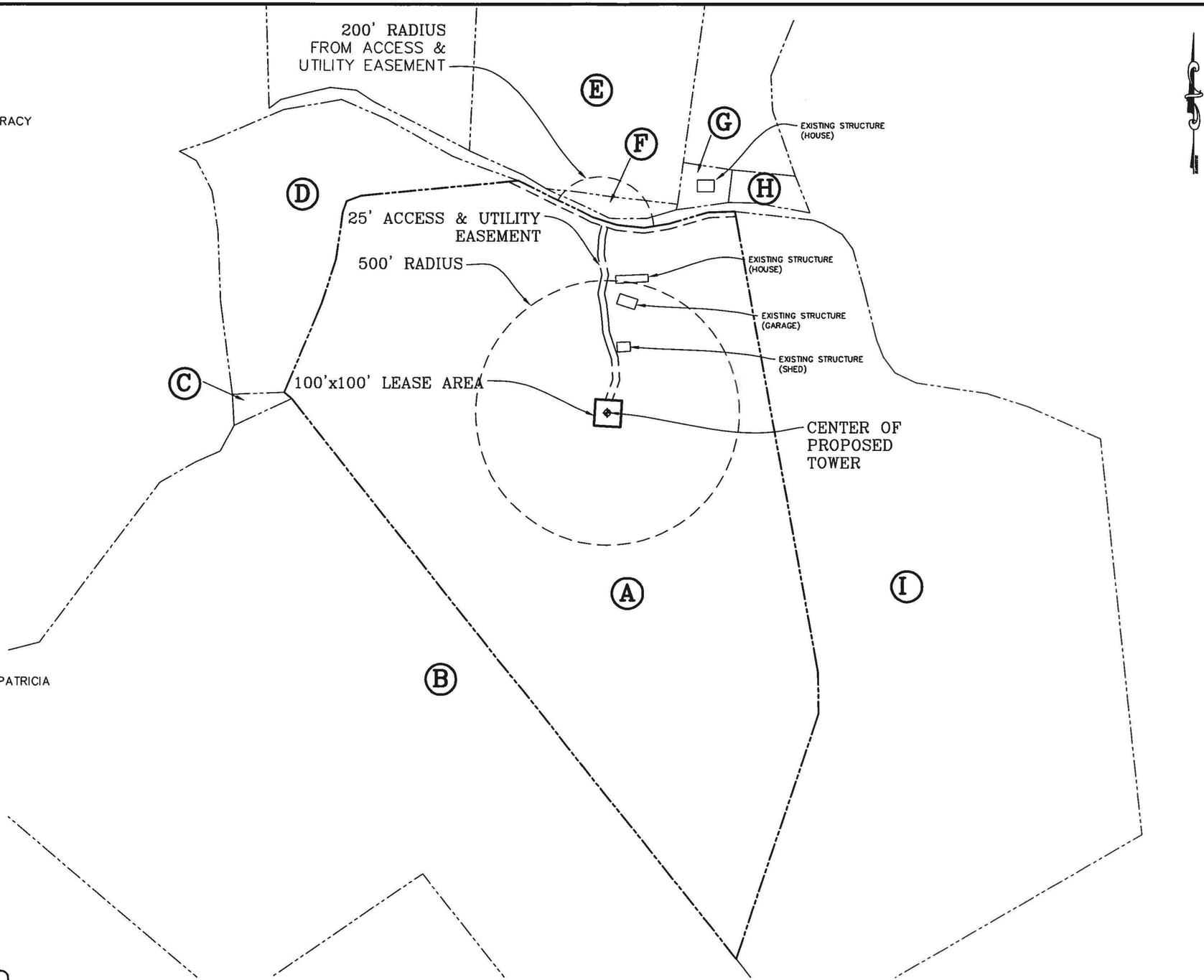
Ⓔ PARCEL ID: 87-3
OWNER: BROOKS ALICE CAROLYN
1020 GRASSLAND CHASE DR
GALLATIN TN 37066

Ⓕ PARCEL ID: 87-45
OWNER: LING ROBERT E
320 WRIGHT RD
BEAVER DAM KY 42320

Ⓖ PARCEL ID: 87-4B & 87-4C
OWNER: COY CHARLES E
2099 CEDAR GROVE RD
HARTFORD KY 42347

Ⓗ PARCEL ID: 87-4B & 87-4C
OWNER: COY CHARLES E
2099 CEDAR GROVE RD
HARTFORD KY 42347

Ⓘ PARCEL ID: 87-18
OWNER: SAFREED CARROLL E & PATRICIA
3444 ROYAL DR
OWENSBORO KY 42301



SURVEYOR NOTES

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED 4.24.18 FROM OHIO COUNTY COUNTY PROPERTY VALUATION OFFICE. RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE INACCURACIES AND THE TIME LAPSE IN UPDATING FILES.

2. THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND DOES CONSTITUTE A BOUNDARY SURVEY.

3. THIS MAP IS NOT FOR RECORDING OR PROPERTY TRANSFER.

0 40 80 160

SCALE: 1 inch = 80 ft.
PAPER SIZE 22x34
SCALE: 1 inch = 160 ft.
PAPER SIZE 11x17

SITE INFO

TAX PARCEL NO: 87-45

PROPERTY OWNER: ROBERT LING

SOURCE OF TITLE: DB 323-416

at&t

MasTec

IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING | PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77478
Voice: (281) 796-2651 | Fax: (866) 598-3136
irishtower.com

DRAWN BY: MD
CHECKED BY: JC/ACR

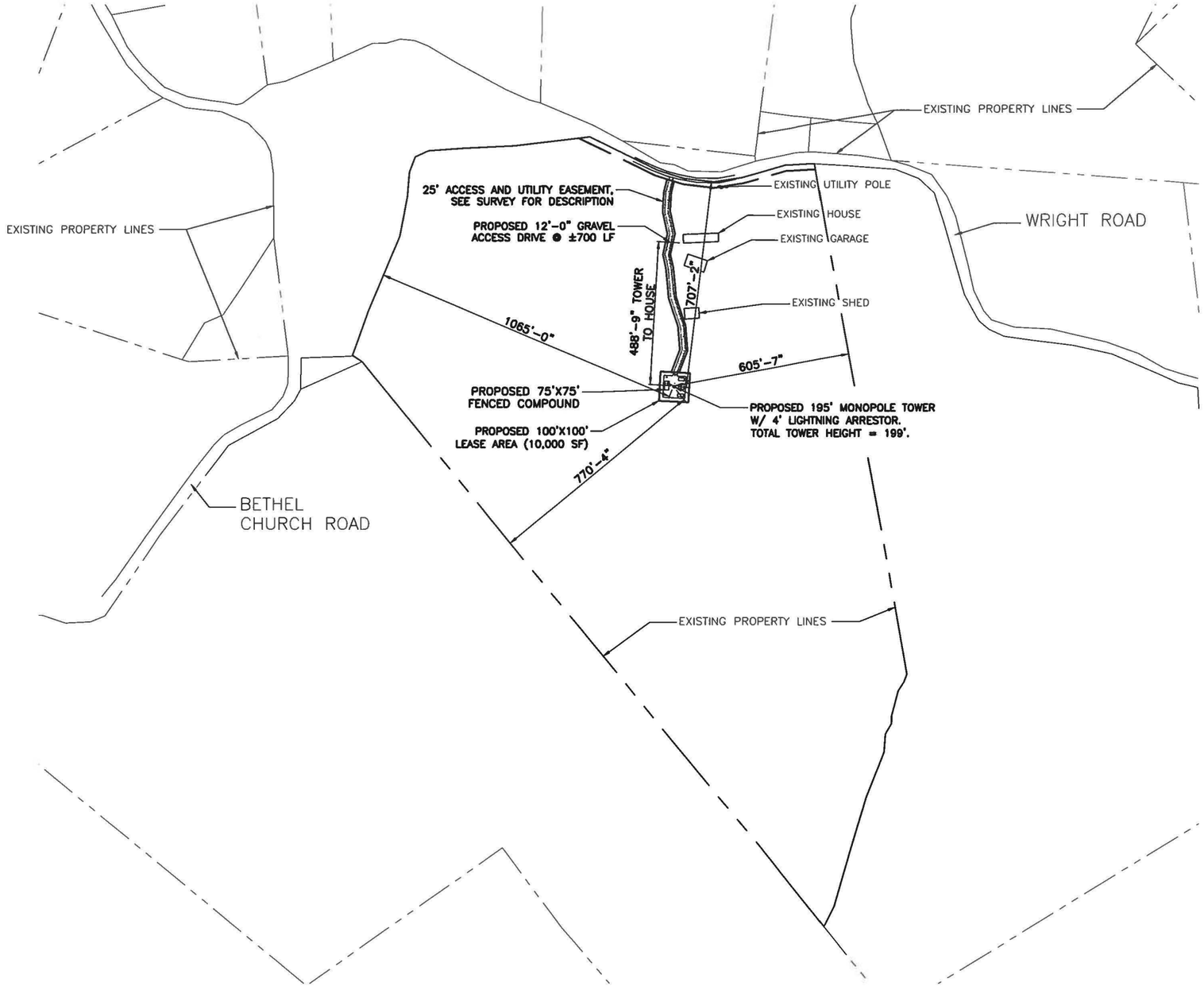
REV	DATE	DESCRIPTION
A	4.24.18	REVIEW

STATE of KENTUCKY
A. CLAY ROBINSON
33
LICENSED
PROFESSIONAL
LAND SURVEYOR

FA #
13800748
SITE #
KYL03664
SITE NAME
ELMLICK CREEK
SITE ADDRESS
320 WRIGHT RD
BEAVER DAM, KY 42320
OHIO COUNTY

SHEET TITLE
500' RADIUS & ABUTTER'S MAP

SHEET NUMBER
B-2



LEGEND

- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING PAVEMENT
- EXISTING PROPERTY LINE

OVERALL SITE PLAN

22"x34" SCALE: 1" = 200'-0"
11"x17" SCALE: 1" = 400'-0"
200' 100' 0' 200'

1

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IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING | PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77479
Voice: (281) 796-2651 | Fax: (866) 598-3136
Irishtower.com

ZONING DRAWINGS
NOT FOR CONSTRUCTION

DRAWN BY:	DL
CHECKED BY:	JRG

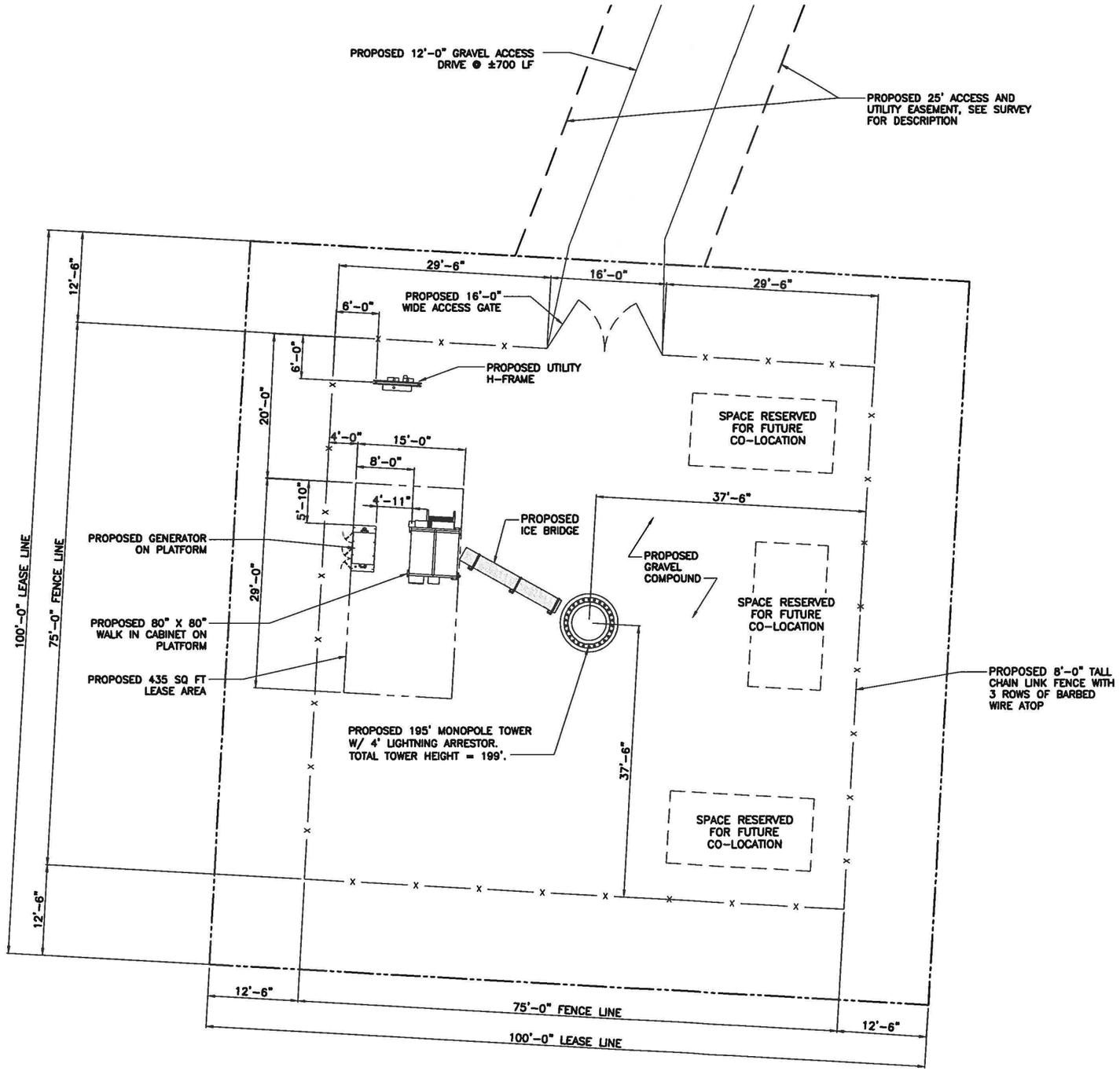
REV	DATE	DESCRIPTION
0	06/08/18	ISSUED FOR ZONING

STATE OF KENTUCKY
JACOB GORALSKI
30696
LICENSED PROFESSIONAL ENGINEER
6/8/2018

FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320

SHEET TITLE
OVERALL SITE LAYOUT

SHEET NUMBER
C-1



LEGEND

- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING PAVEMENT
- EXISTING PROPERTY LINE

DETAIL SITE PLAN

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

1

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IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING | PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77479
Voice: (281) 796-2651 | Fax: (866) 598-3136
Irishtower.com

ZONING DRAWINGS
NOT FOR CONSTRUCTION

DRAWN BY:	DL
CHECKED BY:	JRG

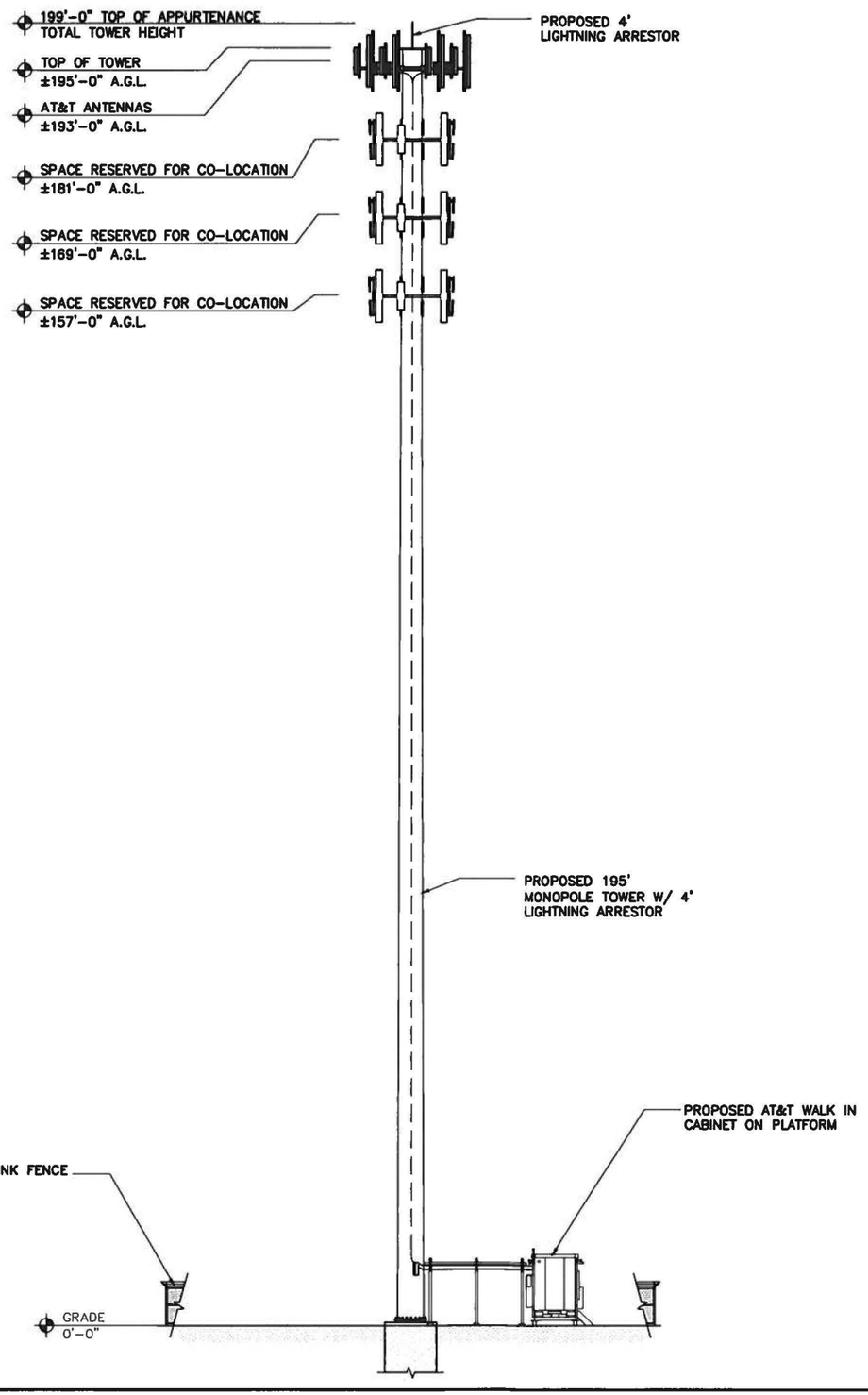
REV	DATE	DESCRIPTION
0	06/08/18	ISSUED FOR ZONING

STATE OF KENTUCKY
JACOB GORALSKI
30696
LICENSED PROFESSIONAL ENGINEER
6/8/2018

FA #
13800748
SITE#
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320

SHEET TITLE
ENLARGED COMPOUND LAYOUT

SHEET NUMBER
C-2



TOWER ELEVATION

22"x34" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0" 8'

1

at&t

MasTec

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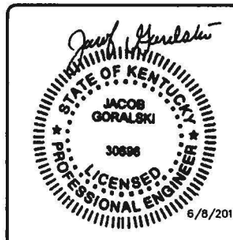
Voice: (281) 796-2651 | Fax: (866) 598-3136
irishtower.com

ZONING DRAWINGS
NOT FOR CONSTRUCTION

DRAWN BY:	DL
CHECKED BY:	JRG

REV	DATE	DESCRIPTION
0	06/08/18	ISSUED FOR ZONING



FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320

SHEET TITLE
TOWER ELEVATION

SHEET NUMBER
C-3

EXHIBIT C
TOWER AND FOUNDATION DESIGN

Sabre Industries™
Towers and Poles

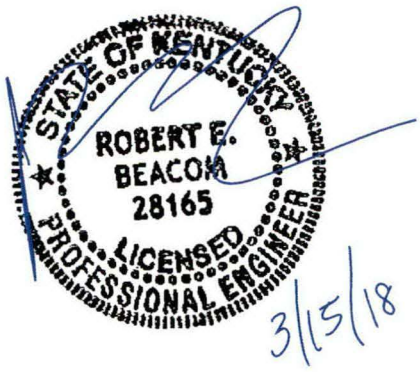
Structural Design Report

195' Monopole
Site: Elmlick Creek, KY
Site Number: KYL03664

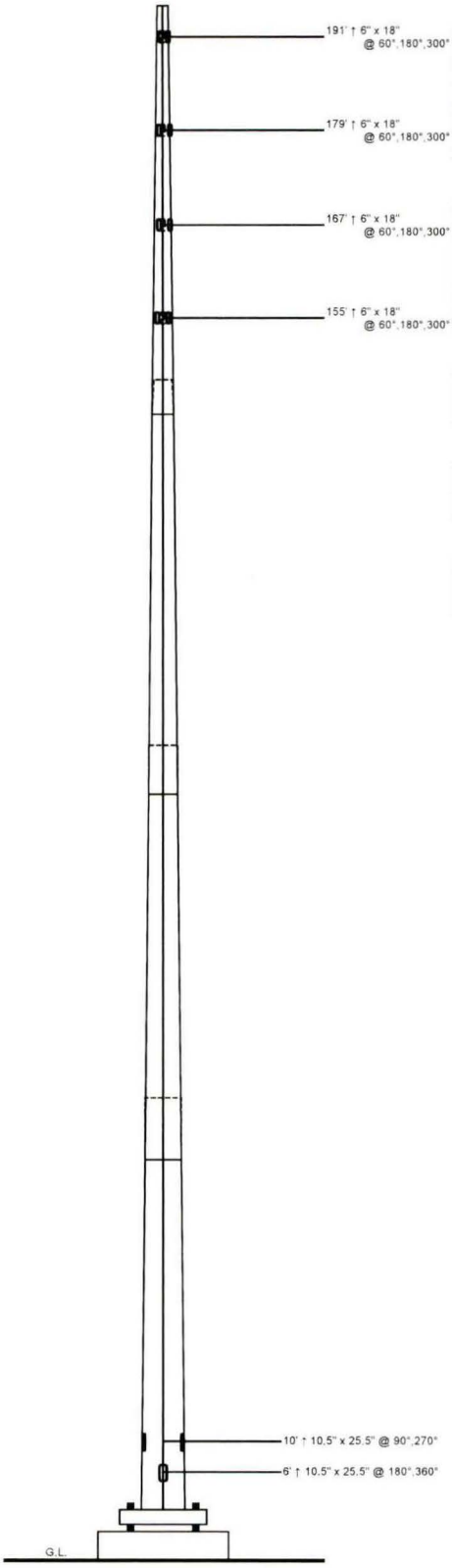
Prepared for: AT&T
by: Sabre Towers & Poles ™

Job Number: 404422

March 15, 2018



Length (ft)	52'-6"	53'-6"	53'-6"	53'-3"
Number Of Sides		18		
Thickness (in)	3/8"		1/2"	
Lap Splice (ft)		A	6' - 3"	8' - 0"
Top Diameter (in)	18"	30.5"	42.55"	54.11"
Bottom Diameter (in)	32.5"	45.27"	57.32"	68.81"
Taper (in/ft)	0.2761			
Grade	A572-65			
Weight (lbs)	6109	11442	15131	20870
Overall Steel Height (ft)	194			



Designed Appurtenance Loading

Elev	Description	Tx-Line
193	(1) 278 sq. ft. EPA 6000# (no Ice)	(18) 1 5/8"
181	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"
169	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"
157	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"

Load Case Reactions

Description	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
3s Gusted Wind	94.77	61.96	9987.18	19.94	12.31
3s Gusted Wind 0.9 Dead	71.02	62.29	9817.62	19.45	11.94
3s Gusted Wind&Ice	144.06	10.21	1826.78	3.9	2.36
Service Loads	79.02	15.83	2540.74	5.23	3.17

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	82"	2.5"	76.25"	26	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	3148.6	A615-75	Galv

Material List

Display	Value
A	4' - 6"

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) The Monopole was designed for a basic wind speed of 89 mph with 0" of radial ice, and 30 mph with 3/4" of radial ice, in accordance with ANSI/TIA-222-G, Structure Class II, Exposure Category C, Topographic Category 1.
5) The tower design meets the requirements for an Ultimate Wind Speed of 115 mph (Risk Category II), in accordance with the 2012 International Building Code.
6) Full Height Step Bolts
7) Tower Rating: 99.9%

Sabre Industries
Towers and Poles

Sabre Communications Corporation
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

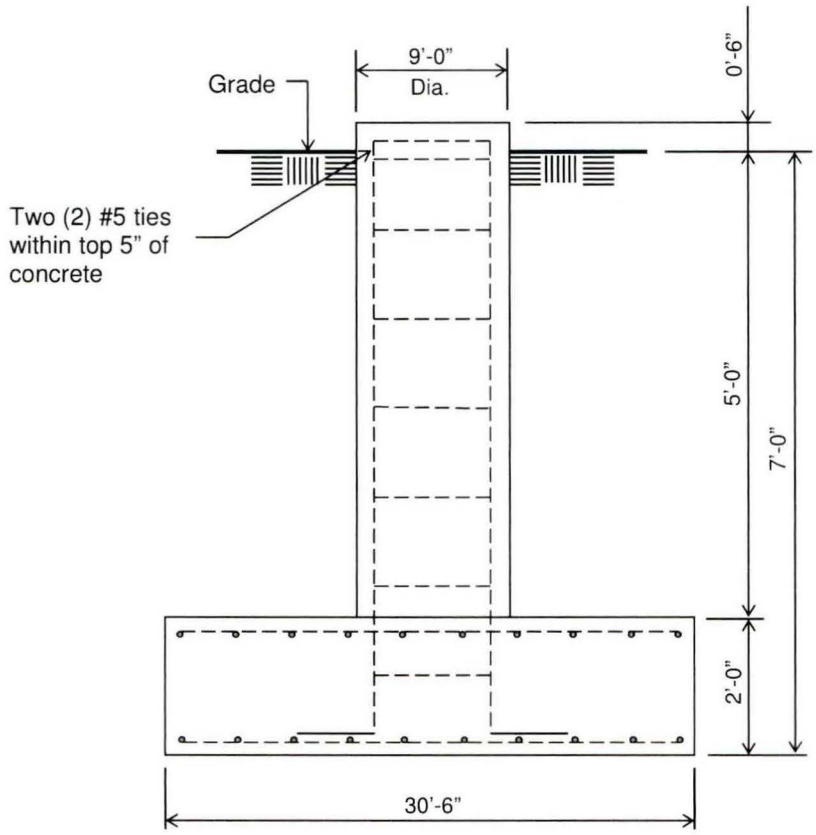
Job:	**404422**
Customer:	AT&T
Site Name:	Elmlick Creek, KY KYL03664
Description:	195' Monopole
Date:	3/15/2018 By: NM

Sabre Industries™
Towers and Poles

No.: 404422

Date: 03/15/18
By: NM

Customer: AT&T
Site: Elmlick Creek, KY KYL03664
195' Monopole at
89 mph Wind with no ice and 30 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G.



ELEVATION VIEW
(81.87 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.

2) Rebar to conform to ASTM specification A615 Grade 60.

3) All rebar to have a minimum of 3" concrete cover.

4) All exposed concrete corners to be chamfered 3/4".

5) The foundation design is based on the geotechnical report by ECS Southeast, LLP., Project No. 26:3125-E2 dated: February 28th, 2018.

6) See the geotechnical report for compaction requirements, if specified.

7) 5 ft of soil cover is required over the entire area of the foundation slab.

8) The foundation is based on the following factored loads:
   Moment = 9,987.18 k-ft
   Axial = 94.77 k
   Shear = 61.96 k

Rebar Schedule for Pad and Pier	
Pier	(62) #8 vertical rebar w/ hooks at bottom w/ #5 ties, two within top 5" of pier, then 12" C/C
Pad	(63) #9 horizontal rebar evenly spaced each way top and bottom (252 total)

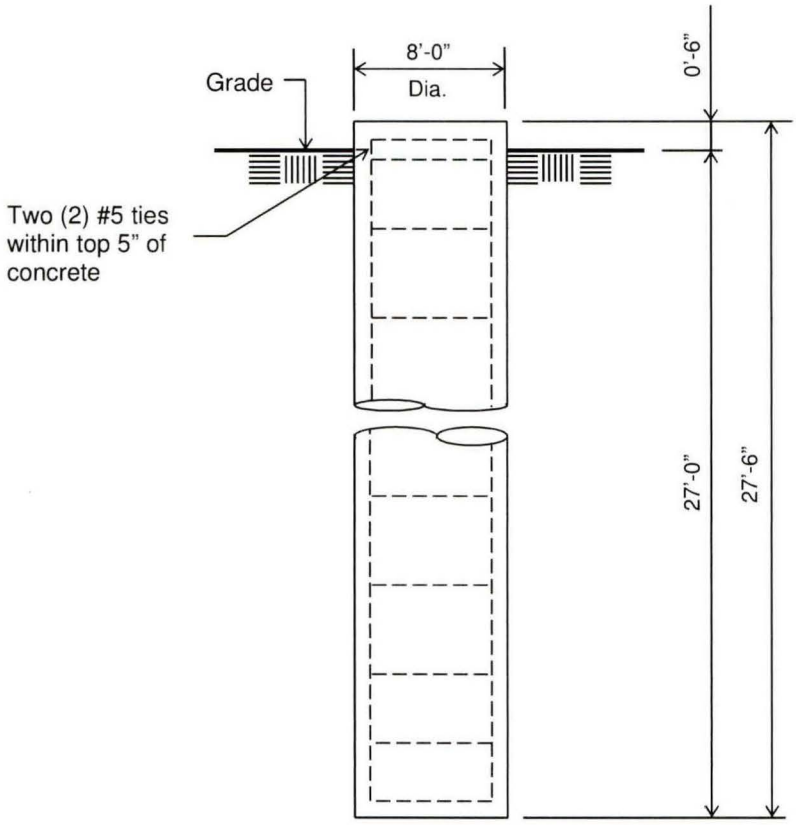
7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

Sabre Industries™
Towers and Poles

No.: 404422

Date: 03/15/18
By: NM

Customer: AT&T
Site: Elmlick Creek, KY KYL03664
195' Monopole at
89 mph Wind with no ice and 30 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G.



ELEVATION VIEW
(51.2 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.

2) Rebar to conform to ASTM specification A615 Grade 60.

3) All rebar to have a minimum of 3" concrete cover.

4) All exposed concrete corners to be chamfered 3/4".

5) The foundation design is based on the geotechnical report by ECS Southeast, LLP., Project No. 26:3125-E2 dated: February 28th, 2018.

6) See the geotechnical report for drilled pier installation requirements, if specified.

7) The foundation is based on the following factored loads:
   Moment = 9,987.18 k-ft
   Axial = 94.77 k
   Shear = 61.96 k

Rebar Schedule for Pier	
Pier	(42) #11 vertical rebar w/ #5 ties, two within top 5" of pier, then 7" C/C

7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

(USA 222-G) - Monopole Spatial Analysis (c)2015 Guymast Inc.

Tel:(416)736-7453 Fax:(416)736-4372 Web:www.guymast.com

Processed under license at:

Sabre Towers and Poles on: 14 mar 2018 at: 16:04:20

195' Monopole / Elmlick Creek, KY

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
194.0										
			18.28	0.375	1558.6	557.8				
	A	18								6.7
			31.72	0.375	2729.5	1725.7				
146.0										
			31.72	0.375	2729.5	1725.7				
	A/B	18					SLIP	4.50	1.70	
			32.25	0.500	3685.4	2350.9				
141.5										
			32.25	0.500	3685.4	2350.9				
	B	18								9.4
			44.21	0.500	5073.9	4474.8				
98.7										
			44.21	0.500	5073.9	4474.8				
	B/C	18					SLIP	6.25	1.69	
			44.97	0.500	5163.1	4634.4				
92.5										
			44.97	0.500	5163.1	4634.4				
	C	18								13.9
			55.95	0.500	6286.7	7051.0				
53.2										
			55.95	0.500	6286.7	7051.0				
	C/D	18					SLIP	8.00	1.70	
			57.20	0.500	6388.4	7329.1				
45.2										
			57.20	0.500	6388.4	7329.1				
	D	18								18.1
			69.87	0.500	7311.1	10278.6				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	BOLTS AT BASE OF SECTION NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	141.500	0	A325	0.00	92.0	0	141.500
B	92.500	0	A325	0.00	92.0	0	92.500
C	45.250	0	A325	0.00	92.0	0	45.250
D	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH ft	OUTSIDE.DIAMETER BOT * in	TOP * in	BEND RAD in	MAT-ERIAL ID	FLANGE.ID BOT	TOP	FLANGE.WELD ..GROUP.ID.. BOT	TOP
A	18	52.50	33.00	18.28	0.000	1	0	0	0	0
B	18	53.50	45.97	30.97	0.000	2	0	0	0	0
C	18	53.50	58.20	43.21	0.000	3	0	0	0	0
D	18	53.25	69.87	54.95	0.000	4	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT & deg	HEIGHT in	WIDTH in	.THICKNESS. WEB in	FLANGE in	IRREGULARITY .PROJECTION. % OF AREA	ORIENT deg
PL	1	1	0.0	33.00	0.38	0.375	0.375	0.00	0.0
PL	2	1	0.0	45.97	0.50	0.500	0.500	0.00	0.0
PL	3	1	0.0	58.20	0.50	0.500	0.500	0.00	0.0
PL	4	1	0.0	69.87	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH .. Fu ksi	Fy ksi	THERMAL COEFFICIENT /deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170
4	29000.0	490.0	80.0	65.0	0.00001170

* Only 3 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

89 mph wind with no ice. Wind Azimuth: 0◊

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.000	0.00	0.0	0.0	0.0000	4.3131	0.0000	0.0000
C	192.000	0.00	0.0	0.0	13.7000	7.2000	0.0000	0.0000
C	180.000	0.00	0.0	0.0	0.0000	4.0435	0.0000	0.0000
C	180.000	0.00	0.0	0.0	10.1705	4.8374	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	3.7740	0.0000	0.0000
C	168.000	0.00	0.0	0.0	10.0247	4.8374	0.0000	0.0000
C	156.000	0.00	0.0	0.0	0.0000	3.5044	0.0000	0.0000
C	156.000	0.00	0.0	0.0	9.8704	4.8374	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0544	0.0968	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0544	0.0968	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0651	0.1179	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0651	0.1179	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0752	0.1391	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0752	0.1391	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0813	0.3517	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0813	0.3517	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0848	0.2156	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0848	0.2156	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0925	0.2408	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0925	0.2408	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0995	0.2659	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0995	0.2659	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1041	0.5626	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1041	0.5626	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1056	0.2957	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.1056	0.2957	0.0000	0.0000

D	79.417	0.00	180.0	0.0	0.1100	0.3188	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1100	0.3188	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1133	0.3420	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1133	0.3420	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1148	0.7156	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1148	0.7156	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1130	0.3721	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.1130	0.3721	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.1100	0.3921	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1055	0.4323	0.0000	0.0000

LOADING CONDITION M

89 mph wind with no ice. Wind Azimuth: 0◊

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.000	0.00	0.0	0.0	0.0000	3.2348	0.0000	0.0000
C	192.000	0.00	0.0	0.0	13.7000	5.4000	0.0000	0.0000
C	180.000	0.00	0.0	0.0	0.0000	3.0326	0.0000	0.0000
C	180.000	0.00	0.0	0.0	10.1705	3.6281	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	2.8305	0.0000	0.0000
C	168.000	0.00	0.0	0.0	10.0247	3.6281	0.0000	0.0000
C	156.000	0.00	0.0	0.0	0.0000	2.6283	0.0000	0.0000
C	156.000	0.00	0.0	0.0	9.8704	3.6281	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0544	0.0726	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0544	0.0726	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0651	0.0885	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0651	0.0885	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0752	0.1043	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0752	0.1043	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0813	0.2638	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0813	0.2638	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0848	0.1617	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0848	0.1617	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0925	0.1806	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0925	0.1806	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0995	0.1995	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0995	0.1995	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1041	0.4219	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1041	0.4219	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1056	0.2217	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.1056	0.2217	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.1100	0.2391	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1100	0.2391	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1133	0.2565	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1133	0.2565	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1148	0.5367	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1148	0.5367	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1130	0.2791	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.1130	0.2791	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.1100	0.2941	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1055	0.3242	0.0000	0.0000

LOADING CONDITION Y

30 mph wind with 0.75 ice. Wind Azimuth: 0◊

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.000	0.00	0.0	0.0	0.0000	4.3131	0.0000	0.0000

C	192.000	0.00	0.0	0.0	1.6744	17.9386	0.0000	0.0000
C	180.000	0.00	0.0	0.0	0.0000	4.0435	0.0000	0.0000
C	180.000	0.00	0.0	0.0	2.0057	11.9507	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	3.7740	0.0000	0.0000
C	168.000	0.00	0.0	0.0	1.9683	11.9021	0.0000	0.0000
C	156.000	0.00	0.0	0.0	0.0000	3.5044	0.0000	0.0000
C	156.000	0.00	0.0	0.0	1.9289	11.8502	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0084	0.1454	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0084	0.1454	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0097	0.1758	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0097	0.1758	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0110	0.2059	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0110	0.2059	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0118	0.4242	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0118	0.4242	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0122	0.2915	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0122	0.2915	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0132	0.3241	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0132	0.3241	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0141	0.3564	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0141	0.3564	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0147	0.6580	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0147	0.6580	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0148	0.3935	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0148	0.3935	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0154	0.4223	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0154	0.4223	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0157	0.4506	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0157	0.4506	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0159	0.8277	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0159	0.8277	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0157	0.4852	0.0000	0.0000
D	11.312	0.00	180.0	0.0	0.0145	0.5273	0.0000	0.0000
D	11.312	0.00	180.0	0.0	0.0145	0.5409	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0145	0.5409	0.0000	0.0000

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195' Monopole / Elmlick Creek, KY

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft) HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	ROTATIONS (deg) TILT ALONG	TILT ACROSS	TWIST
194.0	19.94D	0.05Q	2.97B	12.31D	0.02Q	0.01W
178.0	16.68D	0.04Q	2.28B	11.98D	0.02Q	0.00W
162.0	13.59D	0.03Q	1.65B	10.99D	0.02Q	0.00W
146.0	10.80E	0.03Q	1.15H	9.58D	0.02Q	0.00W
141.5	10.08E	0.03Q	1.03H	9.24D	0.02Q	0.00W
127.2	7.98E	0.02Q	0.71H	8.06D	0.02Q	0.00W
113.0	6.15E	0.02Q	0.47B	6.92D	0.02Q	0.00W
98.7	4.58E	0.01Q	0.30B	5.84E	0.02Q	0.00W
92.5	3.97E	0.01Q	0.24B	5.39E	0.01Q	0.00W
79.4	2.86E	0.01Q	0.14B	4.45E	0.01Q	0.00W

66.3	1.95E	0.01Q	0.08B	3.58E	0.01Q	0.00W
53.2	1.23E	0.00Q	0.04B	2.78E	0.01Q	0.00W
45.2	0.87E	0.00Q	0.02H	2.32E	0.01Q	0.00W
33.9	0.48E	0.00E	0.01H	1.68E	0.00Q	0.00W
22.6	0.21E	0.00E	0.00H	1.08E	0.00E	0.00W
11.3	0.05E	0.00E	0.00E	0.52E	0.00E	0.00W
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
194.0	-0.01 P	0.00 P	0.00 L	-0.01 I	-0.01 B	0.00 B
	40.57 AB	24.73 P	0.00 L	-248.44 B	0.05 W	0.09 W
178.0	40.57 AB	24.73 L	0.00 X	-248.44 D	0.05 W	0.09 W
	59.06 AB	35.78 L	0.00 X	-775.12 A	0.21 L	0.27 W
162.0	59.06 AB	35.78 C	-0.01 C	-775.12 A	0.21 L	0.27 W
	77.71 AB	46.83 C	-0.01 C	-1542.26 L	0.44 C	0.54 W
146.0	77.71 Y	47.40 R	-0.22 W	-1542.52 L	0.78 L	0.63 W
	79.61 Y	47.76 R	-0.22 W	-1780.06 A	0.84 W	0.56 W
141.5	79.61 AA	47.57 U	0.25 E	-1780.03 A	-0.72 N	0.61 W
	83.77 AA	48.77 U	0.25 E	-2543.76 D	-3.64 U	0.97 W
127.2	83.77 AA	48.84 U	0.23 Q	-2543.75 D	-3.65 U	0.96 L
	88.39 AA	50.14 U	0.23 Q	-3321.49 D	-6.11 Q	1.44 W
113.0	88.39 AA	50.16 U	0.23 Q	-3321.49 D	-6.09 Q	1.44 W
	93.47 AA	51.57 U	0.23 Q	-4114.20 D	-9.33 Q	1.86 W
98.7	93.47 AA	51.57 U	0.25 Q	-4114.07 D	-9.40 Q	1.87 W
	97.58 AA	52.21 U	0.25 Q	-4466.79 D	-10.99 Q	2.01 W
92.5	97.58 AB	52.21 U	0.24 E	-4466.94 D	-11.06 Q	2.01 W
	102.72 AB	53.58 U	0.24 E	-5215.73 E	-13.93 Q	2.25 W
79.4	102.72 AA	53.53 U	0.20 Q	-5215.74 E	-13.92 Q	2.25 W
	108.25 AA	54.97 U	0.20 Q	-5975.67 E	-16.54 Q	2.46 W
66.3	108.25 AA	54.96 U	0.21 E	-5975.70 E	-16.51 Q	2.46 W
	114.14 AA	56.44 U	0.21 E	-6746.73 E	-19.22 Q	2.63 W
53.2	114.14 AA	56.48 U	0.21 E	-6746.64 E	-19.25 Q	2.63 W
	120.76 AA	57.40 U	0.21 E	-7224.36 E	-20.47 Q	2.71 W
45.2	120.76 AA	57.38 U	0.22 I	-7224.29 E	-20.49 Q	2.71 W
	126.33 AA	58.65 U	0.22 I	-7906.21 E	-22.29 Q	2.81 W
33.9	126.33 AA	58.64 U	0.21 E	-7906.21 E	-22.28 Q	2.81 W
	132.06 AA	59.87 U	0.21 E	-8594.83 E	-24.19 Q	2.88 W

22.6						
	132.06 AA	59.87 U	0.20 I	-8594.83 E	-24.18 Q	2.88 W
	137.94 AA	61.09 U	0.20 I	-9288.70 E	-26.20 E	2.92 W
11.3						
	137.94 AA	61.08 U	0.20 E	-9288.70 E	-26.20 E	2.92 W
	144.06 AA	62.29 U	0.20 E	-9987.18 E	-28.50 E	2.93 W
base reaction	144.06 AA	-62.29 U	-0.20 E	9987.18 E	28.50 E	-2.93 W

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00							
	0.00P	0.00I	0.00P	0.00P	YES	6.70A	45.2
	0.02AB	0.28B	0.03P	0.30B	YES	8.78A	45.2
178.00							
	0.02AB	0.28D	0.03L	0.30D	YES	8.78A	45.2
	0.03AB	0.61A	0.03L	0.63A	YES	10.86A	45.2
162.00							
	0.03AB	0.61A	0.03C	0.63A	YES	10.86A	45.2
	0.03AB	0.89L	0.03C	0.91L	YES	12.93A	45.2
146.00							
	0.02Y	0.68L	0.03R	0.69L	YES	9.26A	45.2
	0.02Y	0.72A	0.03R	0.73A	YES	9.70A	45.2
141.50							
	0.02AA	0.76A	0.03U	0.77A	YES	9.43A	45.2
	0.02AA	0.85D	0.02U	0.86D	YES	10.82A	45.2
127.25							
	0.02AA	0.85D	0.02U	0.86D	YES	10.82A	45.2
	0.02AA	0.90D	0.02U	0.91D	YES	12.21A	45.2
113.00							
	0.02AA	0.90D	0.02U	0.91D	YES	12.21A	45.2
	0.02AA	0.92D	0.02U	0.93D	YES	13.59A	45.2
98.75							
	0.02AA	0.92D	0.02U	0.93D	YES	13.59A	45.2
	0.02AA	0.92D	0.02U	0.93E	YES	14.20A	45.2
92.50							
	0.02AB	0.96D	0.02U	0.98E	YES	13.85A	45.2
	0.02AB	0.96E	0.02U	0.97E	YES	15.12A	45.2
79.42							
	0.02AA	0.96E	0.02U	0.97E	YES	15.12A	45.2
	0.02AA	0.95E	0.02W	0.97E	YES	16.40A	45.2
66.33							
	0.02AA	0.95E	0.02W	0.97E	YES	16.40A	45.2
	0.02AA	0.96E	0.02W	0.97E	YES	17.67A	45.2
53.25							
	0.02AA	0.96E	0.02W	0.97E	YES	17.67A	45.2
	0.02AA	0.96E	0.02W	0.97E	YES	18.45A	45.2
45.25							
	0.02AA	0.99E	0.02W	1.00E	YES	18.10A	45.2
	0.02AA	0.98E	0.02W	1.00E	YES	19.20A	45.2
33.94							
	0.02AA	0.98E	0.02W	1.00E	YES	19.20A	45.2
	0.02AA	0.98E	0.02W	0.99E	YES	20.30A	45.2
22.62							
	0.02AA	0.98E	0.02W	0.99E	YES	20.30A	45.2

					404422		
	0.02AA	0.98E	0.02W	0.99E	YES	21.40A	45.2
11.31	.....						
	0.02AA	0.98E	0.02W	0.99E	YES	21.40A	45.2
	0.02AA	0.97E	0.02W	0.98E	YES	22.50A	45.2
0.00	.....						

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION
	ALONG	ACROSS	ALONG	ACROSS	
kip	kip	kip	ft-kip	ft-kip	ft-kip
144.06	62.29	0.20	-9987.18	-28.50	2.93
AA	U	E	E	E	W

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195' Monopole / Elmlick Creek, KY

********** Service Load Condition **********

* Only 1 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

60 mph wind with no ice. Wind Azimuth: 0◆

LOADS ON POLE

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	192.000	0.00	0.0	0.0	0.0000	3.5942	0.0000	0.0000
C	192.000	0.00	0.0	0.0	3.4819	6.0000	0.0000	0.0000
C	180.000	0.00	0.0	0.0	0.0000	3.3696	0.0000	0.0000
C	180.000	0.00	0.0	0.0	2.5849	4.0312	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	3.1450	0.0000	0.0000
C	168.000	0.00	0.0	0.0	2.5478	4.0312	0.0000	0.0000
C	156.000	0.00	0.0	0.0	0.0000	2.9203	0.0000	0.0000
C	156.000	0.00	0.0	0.0	2.5086	4.0312	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0138	0.0806	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0138	0.0806	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0165	0.0983	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0165	0.0983	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0191	0.1159	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0191	0.1159	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0207	0.2931	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0207	0.2931	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0216	0.1797	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0216	0.1797	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0235	0.2007	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0235	0.2007	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0253	0.2216	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0253	0.2216	0.0000	0.0000

D	98.750	0.00	180.0	0.0	0.0264	0.4688	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0264	0.4688	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0268	0.2464	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0268	0.2464	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0280	0.2657	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0280	0.2657	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0288	0.2850	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0288	0.2850	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0292	0.5963	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0292	0.5963	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0287	0.3101	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.0287	0.3101	0.0000	0.0000
D	33.937	0.00	180.0	0.0	0.0280	0.3268	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0268	0.3603	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ALONG	TILT ACROSS	TWIST
194.0	5.23B	-0.01K	0.21E	3.17B	-0.01K	0.00K
178.0	4.35B	-0.01K	0.16E	3.08B	-0.01K	0.00K
162.0	3.53B	-0.01K	0.11E	2.82B	-0.01K	0.00K
146.0	2.79B	-0.01K	0.08E	2.45B	-0.01K	0.00K
141.5	2.60B	-0.01K	0.07E	2.37B	-0.01K	0.00K
127.2	2.05B	-0.01K	0.05E	2.06B	-0.01K	0.00K
113.0	1.58B	-0.01K	0.03E	1.77B	-0.01K	0.00K
98.7	1.17B	0.00K	0.02E	1.49B	-0.01K	0.00K
92.5	1.02D	0.00K	0.02E	1.38B	0.00K	0.00K
79.4	0.73D	0.00K	0.01E	1.13B	0.00K	0.00K
66.3	0.50D	0.00K	0.01E	0.91D	0.00K	0.00K
53.2	0.31D	0.00K	0.00E	0.71D	0.00K	0.00K
45.2	0.22D	0.00K	0.00E	0.59D	0.00K	0.00K
33.9	0.12D	0.00K	0.00E	0.43D	0.00K	0.00K
22.6	0.05D	0.00K	0.00E	0.27D	0.00K	0.00K
11.3	0.01D	0.00K	0.00E	0.13D	0.00K	0.00K
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	SHEAR.w.r.t.WIND.DIR ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	MOMENT.w.r.t.WIND.DIR ACROSS ft-kip	TORSION ft-kip
194.0	0.00 C	0.00 L	0.00 C	0.00 F	0.00 C	0.00 C
	18.28 C	6.29 F	0.00 C	-64.23 C	-0.01 I	0.00 I
178.0	18.28 A	6.29 K	0.00 K	-64.23 C	-0.02 I	0.00 I
	27.03 A	9.10 K	0.00 K	-199.86 E	-0.04 I	-0.01 I
162.0	27.03 D	9.10 E	0.00 I	-199.85 C	-0.04 I	-0.01 I
	35.84 D	11.91 E	0.00 I	-396.40 E	-0.12 I	-0.02 I

146.0						
	35.84 D	11.92 D	-0.03 E	-396.53 E	-0.15 I	-0.02 I
	37.16 D	12.01 D	-0.03 E	-457.09 E	-0.18 I	-0.02 I
141.5						
	37.16 D	12.05 B	-0.05 K	-457.07 B	-0.20 I	-0.02 I
	39.72 D	12.36 B	-0.05 K	-651.80 B	0.89 K	-0.05 K
127.2						
	39.71 L	12.39 B	-0.07 K	-651.79 B	0.88 K	-0.05 K
	42.57 L	12.72 B	-0.07 K	-850.01 B	1.81 K	-0.09 K
113.0						
	42.57 K	12.72 B	-0.07 K	-850.01 B	1.81 K	-0.09 K
	45.73 K	13.08 B	-0.07 K	-1051.47 B	2.76 K	-0.12 K
98.7						
	45.73 L	13.04 B	-0.07 K	-1051.49 B	2.77 K	-0.12 K
	48.66 L	13.21 B	-0.07 K	-1140.80 B	3.20 K	-0.13 K
92.5						
	48.66 K	13.22 D	-0.08 K	-1140.86 B	3.20 K	-0.13 K
	51.88 K	13.57 D	-0.08 K	-1330.08 B	4.19 K	-0.16 K
79.4						
	51.88 L	13.57 D	-0.07 K	-1330.07 B	4.20 K	-0.16 K
	55.36 L	13.94 D	-0.07 K	-1522.01 B	5.04 K	-0.18 K
66.3						
	55.36 K	13.94 D	-0.06 K	-1522.00 B	5.05 K	-0.18 K
	59.08 K	14.32 D	-0.06 K	-1716.86 B	5.86 K	-0.19 K
53.2						
	59.08 K	14.33 D	-0.08 K	-1716.83 B	5.84 K	-0.19 K
	63.85 K	14.56 D	-0.08 K	-1837.66 B	6.46 K	-0.20 K
45.2						
	63.85 K	14.57 D	-0.07 K	-1837.66 B	6.46 K	-0.20 K
	67.36 K	14.89 D	-0.07 K	-2010.50 D	7.27 K	-0.21 K
33.9						
	67.36 K	14.90 D	-0.07 K	-2010.51 D	7.27 K	-0.21 K
	71.12 K	15.21 D	-0.07 K	-2185.56 D	8.10 K	-0.21 K
22.6						
	71.12 K	15.22 D	-0.08 K	-2185.56 D	8.10 K	-0.21 K
	75.01 K	15.53 D	-0.08 K	-2362.39 D	8.95 K	-0.22 K
11.3						
	75.01 K	15.53 D	-0.07 K	-2362.40 D	8.95 K	-0.22 K
	79.02 K	15.83 D	-0.07 K	-2540.74 D	9.79 K	-0.22 K
base reaction	79.02 K	-15.83 D	0.07 K	2540.74 D	-9.79 K	0.22 K

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00							
	0.00C	0.00L	0.00L	0.00F	YES	6.70A	45.2
	0.01C	0.07C	0.01F	0.08C	YES	8.78A	45.2
178.00							
	0.01A	0.07C	0.01I	0.08C	YES	8.78A	45.2
	0.01A	0.16E	0.01I	0.17E	YES	10.86A	45.2
162.00							
	0.01D	0.16C	0.01E	0.17E	YES	10.86A	45.2
	0.01D	0.23E	0.01E	0.24E	YES	12.93A	45.2
146.00							
	0.01D	0.17E	0.01D	0.18E	YES	9.26A	45.2

	0.01D	0.19E	0.01D	0.20E	YES	9.70A	45.2
141.50							
	0.01D	0.19B	0.01B	0.20B	YES	9.43A	45.2
	0.01D	0.22B	0.01B	0.23B	YES	10.82A	45.2
127.25							
	0.01L	0.22B	0.01B	0.23B	YES	10.82A	45.2
	0.01L	0.23B	0.01B	0.24B	YES	12.21A	45.2
113.00							
	0.01K	0.23B	0.01B	0.24B	YES	12.21A	45.2
	0.01K	0.23B	0.01B	0.24B	YES	13.59A	45.2
98.75							
	0.01L	0.23B	0.01B	0.24B	YES	13.59A	45.2
	0.01L	0.24B	0.01B	0.24B	YES	14.20A	45.2
92.50							
	0.01K	0.25B	0.01D	0.26B	YES	13.85A	45.2
	0.01K	0.24B	0.00D	0.25B	YES	15.12A	45.2
79.42							
	0.01L	0.24B	0.00D	0.25B	YES	15.12A	45.2
	0.01L	0.24B	0.00D	0.25B	YES	16.40A	45.2
66.33							
	0.01K	0.24B	0.00D	0.25B	YES	16.40A	45.2
	0.01K	0.24B	0.00D	0.25B	YES	17.67A	45.2
53.25							
	0.01K	0.24B	0.00D	0.25B	YES	17.67A	45.2
	0.01K	0.24B	0.00D	0.25B	YES	18.45A	45.2
45.25							
	0.01K	0.25B	0.00D	0.26B	YES	18.10A	45.2
	0.01K	0.25D	0.00D	0.26D	YES	19.20A	45.2
33.94							
	0.01K	0.25D	0.00D	0.26D	YES	19.20A	45.2
	0.01K	0.25D	0.00D	0.26D	YES	20.30A	45.2
22.62							
	0.01K	0.25D	0.00D	0.26D	YES	20.30A	45.2
	0.01K	0.25D	0.00D	0.26D	YES	21.40A	45.2
11.31							
	0.01K	0.25D	0.00D	0.26D	YES	21.40A	45.2
	0.01K	0.25D	0.00D	0.26D	YES	22.50A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
kip	kip	kip	ft-kip	ft-kip	ft-kip
79.02	15.83	-0.07	-2540.74	9.79	-0.22
K	D	K	D	K	K

Sabre Industries™
Towers and Poles

SO#: 404422
Site Name: Elmlick Creek, KY
Date: 3/15/2018

Round Base Plate and Anchor Rods, per ANSI/TIA 222-G

Pole Data

Diameter:	68.810	in (flat to flat)
Thickness:	0.5	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	9987.18	ft-kips
Axial, Pu:	94.77	kips
Shear, Vu:	61.96	kips

Anchor Rod Data

Quantity:	26		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	76.25	BC Override:	

Anchor Rod Results

Maximum Rod (Pu+ Vu/η):	250.2 Kips	
Allowable Φ*Rnt:	260.0 Kips	(per 4.9.9)
Anchor Rod Interaction Ratio:	**96.2%** **Pass**	

Plate Data

Diameter (in):	82	Dia. Override:	
Thickness:	2.5	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	8.40	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	32.25	in. center of pole to center of drain hole	
Center Hole:	56.5	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	43.8 ksi	
Allowable Φ*Fy:	45.0 ksi	(per AISC)
Base Plate Interaction Ratio:	**97.3%** **Pass**	

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES
195' Monopole AT&T Elmlick Creek, KY (404422) 03/15/18 NM

Overall Loads:			
Factored Moment (ft-kips)	9987.18		
Factored Axial (kips)	94.77		
Factored Shear (kips)	61.96		
Bearing Design Strength (ksf)	7.5	Max. Net Bearing Press. (ksf)	5.96
Water Table Below Grade (ft)	999		
Width of Mat (ft)	30.5	Allowable Bearing Pressure (ksf)	5.00
Thickness of Mat (ft)	2	Safety Factor	2.00
Depth to Bottom of Slab (ft)	7	Ultimate Bearing Pressure (ksf)	10.00
Quantity of Bolts in Bolt Circle	26	Bearing Φs	0.75
Bolt Circle Diameter (in)	76.25		
Top of Concrete to Top of Bottom Threads (in)	60		
Diameter of Pier (ft)	9	Minimum Pier Diameter (ft)	7.69
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	7.98
Ht. of Pier Below Ground (ft)	5	Square Pier? (Y/N)	N
Quantity of Bars in Mat	63		
Bar Diameter in Mat (in)	1.128		
Area of Bars in Mat (in^2)	62.96		
Spacing of Bars in Mat (in)	5.79	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	62		
Bar Diameter in Pier (in)	1		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	12		
Area of Bars in Pier (in^2)	48.69	Minimum Pier A_s (in^2)	45.80
Spacing of Bars in Pier (in)	5.05	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.115		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	81.87		
Two-Way Shear Action:			
Average d (in)	19.872		
ϕv_c (ksi)	0.227	v_u (ksi)	0.204
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.342		
$\phi v_c = \phi(\alpha_s d/b_o+2)f'_c{}^{1/2}$	0.227		
$\phi v_c = \phi 4 f'_c{}^{1/2}$	0.228		
Shear perimeter, b_o (in)	401.72		
β_c	1		
One-Way Shear:			
ϕV_c (kips)	829.4	V_u (kips)	595.2
Stability:			
Overturning Design Strength (ft-k)	12473.9	Total Applied M (ft-k)	10451.9

Pier Design:

ϕV_n (kips)	1069.6	V_u (kips)	62.0
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	1069.6		
V_s (kips)	0.0	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	2503.8
Maximum Spacing (in)	6.78	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.74	Req'd Hook Development l_{dh} (in)	11.91
		*** Ref. To Spacing Requirements ACI 11.5.4.3	

Flexure in Slab:

ϕM_n (ft-kips)	5247.7	M_u (ft-kips)	5189.3
a (in)	2.70		
Steel Ratio	0.00866		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	132.14	Required Development in Pad (in)	29.86

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram Visual Check	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1

LPile for Windows, Version 2018-10.003

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

This copy of LPile is being used by:

Nicholas Milbrodt
Sabre Industries

Serial Number of Security Device: 227886555

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is a violation of the software license agreement.

Files Used for Analysis

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2018\files\

Name of input data file:
404422.lp10

Name of output report file:
404422.lp10

Name of plot output file:
404422.lp10

Name of runtime message file:
404422.lp10

Date and Time of Analysis

Date: March 15, 2018 Time: 13:15:19

Problem Title

Site : Elmlick Creek, KY

Tower : 195' Monopole

Prepared for : AT&T

Job Number : 404422

Engineer : NM

Program Options and Settings

Computational Options:
 - Use unfactored loads in computations (conventional analysis)
Engineering Units Used for Data Input and Computations:
 - US Customary System Units (pounds, feet, inches)

Analysis Control Options:
 - Maximum number of iterations allowed = 999
 - Deflection tolerance for convergence = 1.0000E-05 in
 - Maximum allowable deflection = 100.0000 in
 - Number of pile increments = 100

Loading Type and Number of Cycles of Loading:
 - Static loading specified

 - Use of p-y modification factors for p-y curves not selected
 - Analysis uses layering correction (Method of Georgiadis)
 - No distributed lateral loads are entered
 - Loading by lateral soil movements acting on pile not selected
 - Input of shear resistance at the pile tip not selected
 - Computation of pile-head foundation stiffness matrix not selected
 - Push-over analysis of pile not selected
 - Buckling analysis of pile not selected

Output Options:
 - Output files use decimal points to denote decimal symbols.
 - Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
 - No p-y curves to be computed and reported for user-specified depths
 - Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined = 1
Total length of pile = 27.500 ft
Depth of ground surface below top of pile = 0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	96.0000
2	27.500	96.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 27.500000 ft
Shaft Diameter = 96.000000 in
Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians

Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 4 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer	=	0.500000	ft
Distance from top of pile to bottom of layer	=	5.500000	ft
Effective unit weight at top of layer	=	115.000000	pcf
Effective unit weight at bottom of layer	=	115.000000	pcf
Undrained cohesion at top of layer	=	2000.	psf
Undrained cohesion at bottom of layer	=	2000.	psf
Epsilon-50 at top of layer	=	0.005000	
Epsilon-50 at bottom of layer	=	0.005000	

Layer 2 is stiff clay without free water

Distance from top of pile to top of layer	=	5.500000	ft
Distance from top of pile to bottom of layer	=	7.500000	ft
Effective unit weight at top of layer	=	115.000000	pcf
Effective unit weight at bottom of layer	=	115.000000	pcf
Undrained cohesion at top of layer	=	2000.	psf
Undrained cohesion at bottom of layer	=	2000.	psf
Epsilon-50 at top of layer	=	0.005000	
Epsilon-50 at bottom of layer	=	0.005000	

Layer 3 is stiff clay without free water

Distance from top of pile to top of layer	=	7.500000	ft
Distance from top of pile to bottom of layer	=	23.500000	ft
Effective unit weight at top of layer	=	125.000000	pcf
Effective unit weight at bottom of layer	=	125.000000	pcf
Undrained cohesion at top of layer	=	3000.	psf
Undrained cohesion at bottom of layer	=	3000.	psf
Epsilon-50 at top of layer	=	0.004000	
Epsilon-50 at bottom of layer	=	0.004000	

Layer 4 is stiff clay without free water

Distance from top of pile to top of layer	=	23.500000	ft
Distance from top of pile to bottom of layer	=	30.500000	ft
Effective unit weight at top of layer	=	135.000000	pcf
Effective unit weight at bottom of layer	=	135.000000	pcf
Undrained cohesion at top of layer	=	5000.	psf
Undrained cohesion at bottom of layer	=	5000.	psf
Epsilon-50 at top of layer	=	0.0010000	
Epsilon-50 at bottom of layer	=	0.0010000	

(Depth of the lowest soil layer extends 3.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Undrained Cohesion psf	E50 or krm
1	Stiff Clay	0.5000	115.0000	2000.	0.00500
	w/o Free Water	5.5000	115.0000	2000.	0.00500
2	Stiff Clay	5.5000	115.0000	2000.	0.00500
	w/o Free Water	7.5000	115.0000	2000.	0.00500
3	Stiff Clay	7.5000	125.0000	3000.	0.00400
	w/o Free Water	23.5000	125.0000	3000.	0.00400
4	Stiff Clay	23.5000	135.0000	5000.	0.00100
	w/o Free Water	30.5000	135.0000	5000.	0.00100

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load No.	Load Type	Condition 1		Condition 2		Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V =	82613. lbs	M =	159794880. in-lbs	126360.	No
2	1	V =	15830. lbs	M =	30488880. in-lbs	79020.	No

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	27.500000 ft
Shaft Diameter	=	96.000000 in
Concrete Cover Thickness	=	3.625000 in
Number of Reinforcing Bars	=	42 bars
Yield Stress of Reinforcing Bars	=	60000. psi
Modulus of Elasticity of Reinforcing Bars	=	29000000. psi
Gross Area of Shaft	=	7238. sq. in.
Total Area of Reinforcing Steel	=	65.580904 sq. in.
Area Ratio of Steel Reinforcement	=	0.91 percent
Edge-to-Edge Bar Spacing	=	5.116926 in
Maximum Concrete Aggregate Size	=	0.750000 in
Ratio of Bar Spacing to Aggregate Size	=	6.82
Offset of Center of Rebar Cage from Center of Pile	=	0.0000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As	=	31370.235 kips
Tensile Load for Cracking of Concrete	=	-3377.270 kips
Nominal Axial Tensile Capacity	=	-3934.854 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.410000	1.561450	43.670000	0.00000
2	1.410000	1.561450	43.182242	6.508676
3	1.410000	1.561450	41.729864	12.871958
4	1.410000	1.561450	39.345310	18.947703
5	1.410000	1.561450	36.081847	24.600187
6	1.410000	1.561450	32.012375	29.703143
7	1.410000	1.561450	27.227800	34.142581
8	1.410000	1.561450	21.835000	37.819329
9	1.410000	1.561450	15.954443	40.651257
10	1.410000	1.561450	9.717489	42.575102
11	1.410000	1.561450	3.263463	43.547890
12	1.410000	1.561450	-3.263463	43.547890
13	1.410000	1.561450	-9.717489	42.575102
14	1.410000	1.561450	-15.954443	40.651257

15	1.410000	1.561450	-21.835000	37.819329
16	1.410000	1.561450	-27.227800	34.142581
17	1.410000	1.561450	-32.012375	29.703143
18	1.410000	1.561450	-36.081847	24.600187
19	1.410000	1.561450	-39.345310	18.947703
20	1.410000	1.561450	-41.729864	12.871958
21	1.410000	1.561450	-43.182242	6.508676
22	1.410000	1.561450	-43.670000	0.00000
23	1.410000	1.561450	-43.182242	-6.508676
24	1.410000	1.561450	-41.729864	-12.871958
25	1.410000	1.561450	-39.345310	-18.947703
26	1.410000	1.561450	-36.081847	-24.600187
27	1.410000	1.561450	-32.012375	-29.703143
28	1.410000	1.561450	-27.227800	-34.142581
29	1.410000	1.561450	-21.835000	-37.819329
30	1.410000	1.561450	-15.954443	-40.651257
31	1.410000	1.561450	-9.717489	-42.575102
32	1.410000	1.561450	-3.263463	-43.547890
33	1.410000	1.561450	3.263463	-43.547890
34	1.410000	1.561450	9.717489	-42.575102
35	1.410000	1.561450	15.954443	-40.651257
36	1.410000	1.561450	21.835000	-37.819329
37	1.410000	1.561450	27.227800	-34.142581
38	1.410000	1.561450	32.012375	-29.703143
39	1.410000	1.561450	36.081847	-24.600187
40	1.410000	1.561450	39.345310	-18.947703
41	1.410000	1.561450	41.729864	-12.871958
42	1.410000	1.561450	43.182242	-6.508676

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 5.117 inches
between bars 1 and 42.

Ratio of bar spacing to maximum aggregate size = 6.82

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	79.020
2	126.360

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	79.020	160089.131	0.00300000
2	126.360	161715.351	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.70).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318, Section
9.3.2.2 or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Load No.	Resist. Factor for Moment	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in^2
1	0.65	160089.	51.363000	104058.	3.7285E+09
2	0.65	161715.	82.134000	105115.	3.7705E+09
1	0.70	160089.	55.314000	112062.	3.7150E+09
2	0.70	161715.	88.452000	113201.	3.7545E+09
1	0.75	160089.	59.265000	120067.	3.5988E+09
2	0.75	161715.	94.770000	121287.	3.6407E+09

Layering Correction Equivalent Depths of Soil & Rock Layers

Layer No.	Top of Layer Below Pile Head ft	Equivalent Top Depth Below Grnd Surf ft	Same Layer Type As Layer Above	Layer is Rock or is Below Rock Layer	F0 Integral for Layer lbs	F1 Integral for Layer lbs
1	0.5000	0.00	N.A.	No	0.00	264000.
2	5.5000	5.0000	Yes	No	264000.	119132.
3	7.5000	4.9153	Yes	No	383132.	1662171.
4	23.5000	14.1462	Yes	No	2045303.	N.A.

Notes: The F0 integral of Layer n+1 equals the sum of the F0 and F1 integrals for Layer n. Layering correction equivalent depths are computed only for soil types with both shallow-depth and deep-depth expressions for peak lateral load transfer. These soil types are soft and stiff clays, non-liquefied sands, and cemented c-phi soil.

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	82613.	M, in-lb	1.60E+08	126360.	15.2892	-0.08081	-1005718.	1.61E+08
2	V, lb	15830.	M, in-lb	3.05E+07	79020.	0.03763	-3.28E-04	-172594.	3.07E+07

Maximum pile-head deflection = 15.2892329490 inches
Maximum pile-head rotation = -0.0808117129 radians = -4.630170 deg.

The analysis ended normally.

1807.3.2.1 (2009 IBC, 2012 IBC, & 2015 IBC)

Moment (ft·k)	9,987.18	
Shear (k)	61.96	
Caisson diameter (ft)	8	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	23	
Lateral soil pressure (lb/ft^2)	926.09	
Ground to application of force, h (ft)	161.69	
Applied lateral force, P (lb)	61,960	
Lateral soil bearing pressure, S_1 (lb/ft)	7,100.00	
Diameter, b (ft)	8	
A	2.55	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	22.52	$= 0.5A[\,1 + (\,1 + (\,4.36h / A\,)\,)^{1/2}\,]$

MasTec
Network Solutions

February 2nd, 2018
Kentucky Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, KY 40602-0615

RE: Site Name – Elmlick Creek
Proposed Cell Tower
37 28 36.26 North Latitude, 86 47 45.36 West Longitude

Dear Commissioners:

The Project / Construction Manager for the proposed new communications facility will be Don Murdock. His contact information is (615) 207-8280 or Don.Murdock@mastec.com

Don has been in the industry completing civil construction and constructing towers since 2009. He has worked at Mastec Network Solutions since 2009 completing project and construction management on new site build projects.

Thank you,

Don Murdock, Sr. Project Manager – Tennessee/Kentucky Market
MasTec Network Solutions
(615) 207-8280

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST

KY Public Service Commission

Master Utility Search

- Search for the utility of interest by using any single or combination of criteria.
- Enter Partial names to return the closest match for Utility Name and Address/City/Contact entries.

Utility ID	Utility Name	Address/City/Contact	Utility Type	Status
				Active

Search

	Utility ID	Utility Name	Utility Type	Class	City	State
View	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
View	4109300	Access Point, Inc.	Cellular	D	Cary	NC
View	4108300	Air Voice Wireless, LLC	Cellular	A	Bloomfield Hill	MI
View	4110650	Alliant Technologies of KY, L.L.C.	Cellular	C	Morristown	NJ
View	44451184	Alltel Communications, LLC	Cellular	A	Basking Ridge	NJ
View	4110850	AltaWorx, LLC	Cellular	C	Fairhope	AL
View	4107800	American Broadband and Telecommunications Company	Cellular	C	Toledo	OH
View	4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
View	4110700	Andrew David Balholm dba Norcell	Cellular	C	Clayton	WA
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
View	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
View	4108750	Blue Jay Wireless, LLC	Cellular	C	Carrollton	TX
View	4111050	BlueBird Communications, LLC	Cellular	C	New York	NY
View	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
View	4107600	Boomerang Wireless, LLC	Cellular	B	Hiawatha	IA
View	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI

View	4110050	CampusSims, Inc.	Cellular	D	Boston	MA
View	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
View	4111000	ComApp Technologies LLC	Cellular	C	Melrose	MA
View	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
View	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
View	4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
View	4001900	CTC Communications Corp. d/b/a EarthLink Business I	Cellular	D	Grand Rapids	MI
View	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
View	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
View	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
View	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
View	4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
View	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
View	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
View	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
View	4109600	Google North America Inc.	Cellular	B	Mountain View	CA
View	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
View	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
View	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4110600	Horizon River Technologies, LLC	Cellular	C	Atlanta	GA
View	4103100	i-Wireless, LLC	Cellular	A	Newport	KY
View	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	OK
View	22215360	KDDI America, Inc.	Cellular	D	New York	NY
View	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
View	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
View	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
View	4109750	Konatel, Inc. dba telecom.mobi	Cellular	D	Johnstown	PA
View	4110900	Lunar Labs, Inc.	Cellular	C	Detroit	MI
View	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
View	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA

View	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
View	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
View	10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
View	4001800	OnStar, LLC	Cellular	A	Detroit	MI
View	4110750	Onvoy Spectrum, LLC	Cellular	C	Plymouth	MN
View	4109050	Patriot Mobile LLC	Cellular	D	Southlake	TX
View	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
View	4202100	Powertel/Memphis, Inc. dba T-Mobile	Cellular	A	Bellevue	WA
View	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
View	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	B	Hiawatha	IA
View	4110500	Republic Wireless, Inc.	Cellular	D	Raleigh	NC
View	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
View	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
View	4106300	SI Wireless, LLC	Cellular	A	Carbondale	IL
View	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	NJ
View	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
View	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
View	4109550	Stream Communications, LLC	Cellular	D	Dallas	TX
View	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
View	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
View	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	South Portland	ME
View	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
View	4108900	Telrite Corporation dba Life Wireless	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	D	Kansas City	MO
View	4109950	The People's Operator USA, LLC	Cellular	D	New York	NY
View	4109000	Ting, Inc.	Cellular	A	Toronto	ON
View	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL

View	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ
View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4110300	UVNV, Inc.	Cellular	D	Costa Mesa	CA
View	4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
View	4110800	Visible Service LLC	Cellular	C	Lone Tree	CO
View	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
View	4110950	Wing Tel Inc.	Cellular	C	New York	NY
View	4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	D	Louisville	KY

EXHIBIT E
FAA

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

Aeronautical Study No.
2017-ASO-17113-OE

Issued Date: 01/08/2018

Dave Cundiff - Dana Irvin
AT&T Mobility
208 S. Akard St., 1012.4
Dallas, TX 75202

**** 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 Elmlick Creek
Location:	Beaver Dam, KY
Latitude:	37-28-36.26N NAD 83
Longitude:	86-47-45.36W
Heights:	675 feet site elevation (SE)
	199 feet above ground level (AGL)
	874 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 in accordance with FAA Advisory circular 70/7460-1 L Change 1.

Any height exceeding 199 feet above ground level (874 feet above mean sea level), will result in a substantial adverse effect and would warrant a Determination of Hazard to Air Navigation.

This determination expires on 07/08/2019 unless:

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

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

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

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

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

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

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

If we can be of further assistance, please contact our office at (202) 267-4525, or david.maddox@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-17113-OE.

Signature Control No: 341276701-352535087 (DNE)
David Maddox
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2017-ASO-17113-OE

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

TOPO Map for ASN 2017-ASO-17113-OE

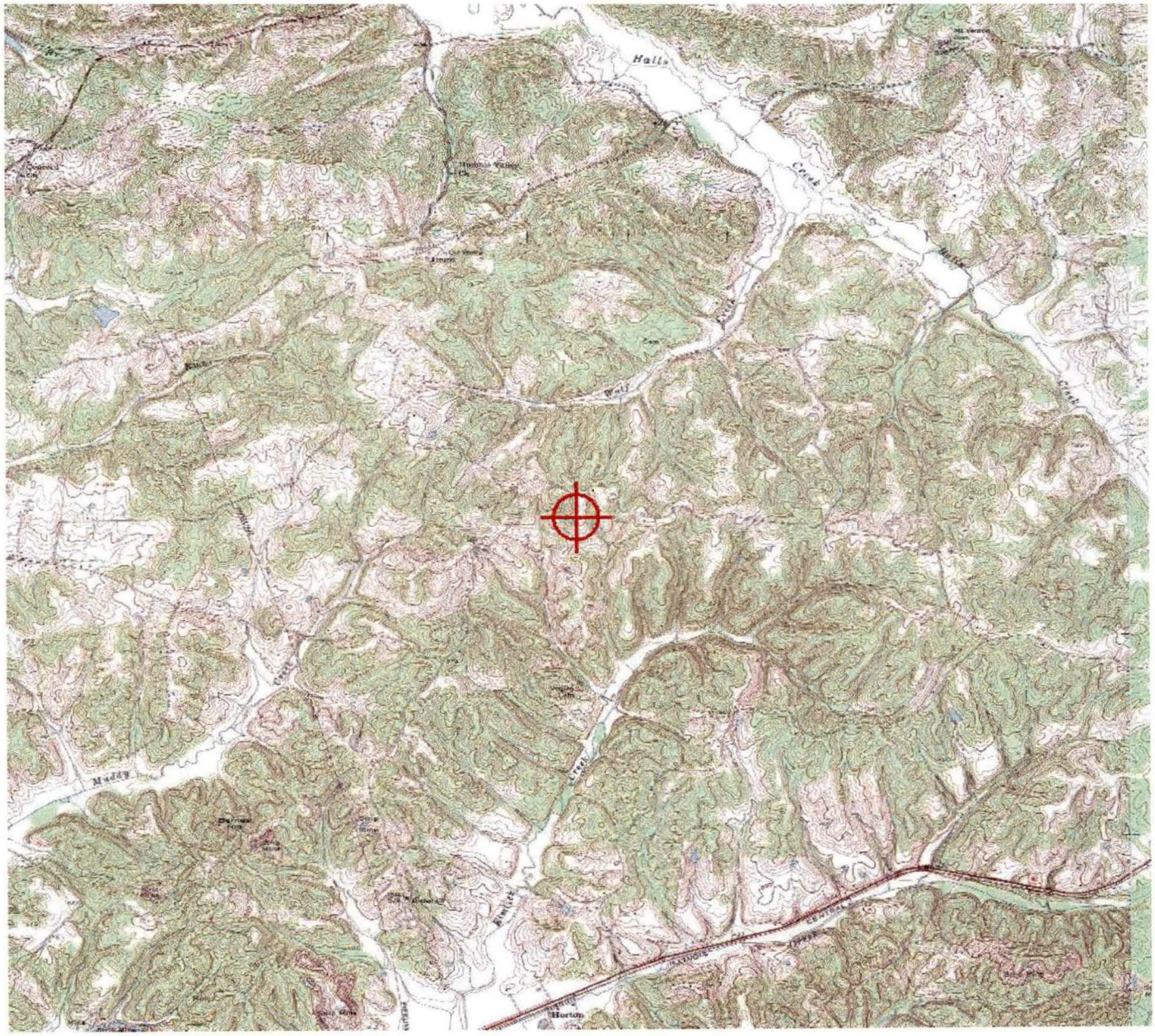


EXHIBIT F
KENTUCKY AIRPORT ZONING COMMISSION

KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

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

January 9, 2018

APPROVAL OF APPLICATION

APPLICANT:
John Monday
John Monday
3300 E. Renner Rd B3132
Richardson, TX 75082

SUBJECT: AS-092-JQD-2017-084

STRUCTURE:	Antenna Tower
LOCATION:	Beaver Dam, KY
COORDINATES:	37° 28' 36.26" N / 86° 47' 45.36" W
HEIGHT:	199' AGL/874'AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 199'AGL/ 874'AMSL Antenna Tower near Beaver Dam, KY 37° 28' 36.26" N / 86° 47' 45.36" W.

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

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

Obstruction Marking/Lighting are not required.

John Houlihan
Administrator

MATTHEW BEVIN
Governor

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

CONSTRUCTION/ALTERATION STATUS REPORT

January 9, 2018

AERONAUTICIAL STUDY NUMBER: AS-092-JQD--2017-084

John Monday
John Monday
3300 E. Renner Rd B3132
Richardson, TX 75082

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on January 9, 2018. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 421 Buttermilk Pike, Covington, KY, 41017. 859-341-2700.

STRUCTURE:	Antenna Tower
LOCATION:	Beaver Dam, KY
COORDINATES:	37° 28' 36.26" N / 86° 47' 45.36" W
HEIGHT:	199' AGL/874'AMSL

CONSTRUCTION/ALTERATION STATUS

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

2. Construction status is as follows:
   Structure reached its greatest height of _____ ft. AGL
   _____ ft. AMSL on _____ (date).

   Date construction was completed. _____

   Type of obstruction marking/painting. _____

   Type of obstruction lighting. _____

   As built coordinates. _____

   Miscellaneous Information. _____

   DATE _____

   SIGNATURE/TITLE _____

2017-084

KENTUCKY TRANSPORTATION CABINET

KENTUCKY AIRPORT ZONING COMMISSION

TC 55-2
Rev. 06/2016

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (*name*) John Monday	**PHONE** 855-699-7073	**FAX** 972-907-1131	**KY AERONAUTICAL STUDY #** AS-092-JQD-2017-084
ADDRESS (*street*) 3300 E. Renner Road, B3132	**CITY** Richardson		**STATE** TX / **ZIP** 75082
APPLICANT'S REPRESENTATIVE (*name*) Roy Johnson	**PHONE** 502-445-2475	**FAX** 502-222-4266	
ADDRESS (*street*) 3605 Mattingly Road	**CITY** Buckner		**STATE** KY / **ZIP** 40010
APPLICATION FOR [X] New Construction [ ] Alteration [ ] Existing **DURATION** [ ] Permanent [ ] Temporary (*months* *days*)			**WORK SCHEDULE** Start End TBD
TYPE [ ] Crane [ ] Building [X] Antenna Tower [ ] Power Line [ ] Water Tank [ ] Landfill [ ] Other	**MARKING/PAINTING/LIGHTING PREFERRED** [ ] Red Lights & Paint [ ] White- medium intensity [ ] White- high intensity [X] Dual- red & medium intensity white [ ] Dual- red & high intensity white [ ] Other		
LATITUDE 37 ° 28' 36.26 "	**LONGITUDE** 86 ° 47 ' 45.36 "		**DATUM** [X] NAD83 [ ] NAD27 [ ] Other
NEAREST KENTUCKY City Beaver Dam County Ohio	**NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT** JQD Ohio County		
SITE ELEVATION (AMSL, *feet*) 675	**TOTAL STRUCTURE HEIGHT** (AGL, *feet*) ~~235~~ 199 See email dated 1-8-18		**CURRENT** (*FAA aeronautical study #*) 2017-ASO-17113-OE
OVERALL HEIGHT (*site elevation plus total structure height, feet*) ~~910~~ 874			**PREVIOUS** (*FAA aeronautical study #*)
DISTANCE (*from nearest Kentucky public use or Military airport to structure*) 2.79 NM			**PREVIOUS** (*KY aeronautical study #*)
DIRECTION (*from nearest Kentucky public use or Military airport to structure*) Northeast			

DESCRIPTION OF LOCATION (*Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.*)

1A and Quad attached

DESCRIPTION OF PROPOSAL

AT&T proposes to construct a 215' cell tower with a 15' lightning rod for an overall height of 235'.

FAA Form 7460-1 (*Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?*)
[ ] No [X] Yes, when? 08/18/17

CERTIFICATION (*I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.*)

PENALITIES (*Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.*)

NAME	**TITLE**	**SIGNATURE**	**DATE**
Michelle Ward	Sr. Real Estate Mgr.	Michelle Ward	08/22/17

COMMISSION ACTION

[ ] Chairperson, KAZC
[X] Administrator, KAZC

[X] Approved
[ ] Disapproved

SIGNATURE

DATE 1-8-18

EXHIBIT G
GEOTECHNICAL REPORT

February 28, 2018

Mr. Jacob Goralski, P.E.
Irish Tower, LLC
4603 Bermuda Drive,
Sugar Land, TX 77479

ECS Project No. 26:3125-E2

Reference: Report of Subsurface Exploration and Geotechnical Engineering Services
Elmlick Creek Tower
320 Wright Road
Beaver Dam, KY

Dear Mr. Goralski:

ECS Southeast, LLP (ECS) has completed the subsurface exploration for the proposed construction of a monopole tower located at 320 Wright Road, in Beaver Dam, Kentucky, approximately 1,900 feet southeast of the intersection with Bethel Church Road. The purpose of these services was to explore the subsurface soil and groundwater conditions at the site, and to develop geotechnical recommendations pertaining to foundation support of the structures. This report explains our understanding of the project, documents our findings, and presents our conclusions and geotechnical engineering recommendations to serve as an aid during the design and construction of the project.

PROJECT INFORMATION AND PROPOSED CONSTRUCTION

The project will consist of the construction of a new 195+/-foot tall monopole tower with a 4-foot lightning arrestor and fenced equipment compound. The proposed tower site is located on a grassy area. See the attached Site Location Diagram (Figure 1) and Boring Location Diagram (Figure 2). We have received preliminary site plans showing the site boundaries and proposed tower location. No loading information was provided for the tower. Based on information provided from the client, the current ground surface elevation at the center of the tower is approximately 674.3 feet MSL. To achieve the proposed grading at the tower site, we anticipate no cut and fill will be required. We do not anticipate that any significant stormwater management (SWM) facilities or site retaining walls will be required for this project.

EXPLORATION PROCEDURES

The site subsurface conditions were explored on February 20, 2018 completing one Standard Penetration Test (SPT) boring drilled at the staked center of the tower location. The boring was drilled to the depth of 23 feet (depth of auger refusal). The approximate boring location is shown on the attached Boring Location diagram (Figure 2). The boring location was based on a survey stake-out that was performed by others. Prior to drilling, underground utilities were cleared through the Kentucky 811system.

A CME 45 truck-mounted drill rig was utilized to complete the SPT boring. The drill rig utilized 3-¼ inch hollow stem augers to advance the boreholes. Representative soil samples were secured by means of conventional split-barrel sampling procedures (ASTM D1586). In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler

through the final 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) value or N-value, and is indicated for each sample on the attached boring log.

The SPT values can be used as a qualitative indication of the in-place relative density of cohesionless soils, and as a relative indication of consistency in cohesive soils. This indication is qualitative, since many factors can affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies. The drill rig utilized an automatic hammer to drive the sampler.

A field log of the soil encountered at the boring location was maintained by the drilling crew. After recovery, each soil sample was removed from the sampler and visually classified by the driller. Representative portions of each soil sample were then sealed in plastic bags and transported to our laboratory in Nashville (Franklin), Tennessee, for further visual observation and classification. Observations for groundwater were made during sampling and upon completion of the drilling operations. After completion of the drilling operations, the borehole was backfilled with auger cuttings and excess soil was mounded at the surface.

CLASSIFICATION AND LABORATORY TESTING PROCEDURES

A geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the Unified Soil Classification System (ASTM D 2487). The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring log. A brief explanation of the Unified Soil Classification System (USCS) is included with this report. The engineer grouped the various soil types into the major zones noted on the boring log. The stratification lines designating the interfaces between materials on the exploration records are approximate; in situ, the transitions may be gradual.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposition.

SITE GEOLOGY

The USGS Geologic Map of the Horton Quadrangle (1971) indicates this particular site is underlain by the Caseyville, Tradewater, and Carbondale Formations. This formation is typically a light gray to yellowish brown, fine to medium-grained, sandstone and silty carbonaceous shale, interbedded.

Figure 1 - USGS Geologic Map of the Horton Quadrangle
(approximate site location highlighted)

SUBSURFACE CONDITIONS

The subsurface conditions discussed in the following paragraphs, and those shown on the boring log, represent an estimate of the subsurface conditions based on interpretation of the exploration data using normally accepted geotechnical engineering judgments. It should be noted that the transition between different soil strata is often less distinct than what is shown on the exploration records.

In general, the exploration revealed an approximate 8-inch thick layer of topsoil underlain by lean clay underlain by weathered sandstone extending to the depth of auger refusal (approximately 23 feet). SPT N-values for the lean clay varied from 12 to 30 blows per foot (bpf). The encountered conditions are shown on the attached boring log.

Groundwater was not encountered at the time of our exploration. It should be noted that groundwater can vary on a seasonal basis due to precipitation, evaporation, surface run-off, area stream levels and other factors not immediately apparent at the time of this exploration. It is also possible for groundwater to exist in a perched condition within the soil overburden or at the soil/rock interface.

ANALYSIS AND RECOMMENDATIONS

General

The following recommendations have been developed on the basis of the previously described project information and subsurface conditions identified during this study. If there are any changes to the project characteristics, or if differing subsurface conditions are encountered during construction, ECS should be consulted so that the recommendations of this report can be reviewed and revised, as necessary.

Subgrade Preparation

Vegetation, and all other soft, unsuitable, or deleterious material should be removed from the existing ground surface at the foundation areas. These operations should extend at least 5 feet beyond the edge of planned structures, where practical. After examining the exposed soils, loose and yielding areas should be identified by proofrolling with an approved piece of equipment, such as a loaded dump truck, having an axle weight of at least 10 tons. Unsuitable or unstable subgrade materials may require moisture conditioning, in-place densification, or removal and replacement with new engineered fill.

Engineered Fill

The first layer of fill should be placed in a relatively uniform horizontal lift and be adequately keyed into the stripped and scarified subgrade soils. Fill materials should be free of organics, wet/frozen materials, or other deleterious materials. Engineered fill materials should consist of low to moderately plastic clays and silts, or coarse grained material such as sand and gravel. Engineered fill should have a maximum Liquid Limit no greater than 50, and a maximum Plasticity Index no greater than 30. In general, we recommend material to be used as engineered fill have a Standard Proctor maximum dry density of at least 90 pcf. Engineered soil fill should be placed in maximum loose lifts of 8 inches and compacted to at least 95 percent of the Standard Proctor (ASTM D698) maximum dry density. Soil engineered fill should be compacted within 3 percentage points of the optimum moisture content determined by the Standard Proctor method. Soil fill should not contain rock material greater than 4 inches in diameter.

Fill operations should be observed on a full-time basis by an experienced engineering technician to check that the required degree of compaction is being achieved. We recommend a minimum of one compaction test per 2,500 square-foot area be performed for each lift of engineered fill for structural areas, and that at least one test per lift per 100 linear feet of utility trench backfill.

Equipment Shelter Foundation

Based upon our findings, the equipment shelter may be supported by a turned-down monolithic slab-on-grade with foundation elements bearing on existing natural material or properly-compacted engineered fill. These foundations can be designed for a maximum net allowable soil bearing pressure of up to 3,000 psf.

For footings constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be less than 1 inch (plus any consolidation settlement from new fill loads). Maximum differential settlement is expected to be half the total settlement. Shallow foundations should be designed to bear at least 18 inches below the final exterior grades. The slab-on-grade may be designed using a modulus of subgrade reaction of 90 pounds per cubic inch (pci). A layer of free draining gravel may be used underlying the slab to serve as a leveling pad and provide a capillary break. All slab and foundation subgrades should be evaluated immediately prior to concrete placement by ECS to verify that the exposed subgrades are capable of satisfactorily supporting the design loads.

Monopole Tower Foundation

The proposed tower can be supported on a drilled shaft (caisson) foundation or a pad and pier foundation. Based on previous experience with monopole structures, we anticipate that wind loading, associated uplift resistance, and lateral loading may control the sizing and depth of the pole foundation. We have provided estimated soil parameters at various depths to aid in drilled shaft foundation design in the attached Geotechnical Data Form.

Uplift forces can be resisted by the factored weight of the shaft and the side shear along the circumference of the shaft (skin friction). The compression forces can be resisted by the side shear along the circumference of the shaft and the end bearing capacity. In determining the dimensions of the drilled shafts, we recommend that a minimum factor of safety of 1.25 with regard to the weight of the concrete should be used in conjunction with the presented allowable side shear values. For uplift and compression, we recommend no contribution to resisting loads be considered from side shear within 5 feet of the ground surface, soft clay or from potentially liquefiable zones.

The installation contractor should be prepared to case the excavation, if needed, depending on the condition of the soils and the ground water elevation at the time of construction. Once the bearing level is reached, all loose materials and any accumulated water seepage should be removed prior to placement of pier reinforcing cage and concrete. Up to 1 inch of water standing in the base of the pier is acceptable at the time of concrete placement and an inflow rate of 1 inch per 5 minutes is also acceptable. Higher inflow rates, which could occur, may require additional control or that drilled shaft concrete be placed by tremie method. The drilled shaft contractor should be prepared to handle such a condition and to ensure suitable end bearing conditions.

The drilled shaft concrete should be placed in intimate contact with undisturbed natural soil/rock. To reduce the potential for arching, we recommend the drilled shaft concrete mix be designed for a slump of 5 to 7 inches. Provided water seepage is minimal, our experience and current

research in the field indicates that the drilled shafts can be constructed by "free fall" placement of concrete without affecting the strength and quality of concrete. The concrete should "free fall" without hitting the sides of the casing or reinforcing steel. The use of a hopper or other suitable device is recommended to control concrete placement and direct it toward the center of the shaft. The placement of concrete in the cased shaft should proceed until the concrete level is above the external fluid level and should be maintained above this level throughout casing removal. However, if significant seepage is present within the excavation or if slurry is used, it will be necessary to place the concrete by tremie method, and we recommend a concrete slump of 7 to 9 inches for this method of concrete placement.

Pad and Pier Recommendations: Based on the relatively shallow depth to bedrock, a pad and pier foundation approach would also be reasonable. We recommend that the foundation be excavated down to weathered rock and can be designed for a net allowable bearing capacity of 5,000 psf.

The foundation design and construction procedures should be reviewed with the foundation contractor prior to the start of construction. If you desire, we would be pleased to review the plans and specifications for the project once they are completed so we may have the opportunity to comment on the impact of the soil/rock and groundwater conditions on the final design.

Seismic Site Classification

Based on our interpretation of the International Building Code (IBC) 2012, it is our opinion that a Seismic Site Class "C" is appropriate for this site. In accordance with IBC 2012 and United States Geological Survey's (USGS) Seismic Hazard Curves and Uniform Hazard Response Spectra program, the following parameters may be used in design:

- Latitude: 37.47865, Longitude: - 86.79586
- $S_s = 0.359$, $S_1 = 0.155$
- $S_{MS} = 0.359$, $S_{M1} = 0.155$
- $S_{DS} = 0.287$, $S_{D1} = 0.170$
  *Spectral accelerations were determined from USGS National Seismic Hazard Maps

General Construction Considerations

Positive site drainage should be maintained during earthwork operations, which should help maintain the integrity of the soil. Placement of fill on the near surface soils which have become wet may be difficult. When wet, these soils will degrade quickly with disturbance from contractor operations and will be difficult to stabilize for fill placement.

The surficial soils are considered moderately erodible. All erosion and sedimentation shall be controlled in accordance with Best Management Practices and current County requirements. At the appropriate time, we would be pleased to provide a proposal for NPDES monitoring and construction materials testing related services.

CLOSING

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for the conclusions, opinions, or

recommendations made by others based on these data. No third party is given the right to rely on this report without express written permission.

The scope of services for this study does not include environmental assessment or investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil or groundwater within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

We appreciate this opportunity to be of service to you during the design phase of this project. If you have any questions with regard to the information and recommendations presented in this report, please do not hesitate to contact us.

Respectfully,

ECS SOUTHEAST, LLP

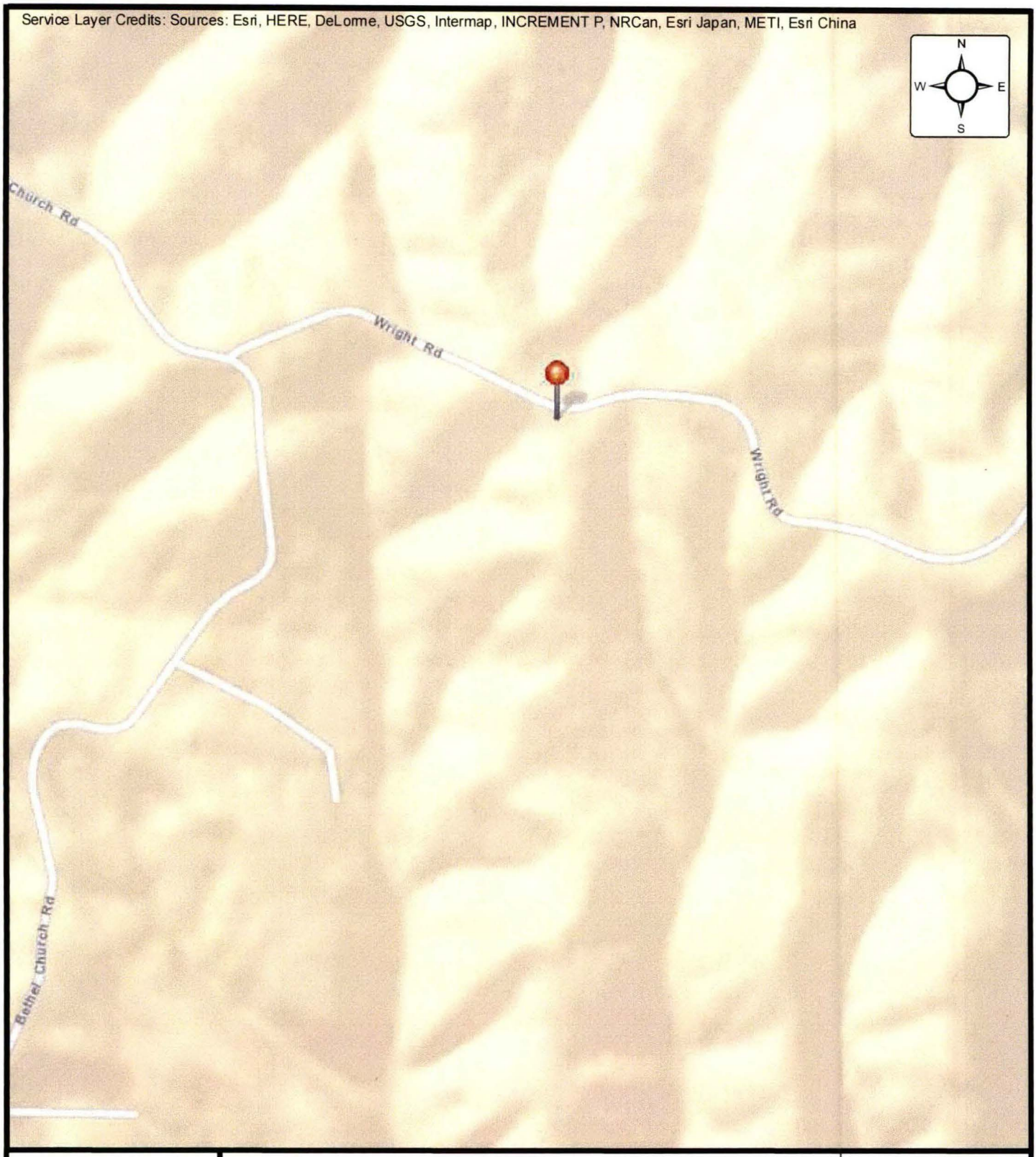
Eric Gasiecki

Eric M. Gasiecki, P.E.
Geotechnical Department Manager

For Dan Franklin
Principal Reviewer

Mark D. Luskin, P.E.
Engineering Manager

Attachments: Figure 1: Site Location Map
Figure 2: Boring Location Diagrams
Geotechnical Data Form
SPT Boring Log (B-1)
Reference Notes for Boring Log
USGS Summary Report

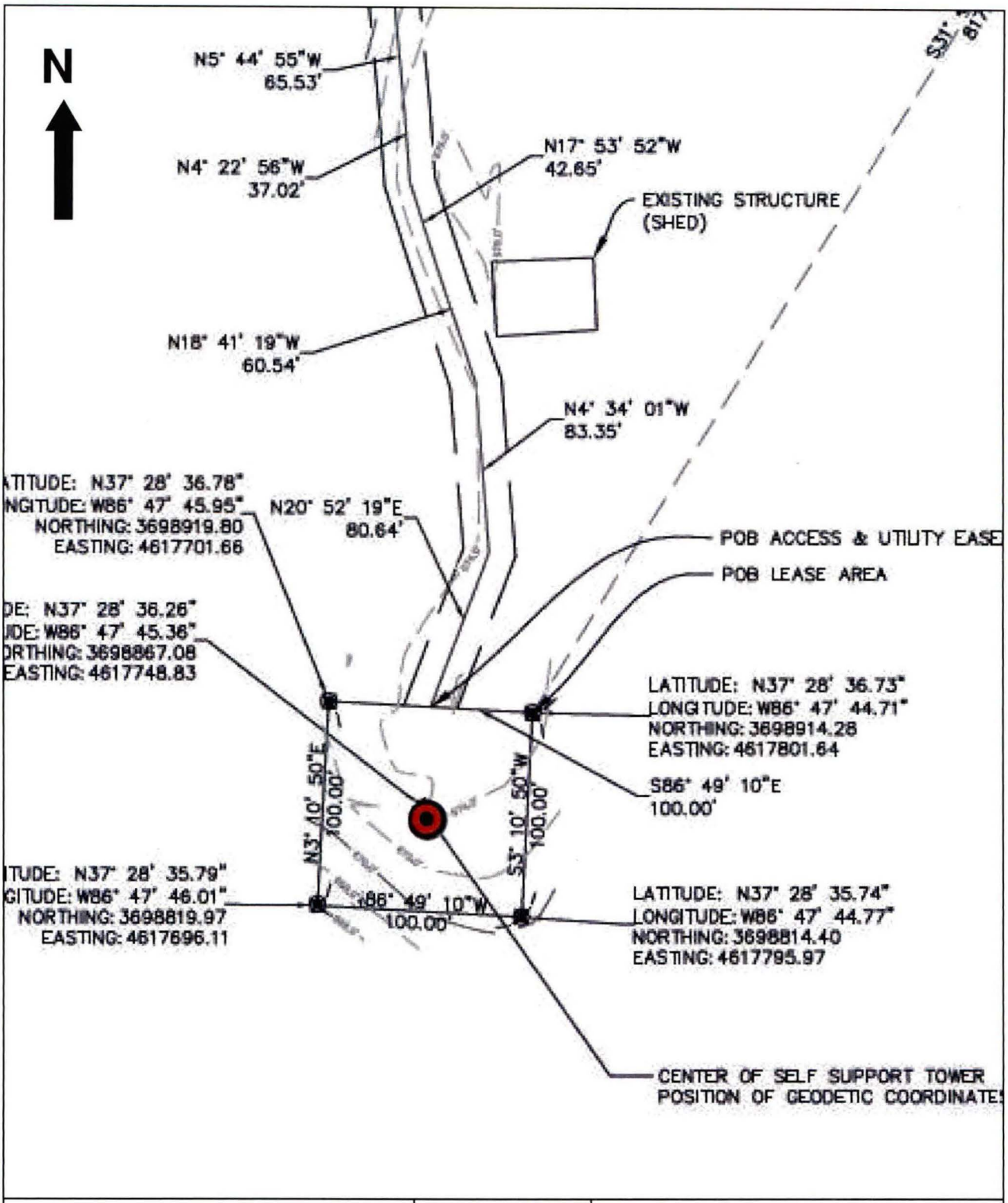


SITE LOCATION DIAGRAM

IRISH TOWER SITES-ELMLICK CREEK

BEAVER DAM, KY 42320
IRISH TOWER, LLC

ENGINEER	SC
SCALE	NTS
PROJECT NO.	26:3125-E2
SHEET	1 OF 1
DATE	2/7/2018



Irish Tower – Elmlick Creek

320 Wright Road
Beaver Dam, KY
ECS Project No. 26:3125-E2

Figure 2: Boring Location Diagram

Approximate Boring Locations

GEOTECHNICAL DATA FORM

Background Information

Client: Irish Tower, LLC
Project: Elmlick Creek Tower
Location: 320 Wright Road, Beaver Dam, KY

ECS Project No.: 26:3125-E2
Type: Monopole
Height: 195'+/-

Subsurface Conditions

Depth (feet)	Soil Behavior Type	Average N (spt)	Relative Density/Consistency	USCS Classification
0 - 7	Lean Clay	21	Very Stiff	CL
7 - 23	Weathered Sandstone	-	-	-
23+	Sandstone Bedrock	-	-	-

Estimated Soil Parameters for LPILE

Depth (feet)	LPILE Soil Type	γ (pcf)	S_u (psf)	ϕ' (°)	K* (pci)	E_{50}*
0 - 7	Very Stiff Clay	115	2000	-	125	0.005
7 - 23	Weathered Bedrock	125	3000	-	200	0.004
23+	Sandstone Bedrock	135	5000+	-	225	0.001

γ= In-situ Soil Density
S_u= Undrained Shear Strength
ϕ'= Effective Friction Angle
K= Horizontal Subgrade Reaction

*Parameters estimated from values suggested in LPILE user manual.

Foundation Recommendations

For Drilled Shaft Foundations**

Depth (ft)	Allowable End Bearing (KSF)
0 - 7	3
7 - 23	5
23+	15

Depth Interval	Allowable Average Side Friction (PSF)
0 - 5	-
5 - 7	750
7 - 23	1,000
23+	2,000

**Ignore in top 5 feet in design, minimum embedment depth of 10% tower height applies.

Construction Criteria

1) Proofroll site prior to construction to detect unsuitable soil near the surface.
2) Compact building pads/roadway subgrade and each 8 inch lift of approved fill to 95% maximum dry density in accordance with ASTM D698 standard proctor.
3) Approved fill materials are soils with less than 3% organics, less than 50 liquid limit and less than 30 plastic index.
4) Foundation construction should be observed by Geotechnical Engineer.
5) Drilled shaft foundations should be installed in accordance with the requirements of the Deep Foundation Institute and monitored by the Geotechnical Engineer.

CLIENT	Job #:	BORING #	SHEET
Irish Tower, LLC	26:3125-E2	B-1	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Irish Tower Sites-Elmlick Creek	Irish Tower, LLC

SITE LOCATION: 320 Wright Road, Beaver Dam, Ohio, KY

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - — - REC% ——

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

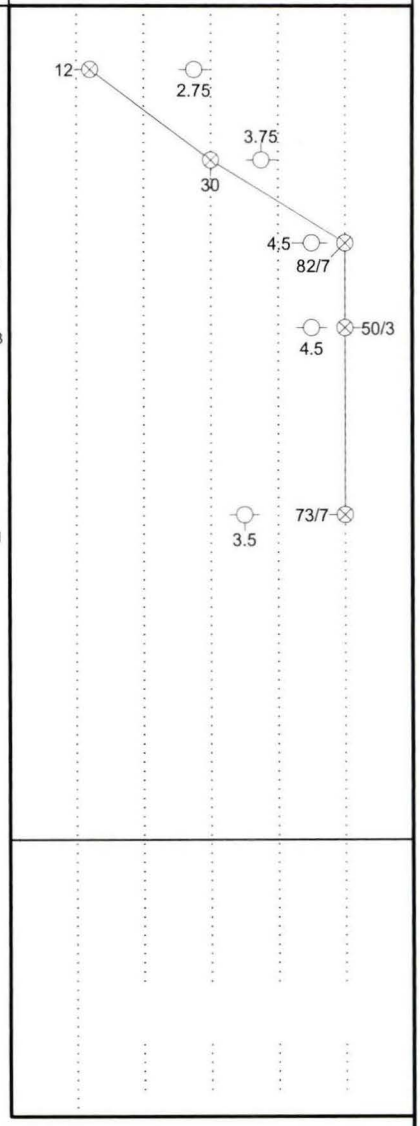
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 674

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Topsoil Depth [8"]			
	S-1	SS	18	18	(CL) LEAN CLAY, trace sand, brown and gray, moist, stiff			2 5 7
	S-2	SS	18	18	(CL) LEAN CLAY WITH SAND, trace gravel, light brown, moist, hard to very hard		670	8 11 19
5	S-3	SS	13	13				20 32 50/1
	S-4	SS	9	9	Weathered SANDSTONE, light brown		665	5 50/3
10								
	S-5	SS	13	13			660	5 23 50/1
15								
							655	
20								
					AUGER REFUSAL @ 23'		650	
25								
							645	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL dry WS ☐ WD ☒	BORING STARTED 02/20/18		CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 02/20/18		HAMMER TYPE Auto
WL dry upon completion	RIG ATV	FOREMAN Bill Kurpis	DRILLING METHOD SPT

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	FILL[3] MAN-PLACED SOILS
GW	**WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines
GP	**POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines
GM	**SILTY GRAVEL** gravel-sand-silt mixtures
GC	**CLAYEY GRAVEL** gravel-sand-clay mixtures
SW	**WELL-GRADED SAND** gravelly sand, little or no fines
SP	**POORLY-GRADED SAND** gravelly sand, little or no fines
SM	**SILTY SAND** sand-silt mixtures
SC	**CLAYEY SAND** sand-clay mixtures
ML	**SILT** non-plastic to medium plasticity
MH	**ELASTIC SILT** high plasticity
CL	**LEAN CLAY** low to medium plasticity
CH	**FAT CLAY** high plasticity
OL	**ORGANIC SILT or CLAY** non-plastic to low plasticity
OH	**ORGANIC SILT or CLAY** high plasticity
PT	**PEAT** highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION		**PARTICLE SIZES**
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	**SPT[5] (BPF)**	**CONSISTENCY[7] (COHESIVE)**
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Medium Stiff
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT[5]	**DENSITY**
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
Dual Symbol *(ex: SW-SM)*	10	10
With	15 - 20	15 - 25
Adjective *(ex: "Silty")*	≥25	≥30

WATER LEVELS[6]		
	WL	Water Level (WS)(WD)
		(WS) While Sampling
		(WD) While Drilling
	SHW	Seasonal High WT
	ACR	After Casing Removal
	SWT	Stabilized Water Table
	DCI	Dry Cave-In
	WCI	Wet Cave-In

[1] *Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.*

[2] *To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.*

[3] *Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-**FILL**)].*

[4] *Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).*

[5] *Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).*

[6] *The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.*

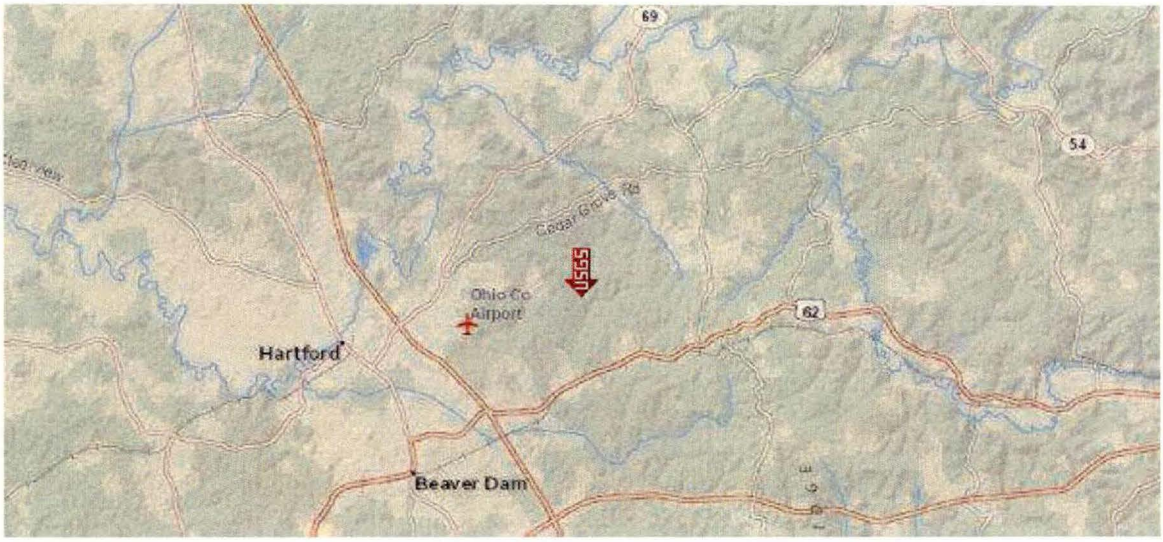
[7] *Minor deviation from ASTM D 2488-09 Note 16.*

[8] *Percentages are estimated to the nearest 5% per ASTM D 2488-09.*

USGS Design Maps Summary Report

User–Specified Input

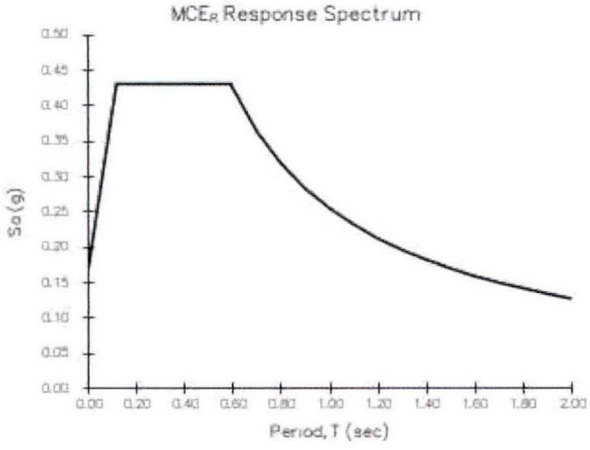
Building Code Reference Document	2012/2015 International Building Code (which utilizes USGS hazard data available in 2008)
Site Coordinates	37.47865°N, 86.79586°W
Site Soil Classification	Site Class C – "Very Dense Soil and Soft Rock"
Risk Category	I/II/III



USGS–Provided Output

S_S =	0.359 g	S_{MS} =	0.431 g	S_{DS} =	0.287 g
S_1 =	0.155 g	S_{M1} =	0.255 g	S_{D1} =	0.170 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.



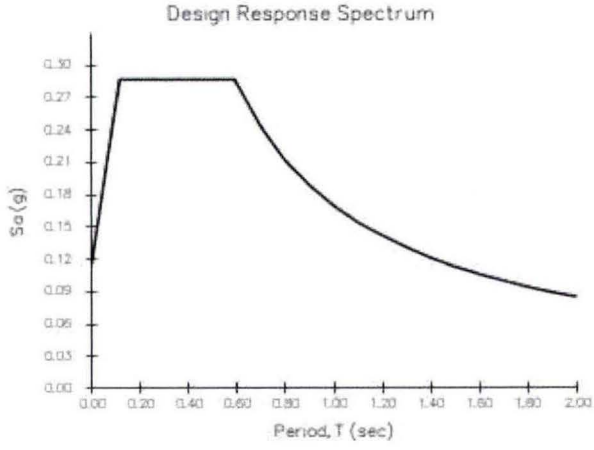


EXHIBIT H
DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site

1. Beginning at the offices of the Ohio County Judge Executive located at 130 E. Washington Street, Hartford, Kentucky start out going southwest on E Washington Street.
2. Take the 2nd left onto S Main St/US-231 S/KY-69.
3. Turn left onto KY-69/State Route 69 N.
4. Turn right onto Hamlin Chapel Road.
5. Turn left onto Bethel Church Road.
6. Stay straight to go onto Wright Rd.
7. Arrive at 320 Wright Rd, Beaver Dam, Kentucky on the right.
8. The site coordinates are 37°28'36.26" North latitude, 86°47'45.36" West longitude.

Prepared by:
Robert W. Grant
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

EXHIBIT I
COPY OF REAL ESTATE AGREEMENT

Market: Evansville
Cell Site Number: KYL03664
Cell Site Name: Elmlick Creek
Fixed Asset Number: 13800748

OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("**Agreement**"), dated as of the latter of the signature dates below (the "**Effective Date**"), is entered into by Robert Ling, single, having a mailing address of 320 Wright Road, Beaver Dam, KY 42320 ("**Landlord**") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 575 Morosgo Drive, Atlanta, GA 30324 ("**Tenant**").

BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 320 Wright Road, Beaver Dam, KY 42320 in the County of Ohio, State of Kentucky (collectively, the "**Property**"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

1. **OPTION TO LEASE.**

(a) Landlord grants to Tenant an option (the "**Option**") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above such ground space, as described on attached **Exhibit 1** (the "**Premises**"), for the placement of Tenant's Communication Facility.

(b) During the Option Term, and during the term of this Agreement, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "**Tests**"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "**Government Approvals**"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.

(c) In consideration of Landlord granting Tenant the Option, Tenant agrees to pay Landlord the sum of [redacted] within forty five (45) business days of the Effective Date. The Option will be for an initial term of one (1) year commencing on the Effective Date (the "**Initial Option Term**") and may be renewed by Tenant for an additional one (1) year (the "**Renewal Option Term**") upon written notification to Landlord and the payment of an additional [redacted] no later than five (5) days prior to the expiration date of the Initial Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "**Option Term.**"

(d) The Option may be sold, assigned or transferred at any time by Tenant to an Affiliate (as that term is hereinafter defined) of Tenant or to any third party agreeing to be subject to the terms hereof. Otherwise, the Option may not be sold, assigned or transferred without the written consent of Landlord, such consent not to

be unreasonably withheld, conditioned or delayed. From and after the date the Option has been sold, assigned or transferred by Tenant to an Affiliate or a third party agreeing to be subject to the terms hereof, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

(e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, this Agreement will terminate and the parties will have no further liability to each other.

(f) If during the Option Term, or during the term of this Agreement the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, Property or any of Landlord's contiguous, adjoining or surrounding property (the "**Surrounding Property**,") or in the event of foreclosure, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term of this Agreement if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises, Property or Surrounding Property or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use. Any and all terms and conditions of this Agreement that by their sense and context are intended to be applicable during the Option Term shall be so applicable.

2. **PERMITTED USE.** Tenant may use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of its communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure, associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively, the "**Communication Facility**"), as well as the right to test, survey and review title on the Property; Tenant further has the right but not the obligation to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including, but not limited to, emergency 911 communication services, at no additional cost to Tenant or Landlord (collectively, the "**Permitted Use**"). Landlord and Tenant agree that any portion of the Communication Facility that may be conceptually described on **Exhibit 1** will not be deemed to limit Tenant's Permitted Use. If **Exhibit 1** includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of **Exhibit 1**. For a period of ninety (90) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of Landlord's contiguous, adjoining or Surrounding Property as described on **Exhibit 1** as may reasonably be required during construction and installation of the Communication Facility. Tenant has the right to install and operate transmission cables from the equipment shelter or cabinet to the antennas, electric lines from the main feed to the equipment shelter or cabinet and communication lines from the Property's main entry point to the equipment shelter or cabinet, and to make other improvements, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises and undertake any other appropriate means to secure the Premises at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the equipment, increase the number of antennas or relocate the Communication Facility within the Premises at any time during the term of this Agreement. Tenant will be allowed to make such alterations to the Property in order to ensure that Tenant's Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "**Additional Premises**") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

3. **TERM.**

(a) The initial lease term will be five (5) years (the "**Initial Term**"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "**Term Commencement Date**"). The Initial Term will terminate on the fifth (5th) anniversary of the Term Commencement Date.

(b) This Agreement will automatically renew for four (4) additional five (5) year term(s) (each five (5) year term shall be defined as an "**Extension Term**"), upon the same terms and conditions unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or then-existing Extension Term.

(c) Unless (i) Landlord or Tenant notifies the other in writing of its intention to terminate this Agreement at least six (6) months prior to the expiration of the final Extension Term, or (ii) the Agreement is terminated as otherwise permitted by this Agreement prior to the end of the final Extension Term, then upon the expiration of the final Extension Term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("**Annual Term**") until terminated by either party by giving to the other written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rental during such Annual Terms shall be equal to the Rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "**Holdover Term**"), subject to the terms and conditions of this Agreement.

(d) The Initial Term, any Extension Terms, any Annual Terms and any Holdover Term are collectively referred to as the Term (the "**Term**").

4. **RENT.**

(a) Commencing on the first day of the month following the date that Tenant commences construction (the "**Rent Commencement Date**"), Tenant will pay Landlord on or before the fifth (5th) day of each calendar month in advance [redacted] (the "**Rent**"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.

(b) In year one (1) of each Extension Term, the monthly Rent will increase by [redacted] over the Rent paid during the previous five (5) year term.

(c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly Rent which is due and payable without a requirement that it be billed by Landlord. The provisions of this subsection shall survive the termination or expiration of this Agreement.

5. **APPROVALS.**

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for Tenant's Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for Tenant's Permitted Use under this Agreement and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.

(b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.

(c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.

6. **TERMINATION.** This Agreement may be terminated, without penalty or further liability, as follows:

(a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods;

(b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant; or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable;

(c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses;

(d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or

(e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: 5 Approvals, 6(a) Termination, 6(b) Termination, 6(c) Termination, 6(d) Termination, 11(d) Environmental, 18 Condemnation, or 19 Casualty.

7. **INSURANCE.**

(a) During the Term, Tenant will carry, at its own cost and expense, the following insurance: (i) workers' compensation insurance as required by law; and (ii) commercial general liability (CGL) insurance with respect to its activities on the Property, such insurance to afford protection of up to [redacted] per occurrence and [redacted] general aggregate, based on Insurance Services Office (ISO) Form CG 00 01 or a substitute form providing substantially equivalent coverage. Tenant's CGL insurance shall contain a provision including Landlord as an additional insured. Such additional insured coverage:

(i) shall be limited to bodily injury, property damage or personal and advertising injury caused, in whole or in part, by Tenant, its employees, agents or independent contractors;

(ii) shall not extend to claims for punitive or exemplary damages arising out of the acts or omissions of Landlord, its employees, agents or independent contractors or where such coverage is prohibited by law or to claims arising out of the gross negligence of Landlord, its employees, agents or independent contractors; and

(iii) shall not exceed Tenant's indemnification obligation under this Agreement, if any.

(b) Notwithstanding the foregoing, Tenant shall have the right to self-insure the coverages required in subsection (a). In the event Tenant elects to self-insure its obligation to include Landlord as an additional insured, the following provisions shall apply (in addition to those set forth in subsection (a)):

(i) Landlord shall promptly and no later than thirty (30) days after notice thereof provide Tenant with written notice of any claim, demand, lawsuit, or the like for which it seeks coverage pursuant to this Section and provide Tenant with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like;

(ii) Landlord shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of Tenant; and

(iii) Landlord shall fully cooperate with Tenant in the defense of the claim, demand, lawsuit, or the like.

8. **INTERFERENCE.**

(a) Prior to or concurrent with the execution of this Agreement, Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as those existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.

(b) Landlord will not grant, after the date of this Agreement, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.

(c) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to, interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.

(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

9. **INDEMNIFICATION.**

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, agents or independent contractors.

(b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees or agents, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.

(c) The indemnified party: (i) shall promptly provide the indemnifying party with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Section and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

10. **WARRANTIES.**

(a) Tenant and Landlord each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority to enter into this Agreement and bind itself hereto through the party set forth as signatory for the party below.

(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this

Agreement; (iii) as long as Tenant is not in default then Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises without hindrance or ejection by any persons lawfully claiming under Landlord; (iv) Landlord's execution and performance of this Agreement will not violate any laws, ordinances, covenants or the provisions of any mortgage, lease or other agreement binding on Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, Landlord will provide promptly to Tenant a mutually agreeable subordination, non-disturbance and attornment agreement executed by Landlord and the holder of such security interest.

11. ENVIRONMENTAL.

(a) Landlord represents and warrants that, except as may be identified in **Exhibit 11** attached to this Agreement, (i) the Property, as of the date of this Agreement, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.

(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("**Claims**"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the Effective Date of this Agreement or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.

(c) The indemnifications of this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.

(d) In the event Tenant becomes aware of any hazardous substances on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party, Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.

12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("**Access**") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in **Exhibit 1**, Landlord grants to Tenant an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as **Exhibit 12**; upon Tenant's request, Landlord shall execute

additional letters during the Term. Landlord acknowledges that in the event Tenant cannot obtain Access to the Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty, [redacted] in consideration of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of Access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages.

13. **REMOVAL/RESTORATION.** All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during or after the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Tenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of Tenant and may be removed by Tenant at any time during or after the Term. Tenant will repair any damage to the Property resulting from Tenant's removal activities. Any portions of the Communication Facility that Tenant does not remove within one hundred twenty (120) days after the later of the end of the Term and cessation of Tenant's operations at the Premises shall be deemed abandoned and owned by Landlord. However, to the extent required by law, Tenant will remove the above-ground portions of the Communications Facility within such one hundred twenty (120) day period. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation.

14. **MAINTENANCE/UTILITIES.**

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.

(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply, Tenant will have the right, at its own cost and expense, to submeter from Landlord. When submetering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Landlord agrees that it will not include a markup on the utility charges. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and/or agent designated by Tenant. Tenant will remit payment within forty-five (45) days of receipt of the usage data and required forms. As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.

(c) Landlord hereby grants to any company providing utility or similar services, including electric power and telecommunications, to Tenant an easement over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or

the service company's request, Landlord will execute a separate recordable easement evidencing this grant, at no cost to Tenant or the service company.

15. **DEFAULT AND RIGHT TO CURE.**

(a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) non-payment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.

(b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 of this Agreement within twenty-four (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 of this Agreement within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.

16. **ASSIGNMENT/SUBLEASE.** Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assignment.

17. **NOTICES.** All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows:

If to Tenant:
New Cingular Wireless PCS, LLC
Attn: Network Real Estate Administration
Re: Cell Site #KYL03664; Cell Site Name: Elmlick Creek (KY)
Fixed Asset No.: 13800748
575 Morosgo Drive
Atlanta, GA 30324

With a copy to:
New Cingular Wireless PCS, LLC
Attn.: Legal Department
Re: Cell Site #: KYL03664; Cell Site Name: Elmlick Creek (KY)
Fixed Asset No.: 13800748
208 S. Akard Street
Dallas, TX 75202

The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

If to Landlord: Robert Ling
320 Wright Road
Beaver Dam, KY 42320

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other as provided herein.

18. **CONDEMNATION.** In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within forty-eight (48) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.

19. **CASUALTY.** Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within forty-eight (48) hours of the casualty or other harm. If any part of the Communication Facility or Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis. Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of the Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant, and Tenant decides not to terminate under this Section, then Landlord will promptly rebuild or restore any portion of the Property interfering with or required for Tenant's Permitted Use of the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Property and/or the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.

20. **WAIVER OF LANDLORD'S LIENS.** Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

21. **TAXES.**

(a) Landlord shall be responsible for timely payment of all taxes and assessments levied upon the lands, improvements and other property of Landlord, including any such taxes that may be calculated by the taxing authority using any method, including the income method. Tenant shall be responsible for any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth

in this Section 21. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll, excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.

(b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than thirty (30) days after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant within such time period, Landlord shall be responsible for payment of the tax or assessment set forth in the notice, and Landlord shall not have the right to reimbursement of such amount from Tenant. If Landlord provides a notice of assessment to Tenant within such time period and requests reimbursement from Tenant as set forth below, then Tenant shall reimburse Landlord for the tax or assessments identified on the notice of assessment on Tenant's leasehold improvements, which has been paid by Landlord. If Landlord seeks reimbursement from Tenant, Landlord shall, no later than thirty (30) days after Landlord's payment of the taxes or assessments for the assessed tax year, provide Tenant with written notice including evidence that Landlord has timely paid same, and Landlord shall provide to Tenant any other documentation reasonably requested by Tenant to allow Tenant to evaluate the payment and to reimburse Landlord.

(c) For any tax amount for which Tenant is responsible under this Agreement, Tenant shall have the right to contest, in good faith, the validity or the amount thereof using such administrative, appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as Tenant may deem appropriate. This right shall include the ability to institute any legal, regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Tenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.

(d) Landlord shall not split or cause the tax parcel on which the Premises are located to be split, bifurcated, separated or divided without the prior written consent of Tenant.

(e) Tenant shall have the right but not the obligation to pay any taxes due by Landlord hereunder if Landlord fails to timely do so, in addition to any other rights or remedies of Tenant. In the event that Tenant exercises its rights under this Section 21(e) due to such Landlord default, Tenant shall have the right to deduct such tax amounts paid from any monies due to Landlord from Tenant as provided in Section 15(b), provided that Tenant may exercise such right without having provided to Landlord notice and the opportunity to cure per Section 15(b).

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, of a copy of any such notices shall be sent to the following address. Promptly after the Effective Date of this Agreement, Landlord shall provide the following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax addresses changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

New Cingular Wireless PCS, LLC
Attn: Network Real Estate Administration -- Taxes
Re: Cell Site #KYL03664; Cell Site Name: Elmlick Creek (KY)
Fixed Asset No: 13800748
575 Morosgo Drive

Atlanta, GA 30324

(g) Notwithstanding anything to the contrary contained in this Section 21, Tenant shall have no obligation to reimburse any tax or assessment for which the Landlord is reimbursed or rebated by a third party.

22. SALE OF PROPERTY

(a) Landlord shall not be prohibited from the selling, leasing or use of any of the Property or the Surrounding Property except as provided below.

(b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property or Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor shall send the documents listed below in this subsection (b) to Tenant. Until Tenant receives all such documents, Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement.

i. Old deed to Property
ii. New deed to Property
iii. Bill of Sale or Transfer
iv. Copy of current Tax Bill
v. New IRS Form W-9
vi. Completed and Signed AT&T Payment Direction Form
vii. Full contact information for new Landlord including phone number(s)

(c) Landlord agrees not to sell, lease or use any areas of the Property or Surrounding Property for the installation, operation or maintenance of other wireless communications facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. Landlord or Landlord's prospective purchaser shall reimburse Tenant for any costs and expenses of such testing. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communications facility or equipment.

(d) The provisions of this Section shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.

23. RENTAL STREAM OFFER. If at any time after the date of this Agreement, Landlord receives a bona fide written offer from a third party seeking an assignment or transfer of Rent payments associated with this Agreement ("**Rental Stream Offer**"), Landlord shall immediately furnish Tenant with a copy of the Rental Stream Offer. Tenant shall have the right within twenty (20) days after it receives such copy to match the Rental Stream Offer and agree in writing to match the terms of the Rental Stream Offer. Such writing shall be in the form of a contract substantially similar to the Rental Stream Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the twenty (20) day period, Landlord may assign the right to receive Rent payments pursuant to the Rental Stream Offer, subject to the terms of this Agreement. If Landlord attempts to assign or transfer Rent payments without complying with this Section, the assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section.

24. MISCELLANEOUS.

(a) **Amendment/Waiver.** This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other

party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.

(b) **Memorandum/Short Form Lease.** Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum or Short Form of Lease substantially in the form attached as **Exhibit 24b**. Either party may record this Memorandum or Short Form of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term of this Agreement, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease.

(c) **Limitation of Liability.** Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.

(d) **Compliance with Law.** Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("**Laws**") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.

(e) **Bind and Benefit.** The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.

(f) **Entire Agreement.** This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.

(g) **Governing Law.** This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.

(h) **Interpretation.** Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in this Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.

(i) **Affiliates.** All references to "Tenant" shall be deemed to include any Affiliate of New Cingular Wireless PCS, LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.

(j) **Survival.** Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.

(k) **W-9.** As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including, any change in Landlord's name or address.

(l) **Execution/No Option.** The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.

(m) **Attorneys' Fees.** In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including without limitation, reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.

(n) **WAIVER OF JURY TRIAL.** EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.

[SIGNATURES APPEAR ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the last date written below.

"LANDLORD"

Robert Ling

By: Robert Ling
Print Name: Robert LING
Its: _____
Date: 4-11-17

"TENANT"
New Cingular Wireless PCS, LLC,
a Delaware limited liability company
By: AT&T Mobility Corporation
Its: Manager

By: _____
Print Name: Tonia Coleman
Its: Area Manager CNE
Date: 6/14/2017

[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

LANDLORD ACKNOWLEDGMENT

STATE OF Kentucky)
) ss:
COUNTY OF Ohio)

On the 27th day of June, 2017 before me, personally appeared Robert Lang, who acknowledged under oath, that he/she is the person/officer named in the within instrument, and that he/she executed the same in his/her stated capacity as the voluntary act and deed of the Landlord for the purposes therein contained.

Notary Public: _____
My Commission Expires: 12-9-20

TENANT ACKNOWLEDGMENT

STATE OF _____)
) ss:
COUNTY OF _____)

On the _____ day of _____, 20___, before me personally appeared _____, and acknowledged under oath that he/she is the _____ of AT&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, the Tenant named in the attached instrument, and as such was authorized to execute this instrument on behalf of the Tenant.

Notary Public: _____
My Commission Expires: _____

TENANT ACKNOWLEDGMENT

STATE OF Alabama)
) ss:
COUNTY OF Jefferson)

On the 19 day of June, 2017, before me personally appeared Bryan Coleman, and acknowledged under oath that he/she is the Area Manager of AT&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, the Tenant named in the attached instrument, and as such was authorized to execute this instrument on behalf of the Tenant.

KATHY M. MCLAUGHLIN NOTARY PUBLIC ALABAMA STATE AT LARGE

Kathy M. M

Notary Public: Kathy M. McLaughlin
My Commission Expires: 10-26-2020

LANDLORD ACKNOWLEDGMENT

STATE OF _____)
) ss:
COUNTY OF _____)

On the _____ day of _____, 20__ before me, personally appeared _____, who acknowledged under oath, that he/she is the person/officer named in the within instrument, and that he/she executed the same in his/her stated capacity as the voluntary act and deed of the Landlord for the purposes therein contained.

_____
Notary Public: _____
My Commission Expires: _____

EXHIBIT 1

DESCRIPTION OF PREMISES

to the Option and Lease Agreement dated June 19, 2017 by and between Robert Ling, single as Landlord, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

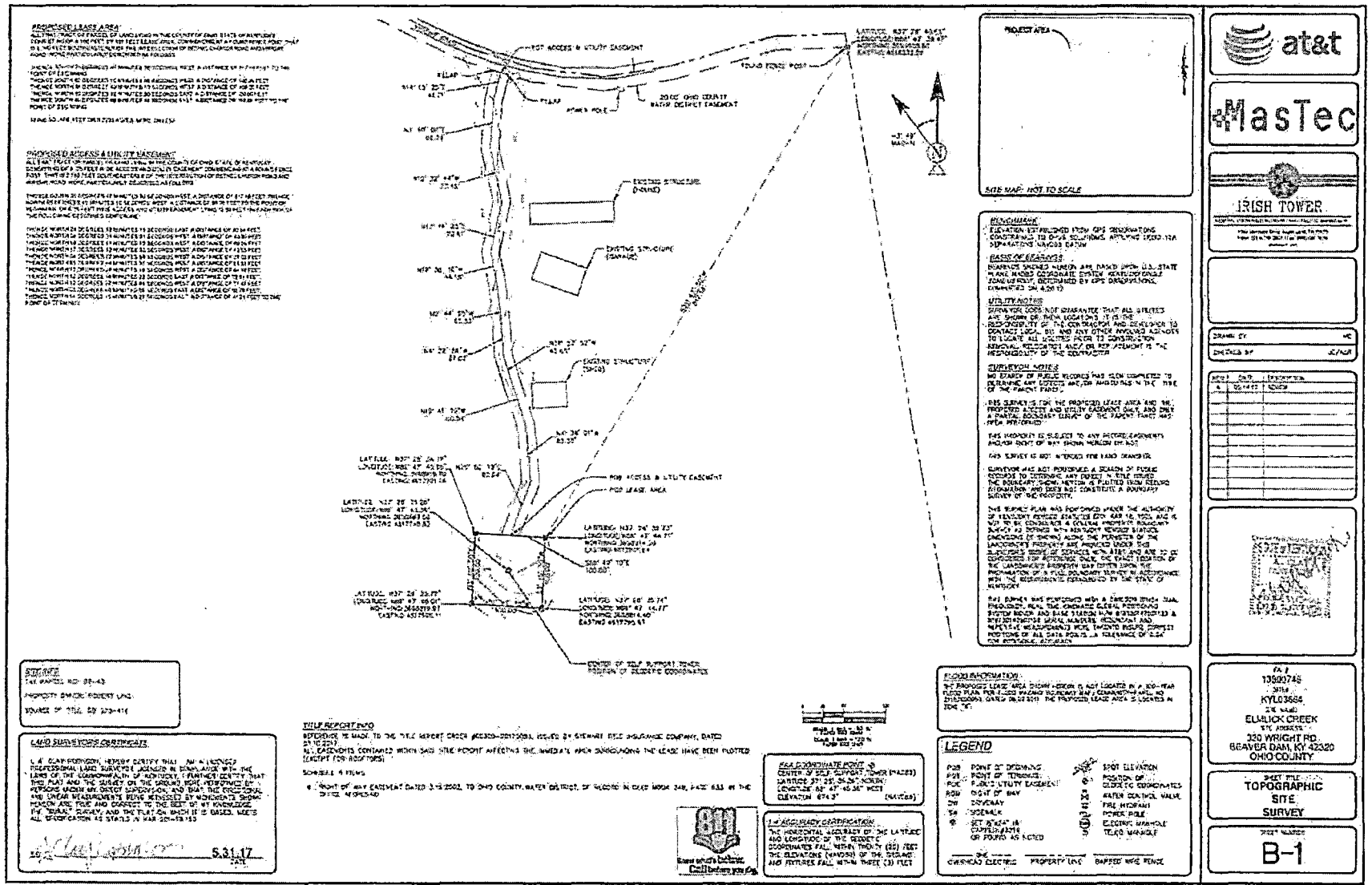
TRACT 1: Beginning at a stone, J. W. Gray's corner; thence S. 15 E. 51-1/2 poles to a white oak on a branch; thence down said branch with its meanders, when reduced to a straight line 56 poles to a hickory in W. W. Cook's line; thence with his line N. 46 W. 110 poles to a black oak, J. W. gray's corner in his line; thence with Gray's line N. 70 E. 80 poles to the beginning, containing 30-1/4 acres, more or less.

TRACT 2: Beginning at two white oaks, G. B. Likens' corner in Hardin Hinton's line; thence S. 68-1/2 E. 5-1/2 poles to a stone; thence S. 15 E. 54-1/2 poles to a stone, henry Hinton's corner; thence with his line S. 70 W. 80 poles to a black oak in Cook's line; thence with his line N. 46 W. 46 poles to a gum, white oak and hickory, Berry Hurt's corner; thence with his line N. 20 E. 48 poles to two black oaks, two black gums and white oak, Hurt's corner in G. B. Likens' line; thence with his line N. 78 E. 26 poles to the beginning, containing 32-3/4 acres, more or less.

The two tract containing 63 acres, more or less.

The minerals underlying the above described tracts are conveyed to the extent same have not been previously conveyed, excepted or reserved.

AND BEING THE SAME PROPERTY conveyed to Robert E. Ling and Mary G. Small from Alfred Ray Bundy and Karen Rae Bundy, husband and wife, by Deed dated May 7, 1998, of record in Deed Bank 317, Page 565, in the office of the Ohio County Court Clerk.



Robert E Lins
6-2-17

EXHIBIT 12

STANDARD ACCESS LETTER

[FOLLOWS ON NEXT PAGE]

[Landlord Letterhead]

DATE

Building Staff / Security Staff
Landlord, Lessee, Licensee
Street Address
City, State, Zip

Re: Authorized Access granted to AT&T

Dear Building and Security Staff,

Please be advised that we have signed a lease with AT&T permitting AT&T to install, operate and maintain telecommunications equipment at the property. The terms of the lease grant AT&T and its representatives, employees, agents and subcontractors ("representatives") 24 hour per day, 7 day per week access to the leased area.

To avoid impact on telephone service during the day, AT&T representatives may be seeking access to the property outside of normal business hours. AT&T representatives have been instructed to keep noise levels at a minimum during their visit.

Please grant the bearer of a copy of this letter access to the property and to leased area. Thank you for your assistance.

Robert Ling
Landlord Signature

EXHIBIT J
NOTIFICATION LISTING

Elmlick Creek – Notice List

Robert E. Ling
320 Wright Road
Beaver Dam, KY 42320

D. Wayne & Tracy Skipworth
890 Lewis Creek Lane
Beaver Dam, KY 42320

Dan Skinner III
143 McConnell Drive
Central City, KY 42330

Willie Louis Burden
c/o Alene Lamar
3564 Bethel Church Road
Beaver Dam, KY 42320

Alice Carolyn Brooks
1020 Grassland Chase Drive
Gallatin, TN 37066

Charles E. Coy
2099 Cedar Grove Road
Hartford, KY 42347

Carroll E & Patricia Safreed
3444 Royal Drive
Ownesboro, KY 42301

EXHIBIT K
COPY OF PROPERTY OWNER NOTIFICATION

PIKE
LEGAL

1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

Notice of Proposed Construction of Wireless Communications Facility Site Name: Elmlick Creek

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 320 Wright Road, Beaver Dam, Kentucky (37°28'36.26" North latitude, 86°47'45.36" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00154 in any correspondence sent in connection with this matter.

In addition to expanding and improving voice and data service for AT&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service to homes and businesses in the area. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies.

We have attached a map showing the site location for the proposed tower. Applicant's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely,
David A. Pike
Attorney for Applicant

enclosure

Driving Directions to Proposed Tower Site

1. Beginning at the offices of the Ohio County Judge Executive located at 130 E. Washington Street, Hartford, Kentucky start out going southwest on E Washington Street.
2. Take the 2nd left onto S Main St/US-231 S/KY-69.
3. Turn left onto KY-69/State Route 69 N.
4. Turn right onto Hamlin Chapel Road.
5. Turn left onto Bethel Church Road.
6. Stay straight to go onto Wright Rd.
7. Arrive at 320 Wright Rd, Beaver Dam, Kentucky on the right.
8. The site coordinates are 37°28'36.26" North latitude, 86°47'45.36" West longitude.

Prepared by:
Robert W. Grant
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

(A) PARCEL ID: 87-45
OWNER: LING ROBERT E
320 WRIGHT RD
BEAVER DAM KY 42320

(B) PARCEL ID: 87-20
OWNER: SKIPWORTH D WAYNE & TRACY
890 LEWIS CREEK LN
BEAVER DAM KY 42320

(C) PARCEL ID: 87-20A
OWNER: SKINNER DAN III
143 MCCONNELL DR
CENTRAL CITY KY 42330

(D) PARCEL ID: 88-7
OWNER: BURDEN WILLIE LOUIS
C/O ALLENE LAMAR
3564 BETHEL CHURCH RD
BEAVER DAM KY 42320

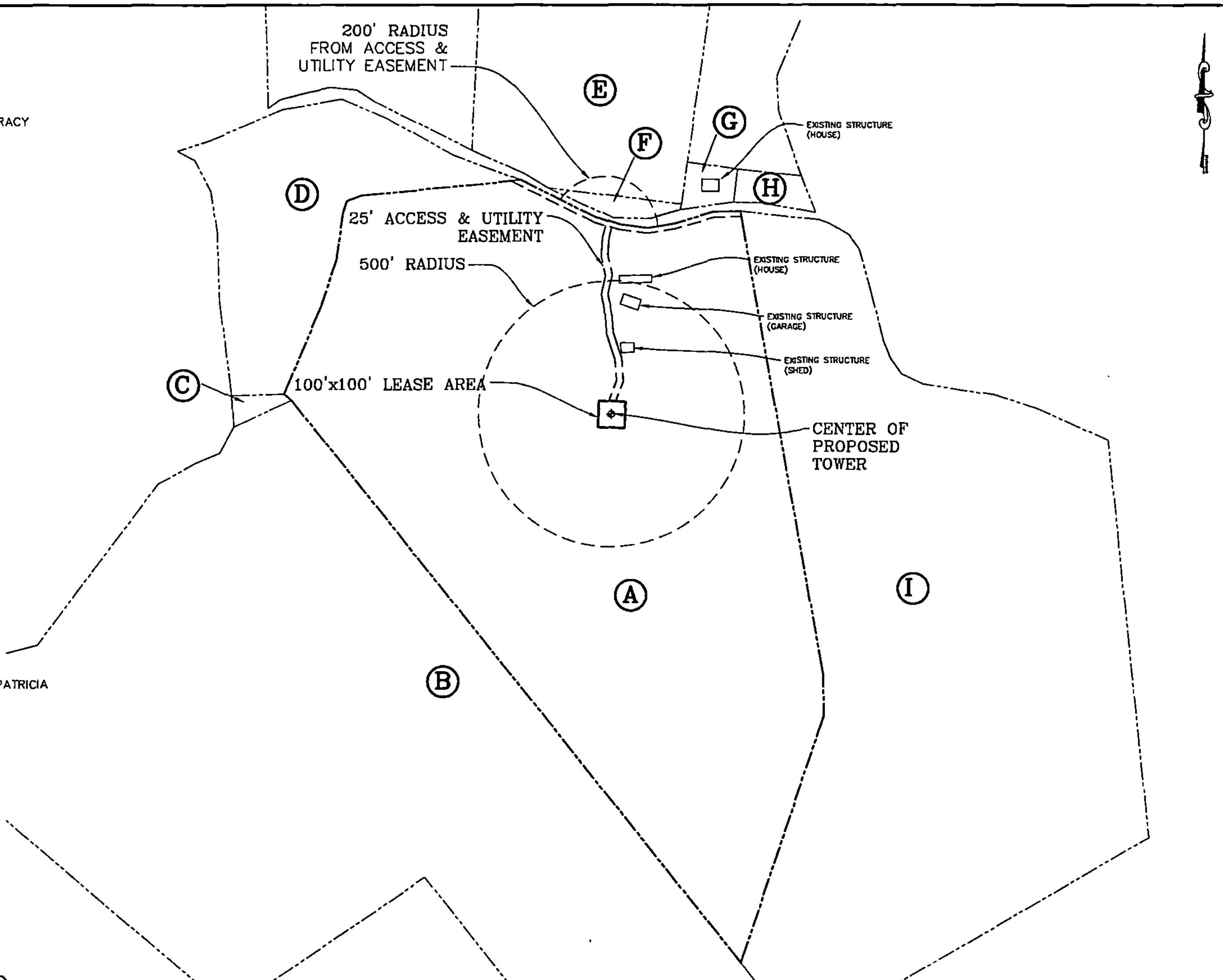
(E) PARCEL ID: 87-3
OWNER: BROOKS ALICE CAROLYN
1020 GRASSLAND CHASE DR
GALLATIN TN 37066

(F) PARCEL ID: 87-45
OWNER: LING ROBERT E
320 WRIGHT RD
BEAVER DAM KY 42320

(G) PARCEL ID: 87-4B & 87-4C
OWNER: COY CHARLES E
2099 CEDAR GROVE RD
HARTFORD KY 42347

(H) PARCEL ID: 87-4B & 87-4C
OWNER: COY CHARLES E
2099 CEDAR GROVE RD
HARTFORD KY 42347

(I) PARCEL ID: 87-18
OWNER: SAFREED CARROLL E & PATRICIA
3444 ROYAL DR
OWENSBORO KY 42301



SURVEYOR NOTES

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED 4.24.18 FROM OHIO COUNTY COUNTY PROPERTY VALUATION OFFICE. RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE INACCURACIES AND THE TIME LAPSE IN UPDATING FILES.

2. THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND DOES CONSTITUTE A BOUNDARY SURVEY.

3. THIS MAP IS NOT FOR RECORDING OR PROPERTY TRANSFER.

SCALE: 1 inch = 80 ft. PAPER SIZE 22x34
SCALE: 1 inch = 160 ft. PAPER SIZE 11x17

SITE INFO

TAX PARCEL NO: 87-45

PROPERTY OWNER: ROBERT LING

SOURCE OF TITLE: DB 323-416

at&t

MasTec

IRISH TOWER
GENERAL CONSTRUCTION | ENGINEERING PROJECT MANAGEMENT
4603 Bermuda Drive, Sugar Land, TX 77479
Voice: (281) 796-2651 | Fax: (866) 506-3136
irishtower.com

DRAWN BY: MD

CHECKED BY: JC/ACR

REV	DATE	DESCRIPTION
A	4.24.18	REVIEW

STATE OF KENTUCKY
A. CLAY ROBINSON
PROFESSIONAL LAND SURVEYOR

FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320
OHIO COUNTY

SHEET TITLE
500' RADIUS
&
ABUTTER'S MAP

SHEET NUMBER
B-2

EXHIBIT L
COPY OF COUNTY JUDGE/EXECUTIVE NOTICE

PIKE LEGAL

1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

VIA CERTIFIED MAIL

Hon. David Johnston
County Judge Executive
130 E. Washington Street, Suite 209
Hartford, KY 42347

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2018-00154
Site Name: Elmlick Creek

Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 320 Wright Road, Beaver Dam, Kentucky (37°28'36.26" North latitude, 86°47'45.36" West longitude). The proposed facility will include a 195-foot tall antenna tower, plus a 4-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00154 in any correspondence sent in connection with this matter.

In addition to expanding and improving voice and data service for AT&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service to homes and businesses in the area. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies.

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Sincerely,
David A. Pike
Attorney for Applicant

enclosures

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Prepared by:
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OWNER: BROOKS ALICE CAROLYN
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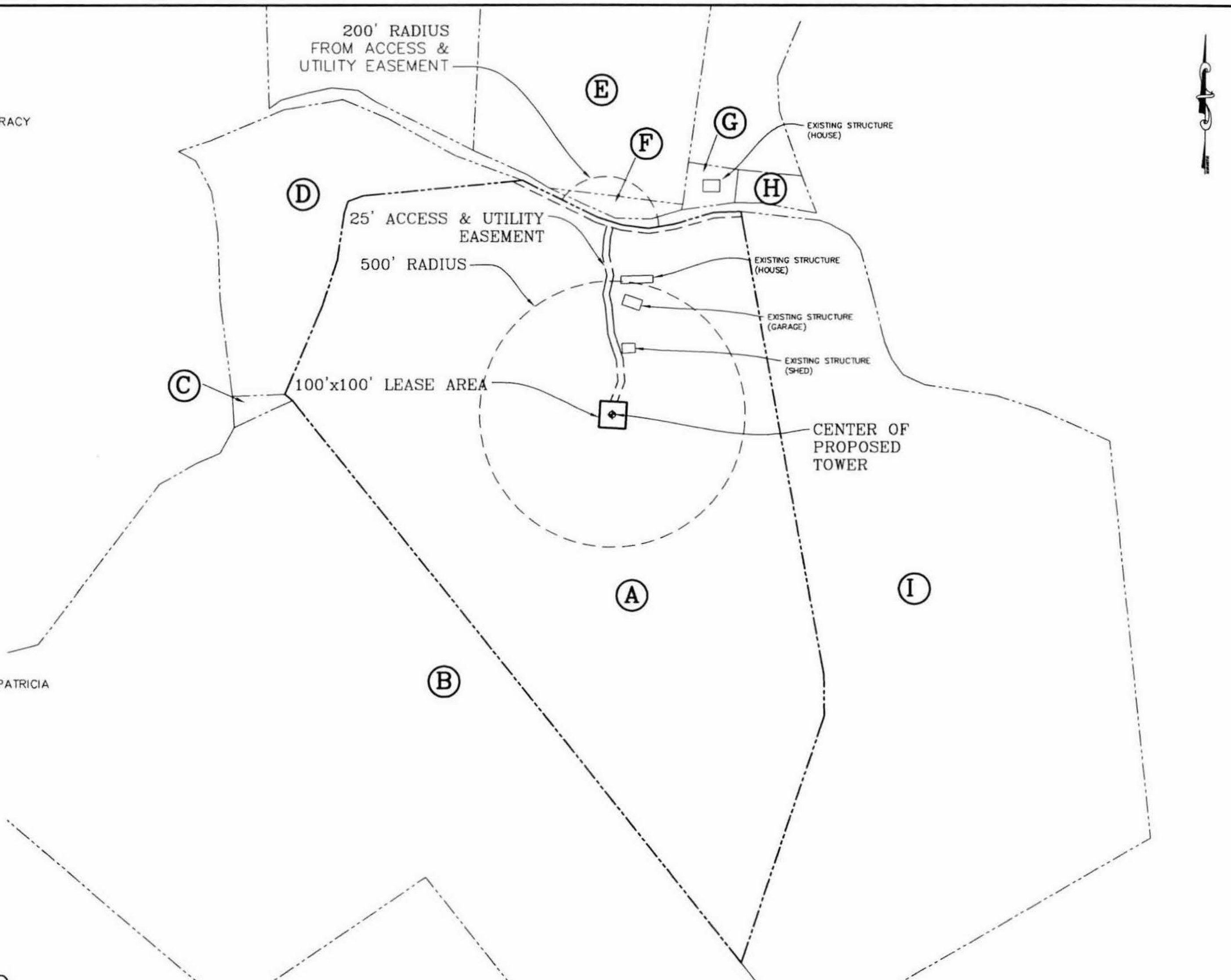


SURVEYOR NOTES

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED 4.24.18 FROM OHIO COUNTY COUNTY PROPERTY VALUATION OFFICE. RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE INACCURACIES AND THE TIME LAPSE IN UPDATING FILES.

2. THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND DOES CONSTITUTE A BOUNDARY SURVEY.

3. THIS MAP IS NOT FOR RECORDING OR PROPERTY TRANSFER.

SITE INFO

TAX PARCEL NO: 87-45

PROPERTY OWNER: ROBERT LING

SOURCE OF TITLE: DB 323-416

at&t

MasTec

IRISH TOWER

GENERAL CONSTRUCTION | ENGINEERING PROJECT MANAGEMENT

DRAWN BY: MD

CHECKED BY: JC/ACR

REV	DATE	DESCRIPTION
A	4.24.18	REVIEW

STATE OF KENTUCKY
A. CLA...
PROFESSIONAL
LAND SURVEYOR

FA #
13800748
SITE #
KYL03664
SITE NAME:
ELMLICK CREEK
SITE ADDRESS:
320 WRIGHT RD
BEAVER DAM, KY 42320
OHIO COUNTY

SHEET TITLE
500' RADIUS & ABUTTER'S MAP

SHEET NUMBER
B-2

EXHIBIT M
NOTICE SIGN
AND
NEWSPAPER NOTICE TEXT

SITE NAME: ELMLICK CREEK
NOTICE SIGNS

The signs are at least (2) feet by four (4) feet in size, of durable material, with the text printed in black letters at least one (1) inch in height against a white background, except for the word "**tower**," which is at least four (4) inches in height.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00154 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00154 in your correspondence.

1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

VIA TELEPHONE: 270-298-7100

Ohio County Times News
314 Main Street
PO Box 226
Hartford, KY 42347

RE: Legal Notice Advertisement
Site Name: Elmlick Creek

Dear Ohio County Times News:

Please publish the following legal notice advertisement in the next edition of *The Ohio County Times News*:

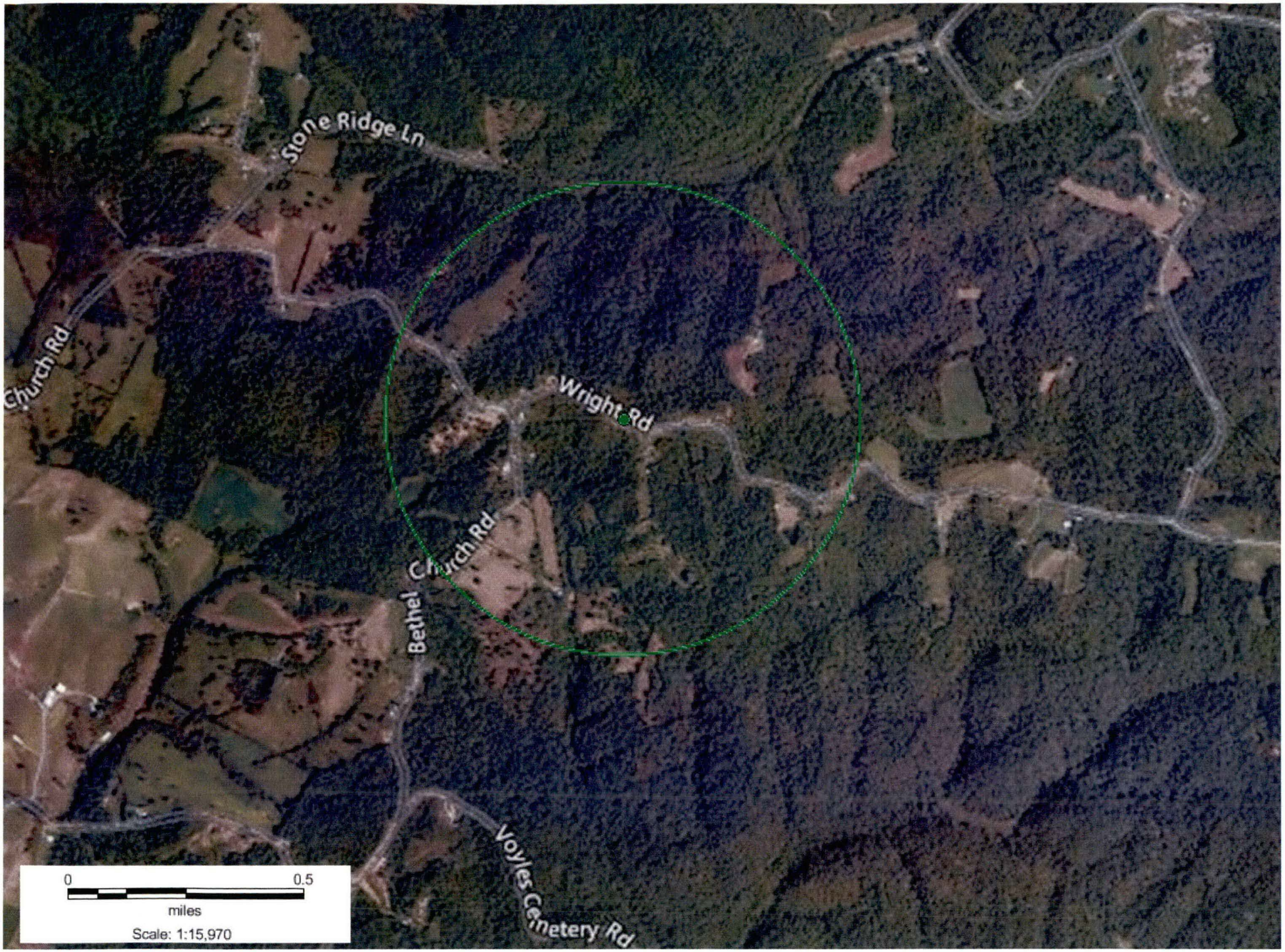
NOTICE

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 320 Wright Road, Beaver Dam, Kentucky (37°28'36.26" North latitude, 86°47'45.36" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00154 in any correspondence sent in connection with this matter.

After this advertisement has been published, please forward a tearsheet copy, affidavit of publication, and invoice to Pike Legal Group, PLLC, P. O. Box 369, Shepherdsville, KY 40165. Please call me at (800) 516-4293 if you have any questions. Thank you for your assistance.

Sincerely,
Robert W. Grant
Pike Legal Group, PLLC

EXHIBIT N
COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Lat: 37.479037
Lon: -86.796765
Radius: .5 miles

Elmlick Creek Search Area