COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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| 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.: 2018-00359 |
| CONVENIENCE AND NECESSITY TO CONSTRUCT |) |
| A WIRELESS COMMUNICATIONS FACILITY |) |
| IN THE COMMONWEALTH OF KENTUCKY |) |
| IN THE COUNTY OF CASEY |) |
| | |

SITE NAME: MURPHY BRANCH FN

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 Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" 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 John W. and Paula G. Cox pursuant to a Deed recorded at Deed Book 191, Page 141 in the office of the County Clerk. The proposed WCF will consist of a 195-foot tall 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. Documentation confirming that no notice is required to the Federal Aviation Administration ("FAA") for the proposed tower site is attached as **Exhibit E**.
- 12. Documentation confirming that a Kentucky Airport Zoning Commission ("KAZC") permit is not required for the proposed site is attached as **Exhibit F**.
- 13. 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 legal notice advertisement regarding the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located. A copy of the newspaper legal notice advertisement is attached as part of **Exhibit M**.
 - 23. The general area where the proposed facility is to be located is rural,

mountainous, wooded and sparsely populated. There are no existing residential structures within 500 feet of the proposed tower location.

- 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.
- 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

Lewid a Pelse

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

| Α | - | FCC License Documentation |
|---|---|-------------------------------------------------------------------------------------------------|
| В | - | Site Development Plan: |
| | | 500' Vicinity Map Legal Descriptions Flood Plain Certification Site Plan Vertical Tower Profile |
| С | - | Tower and Foundation Design |
| D | - | Competing Utilities, Corporations, or Persons List |
| Ε | - | FAA |
| F | - | Kentucky Airport Zoning Commission |
| G | - | Geotechnical Report |
| Н | - | Directions to WCF Site |
| 1 | - | Copy of Real Estate Agreement |
| J | - | Notification Listing |
| K | - | Copy of Property Owner Notification |
| L | - | Copy of County Judge/Executive Notice |
| M | - | Copy of Posted Notices and Newspaper Notice Advertisement |
| N | - | Copy of Radio Frequency Design Search Area |

EXHIBIT A FCC LICENSE DOCUMENTATION

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW NEW CINGULAR WIRELESS PCS, LLC 208 S AKARD ST., RM 1015 DALLAS, TX 75202

| Call Sign KNKN964 | File Number |
|----------------------|---------------------|
| 1 | Service Cellular |
| Market Numer | Channel Block |
| CMA448 | В |
| Sub-Marke | t Designator |

FCC Registration Number (FRN): 0003291192

Market Name Kentucky 6 - Madison

| Grant Date 10-05-2010 | Effective Date 08-31-2018 | Expiration Date 10-01-2020 | Five Yr Build-Out Date | Print Date |
|--------------------------|------------------------------|-------------------------------|------------------------|------------|
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Site Information:

| Location | Latitude | Longitude | Ground Elevation (meters) | Structure Hgt to Tip (meters) | Antenna Structure Registration No. |
|-----------|-------------------|---------------|---------------------------|-------------------------------|---------------------------------------|
| 5 | 37-18-37.2 N | 084-55-40.2 W | 325.8 | 69.2 | 1043347 |
| Address | : 604 HATFIELD RC | | | | |
| City: Lib | erty County: CAS | SEY State: KY | Construction Deadline: | | |

| | | | | A STANSON | | | | |
|------------------------------------|---------|---------|------------|-----------|------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Antenna: 1 | | | | | sulfate of | | | |
| Maximum Transmitting ERP in Watts: | 140.820 | | | | | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.800 | 102.600 | 65.700 | 61.100 | 108.000 | 120,600 | 100.900 | 65.400 |
| Transmitting ERP (watts) | 192.800 | 103.500 | 11.600 | | 0.600 | .0.500 | 8.800 | 94.400 |
| Antenna: 2 | | | | ' | 142 | 4 | | |
| Maximum Transmitting ERP in Watts: | 140.820 | | | , | *** | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.800 | 102.600 | 65,700 | 61.100 | 108,000 | 120.600 | 100.900 | 65.400 |
| Transmitting ERP (watts) | 1.400 | 22,100 | 142.900 | 188.400 | 56.900 | 3.700 | 0.400 | 0.400 |
| Antenna: 3 | | | • 1=12 • • | | | | | |
| Maximum Transmitting ERP in Watts: | 140.820 | | | | V. | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.800 | 102,600 | 65.700 | 61.100 | 108.000 | 120.600 | 100.900 | 65.400 |
| Transmitting ERP (watts) | 1.300 | 0.400 | 0.400 | 3.300 | 49.500 | 179,900 | A CONTRACTOR OF THE PARTY OF TH | 27.200 |
| | | | | | | contraction of the sales | Descusión | |

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.

Call Sign: KNKN964 **Print Date:** File Number:

| Call Sign: KNKN964, | File | Number: | | | Pr | int Date | : | |
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| Location Latitude | Longitude | | round Elev leters) | | Structure Hgt (meters) | to Tip | Antenna St Registratio | |
| 7 37-32-40 8 N | 084-17 - 40.6 W | 39 | 8.7 | | 128.0 | | 1228453 | |
| Address: 521 FENTRESS LA | | | | | | | | |
| City: Berea County: MAD | ISON State: KY | Y Consti | ruction Dea | dline: 0 | 5-19-2015 | | | |
| Antenna: 1 Maximum Transmitting ERP in | PART 2824/State 4 | | 00 | 12# | 100 | 225 | 2=0 | 215 |
| Azimuth(from true north) Antenna Height AAT (meters) | 0 172.500 | 45 170.300 | 90 101.700 | 135 65.000 | 180 99.300 | 225 140.700 | 270 147.900 | 315 171.700 |
| Transmitting ERP (watts) Antenna: 2 | 94,100 | 66.200 | 8.600 | 0.400 | 0.200 | 0.200 | 2.100 | 27.300 |
| Maximum Transmitting ERP in Azimuth(from true north) | 1 Watts: 140.820 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 172.500 | 43 170.300 | 101.700 | 65.000 | 99.300 | 140.700 | 147.900 | 171.700 |
| Transmitting ERP (watts) Antenna: 3 | 0.600 | 9.400 | 67.500 | 94.400 | | 1.500 | 0.200 | 0.200 |
| Maximum Transmitting ERP in | Watts: 140,820 | 1983 | | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | 172 500 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Transmitting ERP (watts) | 172.500 21.200 | | 101.700 1.200 | 65.000 1.100 | 99.300 17.200 | 140.700 192.100 | 147.900 389.900 | 171.700 205.800 |
| | | 9 968, ° 3088 | | | | | 20,77,00 | 200.000 |
| | | 4. 1284 | | | | | | |
| Location Latitude | Longitude | 1000 / A | round Elev ieters) | | Structure Hgt (meters) | to Tip | Antenna St Registratio | |
| Location Latitude 8 37-45-36.3 N | Longitude 084-38-06.5 W | (n | 621 (PRE) (PRE) : | | _ | to Tip | | |
| | 084-38-06.5 W | (n | ieters) | | (meters) | to Tip | Registratio | |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R | 084-38-06.5 W OAD (76207) | (n , 29 | ieters) 91.1 | , | (meters) | • | Registratio | |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 | 084-38-06.5 W OAD (76207) GARRARD St | (n , 29 | ieters) 91.1 | , | (meters) 86.9 | • | Registratio | |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 | (m 29 ate: KY | ieters) 01.1 Construct | ion Dea | (meters) 86.9 dline: 05-19-20 | 015 | Registratio 1043357 | n No. |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) | 084-38-06.5 W OAD (76207) GARRARD St | (n , 29 | 90 147,300 | ion Dead | (meters) 86.9 dline: 05-19-20 180 97.300 | • | Registratio | |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 | (m 29 sate: KY 45 | eters) 01.1 Construct | ion Dead | (meters) 86.9 dline: 05-19-20 180 97.300 | 225 | Registratio 1043357 270 | 315 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 | 45 109.800 | 90 147,300 | 135 148.90 44.100 | (meters) 86.9 dline: 05-19-20 180 97.300 | 225 106.100 0.600 | 270 107.500 0.600 | 315 134.700 4.900 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 1 Watts: 140.820 0 | 45 109.800 298.200 | 90 147.300 252.300 | 135 148.90 44.100 | (meters) 86.9 dline: 05-19-20 180 97.300 1.700 | 225 106.100 0.600 | 270 107.500 0.600 | 315 134.700 4.900 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 1 Watts: 140.820 | 45 109.800 298.200 | 90 147.300 252.300 | 135 138.90 44.100 | (meters) 86.9 dline: 05-19-20 180 97.300 1.700 180 0 97.300 | 225 106.100 0.600 | 270 107.500 0.600 | 315 134.700 4.900 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 4 Maximum Transmitting ERP in | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 1 Watts: 140.820 0 112.000 0.600 | 45 109.800 298.200 45 109.800 2.500 | 90 147.300 252.300 90 147.300 | 135 118.90 44.100 135 118.90 266.80 | (meters) 86.9 dline: 05-19-20 180 97.300 1.700 180 0 97.300 0 97.300 0 295.300 | 225 106.100 0.600 225 106.100 | 270 107.500 0.600 270 107.500 3.600 | 315 134.700 4.900 315 134.700 0.600 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 4 Maximum Transmitting ERP in Azimuth(from true north) | 084-38-06.5 W OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 1 Watts: 140.820 0 112.000 0.600 1 Watts: 140.820 0 | 45 109.800 298.200 45 109.800 2.500 | 90 147,300 252,300 90 147,300 47,700 | 135 118.90 44.100 135 118.90 266.80 | (meters) 86.9 dline: 05-19-20 180 0 97.300 1.700 180 0 97.300 0 295.300 | 225 106.100 0.600 225 106.100 74.600 | 270 107.500 0.600 270 107.500 3.600 | 315 134.700 4.900 315 134.700 0.600 |
| 8 37-45-36.3 N Address: 363 JESSE BRIM R City: DANVILLE County: Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 4 Maximum Transmitting ERP in | 084-38-06.5 W .OAD (76207) GARRARD St Watts: 140.820 0 112.000 82.600 1 Watts: 140.820 0 112.000 0.600 1 Watts: 140.820 | 45 109.800 298.200 45 109.800 2.500 | 90 147.300 252.300 90 147.300 47.700 | 135 118.90 44.100 135 118.90 266.80 | (meters) 86.9 dline: 05-19-20 180 97.300 1.700 180 0 97.300 0 295.300 | 225 106.100 0.600 225 106.100 | 270 107.500 0.600 270 107.500 3.600 | 315 134.700 4.900 315 134.700 0.600 |



| Call Sign: KNKN964 | File | Number: | | | P | rint Date | : | |
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| and the second s | Longitude | (m | round Elev eters) | ation | Structure Hg (meters) | t to Tip | Antenna St Registration | |
| 11 37-24-08:4 N | 084-52-12.5 W | _ | 14.4 | | 123.1 | | 1244845 | |
| Address: 1064 GEORGE BRAT | • | • | | _ | | | | |
| City: HUSTONVILLE Coun | ty: CASEY S | tate: KY | Construc | tion De | adline: 05-19- | 2015 | | · |
| Antenna: 1 Maximum Transmitting ERP in V Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | | 45 150.700 | 90 149.300 | 135 146.00 | 180 00 168.200 | 225 167.200 | 270 124.000 | 315 147.600 |
| Antenna: 2 | 141,900 | 76.200 | 8.600 | 0.300 | 0.500 | 0.400 | 6.500 | 69.500 |
| Maximum Transmitting ERP in Nazimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 | Watts: 140.820 0 143.900 1.600 | 45 150.700 30.200 | 90 149.300 198.200 | 135 146.00 256.70 | | 225 167.200 4.200 | 270 124.000 0.513 | 315 147.600 0.600 |
| Maximum Transmitting ERP in V Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | Watts: 140.820 0 113.900 1.600 | 45 150.700 0.600 | 90 149.300 0.600 | 135 146.00 4.700 | 180 00 168.200 79.800 | 225 167.200 288.100 | 270 124.000 238.200 | 315 147.600 43.600 |
| 10 | Longitude | 900 W. 1520 | round Elev leters) | ation | Structure Hg (meters) | t to Tip | Antenna St Registratio | |
| 12 37-52-28.6 N | 084-20-20.7 W | - 28 | 35.0 | | 121.9 | | 1002236 | |
| Address: 3600 LEXINGTON F | ` , | ye. | 14 | | | | | |
| City: RICHMOND County: | MADISON St | ate: KY | Construc | tion De | adline: 05-19-2 | 2015 | | |
| Antenna: 1 Maximum Transmitting ERP in V Azimuth(from true north) Antenna Height AAT (meters) | Watts: 140.820 0 91.600 | 45 113.700 | 90 | 135 | 180 00 85.800 | 225 112.000 | 270 92.600 | 315 86.400 |
| Transmitting ERP (watts) Antenna: 2 | 261.200 | 136.300 | 133.000 13.900 | 106.20 0.600 | 0.800 | 0.700 | 11.000 | 124.300 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | 0 91.600 | 45 113.700 | 90 133.000 | 135 106.20 | | 225 112.000 | 270 92.600 | 315 86.400 |
| Antenna: 3 Maximum Transmitting ERP in | 2.000 | 37.500 | 246.600 | 319.50 | 00 92,700 | 5.200 | 0.639 | 0.800 |
| Azimuth (from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | watts: 140.820 0 91.600 1.800 | 45 113.700 0.610 | 90 133.000 0.610 | 135 106.20 5.000 | 180 00 \$5.800 84,500 | 225 112.000 305.100 | 270 92.600 258.200 | 315 86.400 45.100 |



Transmitting ERP (watts)

Transmitting ERP (watts)

Azimuth(from true north)
Antenna Height AAT (meters)

Maximum Transmitting ERP in Watts: 140.820

Antenna: 3

| Call Sign: KNKN964 | File | Number: | | | P | rint Date | : | |
|---------------------------------------------------------|--------------------------------|----------------------|----------------------------|-----------------|----------------------------------|------------------|--------------------------------------|--------------------|
| Location Latitude. | Longitude | | ound Elev eters) | ation | Structure Hg (meters) | t to Tip | Antenna St Registratio | |
| 15 37-35-26 1 N | 084-50-43.3 W | 40 | 6.9 | | 59.1 | | Ü | |
| Address: 4213 PERSIMMO | N KNOB ROAD (10 | 01147) | | | | | | |
| City: JUNCTION CITY & C | | State: KY | Constru | ction D | eadline: 05-19 | 20 15 | | |
| Antenna: 1 Maximum Transmitting ERP i | Work 140 820 | | | | | | | |
| Azimuth(from true north) | | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 168.700 | 171.100 | 158.800 | 149.20 | | 133.900 | 101.600 | 177.600 |
| Transmitting ERP (watts) 🧗 🤻 Antenna: 2 | 1.600 | 2.100 | 2.300 | 0.900 | 0.100 | 0.100 | 0.100 | 0.300 |
| Maximum Transmitting ERP i | in Watts: 140.820 | | | | | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) Transmitting ERP (watts) | ARCHITECTURE - 1970 | 171.100 | 158.800 | 149.20 | | 133.900 | 101.600 | 177.600 |
| Antenna: 3 | 0.107 | 0.200 | 3.400 | 28.000 | 53.500 | 25.000 | 2.700 | 0.200 |
| Maximum Transmitting ERP i | | 3.99 | | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | | 45 171 100 | 90 | 135 | 180 00 115.800 | 225 133,900 | 270 101.600 | 315 177.600 |
| Transmitting ERP (watts) | 34.000 | | 158.800 0.400 | 149.20 0.500 | 2.400 | 24.100 | 129.000 | 161.70 |
| Location Latitude 16 37-21-10.9 N | Longitude 084-39-33.8 W | \$10.00 K/St | ound Elev eters) 6.2 | ation | Structure Hg (meters) 87.2 | t to Tip | Antenna St Registratio 1257886 | |
| Address: 12900 US HWY 27 | 7 S (106194) | *** | | | | | | |
| City: Waynesburg County | : LINCOLN Stat | te: KY 🦟 C | onstruction | n Deac | dline: 05-19-20 | 115 | | |
| Antenna: 1 Maximum Transmitting ERP | in Watts: 140.820 | | 11.4 | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | | 45 | 90 🐪 🤛 | 135 | 180 | 225 | 270 | 315 |
| Transmitting ERP (watts) | 107.700 397.200 | 134.700 162.700 | 131.900 9.900 | 154.40 1.400 | 138 PM | 118.300 1.000 | 145.400 27.800 | 145.200 210.10 |
| Antenna: 2 | | 102.700 | 7.700 | 1,400 | 0.000 | 1.000 | 27,000 | 210.10 |
| Maximum Transmitting ERP in Azimuth(from true north) | | 45 | 90 | 125 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | | 45 134,700 | 90 131.900 | 135 154.4 | | 118.300 | | 145.200 |
| Transmitting FRP (watte) | 2 000 | (0.100 | 101.700 | 104.4 | 20.100 | 2 (00 | 2.5.100 | 1 000 |

154.400 354.700

154.400

11.100

135

76.400

180

120.400 124.000

118.300

371.400

3.600

309.500

131.900

0.742

90

3.900

0 107.700

2.000

62.100

134.700

0.742



0.709

270

145.400 269.600

145.200

30.500

1.000

315

| Call Sign: KNKN964 | File | Number: | | | P | rint Date | : | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------|-----------------------------------------------------|------------------------------------|----------------------------------------------|---------------------------------------------|
| Location Latitude 17 | Longitude 084-57-39.5 W | (m | ound Elevers) | ation | Structure Hg (meters) 78.9 | t to Tip | Antenna St Registratio 1263764 | |
| Address: 309 Antioch Church | | | 5.0 | | 76.7 | | 1205704 | |
| City: Liberty County: CASI | | Constru | ction Dead | line: 05 | 5-19-2015 | | | |
| | | | | | | | | |
| Antenna: 4 | | | | | | | | |
| Maximum Transmitting ERP in | and Sold State (1988). | | | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | 0 90.900 | 45 41.300 | 90 | 135 | 180 | 225 | 270 92.000 | 315 |
| Transmitting ERP (watts) | 365,600 | 148.900 | 39.900 7.800 | 47.800 1.500 | 59.300 0.731 | 71.200 1.300 | 23.600 | 74.100 196.200 |
| Antenna: 5 | | 1101500 | ,,,,,, | | | 11000 | | 150.200 |
| Maximum Transmitting ERP in Azimuth(from true north) | Watts: 140.820 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 90,9 00 | 41.300 | 39.900 | 47.800 | | 71.200 | 92.000 | 74.100 |
| Transmitting ERP (watts) Antenna: 6 | 2.900 | 29.300 | 156.900 | 196.70 | 00 41.400 | 3.800 | 0.500 | 0.700 |
| Maximum Transmitting ERP in | Watts: 140.820 | ¥- | | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | 0 90.900 | 45 41.300 | 90 | 135 | 180 | 225 | 270 | 315 |
| Transmitting ERP (watts) | 0.300 | | 39.900 0.100 | 47.800 0.900 | 59.300 8.500 | 71.200 23.800 | 92.000 21.000 | 74.100 3.900 |
| Location Latitude | Longitude | G. | ound Elev | ation | Structure Hg | t to Tip | Antenna St | |
| 10 | | 7.7 | eters) | | (meters) | | Registratio | n No. |
| 18 37-32-51.0 N | 084-19-59.0 W | . 37 | 8.0 | | 91.1 | | 1018906 | |
| Address: 850 S. Dogwood Dri | ` , | | | | | | | |
| City: BEREA County: MAI | | | | | | | | |
| | DISON State: 1 | KY Con | struction I | Deadlin | e: 05-19-2015 | | | |
| Antenna: 4 Maximum Transmitting ERP in | | KY Con | struction I | Deadlin | e: 05-19-2015 | | | |
| Maximum Transmitting ERP in Azimuth(from true north) | Watts: 140.820 | 45 | struction I | | e: 05-19-2015 | 225 | 270 | 315 |
| Maximum Transmitting ERP in | Watts: 140.820 | | | 135 70.300 28.600 | 180 118.900 | 225 123.900 0.200 | 270 150.200 0.122 | 315 185.600 0.200 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in | Watts: 140.820 0 168.900 3.900 | 45 159.200 | 90 126.200 | 135 70.300 28:600 | 180 0 118.900 0 3.100 | 123.900 0.200 | 150.200 0.122 | 185.600 0.200 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in Azimuth(from true north) | Watts: 140.820 0 168.900 3.900 Watts: 140.820 0 | 45 159.200 32.100 | 90 126.200 61.200 | 135 70.300 28:600 | 180 118.900 3.100 | 123.900 0.200 | 150.200 0.122 270 | 185.600 0.200 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in | Watts: 140.820 0 168.900 3.900 Watts: 140.820 | 45 159.200 32.100 | 90 126.200 61.200 | 135 70.300 28:600 | 180 118.900 3.100 180 118.900 | 123.900 0.200 225 123.900 | 150.200 0.122 | 185.600 0.200 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 6 Maximum Transmitting ERP in | Watts: 140.820 0 168.900 3.900 Watts: 140.820 0 168.900 0.300 Watts: 140.820 | 45 159.200 32.100 45 159.200 | 90 126.200 61.200 90 126.200 | 135 70.300 28.600 135 70.300 18.000 | 180 118.900 3.100 180 118.900 92.500 | 123.900 0.200 225 123.900 | 150.200 0.122 270 150.200 26.100 | 185.600 0.200 315 185.600 2.500 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 5 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 6 | Watts: 140.820 0 168.900 3.900 Watts: 140.820 0 168.900 0.300 | 45 159.200 32.100 45 159.200 | 90 126.200 61.200 90 126.200 | 135 70.300 28.600 135 70.300 | 180 118.900 3.100 180 118.900 92,500 | 123.900 0.200 225 123.900 | 150.200 0.122 270 150.200 | 185.600 0.200 315 185.600 |



| Call Sign: KNKN964 | File | Number: | | | P | rint Date | : | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------|---------------------------------------------------|
| Location Latitude | Longitude | (n | round Elev neters) | ation | Structure Hg (meters) | t to Tip | Antenna St Registratio | |
| 37-17-03-01 | 084-39-48.6 W | | 59.1 | | 97.5 | | 1047763 | |
| Address: 933 Ellison Pulaski | | | | | | _ | | |
| City: EUBANKS County: | EINCOLN Stat | e: KY C | onstructio | n Dead | line: 05-19-201 | .5 | | |
| | | | | | | | | |
| Antenna: 1 | 140.000 | | | | | | | |
| Maximum Transmitting ERP in Azimuth(from true north) | | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | 61.000 | 8 9.700 | 113.300 | 109.40 | | 113.900 | 103.800 | 96.300 |
| Transmitting ERP (watts) Antenna: 2 | 207. 000 | 86.900 | 7.100 | 0.900 | 0.414 | 0.500 | 13.500 | 104.300 |
| Maximum Transmitting ERP in | n Watts: 140 820 | | | | | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | <u> </u> | 89.700 | 113.300 | 109.40 | | 113.900 | 103.800 | 96.300 |
| Transmitting ERP (watts) Antenna: 3 | 2.800 | 28.8 00 | 154.300 | 193.50 | 00 40.700 | 3.700 | 0.500 | 0.700 |
| Maximum Transmitting ERP in | n Watts: 140,820 | | | | | | | |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) Transmitting ERP (watts) | 61.000 1.900 | 89.700 | 113.300 0.400 | 109.40 6.900 | 00 116.000 57.500 | 113.900 193.500 | 103.800 147.100 | 96.300 15.900 |
| | 1.900 | 0,400 | 0.400 | 0.900 | 37.300 | 193.300 | 147.100 | 13.900 |
| Location Latt 1: | Longitude | G | round Elev | ation | Structure Hg | t to Tip | Antenna St | tructure |
| Location Latitude | Longitude | | | | | - | | |
| Location Latitude | Longitude | ************************************** | ieters) | | (meters) | | Registratio | n No. |
| 20 37-38-56.8 N | 084-57-46.0 W | (n | i eters) 39.0 | | (meters) 48.2 | | Registratio | n No. |
| 20 37-38-56.8 N | 084-57-46.0 W | (n | CONTRACTOR OF THE PARTY OF THE | | , | | Registratio | n No. |
| 20 37-38-56.8 N Address: 710 COX STREET | 084-57-46.0 W (88217) | (n 23 | 39.0 🐪 | on Dead | , | 15 | Registratio | n No. |
| 20 37-38-56.8 N Address: 710 COX STREET | 084-57-46.0 W (88217) | (n 23 | 39.0 🐪 | on Deac | 48.2 | 15 | Registratio | n No. |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun | 084-57-46.0 W (88217) | (n 23 | 39.0 🐪 | on Deac | 48.2 | 15 | Registratio | n No. |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun | 084-57-46.0 W (88217) ty: BOYLE Sta | (n 23 | 39.0 🐪 | on Deac | 48.2 | 15 | Registratio | n No. |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 | (n 2: te: KY | 39.0 Construcți 90 | 135** | 48.2 Illine: 05-19-20 | 225 | 270 | 315 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 0 85.200 | te: KY 45 61.400 | 39.0 Construction 90 39.400 | 135 ₄₄ | 48.2 Iline: 05-19-20 180 30.000 | 225 37.500 | 270 68.300 | 315 61.100 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 | 084-57-46.0 W (88217) ty: BOYLE Stan N Watts: 140.820 0 85.200 68.700 | (n 2: te: KY | 39.0 Construcți 90 | 135** | 48.2 Illine: 05-19-20 | 225 | 270 | 315 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in | 084-57-46.0 W (88217) ty: BOYLE Standard Standar | 45 61.400 32.100 | 90 39.400 3.400 | 135- 30.000 0.200 | 48.2 Illine: 05-19-20 180 30.000 0.137 | 225 37.500 0.200 | 270 68.300 4.400 | 315 61.100 36.000 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 0 85.200 68.700 n Watts: 140.820 0 | 45 61.400 32.100 | 90 39.400 3.400 | 135 30.000 0.200 | 48.2 Iline: 05-19-20 180 30.000 0.137 180 | 225 37.500 0.200 | 270 68.300 4.400 | 315 61.100 36.000 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | 084-57-46.0 W (88217) ty: BOYLE Standard Standar | 45 61.400 32.100 | 90 39.400 3.400 | 135- 30.000 0.200 | 48.2 Illine: 05-19-20 180 30.000 0.137 180 30.000 | 225 37.500 0.200 225 37.500 | 270 68.300 4.400 | 315 61.100 36.000 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 0 85.200 68.700 n Watts: 140.820 0 85.200 0.700 | 45 61.400 32.100 45 61.400 | 90 39.400 3.400 90 39.400 | 135 30.000 0.200 135 30.000 | 48.2 Illine: 05-19-20 180 30.000 0.137 180 30.000 | 225 37.500 0.200 225 37.500 | 270 68.300 4.400 270 68.300 | 315 61.100 36.000 315 61.100 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 | 45 61.400 32.100 45 61.400 10.100 | 90 39.400 39.400 39.400 52.900 | 135 30,000 0,200 135 30,000 63,100 | 180 30.000 0.137 180 30.000 17,400 | 225 37.500 0.200 225 37.500 | 270 68.300 4.400 270 68.300 0.200 | 315 61.100 36.000 315 61.100 0.200 |
| 20 37-38-56.8 N Address: 710 COX STREET City: PERRYVILLE Coun Antenna: 1 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 | 084-57-46.0 W (88217) ty: BOYLE Sta n Watts: 140.820 0 85.200 68.700 n Watts: 140.820 0 85.200 0.700 | 45 61.400 32.100 45 61.400 | 90 39.400 3.400 90 39.400 | 135 30.000 0.200 135 30.000 | 180 30.000 0.137 180 30.000 17.400 | 225 37.500 0.200 225 37.500 | 270 68.300 4.400 270 68.300 | 315 61.100 36.000 315 61.100 |



| Call Sign: KNKN964 | | File I | Number: | | | P | rint Date | : | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------|----------------------------------------------------|---------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------------|-------------------------------------------|--------------------------------------------|
| Location Latitude | Longitude | e | | ound Elev eters) | ation | Structure Hg (meters) | t to Tip | Antenna St Registratio | |
| 21 37-35-48.9 N | 084-19-23 | | 27 | 6.5 | | 84.1 | | 1217686 | |
| Address: 1322 Walnut Meadov | , | 723) | | | | | | | |
| City: Berea County: MADI | SON Sta | te: KY | Constr | uction Dea | adline: (| 05-19-2015 | | | |
| | | | | | | | | | |
| Antenna: 1 | | ha a | | | | | | | |
| Maximum Transmitting ERP in Azimuth(from true north) | Watts: 140 | | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | SEE | .600 | 67.700 | 85.700 | 30.000 | | 34.900 | 73.800 | 71.000 |
| Transmitting ERP (watts) Antenna: 2 | 3.5 | 9.700 | 189.900 | 19.500 | 0.800 | 1.100 | 1.000 | 15.900 | 177.20 |
| Antenna: 2 Maximum Transmitting ERP in | Watts: 140 | .820 | | | | | | | |
| Azimuth(from true north) | ` · · · 0 | | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) Transmitting ERP (watts) | . 69 | ,600 | 67.700 | 85.700 | 30.000 | | 34.900 | 73.800 | 71.000 |
| Antenna: 3 | 2. | 200 | 41.100 | 269.800 | 349.50 | 00 101.400 | 5.700 | 0.700 | 0.800 |
| Maximum Transmitting ERP in | 740.7% | A. | 344 | | | | | | |
| Azimuth(from true north) Antenna Height AAT (meters) | *0 60 | .600 | 45 67 700 | 90 | 135 | 180 | 225 | 270 72.800 | 315 |
| Transmitting ERP (watts) | | .000 900, 👬 | 67.700 0.700 | 85.700 0.700 | 30.000 5.500 | 36.000 92.500 | 34.900 333.800 | 73.800 282.500 | 71.000 49.400 |
| | | 100 | 7,79 | | | | | | |
| Location Latitude | Longitud | e 💘 | V353330 | ound Elev | ation | Structure Hg | t to Tip | Antenna St | |
| 22 37-44-57 3 N | 004 10 00 | 0 0 111 | 10.00 | eters) 4.9 | | (meters) | | Registratio | n No. |
| J7-44-57.5 IV | 084-10-08 | 5.6 W | 2 Z I | 4.9 | | 82.3 | | 1230319 | |
| Address: 176 Kennedy Lane (3 City: Richmond County: M | , | 64-4 | VV O | | Doodii | ine: 05-19-201 | 5 | | |
| City: Kichinona County: M | ADISON | State: | KI CU | msti uctivi | Deaui | ine. 05-19-201 | <i></i> | | |
| | | | £** | 200000 | erecet. | | | | |
| Antonno. 1 | | | Ę.· | 1,978 | | | | | |
| Antenna: 1 Maximum Transmitting ERP in | Watts: 140 | .820 | | | | | | | |
| Maximum Transmitting ERP in Azimuth(from true north) | 0 | | 45 | 90 | 135 | _% 180 | 225 | 270 | 315 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) | 0 12 | 0.300 | 124.900 | 128.100 | 96.900 | 65.900 | 60.500 | 72.000 | 90.300 |
| Maximum Transmitting ERP in Azimuth(from true north) | 0 12 | | | 11 6 6 6 6 6 6 | 100000000000000000000000000000000000000 | Okra. | | | 90.300 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in | 0 12 95 Watts: 1 40 | 0.300 5.500 0.820 | 124.900 46.000 | 128.100 4.500 | 96.900 0.200 | 65.900 0.200 | 60.500 0.200 | 72.000 3.600 | 90.300 41.000 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) | 0 12 95 Watts: 140 | 0.300 5.500 0.820 | 124.900 46.000 | 128.100 4.500 | 96.900 0.200 135 | 65.900 0.200 180 | 60.500 0.200 | 72.000 3.600 270 | 90.300 41.000 315 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | 0 12 95 Watts: 140 0 12 | 0.300 5.500 0.820 0.300 | 124.900 46.000 45 124.900 | 128.100 4.500 90 128.100 | 96.900 0.200 | 65.900 0.200 180 0 65.900 | 60.500 0.200 | 72.000 3.600 | 90.300 41.000 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 | 0 12 93 Watts: 140 0 12 0. | 0.300 5.500 0.820 0.300 700 | 124.900 46.000 | 128.100 4.500 | 96.900 0.200 135 96.900 | 65.900 0.200 180 0 65.900 | 60.500 0.200 225 60.500 | 72.000 3.600 270 72.000 | 90.300 41.000 315 90.300 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) | 0 12 93 Watts: 140 0 12 0. | 0.300 5.500 0.820 0.300 700 | 124.900 46.000 45 124.900 8.600 | 128.100 4.500 90 128.100 43.500 | 96.900 0.200 135 96.900 49.700 | 65.900 0.200 180 65.900 13,500 | 60.500 0.200 225 60.500 | 72.000 3.600 270 72.000 | 90.300 41.000 315 90.300 |
| Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3 Maximum Transmitting ERP in | 0 12 93 Watts: 140 0 12 0. Watts: 140 0 | 0.300 5.500 0.820 0.300 700 | 124.900 46.000 45 124.900 | 128.100 4.500 90 128.100 | 96.900 0.200 135 96.900 | 65.900 0.200 180 65.900 13,500 | 60.500 0.200 225 60.500 0.900 | 72.000 3.600 270 72.000 0.100 | 90.300 41.000 315 90.300 0.100 |

Control Pt. No. 1

Address: 2601 Palumbo Drive

City: Lexington County: State: KY Telephone Number:

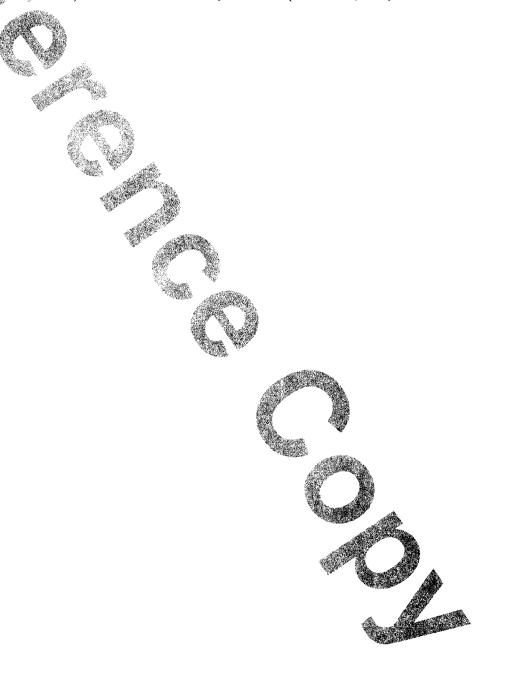


Call Sign: KNKN964 File Number: Print Date:

Waivers/Conditions:

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).

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).



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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS BCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

| Call Sign WPOI255 | File Number |
|----------------------|-------------|
| Radio | Service |
| CW - PCS | Broadband |

FCC Registration Number (FRN): 0003291192

| Grant Date 05-27-2015 | Effective Date 08-31-2018 | Expiration Date 06-23-2025 | Print Date |
|----------------------------------|----------------------------------|-------------------------------|-----------------------------|
| Market Number MTA026 | Channe A | l Block | Sub-Market Designator 19 |
| | Market Louisville-Lexing | Name ton-Evansvill | |
| 1st Build-out Date 06-23-2000 | 2nd Build-out Date 06-23-2005 | 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 nardest version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Warker-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.

Call Sign: WPOI255 File Number: Print Date:

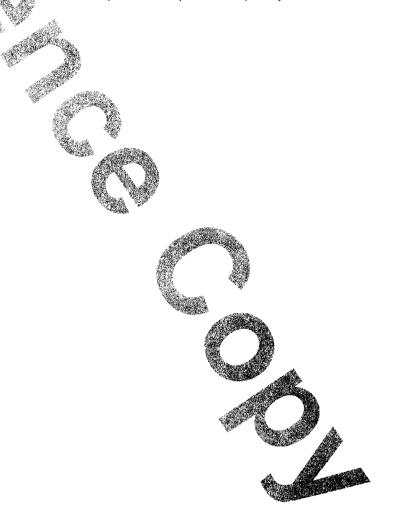
This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

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).



Call Sign: WPOI255 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

FCC 601-MB October 2017

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

| Call Sign WPOK659 | File Number |
|----------------------|-------------|
| Radio | Service |
| CW - PCS | Broadband |

FCC Registration Number (FRN): 0003291192

| Grant Date 10-29-2009 | Effective Date 08-31-2018 | Expiration Date 09-29-2019 | Print Date |
|---------------------------------|----------------------------------|-------------------------------|-----------------------|
| Market Number BTA423 | Channe | I Block | Sub-Market Designator |
| | Market Somerse | Name ,KY | |
| st Build-out Date 09-29-2004 | 2nd Build-out Date 09-29-2009 | 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.

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 nerein. 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 Marker 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.

Call Sign: WPOK659 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

FCC 601-MB October 2017

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PGS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

| Call Sign WPXT205 | File Number |
|----------------------|-------------|
| Radio | Service |
| CW - PCS | Broadband |

FCC Registration Number (FRN): 0003291192

| Grant Date 06-02-2015 | Effective Date 08-31-2018 | Expiration Date 06-23-2025 | Print Date |
|---------------------------------|----------------------------------|----------------------------|-----------------------|
| Market Number MTA026 | Channe | | Sub-Market Designator |
| | Market I Louisville-Lexing | ton-Evansvill | |
| st Build-out Date 06-23-2000 | 2nd Build-out Date 06-23-2005 | 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:

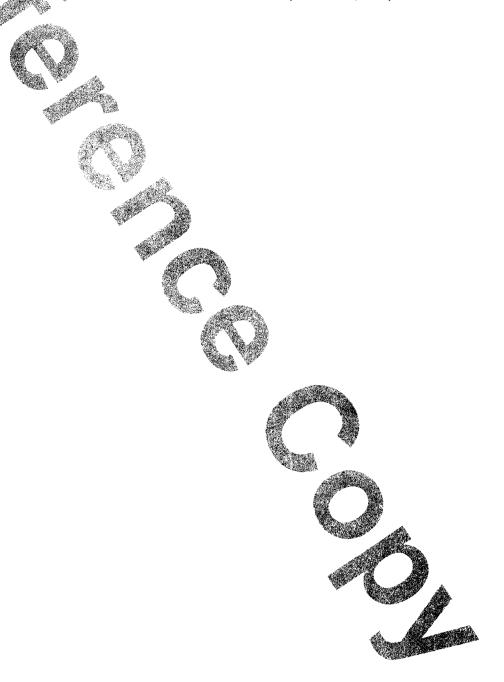
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station for any right in the use of the frequencies designated in the license beyond the term 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 hardeon wersion. 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.

Call Sign: WPXT205 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.

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).



Call Sign: WPXT205

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market

Market Name

Buildout Deadline

Buildout Notification

Status



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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

| Call Sign WQGD755 | File Number | | |
|-----------------------------|-------------|--|--|
| Radio Service | | | |
| AW - AWS (1710-1755 MHz and | | | |
| 2110-2155 MHz) | | | |

FCC Registration Number (FRN): 0003291192

| Grant Date 12-18-2006 | Effective Date 08-31-2018 | Expiration Date 12-18-2021 | Print Date |
|------------------------------|-----------------------------|-------------------------------|-----------------------|
| Market Number BEA047 | Channel G | <u> </u> | Sub-Market Designator |
| | Market N Lexington, KY-1 | lame | |
| st Build-out Date | 2nd Build-out Date | 3rd Build-out Date | 4th Build-out Dat |

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.

Call Sign: WQGD755

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market

Market Name

Buildout Deadline

Buildout Notification

Status



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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 WQGD757 | File Number | |
|-----------------------------|-------------|--|
| Radio | Service | |
| AW - AWS (1710-1755 MHz and | | |
| 2110-2155 MHz) | | |

FCC Registration Number (FRN): 0003291192

| Grant Date 12-18-2006 | Effective Date 08-34-2018 | Expiration Date 12-18-2021 | Print Date |
|--------------------------|-------------------------------|-------------------------------|-----------------------|
| Market Number BEA070 | Channel | | Sub-Market Designator |
| | Marketi Louisville, | Name K-Y-IN | |
| lst Build-out Date | 2nd Build-out Date | 3rd Build-out Date | 4th Build-out Dat |

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 agent 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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Call Sign: WQGD757

File Number:

Print Date:

700 MHz Relicensed Area Information:

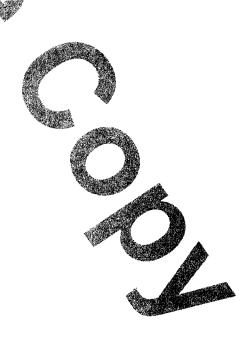
Market

Market Name

Buildout Deadline

Buildout Notification

Status



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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

| Call Sign WQUZ670 | File Number | | | |
|-----------------------------|-------------|--|--|--|
| Radio | Service | | | |
| AW - AWS (1710-1755 MHz and | | | | |
| 2110-2155 MHz) | | | | |

FCC Registration Number (FRN): 0003291192

| Grant Date 09-26-2014 | Effective Date 08-31-2018 | Expiration Date 11-29-2021 | Print Date |
|------------------------------|------------------------------|-------------------------------|-----------------------------|
| Market Number REA004 | Channel | Block | Sub-Market Designator 10 |
| | Market i Mississippi | Valley | |
| st 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, WFB Docket No. 02-353, rel. April 20, 2006.

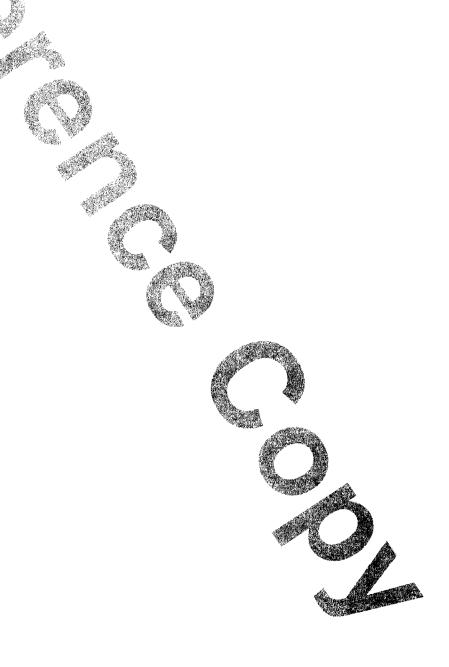
Conditions:

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 conterred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Call Sign: WQUZ670 File Number: Print Date:

The license is subject to compliance with the provisions of the January 12, 2001 Agreement between Deutsche Telekom AG, VoiceStream Wireless Corporation, VoiceStream Wireless Holding Corporation and the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI), which addresses national security, law enforcement, and public safety issues of the FBI and the DOJ regarding the authority granted by this license. Nothing in the Agreement is intended to limit any obligation imposed by Federal lawor regulation including, but not limited to, 47 U.S.C. Section 222(a) and (c)(1) and the FCC's implementing regulations: The Agreement is published at VoiceStream-DT Order, IB Docket No. 00-187, FCC 01-142, 16 FCC Rcd 9779, 9853 (2001).



Call Sign: WQUZ670

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market

Market Name

Buildout Deadline

Buildout Notification

Status

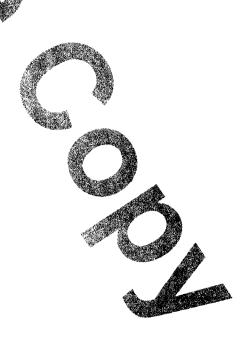
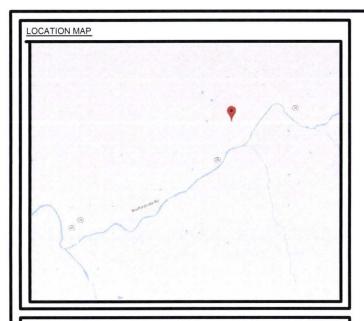


EXHIBIT B

SITE DEVELOPMENT PLAN:

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



DRIVING DIRECTIONS

FROM 625 CAMPBELLSVILLE ST, LIBERTY, KY 42539:

- HEAD SOUTHEAST ON CAMPBELLSVILLE ST TOWARD COURT HOUSE SQUARE 240 FT
- TURN LEFT ONTO KY-49 N/HUSTONVILLE ST & CONTINUE TO FOLLOW KY-49 N 11.3 MI
- TURN RIGHT ONTO KY-78 (BRADFORDSVILLE RD) 1.8 MI & THE DESTINATION WILL BE ON THE LEFT

BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE 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 KBC

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

MURPHY BRANCH FN

14397272

PROPOSED RAW LAND SITE WITH A 195' MONOPOLE WITH A 4' LIGHTNING ARRESTOR AND INSTALLATION OF AN 8'x8' SHELTER ON A 8'x14' PATIO WITH A GENERATOR

PREPARED FOR:



PREPARED BY:



TOGETHER PLANNING A BETTER TOMORROW 158 BUSINESS CENTER DRIVE BIRMINGHAM, AL 35244 TEL: 205-252-6985 FAX: 205-320-1504



KENTUCKY ONE-CALL STATE WIDE CALL: 811 CALL BEFORE YOU DIG

PROJECT INFORMATION

LATITUDE (NAD 83):

SITE ADDRESS: 0 HWY 78

LIBERTY, KY 42539

N 37° 27' 17.626" W 84° 59' 26.115" LONGITUDE (NAD 83):

LATITUDE (NAD DECIMAL): N 37.454896° LONGITUDE (NAD DECIMAL): W 84.990588°

PARCEL ID:

047 - 36

JURISDICTION:

KENTUCKY PUBLIC

SERVICE COMMISSION

PROPERTY OWNER:

JOHN W COX & PAULA G. COX

NEW CINGULAR WIRELESS PCS, LLC A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AT&T MOBILITY

MEIDINGER TOWER

462 S. 4TH STREET, SUITE 2400 LOUISVILLE, KY 40202

ENGINEER:

SMW ENGINEERING 158 BUSINESS CENTER DRIVE BIRMINGHAM, AL 35244 CONTACT: JEREMY SHARIT, PE PHONE: 205-397-6781

TO BE DETERMINED

POWER: FIBER:

FIBER COMPANY AWARDED BY AT&T AT FUTURE TIME, CONSULT CM

TITLE SHEET & PROJECT INFORMATION

SURVEY

B-1SITE SURVEY B-1.1 SITE SURVEY

B - 1.2SITE SURVEY 500' RADIUS AND ABUTTERS MAP B-2

OVERALL SITE LAYOUT C-1

OVERALL SITE LAYOUT - CONT'D C-2C-3ENLARGED COMPOUND LAYOUT

TOWER ELEVATION

SCOPE OF WORK

ZONING DRAWINGS FOR:

CONSTRUCTION OF A NEW UNMANNED TELECOMMUNICATIONS

SITE WORK: NEW TOWER UNMANNED SHELTER ON CONCRETE PAD, GENERATOR ON A CONCRETE PAD, AND UTILITY

> CA# 2865 JEREMY D. SHARIT 26823

JOB #: 14397272

Д

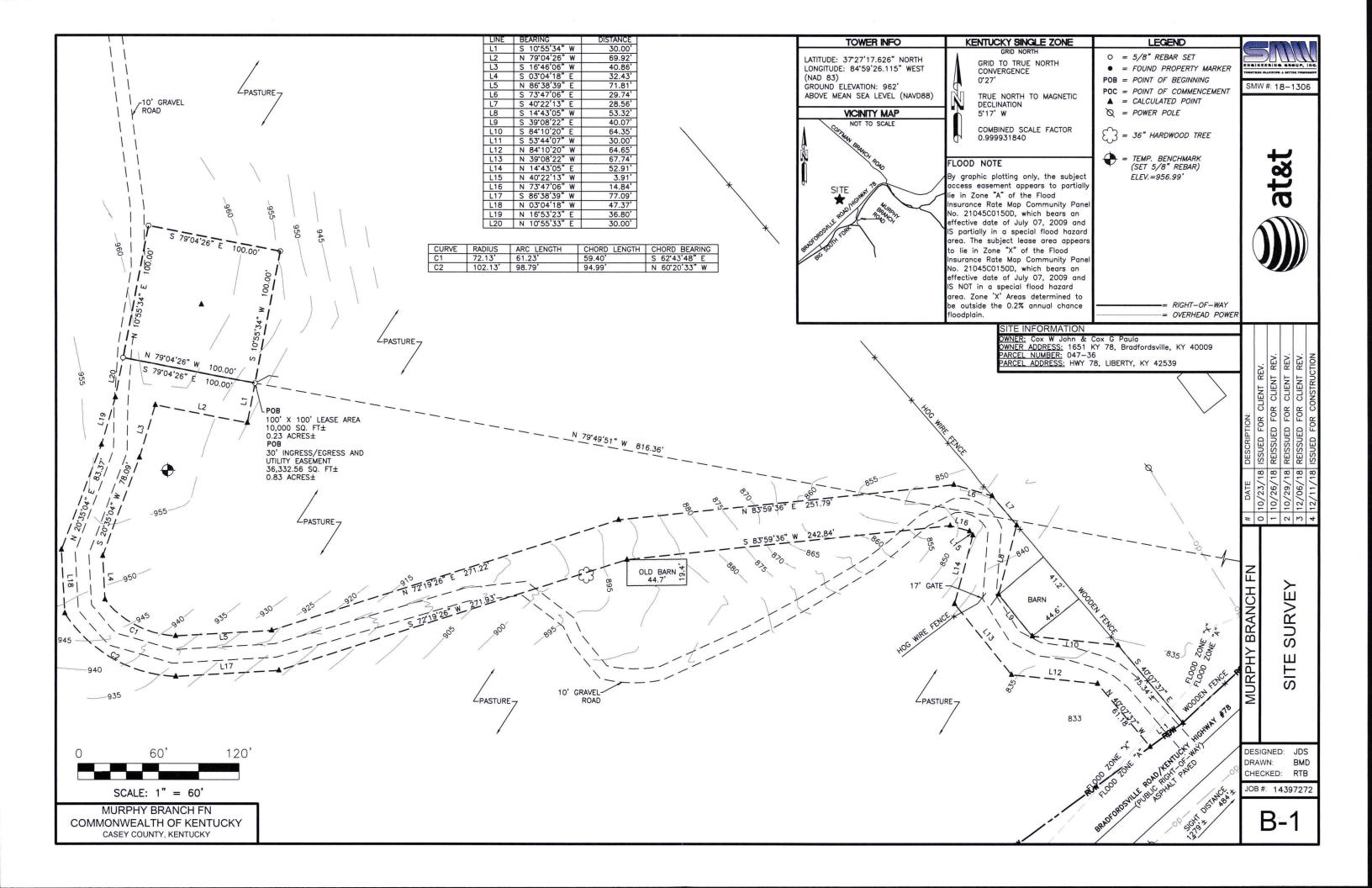


SMW #: 18-1306

0 - 2 8 **RMATION** ∞

SHE 0 ROJE

JDS DESIGNED: DRAWN: BMD CHECKED: RTB





SMW #: 18-1306

at&t



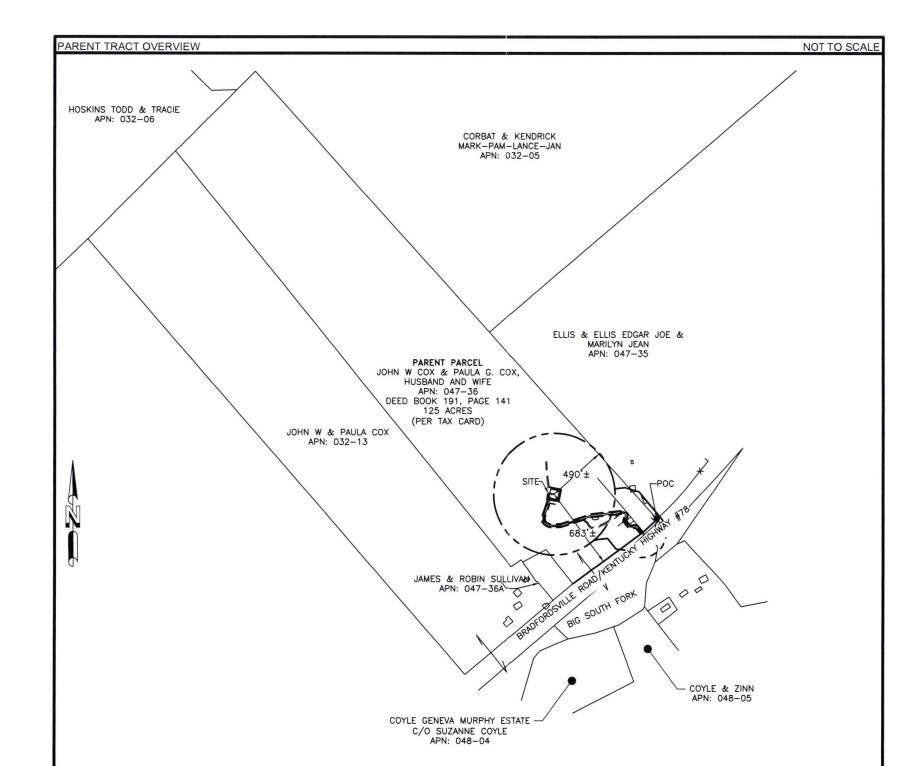
| | * | | - NOTEGIACON: |
|-------------|---|----------|-------------------------------------|
| | # | | DATE DESCRIPTION. |
| l | 0 | 10/23/18 | 0 10/23/18 ISSUED FOR CLIENT REV. |
| | - | 10/26/18 | 1 10/26/18 REISSUED FOR CLIENT REV. |
| SITE SURVEY | 2 | 10/29/18 | 2 10/29/18 REISSUED FOR CLIENT REV. |
| | 3 | 12/06/18 | 3 12/06/18 REISSUED FOR CLIENT REV. |
| | 4 | 12/11/18 | 4 12/11/18 ISSUED FOR CONSTRUCTION |

DESIGNED: JDS BMD DRAWN: CHECKED: RTB

JOB #: 14397272

COMMONWEALTH OF KENTUCKY

MURPHY BRANCH FN CASEY COUNTY, KENTUCKY



PARENT TRACT (TITLE)

BEGINNING at an iron pin the center of the Rolling Fork, originally William Spraggens and William Hafleys corner, thence with their division line North 42 degrees West 250 poles to a gum and whiteoak, originally Bettie A. Hoskins corner; thence with her line North 77 degrees West 47 poles to a poplar and walnut; North 15 degrees West 11 poles to a whiteoak J.G. McAnelly's corner; thence with his line South 45 degrees West 34 poles to a stake 14 poles West of a large chestnut oak; thence South 39 degrees East 266 poles to a stone at foot of a hill; thence North 55 degrees East 6 poles and 9 links to a stone; South 35 degrees East 13-1/2 poles to a stone; thence North 60 degrees East 12 links to a stone; thence South 40 degrees East 19 poles to center of the Rolling Fork; thence up the same with its center which is reduced to a straight line would be North 78 degrees East 14 poles, North 66 degrees 16 poles, North 54 East 17 poles to an iron pin in aforeside division line of said Spraggens and Hafley; thence with same North 24 degrees East 25-1/2 poles to the beginning.

BEGINNING at a point in old line at Northeast end of culvert and running North 40 degrees West 12.32 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.08 poles to a stone in old line; thence a new line North 62 degrees East 13.30 poles to a stone in fence line at foot of hill; thence South 38 degrees East 21.60 poles to a stake at edge of Kentucky Highway #78; thence with said road South 51 degrees West 12.68 poles to the point of beginning, containing 2 acres, more or less, said description being pursuant to a survey conducted on July 22, 1971, by Lewis J. Cochran. Registered land Surveyor #1038.

100' x 100' LEASE AREA (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows:

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence N 79'04'26" W a distance of 100.00 feet to a set 5/8" rebar; Thence N 79'04'26" W a distance of 100.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 10'55'34" W a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 10,000 square feet (0.23 acres) of land more or less.

30' INGRESS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows:

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79°49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT 05 BEGINNING; Thence S 10°55'34" W a distance of 30.00 feet to a point; Thence N 79°04'26" W a distance of 69.92 feet to a point; Thence S 16'46'06" W a distance of 40.86 feet to a point; Thence S 20'35'04" W a distance of 78.09 feet to a point; Thence S 03'04'18" E a distance of 32.43 feet to a point; Thence with a curve turning to the left with an arc length of 61.23 feet, radius of 72.13 feet, chord bearing of S 62'43'48" E, chord length of 59.40 feet to a point; Thence N 86'38'39" E a distance of 71.81 feet to a point; Thence N 72'19'26" E a distance of 271.22 feet to a point; Thence N 83'59'36" E a distance of 251.79 feet to a point; Thence S 73'47'06" E a distance of 29.74 feet to a point: Thence S 40'22'13" E a distance of 28.56 feet to a point: Thence S 14'43'05" W a distance of 53.32 feet to a point; Thence S 39'08'22" E a distance of 40.07 feet to a point; Thence S 84'10'20" E a distance of 64.35 feet to a point; Thence S 40'07'37" E a distance of 75.34 feet more or less, to a point on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway 78 (public right-of-way); Thence along said right-of-way line, S 53'44'07" W a distance of 30.00 feet to a point: Thence leaving said right-of-way line, N 40'07'37" W a distance of 61.18 feet to a point; Thence N 84'10'20" W a distance of 64.65 feet to a point; Thence N 39'08'22" W a distance of 67.74 feet to a point; Thence N 14'43'05" E a distance of 52.91 feet to a point; Thence N 40'22'13' W a distance of 3.91 feet to a point; Thence N 73'47'06" W a distance of 14.84 feet to a point; Thence S 83'59'36" W a distance of 242.84 feet to a point; Thence S 72'19'26" W a distance of 271.93 feet to a point; Thence S 86'38'39" W a distance of 77.09 feet to a point; Thence with a curve turning to the right with an arc length of 98.79 feet, radius of 102.13 feet, chord bearing of N 60°20'33" W, chord length of 94.99 feet to a point; Thence N 03'04'18" W a distance of 47.37 feet to a point; Thence N 20'35'04" E a distance of 83.37 feet to a point; Thence N 16'53'23" E a distance of 36.80 feet to a point; Thence N 10'55'33" E a distance of 30.00 feet to a set 5/8" rebar; Thence S 79"04'26" E a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 36,332.56 square feet (0.83 acres) of land more or less.

PLOTTABLE EXCEPTIONS

U.S. Title Solutions,

Commitment for Title Insurance Commitment File No. 58911—KY1712—5030 Commitment for Title Insurance Commitment Reference No. FA 14397272 Date December 21, 2017 @ 8:00 a.m. Schedule B, Section II

| Exception No. | Instrument | Comment |
|---------------|--------------------|--------------------------------------------------------------------------------------------------|
| 1-6 | N/A | Standard exceptions. Contains no surveying matters. |
| 7 | Book 182, Page 607 | Does affect the subject lease area and easements, is blanket in nature, and is not shown hereon. |
| 8 | Book 8, Page 761 | Contains no surveying matters. |

SURVEYOR'S CERTIFICATION

I certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.

DAVID D.

McKINNEY
3964

LICENSED
PROFESSIONAL
LAND SURVEYOR

David D. McKinney Kentucky License No. 3964

SURVEYOR'S NOTES

- 1. This is an Rawland Tower Survey, made on the ground under the supervision of a Kentucky Registered Land Surveyor. Date of field survey is May 21, 2018.
- 2. The following surveying instruments were used at time of field visit: Nikon NPL-352, Total Station, Reflectorless and Hiper + Legacy E RTK. GD 1HZ.
- 3. Bearings are based on Kentucky Single Zone State Plane Coordinates NAD 83 by GPS observation.
- 4. No underground utilities, underground encroachments or building foundations were measured or located as a part of this survey, unless otherwise shown. Trees and shrubs not located, unless otherwise shown.
- 5. Benchmark used is a GPS Continuously Operating Reference Station, PID DK3324. Onsite benchmark is as shown hereon. Elevations shown are in feet and refer to NAVD 88.
- 6. This survey was conducted for the purpose of an Rawland Tower Survey only, and is not intended to delineate the regulatory jurisdiction of any federal, state, regional or local agency, board, commission or other similar entity.
- 7. Attention is directed to the fact that this survey may have been reduced or enlarged in size due to reproduction. This should be taken into consideration when obtaining scaled data.
- 8. This Survey was conducted with the benefit of an Abstract Title Search.
- 9. This survey meets or exceeds the Minimum Standards of Practice as required by the State of Kentucky for a Class A survey as defined by 201 KAR 18:150.
- 10. Field data upon which this map or plat is based has a closure precision of not less than one—foot in 15,000 feet (1':15,000') and an angular error that does not exceed 10 seconds times the square root of the number of angles turned. Field traverse was not adjusted.
- 11. This survey is not valid without the original signature and the original seal of a state licensed surveyor and mapper.
- 12. This survey does not constitute a boundary survey of the Parent Tract. Any parent tract property lines shown hereon are from supplied information and may not be field verified.
- 13. The Lease Area, and Access and Utility Easement shown hereon was provided by Integrsite dated May 11, 2018 in direct correlation with existing monuments and physical evidence found through inspection and may not depict actual rights of occupancy.
- 14. No water lines were located at the time of this survey.
- 15. Zoning information not provided at the time of this survey



SMW #: 18-1306

at&t



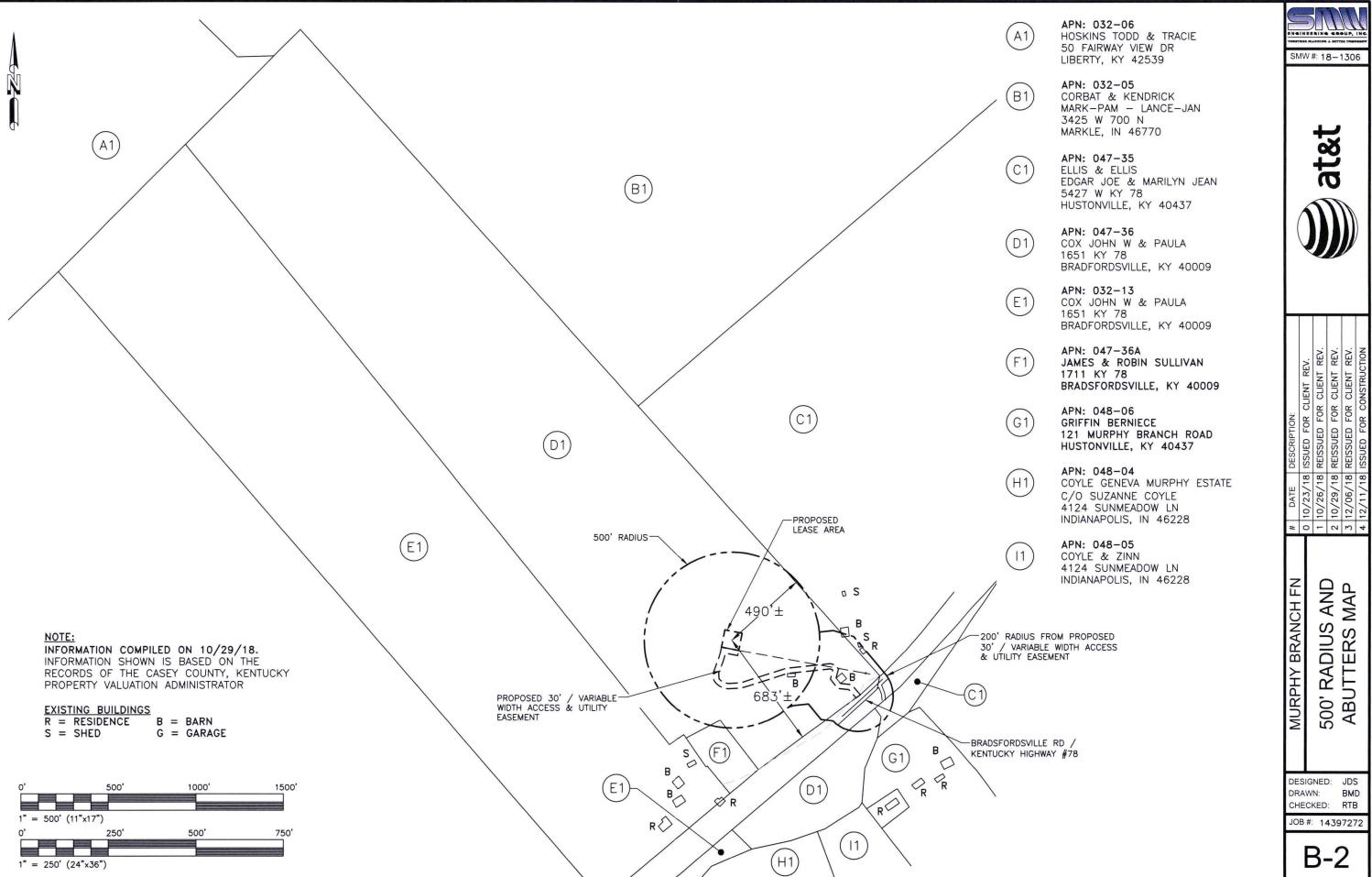
| # DATE DESCRIPTION: 0 10/23/18 ISSUED FOR CLIENT REV. 1 10/26/18 REISSUED FOR CLIENT REV. 2 10/29/18 REISSUED FOR CLIENT REV. 3 12/06/18 REISSUED FOR CLIENT REV. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

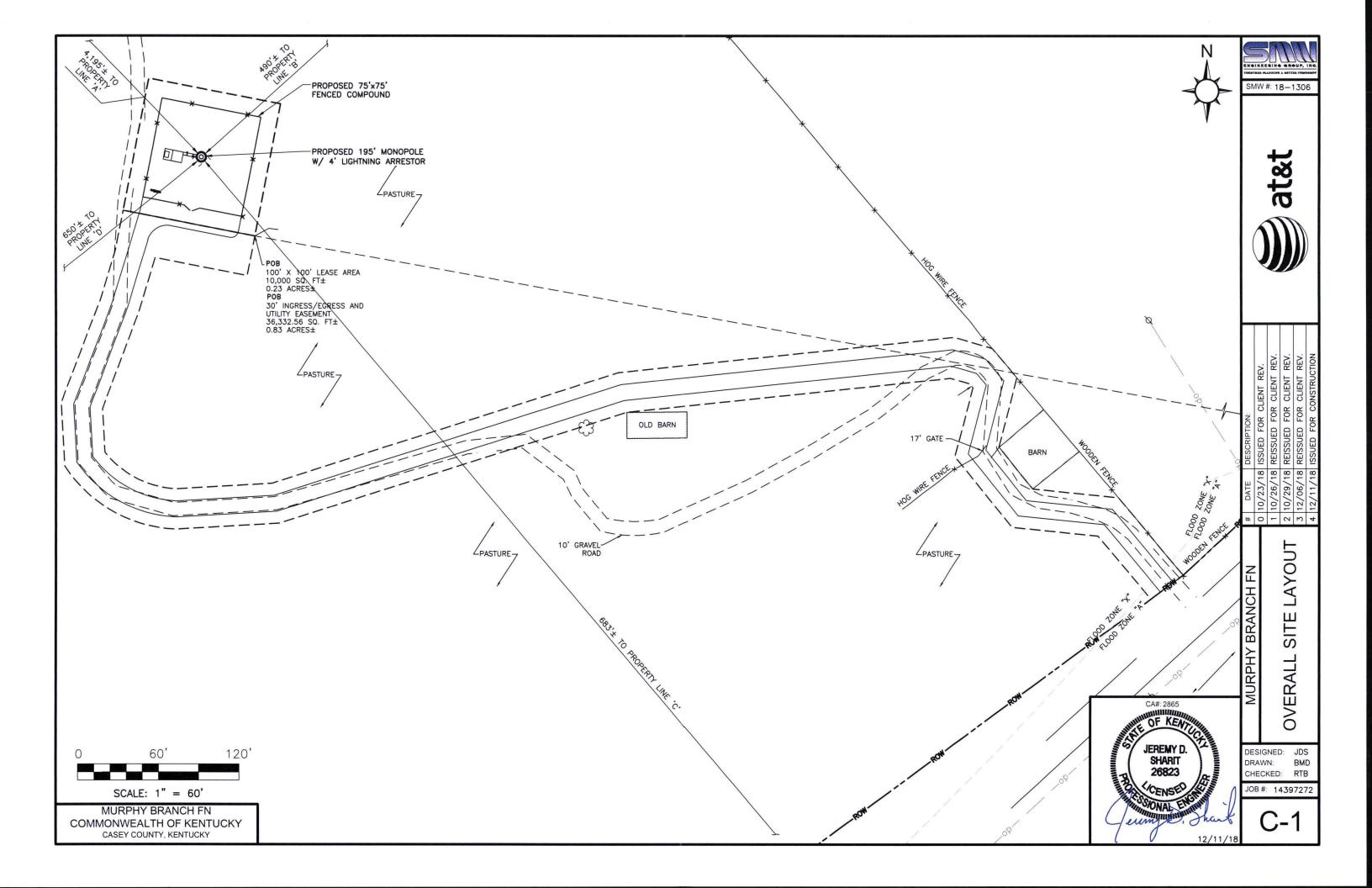
DESIGNED: JDS
DRAWN: BMD
CHECKED: RTB

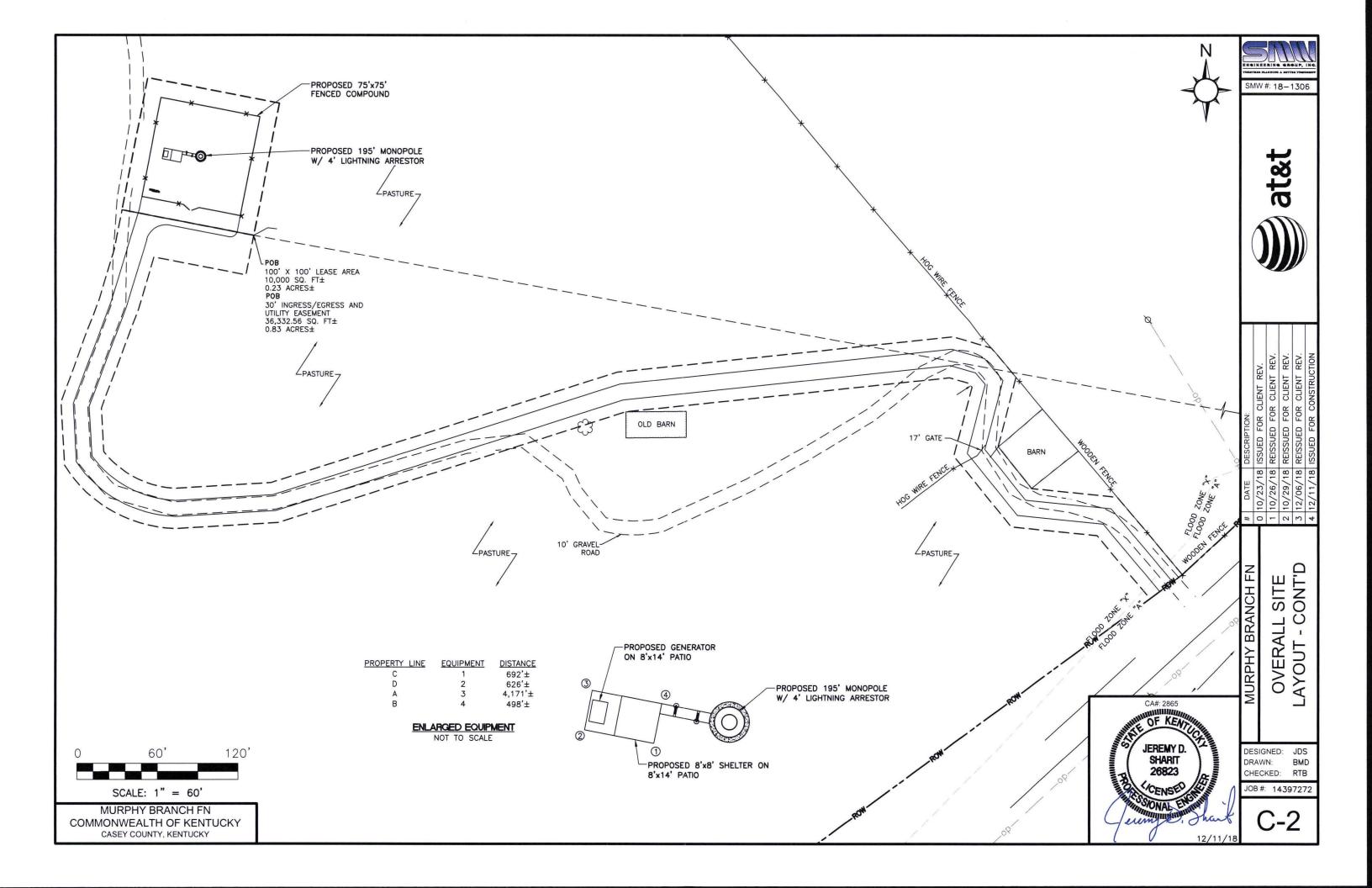
JOB #: 14397272

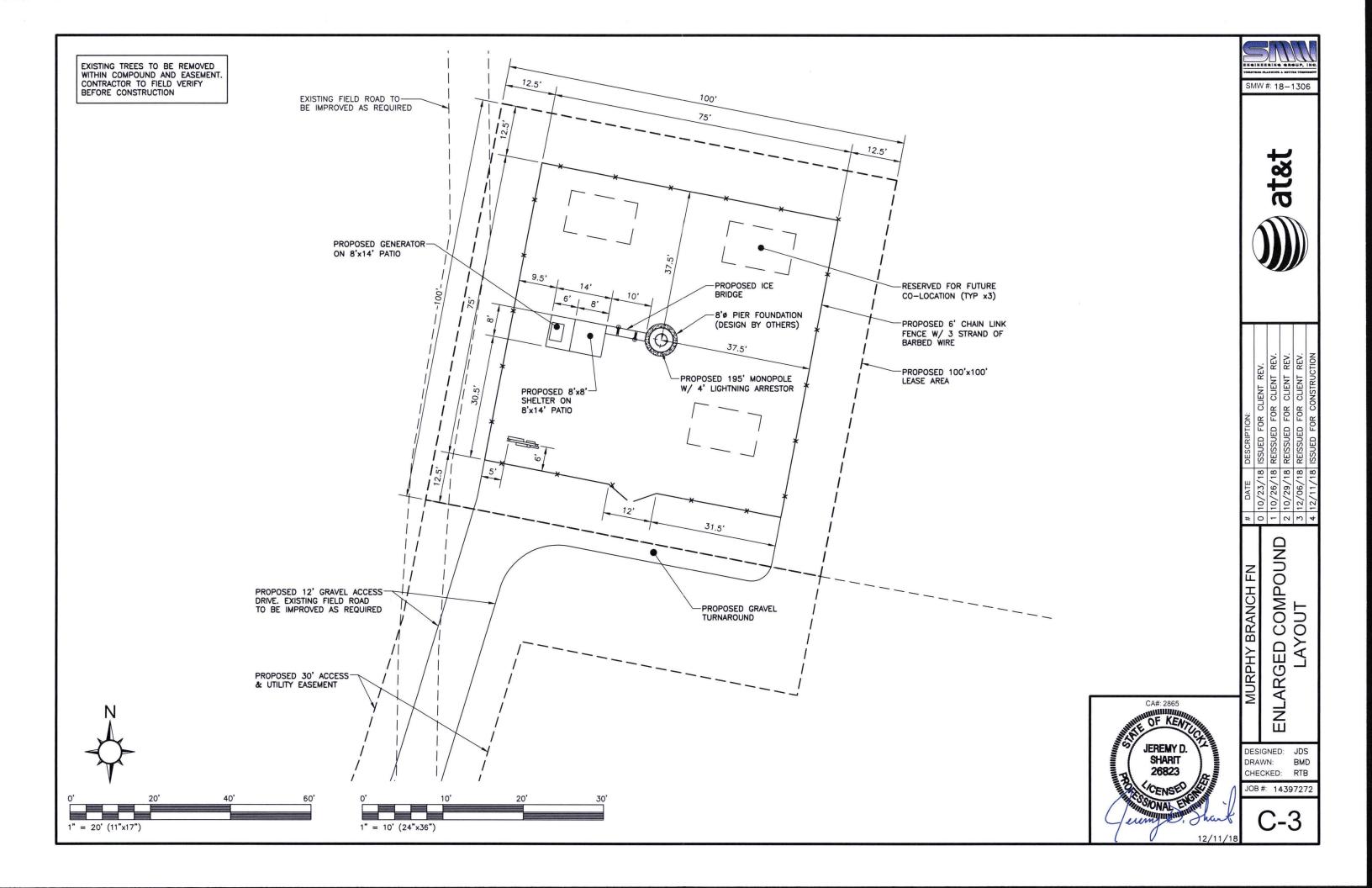
MURPHY BRANCH FN
COMMONWEALTH OF KENTUCKY
CASEY COUNTY, KENTUCKY

3-1.2



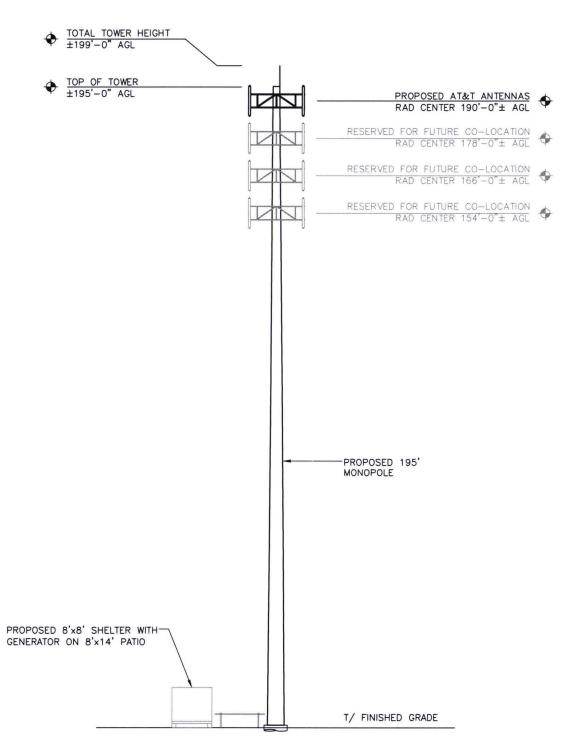






TOWER NOTES

- THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS AND ANTENNAS WERE DESIGNED BY OTHERS.
- THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
- SEE TOWER MANUFACTURER'S DRAWINGS FOR TOWER AND FOUNDATION DETAILS & SPECIFICATIONS
- 4. MANUFACTURER'S DRAWINGS SUPERSCEDE A&E DRAWINGS.





SMW #: 18-1306

atæt



| | # | DATE | DESCRIPTION: | N | | | |
|---|---|-------------------------------------|--------------|-------|---------|------|--|
| T | 0 | ■ 0 10/23/18 ISSUED FOR CLIENT REV. | ISSUED FC | JR CL | LENT RE | | |
| | - | 1 10/26/18 REISSUED FOR CLIENT REV | REISSUED | FOR | CLIENT | REV. | |
| | 7 | 2 10/29/18 REISSUED FOR CLIENT REV. | REISSUED | FOR | CLIENT | REV. | |
| | 3 | 3 12/06/18 REISSUED FOR CLIENT REV | REISSUED | FOR | CLIENT | REV. | |
| | | | | | | | |

MURPHY BRANCH FN
TOWER ELEVATION

CA#: 2865

JEREMY D.

SHARIT

26823

DESIGNED: JDS
DRAWN: BMD
CHECKED: RTB

JOB#: 14397272

C-4

EXHIBIT C TOWER AND FOUNDATION DESIGN



October 10th, 2018 Kentucky Public Service Commission 211 Sower Blvd. P.O. Box 615 Frankfort, KY 40602-0615

RE: Site Name – Murphy Branch FN
Proposed Cell Tower
37° 27′ 17.26″ North Latitude, 84° 59′ 26.11″ 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



Structural Design Report

195' Monopole Site: Murphy Branch FN, KY

Prepared for: AT&T by: Sabre Towers & Poles $^{\text{TM}}$

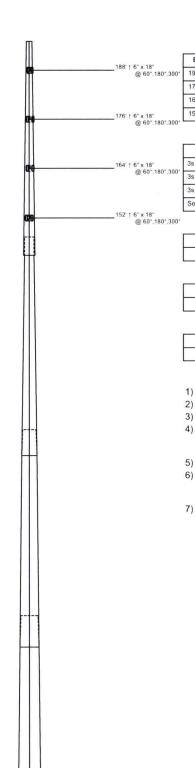
Job Number: 420173

October 12, 2018

| Monopole Profile | 1 |
|-----------------------------------------|-------|
| Foundation Design Summary (Preliminary) | 2 |
| Pole Calculations | 3-13 |
| Foundation Calculations | 14-15 |



| Length (ft) | 53'-3" | / | 53'-6" | / | 53'-6" | / | 52'-3" |
|---------------------------|--------|---------|--------|---------|--------|---|--------|
| Number Of Sides | | | | 18 | | | |
| Thickness (in) | | | 1/2" | | | | 3/8" |
| Lap Splice (ft) | | 7' - 9" | | 6' - 3" | | А | |
| Top Diameter (in) | 53.18" | | 41.61" | | 29.62" | | 17.25" |
| Bottom Diameter (in) | 67.81" | | 56.31" | | 44.32" | | 31.61" |
| Taper (in/ft) | | | | 0.2748 | | | |
| Grade | | | | A572-65 | | | |
| Weight (lbs) | 20521 | | 14831 | | 11161 | | 5899 |
| Overall Steel Height (ft) | | | | 194 | | | |



—9° ↑ 10.5" x 25.5" @ 90°.270° –5° ↑ 10.5" x 25.5" @ 180°,360°

Designed Appurtenance Loading

| Elev | Description | Tx-Line |
|------|------------------------------------|-------------|
| 190 | (1) 278 sq. ft. EPA 6000# (no Ice) | (18) 1 5/8" |
| 178 | (1) 208 sq. ft. EPA 4000# (no ice) | (18) 1 5/8" |
| 166 | (1) 208 sq. ft. EPA 4000# (no ice) | (18) 1 5/8" |
| 154 | (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 | 93.11 | 61.41 | 9758.09 | 20.16 | 12.15 |
| 3s Gusted Wind 0.9 Dead | 69.79 | 61.31 | 9534.27 | 19.56 | 11.75 |
| 3s Gusted Wind&Ice | 142.06 | 10.07 | 1778.39 | 3.93 | 2.32 |
| Service Loads | 77.68 | 15.66 | 2482.39 | 5.28 | 3.13 |

Base Plate Dimensions

| Shape | Diameter | Thickness | Bolt Circle | Bolt Qty | Bolt Diameter |
|-------|----------|-----------|--------------------|----------|---------------|
| Round | 80.75" | 2.5" | 75" | 26 | 2.25" |

Anchor Bolt Dimensions

| ſ | Length | Diameter | Hole Diameter | Weight | Туре | Finish |
|---|--------|----------|---------------|--------|---------|--------|
| Ī | 84" | 2.25" | 2.625" | 3148.6 | A615-75 | Galv |

Material List

| Display | Value |
|---------|---------|
| А | 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) Full Height Step Bolts
- 6) 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.
- 7) Tower Rating: 99.9%

| n Job: | 420173 |
|--------------|-----------------------------------|
| Customer: | AT&T |
| Site Name: | Murphy Branch FN, KY |
| Description: | 195' Monopole |
| Date: | 10/12/2018 By: REB |
| • 1 | Customer: Site Name: Description: |



No.: 420173

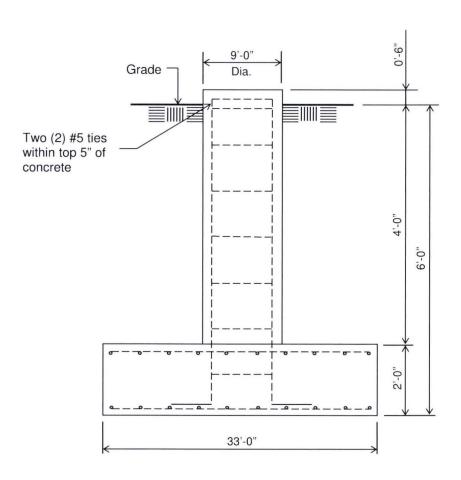
Date: 10/12/18 By: REB

Customer: AT&T Site: Murphy Branch FN, KY

195' Monopole at

89 mph wind and 30 mph wind with 0.75" ice per ANSI/TIA-222-G.

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW

(91.27 Cu. Yds.) (1 REQUIRED; NOT TO SCALE)

Notes:

- 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 presumptive clay soil as defined in ANSI/TIA-222-G-2005. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6) 4 ft of soil cover is required over the entire area of the foundation slab.
- 7) The foundation is based on the following factored loads:

Moment = 9,758.09 k-ftAxial = 93.11 kShear = 61.41 k

| | Rebar Schedule for Pad and Pier | | | | | | | |
|------|-------------------------------------------------|--|--|--|--|--|--|--|
| Pier | (60) #8 vertical rebar w/ hooks at bottom w/ #5 | | | | | | | |
| Fiel | ties, two within top 5" of pier, then 12" C/C | | | | | | | |
| Pad | (71) #8 horizontal rebar evenly spaced each way | | | | | | | |
| Fau | top and bottom (284 total) | | | | | | | |

Information contained herein is the sole property of Sabre Towers & Poles, constitutes a trade secret as defined by lowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Towers & Poles.

(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: 12 oct 2018 at: 8:21:13

195' Monopole / Murphy Branch FN, KY

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

POLE GEOMETRY

| POLE GI | EOMETRY | | | | | | | | | |
|------------|------------------|-------------|-----------------------|----------------------|----------------------|--------|-------------------|-----------------------|--------------------------|------|
| ELEV ft | NAME | No. SIDE | OUTSIDE DIAM in | THICK -NESS in | ♦*Pn | | | OVERL | AP Y | w/t |
| 194.0 | • • • • • • | | 17.52 | 0.375 | 1492.2 | 510.9 | | | | |
| | Α | 18 | 30.83 | 0.375 | 2651.6 | 1628.1 | | | (| 6.3 |
| 146.2 | | | 30.83 | 0.375 | 2651.6 | 1628.1 | | 4 50 | 1 75 | |
| 141 7 | A/B | 18 | | 0.500 | 3580.8 | 2218.4 | | 4.50 | 1.75 | |
| 141.7 | в | 18 | 31.35 | 0.500 | 3580.8 | 2218.4 | | | | 9.1 |
| 99.0 | | | 43 25 | 0.500 | 4962.8 | 4279.9 | | | | J. 1 |
| 33.0 | в/с | 18 | 43.25 | 0.500 | 4962.8 | 4279.9 | SLIP | 6.25 | 1.73 | |
| 92.7 | | | 44.01 | | 5050.9 | | | | | |
| | С | 18 | 44.01 | | 5050.9 | | | | 1 | 3.5 |
| 53.2 | | | 55.00 | 0.500 | | | | | | |
| | C/D | 18 | | 0.500 | | | SLIP | 7.75 | 1.68 | |
| 45.5 | | | | 0.500 | | | | | | |
| | D | 18 | | 0.500 | | | | | 1 | 7.7 |
| 0.0 | | | | | | | | | | |
| | SSEMBLY | | | | | | | | | |
| SECTION | | Ε | | BOLTS | AT BASE | OF SEC | TION | | CAL ⁶ BAS | c |
| NAME | ELE\ | | MBER TY | PE | | | SH | READS IN EAR PLANE | ELE' | V |
| Α | f: 141.750 | | 0 A3 | 25 | in | 0 | ksi 2.0 | 0 | f [.] 141.75 | _ |
| B C | 92.750 45.500 | Ó | 0 A3 0 A3 | 25 25 | 0.00 0.00 0.00 | | 2.0 2.0 2.0 | 0 | 92.75 | 0 |
| D | 0.000 | | 0 A3 | 25 | 0.00 | | 2.0 | ŏ | | |
| | ECTIONS | | | | | | | | | |
| | No.of SIDES | ENGT | H OUTSIDE | .DIAMETE | | | | ANGE.ID T TOP | FLANGE. | |
| NAME | 31063 | fi | * | * | | ID | | 1 105 | BOT | TOP |
| Α | 18 | 52.2 | | | | | 1 0 | 0 | 0 | 0 |
| B C | 18 18 | 53.5 | 50 45.0 | 1 30.0 | 8 0.00 | 00 | 2 0 3 | 0 | 0 | 0 |
| Ď | 18 | 53.2 | | | | | 4 0 | - | ŏ | ŏ |

420173

* - Diameter of circumscribed circle

MATERIAL TYPES

| TYPE OF SHAPE | TYPE NO | NO OF ELEM. | OR | IENT | HEIGHT | WIDTH | .THI WEB | CKNESS. FLANGE | | ULARITY ECTION. ORIENT |
|----------------------|------------------|------------------|----|-------------------|----------------------------------|------------------------------|----------------------------------|----------------------------------|------------------------------|------------------------------|
| | | | & | deg | in | in | in | in | , t <u>-</u> , t | deg |
| PL PL PL PL | 1 2 3 4 | 1 1 1 1 | | 0.0 0.0 0.0 | 32.10 45.01 57.18 68.86 | 0.38 0.50 0.50 0.50 | 0.375 0.500 0.500 0.500 | 0.375 0.500 0.500 0.500 | 0.00 0.00 0.00 0.00 | 0.0 0.0 0.0 |

& - With respect to vertical

MATERIAL PROPERTIES _____

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

LOADING CONDITION A

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

LOADS ON POLE ==========

| LOAD | ELEV | APPLYLO | ADAT | LOAD | FORC | ES | MOM | NTS |
|--------|---------|---------|-------|------|---------|--------|----------|---------|
| TYPE | _ | RADIUS | AZI | AZI | HORIZ | DOWN | VERTICAL | TORSNAL |
| | ft | ft | | | kip | kip | ft-kip | ft-kip |
| С | 189.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 4.2457 | 0.0000 | 0.0000 |
| č | 189.000 | 0.00 | 0.0 | 0.0 | 13.6549 | 7.2000 | 0.0000 | 0.0000 |
| č | 177.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 3.9761 | 0.0000 | 0.0000 |
| C | 177.000 | 0.00 | 0.0 | 0.0 | 10.0773 | 4.8000 | 0.0000 | 0.0000 |
| c C | 165.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 3.7066 | 0.0000 | 0.0000 |
| C | 165.000 | 0.00 | 0.0 | 0.0 | 9.9303 | 4.8000 | 0.0000 | 0.0000 |
| C C | 153.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 3.4370 | 0.0000 | 0.0000 |
| C | 153.000 | 0.00 | 0.0 | 0.0 | 9.7746 | 4.8000 | 0.0000 | 0.0000 |
| D | 194,000 | 0.00 | 180.0 | 0.0 | 0.0523 | 0.0930 | 0.0000 | 0.0000 |
| Ď | 178.083 | 0.00 | 180.0 | 0.0 | 0.0523 | 0.0930 | 0.0000 | 0.0000 |
| D | 178.083 | 0.00 | 180.0 | 0.0 | 0.0629 | 0.1140 | 0.0000 | 0.0000 |
| D | 162.167 | 0.00 | 180.0 | 0.0 | 0.0629 | 0.1140 | 0.0000 | 0.0000 |
| D | 162.167 | 0.00 | 180.0 | 0.0 | 0.0730 | 0.1349 | 0.0000 | 0.0000 |
| D | 146.250 | 0.00 | 180.0 | 0.0 | 0.0730 | 0.1349 | 0.0000 | 0.0000 |
| D | 146.250 | 0.00 | 180.0 | 0.0 | 0.0791 | 0.3417 | 0.0000 | 0.0000 |
| D | 141.750 | 0.00 | 180.0 | 0.0 | 0.0791 | 0.3417 | 0.0000 | 0.0000 |
| D | 141.750 | 0.00 | 180.0 | 0.0 | 0.0826 | 0.2098 | 0.0000 | 0.0000 |
| D | 127.500 | 0.00 | 180.0 | 0.0 | 0.0826 | 0.2098 | 0.0000 | 0.0000 |
| D | 127.500 | 0.00 | 180.0 | 0.0 | 0.0903 | 0.2349 | 0.0000 | 0.0000 |
| D | 113.250 | 0.00 | 180.0 | 0.0 | 0.0903 | 0.2349 | 0.0000 | 0.0000 |
| D | 113.250 | 0.00 | 180.0 | 0.0 | 0.0973 | 0.2599 | 0.0000 | 0.0000 |
| D | 99.000 | 0.00 | 180.0 | 0.0 | 0.0973 | 0.2599 | 0.0000 | 0.0000 |
| D | 99.000 | 0.00 | 180.0 | 0.0 | 0.1019 | 0.5503 | 0.0000 | 0.0000 |
| D | 92.750 | 0.00 | 180.0 | 0.0 | 0.1019 | 0.5503 | 0.0000 | 0.0000 |
| D | 92.750 | 0.00 | 180.0 | 0.0 | 0.1035 | 0.2895 | 0.0000 | 0.0000 |
| D | 79.583 | 0.00 | 180.0 | 0.0 | 0.1035 | 0.2895 | 0.0000 | 0.0000 |

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

| | | | | | 42 | 20173 | | |
|---|--------|------|-------|-----|--------|--------|--------|--------|
| D | 79.583 | 0.00 | 180.0 | 0.0 | 0.1080 | 0.3127 | 0.0000 | 0.0000 |
| D | 66.417 | 0.00 | 180.0 | 0.0 | 0.1080 | 0.3127 | 0.0000 | 0.0000 |
| D | 66.417 | 0.00 | 180.0 | 0.0 | 0.1113 | 0.3359 | 0.0000 | 0.0000 |
| D | 53.250 | 0.00 | 180.0 | 0.0 | 0.1113 | 0.3359 | 0.0000 | 0.0000 |
| D | 53.250 | 0.00 | 180.0 | 0.0 | 0.1129 | 0.7030 | 0.0000 | 0.0000 |
| D | 45.500 | 0.00 | 180.0 | 0.0 | 0.1129 | 0.7030 | 0.0000 | 0.0000 |
| D | 45.500 | 0.00 | 180.0 | 0.0 | 0.1111 | 0.3655 | 0.0000 | 0.0000 |
| D | 34.125 | 0.00 | 180.0 | 0.0 | 0.1111 | 0.3655 | 0.0000 | 0.0000 |
| D | 34.125 | 0.00 | 180.0 | 0.0 | 0.1095 | 0.3856 | 0.0000 | 0.0000 |
| D | 22.750 | 0.00 | 180.0 | 0.0 | 0.1095 | 0.3856 | 0.0000 | 0.0000 |
| D | 22.750 | 0.00 | 180.0 | 0.0 | 0.1039 | 0.4057 | 0.0000 | 0.0000 |
| D | 0.000 | 0.00 | 180.0 | 0.0 | 0.1050 | 0.4258 | 0.0000 | 0.0000 |

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

LOADS ON POLE

| LOAD | ELEV | APPLYLOA | DAT | LOAD | FORC | ES | MOME | NTS |
|--------|--------------------|--------------|----------------|------|--------------------|------------------|--------------------|---------|
| TYPE | ۲. | RADIUS | AZI | AZI | HOŖĮZ | DOWN | VERTICAL | TORSNAL |
| | ft | ft | | | kip | kip | ft-kip | ft-kip |
| С | 189.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 3.1843 | 0.0000 | 0.0000 |
| C | 189.000 | 0.00 | 0.0 | 0.0 | 13.6549 | 5.4000 | 0.0000 | 0.0000 |
| C | 177.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 2.9821 | 0.0000 | 0.0000 |
| C C | 177.000 165.000 | 0.00 0.00 | $0.0 \\ 0.0$ | 0.0 | 10.0773 0.0000 | 3.6000 2.7799 | $0.0000 \\ 0.0000$ | 0.0000 |
| Č | 165.000 | 0.00 | 0.0 | 0.0 | 9.9303 | 3.6000 | 0.0000 | 0.0000 |
| C | 153.000 | 0.00 | 0.0 | 0.0 | 0.0000 | 2.5777 | 0.0000 | 0.0000 |
| C | 153.000 | 0.00 | 0.0 | 0.0 | 9.7746 | 3.6000 | 0.0000 | 0.0000 |
| D | 194.000 | 0.00 | 180.0 | 0.0 | 0.0523 | 0.0698 | 0.0000 | 0.0000 |
| D | 178.083 | | 180.0 | 0.0 | 0.0523 | 0.0698 | 0.0000 | 0.0000 |
| D | 178.083 | | 180.0 | 0.0 | 0.0629 | 0.0855 | 0.0000 | 0.0000 |
| D D | 162.167 162.167 | | 180.0 180.0 | 0.0 | 0.0629 0.0730 | 0.0855 0.1012 | 0.0000 0.0000 | 0.0000 |
| D | 146.250 | | 180.0 | 0.0 | 0.0730 | 0.1012 | 0.0000 | 0.0000 |
| D | 146.250 | 0.00 | 180.0 | 0.0 | 0.0791 | 0.2563 | 0.0000 | 0.0000 |
| D | 141.750 | | 180.0 | 0.0 | 0.0791 | 0.2563 | 0.0000 | 0.0000 |
| D D | 141.750 127.500 | | 180.0 180.0 | 0.0 | 0.0826 0.0826 | 0.1574 0.1574 | 0.0000 0.0000 | 0.0000 |
| D | 127.500 | | 180.0 | 0.0 | 0.0923 | 0.1761 | 0.0000 | 0.0000 |
| D | 113.250 | 0.00 | 180.0 | 0.0 | 0.0903 | 0.1761 | 0.0000 | 0.0000 |
| D | 113.250 | | 180.0 | 0.0 | 0.0973 | 0.1949 | 0.0000 | 0.0000 |
| D D | 99.000 99.000 | | 180.0 180.0 | 0.0 | 0.0973 0.1019 | 0.1949 0.4127 | 0.0000 0.0000 | 0.0000 |
| D | 92.750 | | 180.0 | 0.0 | 0.1019 | 0.4127 | 0.0000 | 0.0000 |
| Ď | 92.750 | | 180.0 | 0.0 | 0.1035 | 0.2171 | 0.0000 | 0.0000 |
| D | 79.583 | | 180.0 | 0.0 | 0.1035 | 0.2171 | 0.0000 | 0.0000 |
| D | 79.583 66.417 | | 180.0 180.0 | 0.0 | 0.1080 0.1080 | 0.2345 0.2345 | 0.0000 0.0000 | 0.0000 |
| D D | 66.417 | | 180.0 | 0.0 | 0.1080 | 0.2520 | 0.0000 | 0.0000 |
| Ď | 53.250 | | 180.0 | 0.0 | 0.1113 | 0.2520 | 0.0000 | 0.0000 |
| D | 53.250 | | 180.0 | 0.0 | 0.1129 | 0.5273 | 0.0000 | 0.0000 |
| D | 45.500 | | 180.0 | 0.0 | 0.1129 | 0.5273 | 0.0000 | 0.0000 |
| D D | 45.500 34.125 | | 180.0 180.0 | 0.0 | $0.1111 \\ 0.1111$ | 0.2741 0.2741 | 0.0000 0.0000 | 0.0000 |
| D | 34.125 | | 180.0 | 0.0 | 0.1095 | 0.2892 | 0.0000 | 0.0000 |
| D | 22.750 | | 180.0 | 0.0 | 0.1095 | 0.2892 | 0.0000 | 0.0000 |
| D | 22.750 | | 180.0 | 0.0 | 0.1039 | 0.3043 | 0.0000 | 0.0000 |
| D | 0.000 | 0.00 | 180.0 | 0.0 | 0.1050 | 0.3193 | 0.0000 | 0.0000 |

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

LOADS ON POLE

LOAD ELEV APPLY..LOAD..AT LOADFORCES.....MOMENTS.....

| TYPE | ft | RADIUS ft | AZI | AZI | 4: HORIZ kip | 20173 DOWN kip | VERTICAL ft-kip | TORSNAL ft-kip |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C C C C C C C | 189.000 189.000 177.000 177.000 165.000 165.000 153.000 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0000 1.6678 0.0000 1.9861 0.0000 1.9484 0.0000 1.9087 | 4.2457 17.9218 3.9761 11.9014 3.7066 11.8520 3.4370 11.7993 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 |
| D D D D D D D D D D | 194.000 178.083 178.083 162.167 146.250 146.250 141.750 127.500 127.500 113.250 99.000 99.000 92.750 99.000 92.750 99.583 79.583 66.417 66.417 53.250 45.500 45.500 41.375 11.375 0.000 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 | | 0.0081 0.0081 0.0095 0.0095 0.0107 0.0107 0.0115 0.0119 0.0129 0.0129 0.0138 0.0144 0.0144 0.0145 0.0151 0.0151 0.0155 0.0156 0.0156 0.0156 0.0154 0.0143 | 0.1399 0.1399 0.1700 0.1700 0.1999 0.4122 0.2838 0.3163 0.3485 0.3485 0.6438 0.3485 0.4426 0.4426 0.4426 0.4426 0.4426 0.5132 0.51329 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 |

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195' Monopole / Murphy Branch FN, KY

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

| MAST ELEV ft | DEFLECTION HORIZONTA ALONG | | DOWN | ROTATIO | | TWIST |
|--------------------|----------------------------|--------|-------|---------|--------|-------|
| 194.0 | 20.16A | -0.06E | 3.01c | 12.15A | -0.03E | 0.00R |
| 178.1 | 16.94A | -0.05E | 2.33c | 11.93A | -0.03E | 0.00R |
| 162.2 | 13.86A | -0.04E | 1.71c | 11.07A | -0.03E | 0.00R |
| 146.2 | 11.05A | -0.04E | 1.20c | 9.73A | -0.03E | 0.00E |
| 141.7 | 10.32A | -0.03E | 1.08C | 9.40A | -0.03E | 0.00E |
| 127.5 | 8.18A | -0.03E | 0.75c | 8.23K | -0.03E | 0.00E |
| 113.2 | 6.31A | -0.02E | 0.50c | 7.08K | -0.02E | 0.00E |
| 99.0 | 4.70A | -0.02E | 0.31c | 5.98A | -0.02E | 0.00E |

420173

| | | | | 420173 | | |
|--------------------|-----------------------|------------------------------|-----------|---------------------------------|-------------------------------|---------|
| 92.7 | 4.08A | -0.01E | 0.25C | 5.53A | -0.02E | 0.00E |
| 79.6 | 2.93A | -0.01E | 0.15c | 4.56A | -0.02E | 0.00E |
| 66.4 | 2.00A | -0.01E | | 3.66A | -0.01E | 0.00E |
| 53.2 | 1.25D | 0.00E | 0.04c | 2.84A | -0.01E | 0.00E |
| 45.5 | 0.90D | 0.00E | 0.03C | 2.38A | -0.01E | 0.00E |
| 34.1 | 0.49D | 0.00E | 0.01c | 1.72D | -0.01E | 0.00E |
| 22.7 | 0.21D | | | 1.110 | | |
| 11.4 | 0.05D | 0.00E | 0.00A | 0.53D | 0.00E | 0.00E |
| 0.0 | 0.00A | | | 0.00A | | |
| | POLE FORCES C | ALCULATED(w.r | .t. to wi | nd direction) | | |
| MAST ELEV ft | TOTAL AXIAL kip | SHEAR.w.r.t. ALONG kip | ACROSS | MOMENT.w.r.t ALONG ft-kip | .WIND.DIR ACROSS ft-kip | |
| 194.0 | -0.01 Q | 0.00 Q | 0.00 R | -0.02 T | -0.01 R | 0.00 R |
| 178.1 | | | | -176.49 C | | |
| 1,011 | | | | -176.50 I | | |
| 162.2 | | | | -648.34 C | | |
| | | | | -648.36 C | | |
| 146.2 | 76.95 AG 76.96 Z | | | -1369.58 C | | |
| | | | | -1369.86 C -1605.63 A | | |
| 141.7 | | 47.15 T | | -1605.63 A -1605.37 A | | |
| | | | | -2362.65 K | | |
| 127.5 | 82.86 AD | | | -2362.63 K | | |
| | | | | -3134.35 K | | |
| 113.2 | | | | -3134.38 K | | |
| | 92.33 AD | 50.71 K | | -3920.97 к | 11.48 E | -1.57 E |
| 99.0 | | | | -3921.04 K | | |
| | 96.35 AG | | | | 12.91 E | |
| 92.7 | 96.35 AG | 51.42 D | 0.28 K | -4270.95 к | 12.97 E | -1.73 E |
| | 101.43 AG | 52.78 D | 0.28 K | -5018.21 K | 15.47 E | -1.96 E |
| 79.6 | 101.43 AD | 52.72 D | -0.25 E | -5018.20 к | 15.42 E | -1.94 E |
| | 106.88 AD | 54.14 D | -0.25 E | -5776.20 к | 18.73 E | -2.18 E |
| 66.4 | 106.88 AD | 54.15 D | -0.26 E | -5776.25 к | 18.70 E | -2.18 E |
| ני כ | 112.71 AD | 55.62 D | -0.26 E | -6545.04 A | 22.05 E | -2.38 E |
| 53.2 | 112.71 AD | 55.64 D | -0.25 c | -6545.06 A | 22.10 E | -2.38 E |
| 45.5 | 119.01 AD | 56.52 D | -0.25 C | -7003.77 A | 23.60 E | -2.45 E |
| +3.3 | 119.01 AD | 56.52 D | -0.21 c | -7003.77 A | 23.59 E | -2.45 E |
| | 124.51 AD | 57.78 D | -0.21 C | -7683.51 A | 25.94 E | -2.54 E |

| 4 | 2 | O | 1 | 7 | 3 |
|---|---|---|---|---|---|
| | | | | | |

| 34.1 | 420173 | | | | | | | | |
|------------------|-----------|----------|--------------------|----------|---------|--|--|--|--|
| 34.1 | 124.51 AD | 57.79 D | -0.24 C -7683.48 A | 25.93 E | -2.54 E | | | | |
| 22.7 | 130.18 AD | 59.04 D | -0.24 C -8369.66 D | 28.09 E | -2.60 E | | | | |
| 22.7 | 130.18 AD | 59.03 D | -0.23 C -8369.65 D | 28.09 E | -2.60 E | | | | |
| 11.4 | 136.00 AD | 60.22 D | -0.23 C -9061.60 D | 30.25 E | -2.63 E | | | | |
| 11.4 | 136.00 AD | 60.22 D | -0.22 C -9061.61 D | 30.26 E | -2.63 E | | | | |
| | 142.06 AD | 61.41 D | -0.22 C -9758.09 D | 32.44 E | -2.64 E | | | | |
| base reaction | 142.06 AD | -61.41 D | 0.22 C 9758.09 D | -32.44 E | 2.64 E | | | | |

COMPLIANCE WITH 4.8.2 & 4.5.4

| ELEV | AXIAL | BENDING | SHEAR + TORSIONAL | TOTAL | SATISFIED | D/t(w/t) | MAX ALLOWED |
|---------------|--------|---------|----------------------|-------|-----------|----------|----------------|
| ft | | | | | | | |
| 194.00 | 0.00Q | 0.00T | 0.00Q | 0.00⊤ | YES | 6.35A | 45.2 |
| 170.00 | 0.01AA | 0.22C | 0.02Q | 0.22C | YES | 8.40A | 45.2 |
| 178.08 | 0.01z | 0.221 | 0.02Q | 0.22c | YES | 8.40A | 45.2 |
| 162 17 | 0.03z | 0.55c | 0.03w | 0.56c | YES | 10.46A | 45.2 |
| 162.17 | 0.03AG | 0.55c | 0.03M | 0.56c | YES | 10.46A | 45.2 |
| 146 25 | 0.03AG | 0.84c | 0.03м | 0.86C | YES | 12.52A | 45.2 |
| 146.25 | 0.02z | 0.64c | 0.03⊤ | 0.65c | YES | 8.95A | 45.2 |
| 141 75 | 0.02z | 0.69A | 0.03T | 0.70A | YES | 9.38A | 45.2 |
| 141.75 | 0.02AD | 0.72A | 0.03K | 0.74A | YES | 9.12A | 45.2 |
| 127 50 | 0.02AD | 0.83κ | 0.02K | 0.85K | YES | 10.50A | 45.2 |
| 127.50 | 0.02AD | 0.83к | 0.02K | 0.85к | YES | 10.50A | 45.2 |
| 112 25 | 0.02AD | 0.89K | 0.02K | 0.90к | YES | 11.88A | 45.2 |
| 113.25 | 0.02AD | 0.89K | 0.02K | 0.90K | YES | 11.88A | 45.2 |
| 00.00 | 0.02AD | 0.92κ | 0.02K | 0.93κ | YES | 13.26A | 45.2 |
| 99.00 | 0.02AG | 0.92K | 0.020 | 0.93K | YES | 13.26A | 45.2 |
| 02.75 | 0.02AG | 0.92κ | 0.020 | 0.93ĸ | YES | 13.87A | 45.2 |
| 92.75 | 0.02AG | 0.96к | 0.02D | 0.98K | YES | 13.52A | 45.2 |
| 70 50 | 0.02AG | 0.96к | 0.02K | 0.97κ | YES | 14.79A | 45.2 |
| 79.58 | 0.02AD | 0.96к | 0.02K | 0.97K | YES | 14.79A | 45.2 |
| 66.42 | 0.02AD | 0.95κ | 0.02K | 0.96к | YES | 16.07A | 45.2 |
| 66.42 | 0.02AD | 0.95к | 0.020 | 0.96K | YES | 16.07A | 45.2 |
| 5 2.25 | 0.02AD | 0.96A | 0.02K | 0.97A | YES | 17.34A | 45.2 |
| 53.25 | 0.02AD | 0.96A | 0.02K | 0.97A | YES | 17.34A | 45.2 |
| 45 50 | 0.02AD | 0.96A | 0.02κ | 0.97A | YES | 18.09A | 45.2 |
| 45.50 | 0.02AD | 0.99A | 0.02K | 1.00A | YES | 17.74A | 45.2 |
| 24.42 | 0.02AD | 0.98A | 0.02K | 1.00A | YES | 18.84A | 45.2 |
| 34.12 | 0.02AD | 0.98A | 0.02K | 1.00A | YES | 18.84A | 45.2 |

| | | | | 4 | 20173 | | |
|-------|--------|-------|-------|-------|-------|--------|------|
| 22.75 | | | 0.02K | | YES | 19.95A | 45.2 |
| 22.73 | 0.02AD | 0.98D | 0.02K | 0.99A | YES | 19.95A | 45.2 |
| 11.37 | | | 0.02K | | | 21.05A | 45.2 |
| 11.57 | | | 0.02K | | | 21.05A | 45.2 |
| 0.00 | | | 0.02K | | YES | 22.15A | 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 |
|--------------|--------------|---------------|-----------------|------------------|------------|
| kip | ALONG kip | ACROSS kip | ALONG ft-kip | ACROSS ft-kip | ft-kip |
| 142.06 AD | 61.41 D | -0.22 C | -9758.09 D | 32.44 E | -2.64 E |

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on: 12 oct 2018 at: 8:21:22

195' Monopole / Murphy Branch FN, KY

LOADING CONDITION A

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

LOADS ON POLE ========

| LOAD TYPE | ELEV ft | APPLYLO RADIUS ft | ADAT AZI | LOAD AZI | FORG HORIZ kip | CES DOWN kip | MOM VERTICAL ft-kip | ENTS TORSNAL ft-kip |
|--------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 0000000 | 189.000 189.000 177.000 177.000 165.000 165.000 153.000 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0000 3.4705 0.0000 2.5612 0.0000 2.5238 0.0000 2.4843 | 3.5381 6.0000 3.3134 4.0000 3.0888 4.0000 2.8642 4.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 |
| D D D D D D | 194.000 178.083 178.083 162.167 162.167 146.250 146.250 141.750 141.750 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 | 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0133 0.0133 0.0160 0.0160 0.0185 0.0185 0.0201 0.0201 0.0210 | 0.0775 0.0775 0.0950 0.0950 0.1124 0.1124 0.2847 0.2847 0.1748 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 |

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

| D : | 127.500 113.250 113.250 99.000 99.000 92.750 79.583 79.583 79.583 66.417 66.417 53.250 53.250 45.500 45.500 34.125 34.125 34.125 22.750 22.750 0.000 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 180.0 | 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | 0.0230 0.0230 0.0247 0.0247 0.0259 0.0259 0.0263 0.0263 0.0274 0.0274 0.0283 0.0283 0.0287 0.0287 0.0287 0.0288 0.0288 0.0278 0.0278 0.0278 0.0278 | 0.1957 0.1957 0.2166 0.2166 0.4586 0.4586 0.2413 0.2413 0.2606 0.2606 0.2799 0.2799 0.5858 0.3046 0.3046 0.3046 0.3213 0.3213 0.3548 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MAXIMUM | POLE DEFORM | ATIONS | CALCULATE | ED(w.r.1 | t. wind di | ======= rection) | | |

| MAST ELEV ft | DEFLECTI HORIZONTA ALONG | | DOWN | ROTATIC TILT ALONG | | TWIST |
|--------------------|--------------------------------|--------|-------|--------------------------|--------|-------|
| 194.0 | 5.28E | -0.01F | 0.21E | 3.13E | -0.01F | 0.00F |
| 178.1 | 4.42E | -0.01F | 0.16E | 3.07E | -0.01F | 0.00F |
| 162.2 | 3.60E | -0.01F | 0.12E | 2.84E | -0.01F | 0.00F |
| 146.2 | 2.86E | -0.01F | 0.08E | 2.50E | -0.01F | 0.00F |
| 141.7 | 2.66E | -0.01F | 0.07E | 2.41E | -0.01F | 0.00F |
| 127.5 | 2.10E | -0.01F | 0.05E | 2.11E | -0.01F | 0.00F |
| 113.2 | 1.62E | -0.01F | 0.04E | 1.81E | -0.01F | 0.00F |
| 99.0 | 1.20E | 0.00F | 0.02E | 1.53E | 0.00F | 0.00F |
| 92.7 | 1.04E | 0.00F | 0.02E | 1.41E | 0.00F | 0.00F |
| 79.6 | 0.75E | 0.00F | 0.01E | 1.16E | 0.00F | 0.00F |
| 66.4 | 0.51E | 0.00F | 0.01E | 0.93E | 0.00F | 0.00F |
| 53.2 | 0.32E | 0.00F | 0.00E | 0.72E | 0.00F | 0.00F |
| 45.5 | 0.23E | 0.00F | 0.00E | 0.61E | 0.00F | 0.00F |
| 34.1 | 0.13E | 0.00F | 0.00E | 0.44E | 0.00F | 0.00F |
| 22.7 | 0.05E | 0.00F | 0.00E | 0.28E | 0.00F | 0.00F |
| 11.4 | 0.01E | 0.00F | 0.00E | 0.14E | 0.00F | 0.00F |
| 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 | TOTAL | SHEAR.w.r.t | | MOMENT.w.r.t | .WIND.DIR | TORSION |
|------------|--------------|--------------|---------------|-----------------|------------------|---------|
| ELEV ft | AXIAL kip | ALONG kip | ACROSS kip | ALONG ft-kip | ACROSS ft-kip | ft-kip |
| 194.0 | 0.00 G | 0.00 K | 0.00 L | 0.00 K | 0.00 L | 0.00 L |
| 178.1 | 10.77 I | 3.68 A | 0.00 E | -45.63 A | 0.00 в | 0.00 н |
| 1,0.1 | 10.77 I | 3.68 1 | 0.00 K | -45.63 E | 0.00 I | 0.00 н |

420173

| 162.2 | 26.68 I | 9.02 I | 0.00 к | -167.23 E | 0.02 н | 0.00 в |
|------------------|---------|----------|---------|------------|---------|---------|
| 10212 | 26.68 K | 9.02 н | 0.00 I | -167.22 F | 0.02 н | 0.00 в |
| 146.2 | 35.34 K | 11.80 н | 0.00 I | -352.18 E | -0.05 I | 0.01 н |
| 140.2 | 35.34 L | 11.88 ∟ | 0.04 I | -352.26 F | -0.11 L | 0.01 в |
| 141.7 | 36.62 L | 11.97 L | 0.04 I | -412.33 н | -0.15 I | 0.02 н |
| 141.7 | 36.63 I | 11.95 K | -0.07 F | -412.43 A | -0.13 I | 0.02 н |
| 127.5 | 39.12 I | 12.25 K | -0.07 F | -605.54 K | 1.07 F | -0.03 F |
| 127.3 | 39.11 B | 12.25 E | -0.06 F | -605.52 к | 1.07 F | -0.03 F |
| 112 2 | 41.90 в | 12.58 E | -0.06 F | -801.64 L | 1.92 F | -0.05 F |
| 113.2 | 41.90 B | 12.58 E | -0.05 F | -801.64 L | 1.92 F | -0.05 F |
| 00.0 | 44.98 в | 12.93 E | -0.05 F | -1001.15 E | 2.71 F | -0.07 F |
| 99.0 | 44.98 в | 12.93 L | -0.06 F | -1001.13 E | 2.68 F | -0.07 F |
| 02.7 | 47.85 в | 13.09 L | -0.06 F | -1089.80 E | 3.07 F | -0.08 F |
| 92.7 | 47.85 B | 13.11 E | -0.05 F | -1089.77 E | 3.08 F | -0.08 F |
| 79.6 | 51.02 B | 13.46 E | -0.05 F | -1279.17 E | 3.79 F | -0.09 F |
| 79.6 | 51.02 B | 13.45 E | -0.06 F | -1279.17 E | 3.79 F | -0.09 F |
| 66.4 | 54.45 B | 13.81 E | -0.06 F | -1471.18 E | 4.54 F | -0.10 F |
| 66.4 | 54.45 в | 13.81 E | -0.06 F | -1471.20 E | 4.53 F | -0.11 F |
| F2 2 | 58.14 B | 14.18 E | -0.06 F | -1666.09 E | 5.28 F | -0.11 F |
| 53.2 | 58.14 B | 14.18 E | -0.06 F | -1666.12 E | 5.28 F | -0.11 F |
| 45.5 | 62.68 в | 14.41 E | -0.06 F | -1782.29 E | 5.74 F | -0.12 F |
| 43.3 | 62.68 в | 14.42 E | -0.06 F | -1782.30 E | 5.74 F | -0.12 F |
| 34.1 | 66.14 B | 14.74 E | -0.06 F | -1954.77 E | 6.46 F | -0.12 F |
| 34.1 | 66.14 B | 14.74 E | -0.06 F | -1954.78 E | 6.46 F | -0.12 F |
| 22.7 | 69.80 в | 15.05 E | -0.06 F | -2129.05 E | 7.16 F | -0.13 F |
| 22.7 | 69.80 в | 15.06 E | -0.06 F | -2129.05 E | 7.16 F | -0.13 F |
| 11.4 | 73.69 в | 15.36 E | -0.06 F | -2304.98 E | 7.89 F | -0.13 F |
| 11.4 | 73.69 в | 15.36 E | -0.07 F | -2304.98 E | 7.89 F | -0.13 F |
| | 77.68 в | 15.66 E | -0.07 F | -2482.39 E | 8.64 F | -0.13 F |
| base reaction | 77.68 в | -15.66 E | 0.07 F | 2482.39 E | -8.64 F | 0.13 F |
| | | | | | | |

COMPLIANCE WITH 4.8.2 & 4.5.4

| ELEV ft | AXIAL | BENDING | SHEAR + TORSIONAL | TOTAL : | SATISFIED | D/t(w/t) | MAX ALLOWED |
|------------|-------|---------|----------------------|---------|-----------|----------|----------------|
| 194.00 | 0.00G | 0.00L | 0.00K | 0.00L | YES | 6.35A | 45.2 |
| 170 00 | 0.011 | 0.06A | 0.00A | 0.06A | YES | 8.40A | 45.2 |
| 178.08 | 0.011 | 0.06E | 0.001 | 0.06E | YES | 8.40A | 45.2 |
| 162.17 | 0.011 | 0.14E | 0.011 | 0.15E | YES | 10.46A | 45.2 |
| 102.17 | | | | | | | |

| | 0.01ĸ | 0.14F | 0.01H | 0.15F | 120173 | 10.46A | 45.2 |
|--------|-------|-------|-------|-------|--------|--------|------|
| | | | | | YES | | |
| 146.25 | 0.01K | 0.22E | 0.01н | 0.23E | YES | 12.52A | 45.2 |
| | 0.01L | 0.16F | 0.01L | 0.17F | YES | 8.95A | 45.2 |
| 141.75 | 0.01L | 0.18н | 0.01L | 0.19н | YES | 9.38A | 45.2 |
| | 0.011 | 0.19A | 0.01K | 0.20A | YES | 9.12A | 45.2 |
| 127.50 | 0.011 | 0.21ĸ | 0.01K | 0.22K | YES | 10.50A | 45.2 |
| 127.30 | 0.01B | 0.21K | 0.01E | 0.22K | YES | 10.50A | 45.2 |
| 113.25 | 0.01B | 0.23L | 0.01E | 0.24L | YES | 11.88A | 45.2 |
| 113.23 | 0.01в | 0.23L | 0.01E | 0.24L | YES | 11.88A | 45.2 |
| 00.00 | 0.01B | 0.23E | 0.01E | 0.24E | YES | 13.26A | 45.2 |
| 99.00 | 0.01B | 0.23E | 0.01L | 0.24E | YES | 13.26A | 45.2 |
| 02.75 | 0.01B | 0.23E | 0.01L | 0.24E | YES | 13.87A | 45.2 |
| 92.75 | 0.01B | 0.25E | 0.01E | 0.26E | YES | 13.52A | 45.2 |
| 70 50 | 0.01B | 0.25E | 0.00E | 0.25E | YES | 14.79A | 45.2 |
| 79.58 | 0.01B | 0.25E | 0.00E | 0.25E | YES | 14.79A | 45.2 |
| 66.43 | 0.01B | 0.24E | 0.00E | 0.25E | YES | 16.07A | 45.2 |
| 66.42 | 0.01в | 0.24E | 0.00E | 0.25E | YES | 16.07A | 45.2 |
| E2 2E | 0.01B | 0.24E | 0.00E | 0.25E | YES | 17.34A | 45.2 |
| 53.25 | 0.01B | 0.24E | 0.00E | 0.25E | YES | 17.34A | 45.2 |
| 45 50 | 0.01B | 0.24E | 0.00E | 0.25E | YES | 18.09A | 45.2 |
| 45.50 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 17.74A | 45.2 |
| 24 12 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 18.84A | 45.2 |
| 34.12 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 18.84A | 45.2 |
| 22.75 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 19.95A | 45.2 |
| 22.75 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 19.95A | 45.2 |
| 11.37 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 21.05A | 45.2 |
| 11.3/ | 0.01в | 0.25E | 0.00E | 0.26E | YES | 21.05A | 45.2 |
| 0.00 | 0.01B | 0.25E | 0.00E | 0.26E | YES | 22.15A | 45.2 |
| 0.00 | | | | | | | |

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

| TORSION | .WIND.DIR | MOMENT.w.r.t | .WIND.DIR | SHEAR.w.r.t | DOWN |
|---------|------------------|-----------------|---------------|--------------|------------|
| ft-kip | ACROSS ft-kip | ALONG ft-kip | ACROSS kip | ALONG kip | kip |
| -0.13 | 8.64 F | -2482.39 E | -0.07 | 15.66 E | 77.68 B |



SO#: 420173

Site Name: Murphy Branch FN, KY

Date: 10/12/2018

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

Pole Data

| Diameter: | 67.810 | in (flat to flat) |
|---------------|--------|-------------------|
| Thickness: | 0.5 | in |
| Yield (Fy): | 65 | ksi |
| # of Sides: | 18 | "0" IF Round |
| trength (Fu): | 80 | ksi |

Reactions

| Moment, Mu: | 9758.09 | ft-kips |
|-------------|---------|---------|
| Axial, Pu: | 93.11 | kips |
| Shear, Vu: | 61.41 | kips |

Anchor Rod Data

| Quantity: | 26 | | | | |
|----------------|------|--------------|-------------------------------|------------|-------------|
| Diameter: | 2.25 | in | Anchor Rod Results | | |
| Rod Material: | A615 | | | | |
| Strength (Fu): | 100 | ksi | Maximum Rod (Pu+ Vu/η): | 248.5 Kips | |
| Yield (Fy): | 75 | ksi | Allowable Φ*Rnt: | 260.0 Kips | (per 4.9.9) |
| BC Diam. (in): | 75 | BC Override: | Anchor Rod Interaction Ratio: | 95.6% Pass | |

Plate Data

| | | | Dase Flate nesults | | |
|----------------|-------|----------------|-------------------------------|------------|------------|
| Diameter (in): | 80.75 | Dia. Override: | | | |
| Thickness: | 2.5 | in | Base Plate (Mu/Z): | 42.7 ksi | |
| Yield (Fy): | 50 | ksi | Allowable Φ*Fy: | 45.0 ksi | (per AISC) |
| Eff Width/Rod: | 8.28 | in | Base Plate Interaction Ratio: | 94.8% Pass | |
| Drain Hole: | 2.625 | in. diameter | | | |
| | | | | | |

Raco Plato Reculte

Drain Location: 31.75 in. center of pole to center of drain hole

Center Hole: 55.5 in. diameter

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES

195' Monopole AT&T Murphy Branch FN, KY (420173) 10/12/18 REB

| Overall Loads: | | | |
|------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Factored Moment (ft-kips) | 9758.09 | | |
| Factored Axial (kips) | 93.11 | | |
| Factored Shear (kips) | 61.41 | | |
| Bearing Design Strength (ksf) | 3.75 | Max. Net Bearing Press. (ksf) | 3.28 |
| Water Table Below Grade (ft) | 999 | | |
| Width of Mat (ft) | 33 | Allowable Bearing Pressure (ksf) | 2.50 |
| Thickness of Mat (ft) | 2 | Safety Factor | 2.00 |
| Depth to Bottom of Slab (ft) | 6 | Ultimate Bearing Pressure (ksf) | 5.00 |
| Quantity of Bolts in Bolt Circle | 26 | Bearing Φs | 0.75 |
| Bolt Circle Diameter (in) | 75 | | |
| Top of Concrete to Top | | | |
| of Bottom Threads (in) | 60 | | |
| Diameter of Pier (ft) | 9 | Minimum Pier Diameter (ft) | 7.58 |
| Ht. of Pier Above Ground (ft) | 0.5 | Equivalent Square b (ft) | 7.98 |
| Ht. of Pier Below Ground (ft) | 4 | Square Pier? (Y/N) | N |
| Quantity of Bars in Mat | 71 | | |
| Bar Diameter in Mat (in) | 1 55.76 | | |
| Area of Bars in Mat (in ²) Spacing of Bars in Mat (in) | 55.76 5.56 | Recommended Spacing (in) | 5 to 12 |
| Quantity of Bars Pier | 60 | necommended Spacing (iii) | 31012 |
| 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) | 47.12 | Minimum Pier A _s (in ²) | 45.80 |
| Spacing of Bars in Pier (in) | 5.22 | Recommended Spacing (in) | 5 to 12 |
| f'c (ksi) | 4.5 | the second control of | |
| fy (ksi) | 60 | | |
| Unit Wt. of Soil (kcf) | 0.11 | | |
| Unit Wt. of Concrete (kcf) | 0.15 | | |
| | | | |
| Volume of Concrete (yd3) | 91.27 | | |
| Two-Way Shear Action: | | | |
| Average d (in) | 20 | | |
| φν _c (ksi) | 0.227 | v _u (ksi) | 0.197 |
| $\phi v_c = \phi(2 + 4/\beta_c) f'_c^{1/2}$ | 0.342 | · u (1.0.) | 0.107 |
| $\phi v_c = \phi(2 + 4/\beta_c) r_c$ $\phi v_c = \phi(\alpha_s d/b_o + 2) f'_c^{1/2}$ | 0.227 | | |
| | | | |
| $\phi \mathbf{v_c} = \phi \mathbf{4f'_c}^{1/2}$ | 0.228 | | |
| Shear perimeter, b_o (in) | 402.12 | | |
| $eta_{	extsf{c}}$ | 1 | | |
| One-Way Shear: | | | |
| | | | |
| ϕV_c (kips) | 903.2 | V _u (kips) | 550.2 |
| Stability: | | | |
| Overturning Design Strength (ft-k) | 13341.3 | Total Applied M (ft-k) | 10157.3 |
| | | | |

Pier Design:

| ϕV_n (kips) | 1069.5 | V _u (kips) | 61.4 |
|-------------------------------------------------------|--------|---------------------------------------------|---------|
| $\phi V_c = \phi 2(1 + N_u/(2000A_g))f'_c^{1/2}b_w d$ | 1069.5 | | |
| V _s (kips) | 0.0 | *** V_s max = 4 $f'_c^{1/2}b_w d$ (kips) | 2503.8 |
| Maximum Spacing (in) | 6.78 | (Only if Shear Ties are Required) | |
| Actual Hook Development (in) | 19.00 | Req'd Hook Development I _{dh} (in) | 12.17 |
| | | *** Ref. To Spacing Requirements ACI 1 | 1.5.4.3 |

Flexure in Slab:

| i ionaro ili olabi | | | |
|---------------------------------------|---------|----------------------------------|--------|
| ϕM_n (ft-kips) | 4741.6 | M _u (ft-kips) | 4683.1 |
| a (in) | 2.21 | | |
| Steel Ratio | 0.00704 | | |
| β_1 | 0.825 | | |
| Maximum Steel Ratio (ρ _t) | 0.0197 | | |
| Minimum Steel Ratio | 0.0018 | | |
| Rebar Development in Pad (in) | 147.14 | Required Development in Pad (in) | 26.45 |
| | | | |

| 0 1111 | 4 : 01/ 0 = 1 |
|----------------------------------|------------------|
| 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 |

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 | 4111300 | 2600Hz, Inc. dba ZSWITCH | Cellular | С | San Francisco | CA |
| 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 | Α | Bloomfield Hill | MI |
| View | 4110650 | Alliant Technologies of KY, L.L.C. | Cellular | D | Morristown | NJ |
| View | 44451184 | Alltel Communications, LLC | Cellular | Α | Basking Ridge | NJ |
| View | 4110850 | AltaWorx, LLC | Cellular | D | Fairhope | AL |
| View | 4107800 | American Broadband and Telecommunications Company | Cellular | D | Toledo | ОН |
| 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 | D | 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 | С | Carrollton | TX |
| View | 4111050 | BlueBird Communications, LLC | Cellular | С | New York | NY |
| View | 4202300 | Bluegrass Wireless, LLC | Cellular | Α | Elizabethtown | KY |
| View | 4107600 | Boomerang Wireless, LLC | Cellular | В | Hiawatha | IA |

| View | 4105500 | BullsEye Telecom, Inc. | Cellular | D | Southfield | MI |
|------|----------|--------------------------------------------------------|----------|---|------------------------------------------------------------------|----|
| View | 4100700 | Cellco Partnership dba Verizon Wireless | Cellular | A | Basking Ridge | LΝ |
| View | 4106600 | Cintex Wireless, LLC | Cellular | D | Rockville | MD |
| View | 4111150 | Comcast OTR1, LLC | Cellular | D | Philadelphia | PA |
| View | 4101900 | Consumer Cellular, Incorporated | Cellular | Α | Portland | OR |
| View | 4106400 | Credo Mobile, Inc. | Cellular | В | San Francisco | CA |
| View | 4108850 | Cricket Wireless, LLC | Cellular | D | San Antonio | TX |
| View | 10640 | Cumberland Cellular Partnership | Cellular | Α | Elizabethtown | KY |
| View | 4111200 | Dynalink Communications, Inc. | Cellular | С | Brooklyn | NY |
| View | 4101000 | East Kentucky Network, LLC dba Appalachian Wireless | Cellular | Α | Ivel | KY |
| View | 4002300 | Easy Telephone Service Company dba Easy Wireless | Cellular | D | Ocala | FL |
| View | 4109500 | Enhanced Communications Group, LLC | Cellular | D | Bartlesville | ок |
| View | 4110450 | Excellus Communications, LLC | Cellular | D | Chattanooga | TN |
| View | 4105900 | Flash Wireless, LLC | Cellular | С | 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 | В | Covington | LA |
| View | 4109600 | Google North America Inc. | Cellular | A | Mountain View | CA |
| View | 33350363 | Granite Telecommunications, LLC | Cellular | D | Quincy | MA |
| View | 4106000 | GreatCall, Inc. d/b/a Jitterbug | Cellular | Α | San Diego | CA |
| View | 10630 | GTE Wireless of the Midwest dba Verizon Wireless | Cellular | Α | Basking Ridge | ΝJ |
| View | 4103100 | i-Wireless, LLC | Cellular | Α | Newport | KY |
| View | 4109800 | IM Telecom, LLC d/b/a Infiniti Mobile | Cellular | D | Tulsa | ок |
| View | 22215360 | KDDI America, Inc. | Cellular | D | New York | NY |
| View | 10872 | Kentucky RSA #1 Partnership | Cellular | Α | Basking Ridge | NJ |
| View | 10680 | Kentucky RSA #3 Cellular General | Cellular | Α | Elizabethtown | ΚΥ |
| View | 10681 | Kentucky RSA #4 Cellular General | Cellular | A | Elizabethtown | KY |
| View | 4109750 | Konatel, Inc. dba telecom.mobi | Cellular | D | Johnstown | PA |
| View | 4111250 | Liberty Mobile Wireless, LLC | Cellular | С | Sunny Isles Beach | |
| View | 4111400 | Locus Telecommunications, LLC | Cellular | С | Fort Lee | NJ |
| View | 4110900 | Lunar Labs, Inc. | Cellular | D | Detroit | MI |
| View | 4107300 | Lycamobile USA, Inc. | Cellular | D | Newark | IJ |
| View | 4108800 | MetroPCS Michigan, LLC | Cellular | Α | Bellevue | WA |
| | | | | | - Alle Francisco Consideration of the second acquisite factor of | |

| View | 4109650 | Mitel Cloud Services, Inc. | Cellular | D | Mesa | AZ |
|------|----------|-----------------------------------------------------------------------|----------|--------------|-------------------|--------------|
| | | New Cingular Wireless PCS, LLC | | | | |
| View | 4202400 | dba AT&T Mobility, PCS | Cellular | Α | San Antonio | TX |
| View | 10900 | New Par dba Verizon Wireless | Cellular | Α | 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 | Α | Detroit | MI |
| View | 4110750 | Onvoy Spectrum, LLC | Cellular | D | 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 | ОН |
| View | 4202100 | Powertel/Memphis, Inc. dba T- Mobile | Cellular | Α | Bellevue | WA |
| View | 4107700 | Puretalk Holdings, LLC | Cellular | Α | Covington | GA |
| View | 4111350 | Q LINK MOBILE LLC | Cellular | С | Dania Beach | FL |
| View | 4106700 | Q Link Wireless, LLC | Cellular | В | Dania | FL |
| View | 4108700 | Ready Wireless, LLC | Cellular | В | Hiawatha | IA |
| View | 4110500 | Republic Wireless, Inc. | Cellular | D | Raleigh | NC |
| View | 4111100 | ROK Mobile, Inc. | Cellular | С | Culver City | CA |
| View | | Rural Cellular Corporation | Cellular | | 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 | Α | Carbondale | IL |
| View | 4110150 | Spectrotel, Inc. d/b/a Touch Base Communications | Cellular | D | Neptune | LΩ |
| View | 4200100 | Sprint Spectrum, L.P. | Cellular | Α | Atlanta | GA |
| View | 4200500 | SprintCom, Inc. | Cellular | Α | 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 | Α | 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 | Cellular | D | Covington | GA |
| View | 4108450 | Tempo Telecom, LLC | Cellular | D | Atlanta | GA |
| View | 4109950 | The People's Operator USA, LLC | Cellular | D | New York | NY |
| View | 4109000 | Ting, Inc. | Cellular | Α | Toronto | ON |
| i | | | | | |) |

| View | 4110400 | Torch Wireless Corp. | Cellular | D | Jacksonville | FL |
|------|---------|--------------------------------------------------------------|----------|---|--------------|----|
| View | 4103300 | Touchtone Communications, Inc. | Cellular | D | Whippany | CN |
| View | 4104200 | TracFone Wireless, Inc. | Cellular | D | Miami | FL |
| View | 4002000 | Truphone, Inc. | Cellular | D | Durham | NC |
| View | 4110300 | UVNV, Inc. d/b/a Mint Mobile | Cellular | D | Costa Mesa | CA |
| View | 4105700 | Virgin Mobile USA, L.P. | Cellular | Α | Atlanta | GA |
| View | 4110800 | Visible Service LLC | Cellular | D | Lone Tree | CO |
| View | 4106500 | WiMacTel, Inc. | Cellular | D | Palo Alto | CA |
| View | 4110950 | Wing Tel Inc. | Cellular | D | New York | NY |
| View | 4109900 | Wireless Telecom Cooperative, Inc. dba theWirelessFreeway | Cellular | D | Louisville | KY |

EXHIBIT E FAA *************** Federal Airways & Airspace Summary Report: New Construction Antenna Structure

Airspace User: Not Identified

File: Murphy Branch FN

Location: Bradfordsville, KY

Latitude: 37°-27'-17.26" Longitude: 84°-59'-26.11"

SITE ELEVATION AMSL.....962 ft. STRUCTURE HEIGHT.....199 ft. OVERALL HEIGHT AMSL.....1161 ft. SURVEY HEIGHT AMSL.....1161 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL) FAR 77.9(b): NNR (DNE Notice Slope) FAR 77.9(c): NNR (Not a Traverse Way)

FAR 77.9: NNR (No Expected TERPS® impact with DVK)

FAR 77.9: NNR (No Expected TERPS® impact 612)

FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required NNR = Notice Not Required

PNR = Possible Notice Required (depends upon actual IFR procedure) For new construction review Air Navigation Facilities at bottom of this report.

Notice to the FAA is not required at the analyzed location and height for slope, height or Straight-In procedures. Please review the 'Air Navigation'

section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL

FAR 77.17(a)(2): DNE - Airport Surface

FAR 77.19(a): DNE - Horizontal Surface

FAR 77.19(b): DNE - Conical Surface

FAR 77.19(c): DNE - CONTEGE SURFACE
FAR 77.19(d): DNE - Approach Surface
FAR 77.19(e): DNE - Approach Transitional Surface
FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: DVK: STUART POWELL FIELD

Type: A RD: 77124.53 RE: 1013.6

FAR 77.17(a)(1): DNE FAR 77.17(a)(2):

VFR Horizontal Surface:

VFR Conical Surface:

VFR Primary Surface:

VFR Approach Surface:

DNE

DNE

DNE

DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: 612: LEBANON SPRINGFIELD-GEORGE H

Type: A RD: 95444.86 RE: 866 FAR 77.17(a)(1): DNE

VFR Transitional Surface: DNE

FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.

VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4) FAR 77.17(a)(3) Departure Surface Criteria (40:1)

DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA) FAR 77.17(a)(4): DNE - No Airway Found

PRIVATE LANDING FACILITIES

No Private Landing Facilites Are Within 6 NM

AIR NAVIGATION ELECTRONIC FACILITIES

| | FAC | | ST | | | DIST | DELTA | | | GRND |
|-------|------|---------|----|-------|--------|--------|-------|----|---------------|------|
| APCH | | | | | | | | | | |
| | IDNT | TYPE | AT | FREQ | VECTOR | (ft) | ELEVA | ST | LOCATION | |
| ANGLE | BEAR | | | | | | | | | |
| | | | | | | | | | | |
| | | _ | | | | | | | | |
| | TYC | NDB | D | 27 | 255.23 | 75985 | +101 | KY | TAYLOR COUNTY | |
| .08 | | | | | | | | | | |
| | DVK | NDB | I | 31 | 55.95 | 79243 | +161 | KY | GOODALL | |
| .12 | | | | | | | | | | |
| | EWO | VOR/DME | I | 110.8 | 288.18 | 208886 | +201 | ΚY | NEW HOPE | |
| .06 | | | | | | | | | | |
| | LEX | RADAR | ON | 2750. | 27.86 | 237299 | +101 | KY | BLUE GRASS | |
| .02 | | | | | | | | | | |

CDMD

CFR Title 47, \$1.30000-\$1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station. Movement Method Proof as specified in §73.151(c) is not required. Please review 'AM Station Report' for details.

Nearest AM Station: WKDO @ 17734 meters.

Airspace® Summary Version 18.5.504

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06-28-2018 15:29:40

EXHIBIT F KENTUCKY AIRPORT ZONING COMMISSION

Cody Knox

From:

Houlihan, John F (KYTC) < John. Houlihan@ky.gov>

Sent:

Friday, July 06, 2018 8:23 AM

To:

Cody Knox

Subject:

RE: AT&T KAZC permit determination - Murphy Branch FN

No permit is required from the KAZC. Thank you

Kentucky Airport Zoning Commission (KAZC)
John Houlihan, Administrator
Department of Highways, District Six
421 Buttermilk Pike
Covington, KY 41017
Office 859-341-2700, Desk 859-341-2707 Ext. 292, Cell 502-330-3955

KAZC webpage: https://transportation.ky.gov/Aviation/Pages/airportzoning.aspx

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail or call (859) 341-2700 and destroy all copies of the original message.

From: Cody Knox < cknox@integrisite.net > Sent: Thursday, July 05, 2018 5:44 PM

To: Houlihan, John F (KYTC) < John. Houlihan@ky.gov>

Cc: Marie Glasgow < Marie.Glasgow@mastec.com >; Matt Hill < Joseph.Hill2@mastec.com >; Roy Johnson

<ri><riohnson@johnsonpm.com>; Sam Astrahan <Sam.Astrahan@mastec.com>; Steven Milana</ti>

<<u>Steven.Milana@mastec.com</u>>; Ed Coachman <edward.coachman@mastec.com>; Wayne Barnett

<wbarnett@integrisite.net>

Subject: AT&T KAZC permit determination - Murphy Branch FN

John.

AT&T is proposing to construct a new tower per the specifications below. Can you confirm if a KAZC permit is required?

Project Name: Murphy Branch FN

Latitude: 37 27 17.26 N Longitude: 84 59 26.11 W

GE: 962'

Tower height including lightning arrestor: 199'

Overall height: 1,161'

Thank you,

Cody Knox Integrisite, Inc. 214 Expo Circle, Suite 4 West Monroe, LA 71292

EXHIBIT G GEOTECHNICAL REPORT



ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES



Preliminary Geotechnical Investigation

Murphy Branch FN

Off Kentucky Highway 78 Bradfordsville, Casey County, Kentucky

ECA Project No. U3008



SUBMITTED TO:

SMW Engineering Group, Inc. 158 Business Center Drive Birmingham, AL 35244

PREPARED BY:

Environmental Corporation of America 1375 Union Hill Industrial Court, Suite A Alpharetta, GA 30004



ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES

September 24, 2018

SMW Engineering Group, Inc. 158 Business Center Drive Birmingham, AL 35244

Attention: Mr. Jeremy Sharit

Subject: Report of Preliminary Geotechnical Investigation

Murphy Branch FN

Off Kentucky Highway 78

Bradfordsville, Casey County, Kentucky

ECA Project No. U3008

Dear Mr. Sharit:

Environmental Corporation of America (ECA) is pleased to submit this report of our Preliminary Geotechnical Investigation for the proposed project. Our services were provided as authorized by an email approval dated September 17, 2018.

This report presents a review of the information provided to us, a description of the site and subsurface conditions, and our recommendations. The appendices contain a USGS Topographic Map, Project Site Survey, Local Geology, USDA Web Soil Survey map and Soil Descriptions for mapped soil types.

Purpose and Scope of Work

The purpose of this effort was to evaluate the likely site conditions so that preliminary foundation design plans can be prepared. No soil borings or testing has been conducted for this report. A final Geotechnical Investigation including borings should be conducted for the proposed tower.

Project Information

We were provided with a project survey prepared by SMW Engineering Group, Inc., and dated June 5, 2018. The proposed tower would be located off Kentucky Highway 78, Bradfordsville, Casey County, Kentucky. In general, the proposed tower compound would be located within a relatively flat terrain with surface elevations ranging between 955 to 963 feet Above Mean Sea Level (AMSL) within the proposed 10,000 (100-foot by 100- foot) square foot lease area. The

ground surface within the proposed lease area is mostly covered with low grass. We understand that plans include constructing a 199-foot tall monopole tower, approximately as shown on Figure 1 in Appendix A.

Estimated Site and Subsurface Conditions

The topography leading up to the proposed compound is mostly relatively flat. The elevation at the proposed tower location is about 962 feet AMSL. The soil survey shows two potential soil types near the proposed tower location. The soil survey described the existing site soils as mainly silt loam and silty clay loam. The descriptions of the soil types are attached in Appendix B. The geology of the site is best described by the Geological Map of State of Kentucky, Kentucky Geological Survey, and the U.S. Geological Survey, as being within Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided, with the primary soil type of Limestone and Shale. The local geology is also shown in Appendix B. In summary, the general soil profile descriptions include limestone or shale occurring at relatively shallow depth.

Based on the information provided by the USDA Web Soil Survey depth of groundwater table will likely be encountered below 80 inches.

Recommendations

Based on the anticipated soil conditions and relatively shallow residual soils, the tower will likely be supported on a shallow mat (pad and pier) foundation system. Assuming existing residual soils at the tower foundation bearing level, a nominal bearing pressure of about 3,000 pounds per square foot (psf) is likely appropriate.

We appreciate the opportunity to be of service. Please call us with any questions at (770) 667-2040.

Sincerely,

Environmental Corporation of America

Héctor A. Acosta, M.S.C.E., P.E. Principal Geotechnical Engineer

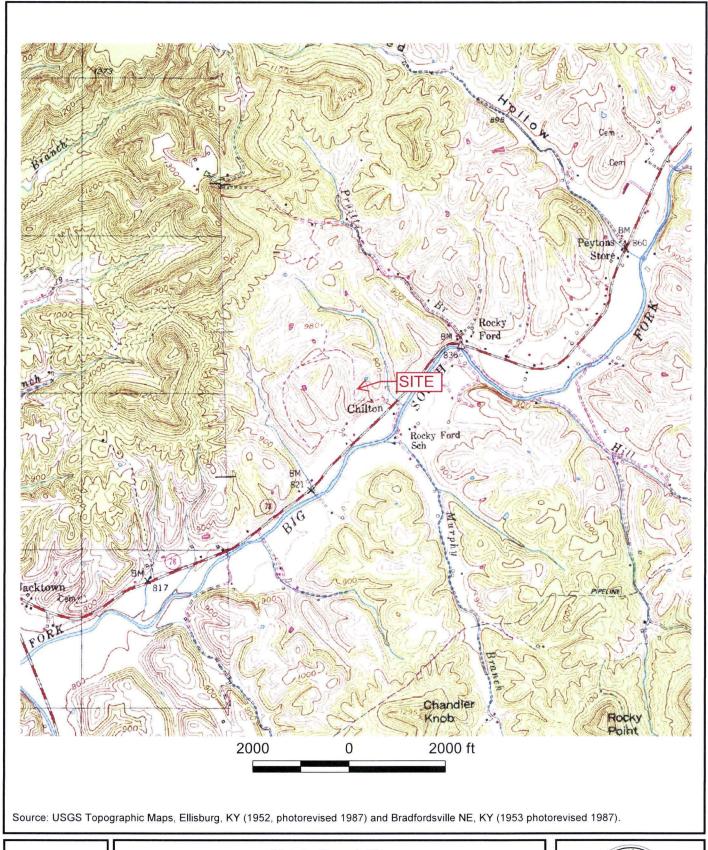
State of Kentucky Reg. No. 31144

Athulya Balakrishnan Project Engineer

Appendix-A Figure 1 – Topographic Map and Site Survey Appendix-B Local Geology, Soil Survey, and Soil Description

APPENDIX A

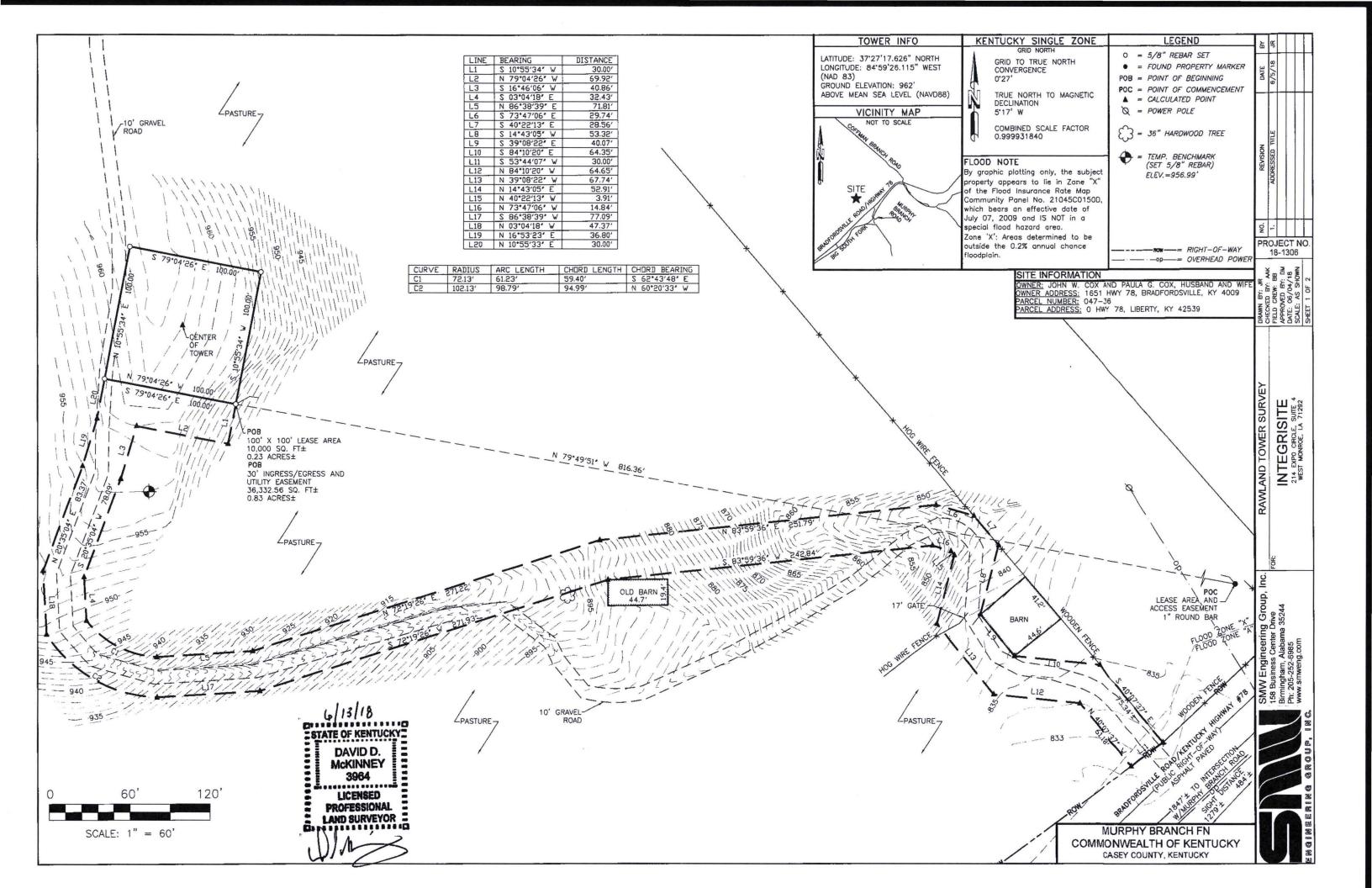
Topographic Map and Site Survey





Murphy Branch FN
Kentucky Highway 78
Bradfordsville, Casey County, Kentucky
Figure 1: Site Location Map





PARENT TRACT (TITLE)

BEGINNING at an iron pin the center of the Rolling Fork, originally William Spraggens and William Hafleys corner, thence with their division line North 42 degrees West 250 poles to a gum and whiteoak, originally Bettie A. Hoskins corner; thence with her line North 77 degrees West 47 poles to a poplar and walnut; North 15 degrees West 11 poles to a whiteoak J.G. McAnelly's corner; thence with his line South 45 degrees West 34 poles to a stake 14 poles West of a large chestnut oak; thence South 39 degrees East 266 poles to a stone at foot of a hill; thence North 55 degrees East 6 poles and 9 links to a stone; South 35 degrees East 13-1/2 poles to a stone; thence North 60 degrees East 12 links to a stone; thence South 40 degrees East 19 poles to center of the Rolling Fork; thence up the same with its center which is reduced to a straight line would be North 78 degrees East 14 poles, North 66 degrees 16 poles, North 54 East 17 poles to an iron pin in aforeside division line of said Spraggens and Hafley; thence with same North 24 degrees East 25-1/2 poles to the beginning. FXCEPT

EGINNING at a point in old line at Northeast end of culvert and running North 40 degrees West 12.32 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.08 poles to a stone in old line; thence a new line North 62 degrees East 13.30 poles to a stone in fence line at foot of hill; thence South 38 degrees East 21.60 poles to a stake at edge of Kentucky Highway #78; thence with said road South 51 degrees West 12.68 poles to the point of beginning, containing 2 acres, more or less, said description being pursuant to a survey conducted on July 22, 1971, by Lewis J. Cochran, Registered land Surveyor #1038.

100' x 100' LEASE AREA (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as follows;

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right—of—way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence N 79'04'26" W a distance of 100.00 feet to a set 5/8" rebar; Thence N 10'55'34" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar; Thence S 10'55'34" W a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 10,000 square feet (0.23 acres) of land more or less.

30' INGRESS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

A portion of John W Cox & Paula G. Cox, husband and wife tract described in Deed Book 191, Page 141 as recorded in the County Court Clerk Office for Casey County, Kentucky, situated in the Commonwealth of Kentucky in said County and being more particularly described as fallows:

COMMENCING at a 1" round bar found marking the Southeast corner of said John W & Paula Cox tract and on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway #78; Thence N 79'49'51" W a distance of 816.36 feet to a set 5/8" rebar and the POINT OF BEGINNING; Thence S 10°55'34" W a distance of 30.00 feet to a point; Thence N 79°04'26" W a distance of 69.92 feet to a point; Thence S 16'46'06" W a distance of 40.86 feet to a point; Thence S 20'35'04" W a distance of 78.09 feet to a point; Thence S 03'04'18" E a distance of 32.43 feet to a point; Thence with a curve turning to the left with an arc length of 61.23 feet, radius of 72.13 feet, chord bearing of S 62'43'48" E, chard length of 59.40 feet to a point; Thence N 86'38'39" E a distance of 71.81 feet to a point; Thence N 72'19'26" E a distance of 271.22 feet to a point; Thence N 83'59'36" E a distance of 251.79 feet to a point; Thence S 73'47'06" E a distance of 29.74 feet to a point; Thence S 40°22'13" E a distance of 28.56 feet to a point; Thence S 14°43'05" W a distance of 53.32 feet to a point; Thence S 39'08'22" E a distance of 40.07 feet to a point; Thence S 84'10'20" E a distance of 64.35 feet to a point; Thence S 40'07'37" E a distance of 75.34 feet more or less, to a point on the Northerly right-of-way line of Bradfordsville Road/Kentucky Highway 78 (public right-of-way); Thence along said right-of-way line, S 53'44'07" W a distance of 30.00 feet to a point; Thence leaving said right-of-way line, N 40'07'37" W a distance of 61.18 feet to a point; Thence N 84'10'20" W a distance of 64.65 feet to a point; Thence N 39'08'22" W a distance of 67.74 feet to a point; Thence N 14'43'05" E a distance of 52.91 feet to a point; Thence N 40'22'13" W a distance of 3.91 feet to a point; Thence N 73'47'06" W a distance of 14.84 feet to a point; Thence S 83'59'36" W a distance of 242.84 feet to a point; Thence S 72"19'26" W a distance of 271.93 feet to a point; Thence S 86'38'39" W a distance of 77.09 feet to a point; Thence with a curve turning to the right with an arc length of 98.79 feet, radius of 102.13 feet, chord bearing of N 60°20'33" W, chord length of 94.99 feet to a point; Thence N 03°04'18" W a distance of 47.37 feet to a point; Thence N 20°35'04" E a distance of 83.37 feet to a point; Thence N 16'53'23" E a distance of 36.80 feet to a point; Thence N 10'55'33" E a distance of 30.00 feet to a set 5/8" rebar; Thence S 79'04'26" E a distance of 100.00 feet to a set 5/8" rebar and the POINT OF BEGINNING. Containing 36,332.56 square feet (0.83 acres) of land more or less.

PLOTTABLE EXCEPTIONS

U.S. Title Solutions.

Commitment for Title Insurance Commitment File No. 58911-KY1712-5030 Commitment for Title Insurance Commitment Reference No. FA 14397272 Date December 21, 2017 @ 8:00 a.m.

Schedule B, Section II

| Exception No. | Instrument | Comment Standard exceptions. Contains no surveying matters. | | |
|---------------|--------------------|--------------------------------------------------------------------------------------------------------|--|--|
| 1 -6 | N/A | | | |
| 7 | Book 182, Page 607 | Does affect the subject lease area and easements, is blanket in nature, and is not shown hereon. | | |
| 8 | Book 8, Page 761 | Contains no surveying matters. | | |

SURVEYOR'S CERTIFICATION

I certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.

DAVID D.

MCKINNEY

3964

LICENSED

PROFESSIONAL

LAND SURVEYOR

G/13/18

SURVEYOR'S NOTES

- 1. This is an Rawland Tower Survey, made on the ground under the supervision of a Kentucky Registered Land Surveyor. Date of field survey is May 21, 2018.
- 2. The following surveying instruments were used at time of field visit: Nikon NPL-352, Total Station, Reflectorless and Hiper + Legacy E RTK. GD 1HZ.
- 3. Bearings are based on Kentucky Single Zone State Plane Coordinates NAD 83 by GPS observation.
- 4. No underground utilities, underground encroachments or building foundations were measured or located as a part of this survey, unless otherwise shown. Trees and shrubs not located, unless atherwise shown.
- 5. Benchmark used is a GPS Continuously Operating Reference Station, PID DK3324. Onsite benchmark is as shown hereon. Elevations shown are in feet and refer to NAVD 88.
- 6. This survey was conducted for the purpose of an Rawland Tower Survey only, and is not intended to delineate the regulatory jurisdiction of any federal, state, regional or local agency, board, commission or other similar entity.
- 7. Attention is directed to the fact that this survey may have been reduced or enlarged in size due to reproduction. This should be taken into consideration when obtaining scaled data.
- 8. This Survey was conducted with the benefit of an Abstract Title Search.
- 9. This survey meets or exceeds the Minimum Standards of Practice as required by the State of Kentucky for a Class A survey as defined by 201 KAR 18:150.
- 10. Field data upon which this map or plot is based has a closure precision of not less than one-foot in 15,000 feet (1':15,000') and an angular error that does not exceed 10 seconds times the square root of the number of angles turned. Field traverse was not adjusted.
- 11. This survey is not valid without the original signature and the original seal of a state licensed surveyor and mapper.
- 12. This survey does not constitute a boundary survey of the Parent Tract. Any parent tract property lines shown hereon are from supplied information and may not be field verified.
- 13. The Lease Area, and Access and Utility Easement shown hereon was provided by Integrsite dated May 11, 2018 in direct correlation with existing monuments and physical evidence found through inspection and may not depict actual rights of occupancy.
- 14. No water lines were located at the time of this survey.
- 15. Zoning information not provided at the time of this survey

| | 8 | 8 | | | |
|------------|-------------|-----------------|--|--|--|
| ld cy E | DATE | 6/5/18 | | | |
| unless | | | | | |
| 3 | l | | | | |
| and | REVISION | ADDRESSED TITLE | | | |
| and | NO. | - | | | |
| | PROJECT NO. | | | | |

18-1306

AWN BY: JR
HECKED BY: AAK
ELD CREW: BB
PPROVED BY: DM
ATE: 06/04/18
CALE: AS SHOWN

PARENT TRACT OVERVIEW NOT TO SCALE CORBAT & KENDRICK APN: 032-05 TODD & TRACIE HOSKINS INTEGRISITE
214 EXPO CIRCLE, SUITE 4
WEST MONROE, LA 71292 APN: 032-06 JOE & MARILYN JEAN EDGER APN: 047-35 PARENT PARCEL neering Group, I Center Drive Alabama 35244 JOHN W COX & PAULA G. COX HUSBAND AND WIFE APN: 047-36 DEED BOOK 191, PAGE 141 125 ACRES (PER TAX CARD) JOHN W & PAULA COX APN: 032-13 -POC JAMES & ROBIN SULLIVAN APN: 047-36A -BIG SOUTH MURPHY BRANCH FN COMMONWEALTH OF KENTUCKY CASEY COUNTY, KENTUCKY

APPENDIX B

Local Geology, Soil Survey, and Soil Descriptions

(https://www.usgs.gov/)

Mineral Resources (https://minerals.usgs.gov/) / Online Spatial Data (/) / Geology (/geology/) / by state (/geology/state/) / Kentucky (/geology/state/state.php?state=KY)

Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided

XML (/geology/state/xml/KYOdc;0) JSON (/geology/state/json/KYOdc;0)

Drakes Formation and Grant Lake and Calloway Creek Limestones, undivided; in Boyle, Casey, and Marion Counties

State Kentucky (/geology/state/state.php?state=KY)

Name Drakes Formation and Grant Lake and Calloway Creek Limestones,

undivided

Geologic age Ordovician

Lithologic

Major

constituents

Sedimentary > Carbonate > Limestone lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale

Minor

Sedimentary > Clastic > Mudstone > Shale lithologies and lithology percentages estimated from stratigraphic column on paper source map; collectively these units are about 55% limestone, 30% dolostone (dolomite) (some of it nodular), and 15% interbedded shale

interbedded shale

Comments collectively, in west-central Kentucky, these units range from 30-137 m

thick

References

Noger, M.C., compiler, 1988, Geologic map of Kentucky: sesquicenntennial edition of the Kentucky Geological Survey: U.S. Geological Survey and the Kentucky Geological Survey, scale 1:500,000.

NGMDB

NGMDB product page for 16355

product

(https://ngmdb.usgs.gov/Prodesc/proddesc_16355.htm)

Counties

Boyle (/geology/state/fips-unit.php?code=f21021) - Casey

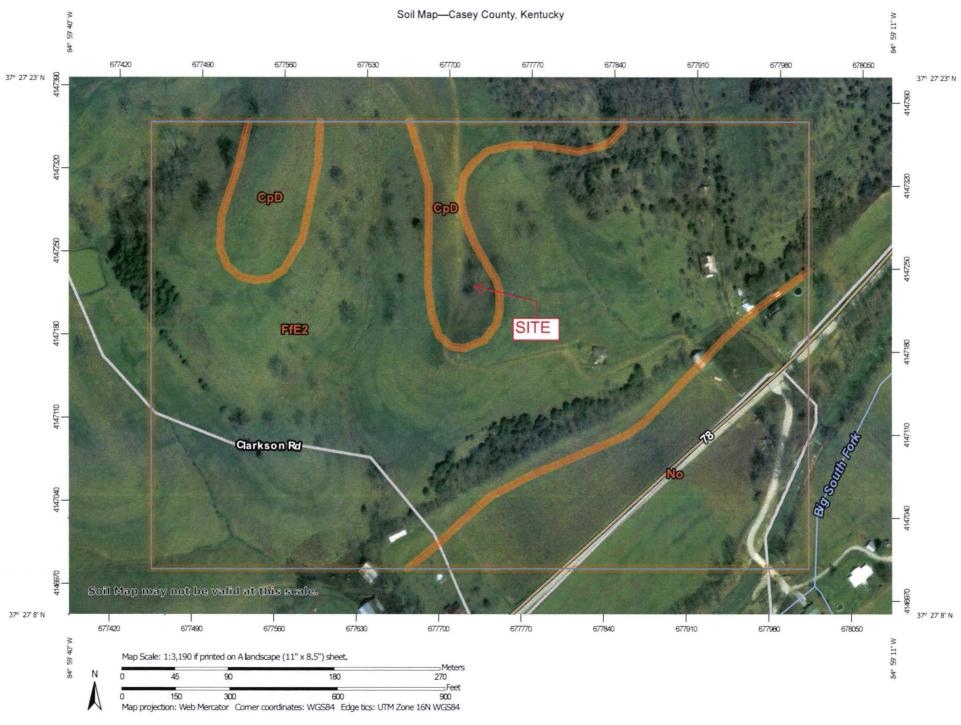
(/geology/state/fips-unit.php?code=f21045) - Marion (/geology/state/fips-

unit.php?code=f21155) - Taylor (/geology/state/fips-unit.php?

code=f21217)

DOI Privacy Policy (https://www.doi.gov/privacy) | Legal (https://www.usgs.gov/laws/policies_notices.html) |
Accessibility (https://www2.usgs.gov/laws/accessibility.html) | Site Map (https://www.usgs.gov/sitemap.html) |
Contact USGS (https://answers.usgs.gov/)

U.S. Department of the Interior (https://www.doi.gov/) | DOI Inspector General (https://www.doioig.gov/) |
White House (https://www.whitehouse.gov/) | E-gov (https://www.whitehouse.gov/omb/management/egov/) |
No Fear Act (https://www.doi.gov/pmb/eeo/no-fear-act) | FOIA (https://www2.usgs.gov/foia)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

-

Soil Map Unit Points

Special Point Features

(0)

Blowout

D

Borrow Pit

X

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole Slide or Slip

Sodic Spot

Spoil Area Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

+++

US Routes

Major Roads Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Casey County, Kentucky Survey Area Data: Version 18, Sep 27, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 26, 2015—Oct 25, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|-----------------------------|-------------------------------------------------------------------------------|--------------|----------------|
| CpD | Colyer-Trappist complex, 12 to 20 percent slopes | 4.9 | 9.3% |
| FfE2 | Faywood-Fairmount-Rock outcrop complex, 20 to 30 percent slopes, eroded | 37.1 | 71.3% |
| No | Nolin silt loam, 0 to 2 percent slopes, occasionally flooded | 10.1 | 19.3% |
| Totals for Area of Interest | | 52.1 | 100.0% |

Established Series Rev. JMR 08/2001

COLYER SERIES

The Colyer series consists of shallow, well drained, slowly permeable soils formed in clayey residuum of weathered, black, highly fissile, bituminous shale. These sloping to very steep soils are on uplands. Slopes range from 6 to 60 percent. The mean annual temperature is 57 degrees F., and the mean annual precipitation is about 46 inches.

TAXONOMIC CLASS: Clayey-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

TYPICAL PEDON: Colyer shally silty clay loam on a 25 percent convex south facing hillside, forested. (Colors are for moist soil unless otherwise stated.)

Oi--3 to 1 inches; loose, undecomposed, leaf and twig litter from mixed hardwood pine forest.

Oe--1 to 0 inch; black (10YR 2/1) decomposed litter.

A--0 to 1 inch; dark grayish brown (10YR 4/2) shaly silty clay loam; moderate fine granular structure; friable; many roots; 15 percent shale fragments, reddish brown on fresh broken surface; very strongly acid, abrupt wavy boundary. (1 to 4 inches thick)

AB--1 to 4 inches; brown (7.5YR 5/4) shaly silty clay loam; moderate fine granular structure; friable, many roots; 20 percent black shale fragments; extremely acid; gradual wavy boundary. (2 to 6 inches thick)

Bw--4 to 9 inches; brown (7.5YR 5/4) shaly silty clay; weak medium subangular blocky structure; firm; sticky and slightly plastic; common roots; few shiny pressure faces on peds; 45 percent black shale fragments; extremely acid; clear smooth boundary. (5 to 15 inches thick)

C--9 to 14 inches; mottled brown (7.5YR 4/4) and yellowish red (5YR 4/6) very shally silty clay; massive and relict shale structure; firm; 80 percent black shale fragments, dark reddish on broken surface; extremely acid; clear wavy boundary. (0 to 10 inches thick)

R--14 inches; black (5YR 2/1) highly fissile hard black shale.

TYPE LOCATION: Clark County, Kentucky; about 10 miles east-southeast of Winchester, 1970 feet north of Indian Fields P. O., then east 1640 feet to road junction, then 2625 feet on left fork, then 75 feet to right of road.

RANGE IN CHARACTERISTICS: Depth to bedrock and solum thickness range from 8 to 20 inches. Reaction ranges from extremely acid through medium acid in the A horizon and from very strongly acid to extremely acid in the B and C horizon.

The A horizon has hue of 10YR or 2.5YR, value of 2 to 4, and chroma of 1 to 4. Texture is silt loam or silty clay loam and their channery and very channery modifiers. Rock fragments range from 5 to 40 percent.

The AB horizons has hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 2 to 6. Texture is silt loam or silty clay loam and their channery, very channery and extremely channery modifiers. Shale fragments range from 10 to 65 percent.

The Bw horizon has hue of 10YR, 7.5YR, or 5YR, value of 4 or 5, and chroma of 4 or 6, and some pedons have mottles in shades of red, brown, and yellow. Texture of the fine-earth is silty clay loam, silty clay, or clay and their very channery and extremely channery modifiers. Shale fragments range from 35 to 65 percent.

The C horizon has colors like those of the Bw horizon and some pedons also have mottles in shades of gray or olive. Texture of the fine-earth is silty clay, clay, or silty clay loam and their very channery and extremely modifiers. Shale fragments range from 35 to 90 percent.

The R horizon is hard fissile shale.

COMPETING SERIES: This is the only member of this family. In closely related families are the Gilpin, Litz, Rohan, and Weikert series. Gilpin soils have argillic horizons with less than 35 percent clay, less than 35 percent coarse fragments, and are 20 to 40 inches to bedrock. Litz soils have shaly or very shaly silt loam B horizons and bedrock exceeds a depth of 20 inches and averages about 35 inches. Rohan soils have less than 35 percent coarse fragments. Weikert soils have shaly, very shaly, channery, or very channery silt loam B horizons.

GEOGRAPHIC SETTING: Sloping to very steep upland areas with slopes of about 6 to 60 percent. The regolith is clayey residuum from black, highly fissile, bituminous shales. Mean annual temperature ranges from 47 degrees to 57 degrees F., and the mean annual precipitation ranges from 40 to 49 inches.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the competing <u>Rockcastle</u> series and the <u>Muse</u>, <u>Shrouts</u>, <u>Tilsit</u>, and <u>Trappist</u> series. Muse, Shrouts, and Trappist soils have argillic horizons, and are more than 20 inches to bedrock. Tilsit soils have fragipans.

DRAINAGE AND PERMEABILITY: Well drained, runoff is rapid. Permeability is slow.

USE AND VEGETATION: Most areas are in forest or pasture. Many cleared areas have become idle and are reverting to forest. The native forests have oak, red and sugar maple, hickory, ash, gum, dogwood, beech, and Virginia and shortleaf pine as the dominant species.

DISTRIBUTION AND EXTENT: Colyer soils are extensive in the Knobs and Eastern Pennyroyal regions of Kentucky, and in southern Indiana, and southern Ohio. Extent is large.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Morgantown, West Virginia

SERIES ESTABLISHED: Centre County, Pennsylvania, 1908.

REMARKS: Diagnostic horizon and features in this pedon are:

Ochric epipedon, 0 to 4 inches, (A, AB) Cambric horizon, 4 to 9 inches, (BW) Lithic contact at 14 inches.

National Cooperative Soil Survey U.S.A.

Established Series Rev. JMR:JDM 11/2005

TRAPPIST SERIES

The Trappist series consists of moderately deep, well drained soils that formed in residuum weathered from acid shale on ridgetops, side slopes and benches. Slopes range from 2 to 60 percent.

TAXONOMIC CLASS: Fine, mixed, semiactive, mesic Typic Hapludults

TYPICAL PEDON: Trappist silt loam--in woodland on a complex 40 percent slope. (Colors are for moist soil.)

Oi--1.5 to 0 inch; hardwood leaves and needles.

A--0 to 2 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; very friable; many fine roots; 5 percent shale channers; very strongly acid; abrupt smooth boundary. (1 to 3 inches thick)

E--2 to 6 inches; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; many fine roots; 5 percent shale channers; very strongly acid; abrupt smooth boundary. (0 to 7 inches thick)

BE--6 to 9 inches; strong brown (7.5YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; common fine roots; 5 percent shale channers; very strongly acid; gradual smooth boundary. (0 to 5 inches thick)

Bt1--9 to 21 inches; strong brown (7.5YR 5/6) silty clay; moderate medium subangular blocky structure; firm, sticky and slightly plastic; common fine roots; common faint clay films on faces of peds; 10 percent shale channers; very strongly acid; gradual wavy boundary. (5 to 20 inches thick)

Bt2--21 to 28 inches; strong brown (7.5YR 5/6) silty clay; common medium distinct yellowish red (5YR 4/6) and light yellowish brown (10YR 6/4) lithochromic mottles; moderate medium angular blocky structure; very firm, sticky and plastic; common faint clay films on faces of peds; 10 percent shale channers; very strongly acid; gradual wavy boundary. (5 to 15 inches thick)

C--28 to 35 inches; variegated yellowish red (5YR 4/6), yellowish brown (10YR 5/6) and light brownish gray (10YR 6/2) very channery clay; relic platy structure; very firm, sticky and plastic; 60 percent shale channers; very strongly acid; clear wavy boundary. (0 to 20 inches thick)

R--35 inches; hard black fissile shale.

TYPE LOCATION: Rowan County, Kentucky; on a south facing side slope about 80 feet east of Kentucky Highway 801 and 900 feet north of the intersection of Kentucky Highways 801 and 1722; 1 mile north of the community of Farmers; 38 degrees, 09 minutes, 17 seconds N. latitude and 83 degrees, 33 minutes, 10 seconds W. Longitude; USGS Farmers Quadrangle.

RANGE IN CHARACTERISTICS: Thickness of the solum and depth to hard shale or siltstone bedrock ranges from 20 to 40 inches. Rock fragments, mostly channers of shale or siltstone, range from 0 to 35 percent in the solum and from 25 to 75 in the C horizon. Coverage of surface stones ranges from 0 to 10 percent. Reaction ranges from strongly to extremely acid, except where limed.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4 and chroma of 1 to 4. The Ap horizon, where present, has hue of 10YR or 7.5YR, value of 4 or 5 and chroma of 2 to 4. Fine-earth texture is silt loam, silty clay loam or loam.

The E horizon has hue of 10YR, 7.5YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Fine-earth texture is similar to the A horizon.

The Bt horizon has hue of 10YR, 7.5YR or 5YR, value of 4 to 6 and chroma of 4 to 8. Fine-earth texture is silty clay loam, silty clay or clay. Some pedons are variegated with lithochromic mottles in shades of red or brown.

Some pedons have BC horizons with colors and textures similar to the Bt horizon and lithochromic mottles that include shades of gray.

The C horizon has hue of 10YR, 7.5YR or 5YR, value of 4 to 6 and chroma of 4 to 8. Lithochromic mottles in shades of red, brown or gray are common. Fine-earth texture is silty clay, clay, clay loam or silty clay loam.

Some pedons have a thin Cr horizon 3 to 6 inches thick.

The R horizon is hard fissile shale or siltstone.

COMPETING SERIES: These are <u>Boden</u>, <u>Braddock</u>, <u>Buffstat</u>, <u>Christian</u>, <u>Clifton</u>, <u>Clover</u>, <u>Danripple</u>, <u>Flagspring</u>, <u>Goresville</u>, <u>Groseclose</u>, <u>Howell</u>, <u>Muse</u>, <u>Rapidan</u>, <u>Sequoia</u>, <u>Totier</u> and <u>Unison</u> series; the tentative <u>Casville</u>, <u>Mount Rush</u>, <u>Spears Mountain</u> and <u>Yellowbottom</u> series; and the inactive <u>Warminster</u> series. All of these soils are more than 40 inches to hard bedrock with the exception of the Mount Rush, Sequoia and Spears Mountain series. The Mount Rush and Spears Mountain series weathered from metamorphic or igneous rock. The Sequoia series is a close competitor, but has paralithic contact above 40 inches with soft shale or siltstone and is not commonly associated with black shale.

GEOGRAPHIC SETTING: Uplands including ridgetops, side slopes and benches. The soil developed mostly in residuum with some influence from colluvial creep on steeper slopes. Annual temperature ranges from about 53 to 57 degrees F. with a mean of 54 degrees. Annual precipitation ranges from 40 to 48 inches with a mean of 47 inches.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Berea, Colyer, Gilpin, Greenbriar, Jessietown, Latham, Muse, Rohan, Shelocta and Tilsit series. Berea, Greenbriar and Jessietown soils are fine-silty. Colyer soils are clayey-skeletal and Rohan soils are loamy-skeletal. Both of these soils are less than 20 inches deep to bedrock. Gilpin and Shelocta soils are fine-loamy. Latham soils are moderately well drained and have a paralithic contact. Tilsit soils have a fragipan. Greenbriar, Muse, Shelocta and Tilsit soils are all more than 40 inches deep to bedrock.

DRAINAGE AND PERMEABILITY: Well drained with slow permeability. Runoff is high on slopes less than 5 percent and very high on slopes greater than 5 percent.

USE AND VEGETATION: Principally hay or pasture, corn, tobacco, small grains and truck or fruit farms. Steeper areas are reverting to native forest of upland oaks, hickory, pine, yellow-poplar, blackgum, dogwood and persimmon.

DISTRIBUTION AND EXTENT: The Knobs region of Kentucky and similar areas in Ohio and Indiana. Extent is large.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Morgantown, West Virginia

SERIES ESTABLISHED: Scott County, Indiana; 1959.

REMARKS: Diagnostic horizons in the pedon are:

Ochric epipedon: 0 to 2 inches, A

Argillic horizon: 9 to 28 inches, Bt1, Bt2

Lithic contact at 35 inches.

National Cooperative Soil Survey U.S.A.

Casey County, Kentucky

CpD—Colyer-Trappist complex, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: If4y Elevation: 730 to 1,190 feet

Mean annual precipitation: 42 to 61 inches Mean annual air temperature: 46 to 68 degrees F

Frost-free period: 169 to 210 days

Farmland classification: Not prime farmland

Map Unit Composition

Colyer and similar soils: 60 percent Trappist and similar soils: 35 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Colyer

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Concave

Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 3 inches: silt loam

H2 - 3 to 10 inches: very channery silty clay
H3 - 10 to 14 inches: extremely channery silty clay

R - 14 to 24 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent

Depth to restrictive feature: 8 to 20 inches to lithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D Hydric soil rating: No

Description of Trappist

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Concave

Parent material: Clayey residuum weathered from acid shale

and/or siltstone

Typical profile

H1 - 0 to 6 inches: silt loam H2 - 6 to 26 inches: silty clay

H3 - 26 to 34 inches: very channery silty clay Cr - 34 to 38 inches: weathered bedrock R - 38 to 48 inches: unweathered bedrock

Properties and qualities

Slope: 12 to 20 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock; 20 to

40 inches to paralithic bedrock Natural drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very

low to moderately high (0.00 to 0.20 in/hr) Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C Hydric soil rating: No

Minor Components

Carpenter

Percent of map unit: 1 percent Hydric soil rating: No

Rock outcrop, shale

Percent of map unit: 1 percent

Hydric soil rating: No

Lenberg

Percent of map unit: 1 percent

Hydric soil rating: No

Faywood

Percent of map unit: 1 percent

Hydric soil rating: No

Severely eroded soils

Percent of map unit: 1 percent Hydric soil rating: No

Data Source Information

Soil Survey Area: Casey County, Kentucky Survey Area Data: Version 18, Sep 27, 2017

EXHIBIT H DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site

- 1. Beginning at 625 Court House Square, Liberty, Kentucky, head northwest (towards Campbellsville Street) and travel approximately 266 feet.
- 2. Turn right onto Campbellsville Street and travel approximately 233 feet.
- 3. Turn left onto KY-49 N / Hustonville Street and travel approximately 0.1 miles.
- 4. Make a slight left to remain on KY-49 N / Hustonville Street and continue for approximately 11.2 miles.
- 5. Turn right onto KY-78 and travel approximately 1.8 miles.
- 6. The site is on the left. The site coordinates are:
 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof 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: Lexington Cell Site Number: 198441 Cell Site Name: Murphy Branch FN Fixed Asset Number: 14397272

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 John W. Cox and Paula G. Cox, husband and wife, having a mailing address of 1651 Highway 78. Bradfordsville, KY 40009 ("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 0 Highway 78, in the County of Casey, 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 within forty five (45) business days of the Effective Date. The Option will be for an initial term of one (i) 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

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 or 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 or 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.
- Tenant may use the Premises for the transmission and reception of 2. PERMITTED USE. 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 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 Fenant 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 (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 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.

- **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 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.
- 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. 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.

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 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 the 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 the Tenant and may be removed by Tenant at any time during the Term. Within one hundred twenty (120) days after the termination of this Agreement. Tenant will, to the extent reasonable, restore the Premises to its condition at the commencement of the Agreement, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted. Footings, foundations, and concrete will be removed to a depth of one foot below grade. Notwithstanding the foregoing. Tenant will not be responsible for the replacement of any trees, shrubs, or other vegetation, nor will Tenant be required to remove from the Premises or the Property any underground utilities.

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.
- 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.
- **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 #: 198441; Cell Site Name: Murphy Branch FN (KY)

Fixed Asset No.: 14397272

575 Morosgo Drive Atlanta, GA 30324

With a copy to:

New Cingular Wireless PCS, LLC

Attn.: Legal Department

Re: Cell Site #: 198441; Cell Site Name: Murphy Branch FN (KY)

Fixed Asset No.: 14397272

208 S. Akard Street Dallas, TX 75202-4206

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

If to Landlord:

John & Paula Cox 1651 Highway 78

Bradfordsville, KY 40009

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 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 #: 198441; Cell Site Name: Murphy Branch (KY)

Fixed Asset No: 14397272

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 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, 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 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 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.
- (1) 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" |
|---------------------------------------------|
| John W. Cox By: July W. |
| Print Name: John W. Cox Date: 3 - 29 - 20/8 |
| |
| Paula G. Cox By: Scarce State |
| Print Name: Paula G. Cox Date: |

LANDLORD ACKNOWLEDGMENT

| STATE OF KENTUCKY |) |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COUNTY OF Lincol- |) ss:) |
| Cox, who acknowledged under oat | h, that he/she/they is/are the person/officer named in the within instrument, same in his/her/their stated capacity as the voluntary act and deed of the ontained. |
| | Notary Public: Why State at large. My Commission Expires: 11-010-2018 |
| | My Commission Expiles: 11-06-6018 |

"TENANT"

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

By: AT&T Mobility Corp
Its: Manager

/

Print Name: Jason Allday

Its: Area Manager - TN/KY

Date:

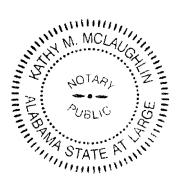
TENANT ACKNOWLEDGMENT

| CO | r a | TT | OF | A 1 | A D | A | N 4 A | |
|----|-----|-----|-----|-----|-----|---|-------|--|
| | ΙA | TE. | Ur. | ΑI | .AB | Α | MA | |

) ss:

COUNTY OF JEFFERSON

On the day of day of day of day of day of day, 2018, before me personally appeared Jason Allday, and acknowledged under oath that he is the Area Manager – TN/KY 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: Kathy M. M. M. Aughlin My Commission Expires: 10 26 2020

EXHIBIT 1

DESCRIPTION OF PREMISES

Page 1 of 3

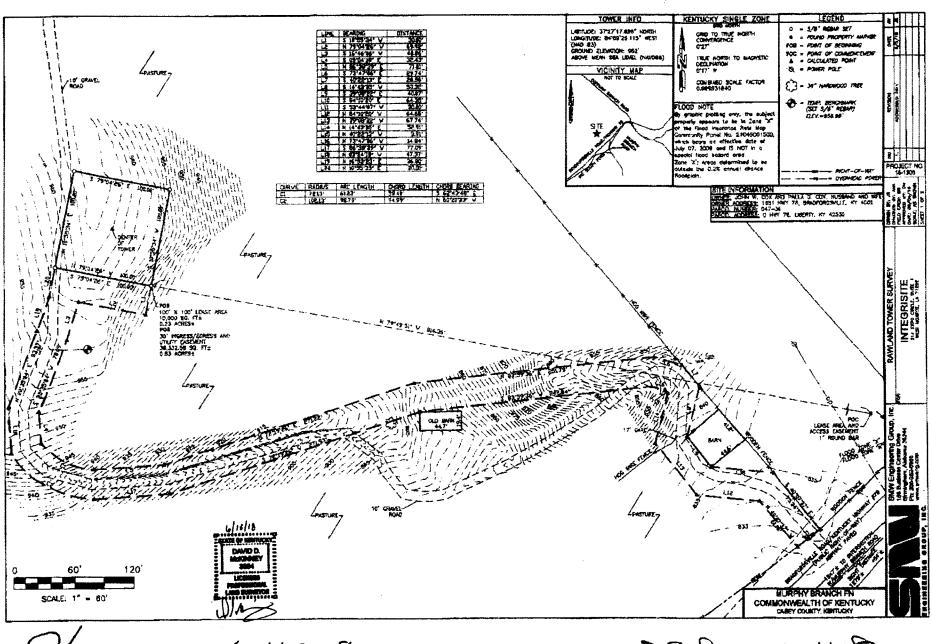
to the Option and Lease Agreement dated 1000 2018, by and between John W. Cox and Paula G. Cox, husband and wife, as Landlord, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows: Deed Book 191, Page 141

BEGINNING at an iron pun the senter of the Rolling Fork, originally William Spraggers and William Hafleys corner; thence with their division line North 40 degrees West 201 poles to a jum and white tak, iriginally Bestie A. Hiskins corner: thence with her line North on degrees West 47 poles to a poplar and walnut; North 15 degrees West 11 poles to a white cak J.G. McAmelly's corner; chence with his line South 45 degrees West 34 poles to a stake 34 poles west of a large chestnut bak; thence south 39 degrees East 166 poles to a stone at foot of a holl; thense North 58 degrees East & poles and 9 links to a stone; South 35 degrees East 13-1.1 poles a spone; thence North 40 degrees East 11 links to a spone; thence south 40 degrees East 19 poles to center of the Rolling Fork; thence up the same with its denter which is reduced to a straight line would be North 76 degrees East 14 piles, Nirth 66 degrees 16 piles, North 84 East 17 poles to an iron pin in afizesaid division line of said Spraggens and Hafley; thenre with same Mirth 24 degrees East 18-1/2 poles to the beginning.

ENCEPT

BEGINNING at a point in tid line at northeast end of oulvert and running North 40 degrees West 12.30 poles to a stake in drain; thence with an offset South 60 degrees West 12 links to a post and stone; thence North 35 degrees West 12.38 poles to a stone in old line; thence a new line North 62 degrees East 13.30 poles to a stone in fence line at foot of hill; thence South 33 degrees East 11.60 poles to a stake at edge of Mentucky Highway \$73; thence with said road South 81 degrees West 12.63 poles to the point of beginning, containing 1 acres, more or less, said description being pursuant to a survey conducted in July 12, 1871, by Lewis 7. Cochran, Registered land Surveyor \$1.38.



Jh w. up 6-14-2018

3446 JE. Cox 6446

PARENT TRACT (ITTLE)

BEDDEBARC G. set from plin the senter of the Ruting Fork, originally stition Spreguess, and stitium Helleys corner, thence with Use's shifteen lines storth 42 degrees West 230 poles to a guar and with Senten Hell 11 poles to entire the Hell 12 poles to enter the For Horis 17 degrees lines, 42 poles to a poles or or widner, from that is senten Hest 11 poles to a entered Like lockably corner; blance with his the South 45 degrees West 34 pows to a store at 19 poles West of a long-chestori not; brunca Senth 35 degrees Eart 246 pows to a store the dot of a long-chestori not; brunca Senth 35 degrees Eart 246 pows to a store thank North 50 degrees Eart 12 shipt to or store; blance South 40 degrees Eart 15 poles to overlar of the Robbet to a store; thereous the sente which is reduced to a straight files would be benefit if yellow to North 56 degrees Eart 14 poles, prin is oforseide division the of seid Spregues and Horie; thereous with some first 24 degrees Eart 27 poles to the

to an item gift is anomate assessment of each sproppine and history; therea with some from 25 degrees con 20-1/2 power to the tenglashing. Color of the state of the color of

 $100 \times 100^\circ$ LEASE AREA (AS-SURVEYED). A purifier of John W East Researched in Deed Book 191, Pope 141 or recorded in the Cookly Court Cases Chicae for East, Courty, Renkook, situated in the Commonwealth of Kantussy in said Courty and being more porticipanty described as

Politers:

COMMENCED at a 1º reune per found marking the Bourhoost cerner of edic John W. & Pould Cox tract and on the hostwelly right-of-way the of Brogelondswille Read/Mentucing Highway \$18. Thence M. 1784/51° M. a distance of \$18.53° feet to a set \$7.6° retoo and the POHT Of Bettiments T. Thomas N. 1784/51° M. a distance of 100.00 feet to a set \$7.6° retoo; Thence N. 1785/51° distance of 100.00 feet to set \$7.6° retoo; Thence S. 1785/51° N. a distance of 100.00 feet to a set \$7.6° retoo; Thence S. 1785/51° N. a distance of 100.00 feet to a set 5/8" rettor and the POSIT OF BEDRINGS Containing 10,000 square that (0,25 occes) at land more or less

30' INGRESS/EGRESS & UTILITY EASEMENT (AS-SURVEYED)

30' INGRESS/ECRESS & UTILITY EASEMENT (AS-SURVEYED)
A portion of John W Dat & Poule C. Cae, husband and wife trool described in Deed book 181, Page 141 as recorded in the County Court Certific for Cooky, County, Senteurory, shouldn't be the Covernmenth of Kentucky in serial County and husey more particularly described as (special conference).

COMBURGATION of a 1' report but hund marking the Brutheast garder of sects show M & Mules County and husey more particularly described as (special conference).

COMBURGATION of a 1' report but hund marking the Brutheast garder of sects show M & Mules County and on the Brutheast (special conference).

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Selection of J2-34 beek to a peach Thereon in J2-35 beet to a peach there is a special Thereon of J2-35 beet to a peach thereon is J2-35 beet to a peac oquare feet (0.83 ecroe) of sand more or less.

PLOTTABLE EXCEPTIONS

Commitment for Title Insurance Commitment File No. 58911—KC1712-5030 Commitment for Title Insurance Commitment Riference No. FA 1439/272 Dots December 21, 2017 8 5:00 c.m. Schedule B, Section 1

| Exception No. | instrument | Concret |
|---------------|--------------------|---------------------------------------------------------------------------------------------------|
| () - (C) | K/A | Sear-eard exceptions. Contains no surreging matters. |
| Ø | Seck 182, Page 607 | Does offect the subject lease erea and assertants, is blacket in seture, and is not share hereous |
| (8) | Book & Page 781 | Contains no surveying matters. |

SURVEYOR'S CERTIFICATION

Festucia License No. 3684

I centry that all parts of this survey and drawing have been completed in recordance with the current receivements of the Practice for Surveying in the Septe of Kentucky to the best of my keomiodge, information, and belief.



mannager er errich

SURVEYOR'S NOTES

- This is an Royalor Tower Survey, seeds on the ground under the supervision of a Kentucky Registered Land Surveyor. Data of field arrays in May 21, 2018.
 The fellowing surveying hydroments were used at time of field visit; Niker MPL-352, Total Station, Refeaturiese and Miser: + Englag
- nin, cu 1442. 3. Bearing are based on Kestucky Single Zehe State Place Coordinates 1960 83 by GPE observation.

 4. Re incompround stables, underpresent desendant periods to be Safet foundations were measured or leasted as a part of Pala observation states. Treas see Safetta and located, unless otherwise shapes.

 5. Benchmark used is a GPE Continuously Operating Reference Station, PRO DX3324, Dhaite beachmark to deliberate harden.

 shapes on all Refer data first to MMD 88. or leasted as a part of this survey, until

- ancer on it seet can have to level as.

 8 This service was conducted for the purpose of an Roveland Towar Survey copy, and it rast intended to delinate the requisitory jurisdiction of any federal, state, segland, or local agency, borrel, commission or other similar with.

 7. Attendion it distributes to the fed that this parvey may sever been recorded or witinged in size due to reproduction. This smooth be faith this pressure and obtaining social data.

 8. This Sarvey was conducted with the beside of in Alexand Tale Search.

 8. This sarvey meets are seclected the Minimum Standards of Practice or required by the State of Reductly for or Class A curvey on Affects or required by the State of Reductly for or Class A curvey on Affects or required by the State of Reductly for or Class A curvey on
- 10. Refd data upon which this map or plot is based hos a prosume precision of not use thos one-loot in 15,000 feet (1'15,000') and on angulor error that does not occase 10 seconds times the square root of the number of angles kinsed. Refd frovens was not.

PROJECT NO

- edjusted.

 11. This survey is not valid without the original signature and the original seed of a abile licensed surveyor and shapper.

 12. This survey does set constitute a beardary survey of the Parcel Truct. Any porent tract property fines shown herefor an form trapping information and many not be field everlied.

 13. The success Avec, and Adoes and Whitly Expensed seems herefore was provided by integrable deleted May 11, 2018 for direct correlation with additing measurements can payeled evidence found through trappetion and may not experience of deleted May 11, 2018 for direct correlation with additing measurements can payeled evidence found through trappetion and may not experience output highest direct correlation.

 14. No worker loss were specied or the time of this survey.

 15. Zooing information and pureleted of the time of this survey.

PARENT TRACT OVERVEW NOT TO SCALE CORBAT & KENDRICK APN: 032-05 7000 & TRACE HOSINES AFRE 032-OF FEGRISITE DE & MARLIN JEAN EDGER APPR 047-35 PARENT PARCEL
JOHN W COX & PAULA O COX
HUSBAND AND WIFE
APIC 07-7-36
OCED GOOK 151, PAGE 141 125 ACRES (PER TAX CARD) SOID W & MALIA COX AFR: D32-17 MES & ROSK SILLIAN 50 50 TH MURPHY BRANCH FM COMMONWEALTH OF KENTUCKY CHEEY COUNTY, KIENTUCKY

then, wy 6-14-2018

EXHIBIT 11

ENVIRONMENTAL DISCLOSURE

Landlord represents and warrants that the Property, as of the date of this Agreement, is free of hazardous substances except as follows:

1. NONE.

[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.

Landlord Signature

Landlord Signature

EXHIBIT J NOTIFICATION LISTING

Murphy Branch FN - Notice List

Hoskins Todd & Tracie 50 Fairway View Dr Liberty, KY 42539

Corbat & Kendrick Mark-Pam-Lance-Jan 3425 W 700 N Markle, IN 46770

Ellis & Ellis Edgar Joe & Marilyn Jean 5427 W KY 78 Hustonville, KY 40437

Cox John W & Paula 1651 KY 78 Bradfordsville, KY 40009

Sullivan James & Robin 1711 KY 78 Bradfordsville, KY 40009

Griffin Berniece 121 Murphy Branch Rd Hustonville, KY 40437

Coyle Geneva Murphy Estate c/o Suzanne Coyle 4124 Sunmeadow Ln Indianapolis, IN 46228

Coyle & Zinn 4124 Sunmeadow Ln Indianapolis, IN 46228

EXHIBIT K COPY OF PROPERTY OWNER NOTIFICATION



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: Murphy Branch FN

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 on Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" 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 2018-00359 in any correspondence sent in connection with this matter.

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 625 Court House Square, Liberty, Kentucky, head northwest (towards Campbellsville Street) and travel approximately 266 feet.
- 2. Turn right onto Campbellsville Street and travel approximately 233 feet.
- 3. Turn left onto KY-49 N / Hustonville Street and travel approximately 0.1 miles.
- 4. Make a slight left to remain on KY-49 N / Hustonville Street and continue for approximately 11.2 miles.
- 5. Turn right onto KY-78 and travel approximately 1.8 miles.
- 6. The site is on the left. The site coordinates are:
 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof 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

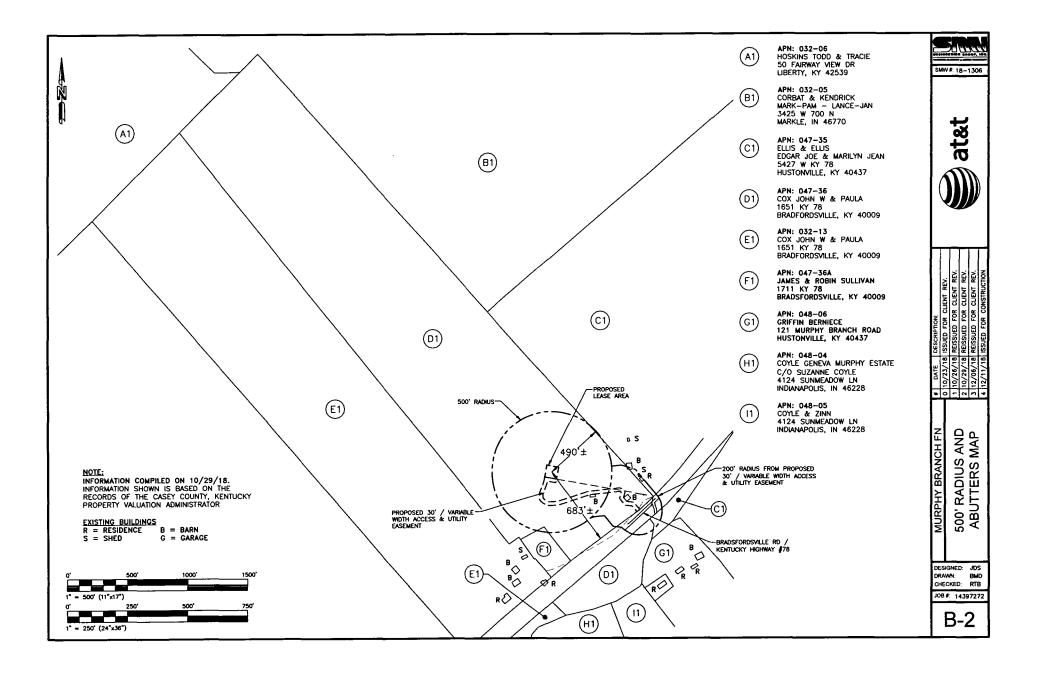


EXHIBIT L COPY OF COUNTY JUDGE/EXECUTIVE NOTICE



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. Randy Dial County Judge Executive 625 Courthouse Square Liberty, KY 42539

RE:

Notice of Proposal to Construct Wireless Communications Facility

Kentucky Public Service Commission Docket No. 2018-00359

Site Name: Murphy Branch FN

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 Highway 78, Liberty, Kentucky 42539 (37°27'17.626" North latitude, 84°59'26.115" 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 2018-00359 in any correspondence sent in connection with this matter.

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Sincerely, David A. Pike Attorney for Applicant

enclosures

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- 4. Make a slight left to remain on KY-49 N / Hustonville Street and continue for approximately 11.2 miles.
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 - a. North 37 deg 27 min 17.626 sec
 - b. West 84 deg 59 min 26.115 sec



Prepared by: Aaron Roof 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

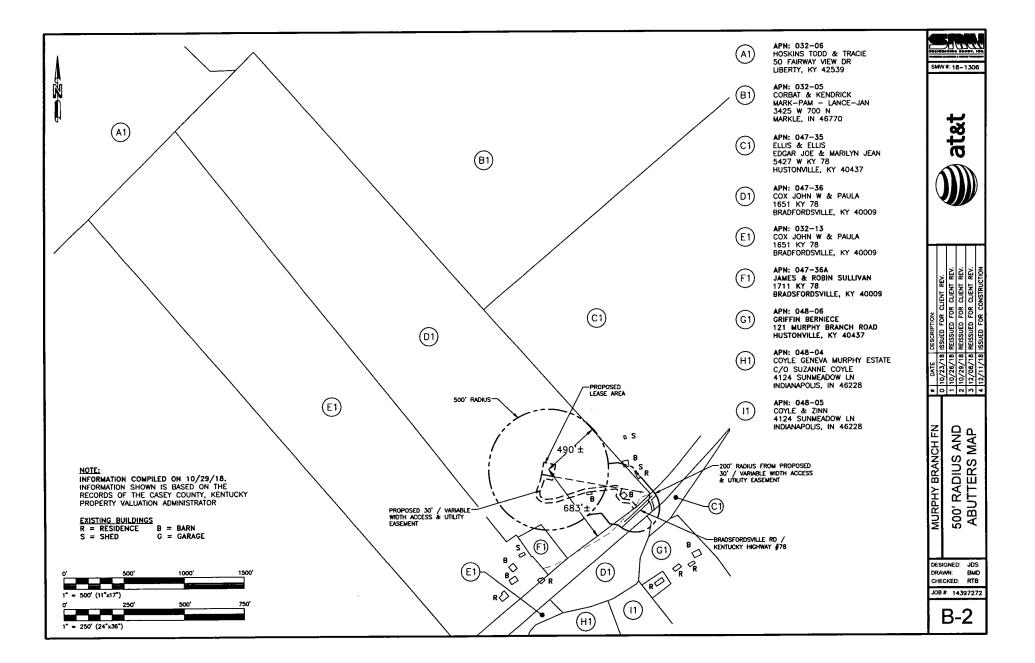


EXHIBIT M COPY OF POSTED NOTICES AND NEWSPAPER NOTICE ADVERTISEMENT

SITE NAME: MURPHY BRANCH FN 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 2018-00359 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 2018-00359 in your correspondence.

TELEPHONE: 606-787-7171

The Casey County News P.O. Box 40 Liberty, KY 42539

RE:

Legal Notice Advertisement

Site Name: Murphy Branch FN

Dear Casey County News:

Please publish the following legal notice advertisement in the next edition of *The* Casey County 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 а new wireless communications facility on a site located on Highway 78 in Liberty, KY 42539 (37°27'17.626" North latitude, 84°59'26.115" 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 2018-00359 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,

Aaron L. Roof Pike Legal Group, PLLC

EXHIBIT N COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Lat: 37.449429 Lon: -84.988761 Radius: .4 miles

Murphy Branch Search Area