

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

In the Matter of:

THE APPLICATION OF )  
NEW CINGULAR WIRELESS PCS, LLC, )  
A DELAWARE LIMITED LIABILITY COMPANY, )  
D/B/A AT&T MOBILITY )  
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC ) CASE NO.: 2021-00187  
CONVENIENCE AND NECESSITY TO CONSTRUCT )  
A WIRELESS COMMUNICATIONS FACILITY )  
IN THE COMMONWEALTH OF KENTUCKY )  
IN THE COUNTY OF HICKMAN )

SITE NAME: INGRAM BARGE

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**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. 4<sup>th</sup> Street, Suite 2400, Louisville, KY 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. Applicant is a limited liability company organized in the State of Delaware on October 20, 1994.

4. Applicant attests that it is in good standing in the state in which it is organized and further states that it is authorized to transact business in Kentucky.

5. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant entity is attached as part of **Exhibit A** pursuant to 807 KAR 5:001: Section 14(3).

6. 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.

7. 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.

8. To address the above-described service needs, Applicant proposes to construct a WCF at 112 Bottery Road Columbus, KY 42032 (36° 45' 35.679142" North latitude, 89° 06' 36.912318" 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 the Ingram Barge Company LLC, a Tennessee limited liability company pursuant to a Deed recorded at Deed Book 119, Page 27 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**.

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

10. 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**.

11. 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**.

12. 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.

13. Documentation confirming that notice to the Federal Aviation Administration (FAA) is not required for this site is attached as **Exhibit E**.

14. A copy of the approval issued by the Kentucky Airport Zoning Commission ("KAZC") for the proposed tower is attached as **Exhibit F**.

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

engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this exhibit.

16. 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.

17. 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**.

18. 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.

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

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

21. **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**.

22. 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.

23. 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**.

24. 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**.

25. The general area where the proposed facility is to be located is a mix of agricultural and rural residential uses. There are no residential structures located within 500' of the proposed tower location.

26. 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**.

27. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area.

28. All Exhibits to this Application are hereby incorporated by reference as if fully

set out as part of the Application.

29. 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,



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



## LIST OF EXHIBITS

- A - Certificate of Authority & FCC License Documentation
- B - Site Development Plan:
  - 500' Vicinity Map
  - Legal Descriptions
  - Flood Plain Certification
  - Site Plan
  - Vertical Tower Profile
- C - Tower and Foundation Design
- D - Competing Utilities, Corporations, or Persons List
- E - Airspace Documentation
- F - Kentucky Airport Zoning Commission
- G - Geotechnical Report
- H - Directions to WCF Site
- I - Copy of Real Estate Agreement
- J - Notification Listing
- K - Copy of Property Owner Notification
- L - Copy of County Judge/Executive Notice
- M - Copy of Posted Notices and Newspaper Notice Advertisement
- N - Copy of Radio Frequency Design Search Area

**EXHIBIT A**  
**CERTIFICATE OF AUTHORITY & FCC LICENSE**  
**DOCUMENTATION**

**Commonwealth of Kentucky**  
**Alison Lundergan Grimes, Secretary of State**

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Alison Lundergan Grimes  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Authorization**

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Authentication number: 216299  
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

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I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,


**NEW CINGULAR WIRELESS PCS, LLC**

, a limited liability company authorized under the laws of the state of Delaware, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 14, 1999.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 28<sup>th</sup> day of May, 2019, in the 227<sup>th</sup> year of the Commonwealth.



  
Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
216299/0481848

**REFERENCE COPY**

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

<b>Call Sign</b> KNKN830	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA443	<b>Channel Block</b> A
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003291192

<b>Market Name</b> Kentucky 1 - Fulton
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Grant Date	Effective Date	Expiration Date	Five Yr Build-Out Date	Print Date
08-30-2011	08-31-2018	10-01-2021		

**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	36-32-58.2 N	088-19-52.1 W	162.8	215.9	1044609

Address: SOUTH OF 521 MIDWAY ROAD (76098)

City: MURRAY County: CALLOWAY State: KY Construction Deadline:

**Antenna: 1**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	90.905	315.534	257.251	45.036	1.831	0.631	0.653	5.479

**Antenna: 2**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	0.189	0.181	2.710	24.477	46.412	26.231	3.140	0.165

**Antenna: 3**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	93.187	5.247	0.653	0.792	2.286	40.640	253.641	324.312

**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.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	36-40-48.5 N	088-59-38.9 W	125.6	97.5	1043413

Address: 368 US HIGHWAY 51 NORTH (76095)

City: Clinton County: HICKMAN State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	46.473	43.365	8.875	2.867	0.271	1.698	13.116	39.622

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)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	16.262	75.054	100.598	95.375	87.529	27.061	32.457	15.298

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	26.123	10.219	13.943	31.412	138.549	180.577	193.913	76.304

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	36-45-30.7 N	088-10-11.4 W	156.1	96.3	1043411

Address: 771 Rudolph Road (76099)

City: Hardin County: MARSHALL State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	138.810	181.853	201.332	78.257	26.754	10.412	13.921	31.435

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)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	0.495	0.767	13.331	103.933	243.934	88.607	9.081	2.358

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	121.085	34.811	25.322	9.647	14.734	94.724	185.217	194.265

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	36-57-02.0 N	089-04-57.4 W	139.6	35.1	

Address: 966 Westvaco Road (76102)  
City: WICKLIFFE County: BALLARD State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	208.387	279.525	57.987	6.279	2.348	0.861	2.044	43.197

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)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	13.096	122.483	310.652	139.984	16.567	3.121	0.637	1.151

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	1.083	3.141	55.641	235.301	265.480	45.044	5.015	1.649

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	36-31-12.4 N	088-50-41.5 W	144.2	122.2	1030665

Address: 550 Powell Road (76108)  
City: FULTON County: HICKMAN State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.600	50.500	50.000	62.400	74.100	82.600	70.400	68.900
Transmitting ERP (watts)	54.186	259.791	165.189	15.440	1.821	0.520	0.538	2.272

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)	54.600	50.500	50.000	62.400	74.100	82.600	70.400	68.900
Transmitting ERP (watts)	37.483	3.445	0.681	0.543	0.696	23.278	173.429	255.845

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-38-43.9 N	088-28-32.2 W	171.9	129.8	1210819

Address: 1211 Bazzell Cemetery Road (76104)  
City: Murray County: CALLOWAY State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	90.670	314.927	257.500	45.061	1.817	0.634	0.658	5.547

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-38-43.9 N	088-28-32.2 W	171.9	129.8	1210819

Address: 1211 Bazzell Cemetery Road (76104)

City: Murray County: CALLOWAY State: KY Construction Deadline: 10-17-2014

Antenna: 4

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	0.367	0.330	5.484	55.361	112.914	58.679	6.523	0.289

Antenna: 5

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	92.571	5.224	0.656	0.800	2.278	41.111	254.363	324.895

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	36-36-41.4 N	088-47-03.9 W	155.7	98.4	1215493

Address: 13111 State Route 45 South (76105)

City: Wingo County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	75.324	249.922	174.975	24.513	3.151	0.522	1.154	5.702

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)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	0.327	2.041	16.058	48.846	56.920	53.682	10.688	3.498

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	52.956	5.694	1.994	0.772	1.841	39.724	185.306	249.412

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-01-59.6 N	088-55-53.8 W	137.2	81.7	1061534

Address: HIGHWAY 358 SOUTH (76094)

City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	112.389	322.213	224.476	23.789	1.892	0.660	0.706	9.624

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-01-59.6 N	088-55-53.8 W	137.2	81.7	1061534

Address: HIGHWAY 358 SOUTH (76094)  
City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

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)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	0.245	0.296	9.047	63.327	119.917	49.080	4.913	0.289

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	61.077	6.560	2.321	0.892	2.139	46.212	218.148	287.895

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	37-02-00.0 N	088-22-10.0 W	105.5	106.7	1040303

Address: 641 GARY JOHNSON ROAD (76096)  
City: CALVERT CITY County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	19.290	27.291	31.707	11.704	2.348	0.517	1.589	4.904

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)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	0.103	0.173	3.333	26.500	50.592	22.618	2.382	0.161

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	51.334	5.515	1.916	0.726	1.742	37.531	178.683	239.865

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	36-52-41.6 N	088-12-19.4 W	132.3	94.5	1223751

Address: 3018 Barge Island Road (76116)  
City: Benton County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	64.257	218.461	153.987	21.410	2.758	0.447	1.004	4.863



Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	36-52-41.6 N	088-12-19.4 W	132.3	94.5	1223751

Address: 3018 Barge Island Road (76116)

City: Benton County: MARSHALL State: KY Construction Deadline: 10-17-2014

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)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	0.516	0.812	13.931	109.389	254.428	92.990	9.535	2.468

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	126.395	36.677	26.446	10.150	15.357	99.601	194.625	203.444

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	37-06-39.7 N	088-57-32.4 W	118.3	86.6	1244919

Address: 2967 BANDANA ROAD (76122)

City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	40.898	65.024	70.503	22.298	3.898	0.957	2.616	9.032

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)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	0.519	25.920	110.565	221.603	140.992	214.122	87.608	63.085

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	37.744	5.696	3.296	2.226	3.676	28.040	60.416	72.478

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-48-47.4 N	089-01-13.9 W	114.0	92.7	1244912

Address: 461 COUNTY ROAD 1235 (76123)

City: ARLINGTON County: CARLISLE State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	106.670	236.325	87.322	9.136	2.326	0.497	0.777	13.791

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-48-47.4 N	089-01-13.9 W	114.0	92.7	1244912

Address: 461 COUNTY ROAD 1235 (76123)

City: ARLINGTON County: CARLISLE State: KY Construction Deadline: 10-17-2014

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)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	3.771	6.725	70.667	194.932	224.510	93.220	19.059	10.392

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	17.405	2.960	0.738	2.081	7.101	31.894	50.141	56.076

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	36-32-49.7 N	088-09-16.0 W	128.6	77.7	1245399

Address: 10475 STATE ROAD 121 (76124)

City: NEW CONCORD County: CALLOWAY State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	103.508	96.740	121.896	67.061	24.395	17.896	22.126	33.816

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)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	0.291	1.775	14.241	42.943	50.803	47.977	9.728	3.207

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	131.978	37.385	27.253	10.383	15.864	101.405	199.819	210.869

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	36-33-30.0 N	088-35-22.0 W	172.2	98.7	1041880

Address: 2539 State Rte 94E (100720)

City: Sedalia County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	118.798	346.026	241.383	25.538	2.032	0.686	0.737	10.121

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	36-33-30.0 N	088-35-22.0 W	172.2	98.7	1041880

Address: 2539 State Rte 94E (100720)

City: Sedalia County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	0.101	0.148	0.723	2.670	2.039	2.501	0.544	0.100

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	39.858	3.632	0.525	0.681	3.083	30.083	155.327	190.084

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	116.175	337.516	238.141	25.039	2.002	0.669	0.719	9.904

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	0.100	0.100	0.108	1.032	1.990	0.939	0.099	0.100

Antenna: 8

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	39.129	3.555	0.510	0.662	3.020	29.428	154.053	187.149

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	36-38-26.2 N	088-16-00.1 W	165.8	90.8	1030663

Address: 1431 Van Cleave Road

City: MURRAY County: CALLOWAY State: KY Construction Deadline: 03-19-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	99.973	347.694	284.408	49.684	2.009	0.693	0.722	6.047

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)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	0.658	0.593	9.481	98.900	202.269	103.412	11.469	0.466

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	102.904	5.789	0.721	0.870	2.492	44.530	280.630	358.642

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	37-01-59.2 N	088-32-46.3 W	104.9	60.7	

Address: 311 PUGH ROAD (82847)  
City: PADUCAH County: MCCRACKEN State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	138.239	395.682	273.086	31.636	2.365	0.791	0.870	14.102

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)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	0.870	0.945	31.495	230.326	421.829	159.645	11.045	1.137

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	1.780	0.299	0.112	0.233	0.252	1.208	2.817	2.371

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	36-59-09.8 N	088-21-18.6 W	108.2	95.4	1222232

Address: 1285 US HIGHWAY 95 (93609)  
City: CALVERT CITY County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	114.888	331.792	230.236	24.563	1.953	0.671	0.707	9.579

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)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	0.719	1.299	23.038	188.836	348.890	135.248	7.214	1.404

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	38.772	3.498	0.494	0.647	2.930	29.401	150.126	182.816

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	37-03-27.6 N	088-39-35.9 W	126.5	56.4	1261390

Address: 4147 Alben Barkley Drive (99179)  
City: Paducah County: MCCRACKEN State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	63.658	183.190	130.542	23.950	3.395	0.525	0.398	6.814

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)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	0.323	0.908	12.412	76.128	155.305	62.287	7.839	1.323

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	47.164	5.084	1.161	0.385	3.481	30.943	146.763	183.338

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	36-36-12.1 N	089-01-51.1 W	101.2	60.7	

Address: 5151 State Route 1529 (115776)  
City: Clinton County: HICKMAN State: KY Construction Deadline: 10-17-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	278.250	103.782	10.449	2.715	0.593	0.966	15.867	122.648

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)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	7.844	85.062	223.646	261.822	111.972	23.150	11.903	4.338

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	30.528	12.489	16.284	37.081	166.124	217.556	229.754	89.752

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	37-00-56.6 N	088-43-49.8 W	143.3	71.6	1261050

Address: 2136 Mayfield Metropolis Road (109666)

City: Paducah County: MCCRACKEN State: KY Construction Deadline: 10-17-2014

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	156.876	63.244	5.131	0.692	0.325	0.405	10.985	82.231

**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)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	3.414	33.471	169.860	202.694	40.839	2.592	0.626	0.446

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	1.525	0.525	0.550	7.646	91.503	257.113	180.615	19.227

**Control Points:**

**Control Pt. No. 1**

Address: 1650 Lyndon Farms Court

City: LOUISVILLE County: State: KY Telephone Number: (502)332-4700

**Waivers/Conditions:**

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 MATHREW  
NEW CINGULAR WIRELESS PCS, LLC  
208 S AKARD ST., RM 1015  
DALLAS, TX 75202

<b>Call Sign</b> KNLH653	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

**FCC Registration Number (FRN): 0003291192**

<b>Grant Date</b> 04-11-2017	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b>
<b>Market Number</b> BTA339	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Paducah-Murray-Mayfield, KY			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**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.

Grant conditioned upon consummation of the assignment of license to Banana Communications, LLC within 180 days of June 9, 2008, per Memorandum Opinion and Order, DA 08-1380, released June 9, 2008.

**Conditions:**

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

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

**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** KNLH653

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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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

<b>Call Sign</b> WPSJ971	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 06-03-2011	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 05-29-2021	<b>Print Date</b>
<b>Market Number</b> BTA339	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 1	
<b>Market Name</b> Paducah-Murray-Mayfield, KY			
<b>1st Build-out Date</b> 05-29-2006	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**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 herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** WPSJ971

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> WQGD472	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

**FCC Registration Number (FRN):** 0003291192

<b>Grant Date</b> 12-18-2006	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 12-18-2021	<b>Print Date</b>
<b>Market Number</b> CMA443	<b>Channel Block</b> A	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Kentucky 1 - Fulton			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** WQGD472

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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DUPLICATE

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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

<b>Call Sign</b> WQGD606	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

**FCC Registration Number (FRN): 0003291192**

<b>Grant Date</b> 12-18-2006	<b>Effective Date</b> 02-20-2019	<b>Expiration Date</b> 12-18-2021	<b>Print Date</b>
<b>Market Number</b> BEA072	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Paducah, KY-IL			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** WQGD606

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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UNRECORDED COPY

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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

<b>Call Sign</b> WQGD759	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 12-18-2006	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 12-18-2021	<b>Print Date</b>
<b>Market Number</b> BEA073	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Memphis, TN-AR-MS-KY			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**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, WTBS Docket No. 02-353, rel. April 20, 2006.

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

**Conditions:**

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

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**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** WQGD759

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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700 MHz Relicensed Area Information



**EXHIBIT B**

**SITE DEVELOPMENT PLAN:**

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



**CONTRACTOR NOTES:**  
 IF INADVERTENT DISCOVERIES OF NATIVE AMERICAN CULTURAL MATERIALS OR HUMAN REMAINS ARE MADE DURING CONSTRUCTION, ALL WORK SHOULD CEASE AND POTENTIALLY AFFECTED TRIBES, AS WELL AS THE STATE HISTORIC PRESERVATION OFFICE SHOULD BE NOTIFIED IMMEDIATELY.

**DIRECTIONS**

FROM AT&T MTSO: 4510 OHARA DRIVE, EVANSVILLE, IN 47711  
 TAKE N US-41 S TO PENNYRILE PKWY IN HENDERSON 15.1 MI, HEAD NORTHEAST ON OHARA DR TOWARD SPORTSPLEX BL 0.1 MI, TURN LEFT ONTO BERGDOLT RD 0.4 MI, TURN LEFT ONTO HITCH AND PETERS RD 0.5 MI, TURN RIGHT ONTO LYNCH RD 0.6 MI, USE ANY LANE TO TURN LEFT ONTO US-41 S 0.5 MI, TAKE THE EXIT TOWARD IN-66 W/DIAMOND AVE 0.2 MI, TURN LEFT ONTO N US-41 S, ENTERING KENTUCKY 10.4 MI, KEEP LEFT TO CONTINUE ON US-41 S 2.4 MI, DRIVE FROM I-69 TO MAYFIELD. TAKE EXIT 22 FROM I-69 128 MI, KEEP LEFT TO CONTINUE ON PENNYRILE PKWY, FOLLOW SIGNS FOR OWENSBORO 1.2 MI, CONTINUE ONTO I-69/PENNYRILE PKWY 42.6 MI, KEEP RIGHT AT THE FORK TO STAY ON I-69, FOLLOW SIGNS FOR PADUCAH 38.4 MI, TAKE EXIT 68 B TO MERGE ONTO I-24 W/I-69 S TOWARD PADUCAH 16.2 MI, USE THE LEFT LANE TO MERGE ONTO I-69 29.5 MI, TAKE EXIT 22 FOR KY-80 TOWARD MAYFIELD/FANCY FARM 0.2 MI, FOLLOW KY-80 W TO KY-58 W IN HICKMAN COUNTY 28.5 MI, TURN RIGHT ONTO KY-80 W/W BROADWAY/FANCY FARM RD CONTINUE TO FOLLOW KY-80 W 8.3 MI, TURN RIGHT ONTO KY-339 N/KY-80 W 249 FT, TURN LEFT ONTO KY-80 W 6.4 MI, TURN LEFT TO STAY ON KY-80 W 11.8 MI, TURN LEFT ONTO KY-123 S/KY-80 W 1.5 MI, TURN RIGHT ONTO E HOOVER PKWY 0.1 MI, SLIGHT LEFT TO STAY ON E HOOVER PKWY 203 FT, TURN RIGHT ONTO KY-123 N/KY-58 W 226 FT, CONTINUE STRAIGHT ONTO KY-58 W DESTINATION WILL BE ON THE LEFT.

FROM COUNTY SEAT: 110 E CLAY ST E, CLINTON, KY 42031  
 HEAD WEST ON KY-58 W/W CLAY ST TOWARD N JEFFERSON ST CONTINUE TO FOLLOW KY-58 W 9.5 MI, CONTINUE STRAIGHT TO STAY ON KY-58 W DESTINATION WILL BE ON THE LEFT.

DRAFTER NAME: CONNOR SHEEHAN PHONE: (919) 674-5879



**SCOPE OF WORK:**

ZONING DRAWINGS FOR:  
 CONSTRUCTION OF A NEW UNMANNED TELECOMMUNICATIONS FACILITY.

SITE WORK: NEW TOWER, UNMANNED WALK UP CABINET ON A 10'-0"X17'-0" PLATFORM, GENERATOR ON A 10'-0"X17'-0" PLATFORM, AND UTILITY INSTALLATIONS.

**CONTACT INFORMATION**

FIRE DEPARTMENT:	COLUMBUS VOLUNTEER FIRE DEPARTMENT PHONE: (270) 677-4034
POLICE DEPARTMENT:	CLINTON CITY POLICE DEPARTMENT PHONE: (270) 653-5871

**SITE SUMMARY**

SCOPE TYPE:	RAW-LAND
OCCUPANCY TYPE:	TELECOMMUNICATIONS
STRUCTURE HEIGHT:	195'
OVERALL HEIGHT:	199'
STRUCTURE TYPE:	MONOPOLE
LATITUDE:	36° 45' 35.679142" N (36.759911)
LONGITUDE:	-89° 06' 36.912318" W (-89.110253)
PROPOSED LEASE AREA:	4,200 SQFT
JURISDICTION:	HICKMAN COUNTY
COUNTY:	HICKMAN
POWER COMPANY:	KENTUCKY UTILITIES
TELCO COMPANY:	AT&T


**PROJECT DIRECTORY**

APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AT&T MOBILITY 462 S. 4TH STREET, SUITE 2400 LOUISVILLE, KY 40202
PROJECT MANAGER:	MASTEC NETWORK SOLUTIONS 1975 JOE B JACKSON PARKWAY MURFREESBORO, TN 371127 MATT HILL PHONE: (615) 339-5218
SITE DESIGN:	MASTEC ENGINEERING, PLLC 507 AIRPORT BLVD, SUITE 111 MORRISVILLE, NC 27560 CONTACT: RAPHAEL MOHAMED PHONE: (919) 674-5895

**SHEET INDEX**

SHEET	DESCRIPTION	REV.	REV. DATE
T-1	TITLE SHEET	1	03/23/2021
	SITE SURVEY		
M-1	500' RADIUS AND ABUTTERS MAP	1	03/23/2021
C-1	OVERALL SITE LAYOUT	1	03/23/2021
C-2	COMPOUND LAYOUT	1	03/23/2021
C-3	TOWER ELEVATION	1	03/23/2021

**GENERAL NOTES**



THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE HANDICAP ACCESS IS NOT REQUIRED. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED. NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER/ANTENNA MOUNT STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER.

**CODE COMPLIANCE**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

- 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
- 2018 KBC
- 2017 NEC

# NSB - RAWLAND ZONING DRAWINGS



FA #: **15246752** SITE ID: **INGRAM BARGE**

SITE NAME:  
**INGRAM BARGE**

SITE ADDRESS:  
**112 BOTTERY ROAD  
 COLUMBUS, KY 42032  
 (HICKMAN COUNTY)**



03/23/2021  
 RAPHAEL MOHAMED, P.E.  
 KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM
03/23/2021	CONSTRUCTION	1	RM

DRAWN BY: CTS  
 CHECKED BY: CZB  
 APP'VD BY: RM  
 MNS PROJECT NO: 24225

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SITE ID:  
**INGRAM BARGE**

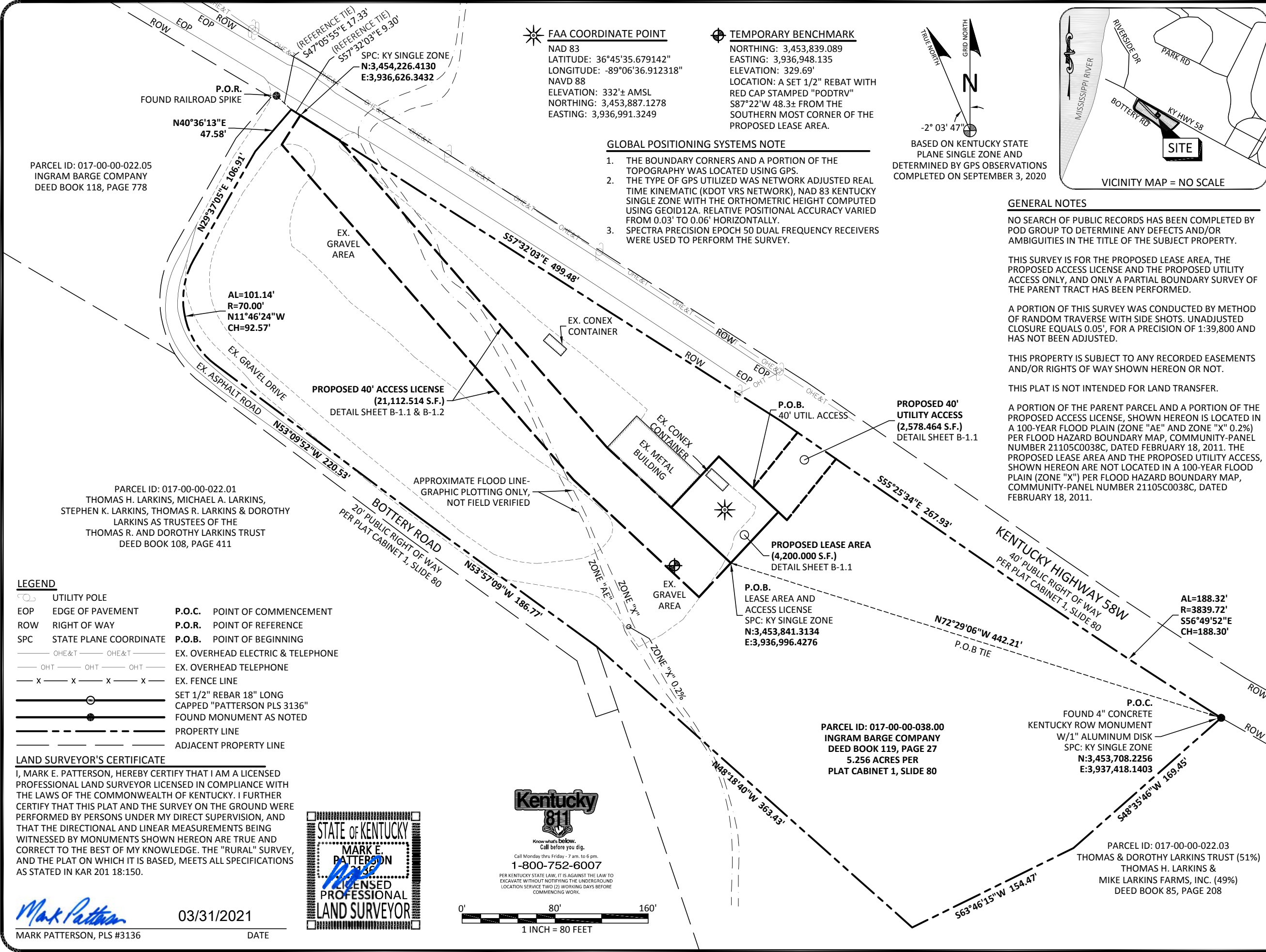
SITE NAME:  
**INGRAM BARGE**

SITE ADDRESS:  
**112 BOTTERY ROAD  
 COLUMBUS, KY 42032**

FA LOCATION:  
**15246752**

SHEET TITLE  
**TITLE SHEET**

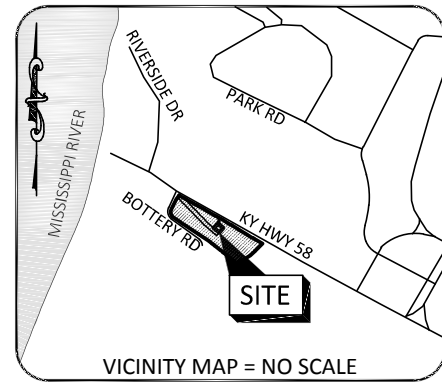
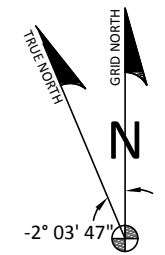
SHEET NUMBER  
**T-1**



**FAA COORDINATE POINT**  
 NAD 83  
 LATITUDE: 36°45'35.679142"  
 LONGITUDE: -89°06'36.912318"  
 NAVD 88  
 ELEVATION: 332± AMSL  
 NORTHING: 3,453,887.1278  
 EASTING: 3,936,991.3249

**TEMPORARY BENCHMARK**  
 NORTHING: 3,453,839.089  
 EASTING: 3,936,948.135  
 ELEVATION: 329.69'  
 LOCATION: A SET 1/2" REBAT WITH RED CAP STAMPED "PODRV" S87°22'W 48.3± FROM THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA.

**GLOBAL POSITIONING SYSTEMS NOTE**  
 1. THE BOUNDARY CORNERS AND A PORTION OF THE TOPOGRAPHY WAS LOCATED USING GPS.  
 2. THE TYPE OF GPS UTILIZED WAS NETWORK ADJUSTED REAL TIME KINEMATIC (KDOT VRS NETWORK), NAD 83 KENTUCKY SINGLE ZONE WITH THE ORTHOMETRIC HEIGHT COMPUTED USING GEOID12A. RELATIVE POSITIONAL ACCURACY VARIED FROM 0.03' TO 0.06' HORIZONTALLY.  
 3. SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED TO PERFORM THE SURVEY.



**GENERAL NOTES**

NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY POD GROUP TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE SUBJECT PROPERTY.

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

A PORTION OF THIS SURVEY WAS CONDUCTED BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. UNADJUSTED CLOSURE EQUALS 0.05', FOR A PRECISION OF 1:39,800 AND HAS NOT BEEN ADJUSTED.

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

THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.

A PORTION OF THE PARENT PARCEL AND A PORTION OF THE PROPOSED ACCESS LICENSE, SHOWN HEREON IS LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "AE" AND ZONE "X" 0.2%) PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011. THE PROPOSED LEASE AREA AND THE PROPOSED UTILITY ACCESS, SHOWN HEREON ARE NOT LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "X") PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011.

PREPARED BY:  
  
 11490 BLUEGRASS PARKWAY  
 LOUISVILLE, KY 40299  
 502-437-5252

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

REV.	DATE	DESCRIPTION
A	9.10.20	PRELIMINARY ISSUE
B	10.13.20	40' UTILITY EASEMENT
0	10.23.20	ISSUED AS FINAL
1	2.10.21	REMOVED 15' UTILITY EASEMENT
2	2.19.21	SITE ADDRESS
3	3.22.21	CLIENT COMMENTS
4	3.31.21	SITE ADDRESS

**SITE INFORMATION:**  
**INGRAM BARGE**  
 112 BOTTERY ROAD  
 COLUMBUS, KY 42032  
 HICKMAN COUNTY

TAX PARCEL NUMBER:  
 017-00-00-038.00

PROPERTY OWNER:  
 INGRAM BARGE COMPANY  
 4400 HARDING ROAD  
 NASHVILLE, TN 37205

SOURCE OF TITLE:  
 DEED BOOK 119, PAGE 27  
 5.256 ACRES PER  
 PLAT CABINET 1, SLIDE 80

FA NUMBER:  
 15246752

POD NUMBER: 20-68187

DRAWN BY: DAP  
 CHECKED BY: MEP  
 SURVEY DATE: 9.3.20  
 PLAT DATE: 9.10.20

SHEET TITLE:  
**SITE SURVEY**  
 THIS DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL

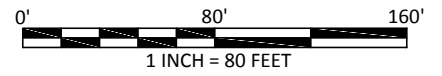
SHEET NUMBER: (4 pages)  
**B-1**

PARCEL ID: 017-00-00-022.05  
 INGRAM BARGE COMPANY  
 DEED BOOK 118, PAGE 778

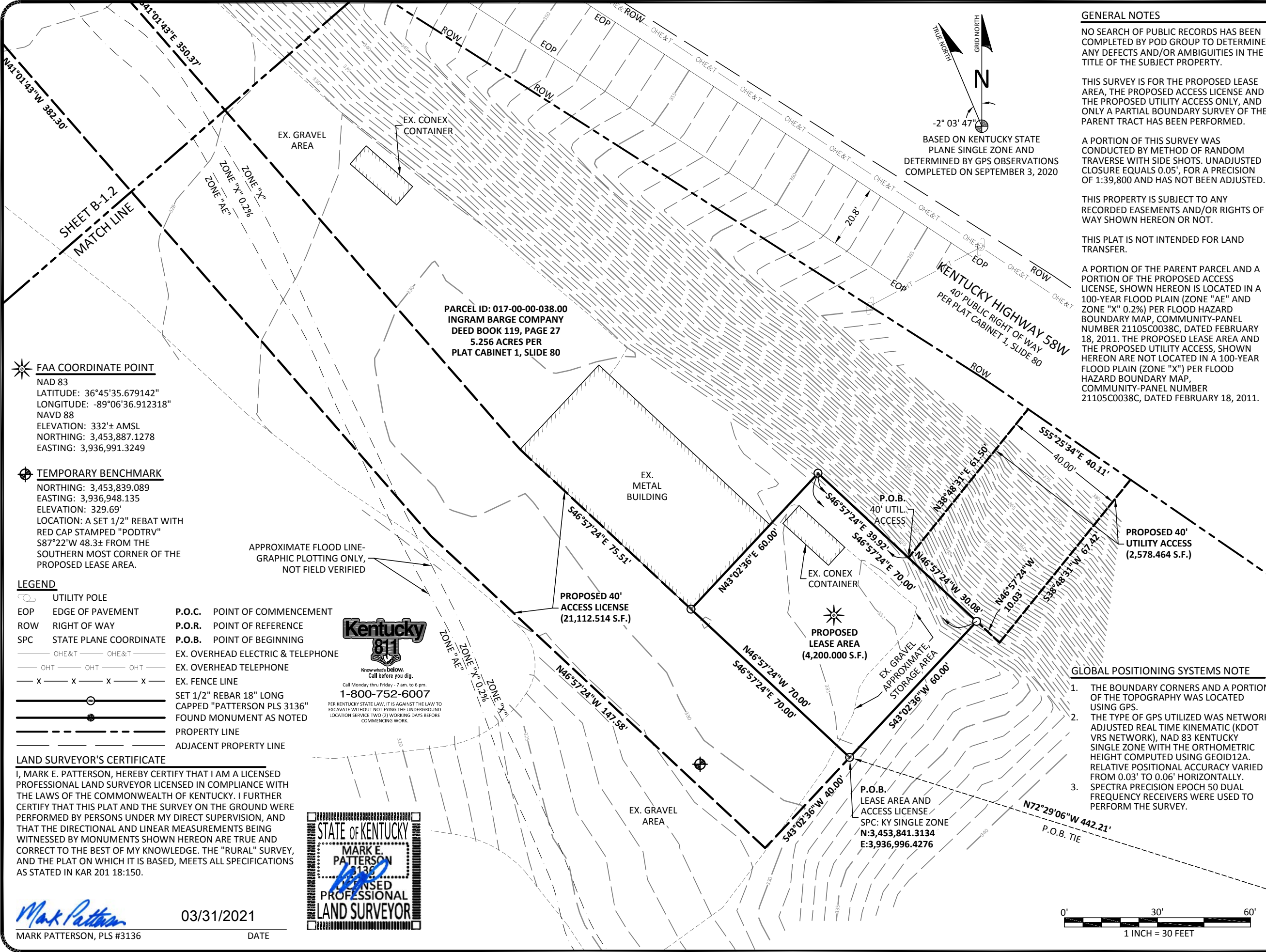
PARCEL ID: 017-00-00-022.01  
 THOMAS H. LARKINS, MICHAEL A. LARKINS,  
 STEPHEN K. LARKINS, THOMAS R. LARKINS & DOROTHY  
 LARKINS AS TRUSTEES OF THE  
 THOMAS R. AND DOROTHY LARKINS TRUST  
 DEED BOOK 108, PAGE 411

- LEGEND**
- UTILITY POLE
  - EOP EDGE OF PAVEMENT
  - ROW RIGHT OF WAY
  - SPC STATE PLANE COORDINATE
  - OHE&T EX. OVERHEAD ELECTRIC & TELEPHONE
  - OHT EX. OVERHEAD TELEPHONE
  - EX. FENCE LINE
  - SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136"
  - FOUND MONUMENT AS NOTED
  - PROPERTY LINE
  - ADJACENT PROPERTY LINE
  - P.O.C. POINT OF COMMENCEMENT
  - P.O.R. POINT OF REFERENCE
  - P.O.B. POINT OF BEGINNING

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



MARK PATTERSON, PLS #3136  
 DATE: 03/31/2021



**GENERAL NOTES**

NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY POD GROUP TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE SUBJECT PROPERTY.

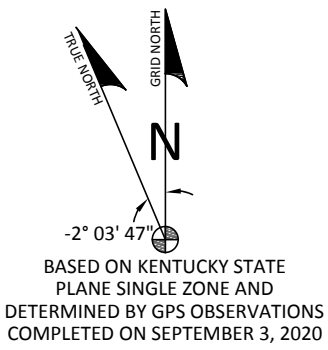
THIS SURVEY IS FOR THE PROPOSED LEASE AREA, THE PROPOSED ACCESS LICENSE AND THE PROPOSED UTILITY ACCESS ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED.

A PORTION OF THIS SURVEY WAS CONDUCTED BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. UNADJUSTED CLOSURE EQUALS 0.05', FOR A PRECISION OF 1:39,800 AND HAS NOT BEEN ADJUSTED.

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

THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.

A PORTION OF THE PARENT PARCEL AND A PORTION OF THE PROPOSED ACCESS LICENSE, SHOWN HEREON IS LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "AE" AND ZONE "X" 0.2%) PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011. THE PROPOSED LEASE AREA AND THE PROPOSED UTILITY ACCESS, SHOWN HEREON ARE NOT LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "X") PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011.



BASED ON KENTUCKY STATE PLANE SINGLE ZONE AND DETERMINED BY GPS OBSERVATIONS COMPLETED ON SEPTEMBER 3, 2020

**FAA COORDINATE POINT**  
 NAD 83  
 LATITUDE: 36°45'35.679142"  
 LONGITUDE: -89°06'36.912318"  
 NAVD 88  
 ELEVATION: 332'± AMSL  
 NORTHING: 3,453,887.1278  
 EASTING: 3,936,991.3249

**TEMPORARY BENCHMARK**  
 NORTHING: 3,453,839.089  
 EASTING: 3,936,948.135  
 ELEVATION: 329.69'  
 LOCATION: A SET 1/2" REBAT WITH RED CAP STAMPED "PODTRV" S87°22'W 48.3± FROM THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA.

- LEGEND**
- UTILITY POLE
  - EDGE OF PAVEMENT
  - RIGHT OF WAY
  - STATE PLANE COORDINATE
  - OHE&T
  - OHT
  - EX. FENCE LINE
  - SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136"
  - FOUND MONUMENT AS NOTED
  - PROPERTY LINE
  - ADJACENT PROPERTY LINE
  - P.O.C. POINT OF COMMENCEMENT
  - P.O.R. POINT OF REFERENCE
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  - EX. OVERHEAD TELEPHONE
  - EX. FENCE LINE

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*Mark Patterson*  
 MARK PATTERSON, PLS #3136  
 DATE 03/31/2021

PREPARED BY:  
**POD**  
 POWER OF DESIGN  
 11490 BLUEGRASS PARKWAY  
 LOUISVILLE, KY 40299  
 502-437-5252

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

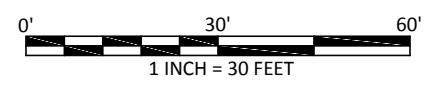
REV.	DATE	DESCRIPTION
A	9.10.20	PRELIMINARY ISSUE
B	10.13.20	40' UTILITY EASEMENT
0	10.23.20	ISSUED AS FINAL
1	2.10.21	REMOVED 15' UTILITY EASEMENT
2	2.19.21	SITE ADDRESS
3	3.22.21	CLIENT COMMENTS
4	3.31.21	SITE ADDRESS

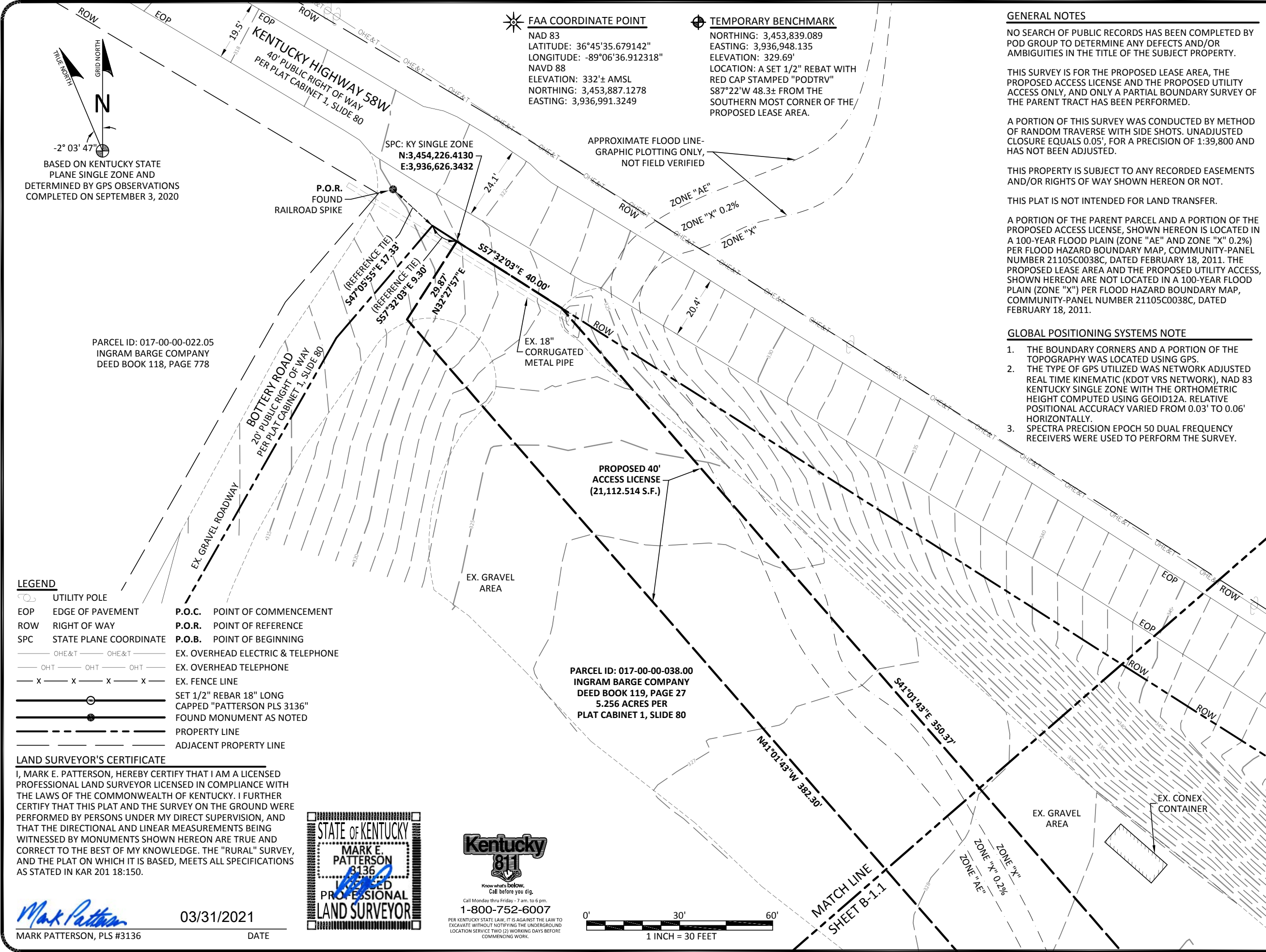
**SITE INFORMATION:**  
**INGRAM BARGE**  
 112 BOTTERY ROAD  
 COLUMBUS, KY 42032  
 HICKMAN COUNTY  
 TAX PARCEL NUMBER:  
 017-00-00-038.00  
 PROPERTY OWNER:  
 INGRAM BARGE COMPANY  
 4400 HARDING ROAD  
 NASHVILLE, TN 37205  
 SOURCE OF TITLE:  
 DEED BOOK 119, PAGE 27  
 5.256 ACRES PER  
 PLAT CABINET 1, SLIDE 80

FA NUMBER:  
 15246752  
 POD NUMBER: 20-68187  
 DRAWN BY: DAP  
 CHECKED BY: MEP  
 SURVEY DATE: 9.3.20  
 PLAT DATE: 9.10.20

SHEET TITLE:  
**SITE SURVEY**  
 THIS DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL  
 SHEET NUMBER: (4 pages)  
**B-1.1**

- GLOBAL POSITIONING SYSTEMS NOTE**
1. THE BOUNDARY CORNERS AND A PORTION OF THE TOPOGRAPHY WAS LOCATED USING GPS.
  2. THE TYPE OF GPS UTILIZED WAS NETWORK ADJUSTED REAL TIME KINEMATIC (KDOT VRS NETWORK), NAD 83 KENTUCKY SINGLE ZONE WITH THE ORTHOMETRIC HEIGHT COMPUTED USING GEOID12A. RELATIVE POSITIONAL ACCURACY VARIED FROM 0.03' TO 0.06' HORIZONTALLY.
  3. SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED TO PERFORM THE SURVEY.





**FAA COORDINATE POINT**  
 NAD 83  
 LATITUDE: 36°45'35.679142"  
 LONGITUDE: -89°06'36.912318"  
 NAVD 88  
 ELEVATION: 332± AMSL  
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 NORTHING: 3,453,839.089  
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 ELEVATION: 329.69'  
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**GENERAL NOTES**  
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 3. SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED TO PERFORM THE SURVEY.

PREPARED BY:  
  
 11490 BLUEGRASS PARKWAY  
 LOUISVILLE, KY 40299  
 502-437-5252

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

REV.	DATE	DESCRIPTION
A	9.10.20	PRELIMINARY ISSUE
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1	2.10.21	REMOVED 15' UTILITY EASEMENT
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 SOURCE OF TITLE:  
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FA NUMBER:  
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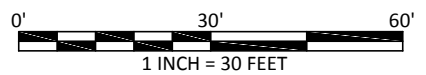
SHEET TITLE:  
**SITE SURVEY**  
 THIS DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL  
 SHEET NUMBER: (4 pages)  
**B-1.2**

- LEGEND**
- UTILITY POLE
  - EOP EDGE OF PAVEMENT
  - ROW RIGHT OF WAY
  - SPC STATE PLANE COORDINATE
  - OHE&T EX. OVERHEAD ELECTRIC & TELEPHONE
  - OHT EX. OVERHEAD TELEPHONE
  - EX. FENCE LINE
  - SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136"
  - FOUND MONUMENT AS NOTED
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**Kentucky 811**  
 Know what's below.  
 Call before you dig.  
 Call Monday thru Friday - 7 am. to 6 pm.  
 1-800-752-6007  
PER KENTUCKY STATE LAW, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.



MARK PATTERSON, PLS #3136  
 DATE: 03/31/2021

MATCH LINE  
 SHEET B-1.1

LEGAL DESCRIPTIONS

PROPOSED LEASE AREA

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED LEASE AREA TO BE LEASED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON SEPTEMBER 3, 2020.

COMMENCING AT A FOUND 4" CONCRETE KENTUCKY RIGHT OF WAY MONUMENT WITH A 1" ALUMINUM DISK, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,708.2256, E:3,937,418.1403 AND AS SHOWN IN PLAT CABINET 1, SLIDE 80, BEING IN THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND BEING THE EASTERN MOST CORNER TO THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00 ALSO CORNER TO THE PROPERTY CONVEYED TO THOMAS & DOROTHY LARKINS TRUST (51%) AND THOMAS H. LARKINS & MIKE LARKINS FARMS, INC. (49%) AS RECORDED IN DEED BOOK 85, PAGE 208, PARCEL ID: 017-00-00-022.03; THENCE LEAVING SAID MONUMENT AND TRAVERSING THE LAND OF SAID INGRAM BARGE, N72°29'06"W 442.21' TO A SET 1/2" REBAR, 18" LONG, CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,841.3134, E:3,936,996.4276 AT THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA AND BEING **THE TRUE POINT OF BEGINNING**; THENCE N46°57'24"W 70.00' TO A SET "IPC"; THENCE N43°02'36"E 60.00' TO A "SET IPC" HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,932.9423, E:3,936,986.2221; THENCE S46°57'24"E 70.00'; THENCE S43°02'36"W 60.00' TO THE POINT OF BEGINNING CONTAINING 4,200.000 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED SEPTEMBER 3, 2020.

PROPOSED 40' ACCESS LICENSE

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 40' ACCESS LICENSE TO BE GRANTED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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PROPOSED 40' UTILITY ACCESS

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 40' UTILITY ACCESS TO BE GRANTED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON SEPTEMBER 3, 2020.

COMMENCING AT A FOUND 4" CONCRETE KENTUCKY RIGHT OF WAY MONUMENT WITH A 1" ALUMINUM DISK, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,708.2256, E:3,937,418.1403 AND AS SHOWN IN PLAT CABINET 1, SLIDE 80, BEING IN THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND BEING THE EASTERN MOST CORNER TO THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00 ALSO CORNER TO THE PROPERTY CONVEYED TO THOMAS & DOROTHY LARKINS TRUST (51%) AND THOMAS H. LARKINS & MIKE LARKINS FARMS, INC. (49%) AS RECORDED IN DEED BOOK 85, PAGE 208, PARCEL ID: 017-00-00-022.03; THENCE LEAVING SAID MONUMENT AND TRAVERSING THE LAND OF SAID INGRAM BARGE, N72°29'06"W 442.21' TO A SET 1/2" REBAR, 18" LONG, CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,841.3134, E:3,936,996.4276 AT THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA; THENCE WITH SAID LEASE AREA FOR THE NEXT THREE CALLS, N46°57'24"W 70.00' TO A SET "IPC"; THENCE N43°02'36"E 60.00' TO A "SET IPC" HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,932.9423, E:3,936,986.2221; THENCE S46°57'24"E 39.92' TO **THE TRUE POINT OF BEGINNING**; THENCE LEAVING SAID LEASE AREA, N38°48'31"E 61.50' TO THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND THE NORTH LINE OF SAID INGRAM BARGE; THENCE WITH SAID COMMON LINE, S55°25'34"E 40.11'; THENCE LEAVING SAID COMMON LINE AND TRAVERSING THE LAND OF SAID INGRAM BARGE, S38°48'31"W 67.42'; THENCE N46°57'24"W 10.03' TO A SET "IPC" AT THE EASTERN MOST CORNER OF SAID LEASE AREA; THENCE WITH SAID LEASE AREA, N46°57'24"W 30.08' TO THE POINT OF BEGINNING CONTAINING 2,578.464 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED SEPTEMBER 3, 2020.

LAND SURVEYOR'S CERTIFICATE

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*Mark Patterson*  
MARK PATTERSON, PLS #3136

03/31/2021  
DATE



REVISIONS

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112 BOTTER ROAD  
COLUMBUS, KY 42032  
HICKMAN COUNTY

TAX PARCEL NUMBER:  
017-00-00-038.00

PROPERTY OWNER:  
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NASHVILLE, TN 37205

SOURCE OF TITLE:  
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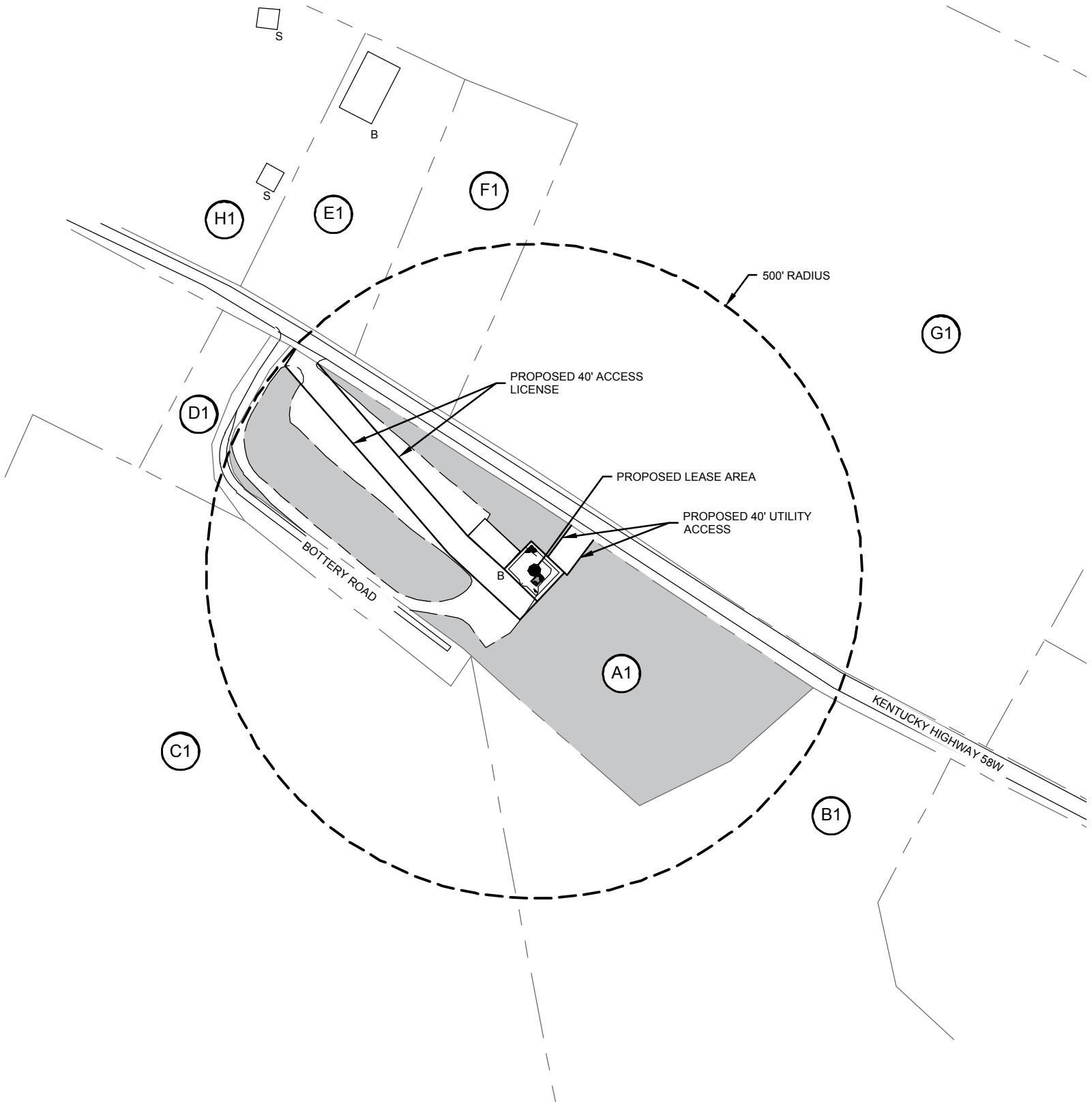
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CHECKED BY: MEP  
SURVEY DATE: 9.3.20  
PLAT DATE: 9.10.20

SHEET TITLE:

**SITE SURVEY**  
THIS DOES NOT REPRESENT A  
BOUNDARY SURVEY OF THE  
PARENT PARCEL

SHEET NUMBER: (4 pages)

**B-1.3**



**GENERAL NOTES:**

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED FROM THE INFORMATION DESCRIBED AND RECORDED FROM DEED BOOKS IN THE COUNTY CLERK'S OFFICE, ON 10/28/20 AND RE-VERIFIED ON 03/23/21. THE PROPERTY VALUATION ADMINISTRATION RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIMS ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES.
2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY
3. NOT FOR RECORDING OR PROPERTY TRANSFER

(A1)	PARCEL ID: 017-00-00-038.00 INGRAM BARGE CO 4400 HARDING RD NASHVILLE, TN 37205
(B1)	PARCEL ID: 017-00-00-022.03 LARKINS THOMAS & DOROTHY TRUST THOMAS H & MIKE LARKINS FARMS 6614 ST RT 58 WEST CLINTON, KY 42031
(C1)	PARCEL ID: 017-00-00-022.01 LARKINS THOMAS & DOROTHY TRUST C/O TOM LARKINS 6614 ST RT 58 WEST CLINTON, KY 42031
(D1)	PARCEL ID: 017-00-00-022.05 INGRAM BARGE CO 4400 HARDING RD NASHVILLE, TN 37205
(E1)	PARCEL ID: 016-00-00-048.00 MCKINNEY LEE C/O PATRICIA MCKINNEY LEWIS 1802 LYDERHURST SAVOY, IL 68174
(F1)	PARCEL ID: 016-00-00-049.00 FERGUSON KAY & SHANE STEPHENS P O BOX 3 COLUMBUS, KY 42032
(G1)	PARCEL ID: 016-00-00-045.00 STATE OF KENTUCKY COLUMBUS BELMONT STATE PARK COLUMBUS KENTUCKY, 42032
(H1)	PARCEL ID: 016-00-00-053.00 FERGUSON KAY & SHANE STEPHENS P O BOX 3 COLUMBUS, KY 42032

EXISTING BUILDINGS  
 B=BARN  
 C=CHURCH  
 G=GARAGE  
 R=RESIDENCE  
 S=SHED



03/23/2021  
 RAPHAEL MOHAMED, P.E.  
 KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM
03/23/2021	CONSTRUCTION	1	RM

DRAWN BY: \_\_\_\_\_ CTS  
 CHECKED BY: \_\_\_\_\_ CZB  
 APP'D BY: \_\_\_\_\_ RM  
 MNS PROJECT NO: \_\_\_\_\_ 24225

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.

PREPARED FOR:



PREPARED BY:



SITE ID:

**INGRAM BARGE**

SITE NAME:

**INGRAM BARGE**

SITE ADDRESS:

**112 BOTTERY ROAD  
 COLUMBUS, KY 42032**

FA LOCATION:

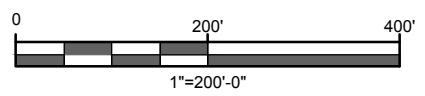
**15246752**

SHEET TITLE

**500' RADIUS AND  
 ABUTTERS MAP**

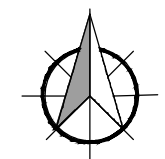
SHEET NUMBER

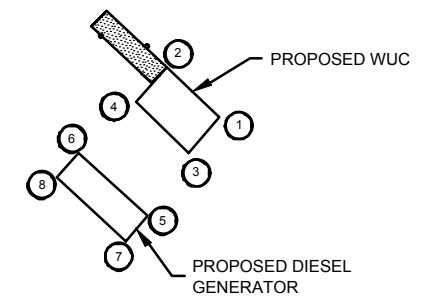
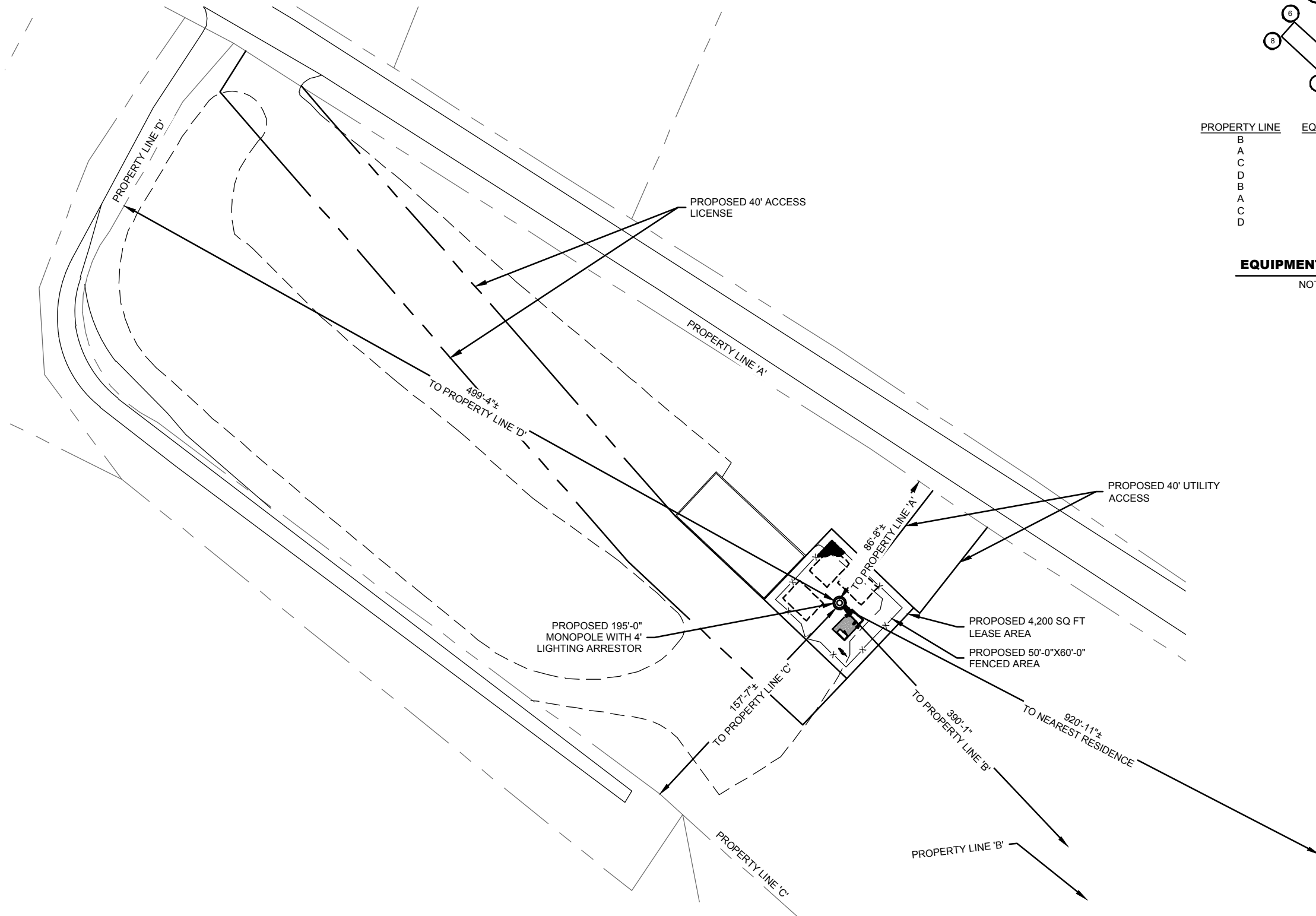
**M-1**



**500' RADIUS AND ABUTTERS MAP**

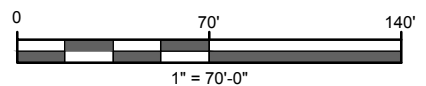
11"x17" SCALE: 1"=200'-0"



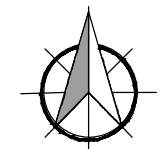


PROPERTY LINE	EQUIPMENT	DISTANCE
B	1	375±
A	2	86±
C	3	159±
D	4	513±
B	5	372±
A	6	98±
C	7	150±
D	8	511±

**EQUIPMENT ENLARGMENT**  
NOT TO SCALE



**OVERALL SITE LAYOUT**  
11"x17" SCALE: 1" = 70'-0"



03/23/2021  
 RAPHAEL MOHAMED, P.E.  
 KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM
03/23/2021	CONSTRUCTION	1	RM

DRAWN BY: CTS  
 CHECKED BY: CZB  
 APPV'D BY: RM  
 MNS PROJECT NO: 24225

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PREPARED FOR:



PREPARED BY:



SITE ID:  
**INGRAM BARGE**

SITE NAME:  
**INGRAM BARGE**

SITE ADDRESS:  
**112 BOTTERY ROAD  
 COLUMBUS, KY 42032**

FA LOCATION:  
**15246752**

SHEET TITLE  
**OVERALL SITE LAYOUT**

SHEET NUMBER  
**C-1**





03/23/2021

RAPHAEL MOHAMED, P.E.  
KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM
03/23/2021	CONSTRUCTION	1	RM

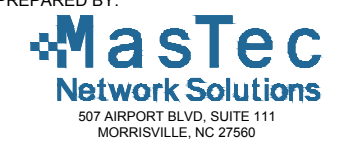
DRAWN BY: CTS  
 CHECKED BY: CZB  
 APPV'D BY: RM  
 MNS PROJECT NO: 24225

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PREPARED FOR:



PREPARED BY:



SITE ID:

**INGRAM BARGE**

SITE NAME:

**INGRAM BARGE**

SITE ADDRESS:

**112 BOTTERY ROAD  
COLUMBUS, KY 42032**

FA LOCATION:

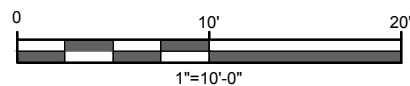
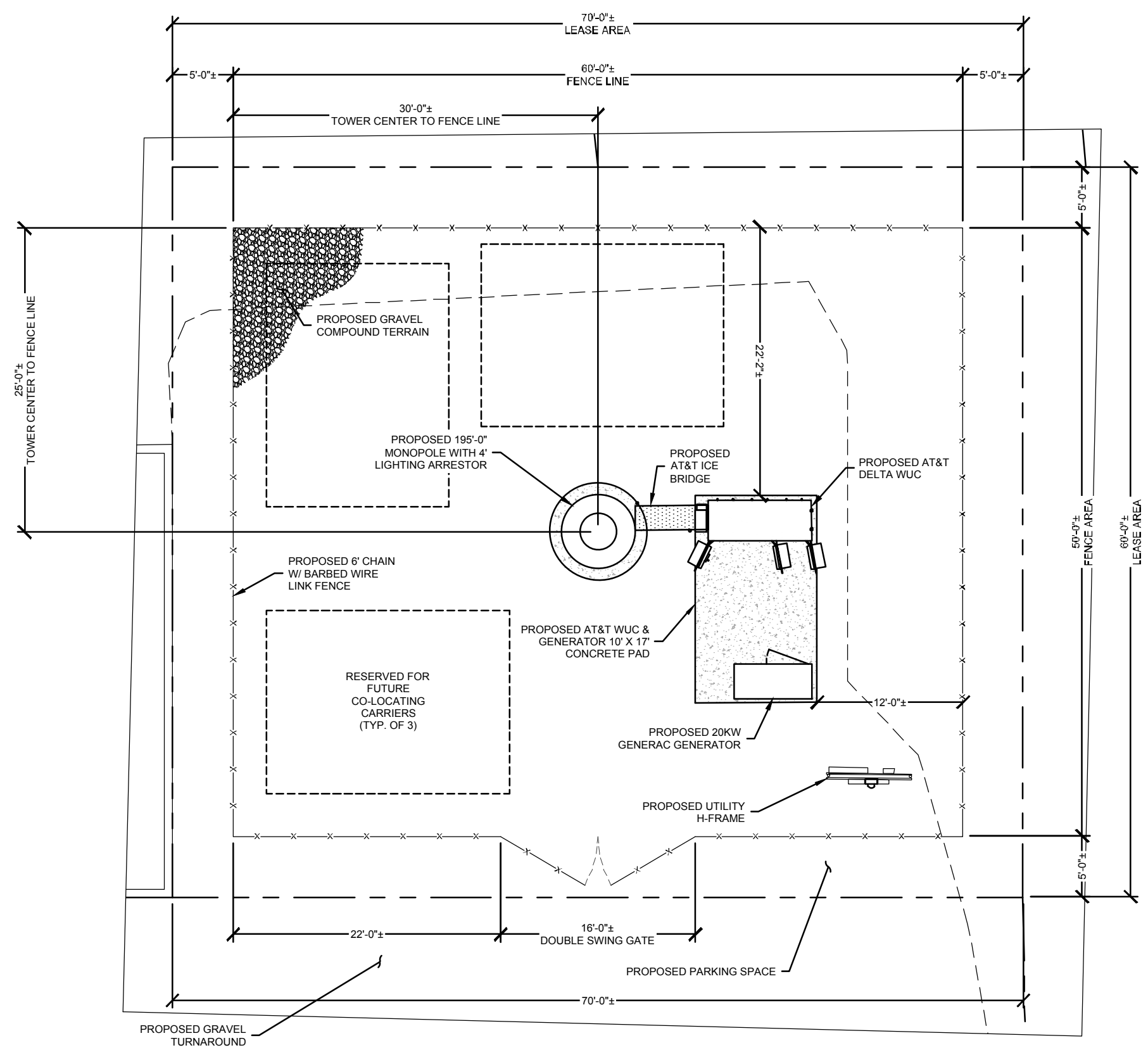
**15246752**

SHEET TITLE

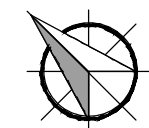
**COMPOUND LAYOUT**

SHEET NUMBER

**C-2**

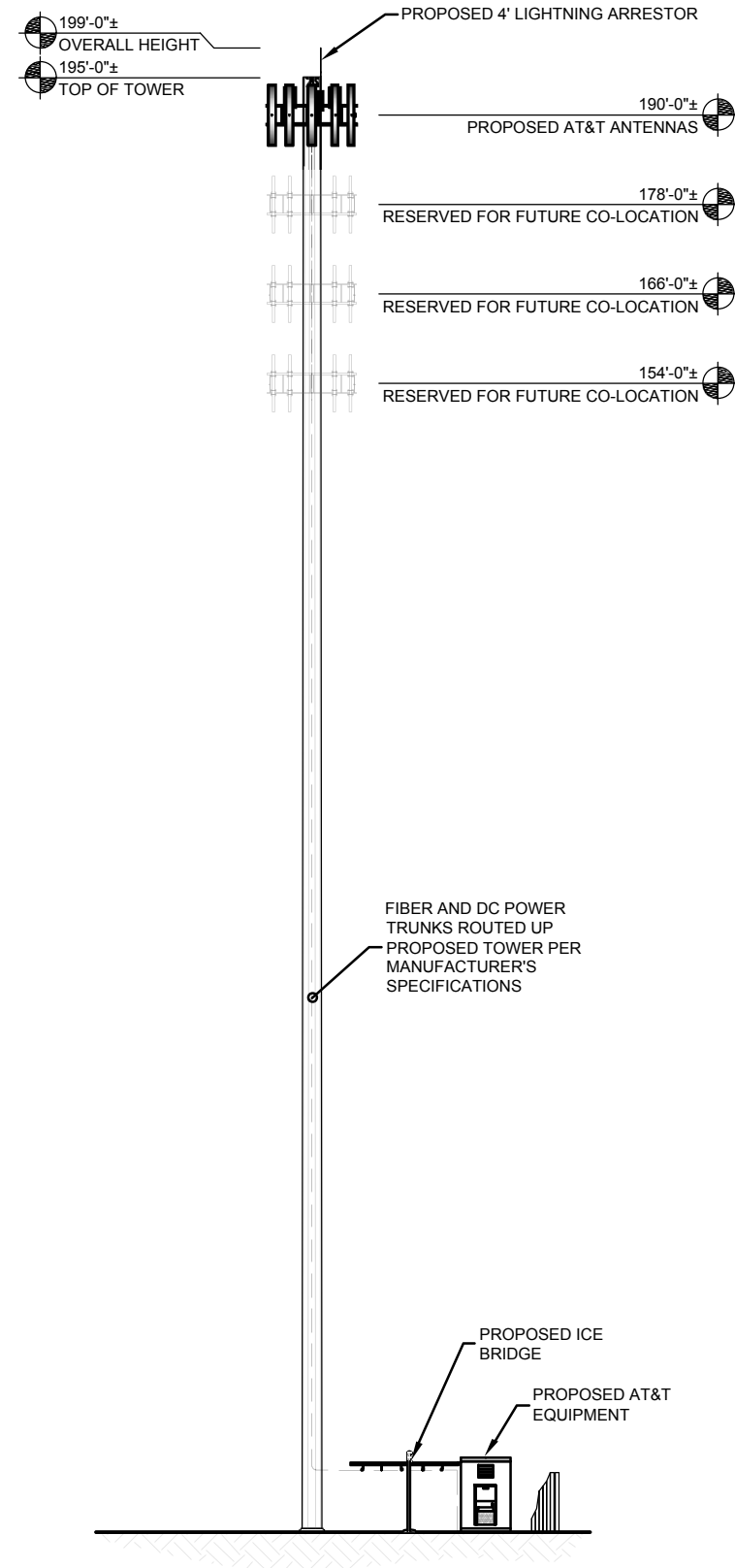


**COMPOUND LAYOUT**  
11"x17" SCALE: 1"=10'-0"



**TOWER NOTES:**

1. THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS, AND ANTENNAS WERE/ARE DESIGNED BY OTHERS.
2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
3. SEE TOWER MANUFACTURE'S DRAWINGS FOR TOWER AND FOUNDATION DETAILS & SPECIFICATIONS.
4. MANUFACTURE'S DRAWINGS SUPERCEDE A&E DRAWINGS



**TOWER ELEVATION**

11"x17" SCALE: 1"=25'-0"



03/23/2021

RAPHAEL MOHAMED, P.E.  
KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM
03/23/2021	CONSTRUCTION	1	RM

DRAWN BY: CTS

CHECKED BY: CZB

APPV'D BY: RM

MNS PROJECT NO: 24225

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PREPARED FOR:



PREPARED BY:



SITE ID:

**INGRAM BARGE**

SITE NAME:

**INGRAM BARGE**

SITE ADDRESS:

**112 BOTTERY ROAD  
COLUMBUS, KY 42032**

FA LOCATION:

**15246752**

SHEET TITLE

**TOWER ELEVATION**

SHEET NUMBER

**C-3**

**EXHIBIT C**  
**TOWER AND FOUNDATION DESIGN**



April 19, 2021

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

RE: Site Name – Ingram Barge  
Proposed Cell Tower  
36 45 35.68 North Latitude, 89 06 36.91 West Longitude

Dear Commissioners:

The Project / Construction Manager for the proposed new communications facility will be Sean Sheehan. His contact information is (610) 312-1001 or [sean.sheehan@mastec.com](mailto:sean.sheehan@mastec.com)

Sean 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,

A handwritten signature in black ink, appearing to read "S Sheehan".

Sean Sheehan, Sr. Project Manager – Tennessee/Kentucky Market  
MasTec Network Solutions  
(610) 312-1001



**Structural Design Report**  
195' Monopole  
Site: Ingram Barge, KY  
Site Number: FA# 15246752

Prepared for: AT&T  
by: Sabre Industries™

Job Number: 480163

**April 27, 2021**

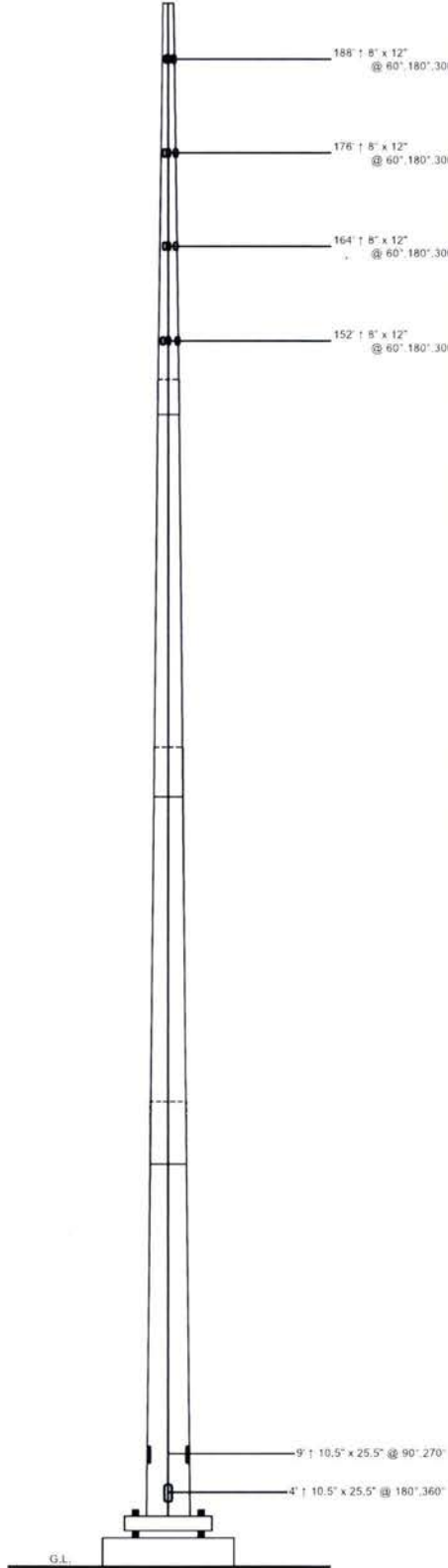
<b>Monopole Profile.....</b>	<b>1</b>
<b>Foundation Design Summary (Option 1).....</b>	<b>2</b>
<b>Foundation Design Summary (Option 2).....</b>	<b>3</b>
<b>Pole Calculations.....</b>	<b>4-14</b>
<b>Foundation Calculations.....</b>	<b>15-22</b>



Digitally Signed By David Hill  
DN: c=US, st=Texas,  
l=Alvarado, o=SABRE  
INDUSTRIES, INC., cn=David  
Hill,  
email=dhill@sabreindustries.c  
om Date: 2021.04.27 14:06:18

04/27/21

Length (ft)	53'-3"	53'-6"	53'-6"	52'-6"
Number Of Sides	18	18	18	18
Thickness (in)	1/2"	7/16"	7/16"	5/16"
Lap Splice (ft)	8'-0"	6'-3"	6'-3"	A
Top Diameter (in)	54.22"	42.95"	31.08"	18.75"
Bottom Diameter (in)	68.59"	57.38"	45.51"	32.91"
Taper (in/ft)			0.2698	
Grade			A572-65	
Weight (lbs)	20835	15206	10146	5186
Overall Steel Height (ft)			194	



### 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"

### Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	106 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	D
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	331 ft

### Load Case Reactions

Description	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
3s Gusted Wind	92.55	60.98	9603.66	19.2	11.71
3s Gusted Wind 0.9 Dead	69.48	60.93	9384.12	18.63	11.32
3s Gusted Wind&Ice	142.06	8.88	1497.07	3.19	1.94
Service Loads	77.12	17.51	2744.35	5.64	3.39

### Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	81.75"	2.5"	76"	26	2.25"

### Anchor Bolt Dimensions


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

### Material List

Display	Value
A	4' - 6"

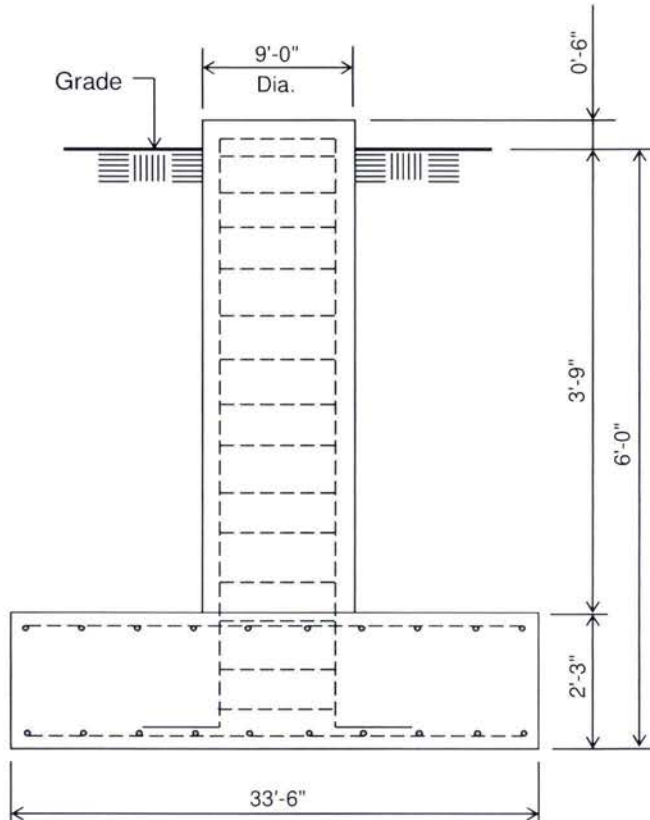
### Notes

- 1) Antenna Feed Lines Run Inside Pole
- 2) All dimensions are above ground level, unless otherwise specified.
- 3) Weights shown are estimates. Final weights may vary.
- 4) Full Height Step Bolts
- 5) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2015 International Building Code.
- 6) Tower Rating: 99.1%

 <p><b>Sabre Industries</b> 7101 Southbridge Drive P.O. Box 658 Sioux City, IA 51102-0658 Phone (712) 258-6990 Fax (712) 279-8814</p>	<p>Job: <b>480163</b></p> <p>Customer: <b>AT&amp;T</b></p> <p>Site Name: <b>Ingram Barge, KY FA# 15246752</b></p> <p>Description: <b>195' Monopole</b></p> <p>Date: <b>2021.04.27</b></p>
	<p>By: <b>DJH</b></p>

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**Customer: AT&T**  
**Site: Ingram Barge, KY FA# 15246752**  
195' Monopole



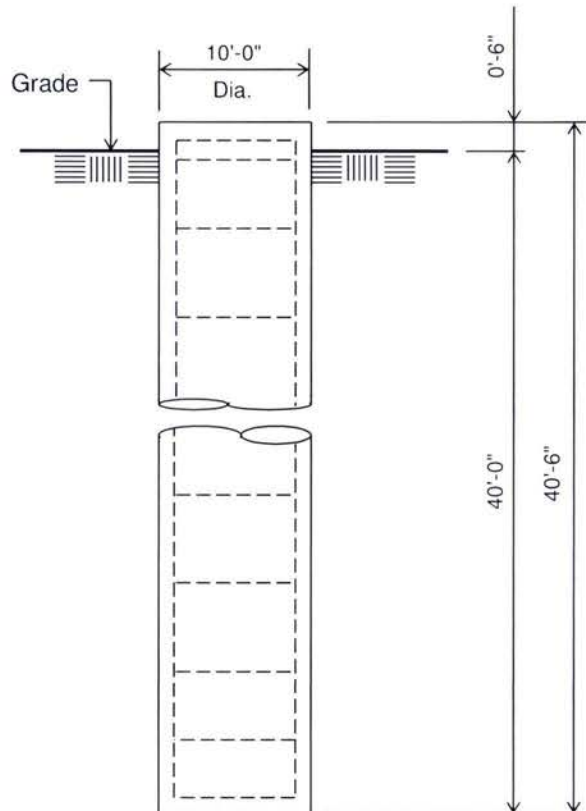
**ELEVATION VIEW**  
(103.53 Cu. Yds.)  
(1 REQUIRED; NOT TO SCALE)

**Notes:**

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by POD Job No. 20-68190, Date: 04/16/2021.
- 6) See the geotechnical report for compaction requirements, if specified.
- 7) 3.75 ft of soil cover is required over the entire area of the foundation slab.
- 8) Tie overlaps shall be staggered with a nominal 180° separation.
- 9) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pad and Pier	
Pier	(54) #11 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(52) #10 horizontal rebar evenly spaced each way top and bottom (208 total)

**Customer: AT&T**  
**Site: Ingram Barge, KY FA# 15246752**  
195' Monopole



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

**Notes:**

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by POD Job No. 20-68190, Date: 04/16/2021.
- 6) See the geotechnical report for drilled pier installation requirements, if specified.
- 7) Tie overlaps shall be staggered with a nominal 180° separation.
- 8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

<b>Rebar Schedule for Pier</b>	
Pier	(54) #11 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 12" C/C



Processed under license at:

Sabre Towers and Poles on: 27 apr 2021 at: 11:31:25

195' Monopole / Ingram Barge, KY

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

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ◆*Pn kip	◆*Mn ft-kip	SPLICE TYPE	..OVERLAP... LENGTH ft	RATIO	w/t
194.0	A	18	19.04	0.312	1358.7	510.8				9.5
146.0	A/B	18	32.18	0.312	2286.1	1472.5	SLIP	4.50	1.67	
141.5	B	18	32.80	0.438	3287.0	2142.0				12.2
98.7	B/C	18	44.49	0.438	4425.3	3939.4	SLIP	6.25	1.68	
92.5	C	18	45.34	0.500	5205.3	4711.0				15.0
53.2	C/D	18	56.06	0.500	6207.0	6976.1	SLIP	8.00	1.70	
45.2	D	18	57.27	0.500	6302.5	7238.7				19.1
0.0			69.65	0.500	7185.4	10068.7				

POLE ASSEMBLY

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

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH ft	OUTSIDE DIAMETER BOT * in	TOP * in	BEND RAD in	MAT- ERIAL ID	FLANGE.ID BOT	TOP	FLANGE.WELD ..GROUP.ID.. BOT	TOP
A	18	52.50	33.42	19.04	0.625	1	0	0	0	0
B	18	53.50	46.21	31.56	0.625	2	0	0	0	0
C	18	53.50	58.27	43.61	0.625	3	0	0	0	0
D	18	53.25	69.65	55.06	0.625	4	0	0	0	0

\* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT & deg	HEIGHT in	WIDTH in	.THICKNESS. WEB	FLANGE in	IRREGULARITY .PROJECTION. % OF ORIENT AREA	deg
PL	1	1	0.0	33.42	0.31	0.312	0.312	0.00	0.0
PL	2	1	0.0	46.21	0.44	0.438	0.438	0.00	0.0

PL	0.00	0.00	1	0.0	58.27	0.50	0.500	0.500	0.00	0.0
PL		4	1	0.0	69.65	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

=====

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

\* Only 3 condition(s) shown in full

\* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

106 mph wind with no ice. Wind Azimuth: 0\*

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY RADIUS ft	LOAD AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0174	0.0084	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	4.2457	0.0000	0.0000
C	189.000	0.00	0.0	0.0	13.2285	7.2000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0346	0.0168	0.0000	0.0000
C	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	9.8418	4.8366	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0342	0.0168	0.0000	0.0000
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	9.7230	4.8366	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0339	0.0168	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0335	0.0168	0.0000	0.0000
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	9.5970	4.8366	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0331	0.0168	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0327	0.0168	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0323	0.0168	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0318	0.0168	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0313	0.0168	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0308	0.0168	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0302	0.0168	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0296	0.0168	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0288	0.0168	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0280	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0270	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0259	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0244	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0223	0.0168	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0529	0.0837	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0529	0.0837	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0628	0.1009	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0628	0.1009	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0723	0.1182	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0723	0.1182	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0782	0.3069	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0782	0.3069	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0818	0.1918	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0818	0.1918	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0893	0.2134	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0893	0.2134	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0962	0.2349	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0962	0.2349	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.1007	0.5314	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1007	0.5314	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.1027	0.2977	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.1027	0.2977	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.1075	0.3204	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1075	0.3204	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.1112	0.3430	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1112	0.3430	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1133	0.7168	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1133	0.7168	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.1123	0.3722	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1123	0.3722	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.1108	0.3919	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1085	0.4311	0.0000	0.0000

LOADING CONDITION M

106 mph wind with no ice. Wind Azimuth: 0

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
						HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0	0.0174	0.0063	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0	0.0000	3.1843	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0	13.2285	5.4000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0	0.0346	0.0126	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0	0.0000	2.9821	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0	9.8418	3.6274	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0	0.0342	0.0126	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0	0.0000	2.7799	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0	9.7230	3.6274	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0	0.0339	0.0126	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0	0.0335	0.0126	0.0000	0.0000
C	153.000	0.00	0.0	0.0	0.0	0.0000	2.5777	0.0000	0.0000
C	153.000	0.00	0.0	0.0	0.0	9.5970	3.6274	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0	0.0331	0.0126	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0	0.0327	0.0126	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0	0.0323	0.0126	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0	0.0318	0.0126	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0	0.0313	0.0126	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0	0.0308	0.0126	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0	0.0302	0.0126	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0	0.0296	0.0126	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0	0.0288	0.0126	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0	0.0280	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0	0.0270	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0	0.0259	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0	0.0244	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0	0.0223	0.0126	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0	0.0529	0.0628	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0	0.0529	0.0628	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0	0.0628	0.0757	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0	0.0628	0.0757	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0	0.0723	0.0887	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0	0.0723	0.0887	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0	0.0782	0.2302	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0	0.0782	0.2302	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0	0.0818	0.1438	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0	0.0818	0.1438	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0	0.0893	0.1600	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0	0.0893	0.1600	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0	0.0962	0.1762	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0	0.0962	0.1762	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0	0.1007	0.3985	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0	0.1007	0.3985	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0	0.1027	0.2233	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0	0.1027	0.2233	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0	0.1075	0.2403	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0	0.1075	0.2403	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0	0.1112	0.2573	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0	0.1112	0.2573	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0	0.1133	0.5376	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0	0.1133	0.5376	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0	0.1123	0.2792	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.0	0.1123	0.2792	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.0	0.1108	0.2939	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0	0.1085	0.3233	0.0000	0.0000

LOADING CONDITION Y

30 mph wind with 1.5 ice. Wind Azimuth: 0

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
						HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0	0.0112	0.0204	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0	0.0000	4.2457	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0	1.8170	17.9218	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0	0.0222	0.0288	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0	0.0000	3.9761	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0	1.3519	11.9380	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0	0.0219	0.0288	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0	0.0000	3.7066	0.0000	0.0000

C	165.000	0.00	0.0	0.0	1.3517	11.2886	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0216	0.0288	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0212	0.0288	0.0000	0.0000
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	1.3104	11.8359	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0209	0.0288	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0205	0.0288	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0201	0.0288	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0196	0.0288	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0192	0.0288	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0187	0.0288	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0182	0.0288	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0176	0.0288	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0169	0.0288	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0162	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0154	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0144	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0132	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0116	0.0288	0.0000	0.0000

D	194.000	0.00	180.0	0.0	0.0086	0.1338	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0086	0.1338	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0100	0.1601	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0100	0.1601	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0113	0.1861	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0113	0.1861	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0121	0.3803	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0121	0.3803	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0126	0.2688	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0126	0.2688	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0136	0.2976	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0136	0.2976	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0145	0.3261	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0145	0.3261	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0151	0.6273	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0151	0.6273	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0154	0.3962	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0154	0.3962	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0160	0.4243	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0160	0.4243	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0165	0.4519	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0165	0.4519	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0167	0.8290	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0167	0.8290	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0166	0.4855	0.0000	0.0000
D	11.312	0.00	180.0	0.0	0.0158	0.5264	0.0000	0.0000
D	11.312	0.00	180.0	0.0	0.0159	0.5394	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0159	0.5394	0.0000	0.0000

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195' Monopole / Ingram Barge, KY

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)  
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MAST ELEV ft	DEFLECTIONS (ft)			ROTATIONS (deg)		TWIST
	HORIZONTAL ALONG	ACROSS	DOWN	TILT ALONG	ACROSS	
194.0	19.20C	-0.05C	2.74C	11.71C	-0.02C	0.00U
178.0	16.08C	-0.04C	2.11C	11.51C	-0.02C	0.00U
162.0	13.08C	-0.03C	1.53C	10.65C	-0.02C	0.00U
146.0	10.37C	-0.03C	1.06C	9.28C	-0.02C	0.00U
141.5	9.67C	-0.03C	0.95C	8.95C	-0.02C	0.00U
127.2	7.63C	-0.02C	0.65C	7.80C	-0.02C	0.00U
113.0	5.87C	-0.02C	0.43L	6.64C	-0.02C	0.00U
98.7	4.37C	-0.01C	0.27L	5.52C	-0.02C	0.00U
92.5	3.80C	-0.01C	0.22L	5.10C	-0.01C	0.00U
79.4	2.74C	-0.01C	0.13L	4.23C	-0.01C	0.00U
66.3	1.87C	0.00C	0.07L	3.42C	-0.01C	0.00U

53.2	1.18C	0.00C	0.00L	2.65C	-0.01C	0.00U
45.2	0.84C	0.00C	0.02L	2.23C	-0.01C	0.00U
33.9	0.46C	0.00C	0.01L	1.62C	0.00C	0.00U
22.6	0.20C	0.00C	0.00L	1.04C	0.00C	0.00U
11.3	0.05C	0.00C	0.00L	0.50C	0.00C	0.00U
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

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

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	WIND.DIR ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	WIND.DIR ACROSS ft-kip	TORSION ft-kip
194.0	-0.01 A	0.00 A	0.00 E	0.01 R	-0.01 E	0.00 U
178.0	24.36 AF	14.11 A	0.00 E	-173.27 A	-0.05 Q	-0.07 Q
162.0	24.36 AB	14.12 R	0.01 H	-173.28 A	-0.04 Q	-0.08 Q
146.0	58.48 AB	34.74 R	0.01 H	-639.50 H	-0.22 Q	-0.27 Q
141.5	58.48 Z	34.74 H	-0.01 T	-639.53 H	-0.22 Q	-0.27 Q
127.2	76.76 Z	45.51 H	-0.01 T	-1351.43 H	-0.43 Q	-0.58 Q
113.0	76.76 AC	45.82 D	-0.14 X	-1351.54 F	-0.47 K	-0.61 Q
98.7	78.50 AC	46.20 D	-0.14 X	-1581.87 A	-0.92 Q	-0.62 Q
92.5	78.51 AA	46.31 C	-0.23 C	-1581.92 H	-1.27 Q	-0.59 Q
79.4	82.37 AA	47.49 C	-0.23 C	-2325.92 C	3.29 C	0.86 U
66.3	82.36 AA	47.46 C	-0.26 C	-2325.88 C	3.30 C	0.85 U
53.2	86.66 AA	48.78 C	-0.26 C	-3084.69 C	6.94 C	1.12 U
45.2	86.66 AA	48.79 C	-0.28 C	-3084.69 C	6.94 C	1.12 U
33.9	91.34 AA	50.19 C	-0.28 C	-3857.72 C	10.87 C	1.41 U
22.6	91.34 AA	50.13 C	0.23 W	-3857.72 C	11.00 C	1.41 U
11.3	95.28 AA	50.79 C	0.23 W	-4201.71 C	12.26 C	1.52 U
0.0	95.28 AA	50.73 C	0.18 Q	-4201.74 C	12.31 C	1.52 U
	100.50 AA	52.10 C	0.18 Q	-4930.70 C	14.22 C	1.71 U
	100.50 AA	52.09 C	0.15 W	-4930.67 C	14.26 C	1.70 U
	106.07 AA	53.52 C	0.15 W	-5672.03 C	16.12 C	1.87 U
	106.08 AA	53.52 C	0.16 W	-5672.05 C	16.10 C	1.87 U
	112.04 AA	55.03 C	0.16 W	-6425.66 C	18.11 C	2.00 U
	112.04 AA	55.02 C	0.17 W	-6425.66 C	18.08 C	2.00 U
	118.68 AA	55.93 C	0.17 W	-6892.74 C	19.22 C	2.07 U
	118.68 AA	55.88 I	0.17 Q	-6892.68 C	19.30 C	2.07 U
	124.30 AA	57.20 I	0.17 Q	-7560.10 C	20.15 C	2.16 U
	124.30 AA	57.20 C	0.17 Q	-7560.08 C	20.11 C	2.16 U
	130.05 AA	58.48 C	0.17 Q	-8234.97 C	21.54 C	2.21 U
	130.05 AA	58.48 C	0.17 W	-8234.93 C	21.54 C	2.21 U
	135.96 AA	59.75 C	0.17 W	-8916.41 C	22.78 C	2.25 U
	135.96 AA	59.75 C	0.17 W	-8916.41 C	22.77 C	2.25 U
	142.06 AA	60.98 C	0.17 W	-9603.66 C	24.13 C	2.26 U
base reaction	142.06 AA	-60.98 C	-0.17 W	9603.66 C	-24.13 C	-2.26 U

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV	AXIAL	BENDING	SHEAR +	TOTAL SATISFIED	D/t(w/t)	MAX
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ft	TORSIONAL				ALLOWED		
194.00	0.00A	0.00R	0.00A	0.00M	YES	9.52A	45.2
	0.01AF	0.22A	0.02A	0.23A	YES	11.96A	45.2
178.00	0.01AB	0.22A	0.02R	0.23A	YES	11.96A	45.2
	0.03AB	0.58H	0.03Q	0.59H	YES	14.39A	45.2
162.00	0.03Z	0.58H	0.03H	0.59H	YES	14.39A	45.2
	0.03Z	0.92H	0.04X	0.94H	YES	16.83A	45.2
146.00	0.02AC	0.66F	0.03D	0.67F	YES	11.92A	45.2
	0.02AC	0.71A	0.03D	0.72A	YES	12.41A	45.2
141.50	0.02AA	0.74H	0.03C	0.75H	YES	12.16A	45.2
	0.02AA	0.86C	0.03C	0.88C	YES	13.71A	45.2
127.25	0.02AA	0.86C	0.03C	0.88C	YES	13.71A	45.2
	0.02AA	0.93C	0.02C	0.95C	YES	15.26A	45.2
113.00	0.02AA	0.93C	0.02C	0.95C	YES	15.26A	45.2
	0.02AA	0.98C	0.02C	0.99C	YES	16.81A	45.2
98.75	0.02AA	0.85C	0.02C	0.86C	YES	14.66A	45.2
	0.02AA	0.86C	0.02C	0.87C	YES	15.26A	45.2
92.50	0.02AA	0.89C	0.02C	0.90C	YES	14.95A	45.2
	0.02AA	0.90C	0.02C	0.91C	YES	16.19A	45.2
79.42	0.02AA	0.90C	0.02C	0.91C	YES	16.19A	45.2
	0.02AA	0.91C	0.02C	0.92C	YES	17.44A	45.2
66.33	0.02AA	0.91C	0.02C	0.92C	YES	17.44A	45.2
	0.02AA	0.92C	0.02C	0.93C	YES	18.68A	45.2
53.25	0.02AA	0.92C	0.02C	0.93C	YES	18.68A	45.2
	0.02AA	0.92C	0.02C	0.94C	YES	19.44A	45.2
45.25	0.02AA	0.95C	0.02C	0.96C	YES	19.09A	45.2
	0.02AA	0.95C	0.02C	0.97C	YES	20.17A	45.2
33.94	0.02AA	0.95C	0.02C	0.97C	YES	20.17A	45.2
	0.02AA	0.95C	0.02C	0.97C	YES	21.24A	45.2
22.62	0.02AA	0.95C	0.02C	0.97C	YES	21.24A	45.2
	0.02AA	0.95C	0.02U	0.97C	YES	22.32A	45.2
11.31	0.02AA	0.95C	0.02U	0.97C	YES	22.32A	45.2
	0.02AA	0.95C	0.02U	0.97C	YES	23.40A	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	ACROSS	ALONG	ACROSS	ft-kip
	kip	kip	ft-kip	ft-kip	
142.06	60.98	0.17	-9603.66	24.13	2.26
AA	C	W	C	C	U

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

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

LOADING CONDITION A =====

60 mph wind with no ice. Wind Azimuth: 0

LOADS ON POLE  
 =====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0050	0.0070	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	3.5381	0.0000	0.0000
C	189.000	0.00	0.0	0.0	3.7922	6.0000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0099	0.0140	0.0000	0.0000
C	177.000	0.00	0.0	0.0	0.0000	3.3134	0.0000	0.0000
C	177.000	0.00	0.0	0.0	2.8214	4.0305	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0098	0.0140	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0000	3.0888	0.0000	0.0000
C	165.000	0.00	0.0	0.0	2.7873	4.0305	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0097	0.0140	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0096	0.0140	0.0000	0.0000
C	153.000	0.00	0.0	0.0	0.0000	2.8642	0.0000	0.0000
C	153.000	0.00	0.0	0.0	2.7512	4.0305	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0095	0.0140	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0094	0.0140	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0093	0.0140	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0091	0.0140	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0090	0.0140	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0088	0.0140	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0087	0.0140	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0085	0.0140	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0083	0.0140	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0080	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0074	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0070	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0064	0.0140	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0152	0.0697	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0152	0.0697	0.0000	0.0000
D	178.000	0.00	180.0	0.0	0.0180	0.0841	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0180	0.0841	0.0000	0.0000
D	162.000	0.00	180.0	0.0	0.0207	0.0985	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0207	0.0985	0.0000	0.0000
D	146.000	0.00	180.0	0.0	0.0224	0.2558	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0224	0.2558	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0235	0.1598	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0235	0.1598	0.0000	0.0000
D	127.250	0.00	180.0	0.0	0.0256	0.1778	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0256	0.1778	0.0000	0.0000
D	113.000	0.00	180.0	0.0	0.0276	0.1958	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0276	0.1958	0.0000	0.0000
D	98.750	0.00	180.0	0.0	0.0289	0.4428	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0289	0.4428	0.0000	0.0000
D	92.500	0.00	180.0	0.0	0.0295	0.2481	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0295	0.2481	0.0000	0.0000
D	79.417	0.00	180.0	0.0	0.0308	0.2670	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0308	0.2670	0.0000	0.0000
D	66.333	0.00	180.0	0.0	0.0319	0.2858	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0319	0.2858	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0325	0.5973	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0325	0.5973	0.0000	0.0000
D	45.250	0.00	180.0	0.0	0.0322	0.3102	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.0322	0.3102	0.0000	0.0000
D	33.938	0.00	180.0	0.0	0.0318	0.3266	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0311	0.3592	0.0000	0.0000

=====

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

=====

MAST ELEV ft	.....DEFLECTIONS (ft).....			.....ROTATIONS (deg).....		
	HORIZONTAL ALONG	ACROSS	DOWN	TILT ALONG	ACROSS	TWIST
194.0	5.64D	0.01H	0.24G	3.39D	0.00H	0.00L
178.0	4.70D	0.01H	0.18G	3.32D	0.00H	0.00L

162.0	3.00D	0.01H	0.13G	2.67D	0.00H	0.00L
146.0	3.00D	0.00H	0.09G	2.67D	0.00H	0.00L
141.5	2.80D	0.00H	0.08G	2.57D	0.00H	0.00L
127.2	2.20D	0.00H	0.06G	2.24D	0.00H	0.00L
113.0	1.69D	0.00H	0.04G	1.90D	0.00H	0.00L
98.7	1.26D	0.00E	0.02G	1.58D	0.00H	0.00L
92.5	1.09D	0.00E	0.02G	1.46D	0.00H	0.00L
79.4	0.79D	0.00E	0.01G	1.21D	0.00E	0.00L
66.3	0.54D	0.00E	0.01G	0.98D	0.00E	0.00L
53.2	0.34D	0.00E	0.00D	0.76D	0.00E	0.00L
45.2	0.24D	0.00E	0.00D	0.64D	0.00E	0.00L
33.9	0.13D	0.00E	0.00D	0.46D	0.00E	0.00L
22.6	0.06D	0.00H	0.00D	0.30D	0.00E	0.00L
11.3	0.01D	0.00H	0.00D	0.14D	0.00H	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

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

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND ALONG kip	WIND.DIR ACROSS kip	MOMENT.w.r.t.WIND ALONG ft-kip	WIND.DIR ACROSS ft-kip	TORSION ft-kip
194.0	0.00 B	0.00 A	0.00 I	0.00 B	0.00 I	0.00 I
178.0	10.67 A	4.05 A	0.00 I	-50.33 G	0.01 L	0.00 L
162.0	26.51 D	9.97 E	0.00 E	-185.41 G	0.04 L	0.02 L
146.0	34.99 D	13.06 D	0.00 H	-390.70 G	0.09 L	0.03 L
141.5	36.16 I	13.20 G	0.05 F	-457.10 G	-0.19 F	0.04 L
127.2	38.45 I	13.58 C	0.04 H	-669.76 C	-0.65 H	0.08 L
113.0	41.03 I	13.96 D	0.04 C	-885.56 C	-0.91 C	0.10 L
98.7	43.83 I	14.36 D	-0.04 K	-1105.30 D	-1.43 C	0.12 L
92.5	46.61 I	14.55 D	-0.04 K	-1203.11 D	-1.53 C	0.13 L
79.4	49.87 I	14.95 D	-0.04 K	-1410.62 D	-1.89 C	0.14 L
66.3	53.38 I	15.35 H	-0.06 E	-1621.36 D	2.20 K	0.16 L
53.2	57.14 I	15.78 H	-0.06 E	-1835.72 D	2.88 E	0.18 L
45.2	61.92 I	16.05 H	0.06 H	-1968.79 D	3.23 E	0.18 L
33.9	65.46 I	16.44 A	0.05 H	-2159.36 D	3.78 E	0.19 L
0.0	69.23 I	16.80 A	0.06 H	-2352.24 D	4.36 E	0.20 L



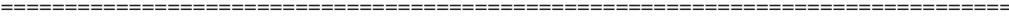
	69.23 I	16.79 A	0.06 H	-2352.24 D	4.36 E	0.20 L
11.3	73.12 I	17.16 A	0.06 H	-2547.28 D	4.91 E	0.20 L
	73.12 I	17.15 A	0.05 H	-2547.28 D	4.91 E	0.20 L
	77.12 I	17.51 A	0.05 H	-2744.35 D	-5.52 H	0.20 L
base reaction	77.12 I	-17.51 A	-0.05 H	2744.35 D	5.52 H	-0.20 L

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00	0.00B	0.00I	0.00I	0.00B	YES	9.52A	45.2
178.00	0.01A	0.06G	0.00A	0.07G	YES	11.96A	45.2
	0.01D	0.06G	0.00E	0.07G	YES	11.96A	45.2
162.00	0.01D	0.17G	0.01E	0.18G	YES	14.39A	45.2
	0.01D	0.17G	0.01D	0.18G	YES	14.39A	45.2
146.00	0.02D	0.27G	0.01D	0.28G	YES	16.83A	45.2
	0.01I	0.19B	0.01G	0.20B	YES	11.92A	45.2
141.50	0.01I	0.21G	0.01G	0.22G	YES	12.41A	45.2
	0.01I	0.21G	0.01C	0.22G	YES	12.16A	45.2
127.25	0.01I	0.25C	0.01C	0.26C	YES	13.71A	45.2
	0.01I	0.25C	0.01D	0.26C	YES	13.71A	45.2
113.00	0.01I	0.27C	0.01D	0.28C	YES	15.26A	45.2
	0.01I	0.27C	0.01D	0.28C	YES	15.26A	45.2
98.75	0.01I	0.28D	0.01D	0.29D	YES	16.81A	45.2
	0.01I	0.24D	0.01H	0.25D	YES	14.66A	45.2
92.50	0.01I	0.25D	0.01H	0.25D	YES	15.26A	45.2
	0.01I	0.26D	0.01D	0.26D	YES	14.95A	45.2
79.42	0.01I	0.26D	0.01D	0.27D	YES	16.19A	45.2
	0.01I	0.26D	0.01H	0.27D	YES	16.19A	45.2
66.33	0.01I	0.26D	0.01H	0.27D	YES	17.44A	45.2
	0.01I	0.26D	0.01H	0.27D	YES	17.44A	45.2
53.25	0.01I	0.26D	0.01H	0.27D	YES	18.68A	45.2
	0.01I	0.26D	0.01H	0.27D	YES	18.68A	45.2
45.25	0.01I	0.26D	0.01H	0.27D	YES	19.44A	45.2
	0.01I	0.27D	0.01A	0.28D	YES	19.09A	45.2
33.94	0.01I	0.27D	0.01H	0.28D	YES	20.17A	45.2
	0.01I	0.27D	0.01H	0.28D	YES	20.17A	45.2
22.62	0.01I	0.27D	0.00H	0.28D	YES	21.24A	45.2
	0.01I	0.27D	0.00H	0.28D	YES	21.24A	45.2
11.31	0.01I	0.27D	0.00H	0.28D	YES	22.32A	45.2
	0.01I	0.27D	0.00H	0.28D	YES	22.32A	45.2
0.00	0.01I	0.27D	0.00H	0.28D	YES	23.40A	45.2

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

DOWN kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
77.12	17.51	0.05	-2744.35	-5.52	0.20



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

### Pole Data

Diameter: 68.590 in (flat to flat)  
 Thickness: 0.5 in  
 Yield (Fy): 65 ksi  
 # of Sides: 18 "0" IF Round  
 Strength (Fu): 80 ksi

### Reactions

Moment, Mu: 9603.66 ft-kips  
 Axial, Pu: 92.55 kips  
 Shear, Vu: 60.98 kips

### Anchor Rod Data

Quantity: 26  
 Diameter: 2.25 in  
 Rod Material: A615  
 Strength (Fu): 100 ksi  
 Yield (Fy): 75 ksi  
 BC Diam. (in): 76 BC Override:

### Anchor Rod Results

(per 4.9.9)

Maximum Put: 230.62 Kips  
 $\Phi^t \cdot R_{nt}$ : 243.75 Kips  
 Vu: 2.35 Kips  
 $\Phi^v \cdot R_{nv}$ : 149.10 Kips  
 Tension Interaction Ratio: 0.90  
 Maximum Puc: 236.85 Kips  
 $\Phi^c \cdot R_{nc}$ : 268.39 Kips  
 Vu: 2.35 Kips  
 $\Phi^c \cdot R_{nc}$ : 120.77 Kips  
 Compression Interaction Ratio: 0.88  
 Maximum Interaction Ratio: **89.5% Pass**

### Plate Data

Diameter (in): 81.75 Dia. Override:  
 Thickness: 2.5 in  
 Yield (Fy): 50 ksi  
 Eff Width/Rod: 8.37 in  
 Drain Hole: 2.625 in. diameter  
 Drain Location: 32.25 in. center of pole to center of drain hole  
 Center Hole: 56.5 in. diameter

### Base Plate Results

Base Plate (Mu/Z): 42.2 ksi  
 Allowable  $\Phi^t \cdot F_y$ : 45.0 ksi (per AISC)  
 Base Plate Interaction Ratio: **93.9% Pass**

**MAT FOUNDATION DESIGN BY SABRE INDUSTRIES**

195' Monopole AT&T Ingram Barge, KY (480163) 04/27/21 DO

**Overall Loads:**

Factored Moment (ft-kips)	9603.66
Factored Axial (kips)	92.55
Factored Shear (kips)	60.98
Bearing Design Strength (ksf)	3
Water Table Below Grade (ft)	999
Width of Mat (ft)	33.5
Thickness of Mat (ft)	2.25
Depth to Bottom of Slab (ft)	6
Quantity of Bolts in Bolt Circle	26
Bolt Circle Diameter (in)	76
Effective Anchor Bolt Embedment (in)	66.5
Diameter of Pier (ft)	9
Ht. of Pier Above Ground (ft)	0.5
Ht. of Pier Below Ground (ft)	3.75
Quantity of Bars in Mat	52
Bar Diameter in Mat (in)	1.27
Area of Bars in Mat (in <sup>2</sup> )	65.87
Spacing of Bars in Mat (in)	7.74
Quantity of Bars Pier	54
Bar Diameter in Pier (in)	1.41
Tie Bar Diameter in Pier (in)	0.625
Spacing of Ties (in)	4
Area of Bars in Pier (in <sup>2</sup> )	84.32
Spacing of Bars in Pier (in)	5.78
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Soil (kcf)	0.11
Unit Wt. of Concrete (kcf)	0.15

Volume of Concrete (yd<sup>3</sup>) 103.53

**Two-Way Shear Action:**

Average d (in)	22.73
$\phi v_c$ (ksi)	0.197
$\phi v_c = \phi(2 + 4/\beta_c)f'_c$	0.302
$\phi v_c = \phi(\alpha_s d/b_o + 2)f'_c$	0.197
$\phi v_c = \phi 4f'_c$	0.201
Shear perimeter, b <sub>o</sub> (in)	473.77
$\beta_c$	1

**One-Way Shear:**

$\phi V_c$  (kips) 919.4

**Stability:**

Overturning Design Strength (ft-k) 14066.9

Max. Net Bearing Press. (ksf) 2.68

Allowable Bearing Pressure (ksf) 2.00

Safety Factor 2.00

Ultimate Bearing Pressure (ksf) 4.00

Bearing  $\Phi_s$  0.75

Minimum Pier Diameter (ft) 9.00

Equivalent Square b (ft) 7.98

Square Pier? (Y/N) N

Recommended Spacing (in) 5 to 12

Minimum Pier A<sub>s</sub> (in<sup>2</sup>) 45.80

Recommended Spacing (in) 5 to 12

v<sub>u</sub> (ksi) 0.119

J (in<sup>3</sup>) 2.541E+07

c + d (in) 118.44

0.40M<sub>sc</sub> (ft-kips) 3945.1

V<sub>u</sub> (kips) 513.6

Total Applied M (ft-k) 10000.0

**Pier-Slab Transfer by Flexure:**

$b_{slab}$ (ft)	15.75		
$\phi M_n$ (ft-kips)	<input type="text" value="5977.2"/>	$0.60M_{sc}$ (ft-kips)	<input type="text" value="5917.7"/>

**Pier Design:**

$\phi V_n$ (kips)	<input type="text" value="1540.1"/>	$V_u$ (kips)	<input type="text" value="61.0"/>
$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f'_c{}^{1/2} b_w d$	943.7		
$V_s$ (kips)	<input type="text" value="795.2"/>	$*** V_s \max = 4 f'_c{}^{1/2} b_w d$ (kips)	<input type="text" value="2503.8"/>
Maximum Spacing (in)	6.78	(Only if Shear Ties are Required)	
Actual Hook Development (in)	21.46	Req'd Hook Development $l_{dh}$ (in) - Tension	17.66
		Req'd Hook Development $l_{dc}$ (in) - Compression	19.04

**Flexure in Slab:**

$\phi M_n$ (ft-kips)	<input type="text" value="6356.8"/>	$M_u$ (ft-kips)	<input type="text" value="4309.6"/>
$a$ (in)	2.57		
Steel Ratio	0.00721		
$\beta_1$	0.825		
Maximum Steel Ratio ( $\rho_t$ )	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	<input type="text" value="144.00"/>	Required Development in Pad (in)	<input type="text" value="34.08"/>

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	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
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

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LPILE for Windows, Version 2019-11.004

Analysis of Individual Piles and Drilled Shafts  
Subjected to Lateral Loading Using the p-y Method  
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Files Used for Analysis  
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Path to file locations:  
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:  
480163.lp11d

Name of output report file:  
480163.lp11o

Name of plot output file:  
480163.lp11p

Name of runtime message file:  
480163.lp11r

-----  
Date and Time of Analysis  
-----

Date: April 27, 2021

Time: 13:38:46

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Problem Title  
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Site : Ingram Barge, KY

Tower : 195' Monopole

Prepared for : AT&T

Job Number : 480163

Engineer : DO

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Program Options and Settings  
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Computational Options:  
- Conventional Analysis  
Engineering Units Used for Data Input and Computations:  
- US Customary System Units (pounds, feet, inches)

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

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

- Use of p-y modification factors for p-y curves not selected

- Analysis uses layering correction (method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:

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

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Pile Structural Properties and Geometry  
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Number of pile sections defined = 1  
Total length of pile = 40.500 ft  
Depth of ground surface below top of pile = 0.5000 ft

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

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

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	120.0000
2	40.500	120.0000

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Input Structural Properties for Pile Sections:  
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Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile  
Length of section = 40.500000 ft  
Shaft Diameter = 120.000000 in  
Shear capacity of section = 0.0000 lbs

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Ground Slope and Pile Batter Angles  
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Ground Slope Angle = 0.000 degrees  
= 0.000 radians  
Pile Batter Angle = 0.000 degrees  
= 0.000 radians

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Soil and Rock Layering Information  
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The soil profile is modelled using 3 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer = 0.500000 ft  
Distance from top of pile to bottom of layer = 3.500000 ft  
Effective unit weight at top of layer = 120.000000 pcf  
Effective unit weight at bottom of layer = 120.000000 pcf  
Undrained cohesion at top of layer = 500.000000 psf  
Undrained cohesion at bottom of layer = 500.000000 psf  
Epsilon-50 at top of layer = 0.020000  
Epsilon-50 at bottom of layer = 0.020000

Layer 2 is stiff clay without free water

Distance from top of pile to top of layer = 3.500000 ft  
Distance from top of pile to bottom of layer = 29.500000 ft  
Effective unit weight at top of layer = 120.000000 pcf  
Effective unit weight at bottom of layer = 120.000000 pcf  
Undrained cohesion at top of layer = 1000.000000 psf  
Undrained cohesion at bottom of layer = 1000.000000 psf  
Epsilon-50 at top of layer = 0.010000  
Epsilon-50 at bottom of layer = 0.010000

Layer 3 to 5000 Clay without free water

ADDRESSES AND CONTACT INFORMATION

Distance from top of pile to top of layer = 29.500000 ft  
 Distance from top of pile to bottom of layer = 40.500000 ft  
 Effective unit weight at top of layer = 120.000000 pcf  
 Effective unit weight at bottom of layer = 120.000000 pcf  
 Undrained cohesion at top of layer = 2000. psf  
 Undrained cohesion at bottom of layer = 2000. psf  
 Epsilon-50 at top of layer = 0.007000  
 Epsilon-50 at bottom of layer = 0.007000

(Depth of the lowest soil layer extends 0.000 ft below the pile tip)

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 Summary of Input Soil Properties  
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Layer Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Undrained Cohesion psf	E50 or krm
1	Stiff Clay	0.5000	120.0000	500.0000	0.02000
	w/o Free Water	3.5000	120.0000	500.0000	0.02000
2	Stiff Clay	3.5000	120.0000	1000.0000	0.01000
	w/o Free Water	29.5000	120.0000	1000.0000	0.01000
3	Stiff Clay	29.5000	120.0000	2000.	0.00700
	w/o Free Water	40.5000	120.0000	2000.	0.00700

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

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 Pile-head Loading and Pile-head Fixity Conditions  
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Number of loads specified = 2

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length	Run Analysis
1	1	V = 81307. lbs	M = 153658560. in-lbs	123400.	No	Yes
2	1	V = 17510. lbs	M = 32932200. in-lbs	77120.	No	Yes

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

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 Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness  
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Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:  
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Dimensions and Properties of Drilled Shaft (Bored Pile):  
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Length of Section = 40.500000 ft  
 Shaft Diameter = 120.000000 in  
 Concrete Cover Thickness (to edge of long. rebar) = 3.625000 in  
 Number of Reinforcing Bars = 54 bars  
 Yield Stress of Reinforcing Bars = 60000. psi  
 Modulus of Elasticity of Reinforcing Bars = 29000000. psi  
 Gross Area of Shaft = 11310. sq. in.  
 Total Area of Reinforcing Steel = 84.318305 sq. in.  
 Area Ratio of Steel Reinforcement = 0.75 percent  
 Edge-to-Edge Bar Spacing = 5.063845 in  
 Maximum Concrete Aggregate Size = 0.750000 in  
 Ratio of Bar Spacing to Aggregate Size = 6.75  
 Offset of Center of Rebar Cage from Center of Pile = 0.0000 in

Axial Structural Capacities:  
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Nom. Axial Structural Capacity =  $0.85 F_c A_c + F_y A_s$  = 47996.312 kips



Tensile Modulus for Cracking of Concrete = 4200000 kips  
 Nominal Axial Tensile Capacity = -5059.098 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.410000	1.561450	55.670000	0.000000
2	1.410000	1.561450	55.293579	6.462893
3	1.410000	1.561450	54.169408	12.838386
4	1.410000	1.561450	52.312688	19.040261
5	1.410000	1.561450	49.748529	24.984650
6	1.410000	1.561450	46.511606	30.591165
7	1.410000	1.561450	42.645694	35.783986
8	1.410000	1.561450	38.203072	40.492891
9	1.410000	1.561450	33.243819	44.654198
10	1.410000	1.561450	27.835000	48.211634
11	1.410000	1.561450	22.049761	51.117091
12	1.410000	1.561450	15.966336	53.331276
13	1.410000	1.561450	9.666994	54.824248
14	1.410000	1.561450	3.236923	55.575815
15	1.410000	1.561450	-3.236923	55.575815
16	1.410000	1.561450	-9.666994	54.824248
17	1.410000	1.561450	-15.966336	53.331276
18	1.410000	1.561450	-22.049761	51.117091
19	1.410000	1.561450	-27.835000	48.211634
20	1.410000	1.561450	-33.243819	44.654198
21	1.410000	1.561450	-38.203072	40.492891
22	1.410000	1.561450	-42.645694	35.783986
23	1.410000	1.561450	-46.511606	30.591165
24	1.410000	1.561450	-49.748529	24.984650
25	1.410000	1.561450	-52.312688	19.040261
26	1.410000	1.561450	-54.169408	12.838386
27	1.410000	1.561450	-55.293579	6.462893
28	1.410000	1.561450	-55.670000	0.000000
29	1.410000	1.561450	-55.293579	-6.462893
30	1.410000	1.561450	-54.169408	-12.838386
31	1.410000	1.561450	-52.312688	-19.040261
32	1.410000	1.561450	-49.748529	-24.984650
33	1.410000	1.561450	-46.511606	-30.591165
34	1.410000	1.561450	-42.645694	-35.783986
35	1.410000	1.561450	-38.203072	-40.492891
36	1.410000	1.561450	-33.243819	-44.654198
37	1.410000	1.561450	-27.835000	-48.211634
38	1.410000	1.561450	-22.049761	-51.117091
39	1.410000	1.561450	-15.966336	-53.331276
40	1.410000	1.561450	-9.666994	-54.824248
41	1.410000	1.561450	-3.236923	-55.575815
42	1.410000	1.561450	3.236923	-55.575815
43	1.410000	1.561450	9.666994	-54.824248
44	1.410000	1.561450	15.966336	-53.331276
45	1.410000	1.561450	22.049761	-51.117091
46	1.410000	1.561450	27.835000	-48.211634
47	1.410000	1.561450	33.243819	-44.654198
48	1.410000	1.561450	38.203072	-40.492891
49	1.410000	1.561450	42.645694	-35.783986
50	1.410000	1.561450	46.511606	-30.591165
51	1.410000	1.561450	49.748529	-24.984650
52	1.410000	1.561450	52.312688	-19.040261
53	1.410000	1.561450	54.169408	-12.838386
54	1.410000	1.561450	55.293579	-6.462893

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

Minimum spacing between any two bars not equal to zero = 5.064 inches  
 between bars 46 and 47.

Ratio of bar spacing to maximum aggregate size = 6.75

Concrete Properties:

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

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

Number	Axial Thrust Force kips
1	77.120
2	123.400

Summary of Results for Nominal Moment Capacity for Section 1

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

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	77.120	262908.128	0.00300000
2	123.400	264997.299	0.00300000

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

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

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

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

Axial Load No.	Resist. Factor for Moment	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in <sup>2</sup>
1	0.65	262908.	50.128000	170890.	7.8749E+09
2	0.65	264997.	80.210000	172248.	7.9449E+09
1	0.75	262908.	53.984000	197181.	7.5780E+09
2	0.75	264997.	86.380000	198748.	7.6472E+09
1	0.90	262908.	57.840000	236617.	4.9000E+09
2	0.90	264997.	92.550000	238498.	4.9484E+09

#### Layering Correction Equivalent Depths of Soil & Rock Layers

Layer No.	Top of Layer Below Pile Head ft	Equivalent Top Depth Below Grnd Surf ft	Same Layer Type As Layer Above	Layer is Rock or is Below Rock Layer	F0 Integral for Layer lbs	F1 Integral for Layer lbs
1	0.5000	0.00	N.A.	No	0.00	51604.
2	3.5000	1.6436	Yes	No	51604.	1428478.
3	29.5000	18.4365	Yes	No	1480081.	N.A.

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

#### Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

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

Load Case No.	Load Type	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	81307.	M, in-lb	1.54E+08	123400.	17.2392	-0.05346	-718613.	1.58E+08
2	V, lb	17510.	M, in-lb	3.29E+07	77120.	0.05364	-2.68E-04	-143201.	3.36E+07

Maximum pile-head deflection = 17.2392302870 inches  
 Maximum pile-head rotation = -0.0534639169 radians = -3.063257 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft-k)	9,603.66	
Shear (k)	60.98	
Caisson diameter (ft)	9	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	32	
Lateral soil pressure (lb/ft <sup>2</sup> )	300.00	
Ground to application of force, h (ft)	157.99	
Applied lateral force, P (lb)	60,980	
Lateral soil bearing pressure, S <sub>1</sub> (lb/ft)	3,200.00	
Diameter, b (ft)	9	
A	4.95	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	31.79	$= 0.5A [ 1 + ( 1 + ( 4.36h / A ) )^{1/2} ]$

**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 ▼

	Utility ID	Utility Name	Utility Type	Class	City	State
<input type="button" value="View"/>	4111300	2600Hz, Inc. dba ZSWITCH	Cellular	D	San Francisco	CA
<input type="button" value="View"/>	4108300	Air Voice Wireless, LLC	Cellular	B	Bloomfield Hill	MI
<input type="button" value="View"/>	4110650	Alliant Technologies of KY, L.L.C.	Cellular	D	Morristown	NJ
<input type="button" value="View"/>	4111900	ALLNETAIR, INC.	Cellular	C	West Palm Beach	FL
<input type="button" value="View"/>	44451184	Alltel Corporation d/b/a Verizon Wireless	Cellular	A	Lisle	IL
<input type="button" value="View"/>	4110850	AltaWorx, LLC	Cellular	D	Fairhope	AL
<input type="button" value="View"/>	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	OH
<input type="button" value="View"/>	4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
<input type="button" value="View"/>	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
<input type="button" value="View"/>	4110700	Andrew David Balholm dba Norcell	Cellular	D	Buford	GA
<input type="button" value="View"/>	4105700	Assurance Wireless USA, L.P.	Cellular	A	Atlanta	GA
<input type="button" value="View"/>	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
<input type="button" value="View"/>	4106000	Best Buy Health, Inc. d/b/a GreatCall d/b/a Jitterbug	Cellular	A	San Diego	CA
<input type="button" value="View"/>	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
<input type="button" value="View"/>	4111050	BlueBird Communications, LLC	Cellular	D	New York	NY
<input type="button" value="View"/>	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY

<a href="#">View</a>	4107600	Boomerang Wireless, LLC	Cellular	D	Hiawatha	IA
<a href="#">View</a>	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
<a href="#">View</a>	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4106600	Cintex Wireless, LLC	Cellular	D	Houston	TX
<a href="#">View</a>	4111150	Comcast OTR1, LLC	Cellular	C	Phoeniexville	PA
<a href="#">View</a>	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
<a href="#">View</a>	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
<a href="#">View</a>	4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
<a href="#">View</a>	4111500	CSC Wireless, LLC d/b/a Altice Wireless	Cellular	D	Long Island City	NY
<a href="#">View</a>	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4111650	DataBytes, Inc.	Cellular	D	Rogers	AR
<a href="#">View</a>	4112000	DISH Wireless L.L.C.	Cellular	C	Englewood	CO
<a href="#">View</a>	4111200	Dynalink Communications, Inc.	Cellular	C	Brooklyn	NY
<a href="#">View</a>	4111800	Earthlink, LLC	Cellular	C	Atlanta	GA
<a href="#">View</a>	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
<a href="#">View</a>	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
<a href="#">View</a>	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
<a href="#">View</a>	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
<a href="#">View</a>	4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
<a href="#">View</a>	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Herndon	VA
<a href="#">View</a>	4111750	Gabb Wireless, Inc.	Cellular	D	Provo	UT
<a href="#">View</a>	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
<a href="#">View</a>	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
<a href="#">View</a>	4112050	GLOTELL US, Corp.	Cellular	C	Hallandale	FL
<a href="#">View</a>	4109600	Google North America Inc.	Cellular	A	Mountain View	CA
<a href="#">View</a>	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
<a href="#">View</a>	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4111350	HELLO MOBILE TELECOM LLC	Cellular	D	Dania Beach	FL
<a href="#">View</a>	4103100	i-Wireless, LLC	Cellular	B	Newport	KY
<a href="#">View</a>	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Dallas	TX
<a href="#">View</a>	4111950	J Rhodes Enterprises LLC	Cellular	C	Gulf Breeze	FL
<a href="#">View</a>	22215360	KDDI America, Inc.	Cellular	D	Staten Island	NY
<a href="#">View</a>	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY

<a href="#">View</a>	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4109550	Kynect Communications, LLC	Cellular	D	Dallas	TX
<a href="#">View</a>	4112200	Lexvor Inc.	Cellular	C	Irvine	CA
<a href="#">View</a>	4111250	Liberty Mobile Wireless, LLC	Cellular	D	Sunny Isles Beach	FL
<a href="#">View</a>	4111400	Locus Telecommunications, LLC	Cellular	A	Fort Lee	NJ
<a href="#">View</a>	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
<a href="#">View</a>	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
<a href="#">View</a>	4111700	Mint Mobile, LLC	Cellular	D	Costa Mesa	CA
<a href="#">View</a>	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
<a href="#">View</a>	4111850	Mobi, Inc.	Cellular	C	Honolulu	HI
<a href="#">View</a>	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
<a href="#">View</a>	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001800	OnStar, LLC	Cellular	A	Detroit	MI
<a href="#">View</a>	4110750	Onvoy Spectrum, LLC	Cellular	D	Chicago	IL
<a href="#">View</a>	4109050	Patriot Mobile LLC	Cellular	D	Irving	TX
<a href="#">View</a>	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
<a href="#">View</a>	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
<a href="#">View</a>	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
<a href="#">View</a>	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
<a href="#">View</a>	4108700	Ready Wireless, LLC	Cellular	C	Hiawatha	IA
<a href="#">View</a>	4110500	Republic Wireless, Inc.	Cellular	A	Raleigh	NC
<a href="#">View</a>	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
<a href="#">View</a>	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Fremont	NE
<a href="#">View</a>	4110150	Spectrotel of the South LLC dba Touch Base Communications	Cellular	D	Neptune	NJ
<a href="#">View</a>	4111450	Spectrum Mobile, LLC	Cellular	A	St. Louis	MO
<a href="#">View</a>	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4111600	STX Group LLC dba Twigby	Cellular	D	Murfreesboro	TN
<a href="#">View</a>	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
<a href="#">View</a>	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4002500	TAG Mobile, LLC	Cellular	D	Plano	TX
<a href="#">View</a>	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	Portland	ME

<a href="#">View</a>	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4112100	Tello LLC	Cellular	C	Atlanta	GA
<a href="#">View</a>	4108900	Telrite Corporation	Cellular	D	Covington	GA
<a href="#">View</a>	4108450	Tempo Telecom, LLC	Cellular	B	Atlanta	GA
<a href="#">View</a>	4109000	Ting, Inc.	Cellular	A	Toronto	ON
<a href="#">View</a>	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
<a href="#">View</a>	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ
<a href="#">View</a>	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4002000	Truphone, Inc.	Cellular	D	Durham	NC
<a href="#">View</a>	4110300	UVNV, Inc. d/b/a Mint Mobile	Cellular	D	Costa Mesa	CA
<a href="#">View</a>	4110800	Visible Service LLC	Cellular	D	Basking Ridge	NJ
<a href="#">View</a>	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
<a href="#">View</a>	4110950	Wing Tel Inc.	Cellular	D	New York	NY
<a href="#">View</a>	4112150	Zefcom, LLC	Cellular	C	Wichita Falls	TX



**EXHIBIT E**  
**AIRSPACE DOCUMENTATION**

\*\*\*\*\*  
\* Federal Airways & Airspace \*  
\* Summary Report: New Construction \*  
\* Antenna Structure \*  
\*\*\*\*\*

Airspace User: Not Identified

File: INGRAMBARGE-DD

Location: Woodland Mills, TN

Latitude: 36°-45'-35.7" Longitude: 89°-06'-36.9"

SITE ELEVATION AMSL.....332 ft.  
STRUCTURE HEIGHT.....199 ft.  
OVERALL HEIGHT AMSL.....531 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 CHQ)
- FAR 77.9: NNR (No Expected TERPS® impact 1M7)
- 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 - Primary 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: CHQ: MISSISSIPPI COUNTY

- Type: A RD: 78055.3 RE: 313.3
- FAR 77.17(a)(1): 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

VFR TRAFFIC PATTERN AIRSPACE FOR: 1M7: FULTON

Type: A RD: 101912.4 RE: 400  
 FAR 77.17(a)(1): 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 Facilities Are Within 6 NM

AIR NAVIGATION ELECTRONIC FACILITIES

APCH	FAC	ST	DIST	DELTA	GRND				
ANGLE	IDNT	TYPE	AT	FREQ	VECTOR	(ft)	ELEVA	ST	LOCATION
	CHQ	NDB	D	20	293.31	78536	+217	MO	
	CHARLESTON		.16						
	CNG	VOR/DME	R	113.1	41.37	120785	+46	KY	
	CUNNINGHAM		.02						
	QPB	RADAR ARSR	Y		204.85	146284	+34	TN	
	Samburg		.01						
	KPAH	RADAR WXL	Y		41.26	149631	+25	KY	PADUCAH
	WXL		.01						

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.

No AM Stations were located within 3.0 km.

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09-15-2020  
08:11:04

**EXHIBIT F**  
**KENTUCKY AIRPORT ZONING COMMISSION**



**KENTUCKY AIRPORT ZONING COMMISSION**

ANDY BESHEAR  
Governor

Office of Audits, 200 Mero Street, 4th floor  
Frankfort, KY 40622  
[www.transportation.ky.gov](http://www.transportation.ky.gov)  
502-782-4043

JIM GRAY  
Secretary

**APPROVAL OF APPLICATION**

December 16, 2020

**APPLICANT**

John Monday  
Cody Knox  
3300 E. Renner Road, B3132  
Richardson, TX 75082

SUBJECT: AS-HICKHAM-1M7-2020-160

STRUCTURE: Antenna Tower  
LOCATION: Columbus, KY  
COORDINATES: 36° 45' 35.7" N / 89° 6' 36.9" W  
HEIGHT: 199' AGL/531' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 199' AGL/531' AMSL Antenna Tower near Columbus, KY 36° 45' 35.7" N / 89° 6' 36.9" W.

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

No Marking/Lighting Required.

***Randall S. Royer***

Randall S. Royer, Executive Director  
Office of Audits  
Acting Administrator  
[Randall.Royer@ky.gov](mailto:Randall.Royer@ky.gov)  
[Jason.Salazar-Munoz@ky.gov](mailto:Jason.Salazar-Munoz@ky.gov)



An Equal Opportunity Employer M/F/D

**EXHIBIT G**  
**GEOTECHNICAL REPORT**

GEOTECHNICAL REPORT

**INGRAM BARGE**

**(15246752)**

**36° 45' 35.68" N**

**89° 06' 36.91" W**

112 Bottery Road,  
Columbus, KY 42032

Prepared For:



Prepared By:







April 16, 2021

Ms. Michelle Ward  
AT&T  
534 Armory Place  
4<sup>th</sup> Floor  
Louisville, KY 40202

Re: Geotechnical Report – **PROPOSED 195' MONOPOLE TOWER w/ 4' LIGHTNING ARRESTOR**  
Site Name: **INGRAM BARGE (15246752)**  
Site Address: 112 Bottery Road, Columbus, Hickman County, Kentucky  
Coordinates: N36° 45' 35.68", W89° 06' 36.91"  
POD Project No. 20-68190

Dear Ms. Ward:

Attached is our geotechnical engineering report for the referenced project. This report contains our findings, an engineering interpretation of these findings with respect to the available project characteristics, and recommendations to aid design and construction of the tower and equipment support foundations.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact our office.

Cordially,

A handwritten signature in blue ink that reads 'Mark Patterson'.

Mark Patterson, P.E.  
Project Engineer  
License No.: KY 16300



Copies submitted: (3) Ms. Michelle Ward

**LETTER OF TRANSMITTAL**

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- BORING LOCATION PLAN
- BORING LOGS
- SOIL SAMPLE CLASSIFICATION

Geotechnical Report  
**PROPOSED 195' MONOPOLE TOWER w/ 4' LIGHTNING ARRESTOR**  
Site Name: **INGRAM BARGE (15246752)**  
112 Bottery Road, Columbus, Hickman County, Kentucky  
N36° 45' 35.68", W89° 06' 36.91"

### 1. PURPOSE AND SCOPE

The purpose of this study was to determine the general subsurface conditions at the site of the proposed tower by drilling three borings and to evaluate this data with respect to foundation concept and design for the proposed tower and shelter. Also included is an evaluation of the site with respect to potential construction problems and recommendations dealing with quality control during construction.

### 2. PROJECT CHARACTERISTICS

AT&T is proposing to construct a monopole tower and either an equipment shelter, slab, or platform at N36° 45' 35.68", W89° 06' 36.91", 112 Bottery Road, Columbus, Hickman County, Kentucky. The site is located in a business next to a warehouse building along Hwy 58W in Columbus. The Mississippi River is about 600 feet to the west. The proposed lease area will be 4,200 square feet and will be accessed along an existing gravel road through the business running east from the intersection of Bottery Road and Hwy 58W to the proposed lease area. The elevation at the proposed tower location is about EL 332 and there is generally about 2-feet of change in elevation across the proposed lease area with the exception of a slope in the northeast corner. The development will also include a small equipment shelter near the base of the tower. The proposed tower location is shown on the Boring Location Plan in the Appendix.

### 3. SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling three test borings near the base of the proposed tower. The Geotechnical Soil Test Boring Logs, which are included in the Appendix, describes the materials and conditions encountered. A sheet defining the terms and symbols used on the boring logs is also included in the Appendix. The general subsurface conditions disclosed by the test borings are discussed in the following paragraphs.

According to the Kentucky Geological Survey, Kentucky Geologic Map Information Services, the site is underlain by the Jackson Formation of sand, clay, silt, and clay breccia.

The borings encountered gravel at the existing ground surface. Below the gravel, the borings encountered silty clay (CL) of low plasticity. The SPT N-values in the clay soil were between 4 to 7 blows per foot (bpf) generally indicating a

soft to medium stiff consistency. At about 9 feet, the borings encountered medium to highly plastic clay (CH) with N-values between 2 and 14 bpf indicating a very soft to stiff consistency. Boring T-1 was terminated at the scheduled depth of 40.5 feet in the clay. From about 14 to 19 feet, a layer of clay silt was encountered in Borings B-1 and B-2 with N-values between 3 and 6 indicating a soft to stiff consistency. Boring B-1 encountered highly plastic clay (CH) at about 19 and Boring B-2 encountered sandy clay (CL) at about 19 feet before the scheduled termination depth of 20.5 feet for both borings.

The drillers did not observe groundwater during drilling, but several samples were very wet and with the proximity to the Mississippi River, groundwater will likely be encountered during construction. It must be noted, however, that short-term water readings in test borings are not necessarily a reliable indication of the actual groundwater level. Furthermore, it must be emphasized that the groundwater level is not stationary but will fluctuate seasonally.

Based on the limited subsurface conditions encountered at the site and using Table 1615.1.1 of the 2018 Kentucky Building Code, the site class is considered "C". Seismic design requirements for telecommunication towers are given in section 1622 of the code. A detailed seismic study was beyond the scope of this report.

#### **4. FOUNDATION DESIGN RECOMMENDATIONS**

The following design recommendations are based on the previously described project information, the subsurface conditions encountered in our borings, the results of our laboratory testing, empirical correlations for the soil types encountered, our analyses, and our experience. If there is any change in the project criteria or structure location, you should retain us to review our recommendations so that we can determine if any modifications are required. The findings of such a review can then be presented in a supplemental report or addendum.

We recommend that the geotechnical engineer be retained to review the near-final project plans and specifications, pertaining to the geotechnical aspects of the project, prior to bidding and construction. We recommend this review to check that our assumptions and evaluations are appropriate based on the current project information provided to us, and to check that our foundation and earthwork recommendations were properly interpreted and implemented.

##### **4.1. Proposed Tower**

Our findings indicate that the proposed monopole can be supported on drilled piers or on a common mat foundation.

#### 4.1.1. Drilled Piers

The following table summarizes the recommended values for use in analyzing lateral and frictional resistance for the various strata encountered at the test boring. It is important to note that these values are estimated based on the standard penetration test results and soil types and were not directly measured. The all values provided are ultimate values and appropriate factors of safety should be used in conjunction with these values. If the piers will bear deeper than about 40 feet, a deeper boring should be drilled to determine the nature of the deeper material.

Depth Below Ground Surface, feet	0 - 3	3 - 29	29 - 40
Ultimate Bearing Pressure (psf)		5,500	11,000
<b>C</b> Undrained Shear Strength, psf	500	1,000	2,000
$\phi$ Angle of Internal Friction degrees	0	0	0
Total Unit Weight, pcf	120	120	120
Soil Modulus Parameter k, pci	30	250	500
Passive Soil Pressure, psf/one foot of depth		650 + 40(D-3)	1,250 + 40(D-29)
Side Friction, psf		200	500

Note: D = Depth below ground surface (in feet) to point at which the passive pressure is calculated.

It is important that the drilled piers be installed by an experienced, competent drilled pier contractor who will be responsible for properly installing the piers in accordance with industry standards and generally accepted methods, without causing deterioration of the subgrade. The recommendations contained herein relate only to the soil-pier interaction and do not account for the structural design of the piers.

#### 4.1.2. Mat Foundation

The tower could be supported on a common mat foundation bearing on the clay at a minimum of 4 feet in depth. A net allowable soil pressure of 2,000 pounds per square foot may be used. This value may be increased by 30 percent

for the maximum edge pressure under transient loads. A friction value of 0.30 may be used between the concrete and the clay soil. The passive pressures given for the drilled pier foundation may be used to resist lateral forces.

It is important that the mat be designed with an adequate factor of safety with regard to overturning under the maximum design wind load.

#### **4.2. Equipment Platform**

An equipment platform may be supported on shallow piers bearing in the natural clay and designed for a net allowable soil pressure of 1,500 pounds per square foot. The piers should bear at a depth of at least 24 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

#### **4.3. Equipment Slab**

A concrete slab supporting the equipment must be supported on at least 6-inch layer of relatively clean granular material such as gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Provided that a minimum of 6 in. of granular material is placed below the slab, a modulus of subgrade reaction ( $k_{30}$ ) of 90 lbs/cu.in. can be used for design of the slab. All existing topsoil or soft natural soil should be removed beneath crushed stone layer.

#### **4.4. Equipment Building**

If an equipment building support on a slab is chosen in place of the equipment platform, it may be supported on shallow spread footings bearing in the natural clay soil and designed for a net allowable soil pressure of 1,500 pounds per square foot.

The footings should be at least ten inches wide. If the footings bear on soil, they should bear at a depth of at least 24 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

The floor slab for the new equipment building can be supported on firm natural soils or on new compacted structural fill. Floor slabs must be supported on at least 4-inch layer of relatively clean granular material such as gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. This is to help distribute concentrated loads and equalize moisture conditions beneath the slab. Provided that a minimum of

4 in. of granular material is placed below the slab, a modulus of subgrade reaction ( $k_{30}$ ) of 90 lbs/cu.in. can be used for design of the floor slabs.

#### **4.5. Drainage and Groundwater Considerations**

Good site drainage must be provided. Surface run-off water should be drained away from the tower and platform and not allowed to pond. It is recommended that all foundation concrete be placed the same day the excavation is made.

The drillers did not observation groundwater during drilling, but several samples were very wet and with the proximity to the Mississippi River, groundwater will likely be encountered during construction. Therefore, no special provisions regarding groundwater control are considered necessary for shallow foundations. Any seepage should be able to be pumped with sumps.

### **5. GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS**

It is possible that variations in subsurface conditions will be encountered during construction. Although only minor variations that can be readily evaluated and adjusted for during construction are anticipated, it is recommended the geotechnical engineer, or a qualified representative be retained to perform continuous inspection and review during construction of the soils-related phases of the work. This will permit correlation between the test boring data and the actual soil conditions encountered during construction.

#### **5.1 Drilled Piers**

The following recommendations are recommended for drilled pier construction:

- ▶ All piers must be poured the same day drilling is completed so that any shale is not allowed to swell. Clean the foundation bearing area so it is nearly level or suitably benched and is free of ponded water or loose material.
- ▶ Make provisions for ground water removal from the drilled shaft excavation. While the borings were dry, significant seepage is anticipated due to the proximity to the Mississippi River, the drilled pier contractor should have pumps on hand to remove water in the event seepage into the drilled pier is encountered.
- ▶ Specify concrete slumps ranging from 4 to 7 inches for the drilled shaft construction. These slumps are recommended to fill irregularities along the sides and bottom of the drilled hole, displace water as it is placed, and permit placement of reinforcing cages into the fluid concrete.

- Retain the geotechnical engineer to observe foundation excavations after the bottom of the hole is leveled, cleaned of any mud or extraneous material, and dewatered.
- Install a temporary protective steel casing to prevent side wall collapse, prevent excessive mud and water intrusion in the drilled shaft.
- The protective steel casing may be extracted as the concrete is placed provided a sufficient head of concrete is maintained inside the steel casing to prevent soil or water intrusion into the newly placed concrete.
- Direct the concrete placement into the drilled hole through a centering chute to reduce side flow or segregation.

## 5.2 Fill Compaction

All engineered fill placed adjacent to and above the tower foundation should be compacted to a dry density of at least 95 percent of the standard Proctor maximum dry density (ASTM D-698). This minimum compaction requirement should be increased to 98 percent for any fill placed below the tower foundation bearing elevation. Any fill placed beneath the tower foundation should be limited to well-graded sand and gravel or crushed stone. The compaction should be accomplished by placing the fill in about 8 inch (or less) loose lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to ensure that adequate moisture conditioning and compaction is being achieved.

Compaction by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften the foundation soils.

## 5.3 Construction Dewatering

If groundwater is encountered in the shallow foundations, it should be minor and can be handled by conventional dewatering methods such as pumping from sumps.

If groundwater is encountered in the drilled pier excavations, it may be more difficult since pumping directly from the excavations could cause a deterioration of the bottom of the excavation. If the pier excavations are not dewatered, concrete should be placed by the termie method. If groundwater sits on the bottom of the foundation for longer than an hour, the bottom should be cleaned again before the pier is poured.



## **6 FIELD INVESTIGATION**

Three soil test borings were drilled near the base of the proposed tower. Split-spoon samples were obtained by the Standard Penetration Test (SPT) procedure (ASTM D1586) in all test borings. The borings were terminated at the scheduled depths of 20.5 and 40.5 feet. The split-spoon samples were inspected and visually classified by a geotechnical engineer. Representative portions of the soil samples were sealed in glass jars and returned to our laboratory.

The boring logs are included in the Appendix along with a sheet defining the terms and symbols used on the logs and an explanation of the Standard Penetration Test (SPT) procedure. The logs present visual descriptions of the soil strata encountered, Unified System soil classifications, groundwater observations, sampling information, laboratory test results, and other pertinent field data and observations.

## **7 WARRANTY AND LIMITATIONS OF STUDY**

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either express or implied. POD Group is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

A geotechnical study is inherently limited since the engineering recommendations are developed from information obtained from test borings, which depict subsurface conditions only at the specific locations, times and depths shown on the logs. Soil conditions at other locations may differ from those encountered in the test borings, and the passage of time may cause the soil conditions to change from those described in this report.

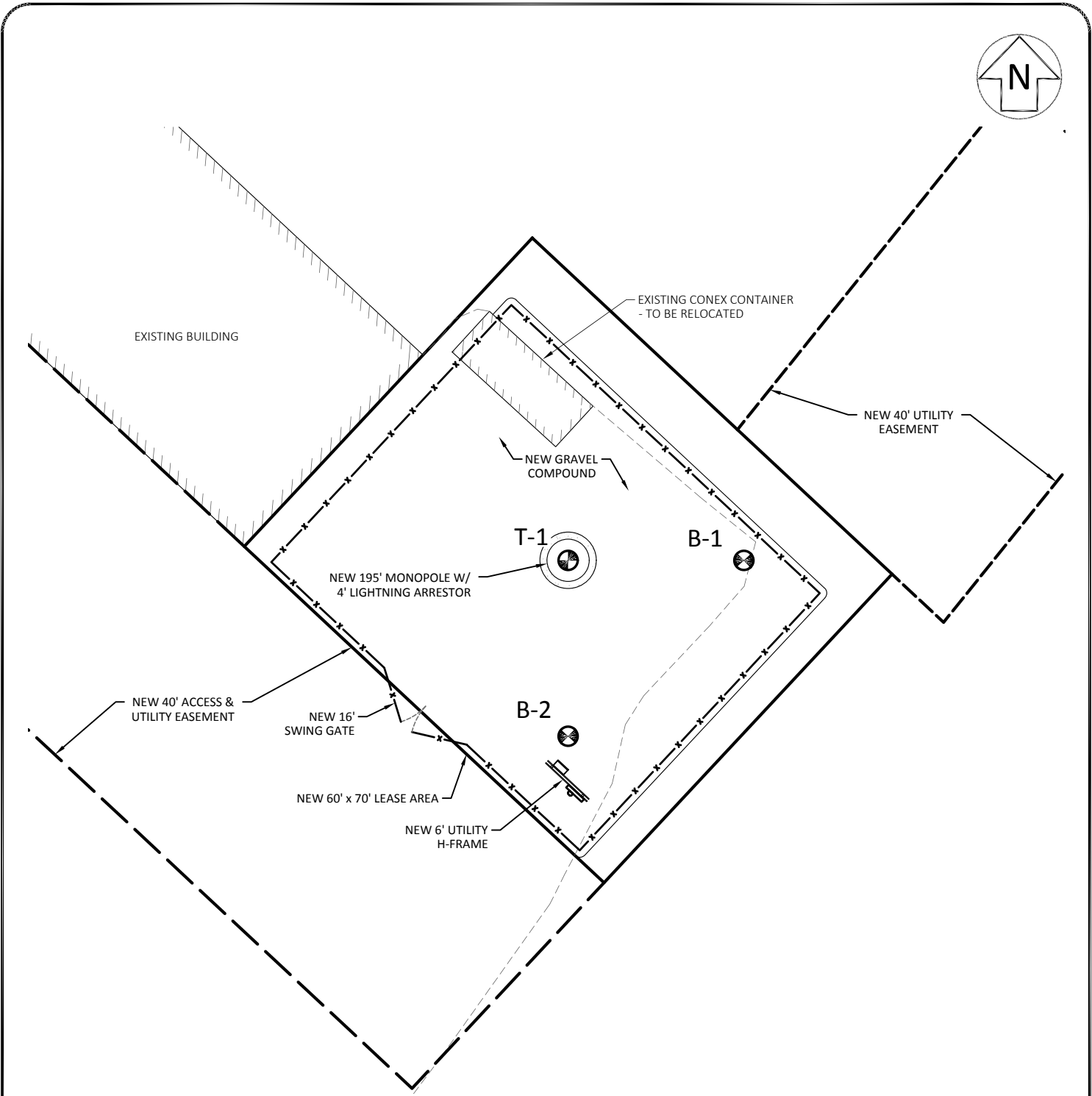
The nature and extent of variation and change in the subsurface conditions at the site may not become evident until the course of construction. Construction monitoring by the geotechnical engineer or a representative is therefore considered necessary to verify the subsurface conditions and to check that the soils connected construction phases are properly completed. If significant variations or changes are in evidence, it may then be necessary to reevaluate the recommendations of this report. Furthermore, if the project characteristics are altered significantly from those discussed in this report, if the project information contained in this report is incorrect, or if additional information becomes available, a review must be made by this office to determine if any modification in the recommendations will be required.

## **APPENDIX**

BORING LOCATION PLAN

BORING LOGS

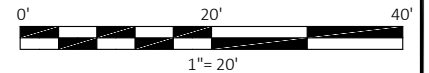
SOIL SAMPLE CLASSIFICATION




**LEGEND**



BORING LOCATION



SHEET TITLE: <b>BORING LOCATION PLAN</b>	FA NUMBER: <b>15246752</b>	SITE INFORMATION: <b>INGRAM BARGE</b>  120 BOTTERY ROAD COLUMBUS, KY 42032  HICKMAN COUNTY	PREPARED BY:  <b>POD</b> POWER OF DESIGN 11490 BLUEGRASS PKWY LOUISVILLE, KY 40299 502-437-5252
	LATITUDE: 36° 45' 35.6. " N LONGITUDE: 89° 06' 36.91" W		
SHEET NUMBER: <b>1</b>	POD NUMBER: 20-68190 DRAWN BY: KDP CHECKED BY: MEP DATE: 4.2.2021		



# Boring Log

Boring: T-1

Page 1 of 1

**Project:** Ingram Barge

**City, State**

**Columbus, KY**

**Method:** H.S.A.

**Boring Date:** 17-Mar-21

**Location:** Proposed Tower Center

**Inside Diameter:** 3 1/4"

**Drill Rig Type:** Deidrich D-50

**Hammer Type:** Auto

**Groundwater:** DRY

**Weather:**

**Driller:** Strata Drilling, LLC

**Note:** About 6 inches of gravel were encountered at the existing ground surface

From (ft)	To (ft)	Material Description	Sample Depth (ft)	Sample Type	Blows per 6-inch increment	Recovery (in)	SPT-N value	Rock Quality (RQD,%)	Atterberg Limits	Moisture Content (%)	% Fines (clay & silt)	Unconfined Compressive Strength, (ksf)
0.5	9.0	SILTY CLAY (CL) - medium stiff, moist, brown - very moist	1.5 - 3	SS	2, 2, 3	12	5			21%		
	4.0		4 - 5.5	SS	2, 3, 4	8	7			20%		1.5
			6.5 - 8	SS	2, 2, 3	8	5			21%		0.8
9.0	40.5	CLAY (CH) - medium stiff, moist, light gray - very soft, wet - stiff, moist, trace fine sand - medium stiff -stiff, wet, brown with trace gravel	9 - 10.5	SS	3, 3, 3	11	6			26%		1.5
	14.0		14 - 15.5	SS	2, 1, 1	12	2			24%		-
	19.0		19-20.5	SS	4, 4, 7	10	11			27%		1.3
	24.0		24-25.5	SS	5, 4, 5	10	9			24%		1.0
			29-30.1	SS	4, 5, 5	10	10			21%		2.1
	34.0	34-35.5	SS	7, 6, 6	6	12			25%			
		39-40.5	SS	7, 7, 7	6	14			30%			
		<b>Boring Terminated at 40.5 feet</b>										



# Boring Log

Boring: B-1

Page 1 of 1

**Project:** Ingram Barge

**City, State**

**Columbus, KY**

**Method:** H.S.A.

**Boring Date:** 17-Mar-21

**Location:** 20' East of Tower Center

**Inside Diameter:** 3 1/4"

**Drill Rig Type:** Deidrich D-50

**Hammer Type:** Auto

**Groundwater:** DRY

**Weather:**

**Driller:** Strata Drilling, LLC

**Note:**

From (ft)	To (ft)	Material Description	Sample Depth (ft)	Sample Type	Blows per 6-inch increment	Recovery (in)	SPT-N value	Rock Quality (RQD,%)	Atterberg Limits	Moisture Content (%)	% Fines (clay & silt)	Unconfined Compressive Strength, (ksf)
0.0	9.0	SILTY CLAY (CL) - medium stiff, brown with trace rock fragments  - soft, wet	1.5 - 3	SS	3, 3, 3	10	6			16%		4.0
	6.5		6.5 - 8	SS	2, 2, 2	5	4			13%		-
9.0	14.0	CLAY (CH) - medium stiff, light gray	9 - 10.5	SS	2, 2, 3	10	5			21%		2.0
14.0	19.0		CLAYEY SILT (ML) - medium stiff, wet, brown	14 - 15.5	SS	3, 3, 3	12	6			34%	
19.0	20.5	CLAY(CH)-very soft, brown-gray-black	19-20.5	SS	1, 1, 1		2			25%		2.0
<b>Boring Terminated at 20.5 feet</b>												





**EXHIBIT H**  
**DIRECTIONS TO WCF SITE**



### Driving Directions to Proposed Tower Site

1. Beginning at 116 S. Jefferson Street, Clinton, KY 42031, head north (toward Jackson Street) on S. Jefferson Street and travel approximately 43 feet.
2. Turn left at the first cross street onto W. Jackson Street and travel for approximately 377 feet.
3. Turn right at the first cross street onto Dunlora Ln and travel approximately 282 feet.
4. Turn left at the first cross street onto KY-58 W / W Clay Street and travel approximately 9.4 miles.
5. Continue straight to stay on KY-58 W and travel approximately 0.4 miles. The site is on the left. The Site address is: 112 Bottery Road, Columbus, KY 42032.
6. The site coordinates are:
  - a. North 36 deg 45 min 35.679142 sec
  - b. West 89° deg 06 min 36.912318 sec



Prepared by:  
Chris Shouse  
Pike Legal Group  
1578 Highway 44 East, Suite 6  
P.O. Box 396  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293

**EXHIBIT I**  
**COPY OF REAL ESTATE AGREEMENT**

Market: Evansville  
Cell Site Number:  
Cell Site Name: Ingram Barge  
Search Ring Name: Ingram Barge  
Fixed Asset Number: 15246752

## OPTION AND LAND LEASE AGREEMENT

THIS OPTION AND LAND LEASE AGREEMENT ("**Agreement**"), dated as of the latter of the signature dates below (the "**Effective Date**"), is entered into by Ingram Barge Company LLC, a Tennessee limited liability company, having a mailing address of 4400 Harding Pike, Nashville, Tennessee 37205 ("**Landlord**") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 1025 Lenox Park Blvd., NE, 3<sup>rd</sup> Floor, Atlanta, GA 30319 ("**Tenant**").

### BACKGROUND

Landlord owns that certain parcel of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 112 Bottery Road, Columbus, KY 42032, in the County of Hickman, State of Kentucky (collectively, the "**Property**"). 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 exclusive option (the "**Option**") to lease a certain portion of the Property containing approximately 4,200 square feet including the air space above such ground space, as described on attached **Exhibit 1**, (the "**Premises**"), for the placement of a Communication Facility in accordance with the terms of this Agreement.

(b) During the Option Term and upon notice to Landlord, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Premises, utility easements and access routes to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Premises, utility easements and access routes (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 the Permitted Use 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 Premises, utility easements and access routes that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Premises, utility easements and access routes, the environmental history of the Premises, utility easements and access routes, Landlord's title to the Premises, utility easements and access routes and the feasibility or suitability of the Premises 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 Premises, utility easements and access routes whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Premises, utility easements and access routes to its condition as it existed at the commencement of the Option Term, reasonable wear and tear excepted, and will promptly repair and correct any damages made to the Property by Tenant and its employees, agents, engineers, surveyors, contractors, and any other representative. Tenant agrees that promptly following the Effective Date, Tenant shall start the Tests and begin the process to receive the Government Approvals.

(c) In consideration of Landlord granting Tenant the Option, Tenant agrees to pay Landlord the sum of [REDACTED] within sixty (60) business days after the Effective Date. The Option may be exercised during an initial term of six months commencing on the Effective Date (the "**Initial Option Term**") which such term may be renewed by Tenant for two subsequent six month periods (each a "**Renewal Option Term**") upon written notification to Landlord and the payment of an additional [REDACTED] no later than five (5) days prior to the expiration date of the Initial Option

Term and the Renewal Option Term, as applicable. 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 without the written consent of Landlord to: (a) Tenant’s Affiliate, (b) to any entity with a net worth of at least [REDACTED] or (c) any entity that acquires all or substantially all of the Tenant’s assets in the market as defined by the Federal Communications Commission in which the Property is located. Tenant shall promptly provide notice to Landlord of such sale, assignment or transfer. Following the successful consummation of such sale assignment, or transfer, and so long as such third-party purchaser, assignee, or transferee (as applicable) has agreed to assume the rights and obligations of Tenant hereunder, Tenant shall be released from liability under this Agreement that accrues after such sale assignment, or transfer, 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 Renewal Option Term, then this Agreement will terminate, and the parties will have no further liability to each other.

(f) If during the Option Term, Landlord decides to subdivide, sell, or change the status of the zoning of the Property, or in the event of a threatened foreclosure on any of the foregoing, Landlord shall notify Tenant in writing as soon as commercially reasonable. Landlord agrees that during the Option Term, or during the Term if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use. Any and all terms and conditions of this Agreement that by their sense and context are intended to be applicable during the Option Term shall be so applicable.

**2. PERMITTED USE.** Upon the exercise of the Option and during the Term, Tenant shall use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure (“**Structure**”), associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (the “**Communication Facility**”), as well as the right to test and survey the Premises, so long as such testing and surveying does not adversely affect Landlord’s operations on the Property, and review title on the Property. Tenant further has the right but not the obligation to add, modify and/or replace equipment related to the Communication Facility 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, (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 of the Communication Facility, Tenant, for itself and its subtenants, licensees and sublicensees, may request the right to use Landlord’s property that is contiguous to, adjoining or surrounding the Premises (the “**Surrounding Property**”) that is reasonably be required during construction and installation of the Communication Facility, and provided that such use of the Surrounding Property does not impair or affect Landlord’s operations on the Property, Landlord will provide its consent to such use of the Surrounding Property by Tenant for such 90-day period. Tenant will promptly repair and correct any damages to the Surrounding Property and the Property caused by Tenant and/or its agents, engineers, surveyors and other representatives. 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 Premises’ main entry point to the equipment shelter or cabinet, install a generator 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 or equipment, install warning signs to make individuals aware of risks, install protective barriers, install any other control measures reasonably required by Tenant's safety procedures or applicable law, and undertake any other appropriate means to secure the Premises or equipment at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the Communication Facility (including, for example, increasing the number of antennas or adding microwave dishes) or relocate the Communication Facility within the Premises at any time during the Term. Tenant will be allowed to make such alterations to the Premises in order to ensure that the Communication Facility complies with all applicable federal, state or local laws, rules or regulations.

**3. TERM.**

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

(b) This Agreement will automatically renew for seventeen (17) additional five (5) year term(s) (each additional five (5) year term shall be defined as an "**Extension Term**"), upon the same terms and conditions set forth herein unless (i) Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at twelve (12) months prior to the expiration of the Initial Term or the then-existing Extension Term or (ii) within the first 90 days of the current Extension Term Landlord notifies Tenant in writing of Landlord's intention not to renew this Agreement at the end of the immediately subsequent 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, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year following the final Extension Term, and for annual terms thereafter ("**Annual Term**") until terminated by either party hereto by giving to the other party hereto written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rent during such Annual Terms shall be [REDACTED]

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

**4. RENT.**

(a) Commencing on the first day of the month following the date that Tenant exercises its Option, (the "**Rent Commencement Date**"). Tenant will pay Landlord on or before the fifth (5<sup>th</sup>) day of each calendar month in advance, [REDACTED] (the "**Rent**"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, the Rent will be prorated.

(b) 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 for the 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 the Permitted Use 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 Premises surveyed by a surveyor of its choice.

(c) Following prior written notice to Landlord and during the Term, 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 Premises, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals, and following such, Tenant shall restore the Premises to its condition as it existed prior to such tests.

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

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

(b) by Tenant upon written notice to Landlord, if Tenant is unable, after taking all commercially reasonable steps and not due to any fault of Tenant, 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, during the Option Term 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 of the Communication Facility;

(e) by Tenant upon twelve (12) months' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee [REDACTED] 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: Section 5 Approvals, Section 6(a) Termination, Section 6(b) Termination, Section 6(c) Termination, Section 6(d) Termination, Section 11(d) Environmental, Section 18 Condemnation or Section 19 Casualty; or

(f) by Landlord upon written notice to Tenant at the end of the Initial Period, if the Communication Facility is not completed and in service by the end of the Initial Term; or

(g) by Landlord, in its sole discretion, if Tenant removes all or any portion of the Communication Facility from the Premises that adversely affects the services provided by the Communications Facility and does not immediately replace the Communication Facility with infrastructure and/or technology that provides the same or better service than the Communication Facility.

**7. INSURANCE.**

(a) During the Option Term and throughout the Term, Tenant shall maintain the following insurance coverages subject to the terms below:

(i) Automobile Liability Insurance - [REDACTED] per occurrence Combined Single Limit;

(ii) Commercial General Liability Insurance, per form ISO CG 00 01 or equivalent - [REDACTED] per occurrence / [REDACTED] aggregate including Contractual Liability and Completed Operations coverage;

(iii) Workers Compensation Coverage including United States Longshoremen & Harbor Workers Act (if applicable) – Statutory Employers Liability - [REDACTED] per accident/per disease, per employee/per disease, policy limit; and,

(iv) Excess Liability Insurance - [REDACTED] per occurrence / aggregate . Tenant may use any combination of primary and excess insurance to meet the total limits required

(b) Tenant shall cause all of the above policies, except workers compensation, to include the Landlord as additional insured by endorsement, as respects this agreement.

(c) Tenant shall cause all of the above policies to include a waiver of the insurance company's right to subrogation against the Landlord.

(d) Tenant shall cause the insurance listed above to be primary notwithstanding any other insurance in force. All deductibles or self-insured retentions will be for Tenant's sole account.

(e) Tenant shall secure policies with the coverages stated above exclusively from insurers with A.M. Best ratings of at least A-VII.

(f)

(g) Tenant shall provide Landlord with a certificate or certificates of insurance evidencing the coverages and requirements listed above prior to work taking place and upon renewal of each coverage. Tenant shall provide at least 30 days prior written notice to Landlord of cancellation or non-renewal of any required coverage that is not replaced. Tenant shall send the certificates to Ingram Barge Company LLC, Attn: Risk Management, 4400 Harding Road, Nashville, TN 37205.

## **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 the 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 Effective Date, a lease, license or any other right to any third party to operate communications equipment on the Property, 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 directly interfere in any way with the Communication Facility, the operations of Tenant on the Premises or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within a commercially reasonable amount of time after receipt of written notice of interference from Tenant, but only if such interference is not caused by actions necessary to the conduct of Landlord's business and/or Landlord has control over the cause of such interference.

(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the 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 and its affiliates harmless from and against any and all injury, loss, damage or liability, costs or expenses in connection with a third party claim

(including reasonable attorneys' fees and court costs) arising directly from (i) the installation, use, maintenance, repair or removal of the Communication Facility, (ii) the willful misconduct or negligence of or the use of the Premises by Tenant and its employees, invitees, agents, contractors and/or subcontractors, (iii) damages to the Antennas caused by Tenant or any of its employees, invitees, agents, contractors and/or subcontractors and/or (iv) Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission or other fault of Landlord, its employees, invitees, 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, costs or expenses in connection with third party claim (including reasonable attorneys' fees and court costs) arising directly from the willful misconduct or negligence of Landlord, its employees, invitees, agents or independent contractors, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission or other fault of Tenant, its employees, invitees, agents, contractors, and/or subcontractors.

(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 9 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, which shall not be unreasonably withheld, and (ii) shall reasonably 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) Each of Tenant and Landlord acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power, and authority or capacity, as applicable, to enter into this Agreement and bind itself hereto through the party or individual set forth as signatory for the party below.

(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Premises; (ii) the Premises is not 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) Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises in accordance with the terms of this Agreement 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 Premises is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, then Landlord will provide to Tenant a mutually agreeable subordination, non-disturbance and attornment agreement executed by Landlord and the holder of such security interest in the form attached hereto as **Exhibit 10(b)**.

(c) Tenant represents, warrants and agrees that Tenant's execution and performance of this Agreement will not violate any laws, ordinances, covenants or other agreement binding on Tenant.

## **11. ENVIRONMENTAL.**

(a) 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 Premises.



(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, directly arising from subsurface contamination of the Premises caused by hazardous substances that were present on the Premises prior to the Effective Date and were not detected or identified by the Tests, or from contamination of the Premises from by hazardous substances placed on to the Premises by 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, directly arising from hazardous substances brought onto the Property by Tenant, Tenant’s contractors or Tenant’s agents.

(c) The indemnification provisions contained in 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 (i) any hazardous materials on the Premises that were not placed on the Premises by Tenant or its employees, invitees, agents, contractors and/or subcontractors, or (ii) any environmental, health or safety condition or matter relating to the Premises not created or cause by Tenant or its subcontractors, that, in Tenant’s sole reasonable determination, renders the condition of the Premises unsuitable for the Permitted Use then Tenant will have the right to terminate this Agreement upon written notice to Landlord.

**12. ACCESS.** Throughout the Term, and at no additional charge to Tenant, Landlord hereby grants Tenant, and its employees, agents, and subcontractors, a non-exclusive license to use the access roads located on the Property to access the Premises on a twenty-four (24) hour per day, seven (7) day per week basis (“**Access License**”) for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises, provided, however, Tenant shall provide Landlord prior notice regarding any access needed for construction or maintenance and provided that such access does not interfere with Landlord’s operations on the Property. In the event of an emergency, notice may be provided after access has been obtained. The Access License is non-revocable, coterminous with the Agreement and runs with the Agreement.

**13. REMOVAL/RESTORATION.** All portions of the Communication Facility brought onto the Premises by Tenant will be and remain Tenant’s personal property and, at Tenant’s option, any portion of may be removed by Tenant at any time during the Term, provided that any such removal does not affect the operation of the Communication Facility. 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. Within one hundred twenty (120) days after the termination of this Agreement, Tenant will restore the Premises to its condition at the commencement of the Agreement, reasonable wear and tear excepted, and will promptly repair and correct any damage on the Property or any of Landlord’s property caused by the Tenant and/or its agents, engineers, surveyors and other representatives. Footings, foundations, and concrete will be removed to a depth of two-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 that were not placed by or at the direction of Tenant.

**14. MAINTENANCE/UTILITIES.**

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted.

(b) Tenant will be responsible for paying all utility charges for electricity, telephone services or other utility used or consumed by Tenant on the Premises.

(c) Landlord will maintain access roads to the Premises where Tenant does not have exclusive control, in good and tenable condition, subject to reasonable wear and tear and damage from the elements.

(d) Tenant will have the right to install utilities, at Tenant's expense, and to improve present utilities on the Premises. Landlord hereby grants to any service company providing utility or similar services, including electric power and telecommunications, to Tenant non-exclusive access over the Property, solely for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such service companies may from time to time require in order to provide such services to the Premises, provided that such access does not interfere with Landlord's use of the Property.

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

(a) Tenant will be deemed to be in default under this Agreement upon (i) non-payment of Rent if such Rent remains unpaid for more than five (5) days or (ii) Tenant's breach of this Agreement that remains uncured within forty-five (45) days after written notice from Landlord specifying the breach. No such default, however, will be deemed to exist if Tenant has commenced to cure such default within such applicable cure 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, then Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.

(b) Landlord will be deemed to be in default under this Agreement upon (i) Landlord's failure to provide Access to the Premises as required by Section 12 within a commercially reasonable time after receipt of written notice of such failure; (ii) Landlord's failure to cure an interference problem as provided in Section 8; 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.

**16. ASSIGNMENT/SUBLEASE.** Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein to its affiliates or third party, in whole or in part, without Landlord's consent, so long as such affiliate or third-party agrees to continue to maintain and facilitate services via the Communications Facility.

**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 hereto as follows:

If to Tenant:                   New Cingular Wireless PCS, LLC  
  Attn: Network Real Estate Administration  
  Re: Cell Site #; Cell Site Name: Ingram Barge (KY)  
  Fixed Asset #: 15246752  
  1025 Lenox Park Blvd., NE  
  3<sup>rd</sup> Floor

Atlanta, Georgia 30319

With a copy to: New Cingular Wireless PCS, LLC  
Attn.: Legal Dept – Network Operations  
Re: Cell Site #: ; Cell Site Name: Ingram Barge (KY)  
Fixed Asset #: 15246752  
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: Ingram Barge Company LLC  
Attn: Trae Gandee  
4400 Harding Pike  
Nashville, TN 37205

With a copy to: Ingram Barge Company LLC  
Attn: Legal Department  
4400 Harding Pike  
Nashville, TN 37205

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

**18. CONDEMNATION.** In the event Landlord receives notification of any condemnation proceedings affecting the Premises, Landlord will provide notice of the proceeding to Tenant within a reasonable time. 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 from the condemning authority, 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 *pro rata* basis.

**19. CASUALTY.** Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within a commercially reasonable time period following the occurrence of such casualty or harm and if such casualty or other harm materially affects the Premises. If any part of the Communication Facility or the Premises is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then promptly following the occurrence of such casualty or harm, Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of Landlord's receipt of notice 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 *pro rata* basis. If Tenant notifies Landlord that it will be terminating this Agreement due to such casualty or harm, then upon Landlord's consent Tenant may place temporary transmission and reception facilities on the Premises, but only for such period of time that is required for Tenant to activate a replacement transmission facility at another location and further provided that such temporary transmission and reception facilities do not interfere with Landlord's operations on the Property. The temporary transmission and reception facilities will be governed by this Agreement such that the termination of this Agreement shall not be effective until Tenant has removed such temporary transmission and reception facilities. If Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility with Landlord's consent, then Landlord hereby agrees to permit Tenant to place temporary transmission and

reception facilities on the Premises until the reconstruction of the Premises and/or the Communication Facility is completed, provided that such temporary transmission and reception facilities do not interfere with Landlord's operations on the Property. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within one hundred twenty (120) days after the occurrence of the casualty or other harm. If Landlord does not so notify Tenant that Landlord will not be rebuilding and/or restoring the Property, and Tenant decides not to terminate under this Section 19, then Landlord will rebuild or restore any portion of the Property that is directly interfering with or required for Tenant's Permitted Use to substantially the same condition as existed before the casualty or other harm.

**20. WAIVER OF LANDLORD'S LIENS.** 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. Subject to Section 6 above, 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 (i) all taxes and assessments levied upon the lands, improvements and other property of Landlord including any such taxes that may be calculated by a taxing authority using any method, including the income method, (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with this Agreement, and (iii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with a sale of the Property or assignment of Rent payments by Landlord. Tenant shall be responsible for (y) 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 and (z) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with an assignment of this Agreement or sublease by Tenant. 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 six (6) months after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant in a timely manner and Tenant's rights with respect to such taxes are prejudiced by the delay, Landlord shall reimburse Tenant for any increased costs directly resulting from the delay. 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 six (6) months 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 permitted by law. This right shall include the ability to institute any legal, regulatory or informal action in the name of Tenant with respect to the valuation of the Premises. Landlord shall reasonably cooperate with respect to the commencement and prosecution of any such proceedings. The expense of any such proceedings incurred by Landlord and/or Tenant shall be borne

solely 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 or recommend by its legal and/or financial counsel.

(d) Landlord shall not split or cause the tax parcel on which the Premises is located to be split, bifurcated, separated or divided without the prior written consent of Tenant if such action will adversely affect Tenant's use of the Premises.

(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 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).

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17. Promptly after the Effective Date, 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.

(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 PREMISES.**

(a) Landlord may sell the Property to a third party, provided the sale is made subject to the terms of this Agreement.

(b) If Landlord, at any time during the Term of this Agreement, decides to sell or transfer the Premises to a third-party purchaser other than Tenant, then Landlord shall notify Tenant in writing, of such sale or transfer which shall be subject to this Agreement and Tenant's rights hereunder. In the event of a transfer or sale of the Property, within thirty (30) days of such transfer, such purchaser shall send the documents listed below in this Section 22(b) to Tenant. Until Tenant receives all such documents, Tenant's failure to make payments under this Agreement shall not be an event of default and Tenant 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 Tenant Payment Direction Form
- vii. Full contact information for new Landlord including phone number(s)

(c) Landlord agrees not to sell or lease any areas of the Property for the installation, operation or maintenance of other wireless communication facilities if such installation, operation or maintenance would materially interfere with Tenant's Permitted Use which shall be determined by radio propagation tests performed by Tenant. 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 communication facility or equipment.

(d) The provisions of this Section 22 shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.

**23. RIGHT OF FIRST REFUSAL.** Notwithstanding the provisions contained in Section 22, if at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking any

sale, conveyance, assignment or transfer that relates to the Premises (“Offer”), Landlord shall immediately furnish Tenant with a copy of the Offer, or if contractually prohibited from such disclosure, all material commercial terms being offered by the third party. Tenant shall have the right within thirty (30) days after it receives such information to agree in writing to match such terms of the Offer. Such writing shall be in the form of a contract that matches the terms of the Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the thirty (30) day period, Landlord may sell, convey, assign or transfer such property interest in or related to the Premises pursuant to the Offer, subject to the terms of this Agreement. 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 23. Tenant’s failure to exercise the right of first refusal shall not be deemed a waiver of the rights contained in this Section 23 with respect to any future proposed conveyances as described herein.

**24. ANTENNAS.** Upon completion of the Communication Facility, and pursuant to Section 8(b), Tenant hereby agrees that Landlord may, in its sole discretion, install, or cause to be installed by a third party vendor, Wi-Max directional antennas and LTE antennas (collectively, the “Antennas”) at no higher than 150’ RAD on the Communication Facility. The Antennas will be installed at least twelve (12) feet below the lowest portion of any installed equipment in the Communication Facility. As between Landlord and Tenant, the Antennas are the property of Landlord and remain the property of Landlord following installation on to the Communication Facility. Tenant agrees that the use of the Antennas will not cause any interference with Tenant’s use of the Communication Facility, and, further, Tenant agrees that it will not make any claim pursuant to Section 8 or any other applicable section hereunder that the Antennas are the source or cause of any interference with the Communication Facility. Following installation of the Antennas, and upon prior notice to Tenant, Landlord may access or cause a third party to access the Antennas for any repairs and/or maintenance.

**25. 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 of Lease.** Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum of Lease substantially in the form attached as **Exhibit 25(b)**. Either party may record this Memorandum of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term, 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 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 Premises and the Communication Facility. Landlord agrees to comply with all Laws relating to Landlord’s ownership of the Premises.

(e) **Bind and Benefit.** The terms and conditions contained in this Agreement will run with the Premises 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 the 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 upon any change in Landlord's name or address.

(l) **Execution/No Option.** The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed electronically and delivered (including by facsimile transmission or electronic pdf) in multiple counterparts, each of which shall be deemed an original for all purposes and all of which shall be deemed, collectively, one agreement.

(m) **Attorneys' Fees.** In the event that any dispute between the parties related to this Agreement should result in litigation, each party shall pay its own attorney fees.

(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.

(o) **No Additional Fees/Incidental Fees.** Unless otherwise specified in this Agreement, all rights and obligations set forth in the Agreement shall be provided by Landlord and/or Tenant, as the case may be, at no additional cost. No unilateral fees or additional costs or expenses are to be applied by either

party to the other party, for any task or service including, but not limited to, review of plans, structural analyses, consents, provision of documents or other communications between the parties.

**[SIGNATURES APPEAR ON NEXT PAGE]**







**EXHIBIT 1 TO MEMORANDUM OF LEASE**  
**LEGAL DESCRIPTION OF PROPERTY AND PREMISES**

The Property is legally described as follows:  
Deed – Book 119, Page 27

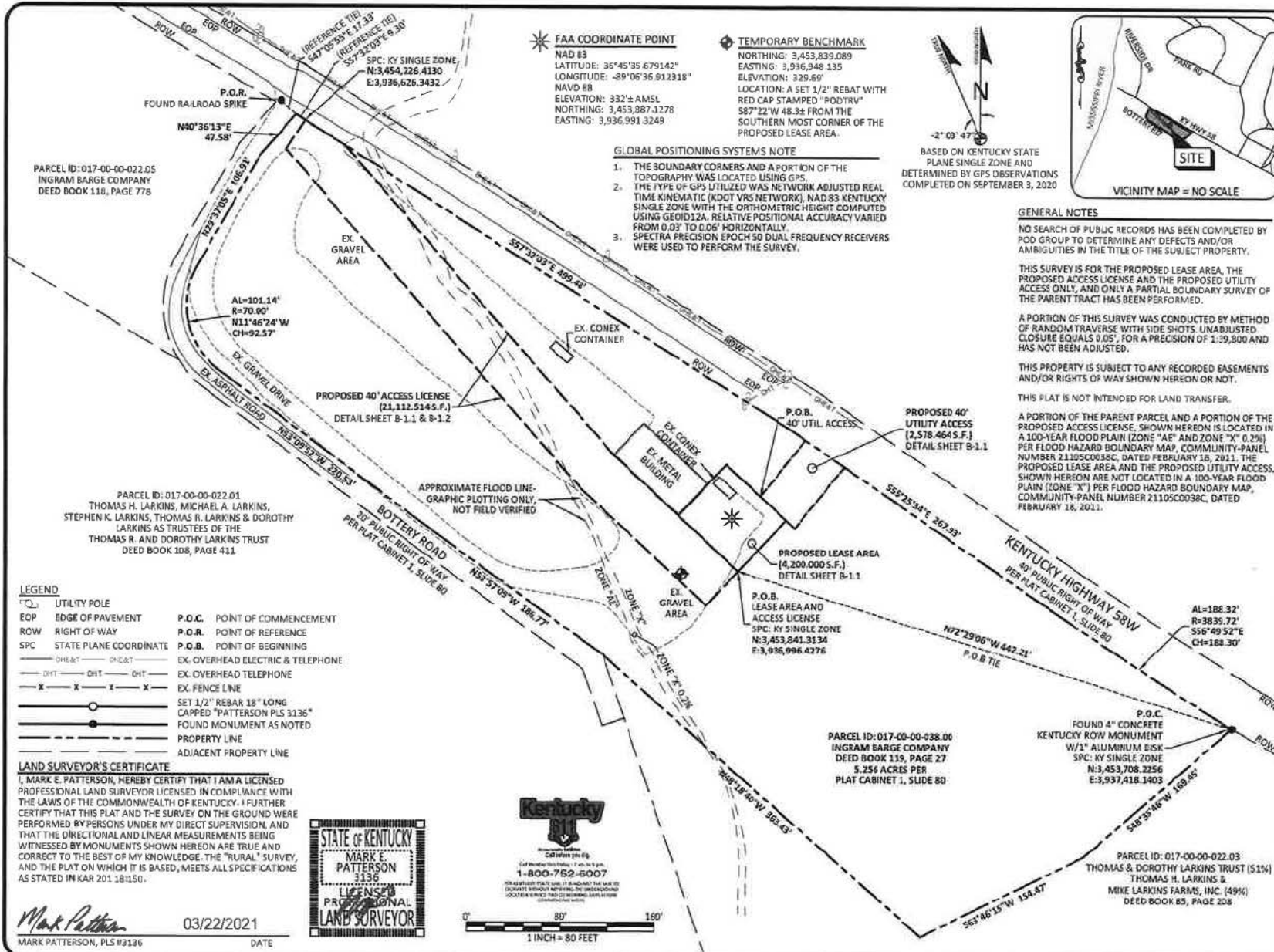
**A tract of land being 5.256 acres described in the Boundary Survey of the Thomas E. & Loetta Jones Property, dated June 6, 2008, which was recorded on December 18, 2008, in Plat Cabinet 1, Slide 80, in the Hickman County Court Clerk's Office.**

**Being also the same real property that was conveyed to Thomas E. Jones and Loetta Jones, husband and wife, by a Deed dated February 26, 1999, that was recorded on March 2, 1999, in Deed Book 102, Page 714, in the Hickman County Court Clerk's Office.**

The Premises is described and/or depicted as follows:

The portion of the Property that is described as "The Proposed 70' X 60' Lease Area" on the included survey.

Continue to next page.

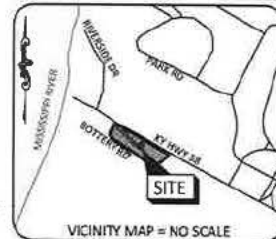


**FAA COORDINATE POINT**  
 NAD 83  
 LATITUDE: 36°45'35.679142"  
 LONGITUDE: -89°06'36.612318"  
 NAVD 88  
 ELEVATION: 332± AMSL  
 NORTHING: 3,453,887.1278  
 EASTING: 3,936,991.3249

**TEMPORARY BENCHMARK**  
 NORTHING: 3,453,839.089  
 EASTING: 3,936,948.135  
 ELEVATION: 329.60'  
 LOCATION: A SET 1/2" REBAR WITH  
 RED CAP STAMPED "PODTRV"  
 587'22" W 48.35' FROM THE  
 SOUTHERN MOST CORNER OF THE  
 PROPOSED LEASE AREA.

**GLOBAL POSITIONING SYSTEMS NOTE**  
 1. THE BOUNDARY CORNERS AND A PORTION OF THE TOPOGRAPHY WAS LOCATED USING GPS.  
 2. THE TYPE OF GPS UTILIZED WAS NETWORK ADJUSTED REAL TIME KINEMATIC (KDOT VRS NETWORK), NAD 83 KENTUCKY SINGLE ZONE WITH THE ORTHOMETRIC HEIGHT COMPUTED USING GEOID12A. RELATIVE POSITIONAL ACCURACY VARIED FROM 0.03' TO 0.06' HORIZONTALLY.  
 3. SPECTRA PRECISION EPOCH 50 DUAL FREQUENCY RECEIVERS WERE USED TO PERFORM THE SURVEY.

BASED ON KENTUCKY STATE PLANE SINGLE ZONE AND DETERMINED BY GPS OBSERVATIONS COMPLETED ON SEPTEMBER 3, 2020



**GENERAL NOTES**  
 NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY POD GROUP TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE SUBJECT PROPERTY.  
 THIS SURVEY IS FOR THE PROPOSED LEASE AREA, THE PROPOSED ACCESS LICENSE AND THE PROPOSED UTILITY ACCESS ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT TRACT HAS BEEN PERFORMED.  
 A PORTION OF THIS SURVEY WAS CONDUCTED BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS UNADJUSTED CLOSURE EQUALS 0.05', FOR A PRECISION OF 1:39,800 AND HAS NOT BEEN ADJUSTED.  
 THIS PROPERTY IS SUBJECT TO ANY RECORDED EASEMENTS AND/OR RIGHTS OF WAY SHOWN HEREON OR NOT.  
 THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.  
 A PORTION OF THE PARENT PARCEL AND A PORTION OF THE PROPOSED ACCESS LICENSE, SHOWN HEREON IS LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "AE" AND ZONE "X" 0.2%) PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011. THE PROPOSED LEASE AREA AND THE PROPOSED UTILITY ACCESS, SHOWN HEREON ARE NOT LOCATED IN A 100-YEAR FLOOD PLAIN (ZONE "X") PER FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 21105C0038C, DATED FEBRUARY 18, 2011.

PREPARED BY:  
  
 13490 BLUEGRASS PARKWAY  
 LOUISVILLE, KY 40299  
 502-487-6262

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

REV.	DATE	DESCRIPTION
A	5.10.20	PRELIMINARY ISSUE
B	10.13.20	40' UTILITY EASEMENT
0	10.23.20	ISSUED AS FINAL
1	2.10.21	REMOVED 45' UTILITY EASEMENT
2	2.19.21	SITE ADDRESS
3	3.22.21	CLIENT COMMENTS

**SITE INFORMATION:**  
 INGRAM BARGE  
 120 BOTTERY ROAD  
 COLUMBUS, KY 42032  
 HICKMAN COUNTY

**TAX PARCEL NUMBER:**  
 017-00-00-038.00

**PROPERTY OWNER:**  
 INGRAM BARGE COMPANY  
 4800 HARDING ROAD  
 NASHVILLE, TN 37205

**SOURCE OF TITLE:**  
 DEED BOOK 119, PAGE 27  
 5.256 ACRES PER  
 PLAT CABINET 1, SLIDE 80

**FA NUMBER:**  
 15246752

**POD NUMBER:** 20-68187

**DRAWN BY:** DAP  
**CHECKED BY:** MEP  
**SURVEY DATE:** 9.3.20  
**PLAT DATE:** 9.10.20

**SHEET TITLE:**  
**SITE SURVEY**  
 THIS DOES NOT REPRESENT A  
 BOUNDARY SURVEY OF THE  
 PARENT PARCEL

**SHEET NUMBER:** (4 pages)  
**B-1**

**LEGEND**  
 □ UTILITY POLE  
 EOP EDGE OF PAVEMENT  
 ROW RIGHT OF WAY  
 SPC STATE PLANE COORDINATE  
 — OHEAT — OHEAT — EX. OVERHEAD ELECTRIC & TELEPHONE  
 — DHT — DHT — DHT — EX. OVERHEAD TELEPHONE  
 — X — X — X — EX. FENCE LINE  
 — SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136" — FOUND MONUMENT AS NOTED  
 — — — — — PROPERTY LINE  
 — — — — — ADJACENT PROPERTY LINE

**LAND SURVEYOR'S CERTIFICATE**  
 I, MARK E. PATTERSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATIONS AS STATED IN KAR 201.18-150.

PARCEL ID: 017-00-00-022.01  
 THOMAS H. LARKINS, MICHAEL A. LARKINS,  
 STEPHEN K. LARKINS, THOMAS R. LARKINS & DOROTHY  
 LARKINS AS TRUSTEES OF THE  
 THOMAS R. AND DOROTHY LARKINS TRUST  
 DEED BOOK 108, PAGE 411

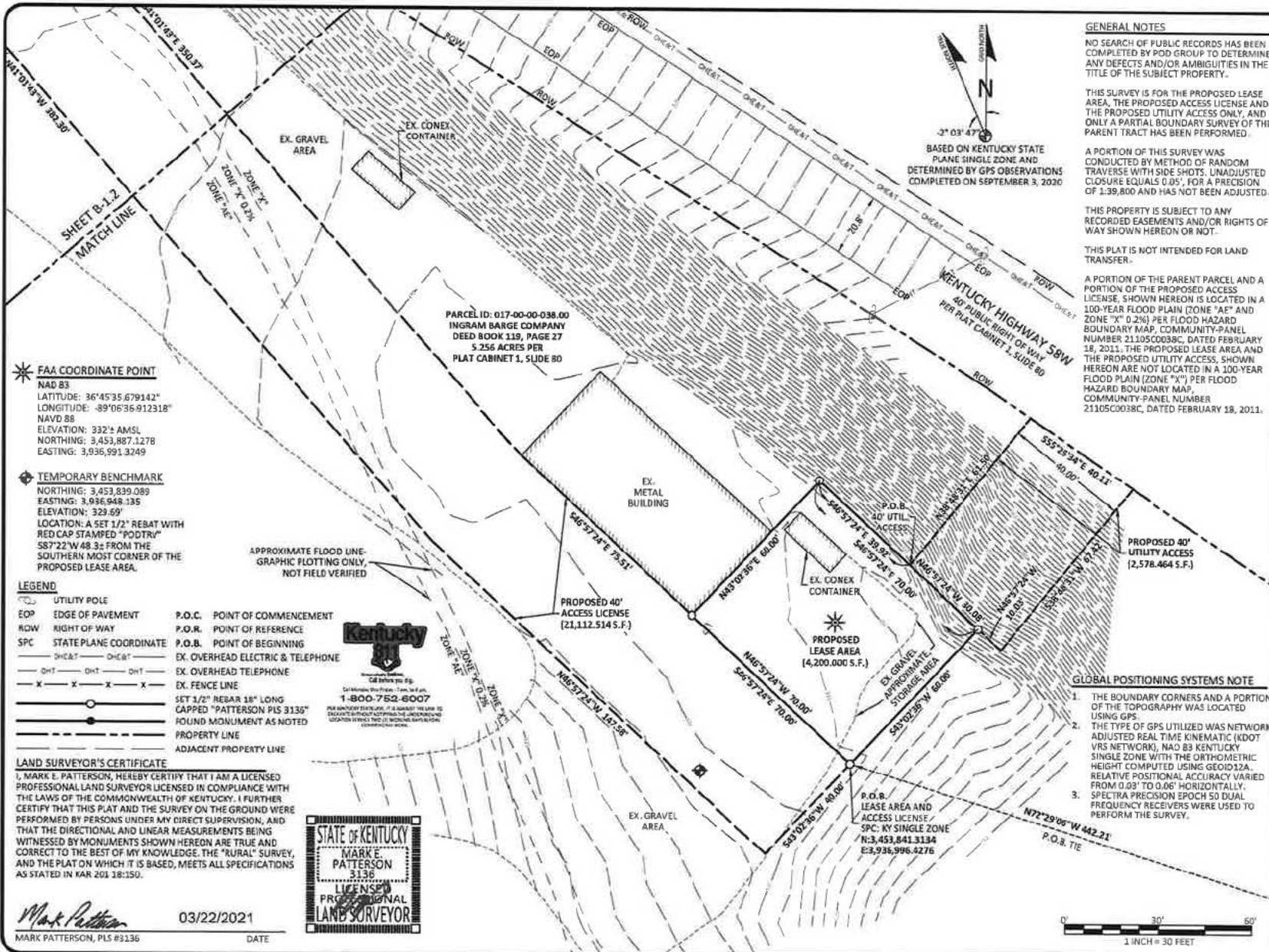
PARCEL ID: 017-00-00-022.02  
 INGRAM BARGE COMPANY  
 DEED BOOK 118, PAGE 776

PARCEL ID: 017-00-00-038.00  
 INGRAM BARGE COMPANY  
 DEED BOOK 119, PAGE 27  
 5.256 ACRES PER  
 PLAT CABINET 1, SLIDE 80

PARCEL ID: 017-00-00-022.03  
 THOMAS H. LARKINS &  
 MICHAEL A. LARKINS  
 DEED BOOK 85, PAGE 208

DATE: 03/22/2021  
 MARK PATTERSON, PLS #3136





-2° 03' 47"
   
 BASED ON KENTUCKY STATE
   
 PLANE SINGLE ZONE AND
   
 DETERMINED BY GPS OBSERVATIONS
   
 COMPLETED ON SEPTEMBER 3, 2020

**GENERAL NOTES**

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 NAVD 88
   
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 EASTING: 3,936,991.3249

**TEMPORARY BENCHMARK**
  
 NORTHING: 3,453,839.089
   
 EASTING: 3,936,948.135
   
 ELEVATION: 329.69'
   
 LOCATION: A SET 1/2" REBAR WITH RED CAP STAMPED "PODTRV"
   
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**LEGEND**

UTILITY POLE
   
 EDGE OF PAVEMENT
   
 RIGHT OF WAY
   
 STATE PLANE COORDINATE
   
 EX. OVERHEAD ELECTRIC & TELEPHONE
   
 EX. OVERHEAD TELEPHONE
   
 EX. FENCE LINE
   
 SET 1/2" REBAR 18" LONG CAPPED "PATTERSON PLS 3136" FOUND MONUMENT AS NOTED
   
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MARK PATTERSON, PLS #3136
   
 DATE: 03/22/2021



PREPARED BY:

33400 BLUEGRASS PARKWAY
   
 LOUISVILLE, KY 40259
   
 502-437-9252

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

REV	DATE	DESCRIPTION
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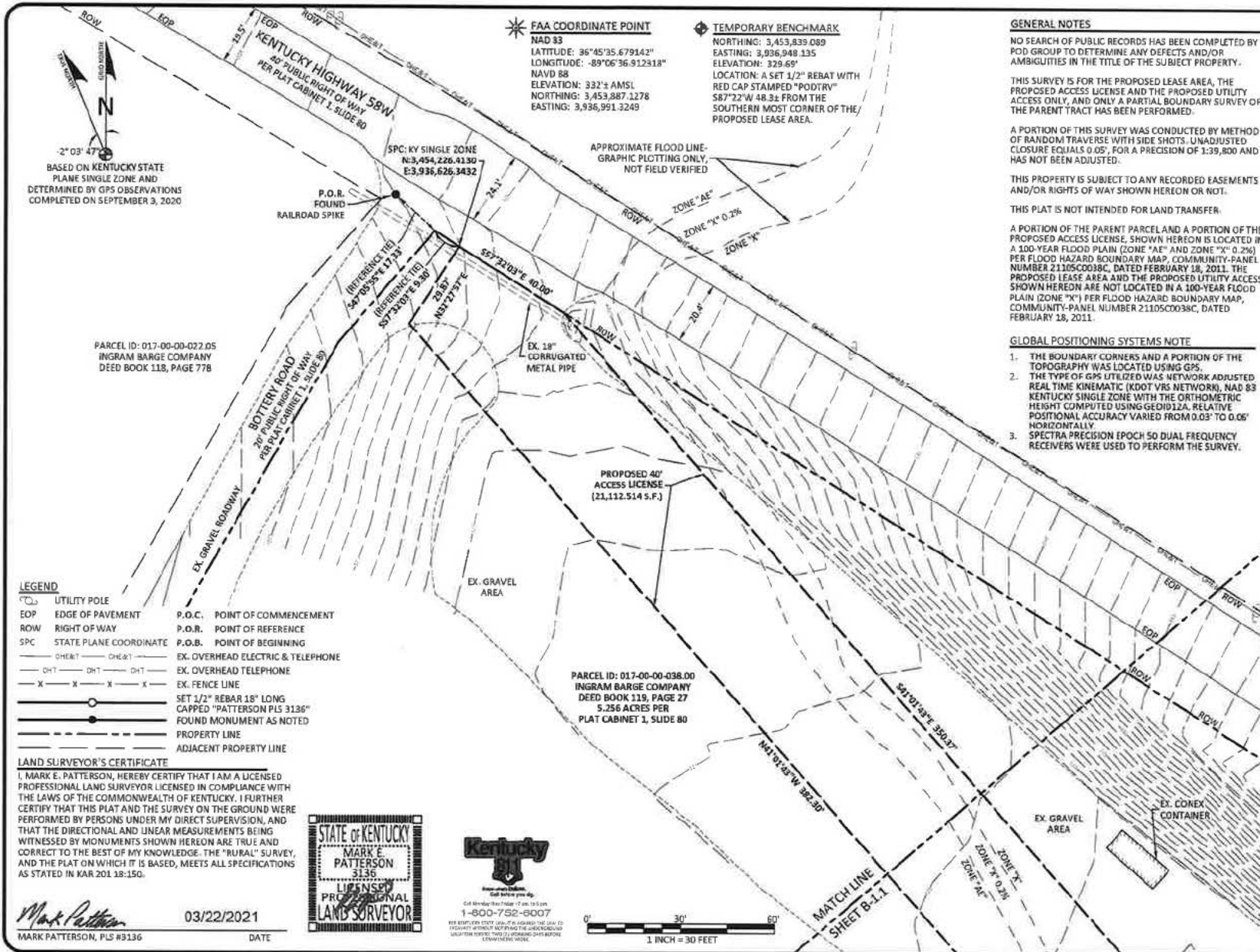
**POD NUMBER:** 20-68187

**DRAWN BY:** DAP  
**CHECKED BY:** MEP  
**SURVEY DATE:** 9.3.20  
**PLAT DATE:** 9.10.20

**SHEET TITLE:**  
**SITE SURVEY**  
 THIS DOES NOT REPRESENT A  
 BOUNDARY SURVEY OF THE  
 PARENT PARCEL

**SHEET NUMBER:** (4 pages)

**B-1.1**



PREPARED BY:  
  
 POWER OF DESIGN  
 13490 BULLGRASS PARKWAY  
 LOUISVILLE, KY 40299  
 502-437-5252

PREPARED FOR:

PREPARED FOR:

**REVISIONS**

REV	DATE	DESCRIPTION
A	9.10.20	PRELIMINARY ISSUE
B	10.13.20	40' UTILITY EASEMENT
0	10.23.20	ISSUED AS FINAL
1	2.10.21	REMOVED 15' UTILITY EASEMENT
2	2.19.21	SITE ADDRESS
3	3.22.21	CLIENT COMMENTS

**SITE INFORMATION:**  
 INGRAM BARGE  
 120 BOTTERY ROAD  
 COLUMBUS, KY 42032  
 HICKMAN COUNTY

**TAX PARCEL NUMBER:**  
 017-00-00-038.00

**PROPERTY OWNER:**  
 INGRAM BARGE COMPANY  
 4400 HARDING ROAD  
 NASHVILLE, TN 37205

**SOURCE OF TITLE:**  
 DEED BOOK 119, PAGE 27  
 5.256 ACRES PER  
 PLAT CABINET 1, SLIDE 80

**FA NUMBER:**  
 15246752

**POD NUMBER:** 20-68187

**DRAWN BY:** DAP  
**CHECKED BY:** MEP  
**SURVEY DATE:** 9.3.20  
**PLAT DATE:** 9.10.20

**SHEET TITLE:**  
 SITE SURVEY  
 THIS DOES NOT REPRESENT A  
 BOUNDARY SURVEY OF THE  
 PARENT PARCEL

**SHEET NUMBER:** (4 pages)

**B-1.2**

LEGAL DESCRIPTIONS

PROPOSED LEASE AREA

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED LEASE AREA TO BE LEASED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON SEPTEMBER 3, 2020.

COMMENCING AT A FOUND 4" CONCRETE KENTUCKY RIGHT OF WAY MONUMENT WITH A 1" ALUMINUM DISK, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,708.2256, E:3,937,418.1403 AND AS SHOWN IN PLAT CABINET 1, SLIDE 80, BEING IN THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND BEING THE EASTERN MOST CORNER TO THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00 ALSO CORNER TO THE PROPERTY CONVEYED TO THOMAS & DOROTHY LARKINS TRUST (S1%) AND THOMAS H. LARKINS & MIKE LARKINS FARMS, INC. (49%) AS RECORDED IN DEED BOOK 85, PAGE 208, PARCEL ID: 017-00-00-022.03, THENCE LEAVING SAID MONUMENT AND TRaversing THE LAND OF SAID INGRAM BARGE, N72°29'06"W 442.21' TO A SET 1/2" REBAR, 18" LONG, CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,841.3134, E:3,936,996.4276 AT THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA AND BEING THE TRUE POINT OF BEGINNING; THENCE N46°57'24"W 70.00' TO A SET "IPC"; THENCE N43°02'36"E 60.00' TO A "SET IPC" HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,932.9423, E:3,936,986.2221; THENCE S46°57'24"E 70.00'; THENCE S43°02'36"W 60.00' TO THE POINT OF BEGINNING CONTAINING 4,200.000 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED SEPTEMBER 3, 2020.

PROPOSED 40' ACCESS LICENSE

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 40' ACCESS LICENSE TO BE GRANTED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEARING DATUM USED HEREIN IS BASED UPON KENTUCKY STATE PLANE COORDINATE SYSTEM, SINGLE ZONE, NAD 83, FROM A REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM OBSERVATION USING THE KENTUCKY TRANSPORTATION CABINET REAL TIME GPS NETWORK COMPLETED ON SEPTEMBER 3, 2020.

COMMENCING AT A FOUND 4" CONCRETE KENTUCKY RIGHT OF WAY MONUMENT WITH A 1" ALUMINUM DISK, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,708.2256, E:3,937,418.1403 AND AS SHOWN IN PLAT CABINET 1, SLIDE 80, BEING IN THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND BEING THE EASTERN MOST CORNER TO THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00 ALSO CORNER TO THE PROPERTY CONVEYED TO THOMAS & DOROTHY LARKINS TRUST (S1%) AND THOMAS H. LARKINS & MIKE LARKINS FARMS, INC. (49%) AS RECORDED IN DEED BOOK 85, PAGE 208, PARCEL ID: 017-00-00-022.03, THENCE LEAVING SAID MONUMENT AND TRaversing THE LAND OF SAID INGRAM BARGE, N72°29'06"W 442.21' TO A SET 1/2" REBAR, 18" LONG, CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,841.3134, E:3,936,996.4276 AT THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA AND BEING THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID LEASE AREA, S43°02'36"W 40.00'; THENCE N46°57'24"W 147.59'; THENCE N41°03'43"W 382.30'; THENCE N32°27'57"E 25.87' TO THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND THE NORTH LINE OF SAID INGRAM BARGE, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,454,226.4130, E:3,936,626.3432 FOR REFERENCE BEING S47°05'55"E 17.33 AND S57°32'03"E 9.30 FROM A FOUND RAILROAD SPIKE IN THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND AS SHOWN IN PLAT CABINET 1, SLIDE 80; THENCE WITH SAID COMMON LINE, S57°32'03"E 40.00'; THENCE LEAVING SAID COMMON LINE AND TRaversing THE LAND OF SAID INGRAM BARGE, S41°01'43"E 150.37'; THENCE S46°57'24"E 75.51' TO A SET "IPC" IN THE WESTERN MOST CORNER OF SAID LEASE AREA; THENCE WITH SAID LEASE AREA, S46°57'24"E 70.00' TO THE POINT OF BEGINNING CONTAINING 21,112.514 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED SEPTEMBER 3, 2020.

PROPOSED 40' UTILITY ACCESS

THE FOLLOWING IS A DESCRIPTION OF THE PROPOSED 40' UTILITY ACCESS TO BE GRANTED FROM THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN THE OFFICE OF THE CLERK OF HICKMAN COUNTY, KENTUCKY AS DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00, WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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COMMENCING AT A FOUND 4" CONCRETE KENTUCKY RIGHT OF WAY MONUMENT WITH A 1" ALUMINUM DISK, HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,708.2256, E:3,937,418.1403 AND AS SHOWN IN PLAT CABINET 1, SLIDE 80, BEING IN THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND BEING THE EASTERN MOST CORNER TO THE PROPERTY CONVEYED TO INGRAM BARGE COMPANY AS RECORDED IN DEED BOOK 119, PAGE 27 (5.256 ACRES PER PLAT CABINET 1, SLIDE 80), PARCEL ID: 017-00-00-038.00 ALSO CORNER TO THE PROPERTY CONVEYED TO THOMAS & DOROTHY LARKINS TRUST (S1%) AND THOMAS H. LARKINS & MIKE LARKINS FARMS, INC. (49%) AS RECORDED IN DEED BOOK 85, PAGE 208, PARCEL ID: 017-00-00-022.03, THENCE LEAVING SAID MONUMENT AND TRaversing THE LAND OF SAID INGRAM BARGE, N72°29'06"W 442.21' TO A SET 1/2" REBAR, 18" LONG, CAPPED "PATTERSON PLS 3136", HEREAFTER REFERRED TO AS A "SET IPC", HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,841.3134, E:3,936,996.4276 AT THE SOUTHERN MOST CORNER OF THE PROPOSED LEASE AREA; THENCE WITH SAID LEASE AREA FOR THE NEXT THREE CALLS, N46°57'24"W 70.00' TO A SET "IPC"; THENCE N42°02'36"E 60.00' TO A "SET IPC" HAVING A KENTUCKY STATE PLANE SINGLE ZONE COORDINATE OF N:3,453,932.9423, E:3,936,986.2221; THENCE S46°57'24"E 39.92' TO THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID LEASE AREA, N38°48'31"E 61.50' TO THE SOUTH LINE OF THE RIGHT OF WAY OF KENTUCKY HIGHWAY 58W AND THE NORTH LINE OF SAID INGRAM BARGE, THENCE WITH SAID COMMON LINE, S55°25'34"E 40.11'; THENCE LEAVING SAID COMMON LINE AND TRaversing THE LAND OF SAID INGRAM BARGE, S38°48'31"W 67.42'; THENCE N46°57'24"W 100.3' TO A SET "IPC" AT THE EASTERN MOST CORNER OF SAID LEASE AREA; THENCE WITH SAID LEASE AREA, N46°57'24"W 30.68' TO THE POINT OF BEGINNING CONTAINING 2,578.464 SQUARE FEET AS PER SURVEY BY MARK E. PATTERSON, PLS #3136 DATED SEPTEMBER 3, 2020.

LAND SURVEYOR'S CERTIFICATE

I, MARK E. PATTERSON, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY. I FURTHER CERTIFY THAT THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS BEING WITNESSED BY MONUMENTS SHOWN HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE "RURAL" SURVEY, AND THE PLAT ON WHICH IT IS BASED, MEETS ALL SPECIFICATIONS AS STATED IN KAR 201.18-150.

*Mark Patterson*  
MARK PATTERSON, PLS #3136

03/22/2021

DATE



REVISIONS

REV	DATE	DESCRIPTION
A	9.10.20	PRELIMINARY ISSUE
B	10.13.20	40' UTILITY EASEMENT
D	10.28.20	ISSUED AS FINAL
1	2.10.21	REMOVED 15' UTILITY EASEMENT
2	2.19.21	SITE ADDRESS
3	3.22.21	CLIENT COMMENTS

SITE INFORMATION:  
**INGRAM BARGE**  
120 BOTTERY ROAD  
COLUMBUS, KY 42092  
HICKMAN COUNTY

TAX PARCEL NUMBER:  
017-00-00-038.00

PROPERTY OWNER:  
INGRAM BARGE COMPANY  
4400 HARDING ROAD  
NASHVILLE, TN 37205

SOURCE OF TITLE:  
DEED BOOK 119, PAGE 27  
5.256 ACRES PER  
PLAT CABINET 1, SLIDE 80

FA NUMBER:  
15246752

POD NUMBER: 20-68187

DRAWN BY: DAP  
CHECKED BY: MEP  
SURVEY DATE: 9.30.20  
PLAT DATE: 9.30.20

SHEET TITLE:

**SITE SURVEY**  
THIS DOES NOT REPRESENT A  
BOUNDARY SURVEY OF THE  
PARENT PARCEL

SHEET NUMBER: (4 pages)

**B-1.3**

**EXHIBIT J**  
**NOTIFICATION LISTING**



**Ingram Barge – Notice List**

INGRAM BARGE CO  
4400 HARDING RD  
NASHVILLE, TN 37205

LARKINS THOMAS & DOROTHY TRUST  
THOMAS H & MIKE LARKINS FARMS  
6614 ST RT 58 WEST  
CLINTON, KY 42031

LARKINS THOMAS & DOROTHY TRUST  
C/O TOM LARKINS  
6614 ST RT 58 WEST  
CLINTON, KY 42031

MCKINNEY LEE  
C/O PATRICIA MCKINNEY LEWIS  
1802 LYDERHURST  
SAVOY, IL 68174

FERGUSON KAY & SHANE STEPHENS  
P O BOX 3  
COLUMBUS, KY 42032

STATE OF KENTUCKY  
COLUMBUS BELMONT STATE PARK  
COLUMBUS KENTUCKY, 42032

**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: Ingram Barge**

Dear Landowner:

New Cingular Wireless PCS, 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 112 Bottery Road, Columbus, KY 42032 (36° 45' 35.679142" North latitude, 89° 06' 36.912318" West longitude). The proposed facility will include a 195-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 199-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

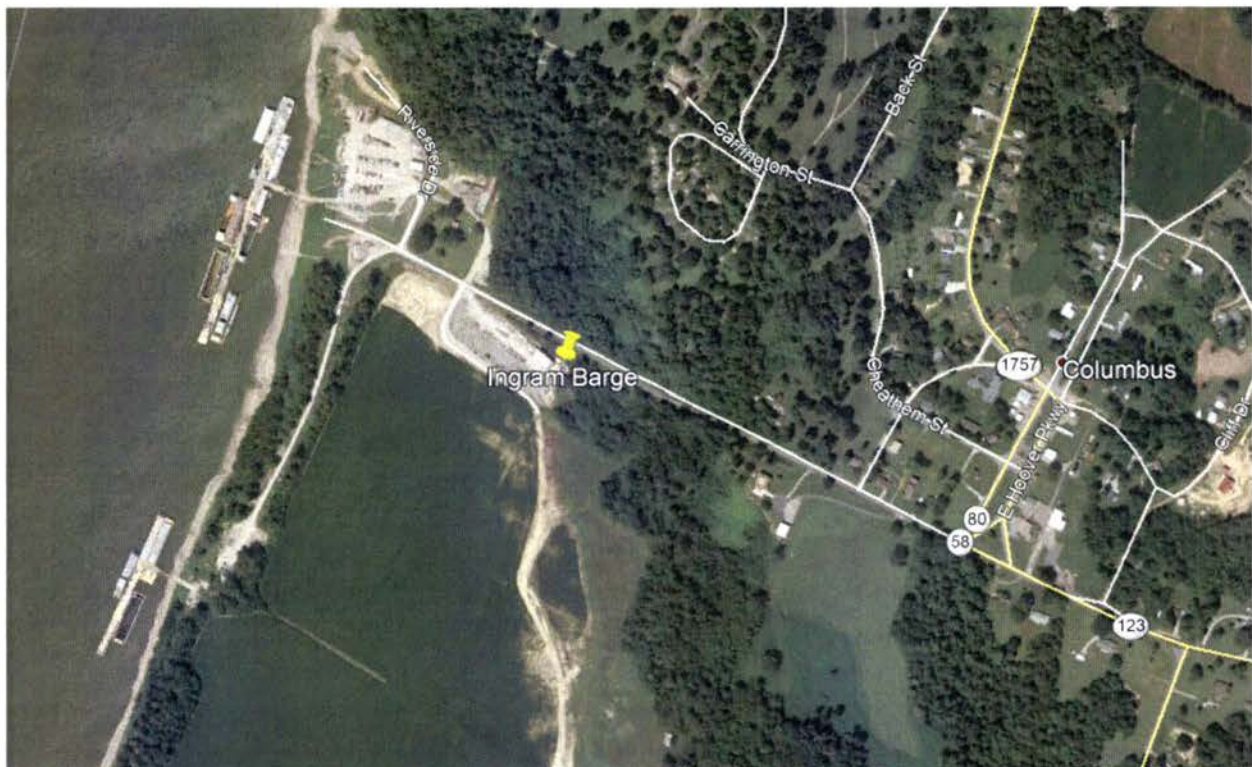
This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the 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 2021-00187 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.

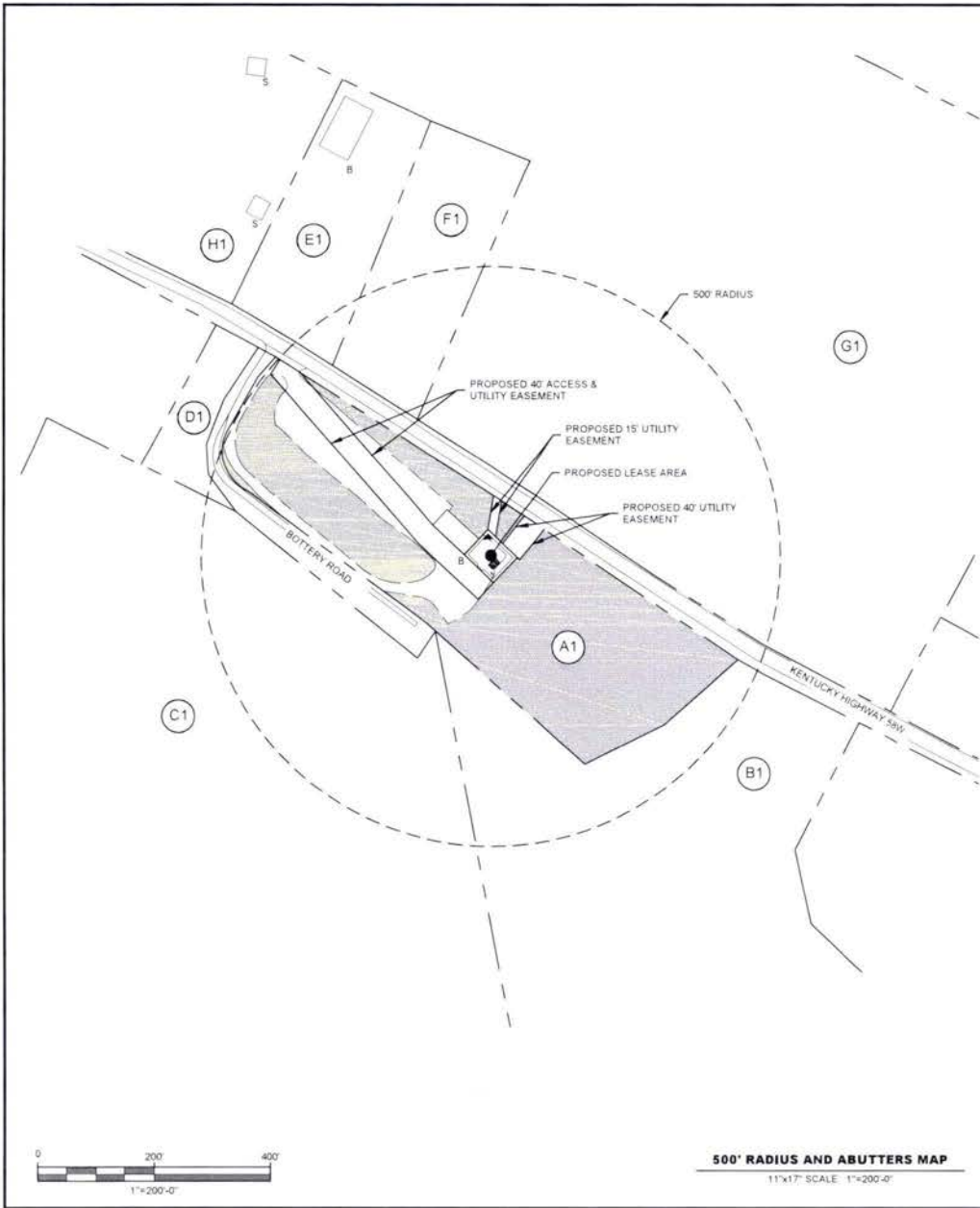
Sincerely,  
David A. Pike  
Attorney for Applicant  
enclosures

## Driving Directions to Proposed Tower Site

1. Beginning at 116 S. Jefferson Street, Clinton, KY 42031, head north (toward Jackson Street) on S. Jefferson Street and travel approximately 43 feet.
2. Turn left at the first cross street onto W. Jackson Street and travel for approximately 377 feet.
3. Turn right at the first cross street onto Dunlora Ln and travel approximately 282 feet.
4. Turn left at the first cross street onto KY-58 W / W Clay Street and travel approximately 9.4 miles.
5. Continue straight to stay on KY-58 W and travel approximately 0.4 miles. The site is on the left. The Site address is: 112 Bottery Road, Columbus, KY 42032.
6. The site coordinates are:
  - a. North 36 deg 45 min 35.679142 sec
  - b. West 89° deg 06 min 36.912318 sec



Prepared by:  
Chris Shouse  
Pike Legal Group  
1578 Highway 44 East, Suite 6  
P.O. Box 396  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293



**GENERAL NOTES:**

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED FROM THE INFORMATION DESCRIBED AND RECORDED FROM DEED BOOKS IN THE COUNTY CLERK'S OFFICE ON 10/28/20 AND RE-VERIFIED ON 12/10/20. THE PROPERTY VALUATION ADMINISTRATION RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIMS ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES.
2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
3. NOT FOR RECORDING OR PROPERTY TRANSFER.

(A1)	PARCEL ID 017-00-00-038.00 INGRAM BARGE CO 4400 HARDING RD NASHVILLE, TN 37205
(B1)	PARCEL ID 017-00-00-022.03 LARKINS THOMAS & DOROTHY TRUST THOMAS H & MIKE LARKINS FARMS 6614 ST RT 58 WEST CLINTON, KY 42031
(C1)	PARCEL ID 017-00-00-022.01 LARKINS THOMAS & DOROTHY TRUST C/O TOM LARKINS 6614 ST RT 58 WEST CLINTON, KY 42031
(D1)	PARCEL ID 017-00-00-022.05 INGRAM BARGE CO 4400 HARDING RD NASHVILLE, TN 37205
(E1)	PARCEL ID 016-00-00-048.00 MCKINNEY LEE C/O PATRICIA MCKINNEY LEWIS 1802 LYDERHURST SAVCY, IL 68174
(F1)	PARCEL ID 016-00-00-049.00 FERGUSON KAY & SHANE STEPHENS P O BOX 3 COLUMBUS, KY 42032
(G1)	PARCEL ID 016-00-00-045.00 STATE OF KENTUCKY COLUMBUS BELMONT STATE PARK COLUMBUS KENTUCKY, 42032
(H1)	PARCEL ID 016-00-00-053.00 FERGUSON KAY & SHANE STEPHENS P O BOX 3 COLUMBUS, KY 42032

EXISTING BUILDINGS  
 B=BARN  
 C=CHURCH  
 D=GARAGE  
 R=RESIDENCE  
 S=SHED



12/10/2020  
 RAPHAEL MOHAMED, P.E.  
 KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM

DRAWN BY: \_\_\_\_\_ CTS  
 CHECKED BY: \_\_\_\_\_ CDB  
 APPROVED BY: \_\_\_\_\_ RM  
 MNS PROJECT NO: 24225

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PREPARED FOR

PREPARED BY

557 AIRPORT BLVD, SUITE 111  
 MORRISON, IL, NC 27560

SITE ID:  
**INGRAM BARGE**

---

SITE NAME:  
**INGRAM BARGE**

---

SITE ADDRESS:  
**112 BOTTERY ROAD  
 COLUMBUS, KY 42032**

---

FA LOCATION:  
**15246752**

---

SHEET TITLE  
**500' RADIUS AND  
 ABUTTERS MAP**

---

SHEET NUMBER  
**M-1**



**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**

Kenny Wilson  
County Judge Executive  
116 S. Jefferson Street  
Clinton, KY 42031

RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2021-00187  
Site Name: Ingram Barge

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 112 Bottery Road, Columbus, KY 42032 (36° 45' 35.679142" North latitude, 89° 06' 36.912318" West longitude). The proposed facility will include a 195-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 199-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

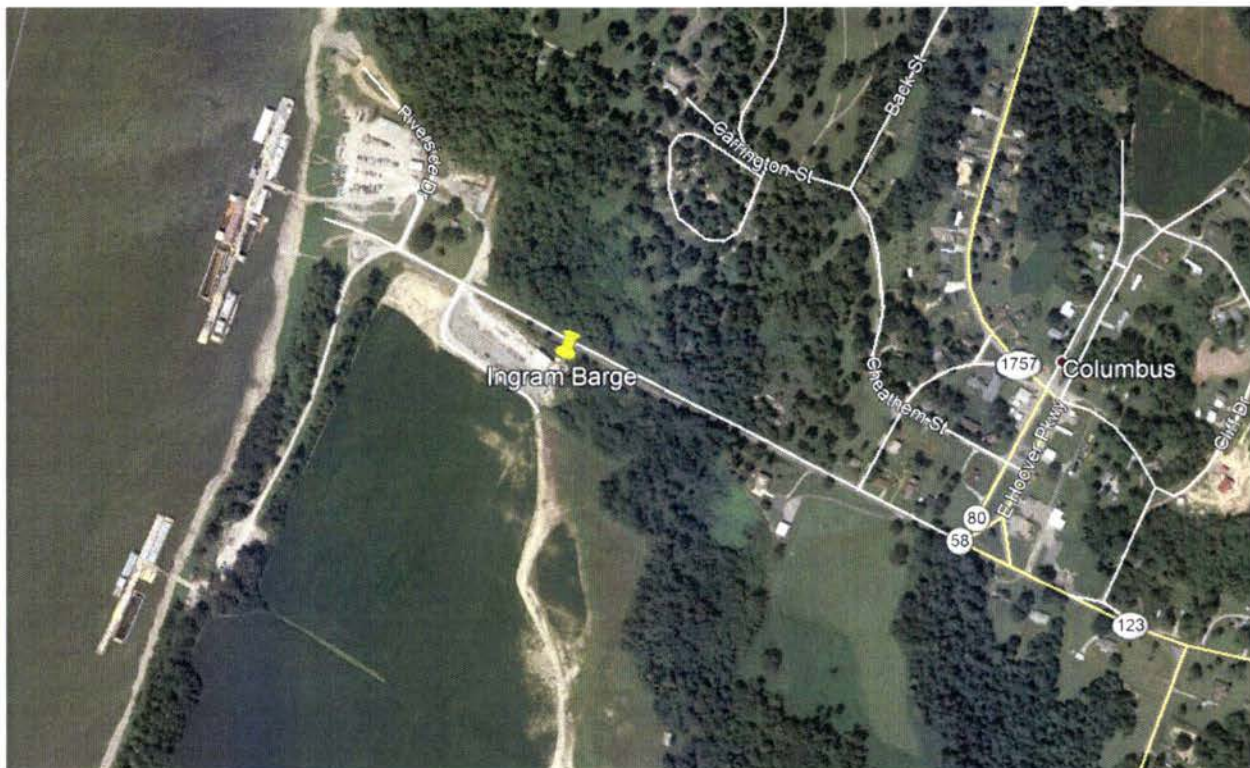
You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2021-00187 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility'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 with any comments or questions you may have.

Sincerely,  
David A. Pike  
Attorney for Applicant  
enclosures

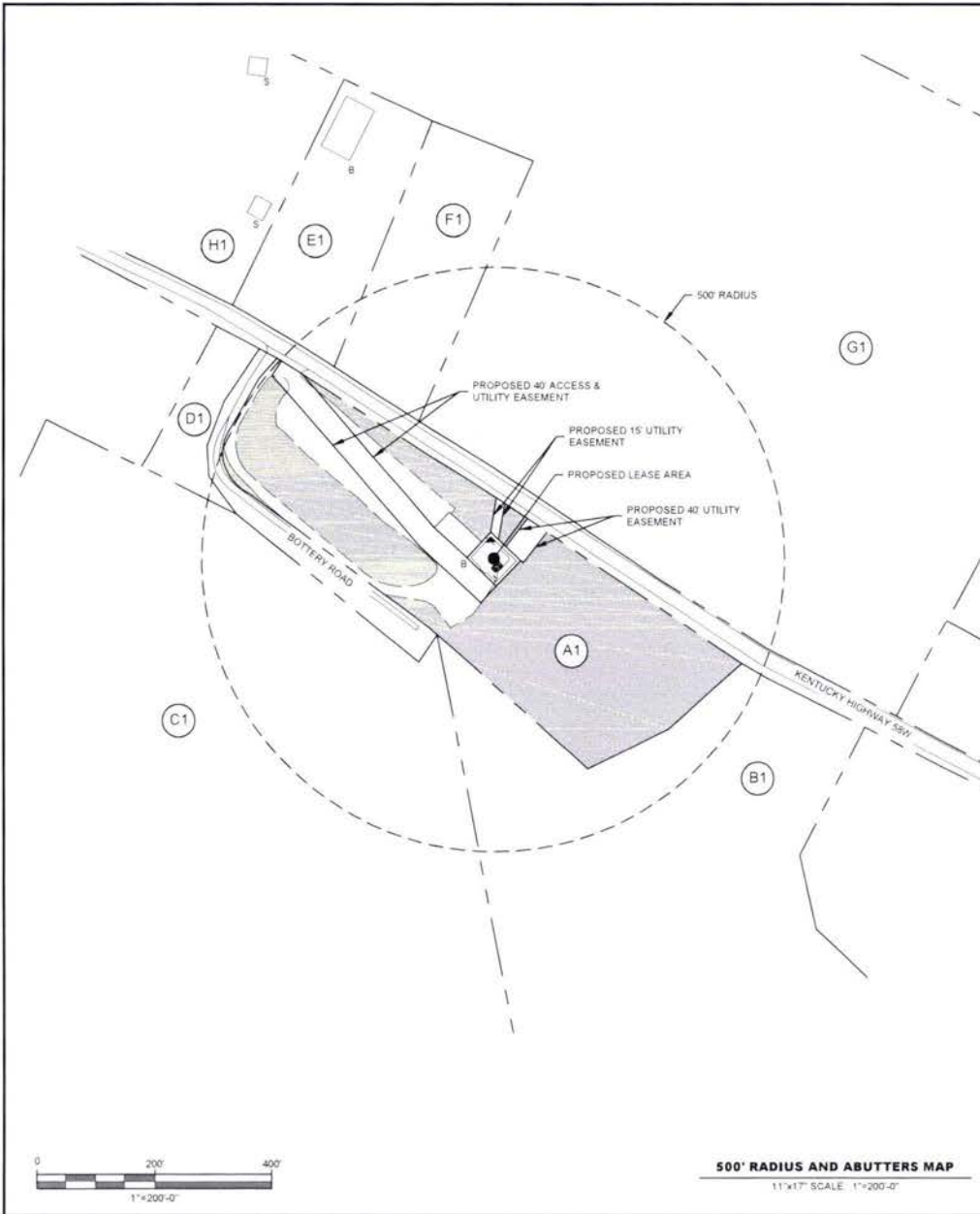
## Driving Directions to Proposed Tower Site

1. Beginning at 116 S. Jefferson Street, Clinton, KY 42031, head north (toward Jackson Street) on S. Jefferson Street and travel approximately 43 feet.
2. Turn left at the first cross street onto W. Jackson Street and travel for approximately 377 feet.
3. Turn right at the first cross street onto Dunlora Ln and travel approximately 282 feet.
4. Turn left at the first cross street onto KY-58 W / W Clay Street and travel approximately 9.4 miles.
5. Continue straight to stay on KY-58 W and travel approximately 0.4 miles. The site is on the left. The Site address is: 112 Bottery Road, Columbus, KY 42032.
6. The site coordinates are:
  - a. North 36 deg 45 min 35.679142 sec
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Prepared by:  
Chris Shouse  
Pike Legal Group  
1578 Highway 44 East, Suite 6  
P.O. Box 396  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293





**500' RADIUS AND ABUTTERS MAP**  
11"X17" SCALE 1"=200'-0"

**GENERAL NOTES:**

1. ALL INFORMATION SHOWN HEREON WAS OBTAINED FROM THE INFORMATION DESCRIBED AND RECORDED FROM DEED BOOKS IN THE COUNTY CLERK'S OFFICE ON 10/28/20 AND RE-VERIFIED ON 12/10/20. THE PROPERTY VALUATION ADMINISTRATION RECORDS MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO THE COUNTY PROPERLY VALUATION ADMINISTRATION EXPRESSLY DISCLAIMS ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES.
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(B1)	PARCEL ID 017-00-00-022.03 LARKINS THOMAS & DOROTHY TRUST THOMAS H & MIKE LARKINS FARMS 6614 ST RT 58 WEST CLINTON, KY 42031
(C1)	PARCEL ID 017-00-00-022.01 LARKINS THOMAS & DOROTHY TRUST C/O TOM LARKINS 6614 ST RT 58 WEST CLINTON, KY 42031
(D1)	PARCEL ID 017-00-00-022.05 INGRAM BARGE CO 4400 HARDING RD NASHVILLE, TN 37205
(E1)	PARCEL ID 016-00-00-048.00 MCKINNEY LEE C/O PATRICIA MCKINNEY LEWIS 1802 LYDERHURST SAVOY, IL 68174
(F1)	PARCEL ID 016-00-00-049.00 FERGUSON KAY & SHANE STEPHENS P O BOX 3 COLUMBUS, KY 42032
(G1)	PARCEL ID 016-00-00-045.00 STATE OF KENTUCKY COLUMBUS BELMONT STATE PARK COLUMBUS KENTUCKY 42032
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EXISTING BUILDINGS  
B=BARN  
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S=SHED



12/10/2020  
RAPHAEL MOHAMED, P.E.  
KENTUCKY LIC. NO. 24429

**SUBMITTALS**

DATE	DESCRIPTION	REV	ISSUED BY
12/10/2020	CONSTRUCTION	0	RM

DRAWN BY \_\_\_\_\_ CTS  
CHECKED BY \_\_\_\_\_ G2B  
APPROVED BY \_\_\_\_\_ RM  
MVS PROJECT NO. 24225

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PREPARED FOR



PREPARED BY



SITE ID:

**INGRAM BARGE**

SITE NAME:

**INGRAM BARGE**

SITE ADDRESS:

**112 BOTTERY ROAD  
COLUMBUS, KY 42032**

FA LOCATION:

**15246752**

SHEET TITLE:

**500' RADIUS AND  
ABUTTERS MAP**

SHEET NUMBER:

**M-1**

**EXHIBIT M  
COPY OF POSTED NOTICES  
AND NEWSPAPER NOTICE ADVERTISEMENT**

**SITE NAME: INGRAM BARGE**  
**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 2021-00187 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 2021-00187 in your correspondence.



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

**TELEPHONE: (270) 653-4040**  
**VIA EMAIL: gaye@thehctimes.com**

The Hickman County Times  
Attn: Public Notice Ad Placement  
104 S Jefferson Street  
Clinton, KY 42031

RE: Legal Notice Advertisement  
Site Name: Ingram Barge

Dear Staff:

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

#### **NOTICE**

**New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 112 Bottery Road, Columbus, KY 42032 (36° 45' 35.679142" North latitude, 89° 06' 36.912318" 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 2021-00187 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,  
Chris Shouse  
Pike Legal Group, PLLC

**EXHIBIT N**  
**COPY OF RADIO FREQUENCY DESIGN SEARCH AREA**



36.760327, -89.108249

Columbus

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