

## COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

AUG 2 9 2017

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.: 2017-00333
CONVENIENCE AND NECESSITY TO CONSTRUCT	)
A WIRELESS COMMUNICATIONS FACILITY	)
IN THE COMMONWEALTH OF KENTUCKY	)
IN THE COUNTY OF CALDWELL	)

SITE NAME: BRIARFIELD ROAD

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 601 West Chestnut Street, Louisville, Kentucky 40203.
- 2. Applicant proposes construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicant submits this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.
- 3. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant entity was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference.
- 4. The Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Applicant's FCC licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations.
- 5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the Applicant's communications network that is designed to meet the increasing demands

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

- 6. To address the above-described service needs, Applicant proposes to construct a WCF on Briarfield Road, Princeton, KY (37°11'01.77" North latitude, 87°52'35.83" 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 Toni and James Larry Watson pursuant to a Deed recorded at Deed Book 226, Page 689 in the office of the Caldwell County Clerk. The proposed WCF will consist of a 255-foot tall tower, with an approximately 15-foot tall lightning arrestor attached at the top, for a total height of 270-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**.
- A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as Exhibit D.
- 8. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of the Applicant has also been included

#### as part of Exhibit B.

- 9. Foundation design plans signed and sealed by a professional engineer registered in Kentucky and a description of the standards according to which the tower was designed are included as part of **Exhibit C**.
- 10. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate Applicant's antennas on an existing structure. When suitable towers or structures exist, Applicant attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.
- 11. A copy of the Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration ("FAA") is attached as **Exhibit E**.
- 12. A copy of the Kentucky Airport Zoning Commission ("KAZC") Approval to construct the tower is attached as **Exhibit F**.
- 13. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as **Exhibit G**. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this

exhibit.

- 14. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit H**. The name and telephone number of the preparer of **Exhibit H** are included as part of this exhibit.
- 15. Applicant, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit I**.
- 16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit C** bear the signature and stamp of a professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.
- 17. The Construction Manager for the proposed facility is Don Murdock and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibits B & C**.
- 18. As noted on the Survey attached as part of **Exhibit B**, the surveyor has determined that the site is not within any flood hazard area.
- 19. **Exhibit B** includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is

#### illustrated in Exhibit B.

- 20. Applicant has notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively.
- 21. Applicant has notified the applicable County Judge/Executive by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will be processed and informed the County Judge/Executive of his/her right to request intervention. A copy of this notice is attached as **Exhibit L**.
- 22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M**. Notice of the location of the proposed facility has also been published in a newspaper of general circulation in the county in which the WCF is proposed to be located.
  - 23. The general area where the proposed facility is to be located is rural with

sparse residences. There are no existing residences within 500' of the proposed tower location.

- 24. The process that was used by the Applicant's radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicant's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Applicant. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.
- 25. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area. In addition to expanding and improving voice and data service for AT&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service in the subject area. As a participant in the FCC's Connect America Fund Phase II (CAF II) program, AT&T is aggressively deploying WLL service infrastructure to bring expanded internet access to residential and business customers in rural and other underserved

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

- 26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.
- 27. All responses and requests associated with this Application may be directed to:

David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400

Telefax:

(502) 543-4410

Email:

dpike@pikelegal.com

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

Respectfully submitted,

David A. Pike

Pike Legal Group, PLLC

1578 Highway 44 East, Suite 6

P. O. Box 369

Shepherdsville, KY 40165-0369

Telephone: (502) 955-4400

Telefax:

(502) 543-4410

Email: dpike@pikelegal.com

Attorney for New Cingular Wireless PCS, LLC

d/b/a AT&T Mobility

#### LIST OF EXHIBITS

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

# EXHIBIT A FCC LICENSE DOCUMENTATION

#### Cellular License - KNKN674 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign KNKN674 Radio Service CL - Cellular

Status Active Auth Type Regular

Market

Market CMA444 - Kentucky 2 - Union Channel Block A
Submarket 0 Phase 2

**Dates** 

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

Effective 06/13/2017 Cancellation

**Five Year Buildout Date** 

12/05/1996

**Control Points** 

1 1650 Lyndon Farms Court, LOUISVILLE, KY

P: (502)329-4700

Licensee

FRN 0003291192 Type Limited Liability Company

Licensee

 NEW CINGULAR WIRELESS PCS, LLC
 P:(855)699-7073

 208 S Akard St., RM 1016
 F:(214)746-6410

 Dallas, TX 75202
 E:FCCMW@att.com

ATTN Leslie Wilson

Contact

AT&T MOBILITY LLC P:(202)457-2055 Michael P Goggin F:(202)457-3073

1120 20th Street, NW - Suite 1000 E:michael.p.goggin@att.com

Washington, DC 20036 ATTN Michael P. Goggin

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

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

**Basic Qualifications** 

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

Demographics

Race

Ethnicity Gender

### PCS Broadband License - KNLF460 - New Cingular Wireless PCS, LLC

Call Sign

KNLF460

Radio Service

CW - PCS Broadband

Status

Active

Auth Type

Regular

C

**Rural Service Provider Bidding Credit** 

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market

BTA083 - Clarksville, TN-

Hopkinsville, KY

Submarket

3

Channel Block

Associated Frequencies (MHz)

001895.00000000-001910.00000000 001975.00000000-001990.00000000

Dates

Grant

08/31/2016

Expiration

Cancellation

09/17/2026

Effective

02/28/2017

**Buildout Deadlines** 

1st

09/17/2001

2nd

**Notification Dates** 

1st

09/13/2001

2nd

Licensee

FRN

0003291192

Type

Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC 3300 E. Renner Road, B3132

Richardson, TX 75082

ATTN Leslie A. Wilson

P:(855)699-7073 F:(972)907-1131

E:FCCMW@att.com

Contact

AT&T Mobility LLC Michael P Goggin

1120 20th Street, NW - Suite 1000

Washington, DC 20036 ATTN FCC Group

P:(202)457-2055 F:(202)457-3073

E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type

Regulatory Status Common Carrier Interconnected

Yes

Alien Ownership

http://wireless2.fcc.gov/UlsApp/UlsSearch/license.jsp?licKey=9130&printable

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

#### PCS Broadband License - KNLH416 - New Cingular Wireless PCS, LLC

Call Sign KNLH416 Radio Service CW - PCS Broadband

Status Active Auth Type Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market BTA083 - Clarksville, TN-Channel Block

Hopkinsville, KY

Submarket 0 Associated 001865.00000000-Frequencies 001870.00000000

(MHz) 001945.000000000-

D

001950.00000000

**Dates** 

Grant 04/10/2017 Expiration 04/28/2027

Effective 06/14/2017 Cancellation

**Buildout Deadlines** 

1st 04/28/2002 2nd

**Notification Dates** 

1st 05/01/2002 2nd

Licensee

FRN 0003291192 Limited Liability Company Type

Licensee

New Cingular Wireless PCS, LLC P:(855)699-7073 208 S Akard St., RM 1016 F:(214)746-6410 Dallas, TX 75202 E:FCCMW@att.com

ATTN Leslie Wilson

Contact

AT&T Mobility LLC P:(202)457-2055 Michael P Goggin F:(202)457-3073

1120 20th Street, NW - Suite 1000 E:michael.p.goggin@att.com

Washington, DC 20036

ATTN FCC Group

Ownership and Qualifications

Radio Service Type

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

### PCS Broadband License - KNLH417 - New Cingular Wireless PCS, LLC

Call Sign

KNLH417

Radio Service

CW - PCS Broadband

Status

Active

Auth Type

Regular

E

#### **Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

#### Reserved Spectrum

Reserved Spectrum

Market

Market

BTA083 - Clarksville, TN-

Hopkinsville, KY

Submarket

0

Channel Block

Associated Frequencies

(MHz)

001885.00000000-001890.00000000 001965.00000000-

001970.00000000

Dates

Grant

04/13/2017

Expiration

04/28/2027

Effective

06/14/2017

Cancellation

**Buildout Deadlines** 

1st

04/28/2002

2nd

**Notification Dates** 

1st

04/26/2002

2nd

Licensee

FRN

0003291192

Type

Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC

208 S Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie Wilson P:(855)699-7073 F:(214)746-6410

E:FCCMW@att.com

Contact

AT&T Mobility LLC Michael P Goggin

1120 20th Street, NW - Suite 1000

Washington, DC 20036 ATTN FCC Group P:(202)457-2055 F:(202)457-3073

E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type

Mobile

Regulatory Status

Common Carrier Interconnected

Yes

Alien Ownership

http://wireless2.fcc.gov/UlsApp/UlsSearch/license.jsp?licKey=10586&printable

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

# PCS Broadband License - WPOI256 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign

WPOI256

Radio Service

CW - PCS Broadband

Status

Active

Auth Type

Regular

#### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

#### Reserved Spectrum

Reserved Spectrum

Market

Market

MTA043 - Nashville

Channel Block

В

Submarket

2

Associated

Frequencies (MHz)

001870.00000000-001885.00000000 001950.00000000-

001965.00000000

**Dates** 

Grant

06/02/2015

Expiration

06/23/2025

Effective

06/14/2017

Cancellation

**Buildout Deadlines** 

1st

06/23/2000

2nd

06/23/2005

**Notification Dates** 

1st

07/07/2000

2nd

02/28/2005

Licensee

FRN

0003291192

Type

Limited Liability Company

Licensee

NEW CINGULAR WIRELESS PCS, LLC

208 S Akard St., RM 1016

Dallas, TX 75202 ATTN Leslie Wilson P:(855)699-7073

F:(214)746-6410

E:FCCMW@att.com

#### Contact

AT&T MOBILITY LLC Michael P Goggin 1120 20th Street, NW - Suite 1000

Washington, DC 20036 ATTN FCC Group P:(202)457-2055 F:(202)457-3073

E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type

Mobile

Regulatory Status

Common Carrier

Interconnected

Yes

#### Alien Ownership

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

## AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGD545 - New Cingular Wireless PCS, LLC

Call Sign

WQGD545

Radio Service

AW - AWS (1710-1755 MHz and

2110-2155 MHz)

Status

Active

Auth Type

Regular

#### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

#### **Reserved Spectrum**

Reserved Spectrum

Market

Market

CMA444 - Kentucky 2 - Union

Channel Block

Α

Submarket

0

Associated Frequencies (MHz) 001710.000000000 001720.00000000 002110.00000000 002120.0000000

Dates

Grant

12/18/2006

Expiration

12/18/2021

Effective

06/14/2017

Cancellation

**Buildout Deadlines** 

1st

2nd

**Notification Dates** 

1st

2nd

Licensee

FRN

0003291192

Туре

Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC 208 S Akard St., RM 1016

Dallas, TX 75202

ATTN Leslie Wilson

P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com

Contact

AT&T Mobility LLC

P:(202)457-2055 F:(202)457-3073

1120 20th Street, NW - Suite 1000

Washington, DC 20036 ATTN Michael P. Goggin E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type

Fixed, Mobile

Regulatory Status

Non-Common

Interconnected

No

#### Carrier

#### Alien Ownership

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

## AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGD606 - New Cingular Wireless PCS, LLC

Call Sign

WQGD606

Radio Service

AW - AWS (1710-1755 MHz and

2110-2155 MHz)

Status

Active

Auth Type

Regular

#### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

#### Reserved Spectrum

Reserved Spectrum

Market

Market

BEA072 - Paducah, KY-IL

Channel Block

C

Submarket

0

Associated Frequencies

(MHz)

001730.00000000-001735.00000000 002130.00000000-

002135.00000000

**Dates** 

Grant

12/18/2006

Expiration Cancellation 12/18/2021

Effective

06/14/2017

**Buildout Deadlines** 

1st

2nd

**Notification Dates** 

1st

2nd

Licensee

FRN

0003291192

Type

Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC 208 S Akard St., RM 1016

Dallas, TX 75202 ATTN Leslie Wilson P:(855)699-7073

F:(214)746-6410 E:FCCMW@att.com

Contact

AT&T Mobility LLC

P:(202)457-2055 F:(202)457-3073

1120 20th Street, NW - Suite 1000

Washington, DC 20036 ATTN Michael P. Goggin E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type Regulatory Status Fixed, Mobile Non-Common

Interconnected

No

http://wireless2.fcc.gov/UIsApp/UIsSearch/license.jsp?licKey=2867751&printable

Carrier

#### Alien Ownership

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

### PCS Broadband License - WQXA289 - New Cingular Wireless PCS, LLC

Call Sign

WQXA289

Radio Service

CW - PCS Broadband

Status

Active

Auth Type

Regular

#### **Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP)

bidding credit?

#### Reserved Spectrum

Reserved Spectrum

Market

Market

MTA043 - Nashville

Channel Block

В

Submarket

8

Associated Frequencies

001870.00000000-001885.00000000

(MHz)

001950.00000000-001965.00000000

**Dates** 

Grant

11/02/2015

Expiration

06/23/2025

Effective

06/14/2017

Cancellation

**Buildout Deadlines** 

1st

2nd

**Notification Dates** 

1st

2nd

Licensee

FRN

0003291192

Type

Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC 208 S Akard St., RM 1016

Dallas, TX 75202

P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com

ATTN Leslie Wilson

Contact

AT&T Mobility LLC Michael P Goggin

1120 20th Street, NW - Suite 1000 Washington, DC 20036

P:(202)457-2055 F:(202)457-3073

E:michael.p.goggin@att.com

Ownership and Qualifications

Radio Service Type

Mobile

Regulatory Status

Common Carrier

Interconnected

Yes

Alien Ownership

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

#### **Basic Qualifications**

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

#### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

#### **EXHIBIT B**

### SITE DEVELOPMENT PLAN:

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



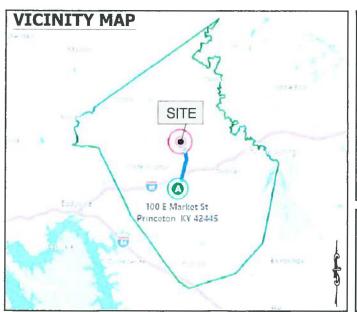
SITE NAME:

BRIARFIELD

SITE NUMBER:

**KYL03259** 

### PROPOSED RAW LAND SITE WITH PROPOSED 255' SELF-SUPPORT TOWER WITH A 15' LIGHTNING ARRESTOR AND INSTALLATION OF A 12'-0" x 12'-0" CONCRETE SHELTER AND GENERATOR



#### **DIRECTIONS**

FROM 100 E MARKET ST, PRINCETON, KY 42445

DEPART US-62 E / E MARKET ST TOWARD US-62 / KY-293

JEFFERSON ST 49 FT

2. TURN RIGHT ONTO US-62 / KY-293 / N JEFFERSON ST 0.3 MI

3 KEEP STRAIGHT ONTO KY-293 / N JEFFERSON ST 3.8 MI 4. TURN LEFT ONTO BRIARFIELD RD 1.4 MI

5. ARR VE AT BRIARFIELD RD ON THE LEFT

#### PROJECT SCOPE OF WORK

ZONING DRAWINGS FOR: CONSTRUCTION OF A PROPOSED UNMANNED TELECOMMUNICATIONS FACILITY

SITE WORK: PROPOSED TOWER, UNMANNED EQUIPMENT SHELTER AND GENERATOR ON A CONCRETE FOUNDATIONS, AND UTIL TY NSTALLATIONS.

A DELAWARE L MITED LIABLTY COMPANY, D/B/A AT&T MOBILITY

LOUISVILLE, KY 40203

37° 11' 01 77" -87\* 52' 35.83"

#### **DRAWING INDEX**

T-1 TITLE SHEET & PROJECT INFORMATION

B-1 SITE SURVEY

B-2 500' RADIUS & ABUTTER'S MAP

C-1 ENLARGED COMPOUND LAYOUT

**CONTACT INFORMATION** 

**BUILDING CODES AND STANDARDS** 

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

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE

AMERICAN CONCRETE NSTITUTE 318

AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL

COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS IEEE-81,

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222 STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND

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

\*\*\*CAUTION\*\*\*

ITILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER MES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE TH

FOR EMERGENCIES CALL: 911

C-2 TOWER ELEVATION

FIRE DEPARTMENT: PRINCETON FIRE DEPARTMENT PHONE: 270—365—2041

ELECTRIC COMPANY: KENERGY CORPORATION PHONE: 800-844-4832

TELEPHONE COMPANY:

PHONE: 855-293-7676

FOLLOWING STANDARDS:

TELECOMMUNICATIONS

EEE 1100, IEEE C62.41

ENVIRONMENTAL PROTECT ON

2014 KENTUCKY BULD NG CODE

SUPPORTING STRUCTURES TIA-601

PRINCETON CITY POLICE DEPARTMENT PHONE: 270 – 365 – 2041







ENERAL CONSTRUCTION ENGINEERING PROJECT MANAGEMEN

**ZONING DRAWINGS** NOT FOR CONSTRUCTION

DRAWN BY

EV	DATE	DESCRIPTION
0	05/31/2017	ISSUED FOR ZONING
1	08/28/2017	ISSUED FOR ZONING

CHECKED BY



ENG. PERMIT # 4363

Know what's below.

Call before you dig.

13800779 KYL03259 BRIARFIELD SITE ADDRESS BRIARFIELD PRINCETON, KY 42445

> TITLE SHEET & PROJECT **INFORMATION**

> > SHEET NUMBER

T-1

#### **PROJECT INFORMATION**

COUNTY: CALDWELL

SITE ADDRESS: BRIARFIELD

PRINCETON, KY 42445

APPLICANT. NEW CINGULAR WIRELESS PCS, LLC,

601 WEST CHESTNUT ST

LATITUDE: ONGITUDE:

ALL THAT TRACT OR PARCEL OF LAND LYING IN THE COUNTY OF CALDWELL STATE OF KENTUCKY CONSISTING OF A 100 FEET BY 100 FEET LEASE AREA COMMENCING AT A FOUND 35° ELM TREE THAT IS 3.230 FEET SOUTHWESTERLY OF THE INTERSECTION OF (KY1119) BRIARFIELD ROAD AND CALVERT ROAD MORE PARTICULARLY DESCRIBED AS FOLLOWS

THENCE ALONG AN EXISTING FENCE LINE NORTH 24 DEGREES 35 MINUTES 32 SECONDS EAST A DISTANCE OF 138 03 FEET

THENCE NORTH 65 DEGREES 24 MINUTES 28 SECONDS WEST A DISTANCE OF 273 97 FEET TO THE POINT OF BEGINNING

THENCE SOUTH 27 DEGREES 13 MINUTES 49 SECONDS WEST A DISTANCE OF 100 00 FEET THENCE NORTH 62 DEGREES 46 MINUTES 11 SECONDS WEST A DISTANCE OF 100 00 FEET THENCE NORTH 27 DEGREES 13 MINUTES 49 SECONDS EAST A DISTANCE OF 100 00 FEET THENCE SOUTH 62 DEGREES 46 MINUTES 11 SECONDS EAST, A DISTANCE OF 100 00 FEET TO THE POINT OF BEGINNING

10 000 SQUARE FEET OR 0 2295 ACRES MORE OR LESS

PROPOSED ACCESS & UTILITY FASFMENT

ALL THAT TRACT OR PARCEL OF LAND LYING IN THE COUNTY OF CALDWELL STATE OF KENTUCKY.

CONSISTING OF A 25 FEET WIDE ACCESS AND UTILITY EASEMENT COMMENCING AT A FOUND 36" ELM

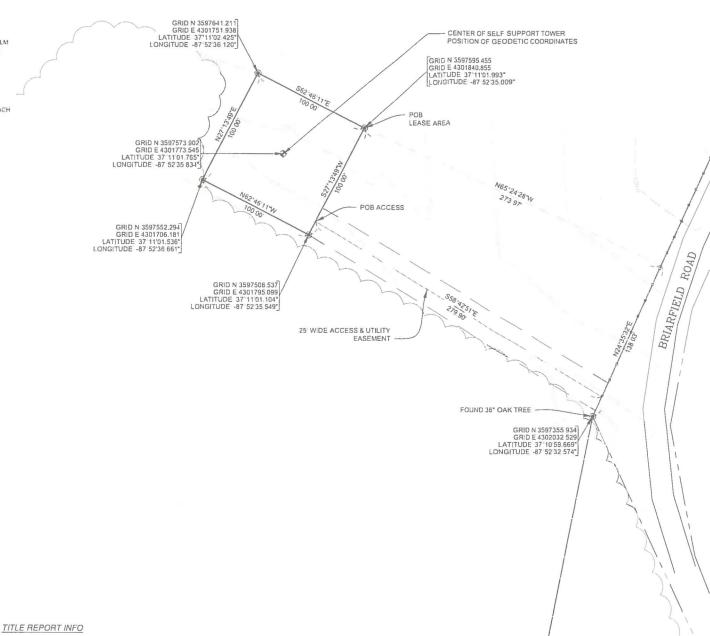
TREE THAT IS 3.230 FEET SOUTHWESTERLY OF THE INTERSECTION OF (KY1119) BRIARRIELD ROAD AND CALVERT ROAD, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

THENCE ALONG AN EXISTING FENCE LINE NORTH 24 DEGREES 35 MINUTES 32 SECONDS EAST A

THERCE ACTION OF A 215 THING FERCE LINE. NORTH 24 DEGREES 35 MINUTES 32 SECONDS EAST A DISTANCE OF 138 03 FEET THENCE NORTH 55 DEGREES 24 MINUTES 28 SECONDS WEST A DISTANCE OF 273 97 FEET THENCE SOUTH 27 DEGREES 13 MINUTES 49 SECONDS WEST A DISTANCE OF 37 47 FEET TO THE POINT OF BEGINNING. OF A 25 FEET WIDE ACCESS AND UTILITY EASEMENT LYING 12 50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE

THENCE SOUTH 58 DEGREES 42 MINUTES 51 SECONDS EAST A DISTANCE OF 279 90 FEET TO THE POINT OF TERMINUS





PROPERTY OWNER: WATSON TONI & JAMES LARRY REFERENCE IS MADE TO THE TITLE REPORT ORDER #00300-20170127 ISSUED BY STEWART TITLE GUARANTY INSURANCE COMPANY DATED 04-10-2017
ALL EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED (EXCEPT FOR ROOFTOPS) SOURCE OF TITLE 226/689

#### SCHEDULE BITEMS

- 7 RIGHT OF WAY EASEMENT DATED MAY 11 1954 TO BIG RIVERS RURAL ELECTRIC COOPERATIVE CORPORATION OF RECORD IN DEED BOOK 112 PAGE 115 IN THE OFFICE AFORESAID (NOT PLOTTED EASEMENT IS 2 500± NORTH OF LEASE AREA)
- 8 OIL AND GAS LEASE DATED OCTOBER 15: 1992 TO MELVIN D. UNDERWOOD OF RECORD IN LEASE BOOK 23. PAGE 583 IN THE OFFICE AFORESAID (NOT ABLE TO PLOT. BLANKET EASEMENT AS DESCRIBED)



A ACCURACY CERTIFICATION

LATITUDE 37' 11' D1.77" NORTH

LONGITUDE 87' 52' 35 83" WEST

ELEVATION 535.5'

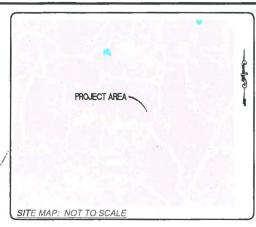
THE HORIZONTAL ACCURACY OF THE LATITUDE AND LONGITUDE OF THE GEODETIC COORDINATES FALL WITHIN TWENTY (20) FEET THE ELEVATIONS (NAVDBB) OF THE GROUND AND FIXTURES FALL WITHIN THREE (3) FEET

SCALE 1 inch = 40 ft. PAPER SIZE 22x34

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

FAA COORDINATE POINT CENTER OF SELF SUPPORT TOWER (NAD83)

(NAVD88)



#### BENCHMARK

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

#### BASIS OF BEARINGS

BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM KENTUCKY SINGLE ZONE US FOOT, DETERMINED BY GPS OBSERVATIONS, COMPLETED ON 2.17.17

#### UTILITY NOTES

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

#### SURVEYOR NOTES

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

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

THIS PROPERTY IS SUBJECT TO ANY RECORD EASEMENTS AND/OR RIGHT OF WAY SHOWN HEREON OR NOT THIS SURVEY IS NOT INTENDED FOR LAND TRANSFER

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

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

THIS SURVEY WAS PERFORMED WITH A CARLSON BRX5+ DUAL FREQUENCY, REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM ROVER AND BASE STATION H/W B16130147501133 & B16130147501126 SERIAL NUMBERS. REDUNDANT AND REPETITIVE MEASUREMENTS WERE TAKENTO INSURE CORRECT POSITIONS OF ALL DATA POINTS...A TOLERANCE OF 0.04 OR POSITIONAL ACCURACY.

#### FLOOD INFORMATION

THE PROPOSED LEASE AREA SHOWN HEREON IS NOT LOCATED IN A 100-YEAR ELOOD PLAIN PER FLOOD HAZARD BOUNDARY MAP COMMUNITY-PANEL NO 21033C0145C & 21033C0165C, DATED 10 16 2009 THE PROPOSED LEASE AREA IS LOCATED IN ZONE "X"

#### LEGEND

POINT OF REGINNING POINT OF TERMINUS PUBLIC UTILITY EASEMENT ROW RIGHT OF WAY DW DRIVEWAY SW SIDEWALK SET ½"×24" IR CAPPED: #3219 OR FOUND AS NOTED

SPOT ELEVATION •

POSITION OF GEODETIC COORDINATES WATER CONTROL VALVE FIRE HYDRANT POWER POLE

ELECTRIC MANHOLE TELCO MANHOLE

OVERHEAD ELECTRIC PROPERTY LINE BARBED WIRE FENCE



# «MasTec



4603 Bermuda Drive Sugar Land TX 77479 Voice (281) 796-2651 | Fax (856) 598-3136 Inshtower.com

RAWN BY HECKED BY ACR

4 3.2.17 REVIEW



13800779 KYL03259 BRIARFIELD BRIARFIELD PRINCETON, KY 42445

> **TOPOGRAPHIC** SITE SURVEY

CALDWELL COUNTY

SHEET NUMBER

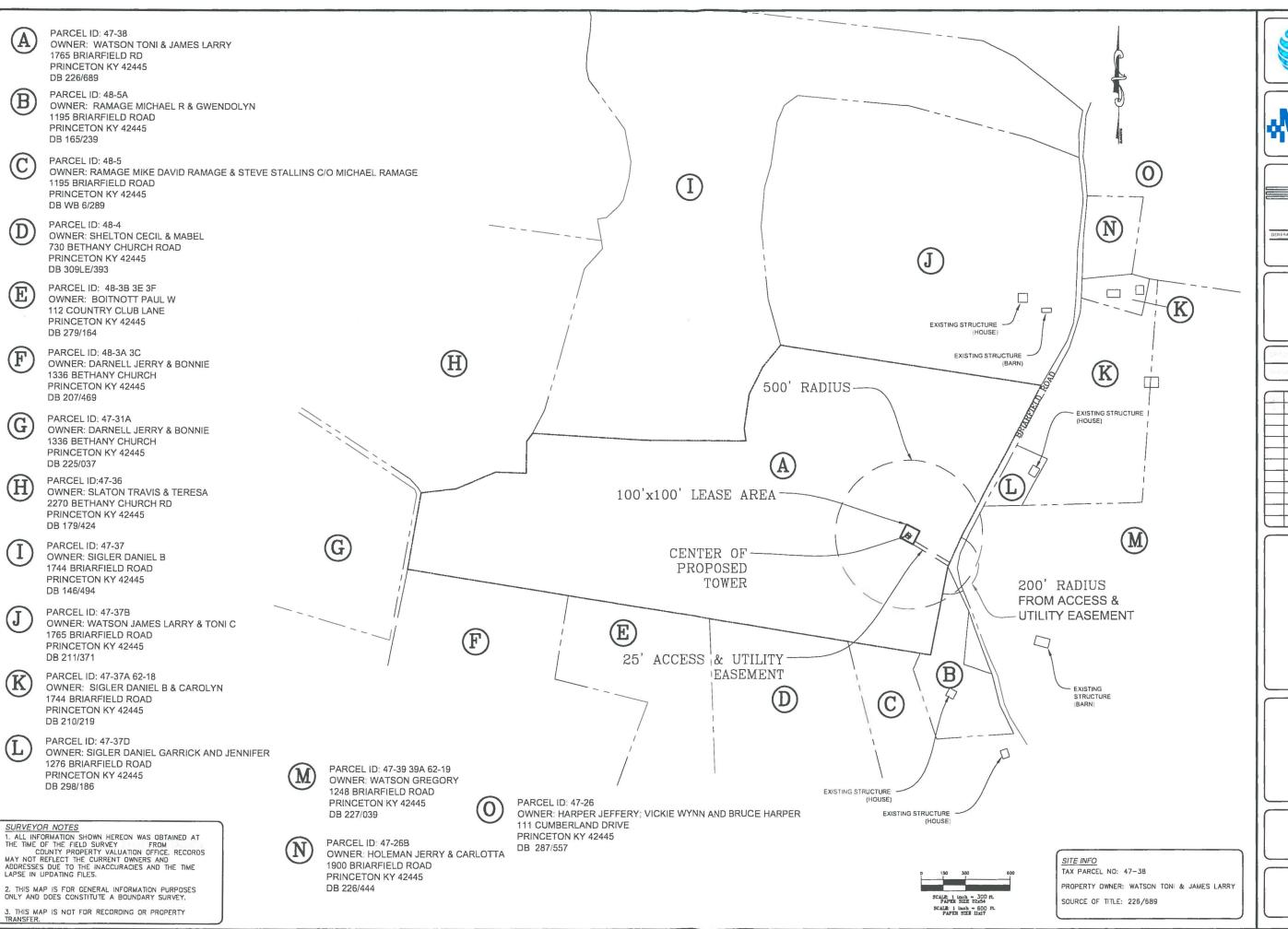
B-1



SITE INFO

TAX PARCEL NO: 47-38

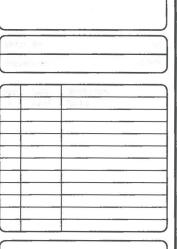
A CLAY ROBINSON HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF KENTUCKY I FURTHER CERTIFY TH. THIS PLAT AND THE SURVEY ON THE GROUND WERE PERFORMED BY PERSONS UNDER MY DIRECT SUPERVISION, AND THAT THE DIRECTIONAL AND LINEAR MEASUREMENTS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













13800779

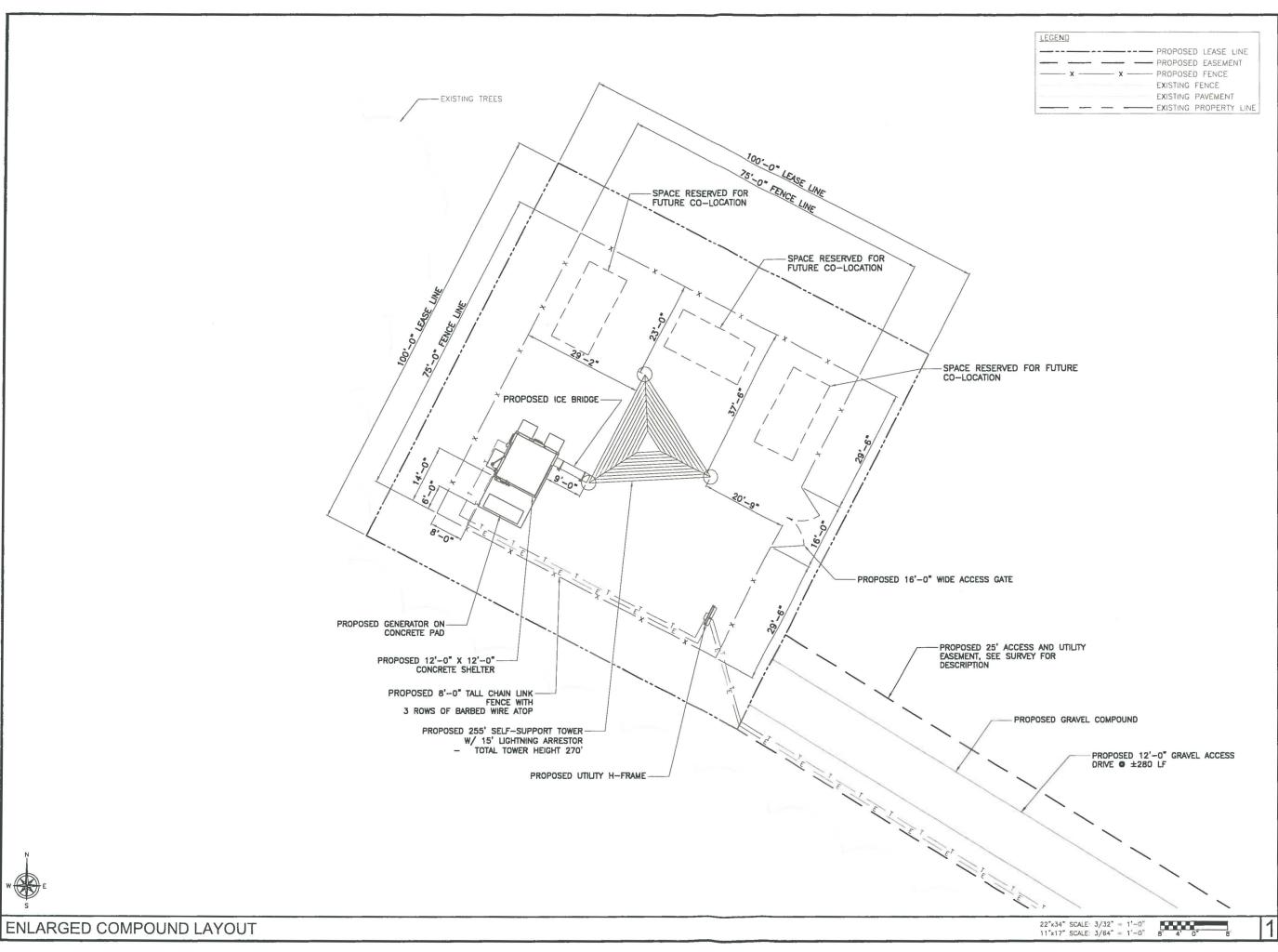
KYL03259

BRIARFIELD

BRIARFIELD PRINCETON, KY 42445 CALDWELL COUNTY

500' RADIUS & ABUTTER'S MAP

B-2









SENERA CONSTRUCTION JENGINEERING | PROJECT MANAGEMENT 4553 Bermudu Drve Sugar Land TX 77479

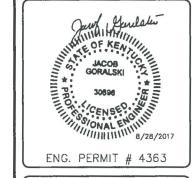
4503 Bermuda Drive Sagar Land TX 77479 Voca (281) 796-265" I Fax (866 598-3136 Ir shlower com

ZONING DRAWINGS NOT FOR CONSTRUCTION

DRAWN BY

CHECKED BY: JRG

V DATE	DESCRIPTION
05/31/2017	ISSUED FOR ZONING
08/28/2017	ISSUED FOR ZONING

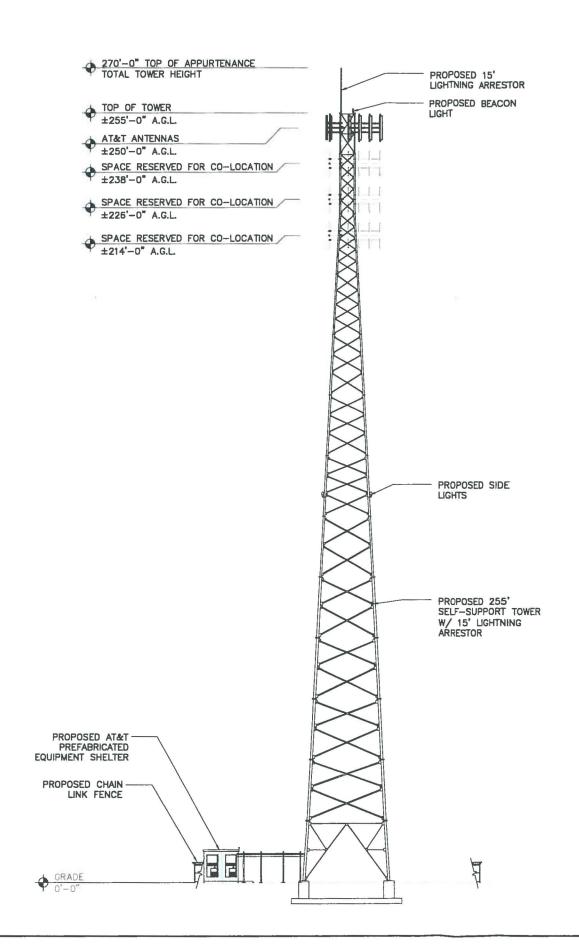


FA #
13800779
SITE#
KYL03259
SITE NAME:
BRIARFIELD
SITE ADDRESS:
BRIARFIELD
PRINCETON, KY 42445

ENLARGED COMPOUND LAYOUT

SHEET NUMBER

C-1









IRISH TOWER TINERA CONTRUCTION ENGINEERING PROJECT MANAGEMEN

4603 Bermuda Orive Sugar Land TX 7479 Voice #81 96-255 | Fax (866-598-3136 Irishtower.com

**ZONING DRAWINGS** NOT FOR CONSTRUCTION

DRAWN BY:

CHECKED BY:

REV DATE DESCRIPTION
0 05/31/2017 ISSUED FOR ZONING 1 08/28/2017 SSUED FOR ZONING



FA # 13800779 SITE# KYL03259 SITE NAME: BRIARFIELD SITE ADDRESS: BRIARFIELD PRINCETON, KY 42445

SHEET TITLE

**TOWER ELEVATION** 

SHEET NUMBER

# EXHIBIT C TOWER AND FOUNDATION DESIGN



August 14th<sup>h</sup>, 2017 Kentucky Public Service Commission 211 Sower Blvd. P.O. Box 615 Frankfort, KY 40602-0615

RE: Site Name – Briarfield Rd Proposed Cell Tower 37 11 01.77 North Latitude, 87 52 35.83 West Longitude

#### Dear Commissioners:

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

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

Thank you,

Don Murdock, Sr. Project Manager – Tennessee/Kentucky Market

MasTec Network Solutions

(615) 207-8280



### Structural Design Report

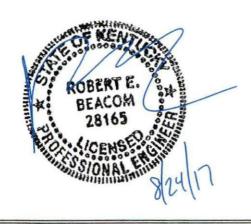
255' S3TL Series HD1 Self-Supporting Tower Site: Briarfield Rd, KY Site Number: KYL03259

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

> > Job Number: 169301

#### August 24, 2017

Tower Profile	1-2
Foundation Design Summary (Option 1)	3
Foundation Design Summary (Option 2)	4
Maximum Leg Loads	5
Maximum Diagonal Loads	6
Maximum Foundation Loads	7
Calculations	8-22



F G	L L2X2X3/16 M	N NONE M				3**	11@5:		1900 1375 565	255° 240° 220°		
٥	¥					(1) 5/8"	.6		2421 19	200'		
U	L3X3X3/16							9 @ 6.6667	11 3017	160'		
80	7	NONE	NONE	NONE	NONE		15: 13:		4305 3211	1401		
8.625 OD X .500	_					(1) 3/4"	37 177		73 4518	120'		< < <
ď	L4X4X1/4						21' 19'	12 @ 10	6207 5173	80.		
.375						(2) 5/8"	23.		5877	40'		< <
12.75 OD X .375	L4X4X5/16						257	×	9999	20'	<	<
	I	-	0	۵		(2) 3/4"	27.	o	7129			$\rightarrow$
n.	gonals	izontals	mals	-Diagonals	-Honzontals	se Bolts	Face Width	nel Count/Height	tion Weight	0'	K-	

#### **Base Reactions**

Total Fou	indation	Individual Footing			
Shear (kips)	96.53	Shear (kips)	58.79		
Axial (kips)	248.02	Compression (kips)	639		
Moment (ft-kips)	15218	Uplift (kips)	561		
Torsion (ft-kips)	39.55				

#### **Material List**

Display	Value								
A	10.75 OD X .500								
В	8.625 OD X .322								
C	5.563 OD X .500								
D	5.563 OD X .375								
E	4.500 OD X .337								
F	3.500 OD X .300								
G	2.375 OD X .154								
Н	L 5 X 3 1/2 X 5/16 (SLV)								
1	L 3 1/2 X 3 1/2 X 1/4								
J	L 3 1/2 X 3 X 1/4 (SLV)								
K	L 2 1/2 X 2 1/2 X 1/4								
L	L 2 1/2 X 2 1/2 X 3/16								
M	L 2 X 2 X 1/8								
N	L 2 X 2 X 3/16								
0	L 3 X 3 X 1/4								
Р	L 3 X 3 X 3/16								
Q	1 @ 13.333'								
R	1 @ 6.667								

#### Notes

- 1) All legs are A500 (50 ksi Min. Yield).
- 2) All braces are A572 Grade 50.
- 3) All brace bolts are A325-X.
- 4) The tower model is S3TL Series HD1.
- Transmission lines are to be attached to standard 12 hole waveguide ladders with stackable hangers.
- 6) Azimuths are relative (not based on true north).
- 7) Foundation loads shown are maximums.
- (6) 1 3/4" dia. F1554 grade 105 anchor bolts per leg. Minimum 65.5" embedment from top of concrete to top of nut.
- 9) All unequal angles are oriented with the short leg vertical.
- 10) Weights shown are estimates. Final weights may vary.
- 11) This tower was designed for a basic wind speed of 89 mph with 0" of radial ice, and 30 mph with 3/4" of radial ice, in accordance with ANSI/TIA-222-G, Structure Class II, Exposure Category C, Topographic Category 1.
- 12) The foundation loads shown are factored loads.
- 13) The tower design meets the requirements for an Ultimate Wind Speed of 115 mph (Risk Category II), in accordance with the 2012 International Building Code.
- 14) Tower Rating: 98.99%



Sabre Communications Corporation 7101 Southbridge Drive

7101 Southbridge Drive P.O. Box 858 Sioux City. IA 51102-0658 Phone. (12) 238-6690 Fax. (712) 279-0814

Information contained herein is the sole property of Sabre Communications: Corporation consociates trade secret as defined by lower Code Ch. 550 and shall not be reproduced copied or used in whole or part for an outcode, withdrawer whose the core without consist of Sarra Communications.

Job 169301 Customer AT&T

Site Name Briarfield Rd, KY KYL03259

Description 255' S3TL

8/24/2017 By REB

#### **Designed Appurtenance Loading**

Elev	Description	Tx-Line
260	(1) Extendible Lightning Rod	
250	(1) 278 Sq. FT. EPA /6000# (No Ice)	(18) 1 5/8"
238	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"

Elev	Description	Tx-Line		
226	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"		
214	(1) 208 sq. ft. EPA 4000# (no ice)	(18) 1 5/8"		



169301 Customer

AT&T

Site Name Briarfield Rd, KY KYL03259

Description 255' S3TL

Date 8/24/2017 By REB

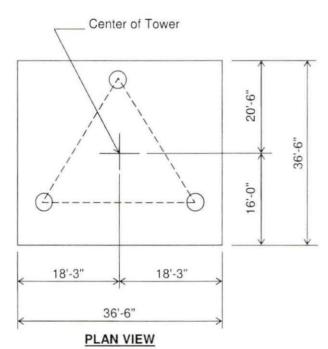


No.: 169301

Date: 8/24/17 By: DJH

#### Customer: AT&T Site: Briarfield Rd, KY KYL03259

255 ft. Model S3TL Series HD1 Self Supporting Tower At 89 mph Wind with no ice and 30 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G. Antenna Loading per Page 1



#### Notes:

- 1). Concrete shall have a minimum 28-day compressive strength of 4500 PSI, in accordance with ACI 318-11.
- 2). Rebar to conform to ASTM specification A615 Grade 60.
- 3). All rebar to have a minimum of 3" concrete cover.
- 4). All exposed concrete corners to be chamfered 3/4".
- 5). The foundation design is based on the geotechnical report by ECS Southeast, LLP; project# 26:3125-D1; dated June 21, 2017.
- Two(2) #4 ties within top 5" of concrete concrete 36'-6"

  ELEVATION VIEW

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

7). The foundation is based on the following factored loads: Factored download (kips) = 100.1

Factored overturn (kip-ft) = 15217.8 Factored shear (kips) = 96.53

8). 5.25 ft of soil cover is required over the entire area of the foundation slab.

CAUTION: Center of tower is not in center of slab.

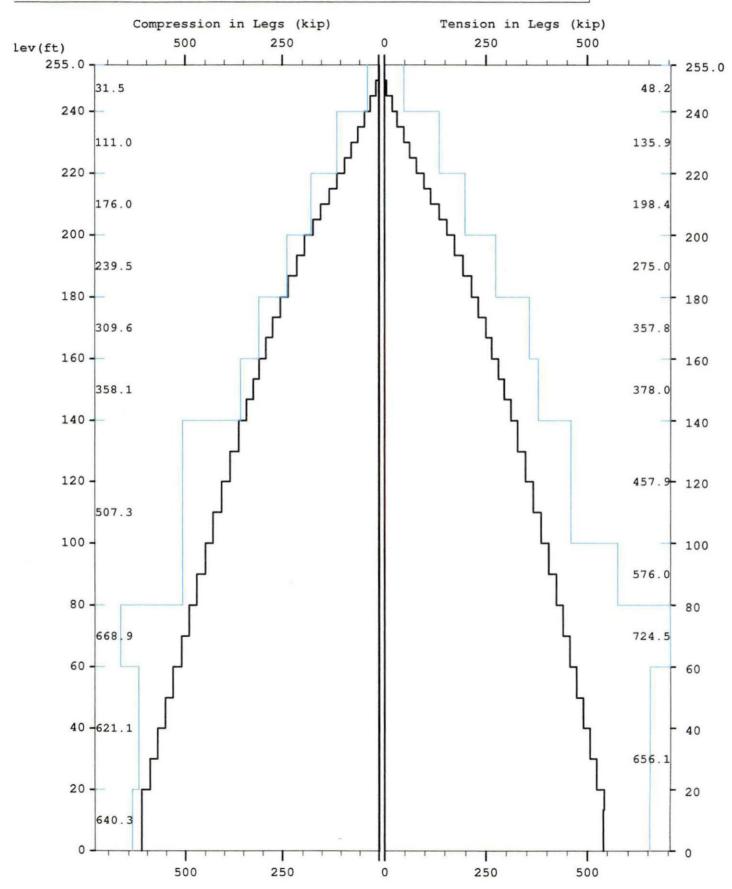
(92.5 Cu. Yds.) (1 REQD.: NOT TO SCALE)

	Rebar Schedule per Mat and per Pier
Pier	(18) #9 vertical rebar w/ hooks at bottom w/ #4 Rebar ties, two (2) within top 5" of pier then 11" C/C
Mat	(66) #9 horizontal rebar evenly spaced each way top and bottom. (264 total)

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

24 aug 2017





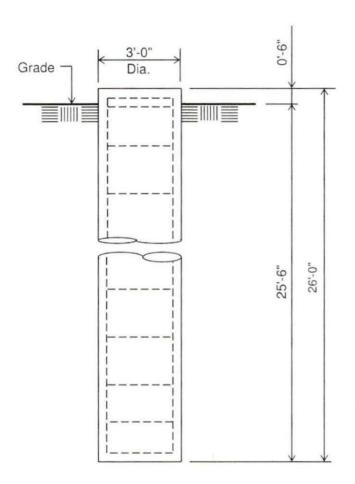


No.: 169301

Date: 8/24/17 By: DJH

#### Customer: AT&T Site: Briarfield Rd, KY KYL03259

255 ft. Model S3TL Series HD1 Self Supporting Tower At 89 mph Wind with no ice and 30 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G. Antenna Loading per Page 1



#### **ELEVATION VIEW**

(6.81 Cu. Yds. each) (3 REQUIRED; NOT TO SCALE)

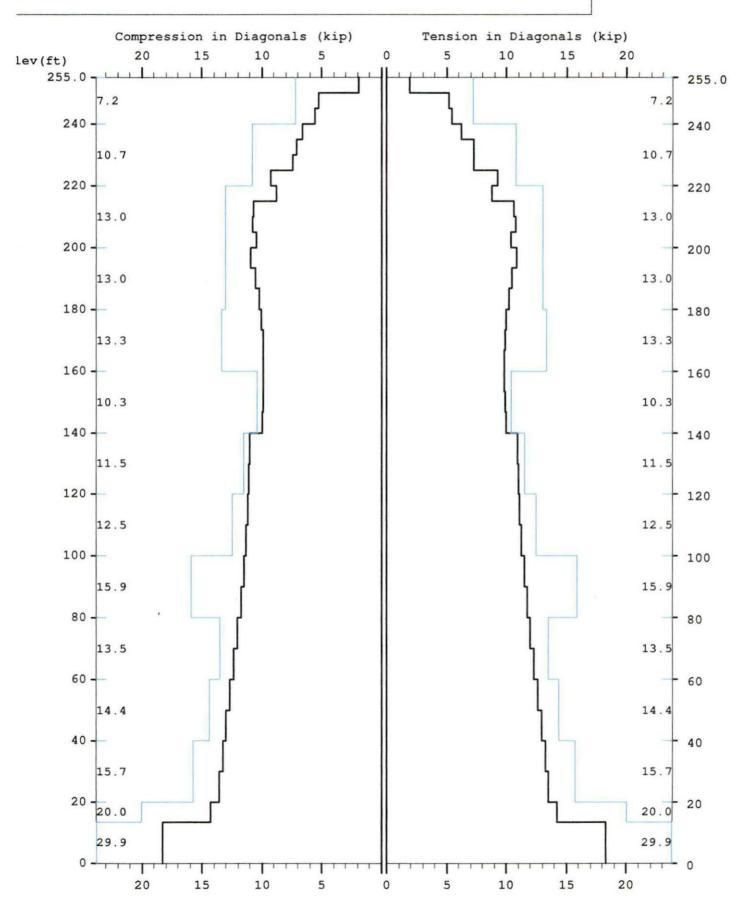
#### Notes:

- 1). Concrete shall have a minimum 28-day compressive strength of 4500 PSI, in accordance with ACI 318-11.
- 2). Rebars to conform to ASTM specification A615 Grade 60.
- 3). All rebar to have a minimum of 3" concrete cover.
- 4). All exposed concrete corners to be chamfered 3/4".
- 5). The foundation design is based on the geotechnical report by ECS Southeast, LLP; project# 26:3125-D1; dated June 21, 2017.
- 6). See the geotechnical report for drilled pier installation requirements, if specified.
- 7). The foundation is based on the following factored loads:
  Factored uplift (kips) = 561
  Factored download (kips) = 639
  Factored shear (kips) = 59

	Rebar Schedule per Pier
Pier	(12) #11 vertical rebar w/#4 ties, two (2) within top 5" of pier then 9" C/C

icensed to: Sabre Towers and Poles

Maximum



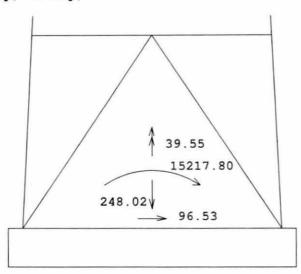
RAWFORCE Ver 2.2 (c) Guymast Inc. 2006-2009 Phone: (416) 736-7453

icensed to: Sabre Towers and Poles

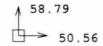
14:57:15

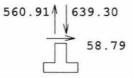
Maximum

TOTAL FOUNDATION LOADS (kip, ft-kip)



INDIVIDUAL FOOTING LOADS (kip)





\_\_\_\_\_\_\_ Latticed Tower Analysis (Unguyed) (c)2013 Guymast Inc. 416-736-7453 Processed under license at:

Sabre Towers and Poles on: 24 aug 2017 at: 14:57:15

#### MAST GEOMETRY ( ft ) ================

PANEL TYPE	NO.OF LEGS	ELEV.AT BOTTOM	ELEV.AT TOP	F.WAT BOTTOM	F.WAT TOP	TYPICAL PANEL HEIGHT
×	3	250.00	255.00	5.00	5.00	5.00
×	3	240.00	250.00	5.00	5.00	5.00
X	3	235.00	240.00	5.50	5.00	5.00
×	3	220.00	235.00	7.00	5.50	5.00
×	3	200.00	220.00	9.00	7.00	5.00
X X	3	180.00	200.00	11.00	9.00	6.67
X	3	160.00	180.00	13.00	11.00	6.67
×	3	140.00	160.00	15.00	13.00	6.67
× × ×	3	120.00	140.00	17.00	15.00	10.00
X	3	100.00	120.00	19.00	17.00	10.00
×	3	80.00	100.00	21.00	19.00	10.00
X	3	60.00	80.00	23.00	21.00	10.00
X	3	40.00	60.00	25.00	23.00	10.00
X	3	20.00	40.00	27.00	25.00	10.00
V	3	13.33	20.00	27.67	27.00	6.67
A	3	0.00	13.33	29.00	27.67	13.33

#### MEMBER PROPERTIES

\_\_\_\_\_\_

MEMBER TYPE	BOTTOM ELEV ft	TOP ELEV ft	X-SECTN AREA in.sq	RADIUS OF GYRAT in	ELASTIC MODULUS ksi	THERMAL EXPANSN /deg
LE LE LE LE DI DI DI DI DI DI HO HO	240.00 220.00 200.00 180.00 160.00 140.00 80.00 0.00 240.00 220.00 200.00 140.00 120.00 120.00 100.00 40.00 235.00 255.00 0.00	255.00 240.00 220.00 200.00 160.00 140.00 60.00 255.00 240.00 220.00 140.00 120.00 140.00 13.33 255.00 240.00	1.075 3.016 4.407 6.111 7.952 8.399 12.763 16.101 14.579 0.484 0.715 0.902 1.188 1.090 1.562 1.688 2.402 2.559 0.484 0.715	0.787 0.787 0.787 0.787 0.787 0.787 0.787 0.787 0.626 0.626 0.626 0.626 0.626 0.626 0.626 0.626	29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000. 29000.	0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117 0.0000117
BR	0.00	13.33	1.438	0.000	29000.	0.0000117

#### FACTORED MEMBER RESISTANCES

воттом	TOP	L	EGS	DIA	GONALS	HORIZ	ONTALS	INT	BRACING
ELEV ft	ELEV	COMP	TENS kip	COMP kip	TENS kip	COMP kip	TENS kip	COMP kip	TENS kip
250.0 240.0 235.0 220.0 200.0 180.0	255.0 250.0 240.0 235.0 220.0 200.0	31.48 31.48 110.98 110.98 175.98 239.46	48.15 48.15 135.90 135.90 198.45 274.95	7.16 7.16 10.74 10.74 13.03 13.00	7.16 7.16 10.74 10.74 13.03 13.00	5.73 0.00 8.38 0.00 0.00	5.73 0.00 8.38 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00

Page 1

						169301			
160.0	180.0	309.64	357.75	13.34	13.34	0.00	0.00	0.00	0.00
140.0	160.0	358.08	378.00	10.34	10.34	0.00	0.00	0.00	0.00
120.0	140.0	507.33	457.90	11.47	11.47	0.00	0.00	0.00	0.00
100.0	120.0	507.33	457.90	12.46	12.46	0.00	0.00	0.00	0.00
80.0	100.0	507.33	576.00	15.85	15.85	0.00	0.00	0.00	0.00
60.0	80.0	668.86	724.50	13.50	13.50	0.00	0.00	0.00	0.00
40.0	60.0	621.06	656.10	14.39	14.39	0.00	0.00	0.00	0.00
20.0	40.0	621.06	656.10	15.70	15.70	0.00	0.00	0.00	0.00
13.3	20.0	640.29	656.10	20.02	20.02	0.00	0.00	0.00	0.00
0.0	13.3	640.29	656.10	29.94	29.94	11.16	11.16	7.41	7.41

\_\_\_\_\_\_\_

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

#### MAST LOADING \_\_\_\_\_

ELEV APPLY..LOAD..AT .....FORCES.. ....MOMENTS.. LOAD LOAD TYPE RADIUS AZI AZI HORIZ DOWN VERTICAL TORSNAL ft kip kip ft-kip ft-kip 260.0 250.0 0.00 0.0 0.15 0.0 0.28 C 0.00 0.00 0.00 0.0 C 10.00 0.00 0.00 238.0 0.0 0.0 7.41 7.33 C 0.00 4.80 0.00 0.00 4.80 C 0.00 0.00 0.00 C 4.80 214.0 0.00 0.0 0.0 7.24 0.00 0.00 255.0 250.0 180.0 0.00 0.0 0.04 D 0.07 0.00 0.00 D 0.00 180.0 0.0 0.07 0.04 0.00 0.00 D 250.0 0.00 42.0 0.0 0.13 0.06 0.06 0.10 0.0 0.06 D 240.0 0.00 42.0 0.13 0.06 0.10 D 240.0 0.00 64.4 0.0 0.16 0.12 0.06 0.11 D 235.0 0.00 64.4 0.0 0.16 0.12 0.06 0.11 D 235.0 0.00 79.5 0.0 0.17 0.12 0.06 0.11 79.5 D 230.0 0.00 0.0 0.17 0.12 0.06 0.11 D 230.0 0.00 83.3 0.0 0.18 0.13 0.05 0.10 D 225.0 0.00 83.3 0.0 0.18 0.13 0.05 0.10 D 225.0 0.00 92.0 0.0 0.20 0.15 0.04 0.06 D 220.0 0.00 92.0 0.0 0.20 0.15 0.04 0.06 D 220.0 0.00 89.2 0.0 0.22 0.18 0.05 0.06 D 215.0 0.00 89.2 0.0 0.22 0.18 0.05 0.06 D 215.0 0.00 353.1 0.0 0.23 0.20 0.01 0.04 D 210.0 0.00 353.1 0.0 0.23 0.20 0.01 0.04 322.3 D 210.0 0.00 0.0 0.23 0.20 0.02 0.04 D 200.0 0.00 0.0 0.24 0.21 0.02 0.04 D 200.0 0.00 322.4 0.0 0.23 0.23 0.02 0.04 D 180.0 0.00 321.9 0.0 0.24 0.24 0.02 0.04 D 180.0 0.00 322.4 0.0 0.24 0.26 0.02 0.04 0.26 D 160.0 0.00 321.9 0.0 0.25 0.02 0.04 D 160.0 0.00 322.4 0.0 0.26 0.02 0.04 0.00 322.0 322.3 322.3 D 140.0 0.0 0.26 0.04 0.27 0.02 140.0 0.0 0.24 0.33 0.02 0.04 D D 110.0 0.00 0.0 0.25 0.34 0.02 0.04 322.3 D 110.0 0.00 0.0 0.25 0.35 0.02 0.04 0.00 D 80.0 0.0 0.26 0.37 0.02 0.03 322.4 322.3 80.0 0.0 0.26 0.42 0.02 0.03 D 0.00 D 40.0 0.0 0.27 0.41 0.02 0.03 D 40.0 322.4 0.0 0.25 0.45 0.02 0.03 322.3 322.4 322.4 D 20.0 0.00 0.0 0.25 0.45 0.02 0.03 D 20.0 0.00 0.0 0.20 0.42 0.02 0.02 D 13.3 0.00 0.0 0.20 0.42 0.02 0.02 D 13.3 0.00 322.4 0.0 0.23 0.49 0.02 0.02 D 0.0 0.00 322.4 0.0 0.23 0.49 0.02 0.02

SUPPRESS PRINTING

.. FOR THIS LOADING .. LOADS DISPL MEMBER FOUNDN

......MAXIMUMS..... ALL DISPL MEMBER FOUNDN

<sup>\*</sup> Only 3 condition(s) shown in full \* Some wind loads may have been derived from full-scale wind tunnel testing

								169301					
IN	IPUT		FORC	ES LO	ADS			FORCES	LOADS				
	no	yes	ye	s y	es	no	no	no	no				
=====	======	====:	=====			=====			=======				
LOADI	LOADING CONDITION M ===================================												
89 mph	89 mph wind with no ice. Wind Azimuth: 0♦												
	MAST LOADING												
LOAD TYPE	ELEV ft		Y.,LO ADIUS ft	ADAT AZI	LOAD	HO	.FORCE RIZ kip	S DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip			
C C C	260.0 250.0 238.0 226.0 214.0		0.00 0.00 0.00 0.00 0.00	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	10 7 7	.28 .00 .41 .33 .24	0.12 5.40 3.60 3.60 3.60	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00			
	255.0 250.0 250.0 240.0 235.0 235.0 235.0 235.0 225.0 225.0 225.0 220.0 215.0 200.0 180.0 160.0 140.0 140.0 140.0 40.0 40.0 20.0 20.0 20.0 20.0 20.0		0.00 0.00	180.0 180.0 42.0 64.4 64.4 79.5 79.5 83.3 83.3 92.0 89.2 89.2 89.2 351.6 316.7 322.4 321.9 322.4		000000000000000000000000000000000000000	.07 .07 .13 .13 .16 .16 .17 .18 .18 .20 .22 .22 .23 .24 .24 .25 .26 .26 .27 .25 .26 .27 .25 .20 .20 .22	0.03 0.03 0.04 0.04 0.09 0.09 0.09 0.10 0.11 0.13 0.13 0.15 0.15 0.15 0.20 0.20 0.21 0.25 0.26 0.26 0.26 0.26 0.31 0.31 0.33	0.00 0.00 0.04 0.04 0.04 0.04 0.04 0.03 0.03	0.00 0.00 0.10 0.11 0.11 0.11 0.11 0.10 0.06 0.06 0.06 0.06 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0.05 0.06 0.06 0.06 0.06 0.06			
LO							MA DISPL	XIMUMS MEMBER FORCES	FOUNDN LOADS				
2"	no	yes	ye.		es	no	no	no	no				
=====	=====	====:		=====	======	=====	=====	=======	=======				

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

Page 3

#### 169301

MAS	T LO	AD	IN	G

	.00 .00
	00
C 238.0 0.00 0.0 0.0 1.49 12.11 0.00 0.0 C 226.0 0.00 0.0 0.0 1.47 12.07 0.00 0.0	.00
D 250.0 0.00 180.0 0.0 0.01 0.18 0.00 0.0 D 250.0 0.00 42.0 0.0 0.01 0.25 0.22 0.0 D 240.0 0.00 42.0 0.0 0.01 0.25 0.22 0.0 D 240.0 0.00 69.8 0.0 0.02 0.39 0.20 0.0 D 235.0 0.00 69.8 0.0 0.02 0.39 0.20 0.0 D 235.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 89.5 0.0 0.02 0.39 0.21 0.0 D 230.0 0.00 86.8 0.0 0.02 0.39 0.21 0.0 D 225.0 0.00 91.0 0.0 0.02 0.39 0.21 0.0 D 225.0 0.00 86.8 0.0 0.02 0.39 0.21 0.0 D 225.0 0.00 86.8 0.0 0.02 0.42 0.18 0.0 D 225.0 0.00 86.8 0.0 0.02 0.50 0.12 0.0 D 220.0 0.00 86.8 0.0 0.02 0.50 0.12 0.0 D 220.0 0.00 84.3 0.0 0.02 0.55 0.13 0.0 D 215.0 0.00 84.3 0.0 0.02 0.55 0.13 0.0 D 215.0 0.00 345.5 0.0 0.02 0.61 0.05 0.0 D 210.0 0.00 345.5 0.0 0.02 0.61 0.05 0.0 D 210.0 0.00 345.5 0.0 0.02 0.61 0.05 0.0 D 210.0 0.00 322.4 0.0 0.02 0.63 0.08	00 00 00 00 00 00 00 00 00 00 00 00 00

#### SUPPRESS PRINTING

=============

	FOR	THIS LO	ADING		MAX	IMUMS	
LOADS	DISPL	MEMBER	FOUNDN	ALL	DISPL	MEMBER	FOUNDN
INPUT		FORCES	LOADS			FORCES	LOADS
no	yes	yes	yes	no	no	no	no

\_\_\_\_\_\_

#### MAXIMUM MAST DISPLACEMENTS:

TWIST -----DEFLECTIONS (ft)-------TILTS (DEG)---EAST DOWN NORTH EAST 3.594 G 3.435 G 3.270 G 3.112 G 2.958 G 2.807 G 2.662 G 2.519 G 2.253 G 2.128 G 2.128 G 2.007 G 3.455 J 3.302 J 3.144 J 2.992 J 2.843 J 2.699 J 2.559 J 2.422 J 2.293 J 2.165 J 2.045 J 1.929 J 0.047 G 0.045 G 0.042 G 0.039 G 0.037 G 0.035 e 0.034 e 0.033 e 0.032 i 0.031 i 0.030 i 1.762 J 1.765 J 1.744 J 1.680 J 1.647 J 1.548 J 1.483 J 1.434 J 1.378 J 1.378 J 1.251 J -0.102 F -0.102 F -0.101 F -0.097 F -0.093 F -0.089 F -0.084 F -0.080 F -0.073 F 255.0 1.831 G 1.834 G 1.812 G 1.747 G 1.713 G 1.666 G 250.0 245.0 240.0 235.0 230.0 225.0 1.609 G 1.542 G 1.491 G 1.432 G 1.369 G 220.0 215.0 210.0 205.0 200.0 -0.073 F -0.070 R -0.067 R 1.300 G

Page 4

				169301		
193.3	1.857 G	1.784 ]	0.029 i	1.231 G	1.184 )	-0.064 R
186.7	1.713 G	1.646 J	0.028 i	1.157 G	1.113 ]	-0.060 R
180.0	1.580 G	1.519 ]	0.027 i	1.081 G	1.040 ]	-0.057 R
173.3	1.453 G	1.396 J	0.026 i	1.021 G	0.983 J	-0.054 R
166.7	1.334 G	1.282 J	0.025 i	0.962 G	0.925 J	-0.051 N
160.0	1.221 G	1.173 J	0.024 i	0.901 G	0.866 J	-0.049 N
153.3	1.116 G	1.071 )	0.023 i	0.843 G	0.811 J	-0.046 N
146.7	1.017 G	0.976 J	0.022 i	0.785 G	0.755 J	-0.043 N
140.0	0.924 G	0.887 J	0.021 i	0.727 G	0.699 ]	-0.040 N
130.0	0.797 G	0.766 J	0.020 i	0.669 G	0.643 J	-0.037 N
120.0	0.681 G	0.654 J	0.018 i	0.612 G	0.588 J	0.033 T
110.0	0.575 G	0.552 J	0.017 i	0.554 G	0.532 J	0.030 T
100.0	0.479 G	0.460 J	0.016 i	0.497 G	0.477 ]	0.027 T
90.0	0.393 G	0.377 ]	0.014 e	0.439 G	0.422 ]	0.024 T
80.0	0.317 G	0.304 ]	0.013 e	0.382 G	0.367 J	0.022 T
70.0	0.249 G	0.239 J	0.012 e	0.338 G	0.324 J	0.019 T
60.0	0.189 G	0.181 J	0.010 e	0.293 G	0.282 J	0.016 T
50.0	0.137 G	0.131 )	0.009 e	0.244 G	0.235 )	0.013 T
40.0	0.092 G	0.088 J	0.007 e	0.196 G	0.188 )	0.009 T
30.0	0.052 G	0.050 J	0.006 Y	0.146 G	0.140 )	0.007 T
20.0	0.019 G	0.018 ]	0.004 Y	0.096 G	0.092 J	0.004 T
13.3	0.008 G	0.007 3	0.003 Y	0.065 G	0.062 ]	0.003 T
0.0	0.000 A					

## MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
255.0	0.04.6	1 02 6	1.20 A	0.00 A
250.0	0.84 S	1.92 G	0.20 G	0.00 A
245.0	4.83 M	5.18 н	0.26 I	0.00 A
240.0	18.39 M	5.45 N	0.55 K	0.00 A
	31.02 M	6.26 M		
235.0	46.94 M	7.23 н	0.16 A	0.00 A
230.0	62.27 M	7.23 T	0.12 A	0.00 A
225.0	78.60 M	9.24 н	0.06 Y	0.00 A
220.0			0.22 A	0.00 A
215.0	97.53 M	8.76 N	0.04 a	0.00 A
210.0	114.08 M	10.60 N	0.24 A	0.00 A
205.0	134.98 M	10.77 в	0.05 A	0.00 A
	152.72 M	10.37 T		
200.0	173.61 M	10.88 T	0.20 A	0.00 A
193.3	193.99 M	10.46 N	0.07 A	0.00 A
186.7	214.28 M	10.18 R	0.18 A	0.00 A
180.0			0.07 A	0.00 A
173.3	232.06 M	9.99 X	0.12 A	0.00 A
166.7	249.75 M	9.89 ×	0.07 A	0.00 A
160.0	265.76 M	9.83 ×	0.10 A	0.00 A
	281.74 M	9.83 R		
153.3	296.52 M	9.87 P	0.09 A	0.00 A
146.7	311.33 M	9.95 v	0.09 A	0.00 A
140.0	328.40 M	10.96 P	0.09 A	0.00 A
130.0			0.11 A	0.00 A
120.0	348.80 M	11.01 V	0.08 A	0.00 A
110.0	367.88 M	11.11 P	0.10 A	0.00 A
	386.76 M	11.27 V	A CONTRACTOR OF THE PROPERTY O	

Page 5

						169301	
100.0				0.06	A	0.00	Α
	404.74 M	11.47	P				
90.0	433 61	11 73	-	0.09	Α	0.00	Α
80.0	422.61 M	11.72	Р	0.06	^	0.00	
00.0	439.83 M	11.99	D	0.00	н	0.00	A
70.0			•	0.06	A	0.00	Α
	456.94 M	12.29	P				
60.0				0.06	A	0.00	А
50.0	473.63 M	12.60	V	0.00		0.00	
50.0	490.30 M	12.93	D	0.06	А	0.00	А
40.0	490.30 M	12.93	P	0.05	0	0.00	Δ
10.0	506.61 M	13.24	V	0.05	~	0.00	93
30.0				0.08	S	0.00	A
	522.75 M	13.52	V				
20.0	541 53			0.15	A	0.00	Α
13.3	541.53 M	14.18	V	0.83	íi.	0.00	D
13.3	540.37 M	18.27	V	0.63	U	0.00	U
0.0			•	0.00	Α	0.00	А

## MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
255.0	1 03 .	1.00	-1.21 G	0.00 A
250.0	-1.02 A	-1.90 A	-0.19 M	0.00 A
245.0	-9.37 G	-5.20 B	-0.18 0	0.00 A
	-23.14 G	-5.55 н		
240.0	-37.61 G	-6.61 G	-0.50 Q	0.00 A
235.0	-55.74 G	-7.11 N	-0.10 S	0.00 A
230.0	-71.84 G		-0.11 S	0.00 A
225.0		-7.38 н	-0.02 S	0.00 A
220.0	-91.19 G	-9.26 B	-0.20 S	0.00 A
	-110.81 G	-8.79 B		
215.0	-130.32 G	-10.73 G	-0.01 U	0.00 A
210.0	-152.72 G	-10.76 T	-0.21 S	0.00 A
205.0			-0.03 S	0.00 A
200.0	-171.26 G	-10.42 B	-0.18 S	0.00 A
193.3	-193.28 G	-10.89 в	-0.05 S	0.00 A
	-214.91 G	-10.50 B		
186.7	-236.55 G	-10.20 L	-0.16 S	0.00 A
180.0	-255.70 G		-0.05 S	0.00 A
173.3			-0.10 s	0.00 A
166.7	-274.86 G	-9.91 L	-0.06 S	0.00 A
160.0	-292.34 G	-9.86 F		
	-309.86 G	-9.85 L	-0.09 S	0.00 A
153.3	-326.19 G	-9.90 J	-0.08 S	0.00 A
146.7			-0.08 S	0.00 A
140.0	-342.61 G	-9.97 J	-0.08 s	0.00 A
130.0	-361.82 G	-11.02 J	-0.10 s	0.00 A
	-385.04 G	-11.05 J		
120.0	-406.94 G	-11.16 D	-0.07 S	0.00 A

Page 6

						169301	
110.0				-0.08	S	0.00	A
100.0	-428.75 G	-11.31	J	-0.05	5	0.00	Δ
	-449.71 G	-11.52	D	350,015050	277		
90.0	-470.67 G	-11.76	1	-0.08	S	0.00	A
80.0				-0.05	S	0.00	А
70.0	-491.15 G	-12.05	D	-0.05	ς	0.00	Δ
	-511.71 G	-12.34	J		-		
60.0	-531.83 G	-12.65	D	-0.05	S	0.00	A
50.0			10	-0.05	S	0.00	Α
40.0	-551.97 G	-12.97	J	-0.06	Ť	0.00	^
Carrier Carr	-571.87 G	-13.27	D	18.3.2.2.2			
30.0	-591.73 G	-13.56	1	-0.09	A	0.00	A
20.0				-0.13	S	0.00	А
13.3	-613.90 G	-14.25	D	-1.00	c	0.00	1/
	-615.44 G	-18.32	D	-1.00	_	0.00	v
0.0				0.00	A	0.00	Α

#### MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip) \_\_\_\_\_\_\_\_

	TOTAL			
NORTH	EAST	DOWN	UPLIFT	SHEAR
58.79 G	50.56 K	639.30 G	-560.91 M	58.79 G

### MAXIMUM TOTAL LOADS ON FOUNDATION : (kip & kip-ft)

H	ORIZONTA	L	DOWN		OVERTURNING	ĵ	TORSION
NORTH	EAST (	TOTAL 0.0		NORTH	EAST	@ 0.0	
96.5 G	92.1	96.5 G	248.0 Y	15217.8 G	14593.4	15217.8 G	39.6 T

\_\_\_\_\_\_

\_\_\_\_\_\_\_ Latticed Tower Analysis (Unguyed) Processed under license at: (c)2013 Guymast Inc. 416-736-7453

on: 24 aug 2017 at: 14:57:50 Sabre Towers and Poles \_\_\_\_\_\_\_

\* 

\_\_\_\_\_\_\_ 

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

Page 7

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

	LOADING						169301		
LOAD TYPE	ELEV ft	APPLYLO RADIUS ft	ADAT AZI	LOAD AZI		FORG ORIZ kip	DOWN kip	MOMI VERTICAL ft-kip	ENTS TORSNAL ft-kip
0000	260.0 250.0 238.0 226.0 214.0	0.00 0.00 0.00 0.00 0.00	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	2	0.08 2.84 2.10 2.08 2.06	0.13 6.00 4.00 4.00 4.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	255.0 250.0 240.0 240.0 235.0 225.0 225.0 225.0 220.0 215.0 210.0 200.0 180.0 160.0 140.0 140.0 140.0 110.0 80.0 80.0 80.0 80.0 80.0 80.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	180.0 180.0 42.0 42.0 64.4 64.4 79.5 83.3 92.0 89.2 89.2 353.1 353.1 322.2 322.4 321.9 322.4 322.3 322.3 322.3 322.3 322.3 322.4 322.4 322.4 322.4			0.02 0.02 0.04 0.04 0.05 0.05 0.06 0.06 0.07 0.07 0.07 0.07 0.07 0.07	0.03 0.05 0.05 0.10 0.11 0.13 0.15 0.16 0.16 0.17 0.17 0.19 0.20 0.21 0.22 0.23 0.22 0.23 0.23 0.35 0.35 0.35 0.35 0.35	0.00 0.00 0.05 0.05 0.05 0.05 0.05 0.04 0.04	0.00 0.03 0.03 0.03 0.03 0.03 0.03 0.02 0.02
	RESS PRI								
		FOR THIS ISPL MEMB FORC	ER FOUN	DN	ALL	DISF	MAXIMUMS PL MEMBER FORCES	R FOUNDN	
	no	yes ye	s ye	S	no	no	no no	no	
MAXIMU	M MAST	DISPLACEME	NTS:	=====	=====				
	ELEV ft	DE NORTH	FLECTION EAST		DOWN		TILTS (	(DEG) EAST	TWIST DEG
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	55.0 50.0 45.0 40.0 35.0 330.0 225.0 20.0 15.0 10.0 100.0	1.028 G 0.983 G 0.936 G 0.890 G 0.846 G 0.721 G 0.721 G 0.683 G 0.645 G 0.609 G 0.575 G	-0.989 -0.945 -0.900 -0.856 -0.814 -0.732 -0.693 -0.657 -0.620 -0.586	D D D D D D D D D	0.015 0.015 0.014 0.013 0.013 0.013 0.012 0.012 0.012 0.011 0.011	6666666666	0.523 G 0.524 G 0.518 G 0.499 G 0.489 G 0.476 G 0.460 G 0.440 G 0.426 G 0.409 G 0.391 G 0.372 G	-0.504 D -0.505 D -0.498 D -0.480 D -0.471 D -0.458 D -0.442 D -0.442 D -0.410 D -0.394 D -0.376 D -0.358 D	-0.029 F -0.029 F -0.029 F -0.028 F -0.026 F -0.025 F -0.024 F -0.023 F -0.022 F -0.021 F -0.020 F -0.019 F

Page 8

				169301		
193.3	0.532 G	-0.511 D	0.010 G	0.352 G	-0.338 D	-0.018 F
186.7	0.491 G	-0.472 D	0.009 G	0.331 G	-0.318 D	-0.017 F
180.0	0.453 G	-0.435 D	0.009 G	0.309 G	-0.297 D	-0.016 F
173.3	0.416 G	-0.400 D	0.009 G	0.292 G	-0.281 D	-0.015 F
166.7	0.382 G	-0.367 D	0.008 G	0.275 G	-0.265 D	0.015 H
160.0	0.350 G	-0.336 D	0.008 G	0.258 G	-0.248 D	0.014 H
153.3	0.320 G	-0.307 D	0.008 G	0.241 G	-0.232 D	0.013 н
146.7	0.291 G	-0.280 D	0.007 G	0.225 G	-0.216 D	0.012 H
140.0	0.265 G	-0.254 D	0.007 G	0.208 G	-0.200 D	0.011 н
130.0	0.229 G	-0.220 D	0.007 G	0.192 G	-0.184 D	0.010 н
120.0	0.196 G	-0.188 D	0.006 G	0.175 G	-0.168 D	0.009 н
110.0	0.165 G	-0.158 D	0.006 G	0.159 G	-0.153 D	0.009 н
100.0	0.138 G	0.132 ]	0.005 G	0.142 G	-0.137 D	0.008 н
90.0	0.113 G	0.108	0.005 G	0.126 G	-0.121 D	0.007 н
80.0	0.091 G	0.087 ]	0.004 G	0.110 G	-0.105 D	0.006 н
70.0	0.072 G	0.069 ]	0.004 G	0.097 G	-0.093 D	0.005 H
60.0	0.054 G	0.052 ]	0.003 G	0.084 G	-0.081 D	0.004 H
50.0	0.039 G 0.026 G	0.038 7	0.003 G	0.070 G	-0.067 D	0.004 н
40.0	0.026 G	0.025 J	0.002 G	0.056 G	-0.054 D	0.003 н
20.0	0.015 G	-0.014 D	0.002 G 0.001 G	0.042 G	-0.040 D	0.002 H
13.3	0.003 G	-0.005 D -0.002 D	0.001 G	0.028 G 0.019 G	-0.026 D -0.018 D	0.001 H
0.0	0.002 G	0.000 A	0.001 G	0.000 A	0.000 A	0.001 H 0.000 A
0.0	U.000 A	U.000 A	U.000 A	U.000 A	U.000 A	U.000 A

## MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV	LEGS	DIAG	HORIZ	BRACE
255.0	0.19 G	0.56 G	0.34 A	0.00 A
250.0			0.06 G	0.00 A
245.0	0.00 A	1.48 H	0.10 I	0.00 A
240.0	3.68 A	1.53 B	0.17 K	0.00 A
235.0	6.70 A	1.69 A	0.06 A	0.00 A
230.0	10.54 A	2.10 н	0.04 A	0.00 A
225.0	14.71 A	2.01 B	0.03 A	0.00 A
	18.36 A	2.62 н		
220.0	23.59 A	2.48 н	0.07 A	0.00 A
215.0	27.33 A	2.97 B	0.01 C	0.00 A
210.0	32.82 A	3.06 B	0.08 A	0.00 A
205.0	37.68 A	2.93 B	0.02 A	0.00 A
200.0	43.33 A		0.07 A	0.00 A
193.3		3.09 н	0.02 A	0.00 A
186.7	48.84 A	2.96 B	0.06 A	0.00 A
180.0	54.29 A	2.90 L	0.02 A	0.00 A
173.3	59.04 A	2.84 L	0.04 A	0.00 A
166.7	63.73 A	2.82 L	0.02 A	0.00 A
	67.97 A	2.80 L		
160.0	72.17 A	2.81 L	0.03 A	0.00 A
153.3	76.05 A	2.82 D	0.03 A	0.00 A
146.7	79.92 A	2.86 J	0.03 A	0.00 A
140.0	84.32 A	3.14 D	0.03 A	0.00 A
130.0	89.49 A	3.16 D	0.04 A	0.00 A
120.0			0.03 A	0.00 A
110.0	94.30 A	3.19 D	0.03 A	0.00 A
	99.03 A	3.25 D		

Page 9

						169301	
100.0				0.02	Α	0.00	А
90.0	103.50 A	3.31	D	0.03	Λ	0.00	٨
	107.92 A	3.38	D	0.05	^	0.00	_
80.0	112 11 .			0.02	Α	0.00	A
70.0	112.11 A	3.46	D	0.02	А	0.00	А
60.0	116.22 A	3.55	D	0.02	Λ.	0.00	^
00.0	120.20 A	3.63	J	0.02	А	0.00	-
50.0	124 10 4	3.72	2	0.02	A	0.00	Α
40.0	124.18 A	3.72	J	0.01	C	0.00	Α
30.0	128.01 A	3.81	D	0.02	c	0.00	^
	131.74 A	3.89	D	0.02	G	0.00	~
20.0	126 42 4	4 07		0.05	Α	0.00	Α
13.3	136.42 A	4.07		0.21	Ι	0.00	Ι
0.0	135.13 A	5.26	D	0.00	А	0.00	А

## MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
255.0	-0.35 A	-0.54 A	-0.35 G	0.00 A
250.0			-0.05 A	0.00 A
245.0	-4.08 G	-1.50 B	-0.03 C	0.00 A
240.0	-8.05 G	-1.62 H	-0.12 E	0.00 A
235.0	-12.72 G	-1.98 G	-0.01 G	0.00 A
230.0	-18.52 G	-1.99 в	-0.03 G	0.00 A
	-23.30 G	-2.15 H		
225.0	-29.70 G	-2.64 B	0.00 A	0.00 A
220.0	-35.42 G	-2.51 H	-0.05 G	0.00 A
215.0	-41.83 G	-3.07 G	0.00 A	0.00 A
210.0			-0.05 G	0.00 A
205.0	-48.59 G	-3.05 B	0.00 G	0.00 A
200.0	-54.03 G	-2.98 B	-0.04 G	0.00 A
193.3	-60.54 G	-3.10 B	-0.01 G	0.00 A
186.7	-66.98 G	-3.01 H	-0.04 G	0.00 A
180.0	-73.45 G	-2.92 L		
	-79.21 G	-2.88 L	-0.01 G	0.00 A
173.3	-85.01 G	-2.84 L	-0.02 G	0.00 A
166.7	-90.33 G	-2.84 L	-0.01 G	0.00 A
160.0	-95.67 G	-2.83 L	-0.02 G	0.00 A
153.3	-100.69 G		-0.02 G	0.00 A
146.7		-2.86 J	-0.02 G	0.00 A
140.0	-105.74 G	-2.87 D	-0.02 G	0.00 A
130.0	-111.71 G	-3.19 D	-0.02 G	0.00 A
120.0	-119.02 G	-3.20 D	-0.02 G	0.00 A
120.0	-125.95 G	-3.24 D	0.02 0	0.00 A

Page 10

						169301	
110.0				-0.02	G	0.00	Α
100 0	-132.88 G	-3.29	D	0.01	_	0 00	
100.0	-139.60 G	-3.36	D.	-0.01	G	0.00	А
90.0				-0.02	G	0.00	Α
1900001-0	-146.33 G	-3.43	D			20.000	
80.0	-152.98 G	-3.51	7	-0.01	G	0.00	A
70.0	-132.90 G	-3.31	J	-0.01	G	0.00	Α
	-159.69 G	-3.59	J	72 T 250	-		
60.0	166.26.0		120	-0.01	G	0.00	А
50.0	-166.26 G	-3.68	D	-0.01	C	0.00	Λ
50.0	-172.83 G	-3.77	D	-0.01	G	0.00	^
40.0				-0.02	I	0.00	A
20.0	-179.36 G	-3.85	D	0.03	7.	0.00	102
30.0	-185.90 G	-3.93	D	-0.03	A	0.00	A
20.0				-0.03	G	0.00	Α
	-192.95 G	-4.13	D				
13.3	-194.24 G	-5.30	D	-0.32	C	0.00	K
0.0	-134.24 G	-5.50	U	0.00	Α	0.00	Α

## MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

	LOADC	OMPONENTS		TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
17.93 G	15.43 K	201.69 G	-140.40 A	17.93 G

## MAXIMUM TOTAL LOADS ON FOUNDATION : (kip & kip-ft)

	HORIZONTA	L	DOWN		OVERTURNING	S	TORSION
NORTH	EAST @	TOTAL 0.0		NORTH	EAST	@ 0.0	
27.7 G	-26.5 D	27.7 G	83.4 G	4367.1 G	-4189.3 D	4367.1 G	11.2 H

#### MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES

Tower Description 255' S3TL Series HD1

Customer AT&T
Project Number 169301
Date 8/24/2017
Engineer DJH

Loads:
١

Factored Moment (ft-kips)	15217.80	Anchor Bolt Count (per leg)	6
Factored Axial (kips)	248.02		
Factored Shear (kips)	96.53		
Individual Leg Loads:		Tower eccentric from mat (ft)	= 2.25
Factored Uplift (kips)	561.00		
Factored Download (kips)	639.00		
Factored Shear (kips)	59.00		
Width of Tower (ft)	29	Allowable Bearing Pressure (ksf)	8.00
Ultimate Bearing Pressure	16.00	Safety Factor	2.00
Bearing Φs	0.75		
Bearing Design Strength (ksf)	12	Max. Factored Net Bearing Pressure (ksf)	4.18
Water Table Below Grade (ft)	999		
Width of Mat (ft)	36.5	Minimum Mat Width (ft)	35.51
Thickness of Mat (ft)	1.75		
Depth to Bottom of Slab (ft)	7		
Bolt Circle Diameter (in)	18		
Top of Concrete to Top		i e	
of Bottom Threads (in)	65.5		
Diameter of Pier (ft)	3.5	Minimum Pier Diameter (ft)	2.83
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	3.10
Ht. of Pier Below Ground (ft)	5.25		
Quantity of Bars in Mat	66		
Bar Diameter in Mat (in)	1.128		
Area of Bars in Mat (in <sup>2</sup> )	65.96		
Spacing of Bars in Mat (in)	6.63	Recommended Spacing (in)	6 to 12
Quantity of Bars Pier	18		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.5	· ·	
Spacing of Ties (in)	11		
Area of Bars in Pier (in2)	17.99	Minimum Pier A <sub>s</sub> (in <sup>2</sup> )	6.93
Spacing of Bars in Pier (in)	5.88	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5	, , , , , , , , , , , , , , , , , , , ,	
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.115		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd3)	92.50	•	

#### MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES (CONTINUED)

T	141	Shear:	_
I WO-	waw	Shear	۰

Average d (in)	16.872		
φν <sub>c</sub> (ksi)	0.228	v <sub>u</sub> (ksi)	0.224
$\phi V_c = \phi (2 + 4/\beta_c) f'_c^{1/2}$	0.342		
$\phi v_c = \phi(\alpha_s d/b_o + 2) f'_c^{1/2}$	0.325		
$\phi V_{c} = \phi 4 f'_{c}^{1/2}$	0.228		
Shear perimeter, bo (in)	182.48		
$\beta_c$	1		

### Stability:

Overturning Design Strength (ft-k)	20156.6	Factored Overturning Moment (II-k)	15941.8
One-Way Shear:			
φV <sub>c</sub> (kips)	842.7	V <sub>u</sub> (kips)	708.6
Pier Design:		_	
Design Tensile Strength (kips)	971.3	Tu (kips)	561.0
φV <sub>n</sub> (kips)	91.8	V <sub>u</sub> (kips)	59.0
$\phi V_c = \phi 2(1 + N_u/(500A_g))f'_c^{1/2}b_w d$	30.6		
V <sub>s</sub> (kips)	72.0	*** $V_s \max = 4 f'_c^{1/2} b_w d$ (kips)	378.7
Maximum Spacing (in)	11.15	(Only if Shear Ties are Required)	
Actual Hook Development (in)	15.74	Req'd Hook Development I <sub>dh</sub> (in)	11.14
		*** Ref. ACI 11.5.5 & 11.5.6.3	

#### Anchor Bolt Pull-Out:

raidioi Boit i dii Gati			
$\phi P_c = \phi \lambda (2/3) f'_c^{1/2} (2.8 A_{SLOPE} + 4 A_{FLAT})$	208.9	P <sub>u</sub> (kips)	561.0
Pier Rebar Development Length (in)	54.56	Required Length of Development (in)	29.13
Flexure in Slab:		•	

M<sub>u</sub> (ft-kips)

rickare in Glab.	
φM <sub>n</sub> (ft-kips)	4657.1
a (in)	2.36
Steel Ratio	0.00893
$\beta_1$	0.825
Maximum Steel Ratio (ρ <sub>t</sub> )	0.0197
Minimum Steel Ratio	0.0018
Rebar Development in Pad (in)	107 15

$\beta_1$	0.825		
Maximum Steel Ratio (ρt)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	107.15	Required Development in Pad (in)	18.80

Condition	1 is OK, 0 Fails
Minimum Mat Width	1
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Two-Way Shear	1
Overturning	1
Anchor Bolt Pull-Out	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Interaction Diagram Visual Check	1
One-Way Shear	1
Hook Development	1
Minimum Mat Depth	1

4635.8

#### DRILLED STRAIGHT PIER DESIGN BY SABRE TOWERS & POLES

Tower Description 255' S3TL Series HD1
Customer Name AT&T
Job Number 169301
Date 8/24/2017
Engineer DJH

Factored Uplift (kips)	561	Anchor Bolt Count (per leg)	6
Factored Download (kips)	639	(1-3)	
Factored Shear (kips)	59		
Ultimate Bearing Pressure	100		
Bearing Φs	0.75		
Bearing Design Strength (ksf)	75		
Water Table Below Grade (ft)	999		
Bolt Circle Diameter (in)	18		
Top of Concrete to Top			
of Bottom Threads (in)	65.5		
Pier Diameter (ft)	3	Minimum Pier Diameter (ft)	2.83
Ht. Above Ground (ft)	0.5	***************************************	
Pier Length Below Ground (ft)	25.5		
Quantity of Bars	12		
Bar Diameter (in)	1.41		
Tie Bar Diameter (in)	0.5		
Spacing of Ties (in)	9		
Area of Bars (in <sup>2</sup> )	18.74	Minimum Area of Steel (in2)	5.09
Spacing of Bars (in)	7.22		
f'c (ksi)	4.5		
fy (ksi)	60		
Unit M/t of Company (lost)	0.15		
Unit Wt. of Concrete (kcf)	0.15		
Download Friction Φs	0.75		
Uplift Friction Φs	0.75		
Volume of Concrete (yd <sup>3</sup> )	6.81		
Skin Friction Factor for Uplift	1	Length to Ignore Download (ft)	
Ignore Bottom Length in Download?	[ ]	0	
Depth at Bottom of Layer (ft)	Ult. Skin Friction (ksf)	(Ult. Skin Friction)*(Uplift Factor)	γ (kcf)
5	0.00	0.00	0.115
7	0.50	0.50	0.115

Depth at Bottom of Layer (ft)	Ult. Skin Friction (ksf)	(Ult. Skin Friction)*(Uplift Factor)	γ (kcf)	
5	0.00	0.00	0.115	
7	0.50	0.50	0.115	
15	4.00	4.00	0.135	
50	6.00	6.00	0.135	
0	0.00	0.00	0	
0	0.00	0.00	0	
0	0.00	0.00		
0	0.00	0.00	0	
0	0.00	0.00	0	
0	0.00	0.00	0	

#### Download:

Factored Net Weight of Concrete (kips)
Bearing Design Strength (kips)
Skin Friction Design Strength (kips)
Download Design Strength (kips)

0.6	
530.1	
678.6	
1208.7	

Factored Net Download (kips)

639.6

### DRILLED STRAIGHT PIER DESIGN BY SABRE TOWERS & POLES (CONTINUED)

Uplift:

Rebar Development Length (in)

Opinit.			
Nominal Skin Friction (kips)	904.8		
Wc, Weight of Concrete (kips)	27.6		
W <sub>R</sub> , Soil Resistance (kips)	931.9		
ΦsWr+0.9Wc (kips)	723.7		
Uplift Design Strength (kips)	703.4	Factored Uplift (kips)	561.0
Pier Design:			
Design Tensile Strength (kips)	1011.8	Tu (kips)	561.0
φV <sub>n</sub> (kips)	64.1	V <sub>u</sub> (kips)	59.0
$\phi V_c = \phi 2(1 + N_u/(500A_g))f'_c^{1/2}b_w d$ (kips)	0.0		
V <sub>s</sub> (kips)	75.4	*** $V_s max = 4 f'_c^{1/2} b_w d$ (kips)	278.2
Maximum Spacing (in)	13.01	(Only if Shear Ties are Required)	
		*** Ref. ACI 11.5.5 & 11.5.6.3	
Anchor Bolt Pull-Out:			
$\phi P_c = \phi \lambda (2/3) f'_c^{1/2} (2.8 A_{SLOPE} + 4 A_{FLAT})$	153.6	P <sub>u</sub> (kips)	561.0

57.71

Required Length of Development (in) 34.96

Condition	1 is OK, 0 Fails
Download	1
Uplift	1
Area of Steel	1
Shear	1
Anchor Bolt Pull-Out	1
Interaction Diagram Visual Check	1

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST

filtregation Reports

PSC Home

### KY Public Service Commission

## Master Utility Search

 Search for the utility of interest by using any single or combination of criteria.

Utility ID Utility Name

Address/City/Contact Utility Type

Status

 Enter Partial names to return the closest match for Utility Name and Address/City/Contact

entries.

✓ Active ▼

Search

	Utility ID	Utility Name	Utility Type	Class	City	State
View	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
View	4109300	Access Point, Inc.	Cellular	D	Cary	NC
View	4108300	Air Voice Wireless, LLC	Cellular	А	Bloomfield Hill	MI
View	4110650	Alliant Technologies of KY, L.L.C.		С	Morristown	NJ
View	44451184	14451184 Alltel Communications, LLC		А	Basking Ridge	NJ
View	4107800	American Broadband and Telecommunications Company		С	Toledo	ОН
View	4108650	AmeriMay Communications		D	Dunedin	FL
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
View	4110700	Andrew David Balholm dba Norcell	Cellular	С	Clayton	WA
View	4107400	Bandwidth.com, Inc.	Cellular	Α	Raleigh	NC
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	LΝ
View	4110550 Blue Casa Mobile, LLC		Cellular	D	Santa Barbara	CA
View	4108750	Blue Jay Wireless, LLC	Cellular	С	Carrollton	TX
View	4202300	Bluegrass Wireless, LLC	Cellular	Α	Elizabethtown	KY
View	4107600	Boomerang Wireless, LLC	Cellular	В	Hiawatha	IA
View	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
View	4110050	CampusSims, Inc.	Cellular	D	Boston	MA

View		100700 Cellco Partnership dba Verizon Wireless		Α	Basking Ridge	NJ
View	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
View	411119111	Consumer Cellular, Incorporated	Cellular	А	Portland	OR
View	4106400	Credo Mobile, Inc.	Cellular	А	San Francisco	CA
View	4108850	Cricket Wireless, LLC	Cellular	Α	San Antonio	TX
View		CTC Communications Corp. d/b/a EarthLink Business I	Cellular	D	Grand Rapids	MI
View	10640	Cumberland Cellular Partnership	Cellular	А	Elizabethtown	KY
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	А	Ivel	KY
View	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
View	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	ОК
View	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
View	4105900	Flash Wireless, LLC	Cellular	С	Concord	NC
View	4104800	France Telecom Cornorate		D	Oak Hill	VA
View	4109350	Global Connection Inc. of America	Cellular	D Norcross		GA
View	4102200	Globalstar USA, LLC	Cellular	В	Covington	LA
View	4109600	Google North America Inc. Cellular B		В	Mountain View	CA
View	33350363	Granite Telecommunications, Cellular D		D	Quincy	MA
View	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	Α	San Diego	CA
View	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	А	Basking Ridge	NJ
View	4110600	Horizon River Technologies, LLC	Cellular	С	Atlanta	GA
View	4103100	i-Wireless, LLC	Cellular	Α	Newport	KY
View	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	ОК
View	22215360	KDDI America, Inc.	Cellular	D	New York	NY
View	10872	Kentucky RSA #1 Partnership	Cellular	А	Basking Ridge	NJ
View	10680	Kentucky RSA #3 Cellular General	Cellular	Α	Elizabethtown	KY
View	10681	Kentucky RSA #4 Cellular General	Cellular	А	Elizabethtown	KY
View	4109750	Konatel, Inc. dba telecom.mobi	Cellular	D	Johnstown	PA
View	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
View	4108800	MetroPCS Michigan, LLC	Cellular	Α	Bellevue	WA
View	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	ΑZ
View	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	Α	San Antonio	TX

View	10900	New Par dba Verizon Wireless		Α	Basking Ridge	NJ
View	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
View	4001800	OnStar, LLC	Cellular	А	Detroit	MI
View	4110750	Onvoy Spectrum, LLC	Cellular	С	Plymouth	MN
View	4109050	Patriot Mobile LLC	Cellular	D	Southlake	TX
View	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	ОН
View	4202100	Powertel/Memphis, Inc. dba T- Mobile	Cellular	А	Bellevue	WA
View	4107700	Puretalk Holdings, LLC	Cellular	Α	Covington	GA
View	4106700	Q Link Wireless, LLC	Cellular	Α	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	В	Hiawatha	IA
View	4110350	Regional Strategic Partners LLC	Cellular	D	Buford	GA
View	4110500	Republic Wireless, Inc.	Cellular	D	Raleigh	NC
View	4106200				Basking Ridge	NJ
View	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular D Los Angeles		Los Angeles	CA
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	) Freemont	
View	4106300	SI Wireless, LLC	Cellular	А	Carbondale	IL
View	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	
View	4200100	Sprint Spectrum, L.P.	Cellular	Α	Atlanta	GA
View	4200500	SprintCom, Inc.	Cellular	Α	Atlanta	GA
View	4109550	Stream Communications, LLC	Cellular	D	Dallas	TX
View	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
View	4202200	T-Mobile Central, LLC dba T- Mobile	Cellular	Α	Bellevue	WA
View	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	South Portland	ME
View	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
View	4108900	Telrite Corporation dba Life Wireless	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	D	Kansas City	MO
View	4109950	The People's Operator USA, LLC	Cellular	D	New York	NY
View	4109000	Ting, Inc.	Cellular	Α	Toronto	ON
View	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
View	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ

View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4110300	UVNV, Inc.	Cellular	D	Costa Mesa	CA
View	4105700	Virgin Mobile USA, L.P.	Cellular	Α	Atlanta	GA
View	4110800	Visible Service LLC	Cellular	С	Lone Tree	CO
View	4200600	West Virginia PCS Alliance, L.C.	Cellular	Α	Waynesboro	VA
View	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
View	4110100	Windward Wireless LLC	Cellular	D	Suwanee	GA
View	4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	D	Louisville	KY

## EXHIBIT E FAA



Issued Date: 08/14/2017

ATT
Dave Cundiff (CP)
3300 E Renner Rd
B3132
Richardson, TX 75082

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

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

Structure:

Tower Briarfield Road

Location:

Princeton, KY

Latitude:

37-11-01.77N NAD 83

Longitude:

87-52-35.83W

Heights:

536 feet site elevation (SE)

270 feet above ground level (AGL) 806 feet above mean sea level (AMSL)

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

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

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

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

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

This determination expires on 02/14/2019 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

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

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licencee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as is necessary to eliminate the harmful interference. This condition expires after 1 year of interference-free operation.

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

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

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

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

If we can be of further assistance, please contact our office at (202) 267-0105, or j.garver@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-15309-OE.

Signature Control No: 339566334-340784933

(DNE)

Jay Garver Specialist

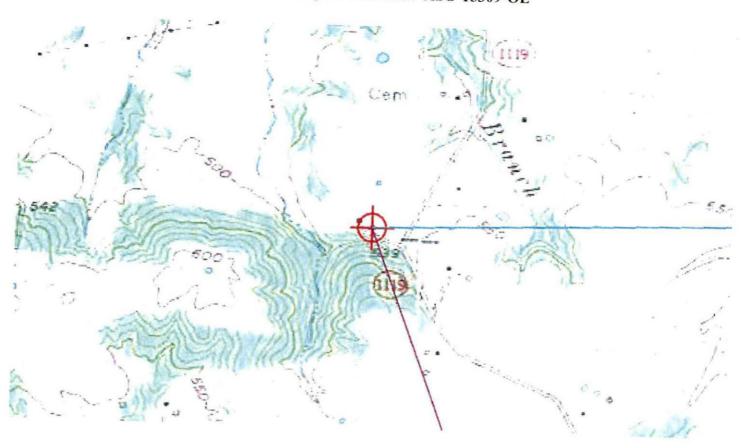
Attachment(s) Frequency Data Map(s)

cc: FCC

## Frequency Data for ASN 2017-ASO-15309-OE

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

## Verified Map for ASN 2017-ASO-15309-OE



# EXHIBIT F KENTUCKY AIRPORT ZONING COMMISSION



#### KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN Governor

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

August 23, 2017

APPROVAL OF APPLICATION

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

SUBJECT: AS-017-2M0-2017-066

STRUCTURE:

Antenna

LOCATION:

Princeton, KY

COORDINATES: 37° 11' 1.77" N / 87° 52' 35.83" W

HEIGHT:

270' AGL/806' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 270'AGL/806'AMSL Antenna near Princeton, KY 37° 11' 1.77" N / 87° 52' 35.83" W.

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

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

Medium Dual Obstruction Lighting is required in accordance with 602 KAR 50:100.

ohn Houlihan Administrator





#### KENTUCKY AIRPORT ZONING COMMISSION

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

#### CONSTRUCTION/ALTERATION STATUS REPORT

August 23, 2017

AERONAUTICIAL STUDY NUMBER: AS-017-2M0-2017-066

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

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on August 23, 2017. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 421 Buttermilk Pike, Covington, KY, 41017. 859-341-2700.

STRUCTURE:	Antenna
LOCATION:	Princeton, KY
	37° 11' 1.77" N / 87° 52' 35.83" W
	270' AGL /806'AMSL
	LTERATION STATUS
I. The project ( ) is	s abandoned. ( ) is not abandoned.
	its greatest height of ft. AGL  AMSL on (date).
Date construction	was completed.
Type of obstruction	on marking/painting.
Type of obstruction	on lighting.
As built coordina	tes.
	formation.
DATE	
CICNIA TUDE (TI	





#### KENTUCKY TRANSPORTATION CABINET

TC 55-2 Rev. 06/2016

#### KENTUCKY AIRPORT ZONING COMMISSION

Page 2 of 2

Power Line Water Tank Dual- red & medium intensity white Dual- red & high intensity white  Landfill Other Dother  LATITUDE LONGITUDE STORY  37 ° 11′ 01.77 " 87° 52′ 35.83 " Other  NEAREST KENTUCKY NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT  City Princeton County Caldwell 2MO Princeton-Caldwell County  SITE ELEVATION (AMSL, feet) TOTAL STRUCTURE HEIGHT (AGL, feet) Filed Concurrently  OVERALL HEIGHT (site elevation plus total structure height, feet) PREVIOUS (FAA aeronautical study #) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North	APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE					
John Monday	APPLICANT (name)	PHONE	FAX	KY AERONAUTICAL	STUDY#	
APPLICANT'S REPRESENTATIVE (name)   PHONE   FAX   S02-222-4266		855-699-7073				
APPLICANT'S REPRESENTATIVE (name) Roy Johnson  ADDRESS (street) 3605 Mattingly Road  APPLICATION FOR New Construction Alteration Existing WORK SCHEDULE BURATION Permanent Temporary (months days) Start End TBD  TYPE Crane Building MARKING/PAINTING/LIGHTING PREFERRED Red Lights & Paint White-medium intensity White-high intensity Cother Dual-red & medium intensity white Dual-red & high intensity white Cother Cother  LANTIUDE 37 ° 11' 01.77 " 87° 52' 35.83 " Other  NEAREST KENTUCKY City Piniscison County Caldwell STEELEVATION (AMSL, feet) TOTAL STRUCTURE HEIGHT (AGL, feet) Filed Concurrently  OVERALL HEIGHT (site elevation plus total structure height, feet) 806 DISTANCE (from nearest Kentucky public use or Military airport to structure) North DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) Nor Yes, when?  CERTIFICATION (hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.) PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME TITLE Michelle Ward  SIGNATURE COMMISSION ACTION  CAdministrator, KAZC Administrator, KAZC Administrator, KAZC  DATE  DATE  DATE  JOAC  CHARL REDICATION (And Continue to the set of the proper to the penalties)  Approved  SIGNATURE  COATE  JOAC  Administrator, KAZC  Administrator, KAZC  DATE  JOAC  JOAC  JOAC  Administrator, KAZC  Administrator, KAZC	ADDRESS (street)	CITY		STATE	ZIP	
Source   S	3300 E. Renner Road, B3132	Richardson		TX	75082	
ADDRESS (street) 3605 Mattingly Road APPLICATION FOR X New Construction Alteration Existing WORK SCHEDULE DURATION Permanent Temporary (months days) Start End TBD  TYPE Crane Building MARKING/PAINTING/LIGHTING PREFERRED  X Antenna Tower Red Lights & Paint White- medium intensity White- high intensity Dual- red & medium intensity white Dual- red & high intensity Dual- re	APPLICANT'S REPRESENTATIVE (name)	PHONE	FAX			
Buckner   KY   40010	Roy Johnson	502-445-2475	502-222-4266			
APPLICATION FOR  New Construction	ADDRESS (street)	CITY		STATE	ZIP	
DURATION Permanent Temporary (months days) Start End TBD  TYPE Crane Building MARKING/PAINTING/LIGHTING PREFERRED  MARKING/PAINTING/LIGHTING PREFERRED  MARKING/PAINTING/LIGHTING PREFERRED  Red Lights & Paint White medium intensity White bigh intensity white  Dual-red & high intensity white  LATITUDE  A7 ° 11' 01.77 " 87° 52' 35.83 " Other  LATITUDE  A7 ° 11' 01.77 " 87° 52' 35.83 " Other  NEAREST KENTUCKY City "niceton-County Caldwell 2MO Princeton-Caldwell County  STEE ELEVATION (AMSL, feet) 7070 A STOLE FIGHT (AGL, feet) 816 Concurrently  OVERALL HEIGHT (site elevation plus total structure height, feet) 970  PREVIOUS (FAA aeronautical study #) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) 971  North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No	3605 Mattingly Road	Buckner		KY	40010	
TYPE Crane Building MARKING/PAINTING/IGHTING PREFERRED Antenna Tower Red Lights & Paint White- medium intensity White- high intensity Dual- red & high intensity Dual- red & high intensity white Landfill Other  LATITUDE Other  LONGITUDE STORM NAD83 NAD27 37 ° 11' 01.77 " 87° 52' 35.83 " Other  LATITUDE STEELEVATION (AMSL, feet) 270  VERALL HEIGHT (site elevation plus total structure height, feet) PREVIOUS (FAA aeronautical study #) Filed Concurrently  OVERALL HEIGHT (site elevation plus total structure height, feet) PREVIOUS (FAA aeronautical study #) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  TAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  ECRIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  Michael Scription Action  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  Administrator, KAZC	APPLICATION FOR X New Construct	tion Alteration Existing		WORK SCHEDULE		
Antenna Tower    Power Line   Water Tank   Dual- red & medium intensity   White- high intensity   Dual- red & high intensity   White- high intensity   White- high intensity   Dual- red & high intensity   White- high intensity   White-high intensity   White	DURATION Permanent Temporary (months days ) Start End TBD					
Power Line   Water Tank   Other   Dual- red & medium intensity white   Dual- red & high intensity white   Dual- red & high intensity white   Dual- red & high intensity white   Dther	TYPE Crane Building	MARKING/PAINTING/LIGHTING PREFERRED				
□ Landfill □ Other □ Other  LATITUDE 37° 11′ 01.77 " 87° 52′ 35.83 " □ Other  NEAREST KENTUCKY NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT  2MO Princeton-Caldwell County  SITE ELEVATION (AMSL, feet) 270  OVERALL HEIGHT (site elevation plus total structure height, feet) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) PREVIOUS (FAA aeronautical study #) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?]  No □ Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons falling to comply with KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME   TITLE   Chairperson, KAZC   Administrator, KAZC   DATE   PATE   PAT	X Antenna Tower	Red Lights & Paint White- medium intensity White- high intensity				
□ Landfill □ Other □ Other  LATITUDE 37° 11′ 01.77 " 87° 52′ 35.83 " □ Other  NEAREST KENTUCKY NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT  2MO Princeton-Caldwell County  SITE ELEVATION (AMSL, feet) 270  OVERALL HEIGHT (site elevation plus total structure height, feet) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) PREVIOUS (FAA aeronautical study #) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?]  No □ Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons falling to comply with KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME   TITLE   Chairperson, KAZC   Administrator, KAZC   DATE   PATE   PAT	Power Line Water Tank	Dual- red & medium intensity white Dual- red & high intensity white				
NEAREST KENTUCKY  NEAREST KENTUCKY  City  Princeton-Caldwell  ZMO Princeton-Caldwell County  SITE ELEVATION (AMSL, feet)  336  OVERALL HEIGHT (site elevation plus total structure height, feet)  806  DISTANCE (from nearest Kentucky public use or Military airport to structure)  4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure)  North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No						
NEAREST KENTUCKY City Princeton County Caldwell 2MO Princeton-Caldwell County SITE ELEVATION (AMSL, feet) 536  TOTAL STRUCTURE HEIGHT (AGL, feet) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) No		LONGITUDE DATUM X NAD83 NAD27			83 NAD27	
NEAREST KENTUCKY City Princeton County Caldwell 2MO Princeton-Caldwell County  TOTAL STRUCTURE HEIGHT (AGL, feet) 536  OVERALL HEIGHT (site elevation plus total structure height, feet) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) No  Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME NAME SIGNATURE  COMMISSION ACTION    Chairperson, KAZC   Administrator, KAZC   Adminis		The state of the s			_	
SITE ELEVATION (AMSL, feet)  536  TOTAL STRUCTURE HEIGHT (AGL, feet) Filed Concurrently  PREVIOUS (FAA aeronautical study #) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  Michelle Ward  SIGNATURE  SIGNATURE  OATE  O7/03/17	NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT					
SITE ELEVATION (AMSL, feet)  536  TOTAL STRUCTURE HEIGHT (AGL, feet) Filed Concurrently  PREVIOUS (FAA aeronautical study #) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  Michelle Ward  SIGNATURE  SIGNATURE  OATE  O7/03/17	City Princeton County Caldwell 2MO Princeton-Caldwell County					
OVERALL HEIGHT (site elevation plus total structure height, feet) 806  DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  COMMISSION ACTION  Chairperson, KAZC Administrator, KAZC  Administrator, KAZC  DATE  DATE  O7/03/17						
BOS DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NM DIRECTION (from nearest Kentucky public use or Military airport to structure) North DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE Sr. Real Estate Mgr.  COMMISSION ACTION  Chairperson, KAZC Administrator, KAZC Administrator, KAZC  Administrator, KAZC		270				
DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NIM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  COMMISSION ACTION  Chairperson, KAZC Administrator, KAZC Administrator, KAZC  Administrator, KAZC	OVERALL HEIGHT (site elevation plus total structure height, feet)  PREVIOUS (FAA aeronautical study #)					
DISTANCE (from nearest Kentucky public use or Military airport to structure) 4.22 NIM  DIRECTION (from nearest Kentucky public use or Military airport to structure) North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  COMMISSION ACTION  Chairperson, KAZC Administrator, KAZC Administrator, KAZC  Administrator, KAZC	806					
DIRECTION (from nearest Kentucky public use or Military airport to structure)  North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  X No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  TITLE  Michelle Ward  SIGNATURE  COMMISSION ACTION  Administrator, KAZC  Administrator, KAZC  Administrator, KAZC  Administrator, KAZC						
North  DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  TITLE  Michelle Ward  SIGNATURE  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  DATE  DATE  O7/03/17	4.22 NM					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)  1A and Quad attached  DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  TITLE  Michelle Ward  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  DATE  Chairperson, KAZC	DIRECTION (from nearest Kentucky public use or Military airport to structure)					
DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME  Michelle Ward  SIGNATURE  COMMISSION ACTION  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC	North					
DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)    No	DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site					
DESCRIPTION OF PROPOSAL  AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)  No Yes, when?  CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME TITLE  Michelle Ward SIGNATURE  COMMISSION ACTION  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC	marked and any certified survey.)					
AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)    No	1A and Quad attached					
AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.  FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)    No						
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)    No	DESCRIPTION OF PROPOSAL					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  Michelle Ward  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  DATE 8-23-17	AT&T proposes to construct a 255' cell tower with a 15' lightning rod for an overall height of 270'.					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  Michelle Ward  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  DATE 8-23-17						
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME						
my knowledge and belief.)  PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE SIGNATURE  Michelle Ward  Chairperson, KAZC  Administrator, KAZC  Administrator, KAZC  DATE 8-23-17						
PENALITIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME	CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of					
imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)  NAME Michelle Ward  TITLE Sr. Real Estate Mgr.  Chairperson, KAZC Administrator, KAZC  DATE  DATE  07/03/17  Chairperson, KAZC  Administrator, KAZC  DATE  DATE  DATE  07/03/17						
NAME Michelle Ward  TITLE Sr. Real Estate Mgr.  COMMISSION ACTION  Chairperson, KAZC  Administrator, KAZC  DATE 07/03/17  Chairperson, KAZC  Administrator, KAZC  DATE 8-23-17	마이크로 발매하는 마스테이트 마스트를 가는 다른 사람들이 되었다. 이 사람들이 되었다면 다른 사람들이 되었다면 다른 사람들이 되었다면 되었다면 하는 것이 되었다면 하는 것이다. 그는 사람들이 다른 사람들이 다른 사람들이 되었다면 하는 것이다. 그는 사람들이 되었다면 하는 것이다면 하는 것이다면 하는 것이다. 그는 사람들이 되었다면 하는 것이다면 하는					
Michelle Ward  Sr. Real Estate Mgr.  COMMISSION ACTION  Chairperson, KAZC  Administrator, KAZC  DATE 8-23-17						
COMMISSION ACTION  Chairperson, KAZC  Administrator, KAZC  DATE 8-23-17		SIGNATURE	Lu 11 11 0	DATE 07/03/17		
Approved SIGNATURE DATE 8-23-17	Michelle Ward Sr. Real Estate M	gr.	· · · · · · · · · · · · · · · · · · ·			
Approved SIGNATURE DATE 8-23-17	COMMUNICATION ACTION	Chairperson	n, KAZC			
	COMMUNICACION					
	Approved SIGNATURE	1		DATE 8-23	-17	
	) <del>=</del> · · /			- U	A.	

# EXHIBIT G GEOTECHNICAL REPORT

June 21, 2017

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

ECS Project No. 26:3125-D1

Reference:

Report of Subsurface Exploration and Geotechnical Engineering Services

Briarfield Road Tower

Briarfield Road Princeton, Kentucky

Dear Mr. Goralski:

ECS Southeast, LLP (ECS) has completed the subsurface exploration for the proposed construction of a self-supported tower located on Briarfield Road in Princeton, Kentucky. approximately 3,300 feet south of the intersection with Calvert Road. The purpose of these services was to explore the subsurface soil and groundwater conditions at the site, and to develop geotechnical recommendations pertaining to foundation support of the structure. This report explains our understanding of the project, documents our findings, and presents our conclusions and geotechnical engineering recommendations to serve as an aid during the design and construction of the project.

### PROJECT INFORMATION AND PROPOSED CONSTRUCTION

The project will consist of the construction of a new 255+-foot tall self-supported tower with a 15-foot lightning arrestor and fenced equipment compound. The proposed tower site is located in a grassy area. See the attached Site Location Diagram (Figure 1) and Boring Location Diagram (Figure 2). We have received preliminary site plans showing the site boundaries and proposed tower location. No loading information was provided for the tower. Based on information provided from the client, the current elevation at the center of the tower is approximately 537 feet MSL. To achieve the proposed grading at the tower site, we anticipate that negligible cut and fill will be required. We do not anticipate that any significant stormwater management (SWM) facilities or site retaining walls will be required for this project.

#### EXPLORATION PROCEDURES

The site subsurface conditions were explored on June 15, 2017 through the completion of three Standard Penetration Test (SPT) borings drilled 35 feet from the staked center of the tower location. The borings were drilled to auger refusal. The approximate boring locations are shown on the attached Boring Location diagram (Figure 2). The boring locations were based on a survey stake-out that was performed by others. Prior to drilling, underground utilities were cleared through the Kentucky 811system.

A CME 55 truck-mounted drill rig was utilized to complete the SPT borings. The drill rig utilized 3 1/4 inch hollow stem augers to advance the boreholes. Representative soil samples were secured by means of conventional split-barrel sampling procedures (ASTM D1586). In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler Briarfield Road Tower ECS Project No. 26:3125-D1 June 21, 2017 Page 2

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

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

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

## CLASSIFICATION AND LABORATORY TESTING PROCEDURES

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

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

### SITE GEOLOGY

The USGS Geologic Map of the Crider Quadrangle (1976) indicates this particular site is underlain by the Menard Limestone formation. This formation typically consists of medium to dark gray finely to medium crystalline limestone, shale and siltstone. The limestone weathers to produce a shallow layer of native soil (residuum) which is typically an orange to brown silty clay.



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

### SUBSURFACE CONDITIONS

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

In general, the exploration revealed approximately 8 inches of topsoil overlying fat clay to depths ranging from approximately 3 to 7 feet. SPT N-values for the fat clay materials varied from 10 to 22 blows per foot (bpf). Auger refusal was encountered at each boring location at depths ranging from approximately 3 to 7 feet below the existing ground surface. The encountered conditions are shown on the attached boring logs.

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

## ANALYSIS AND RECOMMENDATIONS

#### General

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

### Subgrade Preparation

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

### **Engineered Fill**

The first layer of fill should be placed in a relatively uniform horizontal lift and be adequately keyed into the stripped and scarified subgrade soils. Fill materials should be free of organics, wet/frozen materials, or other deleterious materials. Engineered fill materials should consist of low to moderately plastic clays and silts, or coarse grained material such as sand and gravel, with a maximum Liquid Limit no greater than 50, and a maximum Plasticity Index no greater than 30. In general, we recommend material to be used as engineered fill have a Standard Proctor maximum dry density of at least 90 pcf. Engineered soil fill should be placed in maximum loose lifts of 8 inches and compacted to at least 95 percent of the Standard Proctor (ASTM D698) maximum dry density, with the upper 2 feet compacted to at least 98 percent of the same standard. Soil engineered fill should be compacted within 2 percentage points of the optimum moisture content, per the Standard Proctor method. Soil fill should not contain rock material greater than 4 inches in diameter.

Briartield Road Tower ECS Project No. 26:3125-D1 June 21, 2017 Page 4

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

## **Equipment Shelter Foundations**

Based upon our findings, the equipment shelter may be supported by a turned-down monolithic slab-on-grade with foundation elements bearing on the undisturbed natural residual soils or properly-compacted engineered fill. These foundations can be designed for a maximum net allowable soil bearing pressure of up to 3,000 psf. For footings constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be less than 1 inch (plus any consolidation settlement from new fill loads). Maximum differential settlement is expected to be half the total settlement. Shallow foundations should be designed to bear at least 18 inches below the final exterior grades. The slab-on-grade may be designed using a modulus of subgrade reaction of 100 pounds per cubic inch (pci). A layer of free draining gravel may be used underlying the slab to serve as a leveling pad and provide a capillary break. All slab and foundation subgrades should be evaluated immediately prior to concrete placement by ECS to verify that the exposed subgrades are capable of satisfactorily supporting the design loads.

#### Self-support Tower Foundation

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

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

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

The drilled shaft concrete should be placed in intimate contact with undisturbed natural soil/rock. To reduce the potential for arching, we recommend the drilled shaft concrete mix be designed for a slump of 5 to 7 inches. Provided water seepage is minimal, our experience and current research in the field indicates that the drilled shafts can be constructed by "free fall" placement of concrete without affecting the strength and quality of concrete. The concrete should "free fall" without hitting the sides of the casing or reinforcing steel. The use of a hopper or other suitable

влапівів коав Tower ECS Project No. 26:3125-D1 June 21, 2017 Page 5

device is recommended to control concrete placement and direct it toward the center of the shaft. The placement of concrete in the cased shaft should proceed until the concrete level is above the external fluid level and should be maintained above this level throughout casing removal. However, if significant seepage is present within the excavation or if slurry is used, it will be necessary to place the concrete by tremie method, and we recommend a concrete slump of 7 to 9 inches for this method of concrete placement.

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

<u>Pad and Pier Recommendations:</u> Based on the relatively shallow depth to bedrock, a pad and pier foundation approach would also be reasonable. We recommend that the foundation be excavated down to bedrock and can be designed for a net allowable bearing capacity of 8,000 psf. Base friction and passive earth pressures can be used to resist lateral loads. The friction coefficient between the foundation bottom and underlying rock can be assumed to be 0.45. Passive earth pressures along the edge of the foundation can be calculated using a fluid equivalent of 300 pcf. Passive resistant should only be used where the soils adjacent to the foundation will not be eroded or removed in the future.

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

#### Seismic Site Classification

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

- Latitude: 37.18042, Longitude: -87.8742
- $S_s = 0.691, S_1 = 0.246$
- $S_{MS} = 0.691, S_{M1} = 0.246$
- $S_{DS} = 0.461, S_{D1} = 0.164$ 
  - \*Spectral accelerations were determined from USGS National Seismic Hazard Maps

#### **General Construction Considerations**

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

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

Briarfield Road Tower ECS Project No 26:3125-D1 June 21, 2017 Page 6

## CLOSING

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for the conclusions, opinions, or recommendations made by others based on these data. No third party is given the right to rely on this report without express written permission.

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

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

Respectfully,

ECS SOUTHEAST, LLP

Brooke Ferry, E.L.

Geotechnical Project Manager

Donald L. Anderson Principal Reviewer Mark D. Luskin, P.E. Engineering Manager

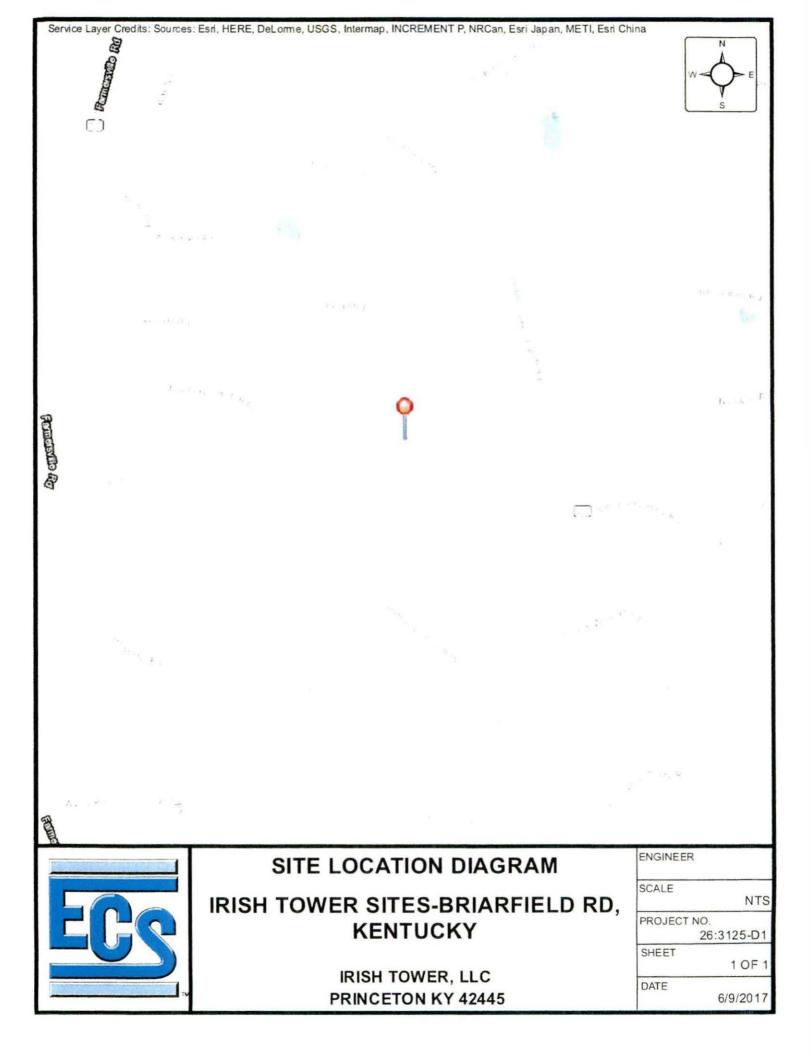
Attachments: Figure 1: Site Location Map

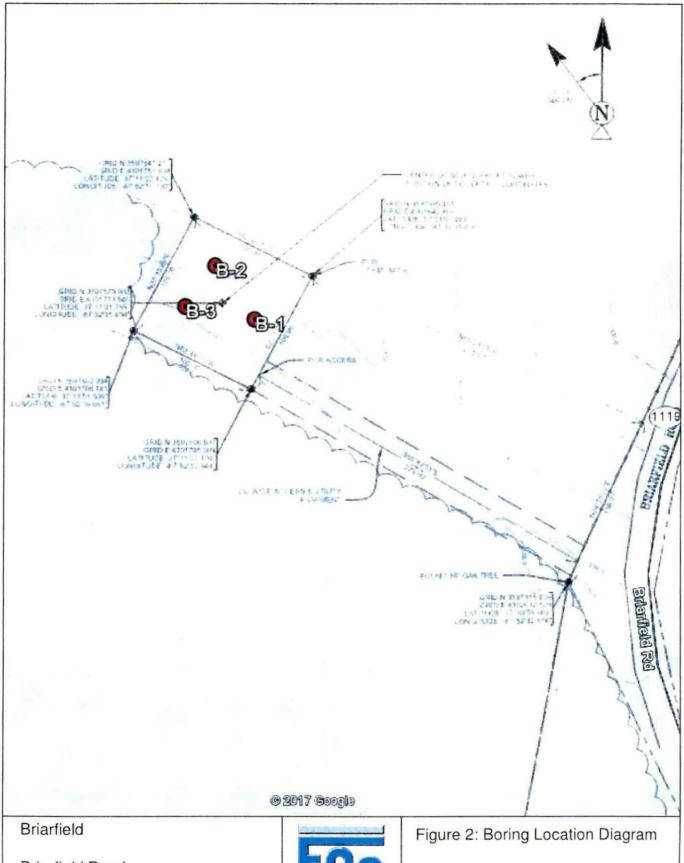
Figure 2: Boring Location Diagrams

Geotechnical Data Form

SPT Boring Log (B-1 through B-3) Reference Notes for Boring Logs

**USGS Summary Report** 





Briarfield Road Princeton, KY ECS Project No. 26:3125-D1



#### GEOTECHNICAL DATA FORM

#### Background Information

Irish Tower, LLC Project Briarfield Road Tower

Location Briarfield Road, Princeton, Kentucky

ECS Project No 26:3125-D1

Self Supported

Type Height.

255'+/-





Depth (feet)	Soil Behavior Type	Average N (spt)	Relative Density/Consistency	USCS Classificati on
0 - 7	FAT CLAY	14	Suff	СН
7+	LIMESTONE Bedrock	50/0		



#### Estimated Soil Parameters for LPILE

Depth	LPILE Soil Type	γ	Su	φ'	К*	E <sub>50</sub> *
(feet)		(pcf)	(psf)	(")	(pci)	
0 - 7	Stiff Clay	115	1000		100	0.007
7+	Limestone Bedrock	135	5000+	100	2000	0.001

y= In-situ Soil Density

S<sub>u</sub>= Undrained Shear Strength

6'= Effective Friction Angle

K= Honzontal Subgrade Reaction

#### Foundation Recommendations

For Drilled Shaft Foundations\*\*

Depth (ft)	Allowable End Bearing (KSF)
0 - 7	3
7 - 15	8
*15+	50

Depth Interval	Allowable Average Side Friction (PSF)
0 - 7	250
7 - 15	2000
*15+	3000

<sup>\*\*</sup>Ignore in top 5 feet in design, minimum embedment depth of 10% tower height applies

#### Construction Criteria

1) Proofroll site prior to construction to detect unsuitable soil near the surface

- 2) Compact building pads/roadway fill in 8 inch lifts. Use and compact approved fill to at least 95% maximum dry density in accordance with ASTM D698 standard proctor (98% in top 2 3) Approved fill materials are soils with less than 3% organics, less than 50 liquid limit and less than 30 plastic index.

  4) Foundation construction should be observed by Geotechnical Engineer

5) Drilled shaft foundations should be installed in accordance with the requirements of the Deep Foundation Institute and monitored by the Geotechnical Engineer

<sup>\*</sup>Parameters estimated from values suggested in LPILE user manual

<sup>\*</sup>Paramaters were increased with embedment depth due to anticipated increase in bedrock quality

CLIENT							Job #		BORIN	NG#		SHEET		
Irish T	owe	r. Ll	C				26:	3125-D1		B-1		1 OF 1	-Ca	
PROJECT	NAME			Bri	arfield Road T	ower	ARCHI	FECT-ENGINEER					LU!	
Little Control of the			.63	ווט	arriela rioad i	OWEI,								. 1
Kentu SITE LOC	ATION											-CALIBRATED P	ENETROMETER TONS	/FT <sup>2</sup>
Briarfi	المام	2020	1 D	rince	aton KV							O CALIBIONIED!	ENETHORIE PER TOTO	
NORTHIN	G	toat	7	EASTIN	eton, KY	STATION							SIGNATION & RECOVE	RY
			1									RQD%	REC%	
			9		DESCRIPTION OF M.	ATERIAL		ENGLISH	UNITS		Н	PLASTIC V	VATER LIQU	UID
		Ų.	(N)	ê.								LIMIT% CO	NTENT% LIMI	T%
E	ON ON	TYP	DIST	RY (	BOTTOM OF CASING	3 <b>3</b>	LOSS	OF CIRCULATIO	N >005	ON	9	X	• A	7
ОЕРТН (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE	RECOVERY	SURFACE ELEVATION	N 537				WATER LEVELS ELEVATION (FT)	BLOWS/6"		RD PENETRATION	
0EP	SAN	SAN	SAN	REC		007				WA	BLO	BL	OWS/FT	
0 _					Topsoil Depth									
	S-1	SS	18	18	(CH) FAT CLA	Y, Drown, mois	t, sun t	o very stiff		F	4 5	10-⊗		
		-	10	10						535	5			
	S-2	SS	18	18					11		25	22-8		
5									///	-	11			
-	0.0	00	40	10					11	F	6		~	-
	S-3	SS	10	10	ALIOED DEFIL	CAL @ 71			//	530	50/4		100+	
_					AUGER REFU	SAL @ /				_				
10										_				
10										_				
15 —														
										525				
-														
15 —														
											1			
										520				
					İ					520				
_										_				
-														
20 —											1			
-										_				
-										515				
-														
25 —														
25														
25										-				
										_				
_										510				
_										_				
-										_				
30 —										_				
-					I .				1	-	1			
Π	TH	E STR						-	TWEEN	SOIL TYP		SITU THE TRANSITION N	MAY BE GRADUAL	_
₩ WL			-	ws 🗌		BORING STARTE		06/15/17		-		E IN DEPTH		_
₩ WL(S	HW)		ŧ	WL(AC	CR) DRY	BORING COMPL	ETED	06/15/17		15		MER TYPE Auto		
å Mr						RIG ATV		FOREMAN Ja	amisor	n King	DRIL	LING METHOD HSA/SI	21	

CLIENT							Job #	BORIN	NG#		SHEET	
Irish T	owe	r. LL	C				26:3125-D1		B-2		1 OF 1	500
PROJECT	NAME			Del	arfield Road	Tower	ARCHITECT-ENGINEER		<u> </u>			EUC.
			es	- DII	arrielo Road	rower,						
Kentu SITE LOC	ATION	_		-							0	
D-1	الداد	<b>7</b>			-1 1/1/						-O- CALIBRATED P	ENETROMETER TONS/FT2
NORTHIN	eia i	Koac	1, P	EASTIN	eton, KY	STATION					ROCK QUALITY DES	SIGNATION & RECOVERY
The second											RQD%	REC%
	-		_		DESCRIPTION OF M	MATERIAL	ENGLISH	LIMITE		-	PLASTIC V	VATER LIQUID
		ш	2	ê	DESCRIPTION OF I	ALCOHOL:	ENGLISH	DINITS	SJ (T			NTENT% LIMIT%
Œ.	NO	TYP	DIST	RY (	BOTTOM OF CASIN	G 🔀	LOSS OF CIRCULATIO	N 2002	EVE ON (	.9	×	$\triangle$
TH.	SAMPLE NO	SAMPLE TYPE	SAMPLE DIST	RECOVERY	SURFACE ELEVATI	on 537			WATER LEVELS ELEVATION (FT)	WS/6		RD PENETRATION
ОЕРТН (FT)	SAM	SAM	SAM	REC	SORFACE ELEVATI	557			WAT	BLOWS/6	BL.	OWS/FT
0 _					Topsoil Depth							
_	S-1	SS	18	18	(CH) FAT CLA	AY, brown, moist	, stiff		_	4	10-⊗	
	3-1	33	10	10					<del></del>	6	10-0	
-												
_	S-2	SS	18	18				1/		3 5	11-⊗	
5 —				-						6		
_					AUGER REFU	JSAL @ 5.5'			_			
									<del></del>			
									_			
									_			
10												
-												
									525			
									-			
									_		ľ	
15 —									_			
_								1				
-								1	<del></del>			
-								1				
_									_			
20 —												
									_			
									— — 515			
_				1							× .	
25 —												
25 —		-							_			r
_									<del></del>			
-		İ							_			
_									_			
30 —												
-		1		1						1		
	THI	ESTRA	ATIFIC	CATION	LINES REPRESENT	THE APPROXIMATE	E BOUNDARY LINES BET	WEEN	SOIL TYPI	ES IN-	SITU THE TRANSITION M	AY BE GRADUAL
₩L				ws 🗌	wb⊠	BORING STARTED	06/15/17			CAVE	E IN DEPTH	
₩ WL(SH	HW)		<u>*</u>	WL(AC	R) DRY	BORING COMPLE	TED 06/15/17			НАМ	MER TYPE Auto	
₩L	7-1-61		-		con market	RIG ATV	FOREMAN Ja	misor	King		LING METHOD HSA/SF	PT

CLIENT							Job #.	BORIN	NG#		SHEET		
Irish T	owe	r. LL	C				26:3125-D1		B-3		1 OF 1	-0-	
Irish T	NAME	- C:4	00	D	afiald Dard T	22	ARCHITECT-ENGINEER		<u> </u>		1 1011		
			es ·	- Bus	arfield Road T	ower,							
Kentu	ATION	-	_	-					-	1	73		
D:	- I - I - I	<b>7</b>			101					-()- CALIBRATED PENETROMETER			
NORTHIN	G G	Koac	1, P	EASTIN	eton, KY	STATION					ROCK QUALITY DES	SIGNATION & RECOVERY	
			-								RQD%	REC%	
			_		DESCRIPTION OF M.	ATERIAL	ENGLISH	INITS		$\vdash$	PLASTIC W	VATER LIQUID	
		ш	(N)	2		oun mounts over			ELS FT)		LIMIT% COI	NTENT% LIMIT%	
EJ	2	TY	DIS	RY (	BOTTOM OF CASING		LOSS OF CIRCULATION	V >005	LEVE		×	Δ	
ОЕРТН (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DIST	RECOVERY (IN)	SURFACE ELEVATIO	N 537		1	WATER LEVELS ELEVATION (FT)	BLOWS/6"	STANDAR	D PENETRATION	
DEF	SAN	SAN	SAN	REC		Desired.			WA	BLC	BL	OWS/FT	
0 _					Topsoil Depth (CH) FAT CLA		won stiff		_				
	S-1	SS	18	18	(CH) FAT CLA	r, brown, moisi	, very still		- 626	10 8	$\otimes$		
-							į		535	10	18		
-					AUGER REFU	SAL @ 3'							
								1					
5-		1							_				
								1					
								1	530				
-								-					
10								-	_				
10 —		1						-					
-								1	525				
								1	-				
-								-					
15													
									_				
		1						1	<del></del>				
								1	_				
-									_				
20								-	_				
-													
								-	<del></del>				
	4								_				
25 —									_				
25													
25													
7									510				
7									_				
								}	_				
30 -													
1	,												
	70.00	OFF	TIE	ATIO:	LINES SESSESS	THE ADDRESS OF THE	F DOLLARD A DIVINION TO THE	META:	SOIL TUS		OUTLI THE TRANSPORT	IAV BE CRADULE	
¥ WL	THE	STRA				AND CHARLES TO SECURE	E BOUNDARY LINES BET	WEEN	SOIL TYPE			IAT BE GRADUAL.	
₩ WL(Sh	4500		e e e e e e e e e e e e e e e e e e e	WS	WD⊠	BORING STARTE			-		IN DEPTH		
₩ WL(SF			Ŧ	TILIAC	N DKI	RIG ATV	FOREMAN Ja	mieor	King		MER TYPE Auto	DT .	
						THE MIN	JALMAN Ja	1111301	ittiily	DIVILL	TONSI		



# REFERENCE NOTES FOR BORING LOGS

MATERIAL <sup>1,</sup>	2	
	ASPH	ALT
	CONC	RETE
30 80 05 5	GRAV	EL
3565	TOPS	DIL
	VOID	
	BRICK	
80 80 85	AGGR	EGATE BASE COURSE
E THE	$FILL^3$	MAN-PLACED SOILS
	GW	WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GP	POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
HEH	GM	SILTY GRAVEL gravel-sand-silt mixtures
15.2	GC	CLAYEY GRAVEL gravel-sand-clay mixtures
	sw	WELL-GRADED SAND gravelly sand, little or no fines
	SP	POORLY-GRADED SAND gravelly sand, little or no fines
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SM	SILTY SAND sand-silt mixtures
7777	SC	CLAYEY SAND sand-clay mixtures
	ML	SILT non-plastic to medium plasticity
ПП	МН	ELASTIC SILT high plasticity
4///	CL	LEAN CLAY low to medium plasticity
1/1	СН	FAT CLAY high plasticity
إلتأرك	OL	ORGANIC SILT or CLAY non-plastic to low plasticity
****** ****** ******	ОН	ORGANIC SILT or CLAY high plasticity
	PT	PEAT highly organic soils

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

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

COHESIV	E SILTS &	CLAYS
UNCONFINED COMPRESSIVE STRENGTH, Qp4	SPT <sup>5</sup> (BPF)	CONSISTENCY <sup>7</sup> (COHESIVE)
<0.25	<3	Very Soft
0.25 - < 0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Medium Stiff
1.00 - <2.00	9 - 15	Stiff
2.00 - < 4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

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

<b>GRAVELS, SANDS &amp; NON-COHESIVE SILTS</b>			
SPT <sup>5</sup>	DENSITY		
<5	Very Loose		
5 - 10	Loose		
11 - 30	Medium Dense		
31 - 50	Dense		
>50	Very Dense		

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

<sup>&</sup>lt;sup>1</sup>Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.

<sup>&</sup>lt;sup>2</sup>To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

<sup>&</sup>lt;sup>3</sup>Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

<sup>&</sup>lt;sup>4</sup>Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

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

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

<sup>&</sup>lt;sup>7</sup>Minor deviation from ASTM D 2488-09 Note 16.

<sup>&</sup>lt;sup>8</sup>Percentages are estimated to the nearest 5% per ASTM D 2488-09.

## 

## **User-Specified Input**

Report Title 3125-D1

Tok Line 18 C RT T CT 25 LTT

Building Code Reference Document 2012/2015 International Building Code

which you day uBUS hazaro hara e w an sin 2008

Site Coordinates 37.18042°N, 87.8742°W

Site Soil Classification Site Class B - "Rock"

Risk Category I/II/III



## **USGS-Provided Output**

$$S_s = 0.691 g$$

$$S_{MS} = 0.691 g$$

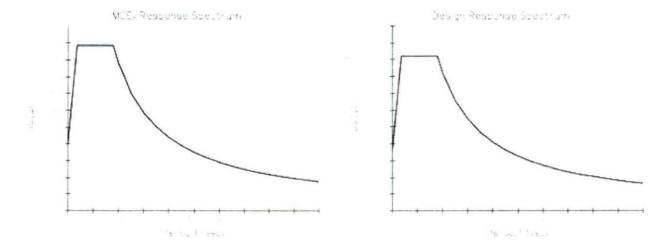
$$S_{bs} = 0.461 g$$

$$S_1 = 0.246 g$$

$$S_{M1} = 0.246 g$$

$$S_{D1} = 0.164 g$$

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

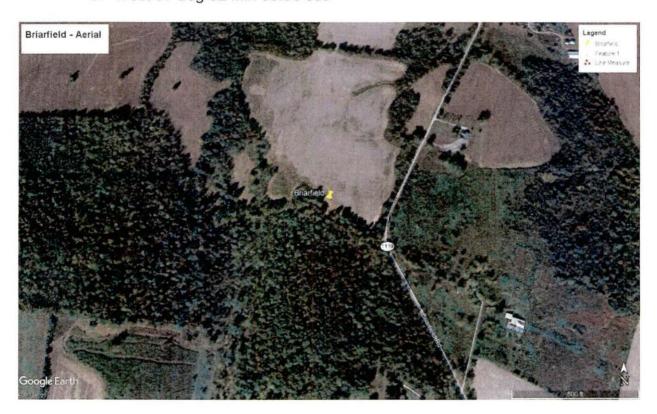


A TRACE THE MINMENT OF BEING AND STORE OF BALLED BURNET HER OF BURNET OF THE ACTION AND RESERVED TO THE RESISTANCE AT THE STORE OF THE RESISTANCE TO THE STORE OF

# EXHIBIT H DIRECTIONS TO WCF SITE

## **Driving Directions to Proposed Tower Site**

- Beginning at the offices of the Caldwell County Judge Executives located at 100 East Market Street, Princeton, Kentucky, head northeast on N. Jefferson Street and travel approximately 0.3 miles.
- 2. Continue straight onto KY-293 N / N. Jefferson Street and travel approximately 3.8 miles.
- 3. Turn left onto KY-1119 N and travel approximately 1.4 miles.
- 4. The site is on the left on Briarfield Road. The site coordinates are
  - a. North 37 deg 11 min 01.77 sec
  - b. West 87 deg 52 min 35.83 sec



Prepared by: Aaron Roof Pike Legal Group PLLC 1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-3069

Telephone: 502-955-4400 or 800-516-4293

# EXHIBIT I COPY OF REAL ESTATE AGREEMENT

Marker Kinnicky Cell Site Number KY[10:250 Cell Site Name Brianfield Ried Fixed Asset Number 11800/779

#### OPTION AND LEASE AGREEMENT

THIS OPTION AND LLAST AGREEMENT ("Agreement"), dated as of the latter of the signature dates below (the "Effective Date"), is entered into by James Larry Watson and Toni Carol Watson, husband and wife, having a mailing address of 1765 Brianfield Road, Princeton, KY 42445 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 575 Morosgo Drive, Atlanta, GA 30324 ("Tenant").

#### BACKGROUND

Landlord owns or controls that certain plot, parcel or trac of land, as described on Exhibit L together with all rights and privileges arising in connection therewith, located at Briarfield Road, Princeton, KY 42-45, in the County of Caldwell, State of Kentucky (co lectively, the "Property"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

## OPTION TO LEASE.

- (a) Landlord grants to Lenant an option (the "Option") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above such ground space, as described on attached Exhibit 1 (the "Premises"), for the placement of Tenant's Communication Facility.
- During the Option Term, and during the term of this Agreement, Terant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Lenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such detect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.
- sum of within forty-five (45) business days of the Effective Date. The Option will be for an initial term of one (1) year commencing on the Effective Date (the "Initial Option Term") and may be renewed by Tenant for an additional one (1) year (the "Renewal Option Term") upon written notification to Landlord and the payment of an additional no later than five (5) days prior to the expiration date of the Initial Option Term." The Initial Option Term and any Renewal Option Term are collectively referred to as the "Option Term."
- (d) The Option may be sold, assigned or transferred at any time by Tenant to an Affiliate (as that term is hereinafter defined) of Tenant or to any third party agreeing to be subject to the terms hereof. Otherwise,

the Option may not be sold, assigned or transferred without the written consent of Landlord, such consent not to be unreasonably withheld, conditioned or delayed. From and after the date the Option has been sold, assigned or transferred by Tenant to an Affiliate or a third party agreeing to be subject to the terms hereof. Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

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

#### TERM.

- (a) The initial lease term will be five (5) years (the "Initial Term"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "Term Commencement Date"). The Initial Term will terminate on the fifth (5th) anniversary of the Term Commencement Date.
- (b) This Agreement will automatically renew for four (4) additional five (5) year term(s) (each five (5) year term shall be defined as an "Extension Term"), upon the same terms and conditions unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or then-existing Extension Term.
- (c) Unless (i) Landlord or Tenant notifies the other in writing of its intention to terminate this Agreement at least six (6) months prior to the expiration of the final Extension Term, or (ii) the Agreement is terminated as otherwise permitted by this Agreement prior to the end of the final Extension Term, then upon the expiration of the final Extension Term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("Annual Term") until terminated by either party by giving to the other written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rental during such Annual Terms shall be equal to the Rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "Holdover Term"), subject to the terms and conditions of this Agreement.
- (d) The Initial Term, any Extension Ferms, any Annual Terms and any Holdover Term are collectively referred to as the Term (the "Term").

#### RENT.

- (a) Commencing on the first day of the month following the date that Tenant commences construction (the "Rent Commencement Date"), Tenant will pay Landlord on or before the fifth (5th) day of each calendar month in advance (the "Rent"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.
- (b) In year one (1) of each Extension Term, the monthly Rent will increase by over the Rent paid during the previous five (5) year term.
- (c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to menthly 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.

## APPROVALS.

- Premises and Property for Tenant's Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for Tenant's Permitted Use under this Agreement and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.
- (b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.
- (c) Terant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.
- TERMINATION. This Agreement may be terminated, without penalty or further liability, as follows:

- (a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods;
- (b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant, or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable.
- (c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses.
- (d) by Tenant upon written notice to I andlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or
- (e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: 5 Approvals, 6(a) Termination, 6(b) Termination, 6(c) Termination, 6(d) Termination, 11(d) Environmental, 18 Condemnation, or 19 Casualty.

#### 7. INSURANCE.

- (a) During the Term, Tenant will carry, at its own cost and expense, the following insurance: (i) workers' compensation insurance as required by law, and (ii) commercial general liability (CGL) insurance with respect to its activities on the Property, such insurance to afford protection of up to per occurrence and general aggregate, based on Insurance Services Office (ISO) Form CG 00 01 or a substitute form providing substantially equivalent coverage. Tenant's CGL insurance shall contain a provision including Landlord as an additional insured. Such additional insured coverage:
  - (i) shall be limited to bodily injury, property damage or personal and advertising injury caused, in whole or in part, by Tenant, its employees, agents or independent contractors;
  - (ii) shall not extend to claims for punitive or exemplary damages arising out of the acts or omissions of Landlord, its employees, agents or independent contractors or where such coverage is prohibited by law or to claims arising out of the gross negligence of Landlord, its employees, agents or independent contractors; and
    - (iii) shall not exceed Tenant's indemnification obligation under this Agreement, if any.
- (b) Notwithstanding the foregoing. Fenant shall have the right to self-insure the coverages required in subsection (a). In the event Tenant elects to self-insure its obligation to include Landlord as an additional insured, the following provisions shall apply (in addition to those set forth in subsection (a)):
  - (i) Landlord shall promptly and no later than thirty (30) days after notice thereof provide Tenant with written notice of any claim, demand, lawsuit, or the like for which it seeks coverage pursuant to this Section and provide Tenant with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like:
  - (ii) Landlord shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of Tenant, and
  - (iii) Landlord shall fully cooperate with Tenant in the defense of the claim, demand lawsuit, or the like.
- (c) Tenant shall provide Landlord annual written proof that the above insurance is active and in good standing within thirty (30) days of the policy renewal.

#### 8. INTERFERENCE.

- (a) Prior to or concurrent with the execution of this Agreement. Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as those existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.
- (b) Landlord will not grant, after the date of this Agreement, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.
- (e) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to, interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period. Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.
- (d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

## 9. INDEMNIFICATION.

- (a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, agents or independent contractors.
- (b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees or agents, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.
- (e) The indemnified party: (i) shall promptly provide the indemnifying party with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Section and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

## 10. WARRANTIES.

- (a) Tenant and Landlord each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority to enter into this Agreement and bind itself hereto through the party set forth as signatory for the party below.
- (b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this

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

## 11. ENVIRONMENTAL.

- (a) Landlord represents and warrants that, except as may be identified in **Exhibit 11** attached to this Agreement, (i) the Property, as of the date of this Agreement, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.
- (b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the Effective Date of this Agreement or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.
- (c) The indemnifications of this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.
- (d) In the event Tenant becomes aware of any hazardous substances on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party. Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.
- 12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in Exhibit 1. Landlord grants to Tenant an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as Exhibit 12; upon Tenant's request, Landlord shall execute

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

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

## 14. MAINTENANCE/UTILITIES.

- (a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.
- Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply. Tenant will have the right, at its own cost and expense. to submeter from Landlord. When submetering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Landlord agrees that it will not include a markup on the utility charges. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and or agent designated by Tenant. Tenant will remit payment within forty-five (45) days of receipt of the usage data and required forms. As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate (wenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.
- (c) Landlord hereby grants to any company providing utility or similar services, including electric power and telecommunications, to Tenant an easement over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or

7

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

## 15. DEFAULT AND RIGHT TO CURE.

- (a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) non-payment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.
- (b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 of this Agreement within twenty-four (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 of this Agreement within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.
- 16. <u>ASSIGNMENT/SUBLEASE</u>. Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assignment.
- 17. NOTICES. All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows:

If to Tenant:

New Cingular Wireless PCS, LLC

Attn: Network Real Estate Administration

Re: Cell Site #KYL02359; Cell Site Name: KY Briarfield Road

Fixed Asset No.: 13800779

575 Morosgo Drive Atlanta, GA 30324

With a copy to:

New Cingular Wireless PCS, LLC

Attn.: Legal Department

Re: Cell Site #: KYL02359; Cell Site Name: KY Briarfield Road

Fixed Asset No.: 13800779

208 S. Akard Street Dallas, TX 75202

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

If to Landlord:

James Larry and Toni Carol Watson

1765 Briarfield Road Princeton, KY 42445

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

- 18. CONDEMNATION. In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within forty-eight (48) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.
- 19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within forty-eight (48) hours of the casualty or other harm. If any part of the Communication Facility or Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis. Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of the Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant, and Tenant decides not to terminate under this Section, then Landlord will promptly rebuild or restore any portion of the Property interfering with or required for Tenant's Permitted Use of the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Property and/or the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.
- 20. WAIVER OF LANDLORD'S LIENS. Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

#### 21. TAXES.

(a) Landlord shall be responsible for timely payment of all taxes and assessments levied upon the lands, improvements and other property of Landlord, including any such taxes that may be calculated by the taxing authority using any method, including the income method. Tenant shall be responsible for any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth in this Section 21. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll, excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.

- (b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than thirty (30) days after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant within such time period, Landlord shall be responsible for payment of the tax or assessment set forth in the notice, and Landlord shall not have the right to reimbursement of such amount from Tenant. If Landlord provides a notice of assessment to Tenant within such time period and requests reimbursement from Tenant as set forth below, then Tenant shall reimburse Landlord for the tax or assessments identified on the notice of assessment on Tenant's leasehold improvements, which has been paid by Landlord. If Landlord seeks reimbursement from Tenant, Landlord shall, no later than thirty (30) days after Landlord's payment of the taxes or assessments for the assessed tax year, provide Tenant with written notice including evidence that Landlord has timely paid same, and Landlord shall provide to Tenant any other documentation reasonably requested by Tenant to allow Tenant to evaluate the payment and to reimburse Landlord.
- (e) For any tax amount for which Tenant is responsible under this Agreement, Tenant shall have the right to contest, in good faith, the validity or the amount thereof using such administrative, appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as Tenant may deem appropriate. This right shall include the ability to institute any legal, regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Lenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.
- (d) Landlord shall not split or cause the tax parcel on which the Premises are located to be split, bifurcated, separated or divided without the prior written consent of Tenant.
- (e) Tenant shall have the right but not the obligation to pay any taxes due by Landlord hereunder if Landlord fails to timely do so, in addition to any other rights or remedies of Tenant. In the event that Tenant exercises its rights under this Section 21(e) due to such Landlord default, Tenant shall have the right to deduct such tax amounts paid from any monies due to Landlord from Tenant as provided in Section 15(b), provided that Tenant may exercise such right without having provided to Landlord notice and the opportunity to cure per Section 15(b).
- (f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, of a copy of any such notices shall be sent to the following address. Promptly after the Effective Date of this Agreement, Landlord shall provide the following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax addresses changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

New Cingular Wireless PCS, LLC
Attn: Network Real Estate Administration -- Taxes
Re: Cell Site #KYL02359; Cell Site Name: KY Briarfield Road
Fixed Asset No: 13800779
575 Morosgo Drive
Atlanta, GA 30324

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

### 22. SALE OF PROPERTY

- (a) Landlord shall not be prohibited from the selling, leasing or use of any of the Property or the Surrounding Property except as provided below.
- (b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property or Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor shall send the documents listed below in this subsection (b) to Tenant. Until Tenant receives all such documents, Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement.
  - i. Old deed to Property
  - ii. New deed to Property
  - iii. Bill of Sale or Transfer
  - iv. Copy of current Tax Bill
  - v. New IRS Form W-9
  - vi. Completed and Signed AT&T Payment Direction Form
  - vii. Full contact information for new Landlord including phone number(s)
- (c) Landlord agrees not to sell, lease or use any areas of the Property or Surrounding Property for the installation, operation or maintenance of other wireless communications facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. Landlord or Landlord's prospective purchaser shall reimburse Tenant for any costs and expenses of such testing. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communications facility or equipment.
- (d) The provisions of this Section shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.
- 23. RENTAL STREAM OFFER. If at any time after the date of this Agreement, Landlord receives a bona fide written offer from a third party seeking an assignment or transfer of Rent payments associated with this Agreement ("Rental Stream Offer"), Landlord shall immediately furnish Tenant with a copy of the Rental Stream Offer. Tenant shall have the right within twenty (20) days after it receives such copy to match the Rental Stream Offer and agree in writing to match the terms of the Rental Stream Offer. Such writing shall be in the form of a contract substantially similar to the Rental Stream Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the twenty (20) day period, Landlord may assign the right to receive Rent payments pursuant to the Rental Stream Offer, subject to the terms of this Agreement. If Landlord attempts to assign or transfer Rent payments without complying with this Section, the assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section.

### 24. MISCELLANEOUS.

- (a) Amendment/Waiver. This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.
- (b) Memorandum/Short Form Lease. Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum or Short Form of Lease substantially in the form attached as

- **Exhibit 24b.** Either party may record this Memorandum or Short Form of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term of this Agreement, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease.
- (c) Limitation of Liability. Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.
- (d) Compliance with Law. Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.
- (e) Bind and Benefit. The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.
- (f) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.
- (g) Governing Law. This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.
- (h) Interpretation. Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in this Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods. (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.
- (i) Affiliates. All references to "Tenant" shall be deemed to include any Affiliate of New Cingular Wireless PCS, LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.
- (j) Survival. Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.
- (k) W-9. As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including, any change in Landlord's name or address.
- (1) Execution/No Option. The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth

herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.

- (m) Attorneys' Fees. In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including without limitation, reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.
- (n) WAIVER OF JURY TRIAL. EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.

[SIGNATURES APPEAR ON NEXT PAGE]

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

"LANDLORD"
James Larry Marto
By: James Larry Watson Print Name: JAMES LARRY WATSON Its: Date: 3-17-17
For Carol Unton
By: Toni Carol Watson Print Name: Ton! CAROL WALON Its: Date: 3-17-17
"TENANT" New Cingular Wireless PCS, LLC, a Delaware limited liability company
By: AT&T Mobility Corporation Its: Manager
By: Print Name: 10 for (1 lime Its: Arei-manage CVE Date: 45/2017
/

[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

## TENANT ACKNOWLEDGMENT

CTATEOR OSS	
STATE OF	
COUNTY OF 1 feet 2 ) ss:	
On the day of here  Cryate Cerester and acknowledged under oath  Mobility Corporation, the Manager of New Cingular V  instrument, and an statution as authorized to execute this in	Vireless PCS, LLC, the Tenant named in the attached
M MCLQUGILL	Notary Public: 10 - 6 - 70 10 10 10 10 10 10 10 10 10 10 10 10 10
LANDLORD ACK	NOWLEDGMENT
COUNTY OF CH (Lue 11)	
COUNTY OF (HILLE!)	
On the 17 day of MARCA  JAMES LARRY WASON who acknowledged un within instrument, and that he/she executed the same in the Landlord for the purposes therein contained.	der oath, that he/she is the person/officer named in the his her stated capacity as the voluntary act and deed of
	Notary Public: 1 1 10 10 10 10 10 10 10 10 10 10 10 10
	ILH 54 7041
COUNTY OF CARLUEIL ) SS:	
On the 17 <sup>M</sup> day of MANULA IONICAROL WARSON, who acknowledged ur within instrument, and that he/she executed the same in the Landlord for the purposes therein contained.	20/1 before me, personally appeared nder oath, that he/she is the person/officer named in the his/her stated capacity as the voluntary act and deed of
	Notary Public: Jewisery Free Reader  My Commission Expires: 7-18
	164547094

#### EXHIBIT 1

#### DESCRIPTION OF PREMISES

I	age of		
to the Option and Lease Agreement dated and Toni Carol Watson, a husband and wife, as limited liability company, as Tenant.			

The Property is legally described as follows:

Several tracts of land situated and being in Caldwell County, Kentucky, and more particularly described as follows:

First Tract: Beginning at a stone in Tyrie's line; thence N. 86 1/2 W. 17 1/2 poles to a stone with black oak pointer; thence N. 71 1/4 poles to a stone; thence E. 35 poles to a black oak on the road and stone in the road; thence with said road S. 22 W. 19 poles to a sassafras and hickory, corner to Sigler; S. 17 W. 38 poles to the beginning, containing 16 1/2 acres.

Second Tract: Beginning at the branch, thence S. 82 W. including the spring 12 poles to a stone; S. 6 W. 27 ½ poles to a stone in the road; with same S. 85 ½ E. 22 poles to a stone; thence S. 9 ½ E. 46 poles to a hickory sapling in the Nichols line; thence S. 88 E. 27 poles to the branch; thence down same, meandering with the dower line, N. 36 poles, N. 60 W. 16 poles, N. 31 W. 16 poles, N. 18 W. 20 poles, N. 80 W. 12 poles to the beginning, containing 15 acres, including the W. M. Leech residence, orchard, & etc.

Third Tract: Beginning at a stone on the branch, corner to said W. M. Leech; thence down said branch with his line N. 36 poles, N. 60 W. 16 poles, N. 31 W. 16 poles, N. 18 W. 20 poles, N. 80 W. 12 poles to a stone, corner to same and Mary Leech; thence N. 82 ½ E. 32 ½ poles to an elm; thence E. 29 poles to a stone; corner to Lot Nq. 3; with same S. 71 1/4 poles to a stone two oaks pointers in Tyrie's line; thence N. 86 ½ W. 19 1/4 poles to the beginning, containing 17 1/4 acres. In the event oil or gas in paying quantities be found on the land described on the three (3) tracts hereinabove described, the heirs of W. M. Leech, together with the grantee herein, shall share and share alike thereto.

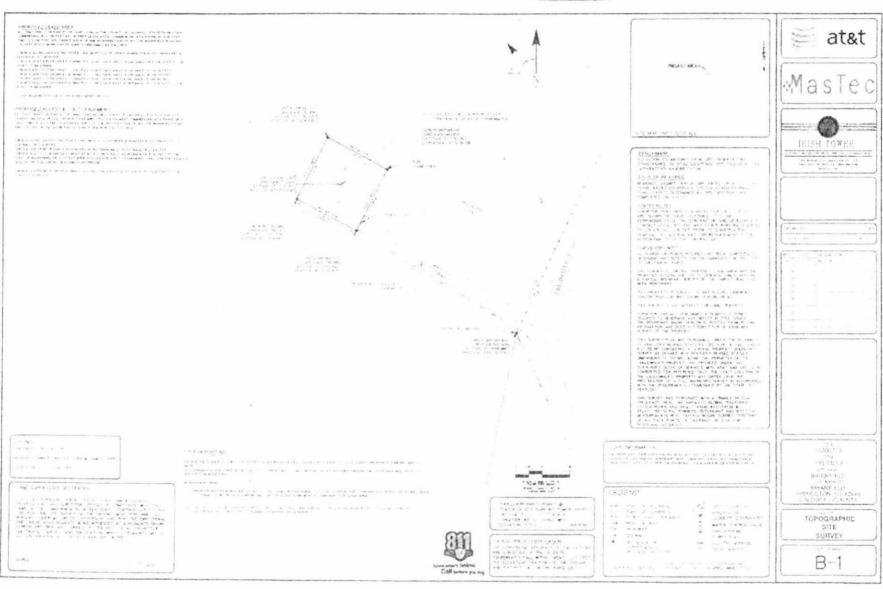
Fourth Tract: Beginning at a stone corner to M. C. Leech and W. M. Leech; with his line N. 82 ½ E. 32 ½ poles to an elm corner to same; with same line 74 poles to a black oak and stone in the road passing W. M. Leech's, G. A. Franklin's corner at 39 poles corner to same Franklin's line in said road; thence with said road N. 22 E. 33 poles to a hickory and white oak, corner to lot No. 4; thence W. 53 ½ poles to a stone and fence post; thence W. 53 ½ poles to a stone on the branch; with the meanders of said branch S. 12 E. 3 poles, S. 25 W. 18 ½ poles S. 63 E. 20 poles to the beginning, containing 29 acres.

Fifth Tract: Consists of two parcels of land containing 16 and 12 acres, respectively, making a total of 28 acres, more or less, and being the same conveyed to Elbert W. Leech by J. F. Early by deed dated March 7th, 1904, recorded in Deed Book 28, Page 253, Caldwell County Court Clerk's Office.

Sixth Tract: Beginning at a stone thence N. 87 W 62 poles to a stone, E. W. Leech corner, thence with his line S. 6 W. 64 poles and 21 links to a stone, E. W. Leech's corner thence with his line N. 88 E. 85 ½ poles to a hickory, W. M. Leech's corner; thence N. 9 ½ W. 46 poles to a stone W. M. Leech's corner; thence N. 85 ½ E. 22 poles to a stone; thence N. 6 E. 27 ½ poles to the beginning, containing 31 ½

acres and 17 poles, more or less.

Being the same property conveyed J.L. Watson and Louise Watson, his wife, by Deed of Conveyance from Francis D. Sisk and Callie B. Sisk, his wife, dated August 17, 1963, and recorded in Deed Book 110, page 320, Caldwell County Clerk's Office. And, Louise Watson received the interest of J.L. Watson upon his death by right of survivorship clause contained in said Deed. AND, Louise Sigler Watson, a widow, died intestate on August 20, 2000, and the Parties to this Deed received said property upon her death, see Affidavit of Descent recorded in Deed Book 236, Page 684, same Office.



#### EXHIBIT 11

#### ENVIRONMENTAL DISCLOSURE

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

1. NONE.

# EXHIBIT 12 STANDARD ACCESS LETTER [FOLLOWS ON NEXT PAGE]

### [Landlord Letterhead]

DATE

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

Re: Authorized Access granted to AT&T

Dear Building and Security Staff,

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

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

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

Landlord Signature

### EXHIBIT J NOTIFICATION LISTING

#### Briarfield Road - Notice List

Toni & James Larry Watson 1765 Briarfield Rd Princeton, KY 42445

Michael R. & Gwendolyn Ramage 1195 Briarfield Road Princeton, KY 42445

Ramage Mike David Ramage & Steve Stallins c/o Michael Ramage 1195 Briarfield Road Princeton, KY 42445

Cecil & Mabel Shelton 730 Bethany Church Road Princeton, KY 42445

Ray Coleman 728 Bethany Church Rd Princeton, KY 42445

Paul W. Boitnott 112 Country Club Lane Princeton, KY 42445

Jerry & Bonnie Darnell 1336 Bethany Church Princeton, KY 42445

Travis & Teresa Slaton 2270 Bethany Church Rd Princeton, KY 42445

Daniel B. Sigler 1744 Briarfield Road Princeton, KY 42445

James Larry & Toni C. Watson 1765 Briarfield Road Princeton, KY 42445

Daniel B. & Carolyn Sigler 1744 Briarfield Road Princeton, KY 42445 Daniel Garrick & Jennifer Sigler 1276 Briarfield Road Princeton, KY 42445

Gregory Watson 1248 Briarfield Road Princeton, KY 42445

Jerry & Carlotta Holeman 1900 Briarfield Road Princeton, KY 42445

Jeffery Harper, Vickie Wynn and Bruce Harper 111 Cumberland Drive Princeton, KY 42445

Jeffery W & Kelly Harper 111 Cumberland Dr Princeton, KY 42445

### 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: Briarfield Road

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on Briarfield Road, Princeton, Kentucky (37° 11' 01.77" North latitude, 87° 52' 35.83" West longitude). The proposed facility will include a 255-foot tall antenna tower, plus a 15-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the Caldwell 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 2017-00333 in any correspondence sent in connection with this matter.

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

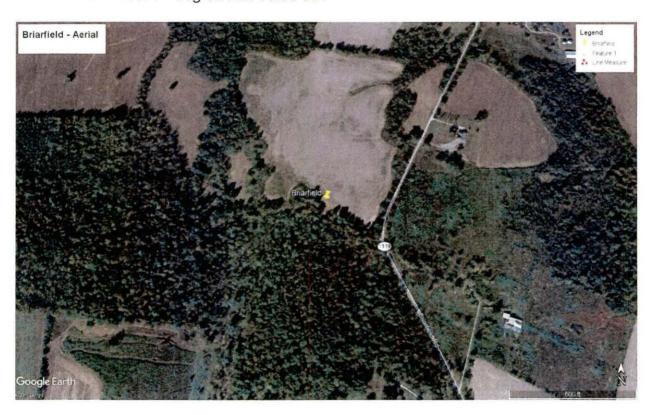
We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely, David A. Pike Attorney for Applicants

enclosure

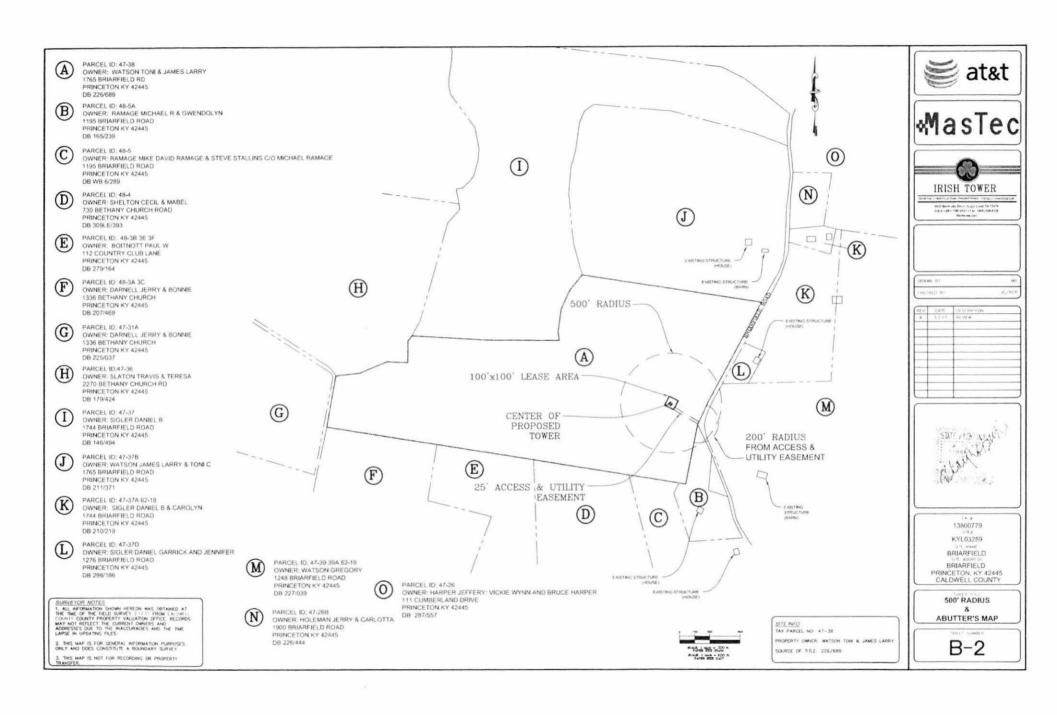
#### **Driving Directions to Proposed Tower Site**

- Beginning at the offices of the Caldwell County Judge Executives located at 100 East Market Street, Princeton, Kentucky, head northeast on N. Jefferson Street and travel approximately 0.3 miles.
- 2. Continue straight onto KY-293 N / N. Jefferson Street and travel approximately 3.8 miles.
- 3. Turn left onto KY-1119 N and travel approximately 1.4 miles.
- 4. The site is on the left on Briarfield Road. The site coordinates are
  - a. North 37 deg 11 min 01.77 sec
  - b. West 87 deg 52 min 35.83 sec



Prepared by: Aaron Roof Pike Legal Group PLLC 1578 Highway 44 East, Suite 6 P.O. Box 369 Shepherdsville, KY 40165-3069

Telephone: 502-955-4400 or 800-516-4293



### EXHIBIT L COPY OF COUNTY JUDGE/EXECUTIVE NOTICE



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

#### VIA CERTIFIED MAIL

Hon. Ellen V. Dunning Caldwell County Judge Executive Caldwell County Courthouse 100 East Market Street, Room #27 Princeton, KY 42445

RF:

Notice of Proposal to Construct Wireless Communications Facility Kentucky Public Service Commission Docket No. 2017-00333

Site Name: Briarfield Road

### Dear Judge Dunning:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on Briarfield Road, Princeton, Kentucky (37° 11' 01.77" North latitude, 87° 52' 35.83" West longitude). The proposed facility will include a 255-foot tall antenna tower, plus a 15-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00333 in any correspondence sent in connection with this matter.

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

We have attached a map showing the site location for the proposed tower. 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 Applicants enclosures

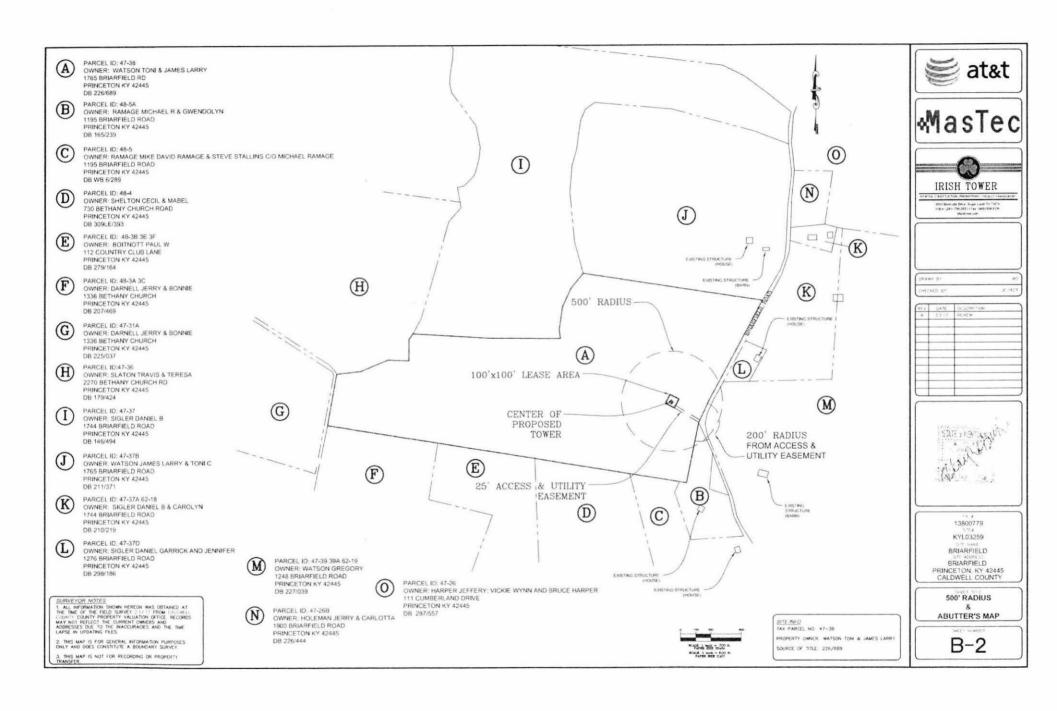
### **Driving Directions to Proposed Tower Site**

- Beginning at the offices of the Caldwell County Judge Executives located at 100 East Market Street, Princeton, Kentucky, head northeast on N. Jefferson Street and travel approximately 0.3 miles.
- 2. Continue straight onto KY-293 N / N. Jefferson Street and travel approximately 3.8 miles.
- 3. Turn left onto KY-1119 N and travel approximately 1.4 miles.
- 4. The site is on the left on Briarfield Road. The site coordinates are
  - a. North 37 deg 11 min 01.77 sec
  - b. West 87 deg 52 min 35.83 sec



Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-3069

Telephone: 502-955-4400 or 800-516-4293



### EXHIBIT M COPY OF POSTED NOTICES

### SITE NAME: BRIARFIELD 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 2017-00333 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 2017-00333 in your correspondence.

VIA TELEPHONE: 270-365-5588 VIA TELEFAX: 270-365-7299

Princeton Times Leader Attn: Public Notice Ad Placement 607 West Washington Street P.O. Box 439 Princeton, KY 42445

RE: Legal Notice Advertisement

Site Name: Briarfield Road

Dear Princeton Times Leader:

Please publish the following legal notice advertisement in the next edition of *The Princeton Times Leader*.

#### NOTICE

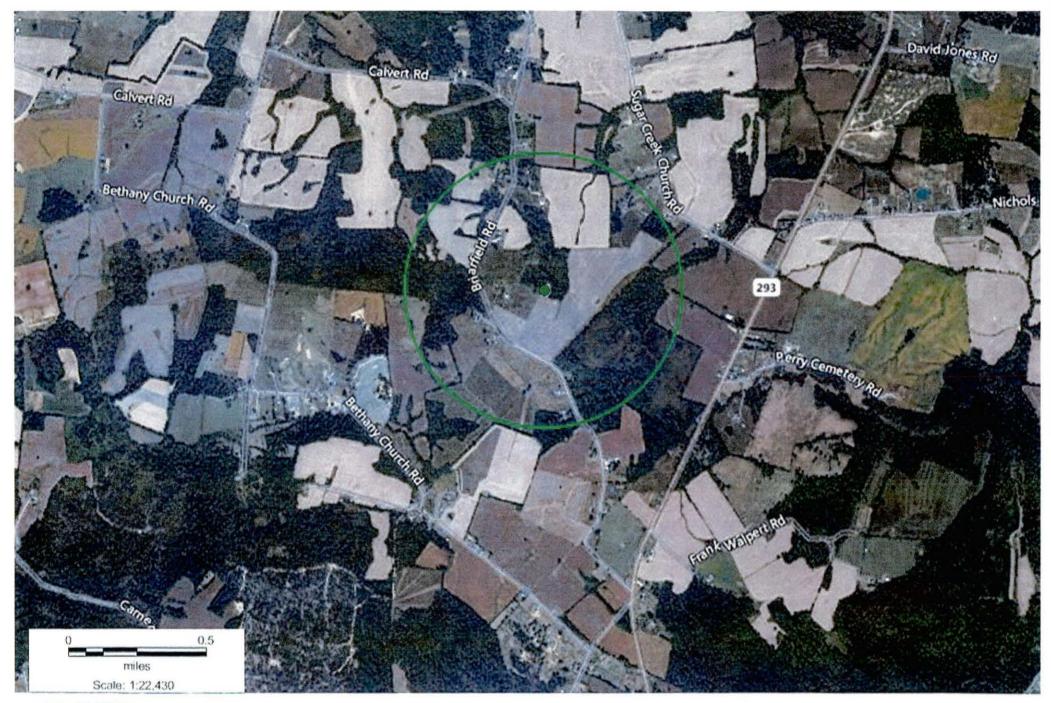
New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on Briarfield Road, Princeton, Kentucky (37°11'01.77" North latitude, 87°52'35.83" 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 2017-00333 in any correspondence sent in connection with this matter.

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

Sincerely,

Aaron L. Roof Pike Legal Group, PLLC

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



Lat: 37.182255 Lon: -87.870993 Radius: .5 miles

Briarfield Rd Search Area