

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

In the Matter of:

THE APPLICATION OF )  
NEW CINGULAR WIRELESS PCS, LLC, )  
A DELAWARE LIMITED LIABILITY COMPANY, )  
D/B/A AT&T MOBILITY )  
AND UNITI TOWERS LLC, A DELAWARE )  
LIMITED LIABILITY COMPANY )  
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC ) CASE NO.: 2020-00343  
CONVENIENCE AND NECESSITY TO CONSTRUCT )  
A WIRELESS COMMUNICATIONS FACILITY )  
IN THE COMMONWEALTH OF KENTUCKY )  
IN THE COUNTY OF BATH )

SITE NAME: BETHEL / CHANDLER ROAD

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

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Uniti Towers LLC, a Delaware limited liability company (“Applicants”), 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 submit 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 Applicants with wireless communications services.

In support of this Application, Applicants respectfully provide and state the following

information:

1. The complete names and addresses of the Applicants are: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having an address of Meidinger Tower, 462 S. 4<sup>th</sup> Street, Suite 2400, Louisville, Kentucky 40202 and Uniti Towers LLC, a Delaware limited liability company having an address of 10802 Executive Center Drive, Benton Building, Suite 300, Little Rock, Arkansas 72211.

2. Applicants propose construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicants submit 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. AT&T Mobility is a limited liability company organized in the State of Delaware on October 20, 1994. Uniti Towers is a limited liability company organized in the State of Delaware on December 2, 2015.

4. Applicants attest that they are in good standing in the state in which they are organized and further state that they are authorized to transact business in Kentucky.

5. The Certificates of Authority filed with the Kentucky Secretary of State for both Applicants are attached as part of **Exhibit A** pursuant to 807 KAR 5:001: Section 14(3).

6. AT&T Mobility operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. Copies of AT&T Mobility's FCC licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in

accordance with applicable FCC regulations.

7. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve AT&T Mobility's services to an area currently not served or not adequately served by AT&T Mobility 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 AT&T Mobility'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 AT&T Mobility's network design that must be in place to provide adequate coverage to the service area.

8. To address the above-described service needs, Applicants propose to construct a WCF at 312 Chandler Road, Sharpsburg, KY 40374 (38° 16' 01.03" North latitude, 83° 50' 48.69" 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 Amos L. Stoltzfus and Ruth Z. Stoltzfus pursuant to a deed recorded at Deed Book 236, Page 87 in the office of the County Clerk. The proposed WCF will consist of a 305-foot tall tower, with an approximately 12-foot tall lightning arrestor attached at the top, for a total height of 317-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of AT&T Mobility's radio electronics equipment and appurtenant equipment. The Applicants' equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of

the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

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

10. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for AT&T Mobility's antennas has also been included as part of **Exhibit B**.

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

12. Applicants have considered the likely effects of the installation of the proposed WCF on nearby land uses and values and have 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 AT&T Mobility's antennas on an existing structure. When suitable towers or structures exist, AT&T Mobility attempts to co-locate on existing structures such as communications towers or other structures capable of supporting AT&T Mobility's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

13. A copy of the Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration ("FAA") is attached as **Exhibit E**.

14. A copy of the approval issued by the Kentucky Airport Zoning Commission



("KAZC") is attached as **Exhibit F**.

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

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

17. Uniti Towers LLC, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreements or abbreviated agreements recorded with the County Clerk are attached as **Exhibit I**.

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

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

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

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

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

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

24. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section

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

25. The general area where the proposed facility is to be located is rural in character.

26. The process that was used by AT&T Mobility'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. AT&T Mobility'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 Applicants when searching for sites for its antennas that would provide the coverage deemed necessary by AT&T Mobility. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant

to radio frequency requirements is attached as **Exhibit N**.

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

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

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

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

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

Respectfully submitted,



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

## LIST OF EXHIBITS

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

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

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

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

**Certificate of Authorization**

Authentication number: 216299

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

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

**NEW CINGULAR WIRELESS PCS, LLC**

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

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

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



*Alison Lundergan Grimes*

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





COMMONWEALTH OF KENTUCKY  
ALISON LUNDERGAN GRIMES, SECRETARY OF STATE

**0972004.06** mstratton  
ADD  
Alison Lundergan Grimes  
Kentucky Secretary of State  
Received and Filed:  
1/3/2017 3:10 PM  
Fee Receipt: \$90.00

Division of Business Filings Business Filings PO Box 718 Frankfort, KY 40602 (502) 564-3490 www.sos.ky.gov	Certificate of Authority (Foreign Business Entity)	FBE
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Pursuant to the provisions of KRS 14A and KRS 271B, 273, 274, 275, 362 and 388 the undersigned hereby applies for authority to transact business in Kentucky on behalf of the entity named below and, for that purpose, submits the following statements:

1. The entity is a :  profit corporation (KRS 271B);  nonprofit corporation (KRS 273);  professional service corporation (KRS 274);  
 business trust (KRS 386);  limited liability company (KRS 275);  professional limited liability company (KRS 275);  
 limited partnership (KRS 362).

2. The name of the entity is Uniti Towers LLC  
(The name must be identical to the name on record with the Secretary of State.)

3. The name of the entity to be used in Kentucky is (if applicable): \_\_\_\_\_  
(Only provide if "real name" is unavailable for use; otherwise, leave blank.)

4. The state or country under whose law the entity is organized is Delaware

5. The date of organization is 12/2/2015 and the period of duration is \_\_\_\_\_  
(If left blank, the period of duration is considered perpetual.)

6. The mailing address of the entity's principal office is  
10802 Executive Center Drive, Benton Building, Suite 300 Little Rock AR 72211  
Street Address City State Zip Code

7. The street address of the entity's registered office in Kentucky is  
306 West Main Street - Suite 512 Frankfort KY 40601  
Street Address (No P.O. Box Numbers) City State Zip Code

and the name of the registered agent at that office is C T Corporation System

8. The names and business addresses of the entity's representatives (secretary, officers and directors, managers, trustees or general partners).

<u>Daniel L. Heard</u> Name	<u>10802 Executive Center Drive, Benton Building, Suite 300</u> Street or P.O. Box	<u>Little Rock</u> City	<u>AR</u> State	<u>72211</u> Zip Code
<u>Kenneth Gunderman</u> Name	<u>10802 Executive Center Drive, Benton Building, Suite 300</u> Street or P.O. Box	<u>Little Rock</u> City	<u>AR</u> State	<u>72211</u> Zip Code
<u>Mark A. Wallace</u> Name	<u>10802 Executive Center Drive, Benton Building, Suite 300</u> Street or P.O. Box	<u>Little Rock</u> City	<u>AR</u> State	<u>72211</u> Zip Code

9. If a professional service corporation, all the individual shareholders, not less than one half (1/2) of the directors, and all of the officers other than the secretary and treasurer are licensed in one or more states or territories of the United States or District of Columbia to render a professional service described in the statement of purposes of the corporation.

10. I certify that, as of the date of filing this application, the above-named entity validly exists under the laws of the jurisdiction of its formation.

11. If a limited partnership, it elects to be a limited liability limited partnership. Check the box if applicable:

12. If a limited liability company, check box if manager-managed:

13. This application will be effective upon filing, unless a delayed effective date and/or time is provided. The effective date or the delayed effective date cannot be prior to the date the application is filed. The date and/or time is \_\_\_\_\_  
(Delayed effective date and/or time)

[Signature] Keith Harvey, VP - Deputy General Counsel 12/30/2016  
Signature of Authorized Representative Printed Name & Title Date

I, C T Corporation System, consent to serve as the registered agent on behalf of the business entity.

[Signature] Tristan Emrich Assistant Secretary 12/30/2016  
Signature of Registered Agent Printed Name Title Date

(09/15)

# Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "UNITI TOWERS LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE THIRTIETH DAY OF DECEMBER, A.D. 2016.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.



5896640 8300

SR# 20167345793

You may verify this certificate online at [corp.delaware.gov/authver.shtml](http://corp.delaware.gov/authver.shtml)

A handwritten signature in black ink, appearing to read "JBULLOCK", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed in a small font.

Authentication: 203613650

Date: 12-30-16

**REFERENCE COPY**

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



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> KNKN956	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA450	<b>Channel Block</b> B
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003291192

<b>Market Name</b> Kentucky 8 - Mason
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<b>Grant Date</b> 08-30-2011	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 10-01-2021	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>
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**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	38-06-01.6 N	083-56-44.2 W	307.8	126.5	1059771
Address: 3003 Maysville Road (76290)					
City: MT. STERLING County: MONTGOMERY State: KY Construction Deadline:					

**Antenna: 1**

<b>Maximum Transmitting ERP in Watts:</b> 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	135.500	127.300	143.700	142.100	122.700	113.300	130.600	136.100
<b>Transmitting ERP (watts)</b>	154.900	65.100	5.300	0.700	0.309	0.400	10.100	78.000

**Antenna: 2**

<b>Maximum Transmitting ERP in Watts:</b> 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	135.500	127.300	143.700	142.100	122.700	113.300	130.600	136.100
<b>Transmitting ERP (watts)</b>	0.500	7.000	36.900	44.000	12.100	0.900	0.100	0.100

**Antenna: 3**

<b>Maximum Transmitting ERP in Watts:</b> 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	135.500	127.300	143.700	142.100	122.700	113.300	130.600	136.100
<b>Transmitting ERP (watts)</b>	24.700	18.300	22.700	33.500	103.700	99.000	126.600	69.600

**Conditions:**

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

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	38-11-09.0 N	083-25-12.0 W	377.0	57.9	

Address: 1470 SOUTH TOLLIVER ROAD (76292)

City: MOREHEAD County: ROWAN State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	116.000	104.400	127.300	125.300	124.700	174.000	174.600	156.000
Transmitting ERP (watts)	225.400	94.700	7.700	1.000	0.500	0.500	14.700	113.600

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	116.000	104.400	127.300	125.300	124.700	174.000	174.600	156.000
Transmitting ERP (watts)	2.500	46.700	306.900	397.600	115.300	6.500	0.800	0.900

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	116.000	104.400	127.300	125.300	124.700	174.000	174.600	156.000
Transmitting ERP (watts)	2.100	0.421	0.421	7.600	62.700	210.700	160.100	17.300

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	38-19-06.7 N	084-07-20.5 W	271.3	126.2	1043355

Address: 1062 MAYSVILLE ROAD (76289)

City: MILLERSBURG County: NICHOLAS State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	135.000	140.400	124.300	128.600	122.500	127.600	146.600	134.900
Transmitting ERP (watts)	158.500	176.800	51.900	29.000	0.400	10.800	59.600	176.800

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	135.000	140.400	124.300	128.600	122.500	127.600	146.600	134.900
Transmitting ERP (watts)	2.000	20.200	108.000	135.400	28.500	2.600	0.400	0.500

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	135.000	140.400	124.300	128.600	122.500	127.600	146.600	134.900
Transmitting ERP (watts)	27.500	10.700	14.300	31.400	141.300	187.300	211.300	81.800

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	38-41-03.8 N	084-03-26.6 W	281.0	127.1	1043359

Address: 275 SOUTH BLUE GRASS ROAD (76297)

City: Brooksville County: BRACKEN State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	169.000	167.500	126.700	147.100	165.400	152.500	139.700	174.500
Transmitting ERP (watts)	133.400	148.800	43.700	24.400	0.300	9.100	50.100	148.800

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	169.000	167.500	126.700	147.100	165.400	152.500	139.700	174.500
Transmitting ERP (watts)	12.200	80.800	162.200	168.800	105.900	30.400	22.400	8.400

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	169.000	167.500	126.700	147.100	165.400	152.500	139.700	174.500
Transmitting ERP (watts)	23.200	9.000	12.000	26.500	118.900	157.600	177.800	68.800

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	38-35-58.3 N	083-10-00.7 W	319.7	61.0	

Address: 803 HIGHWAY 546 STATE ROUTE 10 (76299)

City: GARRISON County: LEWIS State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.800	131.000	101.600	71.200	75.500	126.000	153.200	87.400
Transmitting ERP (watts)	129.000	114.600	117.300	36.300	42.600	15.500	17.400	87.200

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.800	131.000	101.600	71.200	75.500	126.000	153.200	87.400
Transmitting ERP (watts)	73.300	21.400	29.200	144.400	211.200	182.100	175.900	67.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	38-01-26.0 N	083-57-08.0 W	317.9	68.6	1042213

Address: 2122 Levee Road (76302)

City: MT. STERLING County: MONTGOMERY State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.500	100.200	119.400	105.700	123.200	97.900	77.600	85.000
Transmitting ERP (watts)	8.100	22.900	20.100	3.800	0.300	0.100	0.100	0.800

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	38-01-26.0 N	083-57-08.0 W	317.9	68.6	1042213

Address: 2122 Levee Road (76302)

City: MT. STERLING County: MONTGOMERY State: KY Construction Deadline: 12-30-2014

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.500	100.200	119.400	105.700	123.200	97.900	77.600	85.000
Transmitting ERP (watts)	0.100	0.200	1.800	14.400	23.200	14.400	1.500	0.100

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.500	100.200	119.400	105.700	123.200	97.900	77.600	85.000
Transmitting ERP (watts)	175.400	50.300	37.100	13.900	20.100	133.800	268.500	279.600

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	38-14-43.5 N	083-25-18.5 W	405.1	113.1	1042211

Address: 4950 HIGHWAY 799 (76304)

City: MOREHEAD County: ROWAN State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	178.500	177.300	197.500	172.200	197.100	268.500	231.500	202.400
Transmitting ERP (watts)	240.300	293.300	153.900	30.000	15.800	3.100	6.500	74.200

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	178.500	177.300	197.500	172.200	197.100	268.500	231.500	202.400
Transmitting ERP (watts)	0.200	1.100	2.600	2.200	1.700	0.300	0.100	0.200

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	178.500	177.300	197.500	172.200	197.100	268.500	231.500	202.400
Transmitting ERP (watts)	0.400	0.104	0.104	1.600	16.500	52.300	41.900	6.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	38-32-02.2 N	084-01-42.7 W	287.7	93.0	1248707

Address: ROUTE 2 BOX 357A (76309)

City: MT. OLIVET County: ROBERTSON State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	133.400	137.900	100.500	124.900	146.500	140.100	149.500	140.700
Transmitting ERP (watts)	243.800	92.200	9.400	2.400	0.500	0.700	12.900	103.400



Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	38-32-02.2 N	084-01-42.7 W	287.7	93.0	1248707

Address: ROUTE 2 BOX 357A (76309)  
City: MT. OLIVET County: ROBERTSON State: KY Construction Deadline: 12-30-2014

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	133.400	137.900	100.500	124.900	146.500	140.100	149.500	140.700
Transmitting ERP (watts)	1.400	30.900	155.600	213.600	45.400	4.800	1.700	0.600
Antenna: 3								
Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	133.400	137.900	100.500	124.900	146.500	140.100	149.500	140.700
Transmitting ERP (watts)	2.700	0.427	1.000	4.500	61.200	213.600	155.600	21.400

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	38-41-05.5 N	083-50-24.3 W	281.3	142.0	1234091

Address: 3530 TUCKAHOE ROAD (76310)  
City: Maysville County: MASON State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	176.600	204.400	178.600	144.800	138.700	142.800	135.200	167.500
Transmitting ERP (watts)	178.600	199.300	58.500	32.700	0.400	12.100	67.100	199.300
Antenna: 2								
Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	176.600	204.400	178.600	144.800	138.700	142.800	135.200	167.500
Transmitting ERP (watts)	1.600	35.900	180.700	248.000	52.700	5.600	2.000	0.700
Antenna: 3								
Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	176.600	204.400	178.600	144.800	138.700	142.800	135.200	167.500
Transmitting ERP (watts)	1.500	0.305	0.305	5.500	45.400	152.700	116.000	12.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	37-56-51.0 N	083-36-24.0 W	391.7	86.6	1042227

Address: 1158 COUNTY PARK ROAD (84346)  
City: FRENCHBURG County: MENIFEE State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	174.000	196.600	135.600	116.700	129.500	143.100	146.500	161.000
Transmitting ERP (watts)	205.100	86.100	7.000	0.900	0.410	0.500	13.400	103.300

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	37-56-51.0 N	083-36-24.0 W	391.7	86.6	1042227

Address: 1158 COUNTY PARK ROAD (84346)

City: FRENCHBURG County: MENIFEE State: KY Construction Deadline: 12-30-2014

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	174.000	196.600	135.600	116.700	129.500	143.100	146.500	161.000
Transmitting ERP (watts)	20.500	136.000	272.900	284.100	178.200	51.100	37.700	14.100

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	174.000	196.600	135.600	116.700	129.500	143.100	146.500	161.000
Transmitting ERP (watts)	39.000	15.100	20.200	44.500	200.000	265.200	299.200	115.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	38-43-27.3 N	083-59-05.2 W	284.7	60.7	

Address: 1910 Dutch Road Ridge (101049)

City: Augusta County: BRACKEN State: KY Construction Deadline: 12-30-2014

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.600	122.500	103.100	51.900	67.800	65.600	79.900	97.600
Transmitting ERP (watts)	178.200	74.900	6.100	0.800	0.400	0.400	11.700	89.800

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.600	122.500	103.100	51.900	67.800	65.600	79.900	97.600
Transmitting ERP (watts)	2.400	24.800	132.900	166.600	35.100	3.200	0.400	0.600

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	96.600	122.500	103.100	51.900	67.800	65.600	79.900	97.600
Transmitting ERP (watts)	1.700	0.333	0.333	6.000	49.500	166.600	126.600	13.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	38-34-35.7 N	083-26-23.4 W	321.0	119.5	1206373

Address: Off of SR # 10 (76295)

City: Charters County: LEWIS State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	209.500	182.600	156.500	135.100	112.200	142.700	191.300	173.300
Transmitting ERP (watts)	152.800	137.700	121.300	47.800	53.000	18.200	23.100	109.400



Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	38-34-35.7 N	083-26-23.4 W	321.0	119.5	1206373

Address: Off of SR # 10 (76295)

City: Charters County: LEWIS State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	209.500	182.600	156.500	135.100	112.200	142.700	191.300	173.300
Transmitting ERP (watts)	0.800	2.700	44.500	178.100	160.300	24.700	2.800	0.700

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	209.500	182.600	156.500	135.100	112.200	142.700	191.300	173.300
Transmitting ERP (watts)	8.500	2.200	0.441	0.700	11.700	93.600	220.800	83.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
23	38-03-34.6 N	083-30-18.6 W	367.9	59.1	

Address: 148 Dogwood Lane (76303)

City: Salt Lick County: BATH State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.600	119.200	127.400	129.100	131.900	91.500	141.700	180.300
Transmitting ERP (watts)	86.100	142.900	53.100	37.600	0.300	18.800	66.800	133.400

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.600	119.200	127.400	129.100	131.900	91.500	141.700	180.300
Transmitting ERP (watts)	18.000	119.500	239.900	249.700	156.700	44.900	33.100	12.400

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.600	119.200	127.400	129.100	131.900	91.500	141.700	180.300
Transmitting ERP (watts)	34.300	13.300	17.800	39.100	175.800	233.100	263.000	101.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	37-57-38.2 N	083-46-12.6 W	382.2	77.1	1252133

Address: 377 WHISPERING PINE (85240)

City: MEANS County: MENIFEE State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	193.100	167.300	141.100	121.100	166.700	178.600	195.900	185.900
Transmitting ERP (watts)	205.100	86.100	7.000	0.900	0.410	0.500	13.400	103.300

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN956

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	37-57-38.2 N	083-46-12.6 W	382.2	77.1	1252133

Address: 377 WHISPERING PINE (85240)

City: MEANS County: MENIFEE State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	193.100	167.300	141.100	121.100	166.700	178.600	195.900	185.900
Transmitting ERP (watts)	4.000	55.200	276.600	325.000	69.600	3.000	0.700	0.700

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	193.100	167.300	141.100	121.100	166.700	178.600	195.900	185.900
Transmitting ERP (watts)	1.900	0.400	0.400	6.900	57.000	191.800	145.700	15.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	37-55-42.0 N	083-32-46.4 W	394.7	105.2	1252134

Address: MORT BOTTS ROAD (85243)

City: DENNISON County: MENIFEE State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	189.900	177.500	189.000	179.800	166.900	162.500	146.700	200.500
Transmitting ERP (watts)	310.500	126.400	6.600	1.300	0.621	1.100	20.100	166.600

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	189.900	177.500	189.000	179.800	166.900	162.500	146.700	200.500
Transmitting ERP (watts)	0.600	8.100	42.500	50.700	14.000	1.100	0.200	0.101

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	189.900	177.500	189.000	179.800	166.900	162.500	146.700	200.500
Transmitting ERP (watts)	1.700	0.334	0.334	6.000	49.700	167.000	126.900	13.700

Control Points:

Control Pt. No. 1

Address: 2601 Palumbo Drive

City: Lexington County: State: KY Telephone Number: (606)269-1050

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

**Call Sign:** KNKN956

**File Number:**

**Print Date:**

**Waivers/Conditions:**

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

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CORPORATION  
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J. MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

Table with Call Sign (KNLF251), File Number, and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0003291192

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

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

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

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

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

**Call Sign:** KNLF251

**File Number:**

**Print Date:**

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

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918512.

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

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

**Call Sign:** KNLF251

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

Call Sign KNLH398	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date 04-14-2017	Effective Date 08-31-2018	Expiration Date 04-28-2027	Print Date
Market Number BTA252	Channel Block D	Sub-Market Designator 0	
Market Name Lexington, KY			
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

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

Conditions:

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

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

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

**Call Sign:** KNLH398

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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



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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

Table with Call Sign (WPOI255), File Number, and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0003291192

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

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

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

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

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

**Call Sign:** WPOI255

**File Number:**

**Print Date:**

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

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

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

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

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI255

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Reference Copy

**REFERENCE COPY**

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



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> WQGD755	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

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

<b>Grant Date</b> 12-18-2006	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 12-18-2021	<b>Print Date</b>
<b>Market Number</b> BEA047	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 9	
<b>Market Name</b> Lexington, KY-TN-VA-WV			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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



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

**Call Sign:** WQGD755

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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

**EXHIBIT B**

**SITE DEVELOPMENT PLAN:**

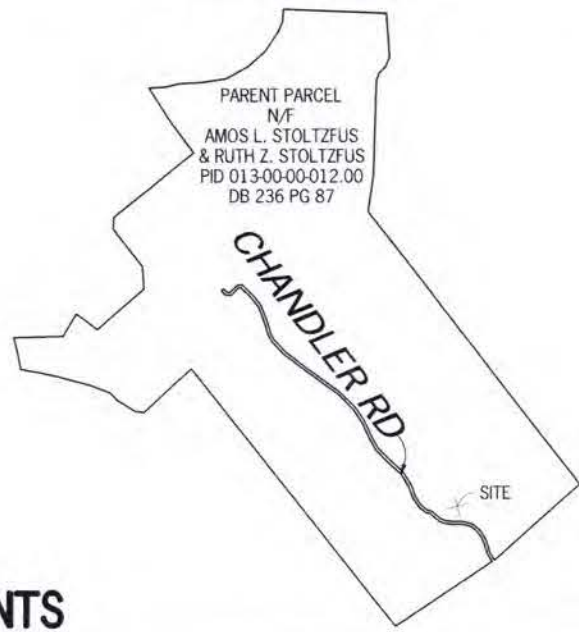
**500' VICINITY MAP  
LEGAL DESCRIPTIONS  
FLOOD PLAIN CERTIFICATION  
SITE PLAN  
VERTICAL TOWER PROFILE**







**OVERALL VIEW**



NTS

**PARENT PARCEL**

OWNER: AMOS L. STOLTZFUS & RUTH Z. STOLTZFUS  
 SITE ADDRESS: 675 CHANDLER RD, SHARPSBURG, KY 40374  
 PARCEL ID: 013-00-00-012.00  
 AREA: 361 ACRES (PER TAX ASSESSOR)  
 ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS  
 REFERENCE: DEED BOOK 236 PAGE 87

**SITE INFORMATION**

LEASE AREA = 10,000 SQUARE FEET (0.2296 ACRES)  
 LATITUDE = 38°16'01.03" (NAD 83) (38.266953°)  
 LONGITUDE = -83°50'48.69" (NAD 83) (-83.846858°)  
 AT CENTER OF LEASE AREA  
 ELEVATION AT CENTER OF LEASE AREA = 918.8' A.M.S.L.

**SURVEYOR'S CERTIFICATE**

I, G. DARRELL TAYLOR, A KENTUCKY PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. THE UNADJUSTED PRECISION RATIO OF THE TRAVERSE EXCEEDED 1:10,000 AND WAS NOT ADJUSTED FOR CLOSURE. THIS SURVEY MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR AN URBAN SURVEY AS ESTABLISHED BY THE STATE OF KENTUCKY, PER 201 KAR 18:150 AND IN EFFECT ON THE DATE OF THIS SURVEY.

*[Signature]* 01/07/2020  
 G. DARRELL TAYLOR, PLS 4179

**GPS NOTES**

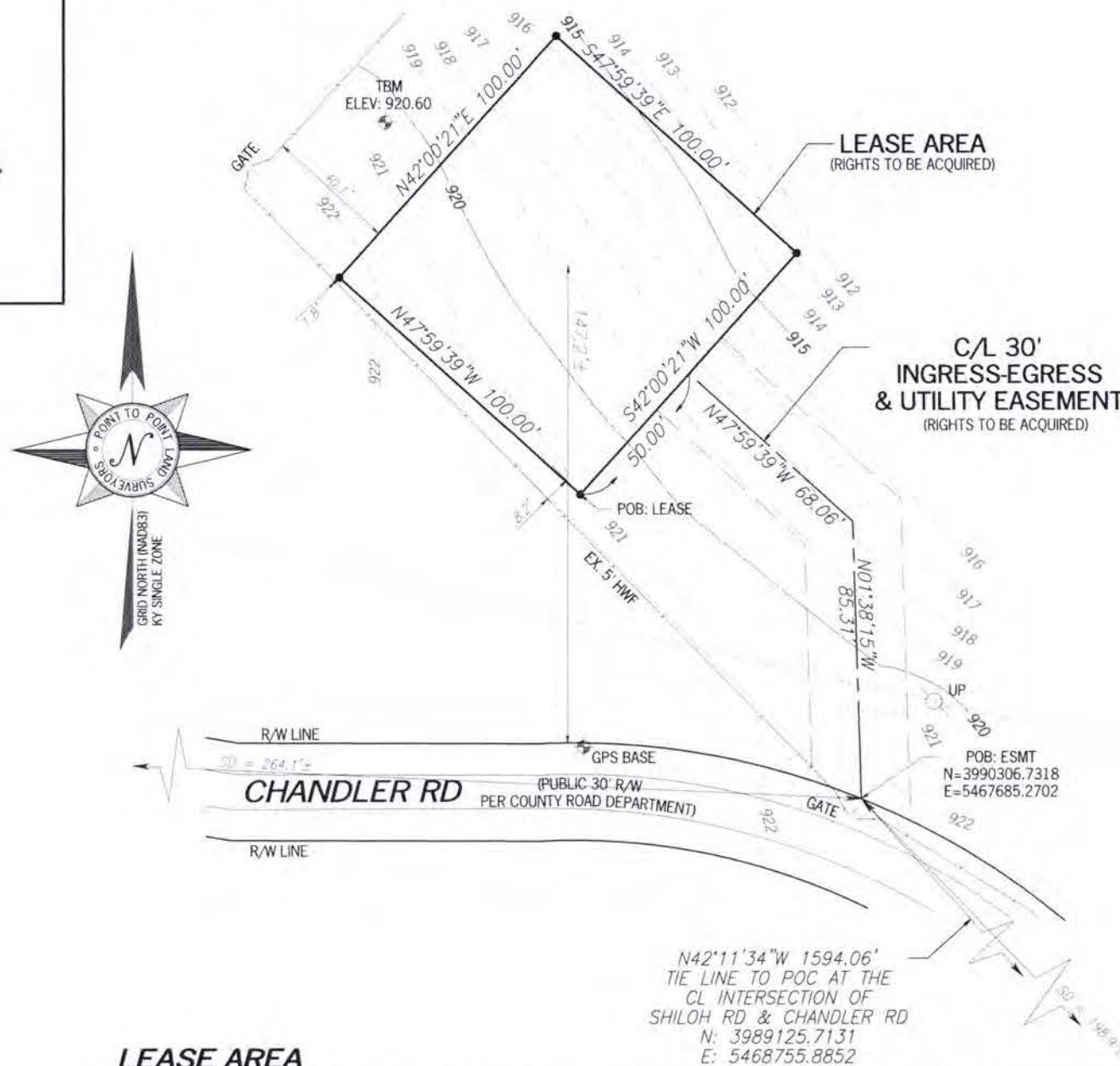
THE FOLLOWING GPS STATISTICS UPON WHICH THIS SURVEY IS BASED HAVE BEEN PRODUCED AT THE 95% CONFIDENCE LEVEL:  
 POSITIONAL ACCURACY: 0.01 FEET (HORZ) 0.13 FEET (VERT)  
 TYPE OF EQUIPMENT: GEOMAX ZENITH35 PRO BASE AND ROVER, DUAL FREQUENCY  
 TYPE OF GPS FIELD PROCEDURE: ONLINE POSITION USER INTERFACE  
 DATES OF SURVEY: 12-19-2019  
 DATUM / EPOCH: NAD\_83(2011)EPOCH:2010.0000  
 PUBLISHED / FIXED CONTROL USE: N/A  
 GEOID MODEL: 18  
 COMBINED GRID FACTOR(S): 0.99988926 CENTERED ON THE GPS BASE POINT AS SHOWN HEREON.  
 CONVERGENCE ANGLE: 01°10'06.45"

**30' INGRESS-EGRESS & UTILITY EASEMENT**

TOGETHER WITH A 30-FOOT INGRESS-EGRESS AND UTILITY EASEMENT (LYING 15 FEET EACH SIDE OF CENTERLINE) LYING AND BEING IN BATH COUNTY, KENTUCKY, AND BEING PART OF THE LANDS OF AMOS L. STOLTZFUS AND RUTH Z. STOLTZFUS, AS RECORDED IN DEED BOOK 236 PAGE 87, BATH COUNTY RECORDS, BATH COUNTY, KENTUCKY, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A POINT CREATED BY THE CENTERLINE INTERSECTION OF SHILOH ROAD AND CHANDLER ROAD, SAID POINT HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N: 3989125.7131, E: 5468755.8852; THENCE RUNNING ALONG A TIE LINE, NORTH 42°11'34" WEST, 1594.06 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF CHANDLER ROAD HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N: 3990306.7318, E: 5467685.2702 AND THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID RIGHT-OF-WAY LINE, NORTH 01°38'15" WEST, 85.31 FEET TO A POINT; THENCE, NORTH 47°59'39" WEST, 68.06 FEET TO THE ENDING AT A POINT ON THE LEASE AREA.

BEARINGS ARE BASED ON KENTUCKY GRID NORTH, NAD83, SINGLE ZONE.



**LEASE AREA**

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN BATH COUNTY, KENTUCKY, AND BEING PART OF THE LANDS OF AMOS L. STOLTZFUS AND RUTH Z. STOLTZFUS, AS RECORDED IN DEED BOOK 236 PAGE 87, BATH COUNTY RECORDS, BATH COUNTY, KENTUCKY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A POINT CREATED BY THE CENTERLINE INTERSECTION OF SHILOH ROAD AND CHANDLER ROAD, SAID POINT HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N: 3989125.7131, E: 5468755.8852; THENCE RUNNING ALONG A TIE LINE, NORTH 42°11'34" WEST, 1594.06 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF CHANDLER ROAD HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N: 3990306.7318, E: 5467685.2702; THENCE LEAVING SAID RIGHT-OF-WAY LINE, NORTH 01°38'15" WEST, 85.31 FEET TO A POINT; THENCE, NORTH 47°59'39" WEST, 68.06 FEET TO A POINT ON THE LEASE AREA; THENCE RUNNING ALONG A LEASE AREA, SOUTH 42°00'21" WEST, 50.00 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, NORTH 47°59'39" WEST, 100.00 FEET TO A POINT; THENCE, NORTH 42°00'21" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 47°59'39" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 42°00'21" WEST, 100.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS ARE BASED ON KENTUCKY GRID NORTH, NAD83, SINGLE ZONE.

SAID TRACT CONTAINS 0.2296 ACRES (10,000 SQUARE FEET), MORE OR LESS.



**VICINITY MAP**

NOT TO SCALE

**GENERAL NOTES**

\* THIS SPECIFIC PURPOSE SURVEY IS FOR THE LEASED PREMISES AND EASEMENTS ONLY. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF UNITI TOWERS, LLC AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE PROPOSED LEASED PREMISES AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

THIS SPECIFIC PURPOSE SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, OR RIGHTS-OF-WAY NOT SHOWN HEREON.

THE FIELD DATA UPON WHICH THIS SPECIFIC PURPOSE SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000+ FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS NOT ADJUSTED FOR CLOSURE.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TPS 1200 ROBOTIC & GEOMAX ZENITH 35. (DATE OF LAST FIELD VISIT: 12-19-2019)

THE 1' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE ADJUSTED TO NAVD 88 DATUM (COMPUTED USING GEOID18) AND HAVE A VERTICAL ACCURACY OF ± 0.5'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.

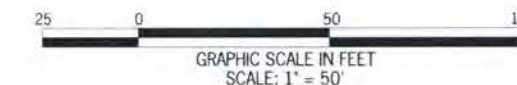
BEARINGS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE BASED ON GRID NORTH (NAD 83) KENTUCKY SINGLE ZONE.

PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X (AREA OF MINIMAL FLOOD HAZARD). COMMUNITY PANEL NO.: 21011C0050C DATED: 12/17/2010.

NO WETLAND AREAS HAVE BEEN INVESTIGATED BY THIS SPECIFIC PURPOSE SURVEY.

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS.

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT ANY UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT ANY UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UNDERGROUND UTILITIES.



**LEGEND**

- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- IPS IRON PIN SET
- IPF IRON PIN FOUND
- CMF CONCRETE MONUMENT FOUND
- UP UTILITY POLE
- N/F NOW OR FORMERLY
- R/W RIGHT-OF-WAY
- HWF HOG WIRE FENCE
- TBM TEMPORARY BENCH MARK
- SD SIGHT DISTANCE

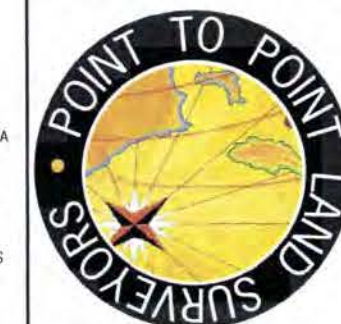


Know what's below.  
 Call before you dig.

STATE of KENTUCKY  
 G. DARRELL TAYLOR  
 4179  
 LICENSED PROFESSIONAL LAND SURVEYOR

NO.	DATE	REVISION

POINT TO POINT LAND SURVEYORS  
 100 Governors Trace, Ste. 103  
 Peachtree City, GA 30269  
 (p) 678.565.4440 (f) 678.565.4497  
 (w) pointtosurvey.com



SPECIFIC PURPOSE SURVEY PREPARED FOR:



CHANDLER RD

SITE NO. KYLEX2051  
 BATH COUNTY, KENTUCKY

DRAWN BY: AKG

CHECKED BY: JKL

APPROVED: D. MILLER

DATE: JANUARY 7, 2020

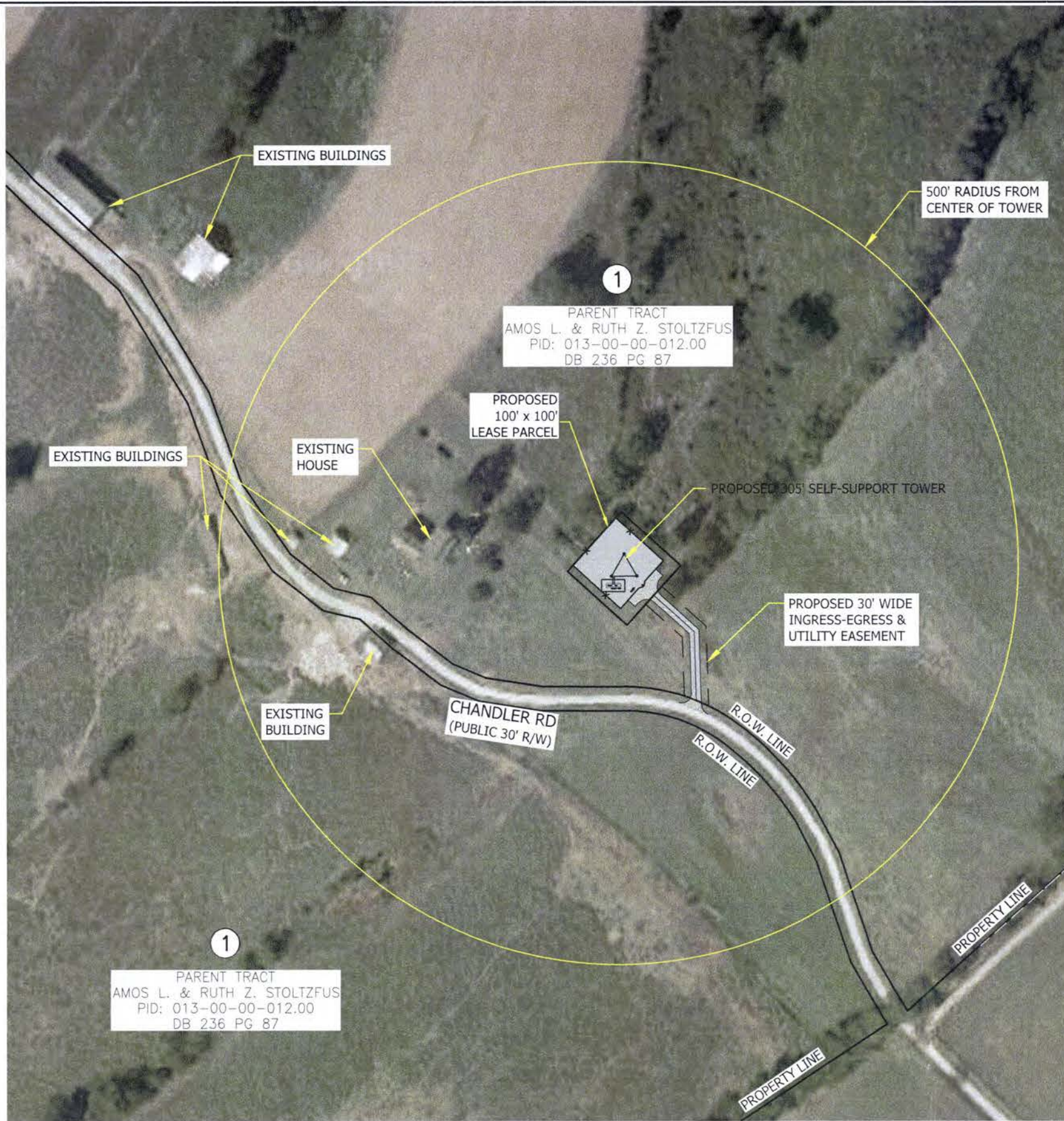
P2P JOB #: 195268KY

SHEET:

1

OF 1





#	OWNER	ADDRESS	PID	REF
1	AMOS & RUTH STOLTZFUS	675 CHANDLER RD SHARPSBURG, KY 40374	013-00-00-012.00	DB 236 PG 87

NOTE:

1. SEE SHT. C-1.1 FOR INFORMATION ON PROPERTIES #2 - #10.
2. PVA INFORMATION WAS OBTAINED ON 7/22/2020 FROM THE OFFICIAL RECORDS OF THE COUNTY'S PROPERTY VALUATION ADMINISTRATOR.
3. THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
4. NOT FOR RECORDING OR PROPERTY TRANSFER.



HARMONI TOWERS  
**CHANDLER RD**  
 FA# 15147579  
 PACE# MRTNK047532  
 PT# 10153678  
 312 CHANDLER RD  
 SHARPSBURG, KY 40374  
 BATH COUNTY  
 PROPOSED 305' SELF-SUPPORT TOWER

PROJECT NO: 137361  
 CHECKED BY: DLS

ISSUED FOR:			
REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
 4011  
 Expires 12/31/20

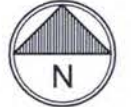


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

500' RADIUS &  
 ADJOINER'S  
 DRAWING

SHEET NUMBER:  
**C-1.0**

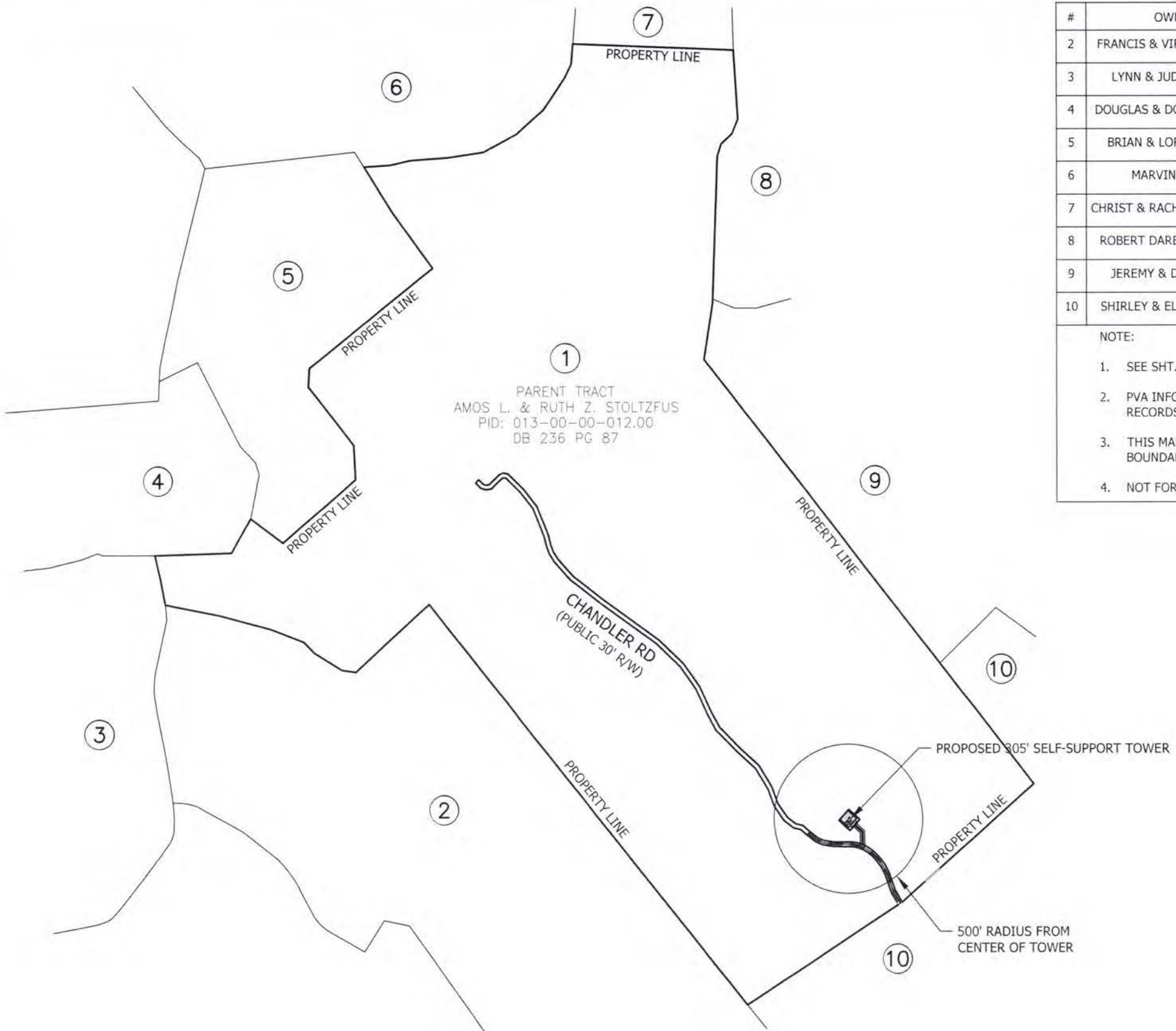
**1** 500' RADIUS & ADJOINER'S DRAWING  
 SCALE:



CALL KENTUCKY ONE CALL  
 (800) 752-6007  
 CALL 3 WORKING DAYS  
 BEFORE YOU DIG!







#	OWNER	ADDRESS	PID	REF
2	FRANCIS & VIRGINIA SMITH	1512 BETHEL RIDGE RD SHARPSBURG, KY 40374	013-00-00-011.00	-
3	LYNN & JUDY HARMON	1779 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-010.00	-
4	DOUGLAS & DONNA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.01	-
5	BRIAN & LORIA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.00	-
6	MARVIN E. VICE	175 SCRUB GRASS RD CARLISLE, KY 40311	013-00-00-003.00	-
7	CHRIST & RACHEL STOLTZFUS	1300 LONG LANE PEMBROKE, KY 42266	012-00-00-001.00	-
8	ROBERT DAREN OVINGTON	1517 SHARP RD SHARPSBURG, KY 40374	019-00-00-001.00	-
9	JEREMY & DUSKY GINN	743 COYOTE RD SHARPSBURG, KY 40374	020-00-00-002.04	-
10	SHIRLEY & ELAINE GRIMES	37 SHILOH RD SHARPSBURG, KY 40374	013-00-00-015.00	-

- NOTE:
- SEE SHT. C-1.0 FOR INFORMATION ON PROPERTIES #1.
  - PVA INFORMATION WAS OBTAINED ON 7/22/2020 FROM THE OFFICIAL RECORDS OF THE COUNTY'S PROPERTY VALUATION ADMINISTRATOR.
  - THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
  - NOT FOR RECORDING OR PROPERTY TRANSFER.

**1** OVERALL ADJOINER'S DRAWING  
SCALE: 1"=800'  
0' 400' 800' 1200' 1600'



CALL KENTUCKY ONE CALL  
(800) 752-6007  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!



HARMONI TOWERS  
CHANDLER RD  
FA# 15147579  
PACE# MRTNK047532  
PT# 10153678  
312 CHANDLER RD  
SHARPSBURG, KY 40374  
BATH COUNTY  
PROPOSED 305' SELF-SUPPORT TOWER

PROJECT NO: 137361  
CHECKED BY: DLS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
4011  
Expires 12/31/20



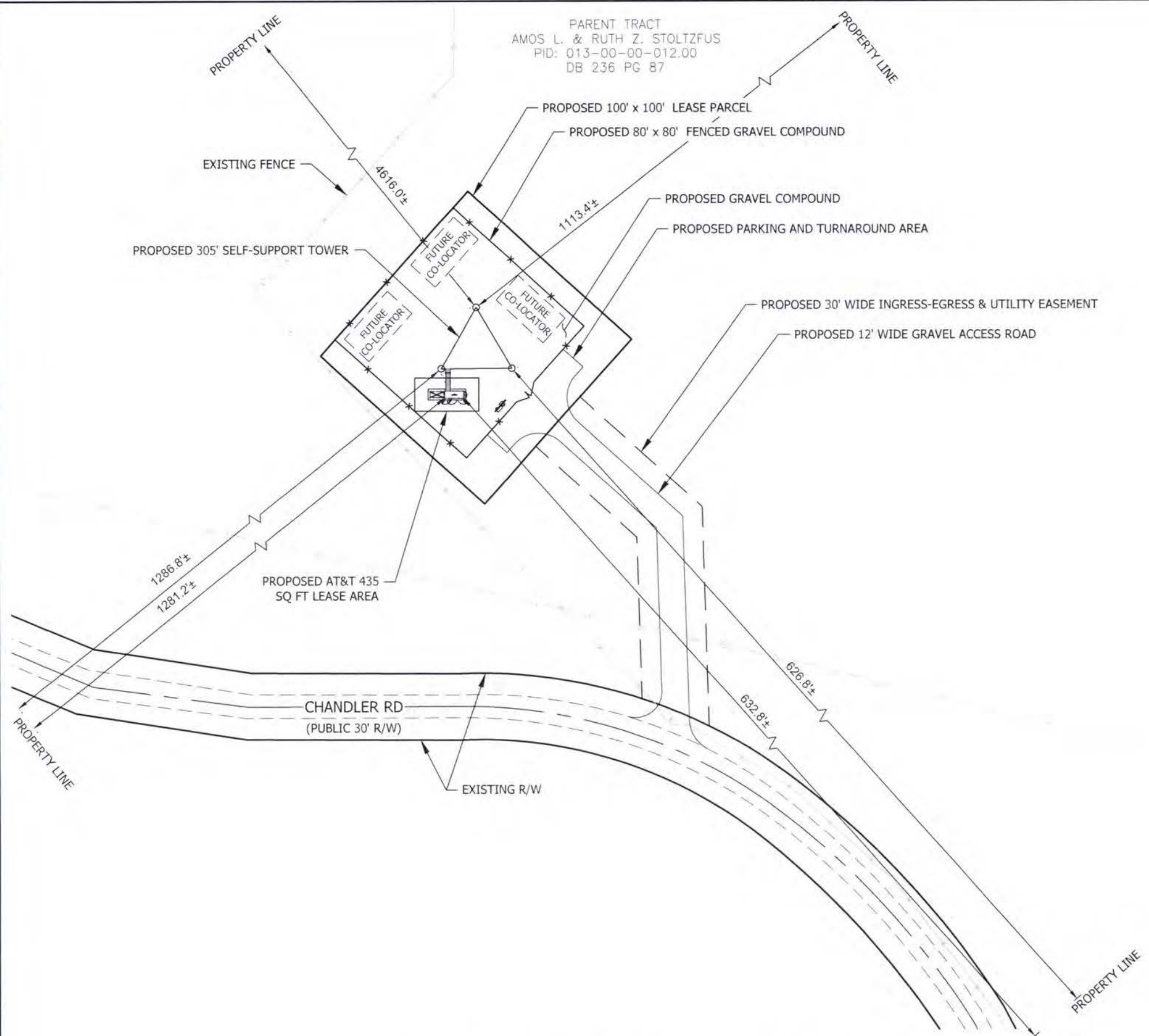
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OVERALL ADJOINER'S DRAWING

SHEET NUMBER:  
**C-1.1**



PARENT TRACT  
 AMOS L. & RUTH Z. STOLTZFUS  
 PID: 013-00-00-012.00  
 DB 236 PG 87



**NOTES:**

1. TOWER LATITUDE, LONGITUDE & ELEVATION MEET FAA "1-A" ACCURACY REQUIREMENTS.

2. PROPOSED SELF-SUPPORT TOWER.

CENTER OF TOWER:

LATITUDE: NORTH 38°16'01.03" (38.266953) NAD 83  
 LONGITUDE: WEST -83°50'48.69" (-83.846858) NAD 83  
 GROUND ELEVATION @ 918.8' (A.M.S.L.)

3. THE APPROXIMATE PERPENDICULAR DISTANCES FROM THE OUTER EDGE OF THE PROPOSED TOWER TO PARENT TRACT NEAREST PROPERTY LINE ARE AS FOLLOWS:

- NORTHWEST: 4616.0'±
- NORTHEAST: 1113.4'±
- SOUTHEAST: 626.8'±
- SOUTHWEST: 1286.8'±



HARMONI TOWERS  
 CHANDLER RD  
 FA# 15147579  
 PACE# MRINK047532  
 PT# 10153678  
 312 CHANDLER RD  
 SHARPSBURG, KY 40374  
 BATH COUNTY  
 PROPOSED 305' SELF-SUPPORT TOWER

PROJECT NO: 137361  
 CHECKED BY: DLS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
O	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

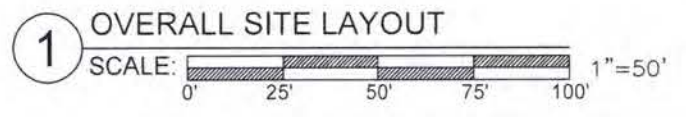
B&T ENGINEERING, INC.  
 4011  
 Expires 12/31/20



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OVERALL SITE LAYOUT

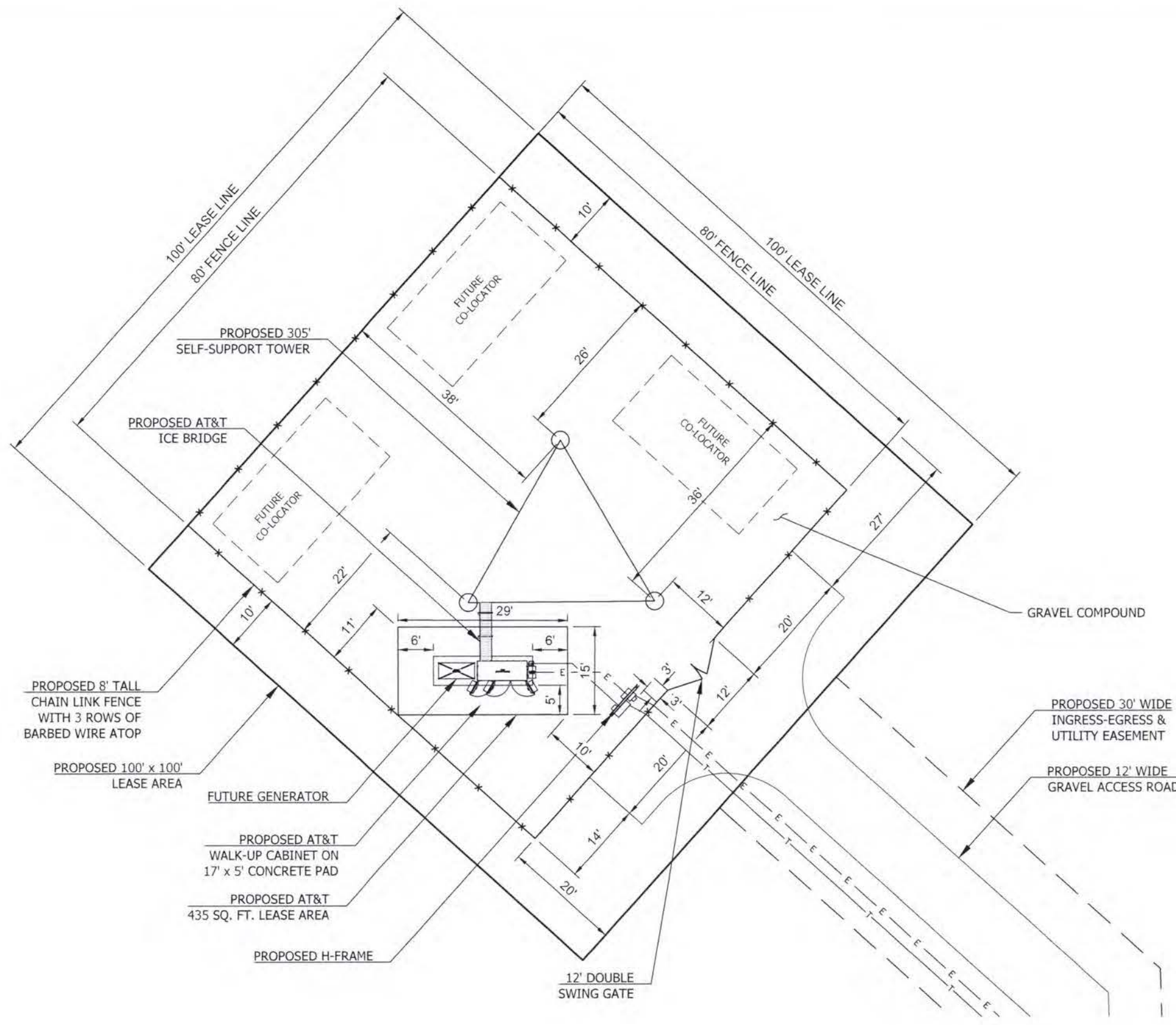
SHEET NUMBER:  
**C-2**



CALL KENTUCKY ONE CALL  
 (800) 752-6007  
 CALL 3 WORKING DAYS  
 BEFORE YOU DIG!







HARMONI TOWERS  
**CHANDLER RD**  
 FA# 15147579  
 PACE# MRINK047532  
 PT# 10153678  
 312 CHANDLER RD  
 SHARPSBURG, KY 40374  
 BATH COUNTY  
 PROPOSED 305' SELF-SUPPORT TOWER

PROJECT NO: 137361  
 CHECKED BY: DLS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

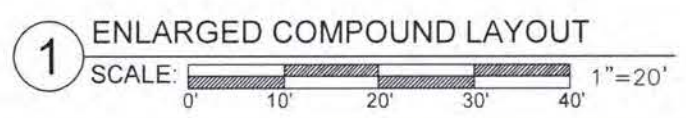
B&T ENGINEERING, INC.  
 4011  
 Expires 12/31/20



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ENLARGED COMPOUND LAYOUT

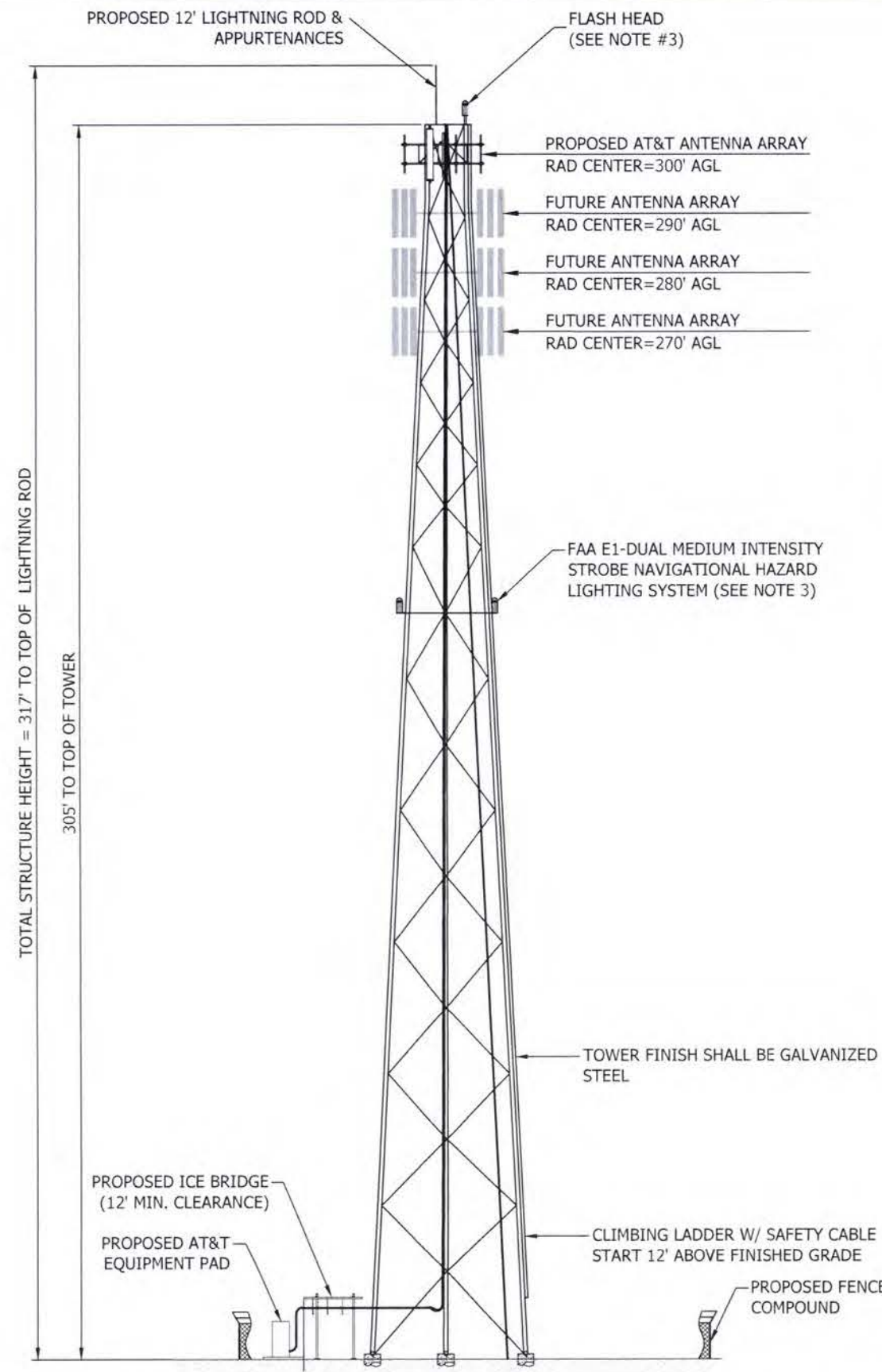
SHEET NUMBER:  
**C-3**



CALL KENTUCKY ONE CALL  
 (800) 752-6007  
 CALL 3 WORKING DAYS  
 BEFORE YOU DIG!







**STRUCTURAL ANALYSIS NOTES:**

1. ANTENNA PLACEMENT WAS DETERMINED WITHOUT VERIFICATION OF STRUCTURAL ANALYSIS.
2. REFER TO STRUCTURAL ANALYSIS OR STRUCTURAL LETTER FOR APPROVAL OF ADDITIONAL NEW APPURTENANCES.

NOTES: CONTRACTOR TO REFER TO THE STRUCTURAL DESIGN REPORT PREPARED BY HARMONI TOWERS PRIOR TO CONSTRUCTION.

**1** PROPOSED TOWER ELEVATION  
SCALE: N.T.S.



HARMONI TOWERS  
**CHANDLER RD**  
 FA# 15147579  
 PACE# MRTNK047532  
 PT# 10153678  
 312 CHANDLER RD  
 SHARPSBURG, KY 40374  
 BATH COUNTY  
 PROPOSED 305' SELF-SUPPORT TOWER

PROJECT NO: 157361  
 CHECKED BY: DLS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
 4011  
 Expires 12/31/20



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TOWER ELEVATION

SHEET NUMBER:  
**C-4**

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



Uniti Group Corporate Headquarters  
10802 Executive Center Drive  
Benton Building, Ste. 300  
Little Rock, AR 72211  
501.850.0820 | uniti.com

July 20, 2020

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

RE: Site Name – Bethel Relo  
Proposed Cell Tower  
38.2669530 North Latitude, 83.8468580 West Longitude

Dear Commissioners:

The Construction Manager for the proposed new communications facility will be Jeremy Culpepper. His contact information is (985) 707-6175 or [Jeremy.Culpepper@uniti.com](mailto:Jeremy.Culpepper@uniti.com). Jeremy has been in the industry completing civil construction and constructing towers since 1998. He has worked at Uniti Towers LLC since 2018 completing project and construction management on new site build projects.

Thank you,

**Jeremy Culpepper**

Digitally signed by Jeremy  
Culpepper  
Date: 2020.07.20 11:06:41 -05'00'

Jeremy Culpepper  
Construction Manager – Tennessee/Kentucky Market  
Uniti Towers LLC  
(985) 707-6175

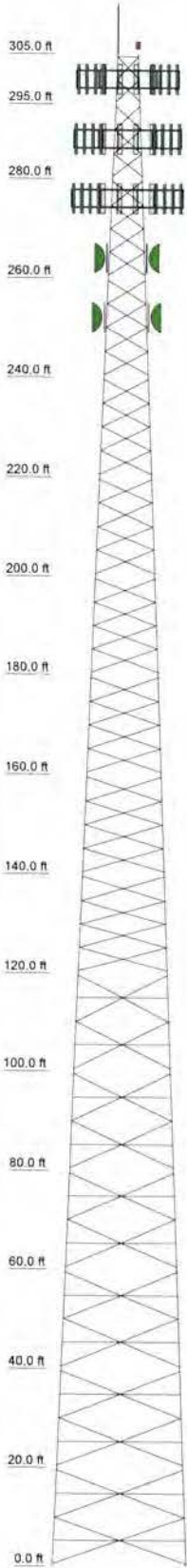
Uniti Fiber Division Headquarters  
107 St. Francis Street, Ste. 1800  
Mobile, AL 36602  
251.662.1170 | unitifiber.com

New Orleans | Birmingham | Jackson | St. Petersburg | Dallas | Memphis

Uniti Towers Division Headquarters  
10801 Executive Center Drive, Shannon Bldg., Ste. 100  
Little Rock, AR 72211  
501.850.0820 | unititowers.com  
Domestic | International



Section:	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	SR 4 3/4		SR 4 1/2	SR 4 1/4	SR 4 1/4	SR 4	SR 3 3/4	SR 3 3/4	SR 3 1/4	SR 3 1/2	SR 3 1/4	SR 3	SR 2 3/4	SR 2 1/4	SR 1 3/4	
Leg Grade								A529-50								
Diagonals	2L3x3x3/16x3/8			2L2 1/2x2 1/2x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	L3x3x1/4	L3x3x1/4	L3x3x1/4	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L1 3/4x1 3/4x3/16		
Diagonal Grade								A36M-50								
Top Chords																
Horizontals	2L2 1/2x2 1/2x3/16x3/8			2L2x2x3/16x3/8	2L2x2x3/16x3/8	B										
Inner Bracing	L1 3/4x1 3/4x3/16															
Face Width (ft)	27	25.5	24	22.5	21	19.5	18	16.5	15	13.5	12	10.5	9	7.5	6	4.875
# Panels @ (ft)								56 @ 4.75								3 @ 4.866672 @ 4.5
Weight (K)	61.1	7.2	7.0	8.5	8.1	5.3	4.7	4.7	3.1	3.6	3.2	2.6	1.8	1.2	0.6	0.4



### DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 1"x10'	305	Sector1(CaAa=10000 Sq.in)No Ice (Carrier 3)	276
Top Beacon	305	Sector2(CaAa=10000 Sq.in)No Ice (Carrier 3)	276
Sector1(CaAa=13333.33 Sq.in)No Ice (Carrier 1)	300	Sector3(CaAa=10000 Sq.in)No Ice (Carrier 3)	276
Sector2(CaAa=13333.33 Sq.in)No Ice (Carrier 1)	300	4 1/2" OD Dish Mount (Carrier 4)	264
Sector3(CaAa=13333.33 Sq.in)No Ice (Carrier 1)	300	4 1/2" OD Dish Mount (Carrier 4)	264
Sector1(CaAa=10000 Sq.in)No Ice (Carrier 2)	288	6' MW Dish (Carrier 4)	264
Sector2(CaAa=10000 Sq.in)No Ice (Carrier 2)	288	6' MW Dish (Carrier 4)	264
Sector3(CaAa=10000 Sq.in)No Ice (Carrier 2)	288	4 1/2" OD Dish Mount (Carrier 5)	252
		4 1/2" OD Dish Mount (Carrier 5)	252
		6' MW Dish (Carrier 5)	252
		6' MW Dish (Carrier 5)	252

### SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L1 3/4x1 3/4x3/16	B	2L1 3/4x1 3/4x3/16x3/8

### MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A529-50	50 ksi	65 ksi	A36M-50	50 ksi	65 ksi

### TOWER DESIGN NOTES

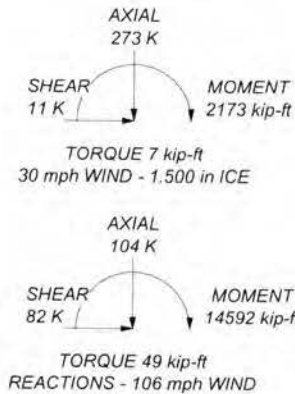
1. Tower is located in Bath County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 106 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. Please see feedline plan for proper feedline placement. Deviation from plan may reduce tower capacity.

ALL REACTIONS  
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 658 K  
SHEAR: 49 K

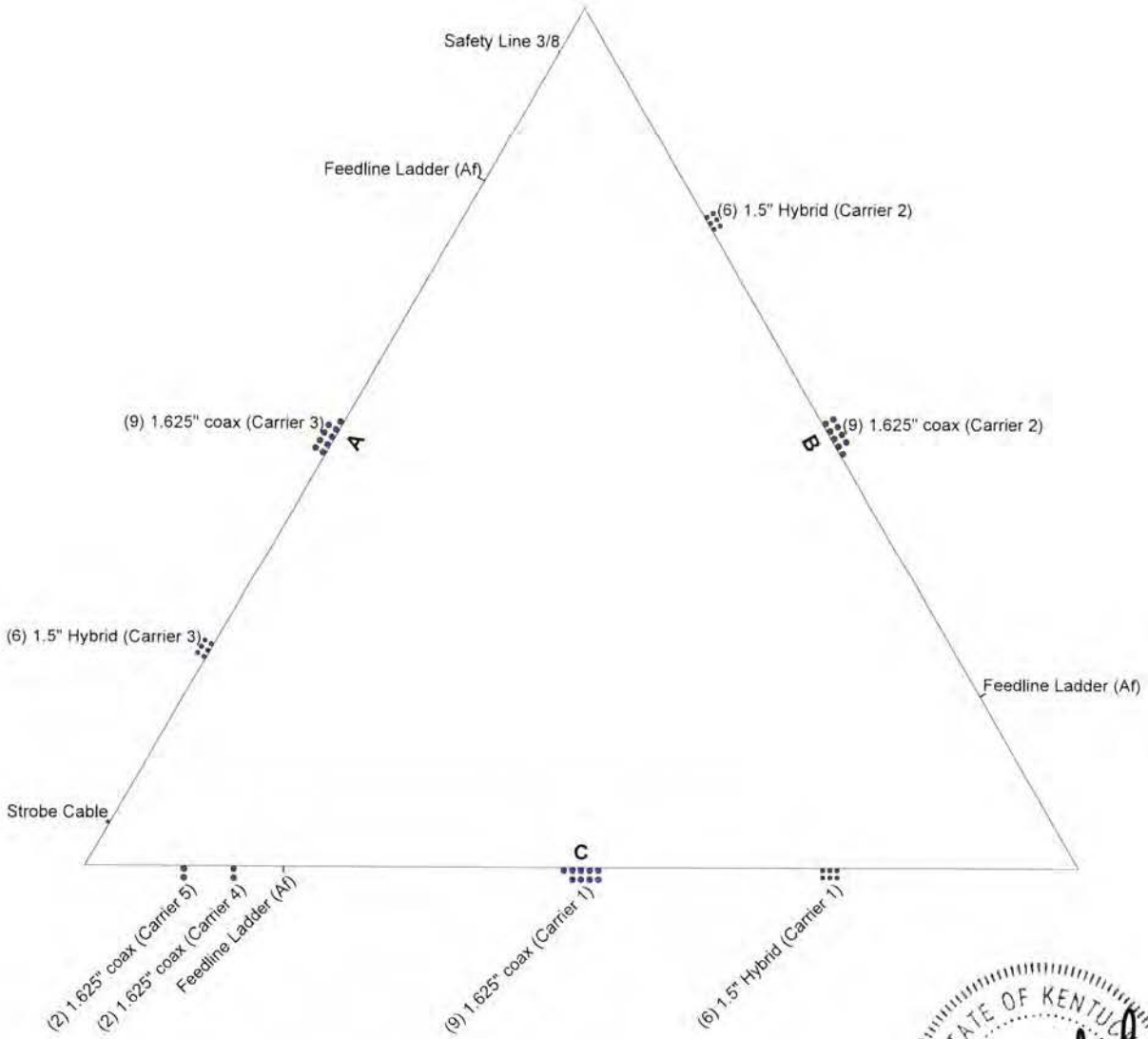
UPLIFT: -565 K  
SHEAR: 44 K




	<b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job: <b>ATS #8642 - Chandler Road (Site# KYLEX205)</b> Project: <b>305' SST/38.266953, -83.846858</b> Client: Harmoni(Units) Towers Code: TIA-222-H Path:	Drawn by: J.Landon Date: 10/20/20 App'd: Scale: NTS Dwg No: E-1
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# Feed Line Plan




  
 BRAD P. MILANCZYK  
 8231  
 LICENSED PROFESSIONAL ENGINEER  
*10/20/20*

 <b>B+T Group</b>	1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job: ATS #8642 - Chandler Road (Site# KYLEX205)</b> Project: 305' SST/38.266953, -83.846858 Client: Harmoni(Uniti) Towers Code: TIA-222-H Path:
	Drawn by: JLondon Date: 10/20/20	App'd: Scale: NTS Dwg No. E-7

DIMENSIONING SCHEDULE	
A	37'-0"
B	5'-0"
C	27'-0"
D	6'-0-11/16"
E	3'-4-9/16"
F	3'-10-3/4"
J	0'-6"
K	6'-0"
L	3'-6"
MIN OVERLAP "M"	3'-3"
DIAMETER	3'-0"

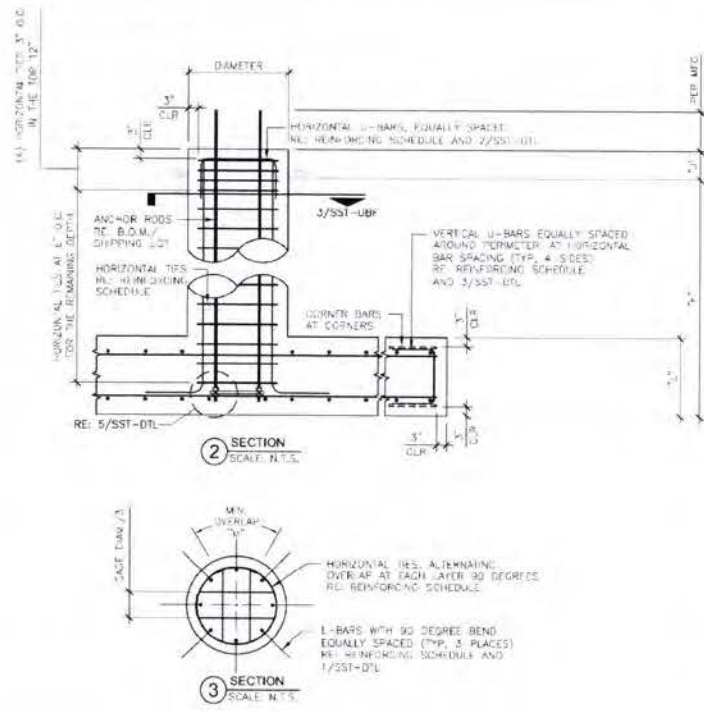
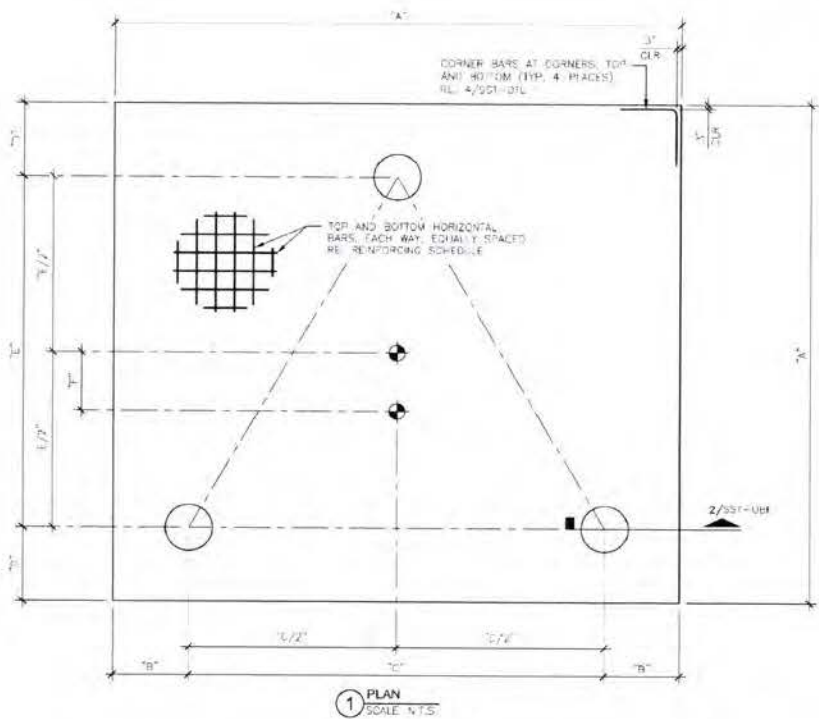
REINFORCING SCHEDULE	SIZE	TOTAL QTY
VERTICAL BARS WITH 90° BEND	#8	48
HORIZONTAL TIES	#4	42
HORIZONTAL U-BAR (PEDESTAL)	#4	12
TOP HORIZONTAL BARS	#8	76
BOTTOM HORIZONTAL BARS	#8	76
CORNER BARS	#4	8
VERTICAL U-BARS (PAD)	#4	76

BASE REACTIONS: (FACTORED LOADS)	
<b>GLOBAL REACTIONS</b>	
MOMENT	1255.0 KIP-FT
AXIAL	104 KIPS
SHEAR	87 KIPS
<b>REACTIONS PER LEG</b>	
COMPRESSION AXIAL	658 KIPS
COMPRESSION SHEAR	49 KIPS
UPLIFT AXIAL	565 KIPS
UPLIFT SHEAR	44 KIPS

**NOTES:**

- REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENT OF ASTM A-615 (GRADE 60) EXCEPT THAT TIES MAY BE ASTM-615 (GRADE 40) WITH 3" MINIMUM CLEAR COVER.
- THE CONTRACTOR SHALL THOROUGHLY REVIEW THE GEOTECH REPORT FOR THIS PROJECT AND FOLLOW THE RECOMMENDATIONS IN THAT REPORT WHEN CONSTRUCTING THE FOUNDATION.  
 GEOTECHNICAL PROPERTIES BY: DELTA DAKS GROUP  
 PROJECT NUMBER: GED20-07096-08  
 DATE: SEPTEMBER 29, 2020
- THIS FOUNDATION HAS BEEN DESIGNED, IN ACCORDANCE WITH THE TIA 223-H STANDARD, SPECIFICALLY FOR THE TOWER AND SOIL CONDITION REFERENCED ABOVE. IF ANYTHING DIFFERS THIS DESIGN SHALL BE CONSIDERED INVALID AND MUST BE REDESIGNED PRIOR TO CONSTRUCTION.
- CONCRETE VOLUME IN CUBIC YARDS: 129.9
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
- CONCRETE MIXTURES SHALL MEET DURABILITY REQUIREMENTS OF CHAPTER 19 OF THE ACI 318-14.
- ALL CONCRETE TESTING SHALL BE IN ACCORDANCE WITH ACI 318-14. A MINIMUM OF (2) 6"X12" OR (3) 4"X8" CONCRETE CYLINDERS PER INDIVIDUAL FOUNDATION AND A MINIMUM OF (6) 6"X12" OR (6) 4"X8" CYLINDERS PER BATCH REQUIRED.
- SUMP TEST SHALL BE MADE IN ACCORDANCE WITH ASTM C143. THE ALLOWABLE CONCRETE SLUMP SHALL BE 4 INCHES (+1") UNLESS ADMIXTURES ARE USED. ADMIXTURE SHALL BE IN ACCORDANCE WITH ASTM C894 STANDARD TYPES A, B, C, D OR E. THE ENGINEER SHALL PRE-APPROVE SUPER PLASTICIZER USE. DO NOT USE CHLORIDE-CONTAINING ADMIXTURES. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.
- BACKFILL MATERIAL SHALL BE COMPACTED TO A MINIMUM UNIT WEIGHT SPECIFIED IN GEOTECH REPORT. THE SOIL SHALL BE INSTALLED IN 6" TO 8" LIFTS AND COMPACTED THOROUGHLY TO ACHIEVE APPROPRIATE UNIT WEIGHT UNLESS GEOTECH SPECIFIES OTHER COMPACTION REQUIREMENTS.
- VERIFY ALL DIMENSIONS AGAINST MANUFACTURER'S DRAWINGS.

**STIPULATION FOR REUSE:**  
 THIS DRAWING WAS SPECIFICALLY DESIGNED FOR USE BY THE CUSTOMER ON THIS DRAWING AT THE SPECIFIED LOCATION. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF A PROPERLY LICENSED ENGINEER.



**B+T GRP**  
 1717 S BOULDER AVE #300 TULSA, OK 74119  
 (918) 587-4630

**ARCOSA**  
 TOWER & STRUCTURES  
 4020 TULL AVE. MUSKOGEE, OK 74403

ISSUED FOR:		
REV	DATE	DESCRIPTION
0	10/20/20	ISSUED FOR CONSTRUCTION



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTIONS OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT

**PROJECT INFORMATION:**  
 PROJECT NO: 145727.001.01  
 SITE NAME: CHANDLER ROAD  
 SITE NO: 8642  
 CLIENT NAME: ARCOSA TELECOM STRUCTURES  
 DRAWN BY: JL  
 CHECKED BY: BS

**SHEET TITLE:**  
 UNIT BASE FOUNDATION

SHEET NUMBER: <b>SST-UBF</b>	REVISION: <b>0</b>
---------------------------------	-----------------------



1717 S BOULDER AVE #300, TULSA, OK 74119  
(918) 587-4630

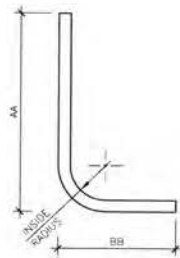


4020 TULL AVE, MUSKOGEE, OK 74403

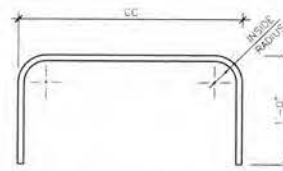
ISSUED FOR:

REV	DATE	DESCRIPTION
0	10/20/20	ISSUED FOR CONSTRUCTION

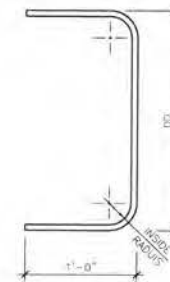
DIMENSIONING SCHEDULE	
AA	5'-10"
BB	1'-3"
CC SST-UBF	2'-4-5/16"
DD	2'-0"
EE	3'-0"
INSIDE RADIUS DETAIL 1	0'-3"
INSIDE RADIUS DETAIL 2	0'-1-1/2"
INSIDE RADIUS DETAIL 3	0'-1-1/2"
INSIDE RADIUS DETAIL 4	0'-1-1/2"



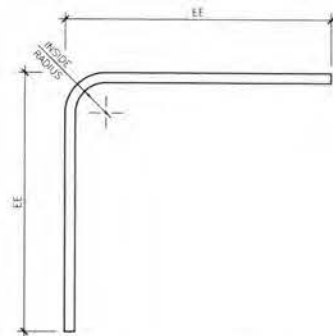
1 L-BAR  
SCALE: N.T.S.



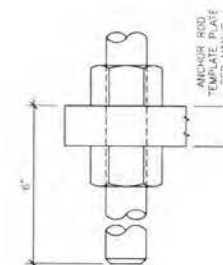
2 HORIZONTAL U-BAR  
SCALE: N.T.S.



3 VERTICAL U-BAR  
SCALE: N.T.S.



4 CORNER BAR  
SCALE: N.T.S.



5 ANCHOR ROD DETAIL  
SCALE: N.T.S.



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PROJECT INFORMATION:

PROJECT NO: 145727.001.01  
SITE NAME: CHANDLER ROAD  
SITE NO: 8542  
CLIENT NAME: ARCOSA TELECOM STRUCTURES

DRAWN BY: JL  
CHECKED BY: BS

SHEET TITLE:

DIMENSIONING DETAIL

SHEET NUMBER:

SST-DTL

REVISION:

0

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 1 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

## Tower Input Data

The main tower is a 3x free standing tower with an overall height of 305.000 ft above the ground line.

The base of the tower is set at an elevation of 0.000 ft above the ground line.

The face width of the tower is 4.125 ft at the top and 27.000 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Bath County, Kentucky.

Tower base elevation above sea level: 922.000 ft.

Basic wind speed of 106 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.000 ft.

Nominal ice thickness of 1.500 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 30 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 60 mph.

Please see feedline plan for proper feedline placement. Deviation from plan may reduce tower capacity..

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

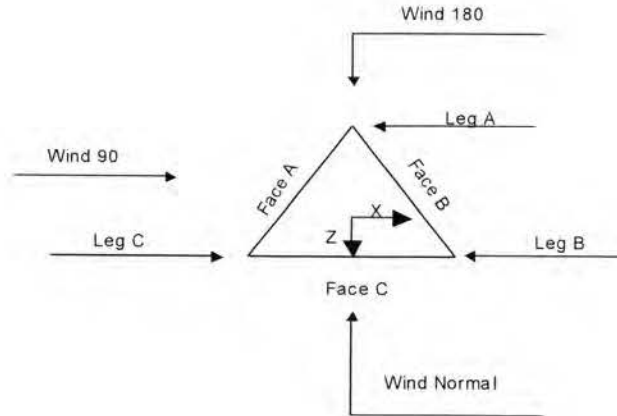
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>√ Use Code Stress Ratios</li> <li>√ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>√ Include Bolts In Member Capacity</li> <li>√ Leg Bolts Are At Top Of Section</li> <li>√ Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>SR Members Have Cut Ends</li> <li>SR Members Are Concentric</li> </ul> | <ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>√ Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>√ Use Clear Spans For KL/r</li> <li>Retension Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>√ Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>Add IBC 6D+W Combination</li> <li>√ Sort Capacity Reports By Component</li> <li>Triangulate Diamond Inner Bracing</li> <li>Treat Feed Line Bundles As Cylinder</li> <li>Ignore KL/ry For 60 Deg. Angle Legs</li> </ul> | <ul style="list-style-type: none"> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>√ Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>√ SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>√ Consider Feed Line Torque</li> <li>√ Include Angle Block Shear Check</li> <li>Use TIA-222-H Bracing Resist Exemption</li> <li>Use TIA-222-H Tension Splice Exemption</li> </ul> <p style="text-align: center;"><b>Poles</b></p> <ul style="list-style-type: none"> <li>Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> <li>Pole Without Linear Attachments</li> <li>Pole With Shroud Or No Appurtenances</li> <li>Outside and Inside Corner Radii Are Known</li> </ul> |
|--|--|--|



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave. Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 2 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon



Triangular Tower

**Tower Section Geometry**

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	305.000-295.000			4.125	1	10.000
T2	295.000-280.000			4.875	1	15.000
T3	280.000-260.000			6.000	1	20.000
T4	260.000-240.000			7.500	1	20.000
T5	240.000-220.000			9.000	1	20.000
T6	220.000-200.000			10.500	1	20.000
T7	200.000-180.000			12.000	1	20.000
T8	180.000-160.000			13.500	1	20.000
T9	160.000-140.000			15.000	1	20.000
T10	140.000-120.000			16.500	1	20.000
T11	120.000-100.000			18.000	1	20.000
T12	100.000-80.000			19.500	1	20.000
T13	80.000-60.000			21.000	1	20.000
T14	60.000-40.000			22.500	1	20.000
T15	40.000-20.000			24.000	1	20.000
T16	20.000-0.000			25.500	1	20.000

**Tower Section Geometry (cont'd)**

**tnxTower**

**B+T Group**  
 1717 S. Boulder Ave, Ste 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	3 of 38
<b>Project</b>	305' SST/38.266953, -83.846858	<b>Date</b>	13:50:20 10/19/20
<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	305.000-295.000	4.500	X Brace	No	No	6.000	6.000
T2	295.000-280.000	4.667	X Brace	No	No	6.000	6.000
T3	280.000-260.000	4.750	X Brace	No	No	6.000	6.000
T4	260.000-240.000	4.750	X Brace	No	No	6.000	6.000
T5	240.000-220.000	4.750	X Brace	No	No	6.000	6.000
T6	220.000-200.000	4.750	X Brace	No	No	6.000	6.000
T7	200.000-180.000	4.750	X Brace	No	No	6.000	6.000
T8	180.000-160.000	4.750	X Brace	No	No	6.000	6.000
T9	160.000-140.000	4.750	X Brace	No	No	6.000	6.000
T10	140.000-120.000	4.750	X Brace	No	No	6.000	6.000
T11	120.000-100.000	4.750	Double K	No	Yes	6.000	6.000
T12	100.000-80.000	4.750	Double K	No	Yes	6.000	6.000
T13	80.000-60.000	4.750	Double K	No	Yes	6.000	6.000
T14	60.000-40.000	4.750	Double K	No	Yes	6.000	6.000
T15	40.000-20.000	4.750	Double K	No	Yes	6.000	6.000
T16	20.000-0.000	4.750	Double K	No	Yes	6.000	6.000

**Tower Section Geometry (cont'd)**

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
305.000-295.000	Solid Round	1 3/4	A529-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
295.000-280.000	Solid Round	1 3/4	A529-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
280.000-260.000	Solid Round	2 1/4	A529-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
260.000-240.000	Solid Round	2 3/4	A529-50 (50 ksi)	Equal Angle	L2x2x3/16	A36M-50 (50 ksi)
240.000-220.000	Solid Round	3	A529-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36M-50 (50 ksi)
220.000-200.000	Solid Round	3 1/4	A529-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36M-50 (50 ksi)
200.000-180.000	Solid Round	3 1/2	A529-50 (50 ksi)	Equal Angle	L3x3x3/16	A36M-50 (50 ksi)
180.000-160.000	Solid Round	3 3/4	A529-50 (50 ksi)	Equal Angle	L3x3x3/16	A36M-50 (50 ksi)
160.000-140.000	Solid Round	3 3/4	A529-50 (50 ksi)	Equal Angle	L3x3x3/16	A36M-50 (50 ksi)
140.000-120.000	Solid Round	4	A529-50 (50 ksi)	Equal Angle	L3x3x1/4	A36M-50 (50 ksi)
120.000-100.000	Solid Round	4	A529-50 (50 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)
100.000-80.000	Solid Round	4 1/4	A529-50 (50 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)
80.000-60.000	Solid Round	4 1/2	A529-50 (50 ksi)	Double Angle	2L3x3x3/16x3/8	A36M-50 (50 ksi)
60.000-40.000	Solid Round	4 1/2	A529-50 (50 ksi)	Double Angle	2L3x3x3/16x3/8	A36M-50 (50 ksi)
40.000-20.000	Solid Round	4 3/4	A529-50 (50 ksi)	Double Angle	2L3x3x3/16x3/8	A36M-50 (50 ksi)
T16 20.000-0.000	Solid Round	4 3/4	A529-50 (50 ksi)	Double Angle	2L3x3x3/16x3/8	A36M-50 (50 ksi)

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 4 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

**Tower Section Geometry (cont'd)**

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 305.000-295.000	Equal Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)	Solid Round		A529-50 (50 ksi)

**Tower Section Geometry (cont'd)**

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T11 120.000-100.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L1 3/4x1 3/4x3/16x3/8	A36M-50 (50 ksi)
T12 100.000-80.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L2x2x3/16x3/8	A36M-50 (50 ksi)
T13 80.000-60.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)
T14 60.000-40.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)
T15 40.000-20.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)
T16 20.000-0.000	None	Flat Bar		A36 (36 ksi)	Double Angle	2L2 1/2x2 1/2x3/16x3/8	A36M-50 (50 ksi)

**Tower Section Geometry (cont'd)**

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T11 120.000-100.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
T12 100.000-80.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
T13 80.000-60.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
T14 60.000-40.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
T15 40.000-20.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)
T16 20.000-0.000	Solid Round		A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36M-50 (50 ksi)

**Tower Section Geometry (cont'd)**







<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 6 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors <sup>1</sup>							
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace	
				X Y	X Y	X Y	X Y	X Y	X Y	X Y	
305.000-295.000 T2	No	No	1	1	1	1	1	1	1	1	1
295.000-280.000 T3	No	No	1	1	1	1	1	1	1	1	1
280.000-260.000 T4	No	No	1	1	1	1	1	1	1	1	1
260.000-240.000 T5	No	No	1	1	1	1	1	1	1	1	1
240.000-220.000 T6	No	No	1	1	1	1	1	1	1	1	1
220.000-200.000 T7	No	No	1	1	1	1	1	1	1	1	1
200.000-180.000 T8	No	No	1	1	1	1	1	1	1	1	1
180.000-160.000 T9	No	No	1	1	1	1	1	1	1	1	1
160.000-140.000 T10	No	No	1	1	1	1	1	1	1	1	1
140.000-120.000 T11	No	No	1	1	1	1	1	1	1	1	1
120.000-100.000 T12	No	No	1	1	1	1	1	1	1	1	1
100.000-80.000 T13	No	No	1	1	1	1	1	1	1	1	1
80.000-60.000 T14	No	No	1	1	1	1	1	1	1	1	1
60.000-40.000 T15	No	No	1	1	1	1	1	1	1	1	1
40.000-20.000 T16	No	No	1	1	1	1	1	1	1	1	1
20.000-0.000				1	1	1	1	1	1	1	1

<sup>1</sup>Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

**Tower Section Geometry (cont'd)**

**tnxTower**

**B+T Group**  
 1717 S. Boulder Ave, Ste 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
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**Job**  
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 305' SST/38.266953, -83.846858

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**Client**  
 Harmoni(Uniti) Towers

**Designed by**  
 JLandon

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 305.000-295.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 295.000-280.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 280.000-260.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 260.000-240.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 240.000-220.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 220.000-200.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 200.000-180.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 180.000-160.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T9 160.000-140.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T10 140.000-120.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T11 120.000-100.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T12 100.000-80.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T13 80.000-60.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T14 60.000-40.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T15 40.000-20.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T16 20.000-0.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

**Tower Section Geometry (cont'd)**

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave. Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 8 of 38
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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
305.000-295.000	T1 Flange	0.000	0	0.625	1	0.625	1	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
295.000-280.000	T2 Flange	0.750	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
280.000-260.000	T3 Flange	0.750	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
260.000-240.000	T4 Flange	0.750	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
240.000-220.000	T5 Flange	0.750	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
220.000-200.000	T6 Flange	0.750	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
200.000-180.000	T7 Flange	1.000	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
180.000-160.000	T8 Flange	1.000	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
160.000-140.000	T9 Flange	1.000	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
140.000-120.000	T10 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.000	0	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
120.000-100.000	T11 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
100.000-80.000	T12 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
80.000-60.000	T13 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
60.000-40.000	T14 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
40.000-20.000	T15 Flange	1.250	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	
20.000-0.000	T16 Flange	1.500	6	0.625	1	0.000	0	0.000	0	0.625	0	0.625	1	0.625	0
		A325N		A325X		A325X		A325N		A325N		A325X		A325N	

### Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
1.625" coax (Carrier 1)	C	No	No	Ar (CaAa)	300.000 - 10.000	0.000	0	9	5	0.750	1.980		0.001
1.5" Hybrid	C	No	No	Ar (CaAa)	300.000 -	0.000	-0.25	6	3	0.750	1.500		0.001



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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
(Carrier 1) **					10.000								
1.625" coax (Carrier 2)	B	No	No	Ar (CaAa)	288.000 - 10.000	0.000	0	9	5	0.750	1.980		0.001
1.5" Hybrid (Carrier 2) **	B	No	No	Ar (CaAa)	288.000 - 10.000	0.000	-0.25	6	3	0.750	1.500		0.001
1.625" coax (Carrier 3) **	A	No	No	Ar (CaAa)	276.000 - 10.000	0.000	0	9	5	0.750	1.980		0.001
1.5" Hybrid (Carrier 3) **	A	No	No	Ar (CaAa)	276.000 - 10.000	0.000	-0.25	6	3	0.750	1.500		0.001
1.625" coax (Carrier 4) **	C	No	No	Ar (CaAa)	264.000 - 10.000	0.000	0.35	2	1	0.750	1.980		0.001
1.625" coax (Carrier 5) **	C	No	No	Ar (CaAa)	252.000 - 10.000	0.000	0.4	2	1	0.750	1.980		0.001
Safety Line 3/8	A	No	No	Ar (CaAa)	305.000 - 10.000	0.000	0.45	1	1	0.375	0.375		0.000
Strobe Cable **	A	No	No	Ar (CaAa)	305.000 - 10.000	0.000	-0.45	1	1	1.250	1.250		0.001
Feedline Ladder (Af) **	C	No	No	Af (CaAa)	300.000 - 10.000	0.000	0.3	1	1	3.000	0.250		0.008
Feedline Ladder (Af) **	B	No	No	Af (CaAa)	288.000 - 10.000	0.000	0.3	1	1	3.000	0.250		0.008
Feedline Ladder (Af) **	A	No	No	Af (CaAa)	276.000 - 10.000	0.000	0.3	1	1	3.000	0.250		0.008

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C <sub>v</sub> A <sub>v</sub> ft <sup>2</sup> /ft	Weight klf
**								

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>v</sub> A <sub>v</sub> In Face ft <sup>2</sup>	C <sub>v</sub> A <sub>v</sub> Out Face ft <sup>2</sup>	Weight K
T1	305.000-295.000	A	0.000	0.000	1.625	0.000	0.009
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	13.618	0.000	0.103
T2	295.000-280.000	A	0.000	0.000	2.438	0.000	0.014
		B	0.000	0.000	21.789	0.000	0.164
		C	0.000	0.000	40.855	0.000	0.308

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	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
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Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_d A_{1, In Face}$ ft <sup>2</sup>	$C_d A_{1, Out Face}$ ft <sup>2</sup>	Weight K
T3	280.000-260.000	A	0.000	0.000	46.829	0.000	0.347
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	56.057	0.000	0.416
T4	260.000-240.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	67.145	0.000	0.456
T5	240.000-220.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T6	220.000-200.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T7	200.000-180.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T8	180.000-160.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T9	160.000-140.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T10	140.000-120.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T11	120.000-100.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T12	100.000-80.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T13	80.000-60.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T14	60.000-40.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T15	40.000-20.000	A	0.000	0.000	57.723	0.000	0.429
		B	0.000	0.000	54.473	0.000	0.410
		C	0.000	0.000	70.313	0.000	0.468
T16	20.000-0.000	A	0.000	0.000	28.862	0.000	0.214
		B	0.000	0.000	27.237	0.000	0.205
		C	0.000	0.000	35.157	0.000	0.234

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_d A_{1, In Face}$ ft <sup>2</sup>	$C_d A_{1, Out Face}$ ft <sup>2</sup>	Weight K
T1	305.000-295.000	A	1.870	0.000	0.000	9.107	0.000	0.132
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	21.424	0.000	0.443
T2	295.000-280.000	A	1.863	0.000	0.000	13.613	0.000	0.196
		B		0.000	0.000	34.222	0.000	0.706
		C		0.000	0.000	64.166	0.000	1.323
T3	280.000-260.000	A	1.851	0.000	0.000	86.335	0.000	1.664
		B		0.000	0.000	85.348	0.000	1.756
		C		0.000	0.000	90.423	0.000	1.831
T4	260.000-240.000	A	1.837	0.000	0.000	103.040	0.000	2.002

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 11 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>A</sub> A <sub>1</sub> In Face ft <sup>2</sup>	C <sub>A</sub> A <sub>1</sub> Out Face ft <sup>2</sup>	Weight K
T5	240.000-220.000	B	1.821	0.000	0.000	85.096	0.000	1.746
		C		0.000	0.000	125.542	0.000	2.340
		A		0.000	0.000	102.647	0.000	1.988
T6	220.000-200.000	B	1.805	0.000	0.000	84.826	0.000	1.735
		C		0.000	0.000	135.171	0.000	2.469
		A		0.000	0.000	102.223	0.000	1.972
T7	200.000-180.000	B	1.787	0.000	0.000	84.533	0.000	1.723
		C		0.000	0.000	134.650	0.000	2.449
		A		0.000	0.000	101.761	0.000	1.956
T8	180.000-160.000	B	1.767	0.000	0.000	84.215	0.000	1.710
		C		0.000	0.000	134.082	0.000	2.426
		A		0.000	0.000	101.252	0.000	1.938
T9	160.000-140.000	B	1.745	0.000	0.000	83.865	0.000	1.696
		C		0.000	0.000	133.458	0.000	2.401
		A		0.000	0.000	100.687	0.000	1.918
T10	140.000-120.000	B	1.720	0.000	0.000	83.475	0.000	1.681
		C		0.000	0.000	132.763	0.000	2.374
		A		0.000	0.000	100.049	0.000	1.895
T11	120.000-100.000	B	1.692	0.000	0.000	83.036	0.000	1.664
		C		0.000	0.000	131.980	0.000	2.344
		A		0.000	0.000	99.316	0.000	1.869
T12	100.000-80.000	B	1.658	0.000	0.000	82.531	0.000	1.644
		C		0.000	0.000	131.080	0.000	2.309
		A		0.000	0.000	98.452	0.000	1.839
T13	80.000-60.000	B	1.617	0.000	0.000	81.936	0.000	1.621
		C		0.000	0.000	130.019	0.000	2.268
		A		0.000	0.000	97.395	0.000	1.803
T14	60.000-40.000	B	1.564	0.000	0.000	81.207	0.000	1.592
		C		0.000	0.000	128.721	0.000	2.219
		A		0.000	0.000	96.020	0.000	1.756
T15	40.000-20.000	B	1.486	0.000	0.000	80.261	0.000	1.556
		C		0.000	0.000	127.033	0.000	2.155
		A		0.000	0.000	94.020	0.000	1.689
T16	20.000-0.000	B	1.331	0.000	0.000	78.884	0.000	1.504
		C		0.000	0.000	124.579	0.000	2.065
		A		0.000	0.000	45.026	0.000	0.781
		B		0.000	0.000	38.076	0.000	0.702
		C		0.000	0.000	59.857	0.000	0.946

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>x</sub> in	CP <sub>z</sub> in	CP <sub>x</sub> Ice in	CP <sub>z</sub> Ice in
T1	305.000-295.000	0.415	3.412	-1.012	2.144
T2	295.000-280.000	3.272	1.361	1.779	1.815
T3	280.000-260.000	0.560	-2.397	-0.533	-1.384
T4	260.000-240.000	-1.522	-0.952	-3.317	0.682
T5	240.000-220.000	-1.963	-0.492	-4.189	1.426
T6	220.000-200.000	-2.137	-0.534	-4.589	1.552
T7	200.000-180.000	-2.143	-0.539	-4.794	1.621
T8	180.000-160.000	-2.263	-0.569	-5.091	1.717
T9	160.000-140.000	-2.381	-0.599	-5.365	1.806
T10	140.000-120.000	-2.479	-0.624	-5.595	1.882
T11	120.000-100.000	-3.199	-0.787	-6.661	2.206
T12	100.000-80.000	-3.289	-0.811	-6.870	2.277
T13	80.000-60.000	-3.142	-0.782	-6.797	2.267



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	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Section	Elevation	CP <sub>X</sub>	CP <sub>Z</sub>	CP <sub>X</sub>	CP <sub>Z</sub>
	ft	in	in	Ice	Ice
				in	in
T14	60.000-40.000	-3.245	-0.808	-6.964	2.326
T15	40.000-20.000	-3.330	-0.830	-7.048	2.359
T16	20.000-0.000	-2.025	-0.518	-4.252	1.463

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T1	1	1.625" coax	295.00 - 300.00	0.6000	0.5508
T1	2	1.5" Hybrid	295.00 - 300.00	0.6000	0.5508
T1	14	Safety Line 3/8	295.00 - 305.00	0.6000	0.5508
T1	15	Strobe Cable	295.00 - 305.00	0.6000	0.5508
T1	17	Feedline Ladder (Af)	295.00 - 300.00	0.6000	0.5508
T2	1	1.625" coax	280.00 - 295.00	0.6000	0.6000
T2	2	1.5" Hybrid	280.00 - 295.00	0.6000	0.6000
T2	4	1.625" coax	280.00 - 288.00	0.6000	0.6000
T2	5	1.5" Hybrid	280.00 - 288.00	0.6000	0.6000
T2	14	Safety Line 3/8	280.00 - 295.00	0.6000	0.6000
T2	15	Strobe Cable	280.00 - 295.00	0.6000	0.6000
T2	17	Feedline Ladder (Af)	280.00 - 295.00	0.6000	0.6000
T2	18	Feedline Ladder (Af)	280.00 - 288.00	0.6000	0.6000
T3	1	1.625" coax	260.00 - 280.00	0.6000	0.6000
T3	2	1.5" Hybrid	260.00 - 280.00	0.6000	0.6000
T3	4	1.625" coax	260.00 - 280.00	0.6000	0.6000
T3	5	1.5" Hybrid	260.00 - 280.00	0.6000	0.6000
T3	7	1.625" coax	260.00 - 276.00	0.6000	0.6000
T3	8	1.5" Hybrid	260.00 - 276.00	0.6000	0.6000
T3	10	1.625" coax	260.00 - 264.00	0.6000	0.6000
T3	14	Safety Line 3/8	260.00 - 280.00	0.6000	0.6000
T3	15	Strobe Cable	260.00 - 280.00	0.6000	0.6000
T3	17	Feedline Ladder (Af)	260.00 - 280.00	0.6000	0.6000
T3	18	Feedline Ladder (Af)	260.00 -	0.6000	0.6000

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	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
			280.00		
T3	19	Feedline Ladder (Af)	260.00 -	0.6000	0.6000
			276.00		
T4	1	1.625" coax	240.00 -	0.6000	0.6000
			260.00		
T4	2	1.5" Hybrid	240.00 -	0.6000	0.6000
			260.00		
T4	4	1.625" coax	240.00 -	0.6000	0.6000
			260.00		
T4	5	1.5" Hybrid	240.00 -	0.6000	0.6000
			260.00		
T4	7	1.625" coax	240.00 -	0.6000	0.6000
			260.00		
T4	8	1.5" Hybrid	240.00 -	0.6000	0.6000
			260.00		
T4	10	1.625" coax	240.00 -	0.6000	0.6000
			260.00		
T4	12	1.625" coax	240.00 -	0.6000	0.6000
			252.00		
T4	14	Safety Line 3/8	240.00 -	0.6000	0.6000
			260.00		
T4	15	Strobe Cable	240.00 -	0.6000	0.6000
			260.00		
T4	17	Feedline Ladder (Af)	240.00 -	0.6000	0.6000
			260.00		
T4	18	Feedline Ladder (Af)	240.00 -	0.6000	0.6000
			260.00		
T4	19	Feedline Ladder (Af)	240.00 -	0.6000	0.6000
			260.00		
T5	1	1.625" coax	220.00 -	0.6000	0.6000
			240.00		
T5	2	1.5" Hybrid	220.00 -	0.6000	0.6000
			240.00		
T5	4	1.625" coax	220.00 -	0.6000	0.6000
			240.00		
T5	5	1.5" Hybrid	220.00 -	0.6000	0.6000
			240.00		
T5	7	1.625" coax	220.00 -	0.6000	0.6000
			240.00		
T5	8	1.5" Hybrid	220.00 -	0.6000	0.6000
			240.00		
T5	10	1.625" coax	220.00 -	0.6000	0.6000
			240.00		
T5	12	1.625" coax	220.00 -	0.6000	0.6000
			240.00		
T5	14	Safety Line 3/8	220.00 -	0.6000	0.6000
			240.00		
T5	15	Strobe Cable	220.00 -	0.6000	0.6000
			240.00		
T5	17	Feedline Ladder (Af)	220.00 -	0.6000	0.6000
			240.00		
T5	18	Feedline Ladder (Af)	220.00 -	0.6000	0.6000
			240.00		
T5	19	Feedline Ladder (Af)	220.00 -	0.6000	0.6000
			240.00		
T6	1	1.625" coax	200.00 -	0.6000	0.6000
			220.00		
T6	2	1.5" Hybrid	200.00 -	0.6000	0.6000
			220.00		
T6	4	1.625" coax	200.00 -	0.6000	0.6000
			220.00		
T6	5	1.5" Hybrid	200.00 -	0.6000	0.6000



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	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>u</sub> No Ice	K <sub>u</sub> Ice
T6	7	1 625" coax	220.00		
T6	7		200.00 -	0.6000	0.6000
T6	8	1 5" Hybrid	220.00		
T6	8		200.00 -	0.6000	0.6000
T6	10	1 625" coax	220.00		
T6	10		200.00 -	0.6000	0.6000
T6	12	1 625" coax	220.00		
T6	12		200.00 -	0.6000	0.6000
T6	14	Safety Line 3/8	220.00		
T6	14		200.00 -	0.6000	0.6000
T6	15	Strobe Cable	220.00		
T6	15		200.00 -	0.6000	0.6000
T6	17	Feedline Ladder (Af)	220.00		
T6	17		200.00 -	0.6000	0.6000
T6	18	Feedline Ladder (Af)	220.00		
T6	18		200.00 -	0.6000	0.6000
T6	19	Feedline Ladder (Af)	220.00		
T6	19		200.00 -	0.6000	0.6000
T7	1	1 625" coax	180.00 -		
T7	1		200.00	0.6000	0.6000
T7	2	1 5" Hybrid	180.00 -		
T7	2		200.00	0.6000	0.6000
T7	4	1 625" coax	180.00 -		
T7	4		200.00	0.6000	0.6000
T7	5	1 5" Hybrid	180.00 -		
T7	5		200.00	0.6000	0.6000
T7	7	1 625" coax	180.00 -		
T7	7		200.00	0.6000	0.6000
T7	8	1 5" Hybrid	180.00 -		
T7	8		200.00	0.6000	0.6000
T7	10	1 625" coax	180.00 -		
T7	10		200.00	0.6000	0.6000
T7	12	1 625" coax	180.00 -		
T7	12		200.00	0.6000	0.6000
T7	14	Safety Line 3/8	180.00 -		
T7	14		200.00	0.6000	0.6000
T7	15	Strobe Cable	180.00 -		
T7	15		200.00	0.6000	0.6000
T7	17	Feedline Ladder (Af)	180.00 -		
T7	17		200.00	0.6000	0.6000
T7	18	Feedline Ladder (Af)	180.00 -		
T7	18		200.00	0.6000	0.6000
T7	19	Feedline Ladder (Af)	180.00 -		
T7	19		200.00	0.6000	0.6000
T8	1	1 625" coax	160.00 -		
T8	1		180.00	0.6000	0.6000
T8	2	1 5" Hybrid	160.00 -		
T8	2		180.00	0.6000	0.6000
T8	4	1 625" coax	160.00 -		
T8	4		180.00	0.6000	0.6000
T8	5	1 5" Hybrid	160.00 -		
T8	5		180.00	0.6000	0.6000
T8	7	1 625" coax	160.00 -		
T8	7		180.00	0.6000	0.6000
T8	8	1 5" Hybrid	160.00 -		
T8	8		180.00	0.6000	0.6000
T8	10	1 625" coax	160.00 -		
T8	10		180.00	0.6000	0.6000
T8	12	1 625" coax	160.00 -		
T8	12		180.00	0.6000	0.6000
T8	14	Safety Line 3/8	160.00 -		
T8	14		180.00	0.6000	0.6000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 15 of 38
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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T8	15	Strobe Cable	180.00 160.00 -	0.6000	0.6000
T8	17	Feedline Ladder (Af)	180.00 160.00 -	0.6000	0.6000
T8	18	Feedline Ladder (Af)	180.00 160.00 -	0.6000	0.6000
T8	19	Feedline Ladder (Af)	180.00 160.00 -	0.6000	0.6000
T9	1	1.625" coax	180.00 140.00 -	0.6000	0.6000
T9	2	1.5" Hybrid	160.00 140.00 -	0.6000	0.6000
T9	4	1.625" coax	160.00 140.00 -	0.6000	0.6000
T9	5	1.5" Hybrid	160.00 140.00 -	0.6000	0.6000
T9	7	1.625" coax	160.00 140.00 -	0.6000	0.6000
T9	8	1.5" Hybrid	160.00 140.00 -	0.6000	0.6000
T9	10	1.625" coax	160.00 140.00 -	0.6000	0.6000
T9	12	1.625" coax	160.00 140.00 -	0.6000	0.6000
T9	14	Safety Line 3/8	160.00 140.00 -	0.6000	0.6000
T9	15	Strobe Cable	160.00 140.00 -	0.6000	0.6000
T9	17	Feedline Ladder (Af)	160.00 140.00 -	0.6000	0.6000
T9	18	Feedline Ladder (Af)	160.00 140.00 -	0.6000	0.6000
T9	19	Feedline Ladder (Af)	160.00 140.00 -	0.6000	0.6000
T10	1	1.625" coax	160.00 120.00 -	0.6000	0.6000
T10	2	1.5" Hybrid	140.00 120.00 -	0.6000	0.6000
T10	4	1.625" coax	140.00 120.00 -	0.6000	0.6000
T10	5	1.5" Hybrid	140.00 120.00 -	0.6000	0.6000
T10	7	1.625" coax	140.00 120.00 -	0.6000	0.6000
T10	8	1.5" Hybrid	140.00 120.00 -	0.6000	0.6000
T10	10	1.625" coax	140.00 120.00 -	0.6000	0.6000
T10	12	1.625" coax	140.00 120.00 -	0.6000	0.6000
T10	14	Safety Line 3/8	140.00 120.00 -	0.6000	0.6000
T10	15	Strobe Cable	140.00 120.00 -	0.6000	0.6000
T10	17	Feedline Ladder (Af)	140.00 120.00 -	0.6000	0.6000
T10	18	Feedline Ladder (Af)	140.00 120.00 -	0.6000	0.6000
T10	19	Feedline Ladder (Af)	140.00 120.00 -	0.6000	0.6000
T11	1	1.625" coax	140.00 100.00 -	0.6000	0.6000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 16 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T11	2	1 5" Hybrid	120 00 - 100 00	0.6000	0.6000
T11	4	1 625" coax	120 00 - 100 00	0.6000	0.6000
T11	5	1 5" Hybrid	120 00 - 100 00	0.6000	0.6000
T11	7	1 625" coax	120 00 - 100 00	0.6000	0.6000
T11	8	1 5" Hybrid	120 00 - 100 00	0.6000	0.6000
T11	10	1 625" coax	120 00 - 100 00	0.6000	0.6000
T11	12	1 625" coax	120 00 - 100 00	0.6000	0.6000
T11	14	Safety Line 3/8	120 00 - 100 00	0.6000	0.6000
T11	15	Strobe Cable	120 00 - 100 00	0.6000	0.6000
T11	17	Feedline Ladder (Af)	120 00 - 100 00	0.6000	0.6000
T11	18	Feedline Ladder (Af)	120 00 - 100 00	0.6000	0.6000
T11	19	Feedline Ladder (Af)	120 00 - 100 00	0.6000	0.6000
T12	1	1 625" coax	80 00 - 100 00	0.6000	0.6000
T12	2	1 5" Hybrid	80 00 - 100 00	0.6000	0.6000
T12	4	1 625" coax	80 00 - 100 00	0.6000	0.6000
T12	5	1 5" Hybrid	80 00 - 100 00	0.6000	0.6000
T12	7	1 625" coax	80 00 - 100 00	0.6000	0.6000
T12	8	1 5" Hybrid	80 00 - 100 00	0.6000	0.6000
T12	10	1 625" coax	80 00 - 100 00	0.6000	0.6000
T12	12	1 625" coax	80 00 - 100 00	0.6000	0.6000
T12	14	Safety Line 3/8	80 00 - 100 00	0.6000	0.6000
T12	15	Strobe Cable	80 00 - 100 00	0.6000	0.6000
T12	17	Feedline Ladder (Af)	80 00 - 100 00	0.6000	0.6000
T12	18	Feedline Ladder (Af)	80 00 - 100 00	0.6000	0.6000
T12	19	Feedline Ladder (Af)	80 00 - 100 00	0.6000	0.6000
T13	1	1 625" coax	60 00 - 80 00	0.6000	0.6000
T13	2	1 5" Hybrid	60 00 - 80 00	0.6000	0.6000
T13	4	1 625" coax	60 00 - 80 00	0.6000	0.6000
T13	5	1 5" Hybrid	60 00 - 80 00	0.6000	0.6000
T13	7	1 625" coax	60 00 - 80 00	0.6000	0.6000
T13	8	1 5" Hybrid	60 00 - 80 00	0.6000	0.6000
T13	10	1 625" coax	60 00 - 80 00	0.6000	0.6000
T13	12	1 625" coax	60 00 - 80 00	0.6000	0.6000
T13	14	Safety Line 3/8	60 00 - 80 00	0.6000	0.6000
T13	15	Strobe Cable	60 00 - 80 00	0.6000	0.6000
T13	17	Feedline Ladder (Af)	60 00 - 80 00	0.6000	0.6000
T13	18	Feedline Ladder (Af)	60 00 - 80 00	0.6000	0.6000
T13	19	Feedline Ladder (Af)	60 00 - 80 00	0.6000	0.6000
T14	1	1 625" coax	40 00 - 60 00	0.6000	0.6000
T14	2	1 5" Hybrid	40 00 - 60 00	0.6000	0.6000
T14	4	1 625" coax	40 00 - 60 00	0.6000	0.6000
T14	5	1 5" Hybrid	40 00 - 60 00	0.6000	0.6000
T14	7	1 625" coax	40 00 - 60 00	0.6000	0.6000
T14	8	1 5" Hybrid	40 00 - 60 00	0.6000	0.6000
T14	10	1 625" coax	40 00 - 60 00	0.6000	0.6000
T14	12	1 625" coax	40 00 - 60 00	0.6000	0.6000
T14	14	Safety Line 3/8	40 00 - 60 00	0.6000	0.6000
T14	15	Strobe Cable	40 00 - 60 00	0.6000	0.6000
T14	17	Feedline Ladder (Af)	40 00 - 60 00	0.6000	0.6000



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 17 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T14	18	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T14	19	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T15	1	1.625" coax	20.00 - 40.00	0.6000	0.6000
T15	2	1.5" Hybrid	20.00 - 40.00	0.6000	0.6000
T15	4	1.625" coax	20.00 - 40.00	0.6000	0.6000
T15	5	1.5" Hybrid	20.00 - 40.00	0.6000	0.6000
T15	7	1.625" coax	20.00 - 40.00	0.6000	0.6000
T15	8	1.5" Hybrid	20.00 - 40.00	0.6000	0.6000
T15	10	1.625" coax	20.00 - 40.00	0.6000	0.6000
T15	12	1.625" coax	20.00 - 40.00	0.6000	0.6000
T15	14	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T15	15	Strobe Cable	20.00 - 40.00	0.6000	0.6000
T15	17	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T15	18	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T15	19	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T16	1	1.625" coax	10.00 - 20.00	0.6000	0.6000
T16	2	1.5" Hybrid	10.00 - 20.00	0.6000	0.6000
T16	4	1.625" coax	10.00 - 20.00	0.6000	0.6000
T16	5	1.5" Hybrid	10.00 - 20.00	0.6000	0.6000
T16	7	1.625" coax	10.00 - 20.00	0.6000	0.6000
T16	8	1.5" Hybrid	10.00 - 20.00	0.6000	0.6000
T16	10	1.625" coax	10.00 - 20.00	0.6000	0.6000
T16	12	1.625" coax	10.00 - 20.00	0.6000	0.6000
T16	14	Safety Line 3/8	10.00 - 20.00	0.6000	0.6000
T16	15	Strobe Cable	10.00 - 20.00	0.6000	0.6000
T16	17	Feedline Ladder (Af)	10.00 - 20.00	0.6000	0.6000
T16	18	Feedline Ladder (Af)	10.00 - 20.00	0.6000	0.6000
T16	19	Feedline Ladder (Af)	10.00 - 20.00	0.6000	0.6000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>1</sub> A <sub>1</sub> Front ft <sup>2</sup>	C <sub>2</sub> A <sub>1</sub> Side ft <sup>2</sup>	Weight K	
Lightning Rod 1"x10'	C	From Leg	0.000	0.000	305.000	No Ice	1.000	1.000	0.040
			0.000			1/2" Ice	2.017	2.017	0.049
			5.000			1" Ice	3.050	3.050	0.065
						2" Ice	5.148	5.148	0.116
Top Beacon	B	From Leg	0.000	0.000	305.000	No Ice	2.700	2.700	0.050
			0.000			1/2" Ice	3.100	3.100	0.070
			1.000			1" Ice	3.500	3.500	0.090
						2" Ice	4.300	4.300	0.130
**									
Sector1(CaAa=13333.33 Sq in)No Ice (Carrier 1)	A	From Leg	4.000	0.000	300.000	No Ice	92.600	62.040	0.700
			0.000			1/2" Ice	115.750	77.550	1.400
			0.000			1" Ice	138.900	93.060	2.100
						2" Ice	185.200	124.080	3.500
Sector2(CaAa=13333.33 Sq in)No Ice (Carrier 1)	B	From Leg	4.000	0.000	300.000	No Ice	92.600	62.040	0.700
			0.000			1/2" Ice	115.750	77.550	1.400
			0.000			1" Ice	138.900	93.060	2.100
						2" Ice	185.200	124.080	3.500



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 18 of 38
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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>1</sub> A <sub>1</sub> Front ft <sup>2</sup>	C <sub>1</sub> A <sub>1</sub> Side ft <sup>2</sup>	Weight K
Sector3(CaAa=13333.33 Sq in)No Ice (Carrier 1)	C	From Leg	4.000 0.000 0.000	0.000	300.000	No Ice 1/2" Ice 1" Ice 2" Ice	92.600 115.750 138.900 185.200	62.040 77.550 93.060 124.080	0.700 1.400 2.100 3.500
**									
Sector1(CaAa=10000 Sq in)No Ice (Carrier 2)	A	From Leg	4.000 0.000 0.000	0.000	288.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
Sector2(CaAa=10000 Sq in)No Ice (Carrier 2)	B	From Leg	4.000 0.000 0.000	0.000	288.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
Sector3(CaAa=10000 Sq in)No Ice (Carrier 2)	C	From Leg	4.000 0.000 0.000	0.000	288.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
**									
Sector1(CaAa=10000 Sq in)No Ice (Carrier 3)	A	From Leg	4.000 0.000 0.000	0.000	276.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
Sector2(CaAa=10000 Sq in)No Ice (Carrier 3)	B	From Leg	4.000 0.000 0.000	0.000	276.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
Sector3(CaAa=10000 Sq in)No Ice (Carrier 3)	C	From Leg	4.000 0.000 0.000	0.000	276.000	No Ice 1/2" Ice 1" Ice 2" Ice	69.440 86.800 104.160 138.880	46.525 58.156 69.787 93.050	0.700 1.400 2.100 3.500
**									
4 1/2" OD Dish Mount (Carrier 4)	C	From Leg	0.500 0.000 0.000	0.000	264.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.615 2.207 2.543 3.241	1.615 2.207 2.543 3.241	0.057 0.074 0.094 0.148
4 1/2" OD Dish Mount (Carrier 4)	B	From Leg	0.500 0.000 0.000	0.000	264.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.615 2.207 2.543 3.241	1.615 2.207 2.543 3.241	0.057 0.074 0.094 0.148
**									
4 1/2" OD Dish Mount (Carrier 5)	C	From Leg	0.500 0.000 0.000	0.000	252.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.615 2.207 2.543 3.241	1.615 2.207 2.543 3.241	0.057 0.074 0.094 0.148
4 1/2" OD Dish Mount (Carrier 5)	B	From Leg	0.500 0.000 0.000	0.000	252.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.615 2.207 2.543 3.241	1.615 2.207 2.543 3.241	0.057 0.074 0.094 0.148
**									

**Dishes**

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 19 of 38
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Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				ft	°	°	ft	ft	ft <sup>2</sup>	K	
6' MW Dish (Carrier 4)	C	Paraboloid w/o Radome	From Leg	1 000	0 000		264 000	6 000	No Ice	28 270	0 140
				0 000					1/2" Ice	29 050	0 290
				0 000					1" Ice	29 830	0 440
									2" Ice	31 390	0 740
6' MW Dish (Carrier 4)	B	Paraboloid w/o Radome	From Leg	1 000	0 000		264 000	6 000	No Ice	28 270	0 140
				0 000					1/2" Ice	29 050	0 290
				0 000					1" Ice	29 830	0 440
									2" Ice	31 390	0 740
**											
6' MW Dish (Carrier 5)	C	Paraboloid w/o Radome	From Leg	1 000	0 000		252 000	6 000	No Ice	28 270	0 140
				0 000					1/2" Ice	29 050	0 290
				0 000					1" Ice	29 830	0 440
									2" Ice	31 390	0 740
6' MW Dish (Carrier 5)	B	Paraboloid w/o Radome	From Leg	1 000	0 000		252 000	6 000	No Ice	28 270	0 140
				0 000					1/2" Ice	29 050	0 290
				0 000					1" Ice	29 830	0 440
									2" Ice	31 390	0 740

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp

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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Comb. No.	Description
34	1 2 Dead+1 0 Wind 210 deg+1 0 Ice+1 0 Temp
35	1 2 Dead+1 0 Wind 240 deg+1 0 Ice+1 0 Temp
36	1 2 Dead+1 0 Wind 270 deg+1 0 Ice+1 0 Temp
37	1 2 Dead+1 0 Wind 300 deg+1 0 Ice+1 0 Temp
38	1 2 Dead+1 0 Wind 330 deg+1 0 Ice+1 0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	305 - 295	Leg	Max Tension	15	7 910	1 523	-0 005
			Max Compression	18	-9 540	-0 058	0 001
			Max Mx	2	-9 530	-1 713	0 006
			Max My	4	-1 074	-0 029	0 789
			Max Vy	2	-3 311	-0 057	-0 003
			Max Vx	4	-2 235	0 006	-0 146
		Diagonal	Max Tension	20	3 493	0 000	0 000
			Max Compression	8	-3 387	0 000	0 000
			Max Mx	2	-0 342	0 034	-0 002
			Max My	8	-3 373	0 000	-0 021
			Max Vy	31	0 019	0 012	0 002
			Max Vx	8	0 007	0 000	0 000
		Top Girt	Max Tension	14	1 383	0 000	0 000
			Max Compression	2	-1 519	0 000	0 000
			Max Mx	35	-0 194	-0 027	0 000
Max My	38		0 040	0 000	0 001		
Max Vy	35		0 026	0 000	0 000		
Max Vx	38		-0 001	0 000	0 000		
T2	295 - 280	Leg	Max Tension	15	34 145	1 429	-0 013
			Max Compression	2	-38 087	0 933	-0 017
			Max Mx	2	-38 086	-1 792	0 018
			Max My	16	-1 188	-0 061	-1 153
			Max Vy	2	-5 446	0 933	-0 017
		Diagonal	Max Vx	4	2 446	-0 058	-0 727
			Max Tension	12	5 225	0 000	0 000
			Max Compression	20	-4 865	0 000	0 000
			Max Mx	7	0 782	-0 065	0 001
			Max My	20	-4 852	-0 016	0 059
			Max Vy	27	-0 025	0 026	0 002
			Max Vx	20	-0 016	0 000	0 000
T3	280 - 260	Leg	Max Tension	15	82 130	2 229	-0 017
			Max Compression	2	-90 382	1 598	-0 011
			Max Mx	2	-38 105	3 624	-0 051
		Max My	4	-2 541	-0 091	-1 950	
		Max Vy	2	-9 312	1 598	-0 011	
		Max Vx	4	3 643	0 038	-0 974	



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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft		
T4	260 - 240	Diagonal	Max Tension	20	7.721	0.000	0.000		
			Max Compression	20	-6.851	0.000	0.000		
			Max Mx	8	2.301	0.034	-0.001		
			Max My	20	-6.822	-0.008	0.031		
			Max Vy	34	0.029	0.027	-0.002		
			Max Vx	20	-0.007	0.000	0.000		
		Leg	Max Tension	7	131.257	3.294	0.177		
			Max Compression	2	-143.944	0.881	0.001		
			Max Mx	2	-90.407	6.195	-0.045		
			Max My	4	-5.083	0.218	-2.796		
			Max Vy	2	-10.222	0.881	0.001		
			Max Vx	4	4.336	0.023	-0.487		
		T5	240 - 220	Diagonal	Max Tension	20	8.649	0.000	0.000
					Max Compression	20	-8.403	0.000	0.000
Max Mx	34				0.381	0.039	-0.004		
Max My	8				-8.117	-0.007	-0.016		
Max Vy	32				0.038	0.039	0.004		
Max Vx	8				0.003	0.000	0.000		
Leg	Max Tension			7	176.681	3.586	0.162		
	Max Compression			2	-193.007	0.873	0.004		
	Max Mx			2	-143.962	5.967	-0.009		
	Max My			24	-9.692	0.283	2.662		
	Max Vy			18	-10.950	0.873	0.034		
	Max Vx			24	-4.500	0.026	0.414		
Diagonal	Max Tension			8	8.758	0.000	0.000		
	Max Compression			8	-9.054	0.000	0.000		
	Max Mx	36	1.387	0.060	-0.004				
	Max My	20	-8.992	-0.010	0.020				
	Max Vy	32	0.051	0.059	0.006				
	Max Vx	20	-0.004	0.000	0.000				
T6	220 - 200	Leg	Max Tension	7	218.126	3.872	0.138		
			Max Compression	2	-238.480	0.957	0.007		
			Max Mx	18	-192.545	6.325	0.314		
			Max My	24	-13.915	0.240	2.667		
			Max Vy	18	-11.851	0.961	0.040		
			Max Vx	24	-4.723	0.027	0.517		
		Diagonal	Max Tension	8	9.021	0.000	0.000		
			Max Compression	8	-9.155	0.000	0.000		
			Max Mx	32	0.442	0.075	0.007		
			Max My	22	-7.881	0.010	0.016		
			Max Vy	32	0.058	0.075	0.007		
			Max Vx	22	-0.003	0.000	0.000		
		T7	200 - 180	Leg	Max Tension	7	257.282	4.357	0.128
					Max Compression	18	-282.480	0.943	0.030
Max Mx	18				-238.296	6.862	0.273		
Max My	24				-17.554	0.220	2.882		
Max Vy	18				-13.003	0.943	0.030		
Max Vx	24				-5.053	0.023	0.467		
Diagonal	Max Tension			8	9.617	0.000	0.000		
	Max Compression			8	-9.564	0.000	0.000		
	Max Mx			32	0.456	0.105	0.010		
	Max My			22	-8.309	0.014	0.018		
	Max Vy			32	0.074	0.105	0.010		
	Max Vx			22	-0.003	0.000	0.000		
T8	180 - 160			Leg	Max Tension	7	295.273	5.403	0.128
					Max Compression	18	-326.139	0.206	0.011
		Max Mx	18		-282.506	7.425	0.229		
		Max My	24		-20.950	0.206	2.997		
		Max Vy	18		-14.367	0.206	0.011		
		Max Vx	24		-5.446	0.006	0.198		
		Diagonal	Max Tension	8	10.444	0.000	0.000		



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	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T9	160 - 140	Leg	Max Compression	8	-10.145	0.000	0.000
			Max Mx	32	0.483	0.127	0.012
			Max My	22	-9.465	0.026	0.017
			Max Vy	38	0.081	0.127	-0.012
			Max Vx	38	0.003	0.000	0.000
			Max Tension	7	332.255	5.049	0.095
			Max Compression	18	-369.164	1.280	0.041
		Diagonal	Max Mx	18	-326.163	7.389	0.185
			Max My	24	-24.155	0.176	2.925
			Max Vy	18	-15.763	1.280	0.041
			Max Vx	24	-5.893	0.029	0.757
			Max Tension	8	10.987	0.000	0.000
			Max Compression	8	-10.759	0.000	0.000
			Max Mx	38	0.558	0.150	-0.014
T10	140 - 120	Leg	Max My	22	-9.993	0.032	0.018
			Max Vy	38	0.088	0.150	-0.014
			Max Vx	38	0.003	0.000	0.000
			Max Tension	7	368.715	6.244	0.093
			Max Compression	18	-412.608	0.059	0.045
			Max Mx	18	-369.194	9.131	0.194
			Max My	24	-27.154	0.192	3.707
		Diagonal	Max Vy	18	-16.692	0.059	0.045
			Max Vx	24	-6.821	-0.029	0.892
			Max Tension	10	12.014	0.000	0.000
			Max Compression	8	-11.786	0.000	0.000
			Max Mx	32	0.705	0.186	-0.017
			Max My	22	-11.100	0.059	0.025
			Max Vy	36	0.103	0.185	0.018
T11	120 - 100	Leg	Max Vx	38	0.004	0.000	0.000
			Max Tension	7	404.247	6.557	0.084
			Max Compression	18	-455.257	0.287	0.042
			Max Mx	18	-455.230	-8.536	-0.090
			Max My	24	-30.370	0.141	4.305
			Max Vy	18	-17.633	0.287	0.042
			Max Vx	24	-6.982	-0.028	0.890
		Diagonal	Max Tension	9	13.302	0.000	0.000
			Max Compression	10	-13.813	0.000	0.000
			Max Mx	36	1.609	0.289	0.000
			Max My	31	-0.325	0.000	-0.007
			Max Vy	36	-0.107	0.000	0.000
			Max Vx	31	0.003	0.000	0.000
			Max Tension	18	7.700	0.000	0.000
T12	100 - 80	Horizontal	Max Compression	18	-7.700	-0.059	0.000
			Max Mx	33	-1.486	-0.188	0.003
			Max My	6	3.921	-0.049	0.005
			Max Vy	33	0.099	-0.188	0.003
			Max Vx	35	-0.002	-0.188	0.004
			Max Tension	25	0.001	0.000	0.000
			Max Compression	37	-0.011	0.000	0.000
		Inner Bracing	Max Mx	26	-0.010	-0.127	0.000
			Max My	18	-0.004	0.000	-0.000
			Max Vy	26	0.053	0.000	0.000
			Max Vx	18	0.000	0.000	0.000
			Max Tension	7	438.537	6.983	0.073
			Max Compression	18	-497.054	0.293	0.051
			Max Mx	18	-455.287	9.116	0.171
Leg	Max My	24	-33.519	0.108	4.385		
	Max Vy	18	-18.468	0.293	0.051		
	Max Vx	24	-7.188	-0.034	1.174		
	Max Tension	9	13.636	0.000	0.000		
	Max Compression	10	-14.051	0.000	0.000		
	Diagonal	Max Mx	10	-14.051	0.000	0.000	
		Max My	10	-14.051	0.000	0.000	
Max Vy		10	-14.051	0.000	0.000		
Max Vx		10	-14.051	0.000	0.000		
Max Tension		10	-14.051	0.000	0.000		
Max Compression		10	-14.051	0.000	0.000		
Max Mx		10	-14.051	0.000	0.000		

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave. Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	23 of 38
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	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T13	80 - 60	Horizontal	Max Mx	36	1 614	0 326	0 000	
			Max My	31	-0 326	0 000	-0 008	
			Max Vy	36	-0 113	0 000	0 000	
			Max Vx	31	0 003	0 000	0 000	
			Max Tension	18	8 425	0 000	0 000	
			Max Compression	18	-8 425	-0 078	0 001	
			Max Mx	31	0 493	-0 236	0 005	
			Max My	6	4 284	-0 068	0 006	
			Max Vy	31	-0 116	-0 236	0 005	
			Max Vx	35	-0 003	-0 236	-0 005	
			Max Tension	23	0 000	0 000	0 000	
			Max Compression	37	-0 012	0 000	0 000	
		Inner Bracing	Max Mx	26	-0 010	-0 145	0 000	
			Max My	18	-0 004	0 000	-0 000	
			Max Vy	26	0 056	0 000	0 000	
			Max Vx	18	0 000	0 000	0 000	
			Max Tension	7	471 885	8 257	0 077	
			Max Compression	18	-538 673	-0 793	0 036	
			Max Mx	18	-538 639	-10 624	-0 065	
			Max My	24	-36 767	0 108	4 771	
			Max Vy	18	-19 647	-0 793	0 036	
			Max Vx	24	-7 453	-0 060	0 740	
			Diagonal	Max Tension	9	14 373	0 000	0 000
				Max Compression	11	-14 515	0 000	0 000
		Max Mx		36	1 726	0 423	0 000	
		Max My		31	-0 272	0 000	-0 010	
		Max Vy		36	-0 139	0 000	0 000	
		Max Vx		31	0 003	0 000	0 000	
		Horizontal	Max Tension	18	9 143	0 000	0 000	
			Max Compression	18	-9 143	-0 112	0 000	
			Max Mx	31	0 569	-0 313	0 007	
			Max My	6	4 645	-0 100	0 009	
			Max Vy	31	-0 145	-0 313	0 007	
Max Vx	35		-0 003	-0 313	0 007			
Inner Bracing	Max Tension	1	0 000	0 000	0 000			
	Max Compression	37	-0 014	0 000	0 000			
	Max Mx	26	-0 012	-0 162	0 000			
	Max My	18	-0 004	0 000	-0 000			
	Max Vy	26	0 059	0 000	0 000			
	Max Vx	18	0 000	0 000	0 000			
T14	60 - 40	Leg	Max Tension	7	504 385	7 943	0 064	
			Max Compression	18	-579 624	0 109	0 039	
			Max Mx	18	-579 590	-10 319	-0 050	
			Max My	24	-40 338	0 112	4 470	
			Max Vy	18	-20 839	0 109	0 039	
			Max Vx	24	-7 665	-0 044	1 020	
		Diagonal	Max Tension	9	14 737	0 000	0 000	
			Max Compression	8	-14 894	0 000	0 000	
			Max Mx	36	1 876	0 465	0 000	
			Max My	31	-0 122	0 000	-0 011	
			Max Vy	36	-0 144	0 000	0 000	
			Max Vx	31	0 003	0 000	0 000	
		Horizontal	Max Tension	18	9 854	0 000	0 000	
			Max Compression	18	-9 854	-0 128	0 001	
			Max Mx	27	0 721	-0 346	0 007	
			Max My	6	5 004	-0 115	0 008	
			Max Vy	31	-0 151	-0 344	0 007	
			Max Vx	35	-0 003	-0 344	0 007	
		Inner Bracing	Max Tension	1	0 000	0 000	0 000	
			Max Compression	37	-0 014	0 000	0 000	
			Max Mx	26	-0 013	-0 179	0 000	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 24 of 38
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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T15	40 - 20	Leg	Max My	18	-0.005	0.000	-0.000	
			Max Vy	26	0.060	0.000	0.000	
			Max Vx	18	-0.000	0.000	0.000	
			Max Tension	7	536.150	8.992	0.065	
			Max Compression	18	-620.293	-0.774	0.022	
			Max Mx	18	-620.256	-11.743	-0.055	
			Max My	24	-43.910	0.150	4.856	
			Max Vy	18	-21.920	-0.774	0.022	
			Max Vx	24	-7.755	-0.050	0.548	
			Diagonal	Max Tension	9	15.297	0.000	0.000
				Max Compression	8	-15.580	0.000	0.000
				Max Mx	36	2.260	0.501	0.000
		Max My		31	0.258	0.000	-0.012	
		Max Vy		36	-0.148	0.000	0.000	
		Max Vx		31	0.003	0.000	0.000	
		Horizontal	Max Tension	18	10.557	0.000	0.000	
			Max Compression	18	-10.557	-0.145	0.001	
			Max Mx	27	0.811	-0.383	0.008	
			Max My	29	2.152	-0.383	0.009	
			Max Vy	31	-0.154	-0.368	0.008	
			Max Vx	29	0.003	-0.383	0.009	
		Inner Bracing	Max Tension	1	0.000	0.000	0.000	
			Max Compression	37	-0.014	0.000	0.000	
			Max Mx	31	-0.013	-0.192	0.000	
Max My	18		-0.006	0.000	-0.000			
Max Vy	31		0.061	0.000	0.000			
Max Vx	18		0.000	0.000	0.000			
T16	20 - 0		Leg	Max Tension	7	566.783	8.715	0.063
				Max Compression	18	-659.489	0.000	0.000
				Max Mx	18	-659.452	-11.455	-0.066
				Max My	24	-47.625	0.166	4.430
				Max Vy	18	-22.891	0.000	0.000
				Max Vx	24	-7.759	0.166	4.430
		Diagonal	Max Tension	9	15.346	0.000	0.000	
			Max Compression	8	-15.809	0.000	0.000	
			Max Mx	31	2.947	0.516	0.000	
			Max My	31	1.112	0.000	-0.012	
			Max Vy	31	0.144	0.000	0.000	
			Max Vx	31	0.003	0.000	0.000	
Horizontal	Max Tension	18	11.240	0.000	0.000			
	Max Compression	18	-11.240	-0.165	0.002			
	Max Mx	35	-0.814	-0.408	0.009			
	Max My	29	2.310	-0.406	0.010			
	Max Vy	35	0.150	-0.408	0.009			
	Max Vx	29	0.003	-0.406	0.010			
Inner Bracing	Max Tension	1	0.000	0.000	0.000			
	Max Compression	29	-0.013	0.000	0.000			
	Max Mx	35	-0.013	-0.193	0.000			
	Max My	35	-0.012	0.000	-0.000			
	Max Vy	35	0.058	0.000	0.000			
	Max Vx	35	0.000	0.000	0.000			

**Maximum Reactions**

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
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	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max Vert	18	658 093	42 155	-24 217
	Max H <sub>x</sub>	18	658 093	42 155	-24 217
	Max H <sub>z</sub>	7	-565 326	-38 039	21 792
	Min Vert	7	-565 326	-38 039	21 792
	Min H <sub>x</sub>	7	-565 326	-38 039	21 792
	Min H <sub>z</sub>	18	658 093	42 155	-24 217
Leg B	Max Vert	10	654 894	-42 322	-23 637
	Max H <sub>x</sub>	23	-563 034	38 252	21 142
	Max H <sub>z</sub>	23	-563 034	38 252	21 142
	Min Vert	23	-563 034	38 252	21 142
	Min H <sub>x</sub>	10	654 894	-42 322	-23 637
	Min H <sub>z</sub>	10	654 894	-42 322	-23 637
Leg A	Max Vert	2	652 539	-0 227	48 096
	Max H <sub>x</sub>	21	40 417	6 290	2 063
	Max H <sub>z</sub>	2	652 539	-0 227	48 096
	Min Vert	15	-543 471	0 253	-42 263
	Min H <sub>x</sub>	9	40 417	-6 295	2 063
	Min H <sub>z</sub>	15	-543 471	0 253	-42 263

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	86 402	-0 000	0 000	6 734	5 754	-0 000
1.2 Dead+1.0 Wind 0 deg - No Ice	103 682	0 000	-80 510	-14449 998	6 993	-11 268
0.9 Dead+1.0 Wind 0 deg - No Ice	77 761	0 000	-80 512	-14420 571	5 245	-11 252
1.2 Dead+1.0 Wind 30 deg - No Ice	103 682	39 423	-65 416	-11775 207	-7227 670	15 899
0.9 Dead+1.0 Wind 30 deg - No Ice	77 761	39 424	-65 418	-11751 558	-7213 518	15 894
1.2 Dead+1.0 Wind 60 deg - No Ice	103 682	66 030	-37 783	-6856 891	-12036 955	5 977
0.9 Dead+1.0 Wind 60 deg - No Ice	77 761	66 031	-37 784	-6843 935	-12012 307	5 955
1.2 Dead+1.0 Wind 90 deg - No Ice	103 682	77 324	-1 327	-337 747	-13995 040	1 677
0.9 Dead+1.0 Wind 90 deg - No Ice	77 761	77 326	-1 328	-338 970	-13966 208	1 642
1.2 Dead+1.0 Wind 120 deg - No Ice	103 682	71 521	38 644	6744 242	-12855 206	31 006
0.9 Dead+1.0 Wind 120 deg - No Ice	77 761	71 523	38 645	6727 721	-12828 967	30 968
1.2 Dead+1.0 Wind 150 deg - No Ice	103 682	37 717	65 200	11730 791	-6780 091	43 270
0.9 Dead+1.0 Wind 150 deg - No Ice	77 761	37 718	65 201	11703 185	-6767 029	43 242
1.2 Dead+1.0 Wind 180 deg - No Ice	103 682	0 000	73 513	13345 181	6 988	11 266
0.9 Dead+1.0 Wind 180 deg - No Ice	77 761	0 000	73 515	13313 910	5 240	11 252
1.2 Dead+1.0 Wind 210 deg - No Ice	103 682	-37 829	65 393	11785 671	6825 817	-10 300
0.9 Dead+1.0 Wind 210 deg - No Ice	77 761	-37 830	65 394	11757 920	6809 178	-10 297



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	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>y</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>y</sub> kip-ft	Torque kip-ft
1 2 Dead+1 0 Wind 240 deg - No Ice	103 682	-71 712	38 754	6775 513	12923 521	-1 530
0 9 Dead+1 0 Wind 240 deg - No Ice	77 761	-71 714	38 755	6758 909	12893 645	-1 506
1 2 Dead+1 0 Wind 270 deg - No Ice	103 682	-77 324	-1 327	-337 749	14008 946	-1 680
0 9 Dead+1 0 Wind 270 deg - No Ice	77 761	-77 326	-1 328	-338 971	13976 619	-1 645
1 2 Dead+1 0 Wind 300 deg - No Ice	103 682	-65 839	-37 673	-6825 403	11996 566	-35 457
0 9 Dead+1 0 Wind 300 deg - No Ice	77 761	-65 840	-37 674	-6812 528	11968 566	-35 420
1 2 Dead+1 0 Wind 330 deg - No Ice	103 682	-39 311	-65 223	-11720 206	7209 964	-48 869
0 9 Dead+1 0 Wind 330 deg - No Ice	77 761	-39 312	-65 225	-11696 701	7192 400	-48 839
1 2 Dead+1 0 Ice+1 0 Temp	273 435	0 001	-0 001	51 881	66 111	-0 001
1 2 Dead+1 0 Wind 0 deg+1 0 Ice+1 0 Temp	273 435	0 000	-10 944	-2016 374	66 703	-3 504
1 2 Dead+1 0 Wind 30 deg+1 0 Ice+1 0 Temp	273 435	5 438	-9 166	-1682 891	-974 144	-0 443
1 2 Dead+1 0 Wind 60 deg+1 0 Ice+1 0 Temp	273 435	9 305	-5 343	-962 534	-1705 204	0 148
1 2 Dead+1 0 Wind 90 deg+1 0 Ice+1 0 Temp	273 435	10 862	-0 117	21 282	-1991 198	1 693
1 2 Dead+1 0 Wind 120 deg+1 0 Ice+1 0 Temp	273 435	9 690	5 361	1047 167	-1764 012	5 073
1 2 Dead+1 0 Wind 150 deg+1 0 Ice+1 0 Temp	273 435	5 288	9 148	1782 815	-934 058	6 175
1 2 Dead+1 0 Wind 180 deg+1 0 Ice+1 0 Temp	273 435	0 000	10 444	2037 997	66 693	3 500
1 2 Dead+1 0 Wind 210 deg+1 0 Ice+1 0 Temp	273 435	-5 297	9 164	1787 317	1070 051	0 939
1 2 Dead+1 0 Wind 240 deg+1 0 Ice+1 0 Temp	273 435	-9 706	5 370	1049 875	1902 116	0 241
1 2 Dead+1 0 Wind 270 deg+1 0 Ice+1 0 Temp	273 435	-10 862	-0 117	21 275	2124 592	-1 696
1 2 Dead+1 0 Wind 300 deg+1 0 Ice+1 0 Temp	273 435	-9 290	-5 334	-959 936	1834 095	-5 464
1 2 Dead+1 0 Wind 330 deg+1 0 Ice+1 0 Temp	273 435	-5 429	-9 150	-1678 387	1104 950	-6 671
Dead+Wind 0 deg - Service	86 402	0 000	-25 796	-4619 253	5 794	-3 607
Dead+Wind 30 deg - Service	86 402	12 631	-20 960	-3763 424	-2308 892	5 116
Dead+Wind 60 deg - Service	86 402	21 156	-12 106	-2189 733	-3847 708	1 911
Dead+Wind 90 deg - Service	86 402	24 775	-0 425	-103 831	-4474 259	0 507
Dead+Wind 120 deg - Service	86 402	22 916	12 382	2162 075	-4109 631	9 923
Dead+Wind 150 deg - Service	86 402	12 085	20 890	3757 489	-2165 852	13 882
Dead+Wind 180 deg - Service	86 402	0 000	23 554	4274 023	5 792	3 608
Dead+Wind 210 deg - Service	86 402	-12 120	20 952	3775 059	2187 589	-3 321
Dead+Wind 240 deg - Service	86 402	-22 977	12 417	2172 102	4138 605	-0 482
Dead+Wind 270 deg - Service	86 402	-24 775	-0 425	-103 832	4485 836	-0 507
Dead+Wind 300 deg - Service	86 402	-21 095	-12 070	-2179 680	3841 902	-11 354
Dead+Wind 330 deg - Service	86 402	-12 595	-20 898	-3745 840	2310 335	-15 678

## Solution Summary

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	27 of 38
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	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-86.402	0.000	0.000	86.402	-0.000	0.000%
2	0.000	-103.682	-80.517	-0.000	103.682	80.510	0.005%
3	0.000	-77.762	-80.517	-0.000	77.761	80.512	0.005%
4	39.426	-103.682	-65.422	-39.423	103.682	65.416	0.005%
5	39.426	-77.762	-65.422	-39.424	77.761	65.418	0.004%
6	66.035	-103.682	-37.786	-66.030	103.682	37.783	0.005%
7	66.035	-77.762	-37.786	-66.031	77.761	37.784	0.004%
8	77.330	-103.682	-1.327	-77.324	103.682	1.327	0.005%
9	77.330	-77.762	-1.327	-77.326	77.761	1.328	0.004%
10	71.527	-103.682	38.647	-71.521	103.682	-38.644	0.005%
11	71.527	-77.762	38.647	-71.523	77.761	-38.645	0.005%
12	37.721	-103.682	65.205	-37.717	103.682	-65.200	0.005%
13	37.721	-77.762	65.205	-37.718	77.761	-65.201	0.004%
14	0.000	-103.682	73.519	-0.000	103.682	-73.513	0.005%
15	0.000	-77.762	73.519	-0.000	77.761	-73.515	0.004%
16	-37.832	-103.682	65.398	37.829	103.682	-65.393	0.005%
17	-37.832	-77.762	65.398	37.830	77.761	-65.394	0.004%
18	-71.718	-103.682	38.758	71.712	103.682	-38.754	0.005%
19	-71.718	-77.762	38.758	71.714	77.761	-38.755	0.005%
20	-77.330	-103.682	-1.327	77.324	103.682	1.327	0.005%
21	-77.330	-77.762	-1.327	77.326	77.761	1.328	0.004%
22	-65.844	-103.682	-37.676	65.839	103.682	37.673	0.005%
23	-65.844	-77.762	-37.676	65.840	77.761	37.674	0.004%
24	-39.315	-103.682	-65.229	39.311	103.682	65.223	0.005%
25	-39.315	-77.762	-65.229	39.312	77.761	65.225	0.004%
26	0.000	-273.435	0.000	-0.001	273.435	0.001	0.001%
27	0.000	-273.435	-10.946	-0.000	273.435	10.944	0.001%
28	5.439	-273.435	-9.167	-5.438	273.435	9.166	0.001%
29	9.307	-273.435	-5.343	-9.305	273.435	5.343	0.001%
30	10.864	-273.435	-0.117	-10.862	273.435	0.117	0.001%
31	9.691	-273.435	5.362	-9.690	273.435	-5.361	0.001%
32	5.289	-273.435	9.150	-5.288	273.435	-9.148	0.001%
33	0.000	-273.435	10.446	-0.000	273.435	-10.444	0.001%
34	-5.298	-273.435	9.165	5.297	273.435	-9.164	0.001%
35	-9.707	-273.435	5.371	9.706	273.435	-5.370	0.000%
36	-10.864	-273.435	-0.117	10.862	273.435	0.117	0.001%
37	-9.291	-273.435	-5.334	9.290	273.435	5.334	0.001%
38	-5.430	-273.435	-9.152	5.429	273.435	9.150	0.001%
39	0.000	-86.402	-25.798	-0.000	86.402	25.796	0.002%
40	12.632	-86.402	-20.961	-12.631	86.402	20.960	0.002%
41	21.157	-86.402	-12.107	-21.156	86.402	12.106	0.002%
42	24.777	-86.402	-0.425	-24.775	86.402	0.425	0.002%
43	22.917	-86.402	12.383	-22.916	86.402	-12.382	0.002%
44	12.086	-86.402	20.892	-12.085	86.402	-20.890	0.002%
45	0.000	-86.402	23.555	-0.000	86.402	-23.554	0.002%
46	-12.121	-86.402	20.953	12.120	86.402	-20.952	0.002%
47	-22.978	-86.402	12.418	22.977	86.402	-12.417	0.002%
48	-24.777	-86.402	-0.425	24.775	86.402	0.425	0.002%
49	-21.096	-86.402	-12.071	21.095	86.402	12.070	0.002%
50	-12.596	-86.402	-20.899	12.595	86.402	20.898	0.002%

### Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	28 of 38
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2	Yes	14	0.00006516	0.00012463
3	Yes	14	0.00004882	0.00009376
4	Yes	14	0.00006222	0.00011933
5	Yes	14	0.00004600	0.00008860
6	Yes	14	0.00005977	0.00011485
7	Yes	14	0.00004365	0.00008422
8	Yes	14	0.00006224	0.00011931
9	Yes	14	0.00004603	0.00008860
10	Yes	14	0.00006506	0.00012430
11	Yes	14	0.00004873	0.00009349
12	Yes	14	0.00006241	0.00011963
13	Yes	14	0.00004619	0.00008891
14	Yes	14	0.00005983	0.00011504
15	Yes	14	0.00004370	0.00008438
16	Yes	14	0.00006244	0.00011971
17	Yes	14	0.00004622	0.00008898
18	Yes	14	0.00006509	0.00012438
19	Yes	14	0.00004876	0.00009356
20	Yes	14	0.00006224	0.00011929
21	Yes	14	0.00004603	0.00008859
22	Yes	14	0.00005978	0.00011484
23	Yes	14	0.00004366	0.00008422
24	Yes	14	0.00006219	0.00011925
25	Yes	14	0.00004598	0.00008854
26	Yes	10	0.00000001	0.00011533
27	Yes	15	0.00000001	0.00014318
28	Yes	15	0.00000001	0.00014011
29	Yes	15	0.00000001	0.00014103
30	Yes	15	0.00000001	0.00014313
31	Yes	15	0.00012319	0.00014623
32	Yes	15	0.00012312	0.00014517
33	Yes	15	0.00012307	0.00014643
34	Yes	15	0.00012338	0.00014801
35	Yes	16	0.00000001	0.00007773
36	Yes	15	0.00012311	0.00014843
37	Yes	15	0.00012255	0.00014558
38	Yes	15	0.00000001	0.00014293
39	Yes	14	0.00000001	0.00009825
40	Yes	14	0.00000001	0.00009667
41	Yes	14	0.00000001	0.00009539
42	Yes	14	0.00000001	0.00009666
43	Yes	14	0.00000001	0.00009808
44	Yes	14	0.00000001	0.00009671
45	Yes	14	0.00000001	0.00009545
46	Yes	14	0.00000001	0.00009676
47	Yes	14	0.00000001	0.00009812
48	Yes	14	0.00000001	0.00009663
49	Yes	14	0.00000001	0.00009534
50	Yes	14	0.00000001	0.00009661

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	305 - 295	18.135	47	0.543	0.092
T2	295 - 280	16.944	47	0.545	0.091
T3	280 - 260	15.142	47	0.526	0.090
T4	260 - 240	12.905	47	0.484	0.086
T5	240 - 220	10.860	47	0.439	0.074



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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T6	220 - 200	9.032	47	0.390	0.063
T7	200 - 180	7.400	47	0.344	0.053
T8	180 - 160	5.961	47	0.302	0.045
T9	160 - 140	4.683	47	0.263	0.036
T10	140 - 120	3.556	47	0.224	0.027
T11	120 - 100	2.597	47	0.188	0.020
T12	100 - 80	1.826	47	0.150	0.017
T13	80 - 60	1.204	47	0.116	0.013
T14	60 - 40	0.722	47	0.086	0.009
T15	40 - 20	0.364	47	0.055	0.006
T16	20 - 0	0.125	47	0.028	0.003

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
305.000	Lightning Rod 1"x10'	47	18.135	0.543	0.092	69849
300.000	Sector1(CaAa=13333.33 Sq.in)No Ice	47	17.541	0.545	0.091	69849
288.000	Sector1(CaAa=10000 Sq.in)No Ice	47	16.098	0.539	0.091	82782
276.000	Sector1(CaAa=10000 Sq.in)No Ice	47	14.676	0.518	0.090	19124
264.000	6' MW Dish	47	13.336	0.493	0.087	25140
252.000	6' MW Dish	47	12.064	0.466	0.081	24647

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	305 - 295	56.670	18	1.696	0.286
T2	295 - 280	52.946	18	1.703	0.284
T3	280 - 260	47.311	18	1.642	0.281
T4	260 - 240	40.321	18	1.510	0.267
T5	240 - 220	33.932	18	1.370	0.230
T6	220 - 200	28.219	18	1.219	0.197
T7	200 - 180	23.121	18	1.076	0.166
T8	180 - 160	18.626	18	0.943	0.140
T9	160 - 140	14.631	18	0.822	0.113
T10	140 - 120	11.111	18	0.698	0.086
T11	120 - 100	8.117	18	0.586	0.064
T12	100 - 80	5.708	18	0.468	0.052
T13	80 - 60	3.762	18	0.363	0.040
T14	60 - 40	2.256	18	0.268	0.030
T15	40 - 20	1.139	18	0.173	0.020
T16	20 - 0	0.393	18	0.086	0.010

### Critical Deflections and Radius of Curvature - Design Wind



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave. Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 30 of 38
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Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	"	ft
305.000	Lightning Rod 1"x10'	18	56.670	1.696	0.286	22612
300.000	Sector1(CaAa=13333.33 Sq in)No Ice	18	54.814	1.703	0.285	22612
288.000	Sector1(CaAa=10000 Sq in)No Ice	18	50.302	1.684	0.283	27022
276.000	Sector1(CaAa=10000 Sq in)No Ice	18	45.857	1.618	0.279	6116
264.000	6' MW Dish	18	41.668	1.538	0.272	8077
252.000	6' MW Dish	18	37.692	1.455	0.254	7916

### Bolt Design Data

Section No.	Elevation	Component Type	Bolt Grade	Bolt Size	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio		Criteria	
								Load	Allowable		
	ft			in							
T1	305	Diagonal	A325X	0.625	1	3.493	9.598	0.364	✓	1	Member Block Shear
		Top Girt	A325X	0.625	1	1.383	9.598	0.144	✓	1	Member Block Shear
T2	295	Leg	A325N	0.750	6	1.318	30.101	0.044	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	5.225	9.598	0.544	✓	1	Member Block Shear
T3	280	Leg	A325N	0.750	6	5.689	30.101	0.189	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	7.721	9.598	0.804	✓	1	Member Block Shear
T4	260	Leg	A325N	0.750	6	13.686	30.101	0.455	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	8.649	10.740	0.805	✓	1	Member Block Shear
T5	240	Leg	A325N	0.750	6	21.874	30.101	0.727	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	8.758	13.025	0.672	✓	1	Member Block Shear
T6	220	Leg	A325N	0.750	6	29.445	30.101	0.978	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	9.021	13.025	0.693	✓	1	Member Block Shear
T7	200	Leg	A325N	1.000	6	36.352	54.517	0.667	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	9.617	14.168	0.679	✓	1	Member Block Shear
T8	180	Leg	A325N	1.000	6	42.877	54.517	0.786	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	10.444	14.168	0.737	✓	1	Member Block Shear
T9	160	Leg	A325N	1.000	6	49.209	54.517	0.903	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	10.987	14.168	0.776	✓	1	Member Block Shear
T10	140	Leg	A325N	1.250	6	55.373	87.220	0.635	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	12.014	17.257	0.696	✓	1	Bolt Shear
T11	120	Leg	A325N	1.250	6	61.449	87.220	0.705	✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	13.302	26.051	0.511	✓	1	Member Block Shear
		Horizontal	A325X	0.625	1	7.700	19.195	0.401	✓	1	Member Block Shear
T12	100	Leg	A325N	1.250	6	67.371	87.220	0.772	✓	1	Bolt Tension

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T13	80	Diagonal	A325X	0.625	1	13.636	26.051	0.523 ✓	1	Member Block Shear
		Horizontal	A325X	0.625	1	8.425	21.480	0.392 ✓	1	Member Block Shear
T14	60	Leg	A325N	1.250	6	73.086	87.220	0.838 ✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	14.374	28.336	0.507 ✓	1	Member Block Shear
T15	40	Horizontal	A325X	0.625	1	9.143	26.051	0.351 ✓	1	Member Block Shear
		Leg	A325N	1.250	6	78.644	87.220	0.902 ✓	1	Bolt Tension
T16	20	Diagonal	A325X	0.625	1	14.737	28.336	0.520 ✓	1	Member Block Shear
		Horizontal	A325X	0.625	1	9.854	26.051	0.378 ✓	1	Member Block Shear
T16	20	Leg	A325N	1.500	6	84.060	87.220	0.964 ✓	1	Bolt Tension
		Diagonal	A325X	0.625	1	15.297	28.336	0.540 ✓	1	Member Block Shear
T16	20	Horizontal	A325X	0.625	1	10.557	26.051	0.405 ✓	1	Member Block Shear
		Leg	A325N	1.500	6	89.354	126.472	0.707 ✓	1	Bolt Tension
T16	20	Diagonal	A325X	0.625	1	15.346	28.336	0.542 ✓	1	Member Block Shear
		Horizontal	A325X	0.625	1	11.240	26.051	0.431 ✓	1	Member Block Shear

**Compression Checks**

**Leg Design Data (Compression)**

Section No.	Elevation ft	Size	L ft	L <sub>n</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>n</sub> K	φP <sub>n</sub> K	Ratio P <sub>n</sub> / φP <sub>n</sub>
T1	305 - 295	1 3/4	10.009	4.504	123.5 K=1.00	2.405	-5.486	35.601	0.154 <sup>1</sup> ✓
T2	295 - 280	1 3/4	15.014	4.671	128.1 K=1.00	2.405	-33.000	33.103	0.997 <sup>1</sup> ✓
T3	280 - 260	2 1/4	20.019	4.754	101.4 K=1.00	3.976	-83.769	84.331	0.993 <sup>1</sup> ✓
T4	260 - 240	2 3/4	20.019	4.754	83.0 K=1.00	5.940	-137.449	161.540	0.851 <sup>1</sup> ✓
T5	240 - 220	3	20.019	4.754	76.1 K=1.00	7.069	-186.937	208.347	0.897 <sup>1</sup> ✓
T6	220 - 200	3 1/4	20.019	4.754	70.2 K=1.00	8.296	-232.605	260.312	0.894 <sup>1</sup> ✓
T7	200 - 180	3 1/2	20.019	4.754	65.2 K=1.00	9.621	-276.559	317.273	0.872 <sup>1</sup> ✓
T8	180 - 160	3 3/4	20.019	4.754	60.9 K=1.00	11.045	-320.115	379.106	0.844 <sup>1</sup> ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 32 of 38
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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio P <sub>u</sub> / φP <sub>u</sub>
T9	160 - 140	3 3/4	20.019	4.754	60.9 K=1.00	11.045	-363.193	379.106	0.958 <sup>1</sup>
T10	140 - 120	4	20.019	4.754	57.1 K=1.00	12.566	-406.636	445.717	0.912 <sup>1</sup>
T11	120 - 100	4	20.019	4.754	57.1 K=1.00	12.566	-444.221	445.717	0.997 <sup>1</sup>
T12	100 - 80	4 1/4	20.019	4.754	53.7 K=1.00	14.186	-486.050	517.034	0.940 <sup>1</sup>
T13	80 - 60	4 1/2	20.019	4.754	50.7 K=1.00	15.904	-527.484	593.004	0.890 <sup>1</sup>
T14	60 - 40	4 1/2	20.019	4.754	50.7 K=1.00	15.904	-568.542	593.004	0.959 <sup>1</sup>
T15	40 - 20	4 3/4	20.019	4.754	48.0 K=1.00	17.721	-609.086	673.582	0.904 <sup>1</sup>
T16	20 - 0	4 3/4	20.019	4.754	48.0 K=1.00	17.721	-648.499	673.582	0.963 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>u</sub> controls

### Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio P <sub>u</sub> / φP <sub>u</sub>
T1	305 - 295	L1 3/4x1 3/4x3/16	6.485	3.258	113.9 K=1.00	0.621	-3.387	13.715	0.247 <sup>1</sup>
T2	295 - 280	L1 3/4x1 3/4x3/16	7.435	3.736	130.5 K=1.00	0.621	-4.865	10.431	0.466 <sup>1</sup>
T3	280 - 260	L1 3/4x1 3/4x3/16	8.697	4.343	151.7 K=1.00	0.621	-6.851	7.721	0.887 <sup>1</sup>
T4	260 - 240	L2x2x3/16	9.987	4.964	151.2 K=1.00	0.715	-8.163	8.951	0.912 <sup>1</sup>
T5	240 - 220	L2 1/2x2 1/2x3/16	11.329	5.625	136.4 K=1.00	0.902	-8.314	13.885	0.599 <sup>1</sup>
T6	220 - 200	L2 1/2x2 1/2x3/16	12.706	6.303	152.8 K=1.00	0.902	-8.691	11.057	0.786 <sup>1</sup>
T7	200 - 180	L3x3x3/16	14.108	6.994	140.8 K=1.00	1.090	-9.314	15.733	0.592 <sup>1</sup>
T8	180 - 160	L3x3x3/16	15.529	7.694	154.9 K=1.00	1.090	-10.145	13.000	0.780 <sup>1</sup>
T9	160 - 140	L3x3x3/16	16.963	8.412	169.4 K=1.00	1.090	-10.759	10.877	0.989 <sup>1</sup>
T10	140 - 120	L3x3x1/4	18.408	9.124	184.9 K=1.00	1.440	-11.740	12.050	0.974 <sup>1</sup>
T11	120 - 100	2L2 1/2x2 1/2x3/16x3/8	10.829	10.644	168.4 K=1.00	1.800	-13.166	17.598	0.748 <sup>1</sup>
T12	100 - 80	2L 'a' > 60.948 in - 261 2L2 1/2x2 1/2x3/16x3/8	11.508	11.313	179.0 K=1.00	1.800	-13.676	15.641	0.874 <sup>1</sup>



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 33 of 38
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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T13	80 - 60	2L 'a' > 64 783 in - 300 2L3x3x3/16x3/8	12 195	11 991	159.5 K=1.00	2 180	-14 456	23 170	0.624 <sup>1</sup> ✓
T14	60 - 40	2L 'a' > 68 500 in - 339 2L3x3x3/16x3/8	12 889	12 687	168.8 K=1.00	2 180	-14 894	20 849	0.714 <sup>1</sup> ✓
T15	40 - 20	2L 'a' > 72 475 in - 378 2L3x3x3/16x3/8	13 589	13 378	178.0 K=1.00	2 180	-15 580	18 864	0.826 <sup>1</sup> ✓
T16	20 - 0	2L 'a' > 76 419 in - 417 2L3x3x3/16x3/8	14 294	14 084	187.4 K=1.00	2 180	-15 809	17 103	0.924 <sup>1</sup> ✓
		2L 'a' > 80 455 in - 456							✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T11	120 - 100	2L1 3/4x1 3/4x3/16x3/8	19 106	9 386	209.8 K=1.00	1 242	-7 700	8 079	0.953 <sup>1</sup> ✓
T12	100 - 80	2L 'a' > 54 035 in - 259 2L2x2x3/16x3/8	20 606	10 126	198.1 K=1.00	1 430	-8 425	10 289	0.819 <sup>1</sup> ✓
T13	80 - 60	2L 'a' > 58 196 in - 298 2L2 1/2x2 1/2x3/16x3/8	22 106	10 866	171.9 K=1.00	1 800	-9 143	16 912	0.541 <sup>1</sup> ✓
T14	60 - 40	2L 'a' > 62 219 in - 337 2L2 1/2x2 1/2x3/16x3/8	23 606	11 616	183.8 K=1.00	1 800	-9 854	14 861	0.663 <sup>1</sup> ✓
T15	40 - 20	2L 'a' > 66 514 in - 376 2L2 1/2x2 1/2x3/16x3/8	25 106	12 355	195.5 K=1.00	1 800	-10 557	13 179	0.801 <sup>1</sup> ✓
T16	20 - 0	2L 'a' > 70 749 in - 415 2L2 1/2x2 1/2x3/16x3/8	26 606	13 105	207.4 K=1.00	1 800	-11 240	11 746	0.957 <sup>1</sup> ✓
		2L 'a' > 75 043 in - 454							✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
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<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	34 of 38
	<b>Project</b>	305' SST/38.266953, -83.846858	<b>Date</b>	13:50:20 10/19/20
	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	305 - 295	L1 3/4x1 3/4x3/16	4.163	4.017	140.3 K=1.00	0.621	-1.519	9.026	0.168 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Inner Bracing Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T11	120 - 100	L1 3/4x1 3/4x3/16	9.553	9.553	333.8 K=1.00	0.621	-0.011	1.596	0.007 <sup>1</sup> ✓
T12	100 - 80	KL/R > 250 (C) - 268 L1 3/4x1 3/4x3/16	10.303	10.303	360.0 K=1.00	0.621	-0.012	1.372	0.008 <sup>1</sup> ✓
T13	80 - 60	KL/R > 250 (C) - 307 L1 3/4x1 3/4x3/16	11.053	11.053	386.2 K=1.00	0.621	-0.014	1.192	0.011 <sup>1</sup> ✓
T14	60 - 40	KL/R > 250 (C) - 346 L1 3/4x1 3/4x3/16	11.803	11.803	412.4 K=1.00	0.621	-0.014	1.045	0.013 <sup>1</sup> ✓
T15	40 - 20	KL/R > 250 (C) - 385 L1 3/4x1 3/4x3/16	12.553	12.553	438.6 K=1.00	0.621	-0.014	0.924	0.015 <sup>1</sup> ✓
T16	20 - 0	KL/R > 250 (C) - 424 L1 3/4x1 3/4x3/16  KL/R > 250 (C) - 465	13.303	13.303	464.8 K=1.00	0.621	-0.013	0.823	0.016 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Tension Checks

### Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	305 - 295	1 3/4	10.009	0.500	13.7	2.405	7.910	108.238	0.073 <sup>1</sup> ✓
T2	295 - 280	1 3/4	15.014	0.500	13.7	2.405	34.145	108.238	0.315 <sup>1</sup> ✓
T3	280 - 260	2 1/4	20.019	0.500	10.7	3.976	82.130	178.924	0.459 <sup>1</sup> ✓
T4	260 - 240	2 3/4	20.019	0.500	8.7	5.940	131.257	267.281	0.491 <sup>1</sup> ✓

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	<b>Project</b>	305' SST/38.266953, -83.846858	<b>Date</b>	13:50:20 10/19/20
	<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio P <sub>u</sub> / φP <sub>u</sub>
T5	240 - 220	3	20.019	0.500	8.0	7.069	176.681	318.086	0.555 <sup>1</sup>
T6	220 - 200	3 1/4	20.019	0.500	7.4	8.296	218.126	373.310	0.584 <sup>1</sup>
T7	200 - 180	3 1/2	20.019	0.500	6.9	9.621	257.282	432.951	0.594 <sup>1</sup>
T8	180 - 160	3 3/4	20.019	0.500	6.4	11.045	295.273	497.010	0.594 <sup>1</sup>
T9	160 - 140	3 3/4	20.019	0.500	6.4	11.045	332.255	497.010	0.669 <sup>1</sup>
T10	140 - 120	4	20.019	0.500	6.0	12.566	368.715	565.487	0.652 <sup>1</sup>
T11	120 - 100	4	20.019	0.500	6.0	12.566	404.247	565.487	0.715 <sup>1</sup>
T12	100 - 80	4 1/4	20.019	0.500	5.7	14.186	438.537	638.381	0.687 <sup>1</sup>
T13	80 - 60	4 1/2	20.019	0.500	5.3	15.904	471.885	715.694	0.659 <sup>1</sup>
T14	60 - 40	4 1/2	20.019	0.500	5.3	15.904	504.385	715.694	0.705 <sup>1</sup>
T15	40 - 20	4 3/4	20.019	0.500	5.1	17.721	536.150	797.425	0.672 <sup>1</sup>
T16	20 - 0	4 3/4	20.019	0.500	5.1	17.721	566.783	797.425	0.711 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>u</sub> controls

### Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio P <sub>u</sub> / φP <sub>u</sub>
T1	305 - 295	L1 3/4x1 3/4x3/16	6.485	3.258	72.8	0.360	3.493	17.567	0.199 <sup>1</sup>
T2	295 - 280	L1 3/4x1 3/4x3/16	7.435	3.736	83.5	0.360	5.225	17.567	0.297 <sup>1</sup>
T3	280 - 260	L1 3/4x1 3/4x3/16	8.697	4.343	97.1	0.360	7.721	17.567	0.439 <sup>1</sup>
T4	260 - 240	L2x2x3/16	9.987	4.964	96.6	0.431	8.649	21.001	0.412 <sup>1</sup>
T5	240 - 220	L2 1/2x2 1/2x3/16	11.329	5.625	86.8	0.571	8.758	27.838	0.315 <sup>1</sup>
T6	220 - 200	L2 1/2x2 1/2x3/16	12.706	6.303	97.2	0.571	9.021	27.838	0.324 <sup>1</sup>
T7	200 - 180	L3x3x3/16	14.108	6.994	89.4	0.712	9.617	34.712	0.277 <sup>1</sup>
T8	180 - 160	L3x3x3/16	15.529	7.694	98.3	0.712	10.444	34.712	0.301 <sup>1</sup>
T9	160 - 140	L3x3x3/16	16.963	8.412	107.5	0.712	10.987	34.712	0.317 <sup>1</sup>



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 36 of 38
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	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio $\frac{P_u}{\phi P_u}$
T10	140 - 120	L3x3x1/4	18.408	9.124	117.7	0.939	12.014	45.794	0.262 <sup>1</sup> ✓
T11	120 - 100	2L2 1/2x2 1/2x3/16x3/8	10.829	10.644	164.2	1.139	13.302	55.529	0.240 <sup>1</sup> ✓
T12	100 - 80	2L 'a' > 60.948 in - 260 2L2 1/2x2 1/2x3/16x3/8	11.508	11.313	174.5	1.139	13.636	55.529	0.246 <sup>1</sup> ✓
T13	80 - 60	2L 'a' > 64.783 in - 299 2L3x3x3/16x3/8	12.195	11.991	153.2	1.424	14.374	69.423	0.207 <sup>1</sup> ✓
T14	60 - 40	2L 'a' > 68.500 in - 338 2L3x3x3/16x3/8	12.889	12.687	162.1	1.424	14.737	69.423	0.212 <sup>1</sup> ✓
T15	40 - 20	2L 'a' > 72.475 in - 377 2L3x3x3/16x3/8	13.589	13.378	171.0	1.424	15.297	69.423	0.220 <sup>1</sup> ✓
T16	20 - 0	2L 'a' > 76.419 in - 416 2L3x3x3/16x3/8	14.294	14.084	180.0	1.424	15.346	69.423	0.221 <sup>1</sup> ✓
		2L 'a' > 80.455 in - 455							✓

<sup>1</sup> P<sub>u</sub> / φP<sub>u</sub> controls

### Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>u</sub> K	Ratio $\frac{P_u}{\phi P_u}$
T11	120 - 100	2L1 3/4x1 3/4x3/16x3/8	19.106	9.386	209.8	0.721	7.700	35.134	0.219 <sup>1</sup> ✓
T12	100 - 80	2L 'a' > 54.035 in - 265 2L2x2x3/16x3/8	20.606	10.126	196.9	0.862	8.425	42.001	0.201 <sup>1</sup> ✓
T13	80 - 60	2L 'a' > 58.196 in - 298 2L2 1/2x2 1/2x3/16x3/8	22.106	10.866	167.6	1.139	9.143	55.529	0.165 <sup>1</sup> ✓
T14	60 - 40	2L 'a' > 62.219 in - 343 2L2 1/2x2 1/2x3/16x3/8	23.606	11.616	179.2	1.139	9.854	55.529	0.177 <sup>1</sup> ✓
T15	40 - 20	2L 'a' > 66.514 in - 382 2L2 1/2x2 1/2x3/16x3/8	25.106	12.355	190.6	1.139	10.557	55.529	0.190 <sup>1</sup> ✓
T16	20 - 0	2L 'a' > 70.749 in - 415 2L2 1/2x2 1/2x3/16x3/8	26.606	13.105	202.1	1.139	11.240	55.529	0.202 <sup>1</sup> ✓
		2L 'a' > 75.043 in - 454							✓

<sup>1</sup> P<sub>u</sub> / φP<sub>u</sub> controls

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder Ave, Ste 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b> 37 of 38
	<b>Project</b> 305' SST/38.266953, -83.846858	<b>Date</b> 13:50:20 10/19/20
	<b>Client</b> Harmoni(Uniti) Towers	<b>Designed by</b> JLandon

### Top Girt Design Data (Tension)

Section No.	Elevation <i>ft</i>	Size	L <i>ft</i>	L <sub>u</sub> <i>ft</i>	Kl/r	A <i>in<sup>2</sup></i>	P <sub>u</sub> <i>K</i>	φP <sub>n</sub> <i>K</i>	Ratio $\frac{P_u}{\phi P_n}$ <i>φP<sub>n</sub><sup>1</sup></i>
T1	305 - 295	L1 3/4x1 3/4x3/16	4.163	4.017	89.8	0.360	1.383	17.567	0.079 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Inner Bracing Design Data (Tension)

Section No.	Elevation <i>ft</i>	Size	L <i>ft</i>	L <sub>u</sub> <i>ft</i>	Kl/r	A <i>in<sup>2</sup></i>	P <sub>u</sub> <i>K</i>	φP <sub>n</sub> <i>K</i>	Ratio $\frac{P_u}{\phi P_n}$ <i>φP<sub>n</sub><sup>1</sup></i>
T11	120 - 100	L1 3/4x1 3/4x3/16	9.553	9.553	213.5	0.621	0.001	27.949	0.000 <sup>1</sup>
T12	100 - 80	L1 3/4x1 3/4x3/16	10.303	10.303	230.3	0.621	0.000	27.949	0.000 <sup>1</sup> ✓ ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Section Capacity Table

Section No.	Elevation <i>ft</i>	Component Type	Size	Critical Element	P <i>K</i>	σP <sub>allow</sub> <i>K</i>	% Capacity	Pass Fail
T1	305 - 295	Leg	1 3/4	1	-5.486	35.601	15.4	Pass
T2	295 - 280	Leg	1 3/4	21	-33.000	33.103	99.7	Pass
T3	280 - 260	Leg	2 1/4	42	-83.769	84.331	99.3	Pass
T4	260 - 240	Leg	2 3/4	69	-137.449	161.540	85.1	Pass
T5	240 - 220	Leg	3	96	-186.937	208.347	89.7	Pass
T6	220 - 200	Leg	3 1/4	123	-232.605	260.312	89.4	Pass
							97.8 (b)	
T7	200 - 180	Leg	3 1/2	148	-276.559	317.273	87.2	Pass
T8	180 - 160	Leg	3 3/4	175	-320.115	379.106	84.4	Pass
T9	160 - 140	Leg	3 3/4	202	-363.193	379.106	95.8	Pass
T10	140 - 120	Leg	4	229	-406.636	445.717	91.2	Pass
T11	120 - 100	Leg	4	256	-444.221	445.717	99.7	Pass
T12	100 - 80	Leg	4 1/4	295	-486.050	517.034	94.0	Pass
T13	80 - 60	Leg	4 1/2	334	-527.484	593.004	89.0	Pass
T14	60 - 40	Leg	4 1/2	373	-568.542	593.004	95.9	Pass
T15	40 - 20	Leg	4 3/4	412	-609.086	673.582	90.4	Pass
							96.4 (b)	
T16	20 - 0	Leg	4 3/4	451	-648.499	673.582	96.3	Pass
T1	305 - 295	Diagonal	L1 3/4x1 3/4x3/16	8	-3.387	13.715	24.7	Pass
							36.4 (b)	
T2	295 - 280	Diagonal	L1 3/4x1 3/4x3/16	22	-4.865	10.431	46.6	Pass
							54.4 (b)	
T3	280 - 260	Diagonal	L1 3/4x1 3/4x3/16	43	-6.851	7.721	88.7	Pass
T4	260 - 240	Diagonal	L2x2x3/16	70	-8.163	8.951	91.2	Pass
T5	240 - 220	Diagonal	L2 1/2x2 1/2x3/16	98	-8.314	13.885	59.9	Pass

# tnxTower

**B+T Group**  
 1717 S. Boulder Ave. Ste 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

<b>Job</b>	ATS #8642 - Chandler Road (Site# KYLEX2051)	<b>Page</b>	38 of 38
<b>Project</b>	305' SST/38.266953, -83.846858	<b>Date</b>	13:50:20 10/19/20
<b>Client</b>	Harmoni(Uniti) Towers	<b>Designed by</b>	JLandon

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
T6	220 - 200	Diagonal	L2 1/2x2 1/2x3/16	125	-8 691	11 057	67.2 (b)	Pass	
T7	200 - 180	Diagonal	L3x3x3/16	152	-9 314	15 733	78.6	Pass	
T8	180 - 160	Diagonal	L3x3x3/16	179	-10 145	13 000	59.2	Pass	
T9	160 - 140	Diagonal	L3x3x3/16	206	-10 759	10 877	67.9 (b)	Pass	
T10	140 - 120	Diagonal	L3x3x1/4	233	-11 740	12 050	78.0	Pass	
T11	120 - 100	Diagonal	2L2 1/2x2 1/2x3/16x3/8	261	-13 166	17 598	98.9	Pass	
T12	100 - 80	Diagonal	2L2 1/2x2 1/2x3/16x3/8	300	-13 676	15 641	97.4	Pass	
T13	80 - 60	Diagonal	2L3x3x3/16x3/8	339	-14 456	23 170	74.8	Pass	
T14	60 - 40	Diagonal	2L3x3x3/16x3/8	378	-14 894	20 849	87.4	Pass	
T15	40 - 20	Diagonal	2L3x3x3/16x3/8	417	-15 580	18 864	62.4	Pass	
T16	20 - 0	Diagonal	2L3x3x3/16x3/8	456	-15 809	17 103	71.4	Pass	
T11	120 - 100	Horizontal	2L1 3/4x1 3/4x3/16x3/8	259	-7 700	8 079	82.6	Pass	
T12	100 - 80	Horizontal	2L2x2x3/16x3/8	298	-8 425	10 289	92.4	Pass	
T13	80 - 60	Horizontal	2L2 1/2x2 1/2x3/16x3/8	337	-9 143	16 912	95.3	Pass	
T14	60 - 40	Horizontal	2L2 1/2x2 1/2x3/16x3/8	376	-9 854	14 861	81.9	Pass	
T15	40 - 20	Horizontal	2L2 1/2x2 1/2x3/16x3/8	415	-10 557	13 179	54.1	Pass	
T16	20 - 0	Horizontal	2L2 1/2x2 1/2x3/16x3/8	454	-11 240	11 746	66.3	Pass	
T1	305 - 295	Top Girt	L1 3/4x1 3/4x3/16	4	-1 519	9 026	80.1	Pass	
T11	120 - 100	Inner Bracing	L1 3/4x1 3/4x3/16	268	-0 011	1 596	95.7	Pass	
T12	100 - 80	Inner Bracing	L1 3/4x1 3/4x3/16	307	-0 012	1 372	16.8	Pass	
T13	80 - 60	Inner Bracing	L1 3/4x1 3/4x3/16	346	-0 014	1 192	1.6	Pass	
T14	60 - 40	Inner Bracing	L1 3/4x1 3/4x3/16	385	-0 014	1 045	1.3	Pass	
T15	40 - 20	Inner Bracing	L1 3/4x1 3/4x3/16	424	-0 014	0 924	1.5	Pass	
T16	20 - 0	Inner Bracing	L1 3/4x1 3/4x3/16	465	-0 013	0 823	1.6	Pass	
							Summary		
							Leg (T2)	99.7	Pass
							Diagonal (T9)	98.9	Pass
							Horizontal (T16)	95.7	Pass
							Top Girt (T1)	16.8	Pass
							Inner Bracing (T16)	1.6	Pass
							Bolt Checks	97.8	Pass
							<b>RATING =</b>	<b>99.7</b>	<b>Pass</b>



**EXHIBIT D**  
**COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST**

## KY Public Service Commission

### Master Utility Search

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

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

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Search

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

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



<a href="#">View</a>	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4109550	Kynect Communications, LLC	Cellular	D	Dallas	TX
<a href="#">View</a>	4111250	Liberty Mobile Wireless, LLC	Cellular	D	Sunny Isles Beach	FL
<a href="#">View</a>	4111400	Locus Telecommunications, LLC	Cellular	A	Fort Lee	NJ
<a href="#">View</a>	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
<a href="#">View</a>	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
<a href="#">View</a>	4111700	Mint Mobile, LLC	Cellular	D	Costa Mesa	CA
<a href="#">View</a>	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
<a href="#">View</a>	4111850	Mobi, Inc.	Cellular	C	Honolulu	HI
<a href="#">View</a>	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
<a href="#">View</a>	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001800	OnStar, LLC	Cellular	A	Detroit	MI
<a href="#">View</a>	4110750	Onvoy Spectrum, LLC	Cellular	D	Chicago	IL
<a href="#">View</a>	4109050	Patriot Mobile LLC	Cellular	D	Irving	TX
<a href="#">View</a>	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
<a href="#">View</a>	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
<a href="#">View</a>	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
<a href="#">View</a>	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
<a href="#">View</a>	4108700	Ready Wireless, LLC	Cellular	C	Hiawatha	IA
<a href="#">View</a>	4110500	Republic Wireless, Inc.	Cellular	A	Raleigh	NC
<a href="#">View</a>	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
<a href="#">View</a>	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Fremont	NE
<a href="#">View</a>	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	NJ
<a href="#">View</a>	4111450	Spectrum Mobile, LLC	Cellular	A	St. Louis	MO
<a href="#">View</a>	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4111600	STX Group LLC dba Twigby	Cellular	D	Murfreesboro	TN
<a href="#">View</a>	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
<a href="#">View</a>	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4002500	TAG Mobile, LLC	Cellular	D	Plano	TX
<a href="#">View</a>	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	Portland	ME
<a href="#">View</a>	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL

## Utility Master Information -- Search

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

**EXHIBIT E**  
**FAA**





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

Aeronautical Study No.  
 2020-ASO-7604-OE

Issued Date: 03/31/2020

Kristy Hurst  
 B+T Group Holdings, Inc.  
 1717 S. Boulder Ave.  
 Suite 300  
 Tulsa, OK 74119

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

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

Structure:           Antenna Tower KYLEX2051  
 Location:           Sharpsburg, KY  
 Latitude:           38-16-01.30N NAD 83  
 Longitude:         83-50-48.69W  
 Heights:            919 feet site elevation (SE)  
                       317 feet above ground level (AGL)  
                       1236 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 2, 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)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 10/01/2021 unless:

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

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

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

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, 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.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

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 (718) 553-2611, or [angelique.eersteling@faa.gov](mailto:angelique.eersteling@faa.gov). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ASO-7604-OE.

**Signature Control No: 433282115-435155733**  
Angelique Eersteling  
Technician

( DNE )

Attachment(s)  
Frequency Data  
Map(s)

cc: FCC

**Frequency Data for ASN 2020-ASO-7604-OE**

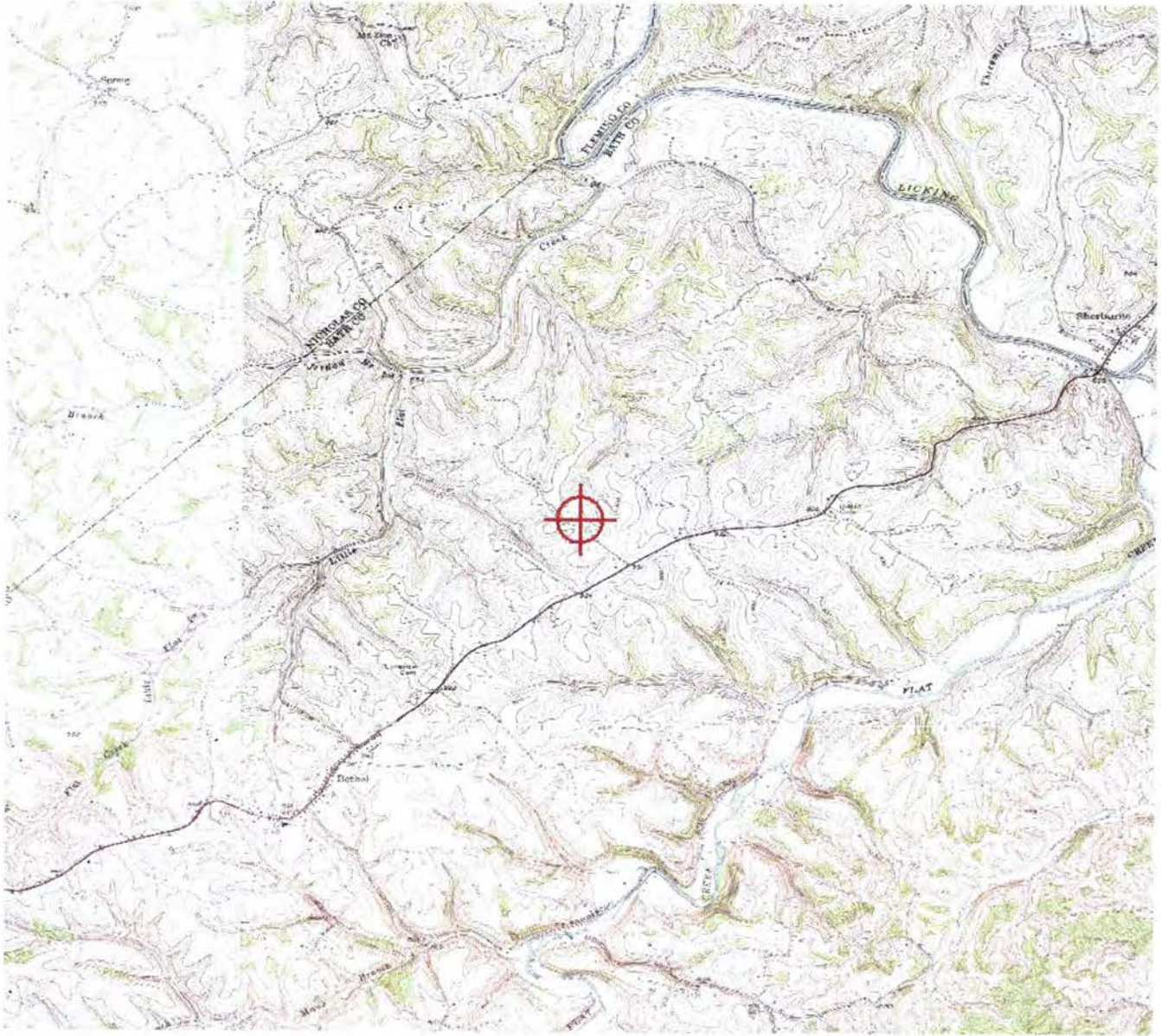
<b>LOW FREQUENCY</b>	<b>HIGH FREQUENCY</b>	<b>FREQUENCY UNIT</b>	<b>ERP</b>	<b>ERP UNIT</b>
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
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 2020-ASO-7604-OE





TOPO Map for ASN 2020-ASO-7604-OE



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



ANDY BESHEAR  
Governor

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

**APPROVAL OF APPLICATION**

August 13, 2020

**APPLICANT**

Uniti Towers  
B&T Group - Patricia Parr  
10802 Executive Center Dr. Ste 300  
Little Rock, AR 72211

**SUBJECT:** AS-BATH-SYM-2020-100

**STRUCTURE:** Antenna Tower  
**LOCATION:** Sharpsburg, KY  
**COORDINATES:** 38° 16' 1.3" N / 83° 50' 48.69" W  
**HEIGHT:** 317' AGL/1236' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 317' AGL/1236' AMSL Antenna Tower near Sharpsburg, KY 38° 16' 1.3" N / 83° 50' 48.69" 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.

Duel - Red & Medium Intensity White Obstruction Lighting Required

***Randall S. Royer***

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



An Equal Opportunity Employer M/F/D

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





**GEOTECHNICAL INVESTIGATION REPORT**

September 29, 2020

Prepared For:

B+T Group



**Chandler Road  
KYLEX2051**

**Proposed Self-Supporting Tower**

675 Chandler Road, Sharpsburg (Bath County), Kentucky 40374  
Latitude N 38° 16 '01.0" Longitude W 83° 50' 48.7"

Delta Oaks Group Project GEO20-07036-08  
Revision 0  
[geotech@deltaoaksgroup.com](mailto:geotech@deltaoaksgroup.com)

Performed By:

Erin Benson, E.I.

Reviewed By:

Joseph V. Borrelli, Jr., P.E.





## INTRODUCTION

This geotechnical investigation report has been completed for the proposed self-supporting tower located at 675 Chandler Road in Sharpsburg (Bath County), Kentucky. The purpose of this investigation was to provide engineering recommendations and subsurface condition data at the proposed tower location. A geotechnical engineering interpretation of the collected information was completed and utilized to suggest design parameters regarding the adequacy of the structure's proposed foundation capacity under various loading conditions. This report provides the scope of the geotechnical investigation; geologic material identification; results of the geotechnical laboratory testing; and design parameter recommendations for use in the design of the telecommunication facility's foundation and site development.

## SITE CONDITION SUMMARY

The proposed tower and compound are located in a grassy field exhibiting a generally flat topography across the tower compound and subject property.

## REFERENCES

- Survey Drawings, prepared by Point to Point Land Surveyors, dated January 7, 2020
- TIA Standard (TIA-222-G), dated August 2005

## SUBSURFACE FIELD INVESTIGATION SUMMARY

The subsurface field investigation was conducted through the advancement of one mechanical soil test boring to the auger refusal depth of 8.7 feet bgs. Samples were obtained at selected intervals in accordance with ASTM D 1586. The sampling was conducted at the staked centerline of the proposed tower. Upon encountering auger refusal 5.0 feet of rock coring was conducted in accordance with ASTM D 2113. Soil and rock samples were transported to our laboratory and classified by a geotechnical engineer in accordance with ASTM D 2487. A detailed breakdown of the material encountered in our subsurface field investigation can be found in the boring log presented in the Appendix of this report.

Additional testing was performed on selected samples in accordance with ASTM D 7012 (Unconfined Compressive Strength – Rock). Laboratory data can be found in the Appendix of this report.

A boring plan portraying the spatial location of the boring in relation to the proposed tower, tower compound and immediate surrounding area can be found in the Appendix.



## **SUBSURFACE CONDITION SUMMARY**

The following provides a general overview of the site's subsurface conditions based on the data obtained during our field investigation.

### **FILL**

Topsoil was encountered during the subsurface field investigation from the existing ground surface to a depth of 1.0 foot bgs.

### **SOIL**

The residual soil encountered in the subsurface field investigation began at a depth of 1.0 foot bgs in the boring and consisted of silty clay and lean clay. The materials ranged from a firm to very hard cohesion.

Auger advancement refusal was encountered during the subsurface field investigation at a depth of 8.7 feet bgs.

### **ROCK**

Rock was encountered during the subsurface investigation at a depth of 8.7 feet bgs. The rock can be described as intensely fractured, moderately weathered, moderately hard limestone.

### **SUBSURFACE WATER**

At the time of drilling, subsurface water was not encountered during the subsurface investigation. However, subsurface water elevations can fluctuate throughout the year due to variations in climate, hydraulic parameters, nearby construction activity and other factors.

### **FROST PENETRATION**

The frost penetration depth for Bath County, Kentucky is 30 inches (2.5 feet).

### **CORROSIVITY**

Soil resistivity was performed in accordance with ASTM G187 with a test result of 2,850 ohms-cm.



## FOUNDATION DESIGN SUMMARY

In consideration of the provided tower parameters and the determined soil characteristics, Delta Oaks Group recommends utilizing a shallow foundation and/or drilled shaft foundation for the proposed structure. The strength parameters presented in the following sections can be utilized for design of the foundation.

### GENERAL SUBSURFACE STRENGTH PARAMETERS

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-1	0.0 – 1.0	TOPSOIL	105	0	0
	1.0 – 1.5	CL – ML	105	0	500
	1.5 – 6.5	CL	110	0	1,000
	6.5 – 8.7	CL	130	0	6,000
	8.7 – 13.7	LIMESTONE	135	0	12,000

- The unit weight provided assumes overburden soil was compacted to a minimum of 95% of the maximum dry density as obtained by the standard Proctor method (ASTM D 698) and maintained a moisture content within 3 percent of optimum
- The values provided for phi angle and cohesion should be considered ultimate.





## SUBSURFACE STRENGTH PARAMETERS – SHALLOW FOUNDATION

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-1	5.0 x 5.0	3.0	6,910
		4.0	7,150
		5.0	7,400
		6.0	7,650
	10.0 x 10.0	3.0	6,540
		4.0	6,660
		5.0	6,780
		6.0	6,910
	15.0 x 15.0	3.0	6,410
		4.0	6,500
		5.0	6,580
		6.0	6,660
	20.0 x 20.0	3.0	6,350
		4.0	6,410
		5.0	6,480
		6.0	6,540
	25.0 x 25.0	3.0	6,320
		4.0	6,370
		5.0	6,410
		6.0	6,460

- Delta Oaks Group recommends the foundation bear a minimum of 3.0 feet bgs.
- A sliding friction factor of 0.30 can be utilized along the base of the proposed foundation.
- The bearing capacity can be increased by 1/3 for transient loading.
- An Ultimate Passive Pressure Table with a reduction due to frost penetration to a depth of 2.5 feet bgs is presented on the following page.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.



## ULTIMATE PASSIVE PRESSURE VS. DEPTH - TOWER FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0	105	0	0	0	1	0
Bottom	1	105	0	0	105	1	52.5
Top	1	105	0	500	105	1	552.5
Bottom	1.5	105	0	500	157.5	1	578.75
Top	1.5	110	0	1000	157.5	1	1078.75
Bottom	2.5	110	0	1000	267.5	1	1133.75
Top	2.5	110	0	1000	267.5	1	2267.5
Bottom	6.5	110	0	1000	707.5	1	2707.5
Top	6.5	130	0	6000	707.5	1	12707.5
Bottom	8.7	130	0	6000	993.5	1	12993.5
Top	8.7	135	0	12000	993.5	1	24993.5
Bottom	10	135	0	12000	1169	1	25169



## SUBSURFACE STRENGTH PARAMETERS - DRILLED SHAFT FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Ultimate Skin Friction - Compression (psf)	Ultimate Skin Friction - Uplift (psf)
B-1	0.0 – 3.0	-	-	-
	3.0 – 6.0	61,340	550	550
	6.0 – 8.7	79,770	2,400	2,400
	8.7 – 13.7	79,620	4,800	4,800

- The top 3.0 feet of soil should be ignored due to the frost penetration and the potential soil disturbance during construction.
- The bearing capacity can be increased by 1/3 for transient loading.
- The values presented assume the concrete is cast-in-place against earth walls and any casing utilized during construction of the foundation was removed.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.



## SUBSURFACE STRENGTH PARAMETERS – SUPPORT STRUCTURE FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Minimum Design Footing Width (ft)	Modulus of Subgrade Reaction (pci)
B-1	2.5	6,480	2.0	200
	3.0	6,750		
	4.0	7,270		
	5.0	7,790		

- Delta Oaks Group recommends utilizing a slab on grade in conjunction with continuous perimeter footings that bear on residual soil or properly compacted structural fill placed in accordance with the recommendations provided in the *CONSTRUCTION* section of this report.
- The slab on grade should be properly reinforced to prevent concrete cracking and shrinkage.
- The foundation should bear a minimum of 2.5 feet bgs.
- A sliding friction factor of 0.30 can be utilized along the base of the proposed foundation.
- An Ultimate Passive Pressure Table is presented on the following page. An appropriate reduction should be considered in accordance with local building code frost penetration depth.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.





## ULTIMATE PASSIVE PRESSURE VS. DEPTH – SUPPORT STRUCTURE FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0	105	0	0	0	1	0
Bottom	1	105	0	0	105	1	52.5
Top	1	105	0	500	105	1	552.5
Bottom	1.5	105	0	500	157.5	1	578.75
Top	1.5	110	0	1000	157.5	1	1078.75
Bottom	2.5	110	0	1000	267.5	1	1133.75
Top	2.5	110	0	1000	267.5	1	2267.5
Bottom	6.5	110	0	1000	707.5	1	2707.5
Top	6.5	130	0	6000	707.5	1	12707.5
Bottom	8.7	130	0	6000	993.5	1	12993.5
Top	8.7	135	0	12000	993.5	1	24993.5
Bottom	10	135	0	12000	1169	1	25169



## CONSTRUCTION

### **SITE DEVELOPMENT**

The proposed access road and tower compound should be evaluated by a Geotechnical Engineer, or their representative, after the removal or "cutting" of the areas to design elevation but prior to the placement of any structural fill material to verify the presence of unsuitable or weak material. Unsuitable or weak materials should be undercut to a suitable base material as determined by a Geotechnical Engineer, or their representative. Backfill of any undercut area(s) should be conducted in accordance with the recommendations provided in the *STRUCTURAL FILL PLACEMENT* section of this report.

Excavations should be sloped or shored in accordance and compliance with OSHA 29 CFR Part 1926, Excavation Trench Safety Standards as well as any additional local, state and federal regulations.

### **STRUCTURAL FILL PLACEMENT**

Structural fill materials should be verified, prior to utilization, to have a minimum unit weight of 110 pcf (pounds per cubic foot) when compacted to a minimum of 95% of its maximum dry density and within plus or minus 3 percentage points of optimum moisture. Materials utilized should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. The Liquid Limit should be no greater than 40 with a Plasticity Index no greater than 20. Structural fill material should contain a maximum particle size of 4 inches with 20 percent or less of the material having a particle size between 2 and 4 inches. Backfill should be placed in thin horizontal lifts not to exceed 8 inches (loose) in large grading areas and 4 inches (loose) where small handheld or walk-behind compaction equipment will be utilized. The potential suitability of on-site materials to be utilized as fill should be evaluated by a Geotechnical Engineer, or their representative just prior to construction.

During construction structural fill placement should be monitored and tested. This should include at minimum, visual observation as well as a sufficient amount of in-place field density tests by a Geotechnical Engineer, or their representative. Materials should be compacted to a minimum of 95% of the maximum dry density as determined by ASTM D 698 (standard Proctor method). Moisture contents should be maintained to within plus or minus 3 percentage points of the optimum moisture content.

### **SHALLOW FOUNDATIONS**

Foundation excavation(s) should be evaluated by a Geotechnical Engineer, or their representative, prior to reinforcing steel and concrete placement. This evaluation should include visual observation to verify a level bearing surface; vertical side-walls with no protrusions, sloughing or caving; and the exposed bearing surface is free of deleterious material, loose soil and standing water. Excavation dimensions should be verified and testing performed on the exposed bearing surface to verify compliance with design recommendations. Bearing testing should be conducted in accordance with ASTM STP399 (Dynamic Cone Penetrometer). A 6-inch layer of compacted crushed stone should be installed prior to reinforcing steel and concrete placement. If subsurface water is encountered during excavation dewatering methods such as sump pumps or well points may be required.





## **DRILLED SHAFT FOUNDATIONS**

Drilled shaft foundations (caissons) are typically installed utilizing an earth auger to reach the design depth of the foundation. Specialized roller bits or core bits can be utilized to penetrate boulders or rock. The equipment utilized should have cutting teeth to result in an excavation with little or no soil smeared or caked on the excavation sides with spiral-like corrugated walls. The drilled shaft design diameter should be maintained throughout the excavation with a plumbness tolerance of 2 percent of the length and an eccentricity tolerance of 3 inches from plan location. A removable steel casing can be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Upon completion of the drilling and casing placement, loose soils and subsurface water greater than 3-inches in depth should be removed from the bottom of the excavation for the "dry" installation method. The drilled shaft installation should be evaluated by a Geotechnical Engineer, or their representative, to verify suitable end bearing conditions, design diameter and bottom cleanliness. The evaluation should be conducted immediately prior to as well as during concrete placement operations.

The drilled shaft should be concreted as soon as reasonably practical after excavation to reduce the deterioration of the supporting soils to prevent potential caving and water intrusion. A concrete mix design with a slump of 6 to 8 inches employed in conjunction with the design concrete compressive strength should be utilized for placement. Super plasticizer may be required to obtain the recommended slump range. During placement, the concrete may fall freely through the open area in the reinforcing steel cage provided it does not strike the reinforcing steel and/or the casing prior to reaching the bottom of the excavation. The removable steel casing should be extracted as concrete is placed. During steel casing removal a head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the bottom of the casing.

If subsurface water is anticipated and/or weak soil layers are encountered drilled shafts are typically installed utilizing the "wet" method by excavating beneath a drilling mud slurry. The drilling mud slurry is added to the drilled shaft excavation after groundwater has been encountered and/or the sides of the excavation are observed to be caving or sloughing. Additional inspection by a Geotechnical Engineer, or their representative, during the "wet" method should consist of verifying maintenance of sufficient slurry head, monitoring the specific gravity, pH and sand content of the drilling slurry, and monitoring any changes in the depth of the excavation between initial approval and just prior to concreting.

Concrete placement utilizing the "wet" method is conducted through a tremie pipe at the bottom of the excavation with the drilling mud slurry level maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the ground water elevation. The bottom of the tremie should be set one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie or a sliding plug introduced into the tremie before the concrete is recommended to reduce the potential contamination of the concrete by the drilling mud slurry. The bottom of the tremie must be maintained in the concrete during placement. Additional concrete should be placed through the tremie causing the slurry to overflow from the excavation in order to reduce the potential for the development of "slurry pockets" remaining in the drilled shaft.



## QUALIFICATIONS

The design parameters and conclusions provided in this report have been determined in accordance with generally accepted geotechnical engineering practices and are considered applicable to a rational degree of engineering certainty based on the data available at the time of report preparation and our practice in this geographic region. All recommendations and supporting calculations were prepared based on the data available at the time of report preparation and knowledge of typical geotechnical parameters in the applicable geographic region.

The subsurface conditions used in the determination of the design recommendations contained in this report are based on interpretation of subsurface data obtained at specific boring locations. Irrespective of the thoroughness of the subsurface investigation, the potential exists that conditions between borings will differ from those at the specific boring locations, that conditions are not as anticipated during the original analysis, or that the construction process has altered the soil conditions. That potential is significantly increased in locations where existing fill materials are encountered. Additionally, the nature and extent of these variations may not be evident until the commencement of construction. Therefore, a geotechnical engineer, or their representative, should observe construction practices to confirm that the site conditions do not differ from those conditions anticipated in design. If such variations are encountered, Delta Oaks Group should be contacted immediately in order to provide revisions and/or additional site exploration as necessary.

Samples obtained during our subsurface field investigation will be retained by Delta Oaks Group for a period of 30 days unless otherwise instructed by B+T Group. No warranty, expressed or implied, is presented.

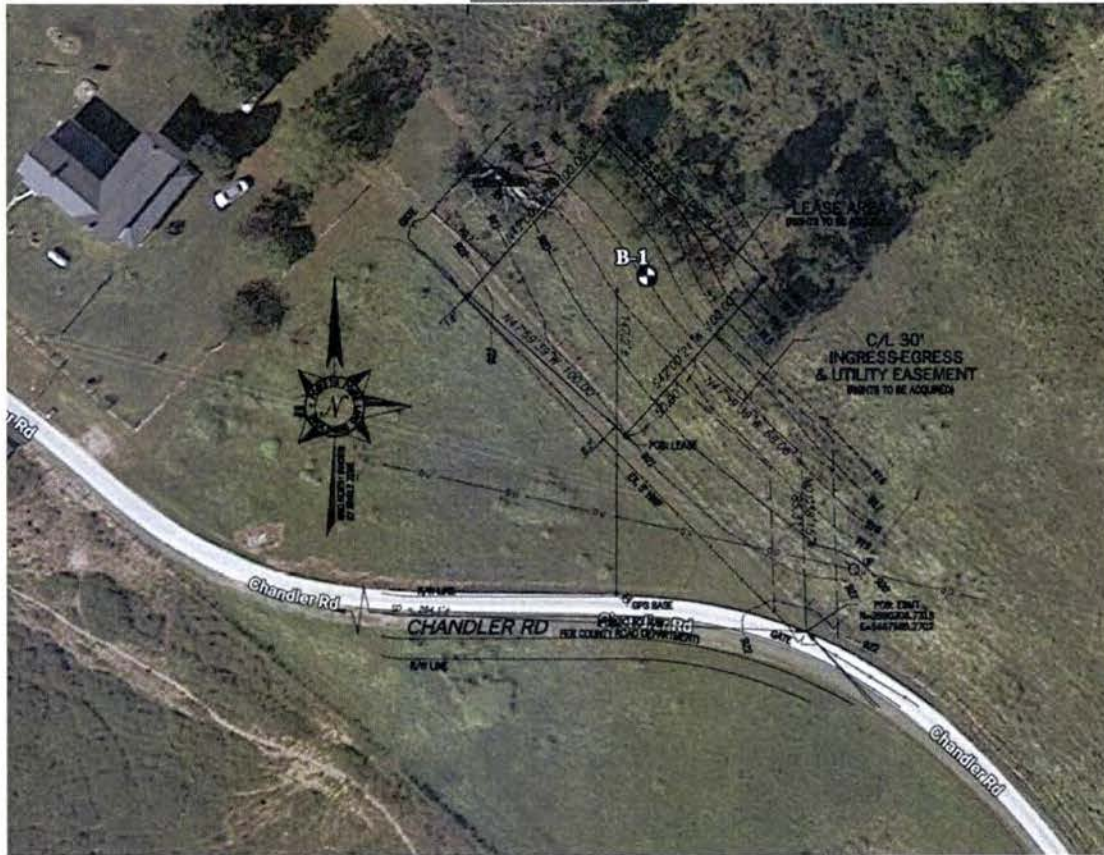
Delta Oaks Group appreciates the opportunity to be of service for this Geotechnical Investigation Report. Please do not hesitate to contact Delta Oaks Group with any questions or should you require additional service on this project.





**APPENDIX**

BORING PLAN





PROJECT NAME Chandler Road - KY

PROJECT NUMBER GEO20-07036-08

PROJECT LOCATION 675 Chandler Road, Sharpsburg, KY 40374

CLIENT B+T Group

Boring No.: B-1

PAGE 1 OF 1

DATE DRILLED : 9/23/2020

DRILLING METHOD : Hollow Stem Auger

GROUND ELEVATION : 920

BORING DEPTH (ft) : 13.7

GROUND WATER LEVELS:

▽ AT TIME OF DRILLING : --- Not Encountered

▼ AT END OF DRILLING : --- Not Encountered

⚡ AFTER DRILLING : --- Not Encountered

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE	▲ SPT N VALUE ▲											
									10	20	30	40	50	60	70	80	90			
0.0	TOPSOIL																			
1.0	SILTY CLAY (CL - ML), firm, brown, with sand, moist		CL-ML		4	2	3	5												
2.0	LEAN CLAY (CL), stiff, brown, with sand, trace silt, moist		CL		3	4	5	9												
4.0	-- Tan and gray, trace silt and sand				6	5	5	10												
7.0	-- Very hard, tan, with sand, trace silt				4	8	50/5"	100												
10.0	LIMESTONE, gray, intensely fractured, moderately weathered, moderately hard																			
11.2	<u>Compressive Strength</u> 6,390 psi @ 11.2'																			
13.7	Refusal at 8.7 feet. Bottom of borehole at 13.7 feet.																			

REC 88%

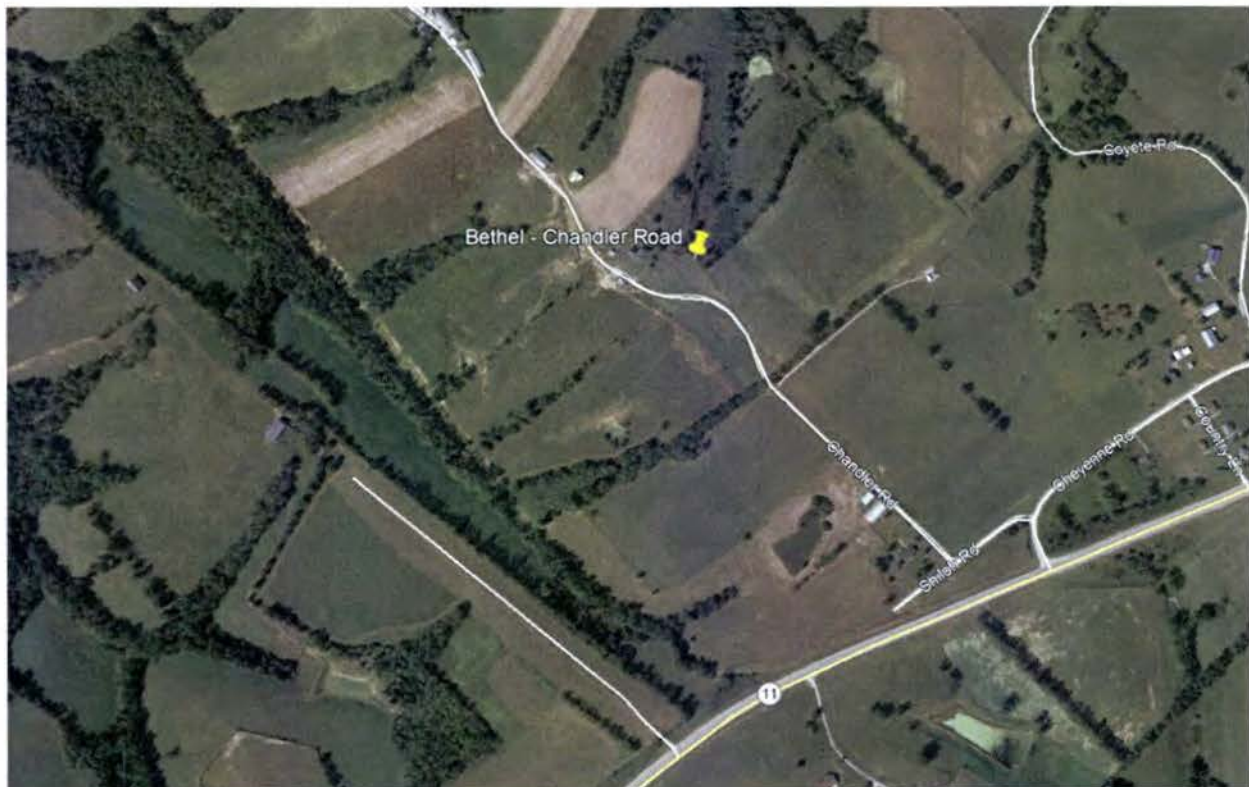
RQD 28%

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



### Driving Directions to Proposed Tower Site

1. Beginning at the Bath County Judge Executive's Office, located at 19 E. Main Street Owingsville, KY 40360, head east (toward N. Court Street / Johnstan Street) on E. Main Street and travel approximately 0.1 miles.
2. Turn left onto Suddith Street and travel approximately 0.2 miles.
3. Follow Suddith Street as it turns right and becomes E. High Street and travel approximately 0.1 miles.
4. Turn left onto KY-36 W and travel approximately 4.8 miles.
5. Turn right onto KY-1325 and travel approximately 7.6 miles.
6. Turn left onto KY-11 S and travel approximately 2.3 miles.
7. Turn right onto Cheyenne Road and travel approximately 233 feet.
8. Turn left onto Shiloh Road and travel approximately 417 feet.
9. Turn right onto Chandler Road and travel approximately 0.3 miles.
10. The site is located on the right at 312 Chandler Road, Sharpsburg, KY 40374.
11. The site coordinates are:
  - a. North 38 deg 16 min 01.03 sec
  - b. West 83 deg 50 min 48.69 sec



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

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



## OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("**Agreement**"), dated as of the latter of the signature dates below (the "**Effective Date**"), is entered into by Amos L. Stoltzfus and Ruth Z. Stoltzfus, having a mailing address of 675 Chandler Rd, Sharpsburg, KY 40374, ("**Landlord**") and Uniti Towers LLC, a Delaware limited liability company having a mailing address of 10802 Executive Center Drive, Benton Building, Suite 300, Little Rock AR 72211 ("**Tenant**").

### BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 312 Chandler Rd, in the City/Town of Sharpsburg, County of Bath, State of Kentucky (collectively, the "**Property**"). Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

#### 1. OPTION TO LEASE.

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

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

(c) In consideration of Landlord granting Tenant the Option, Tenant agrees to pay Landlord the sum of [REDACTED] within thirty (30) business days after the Effective Date. The Option may be exercised during an initial term of one (1) year commencing on the Effective Date (the "**Initial Option Term**") which term may be renewed by Tenant for an additional one (1) year (the "**Renewal Option Term**") upon written notification to Landlord and the payment of an additional [REDACTED] no later than five (5) days prior to the expiration date of the Initial Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "**Option Term**."

(d) The Option may be sold, assigned or transferred at any time by Tenant without the written consent of Landlord. Upon notification to Landlord of such sale, assignment, or transfer, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

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



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

2. **PERMITTED USE.** Tenant may use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure ("**Structure**"), associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (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 the **Surrounding Property** 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, install a generator and to make other improvements, alterations, upgrades or additions appropriate for Tenant's Permitted Use including the right to construct a fence around the Premises or equipment, install warning signs to make individuals aware of risks, install protective barriers, install any other control measures reasonably required by Tenant's safety procedures or applicable law, and undertake any other appropriate means to secure the Premises or equipment at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the Communication Facility (including, for example, increasing the number of antennas or adding microwave dishes) or relocate the Communication Facility within the Premises at any time during the Term. Tenant will be allowed to make such alterations to the Property in order to ensure that the Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "**Additional Premises**") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

3. **TERM.**

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

(b) This Agreement will automatically renew for seventeen (17) additional five (5) year term(s) (each additional five (5) year term shall be defined as an "**Extension Term**"), upon the same terms and



conditions set forth herein unless 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, 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 party written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rent during such Annual Terms shall be [REDACTED]

[REDACTED] If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "**Holdover Term**"), subject to the terms and conditions of this Agreement.

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

#### **4. RENT.**

(a) Commencing on the first day of the month following the date that Tenant commences construction (the "**Rent Commencement Date**"), Tenant will pay Landlord on or before the fifth (5<sup>th</sup>) day of each calendar month in advance, [REDACTED] (the "**Rent**"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, 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 two (2) of the Initial Term, and each year thereafter, including throughout any Extension Terms exercised, the monthly Rent will increase by [REDACTED] over the Rent paid during the previous year, effective the first day of the month in which the anniversary of the Term Commencement Date occurs

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

#### **5. APPROVALS.**

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

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

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

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

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

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



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

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

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

7. **INSURANCE.** During the Option Term and throughout the Term, Tenant will purchase and maintain in full force and effect such general liability policy as Tenant may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of [REDACTED] [REDACTED]. Notwithstanding the foregoing, Tenant shall have the right to self-insure such general liability coverage.

8. **INTERFERENCE.**

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

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

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

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

9. **INDEMNIFICATION.**

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability, costs or expenses in connection with a third party claim (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, invitees, agents or independent contractors.

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



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

#### **10. WARRANTIES.**

(a) Each of Tenant and Landlord (to the extent not a natural person) acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority or capacity, as applicable, to enter into this Agreement and bind itself hereto through the party or individual set forth as signatory for the party below.

(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the 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 in the form attached hereto as **Exhibit 10(b)**.

#### **11. ENVIRONMENTAL.**

(a) Landlord represents and warrants, except as may be identified in **Exhibit 11** attached to this Agreement, (i) the Property, as of the Effective Date, 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 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 indemnification provisions contained in this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up,



remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.

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

**12. ACCESS.** At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in **Exhibit 1**, Landlord grants to Tenant an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as **Exhibit 12**; upon Tenant's request, Landlord shall execute additional letters during the Term. Landlord acknowledges that in the event Tenant cannot obtain Access to the Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty, [REDACTED] per day in consideration of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of Access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages.

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

**14. MAINTENANCE/UTILITIES.**

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

(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply, Tenant will have the right, at its own cost and expense, to sub-meter from Landlord. When sub-metering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Tenant shall reimburse Landlord for such utility usage at the same rate charged to Landlord by the utility service provider. 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 sixty (60) days of receipt of the usage data and required forms. Landlord shall maintain accurate and detailed records of all utility expenses, invoices and payments applicable to Tenant's reimbursement obligations hereunder. Within fifteen (15) days after a request from Tenant, Landlord shall provide copies of such utility billing records to the Tenant in the form of copies of invoices, contracts and cancelled checks. If the utility billing records reflect an overpayment by Tenant, Tenant shall have the right to deduct the amount of such overpayment from any monies due to Landlord from Tenant.

(c) As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.

(d) Tenant will have the right to install utilities, at Tenant's expense, and to improve present utilities on the Property and the Premises. Landlord hereby grants to any service 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 service companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or 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 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 within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.

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



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

If to Tenant:                   Uniti Towers LLC  
  Attn: Real Estate  
  10801 Executive Center Drive  
  Shannon Building, Suite 100  
  Little Rock AR 72211  
  501.458.4724

CC:                                   Uniti Towers LLC  
  ATTN: Keith Harvey, Deputy General Counsel  
  10802 Executive Center Drive  
  Benton Building, Suite 300  
  Little Rock AR 72211

For Emergencies:               NOC 1-844-398-9716

If to Landlord:                 Amos L. and Ruth Z Stoltzfus  
  675 Chandler Rd  
  Sharpsburg, KY 43074  
  Telephone: 606-247-3315

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other party 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 twenty-four (24) 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 *pro rata* basis.

19. **CASUALTY.** Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within twenty-four (24) 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 *pro rata* 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 this 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.<sup>21</sup>

(a) Landlord shall be responsible for (i) all taxes and assessments levied upon the lands, improvements and other property of Landlord including any such taxes that may be calculated by a taxing authority using any method, including the income method (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with this Agreement and (iii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with a sale of the Property or assignment of Rent payments by Landlord. Tenant shall be responsible for (y) any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth in this Section 21 and (z) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with an assignment of this Agreement or sublease by Tenant. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll, excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.

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

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

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



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

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17. Promptly after the Effective Date of this Agreement, Landlord shall provide the Notice address set forth in Section 17 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 address changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

(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 may sell the Property or a portion thereof to a third party, provided: (i) the sale is made subject to the terms of this Agreement; and (ii) if the sale does not include the assignment of Landlord's full interest in this Agreement, the purchaser must agree to perform, without requiring compensation from Tenant or any subtenant, any obligation of Landlord under this Agreement, including Landlord's obligation to cooperate with Tenant as provided hereunder.

(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 Section 22(b) to Tenant. Until Tenant receives all such documents, Tenant's failure to make payments under this Agreement shall not be an event of default and Tenant reserves the right to hold payments due under this Agreement.

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

(c) Landlord agrees not to sell, lease or use any areas of the Property or Surrounding Property for the installation, operation or maintenance of other wireless communication 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 communication 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. RIGHT OF FIRST REFUSAL.** Notwithstanding the provisions contained in Section 22, if at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking any sale, conveyance, assignment or transfer, whether in whole or in part, of any property interest in or related to the Premises, including without limitation any offer seeking an assignment or transfer of the Rent payments



associated with this Agreement or an offer to purchase an easement with respect to the Premises ("Offer"), Landlord shall immediately furnish Tenant with a copy of the Offer. Tenant shall have the right within ninety (90) days after it receives such copy to match the financial terms of the Offer and agree in writing to match such terms of the Offer. Such writing shall be in the form of a contract substantially similar to the Offer, but Tenant may assign its rights to a third party. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the ninety (90) day period, Landlord may sell, convey, assign or transfer such property interest in or related to the Premises pursuant to the Offer, subject to the terms of this Agreement. If Landlord attempts to sell, convey, assign or transfer such property interest in or related to the Premises without complying with this Section 23, the sale, conveyance, 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 23. Tenant's failure to exercise the right of first refusal shall not be deemed a waiver of the rights contained in this Section 23 with respect to any future proposed conveyances as described herein.

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

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

(d) **Compliance with Law.** Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the 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 the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi)



reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.

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

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

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

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

(m) **Attorneys' Fees.** In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including 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.

(o) **Incidental Fees.** Unless specified in this Agreement, no unilateral fees or additional costs or expenses are to be applied by either party to the other party, including review of plans, structural analyses, consents, provision of documents or other communications between the parties.

(p) **Further Acts.** Upon request, Landlord will cause to be promptly and duly taken, executed, acknowledged and delivered all such further acts, documents, and assurances as Tenant may request from time to time in order to effectuate, carry out and perform all of the terms, provisions and conditions of this Agreement and all transactions and permitted use contemplated by this Agreement.

(q) **Force Majeure.** No party shall be liable or responsible to the other party, nor be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term of this Agreement, when and to the extent such failure or delay is caused by or results from acts beyond the affected party's reasonable control, including, without limitation: (a) acts of God; (b) flood, fire, earthquake, or explosion; (c) war, invasion, hostilities (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest; (d) government order or law; (e) embargoes, or blockades in effect on or after the date of this Agreement; (f) action by any governmental authority; (g) national or regional emergency; and (h) strikes, labor stoppages or slowdowns, or other industrial disturbances. The party suffering a force majeure event shall give



written notice to the other party, stating the period of time the occurrence is expected to continue and shall use diligent efforts to end the failure or delay and ensure the effects of such force majeure event are minimized.

**[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"**

Amos L. Stoltzfus and Ruth Z. Stoltzfus

By: *Amos L. Stoltzfus*  
Print Name: Amos L. Stoltzfus  
Date: \_\_\_\_\_

By: *Ruth Z. Stoltzfus*  
Print Name: Ruth Z. Stoltzfus  
Date: \_\_\_\_\_

**"TENANT"**

Uniti Towers LLC

By: *Ginger Majors*  
Print Name: *Ginger Majors*  
Its: *VP - Real Estate*  
Date: *3.14.2020*

[ACKNOWLEDGMENTS APPEAR ON NEXT PAGE]

**TENANT ACKNOWLEDGMENT**

STATE OF ARKANSAS

COUNTY OF PULASKI

On the 4th day of March, 2020, before me personally appeared Ginger Majors, who acknowledged under oath that he/ (she) is the VPJ Real Estate of Uniti Towers LLC, the Tenant named in the attached instrument, and as such was authorized to execute this instrument on behalf of the Tenant.



Laura Headington  
Notary Public: 12701715  
My Commission Expires: 7/13/2027



**LANDLORD ACKNOWLEDGMENT**

STATE OF Ky  
COUNTY OF Booth

BE IT REMEMBERED, that on this 6<sup>th</sup> day of Feb, 2020 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared **Amos L. Stoltzfus** who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he is the person named in the within instrument; and I, having first made known to him the contents thereof, he did acknowledge that he signed, sealed and delivered the same as his voluntary act and deed for the purposes therein contained.

[Signature]  
Notary Public: State of Ky  
My Commission Expires: 2/23  
ID # 606040

**LANDLORD ACKNOWLEDGMENT**

STATE OF Ky  
COUNTY OF Booth

BE IT REMEMBERED, that on this 6<sup>th</sup> day of Feb, 2020 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared **Ruth Z. Stoltzfus** who, being duly sworn on her oath, deposed and made proof to my satisfaction that she is the person named in the within instrument; and I, having first made known to her the contents thereof, she did acknowledge that she signed, sealed and delivered the same as her voluntary act and deed for the purposes therein contained.

[Signature]  
Notary Public: State of Ky  
My Commission Expires: 2/23  
ID # 606040

## EXHIBIT 1

### DESCRIPTION OF PREMISES

Page 1 of 4

to the Option and Lease Agreement dated March 4, 2020, by and between Amos L. Stoltzfus and Ruth Z. Stoltzfus, as Landlord, and Uniti Towers LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

The following described real property located on Chandler Road in Bath County, Kentucky, to-wit:

#### Tract No. I

A certain parcel of land lying and being in Bath County, Kentucky on the waters of Little Flat Creek and described as follows: BEGINNING at a large elm tree on the East side North 4 1/4 West 22 poles to a stone on the same side of the branch corner to Peters; thence North 23 3/4 East 18 poles to a stone 7 links North 12 East from a beech tree North 8 East 10 poles to an elm stump corner to Peters; thence North 9 1/2 West 20 poles to a stone in Peters line and corner to Lot No. 6; thence South 9 3/4 West 17.60 poles to a stone; thence South 44 3/4 West 17.40 poles to a stone; thence South 47 1/2 West 19.70 poles to a beech stump; thence South 72 3/4 West 8 poles to a stone corner to Lot No. 4; thence South 43 1/2 East 65 poles to a stone corner to Lot Nos. 1, 2 and 3; thence North 72 East 53.50 poles to a stone in Peters line and corner to Lot No. 5; thence North 4 1/2 East 66 poles to the beginning containing 39 acres and two roods.

#### Tract No. II

A certain parcel of land lying and being in Bath County, Kentucky, on Little Flat Creek and described as follows: Bounded on the East by the lands of George Baird and T.B. Reid; on the North by the land of Winnie Vice; on the West by the land of A.K. Gorham and on the South by the lands of Lee Cannon and William Hawkins, containing 52 acres, which parcel of land consists of Lots 1, 2, 3, 4 and 5 of the Plat of division of William R. Vice, deceased: Tract No. III

A certain parcel of land lying and being in Bath County, Kentucky on Little Flat Creek and described as follows: BEGINNING at a stake, at corner made for the said Luther B. Vice and M.H. Vice in Jacob Boyd's line; thence with his line North 37 1/2 West 96.2 poles to a stake, corner to the land of Charles H. Cannon and wife; thence with their line North 75 3/4 East 17.36 poles to a stake, corner to same; thence North 70 1/4 East 17 poles to a stake, corner to same; thence South 14 1/4 East 232 poles, crossing the branch, to a stake, corner to same; thence North 60 1/4 East 14.64 poles to a black locust tree, corner to same; thence North 33 1/2 East 15.36 poles to a stake, corner to same in Nick Reed's line; thence with his line South 35 1/2 East 57.8 poles to a stake in branch, corner to same; thence South 39 1/2 East 3.68 poles to a fence post, a corner made with the Saie Luther B. Vice; thence with a line made between him and the said M.H. Vice up the hollow South 47 3/4 West 29.8 poles to a black walnut tree, corner made for same; thence 41 1/4 West 16.4 poles to another black walnut tree, corner made for same; thence South 18 1/4 West 17.48 poles to the center of 7ve small black ash trees growing from the same stump, corner made for same; thence South 31 West 21.8 poles to a stake, corner made for same; thence South 14 1/2 East 27. 8 poles to a fence post, corner made for same; thence South 49 West 51 .72 poles to the beginning, containing 60 acres and six square poles of land.

#### Tract No. IV

A certain parcel of land lying and being in Bath County, Kentucky, on the waters of Little Flat Creek and described as follows: Beginning at a stone in the line of Jacob Boyd, corner to Peters; thence North 58 East 75 6/100 poles to a stake, at corner to said Peters; thence South 45 3/4 poles to a point in the middle of the Maysville and Mt. Sterling Turnpike road; thence with the middle of said pike, North 52 1/2 East 1 5/10 poles to another point in the middle of same; thence leaving the pike North 45 3/4 West 68 24/100 poles to a stake, corner to the Peters land; thence North 49 1/2 East 72 2/10 poles to a Stone, corner to Sim Evans; thence North 41 West 98 84/100 poles to a fence post, corner with M.H. Vice; thence with said M.H. Vice's line up the hollow South 47 3/4 West 29 8/10 poles to a black walnut tree, corner made for same; thence South 18 1/4 West 17 48/ 100 poles to the center of five small black ash trees growing from the same stump, corner for same; thence South 31 West 21 8/10 poles to a stake, corner for Same; thence South 14 1/2 East 27 8/10 poles to a fence post, corner for same; thence South 49 West 51 72/100 poles to a stake in Jacob Boyd's line, corner with said M.H. Vice; thence South 38 1/2 East 44 64/100 poles to the beginning, containing 69 acres, one rood and 29 square poles.

#### Tract No. V

A certain parcel of land lying and being in Bath County, Kentucky on the waters of Little Flat Creek and described as follows: BEGINNING at a set stone, corner to the land of Jacob Boyd; thence with his line South 37 1/2 East 68.64 poles to a stake in the line of said Boyd, corner made for the land conveyed by the parties of the first part to H.M. Vice by deed of even date herewith; thence with the line of said Vice North 75 3/4 East 17.36 poles to a stake, corner made for same; thence



North 70 1/4 East 17 poles to a stake, corner made for same; thence South 14 1/4 East 2.32 poles crossing the branch to a stake, corner made for same; thence North 60 1/4 East 14.64 poles to a black locust tree, corner made for same; thence North 33 1/2 East 105.36 poles to a stake, corner made for same in the line of Nick Reed; thence with said Reed's line North 36 West 59.2 poles to a set stone, corner to him and G.A. Vice; thence with said Vice's line and the line of Lee Cannon South 49 West 146.8 poles to the beginning, containing 68 acres, three roods and 27 square poles of land.

Tract No. VI

A certain parcel of land lying and being in Bath County, Kentucky, on the waters of Little Flat Creek and Bounded on the North by the lands formerly owned by Lizzie Vice Cannon and C.H. Cannon, both now deceased, now S.B. Cannon, et al., and lands formerly owned by Tom Capps; on the East by the lands formerly owned by Lizzie V. Cannon and C.H. Cannon, both now deceased, now S.B. Cannon, et al; on the South by Kenneth Shields, formerly Hawkins and on the West by Noah Smith, formerly Boyd, containing 72 acres be the same more or less. The above six tracts of land contain in the aggregate 364 acres, more or less; all tracts adjoin and make up one boundary and said boundary is bounded on the North by lands formerly belonging to Gano Hendrix, now Darnell, Elizabeth Sharp, Arathur Maze and Kate Shields; on the East by Dorothy Ledford and Game Hendrix (now Darnell); on the South by N.H. Smith and on the West by Douglas Thomas, Kenneth Shields and Kate Shields. There is also conveyed hereby all legal and existing passways appurtenant to or affecting said land, including passways conveyed by Alvin Cannon and Alta Cannon, his wife, to Leander Cannon, by deed dated December 16, 1919, of record at Deed Book 80, Page 568, Bath County Clerk's Office. This conveyance is also subject to any and all legal and existing passways, if any, across said land for the benefit of others.

AND BEING the same property conveyed to Amos L. Stoltzfus and Ruth Z. Stoltzfus from Etna Ann Smathers and William T. Smathers, Jr., and Dr. S.B. Cannon II and Susan Cannon by Deed dated December 19, 2014 and recorded December 19, 2014 in Deed Book 236, Page 87. Tax Parcel No. 013-00-00-012.00

The Premises are described and/or depicted as follows:

#### **LEASE AREA**

All that tract or parcel of land lying and being in Bath County, Kentucky, and being part of the lands of Amos L. Stoltzfus and Ruth Z. Stoltzfus, as recorded in Deed Book 236 Page 87, Bath County Records, Bath County, Kentucky, and being more particularly described as follows:

To find the point of beginning, COMMENCE at a point created by the centerline intersection of Shiloh Road and Chandler Road, said point having a Kentucky Grid North, NAD83, Single Zone Value of N: 3989125.7131, E: 5468755.8852; thence running along a tie line, North 42°11'34" West, 1594.06 feet to a point on the easterly right-of-way line of Chandler Road having a Kentucky Grid North, NAD83, Single Zone Value of N: 3990306.7318, E: 5467685.2702; thence leaving said right-of-way line, North 01°38'15" West, 85.31 feet to a point; thence, North 47°59'39" West, 68.06 feet to a point on the Lease Area; thence running along a Lease Area, South 42°00'21" West, 50.00 feet to a point and the true POINT OF BEGINNING; Thence, North 47°59'39" West, 100.00 feet to a point; Thence, North 42°00'21" East, 100.00 feet to a point; Thence, South 47°59'39" East, 100.00 feet to a point; Thence, South 42°00'21" West, 100.00 feet to a point and the POINT OF BEGINNING.

Bearings are based on Kentucky Grid North, NAD83, Single Zone.

Said tract contains 0.2296 acres (10,000 square feet), more or less, as shown in a survey prepared for Uniti Towers, LLC by POINT TO POINT LAND SURVEYORS, INC. dated January 7, 2020.

#### **30' INGRESS-EGRESS & UTILITY EASEMENT**

Together with a 30-foot Ingress-Egress and Utility Easement (lying 15 feet each side of centerline) lying and being in Bath County, Kentucky, and being part of the lands of Amos L. Stoltzfus and Ruth Z. Stoltzfus, as recorded in Deed Book 236 Page 87, Bath County Records, Bath County, Kentucky, and being more particularly described by the following centerline data:

To find the point of beginning, COMMENCE at a point created by the centerline intersection of Shiloh Road and Chandler Road, said point having a Kentucky Grid North, NAD83, Single Zone Value of N: 3989125.7131, E: 5468755.8852; thence running along a tie line, North 42°11'34" West, 1594.06 feet to a point on the easterly right-of-way line of Chandler Road having a Kentucky Grid North, NAD83, Single Zone Value of N: 3990306.7318, E: 5467685.2702 and the true POINT OF BEGINNING; Thence leaving said right-of-way line, North 01°38'15" West, 85.31 feet to a point; Thence, North 47°59'39" West, 68.06 feet to the ENDING at a point on the Lease Area.



Bearings are based on Kentucky Grid North, NAD83, Single Zone.

As shown in a survey prepared for Uniti Towers, LLC by POINT TO POINT LAND SURVEYORS, INC. dated January 7, 2020.

**Notes:**

1. THIS EXHIBIT MAY BE REPLACED BY A LAND SURVEY AND/OR CONSTRUCTION DRAWINGS OF THE PREMISES ONCE RECEIVED BY TENANT.
2. ANY SETBACK OF THE PREMISES FROM THE PROPERTY'S BOUNDARIES SHALL BE THE DISTANCE REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES.
3. WIDTH OF ACCESS ROAD SHALL BE THE WIDTH REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES, INCLUDING POLICE AND FIRE DEPARTMENTS.
4. THE TYPE, NUMBER AND MOUNTING POSITIONS AND LOCATIONS OF ANTENNAS AND TRANSMISSION LINES ARE ILLUSTRATIVE ONLY. ACTUAL TYPES, NUMBERS AND MOUNTING POSITIONS MAY VARY FROM WHAT IS SHOWN ABOVE.



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



**Bethel – Chandler Road – Notice List**

STOLTZFUS AMOS & RUTH  
675 CHANDLER RD  
SHARPSBURG, KY 40374

SMITH FRANCIS LARUE & VIRGINIA  
1512 BETHEL RIDGE RD  
SHARPSBURG, KY 40374

HARMON LYNN & JUDY  
1779 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

THOMAS BRIAN DOUGLAS HOUSE THOMAS DONNA  
2140 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

THOMAS BRIAN  
2140 LITTLE FLAT LEDFORD  
SHARPSBURG, KY 40374

HOUSE DONNA  
2140 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

HOUSE DONNA  
2170 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

RIDDLE CATLIN  
2188 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

VICE MARVIN E  
175 SCRUB GRASS RD  
CARLISLE, KY 40311

THOMAS BRIAN & LORIA  
2140 LITTLE FLAT LEDFORD RD  
SHARPSBURG, KY 40374

STOLTZFUS CHRIST M & RACHEL S  
1300 LONG LN  
PEMBROKE, KY 42266

OVINGTON ROBERT DAREN  
1517 SHARP RD  
SHARPSBURG, KY 40374

OVINGTON ROBERT DAREN C/O ROBERT OVINGTON  
1541 SHARP RD  
SHARPSBURG, KY 40374

GINN JEREMY & DUSKY  
743 COYOTE RD  
SHARPSBURG, KY 40374

GRIMES SHIRLEY & ELAINE  
37 SHILOH RD  
SHARPSBURG, KY 40374

**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: Bethel / Chandler Road**

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Uniti Towers LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 312 Chandler Road, Sharpsburg, KY 40374 (38° 16' 01.03" North latitude, 83° 50' 48.69" West longitude). The proposed facility will include a 305-foot tall tower, with an approximately 12-foot tall lightning arrestor attached at the top, for a total height of 317-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2020-00343 in any correspondence sent in connection with this matter.

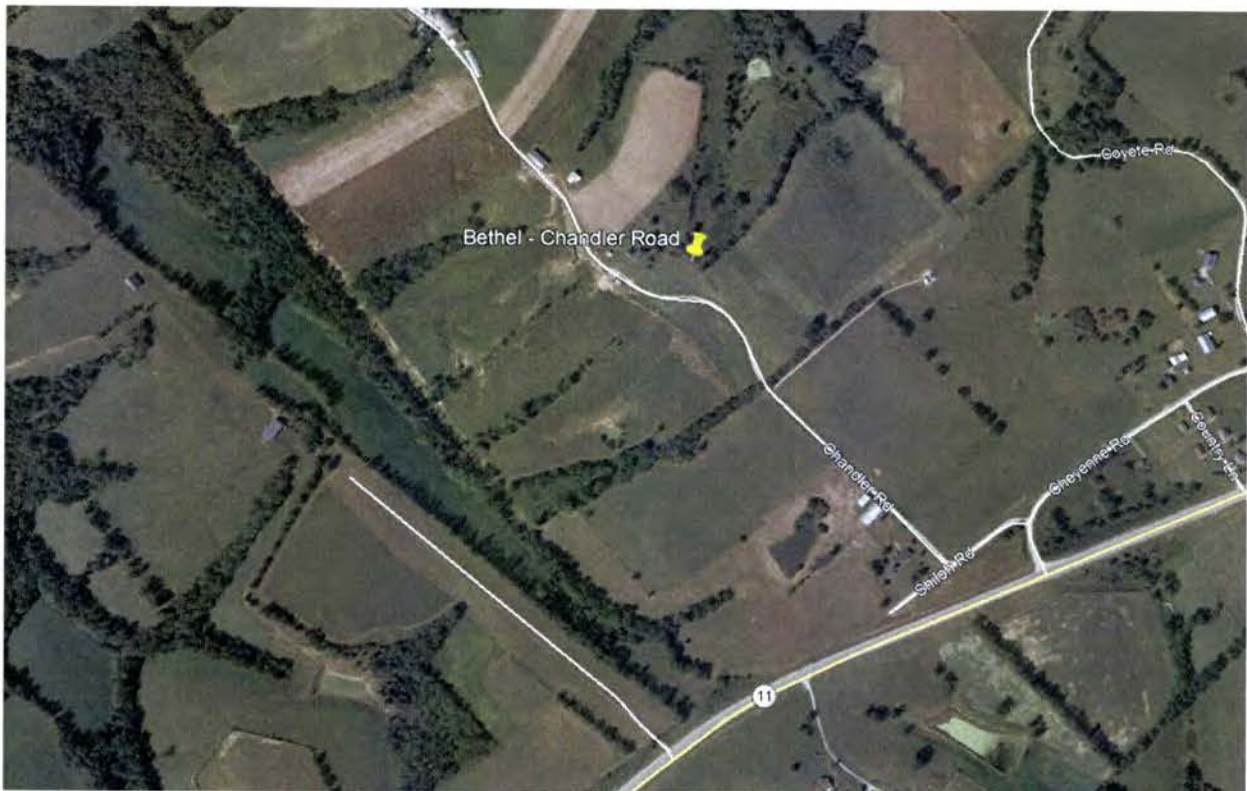
We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the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

Sincerely,  
David A. Pike  
Attorney for Applicants

enclosures

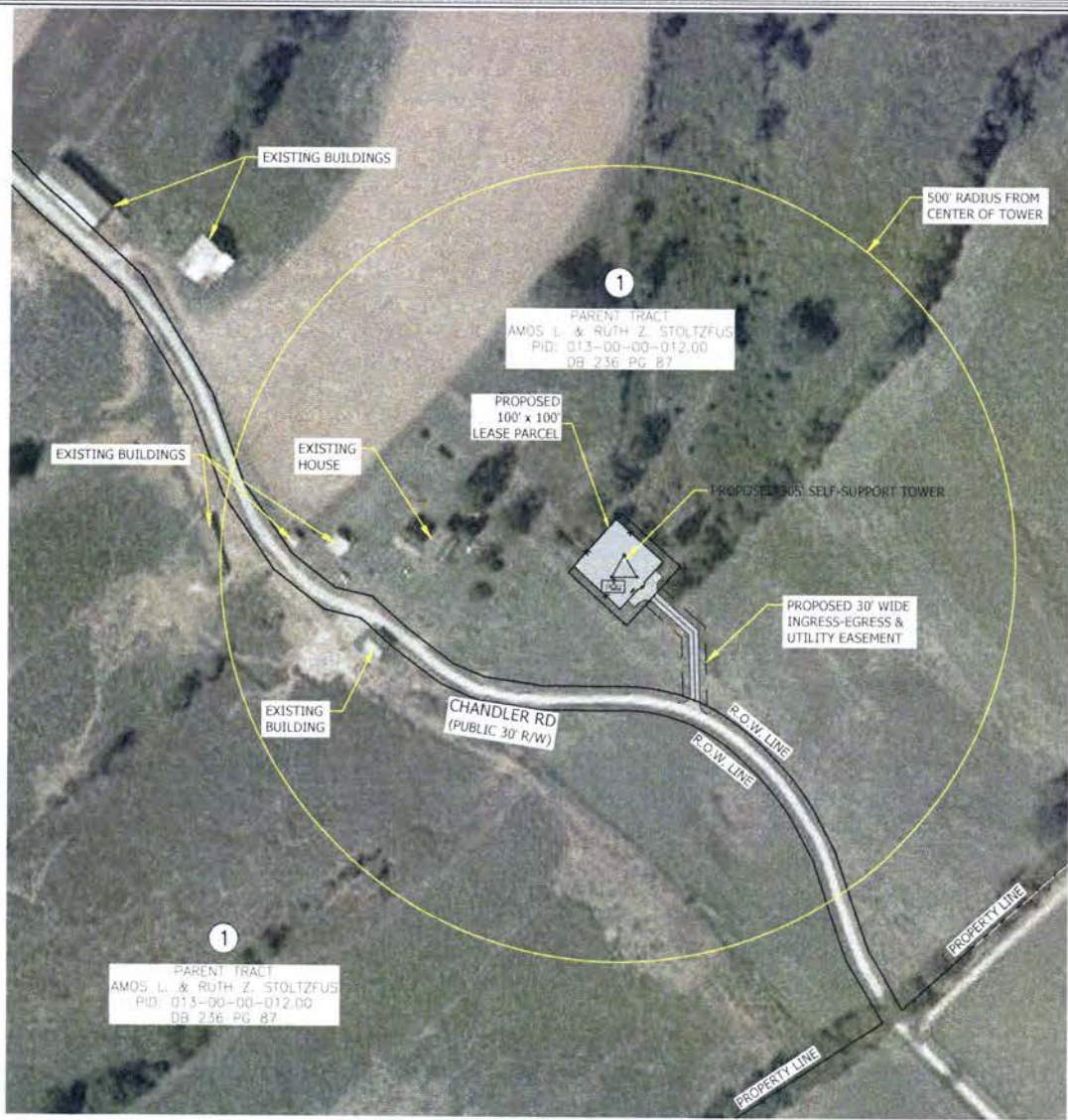
### Driving Directions to Proposed Tower Site

1. Beginning at the Bath County Judge Executive's Office, located at 19 E. Main Street Owingsville, KY 40360, head east (toward N. Court Street / Johnstan Street) on E. Main Street and travel approximately 0.1 miles.
2. Turn left onto Suddith Street and travel approximately 0.2 miles.
3. Follow Suddith Street as it turns right and becomes E. High Street and travel approximately 0.1 miles.
4. Turn left onto KY-36 W and travel approximately 4.8 miles.
5. Turn right onto KY-1325 and travel approximately 7.6 miles.
6. Turn left onto KY-11 S and travel approximately 2.3 miles.
7. Turn right onto Cheyenne Road and travel approximately 233 feet.
8. Turn left onto Shiloh Road and travel approximately 417 feet.
9. Turn right onto Chandler Road and travel approximately 0.3 miles.
10. The site is located on the right at 312 Chandler Road, Sharpsburg, KY 40374.
11. The site coordinates are:
  - a. North 38 deg 16 min 01.03 sec
  - b. West 83 deg 50 min 48.69 sec



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





1 500' RADIUS & ADJOINER'S DRAWING  
SCALE



#	OWNER	ADDRESS	PID	REF
1	AMOS & RUTH STOLTZFUS	675 CHANDLER RD SHARPSBURG, KY 40374	013-00-00-012.00	DB 236 PG 87

NOTE:

- SEE SHT. C-1.1 FOR INFORMATION ON PROPERTIES #2 - #10.
- PVA INFORMATION WAS OBTAINED ON 7/22/2020 FROM THE OFFICIAL RECORDS OF THE COUNTY'S PROPERTY VALUATION ADMINISTRATOR.
- THIS MAP IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
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HARMONI TOWERS  
CHANDLER RD  
EAV# 15147579  
PAGE# AHTN/KM/532  
PI# 10153678  
312 CHANDLER RD  
SHARPSBURG, KY 40374  
BATH COUNTY  
PROPOSED 505' SELF-SUPPORT TOWER

PROJECT NO:	151301		
CHECKED BY:	DLS		
ISSUED FOR			
REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
4013  
Expires 12/31/20



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

500' RADIUS & ADJOINER'S DRAWING

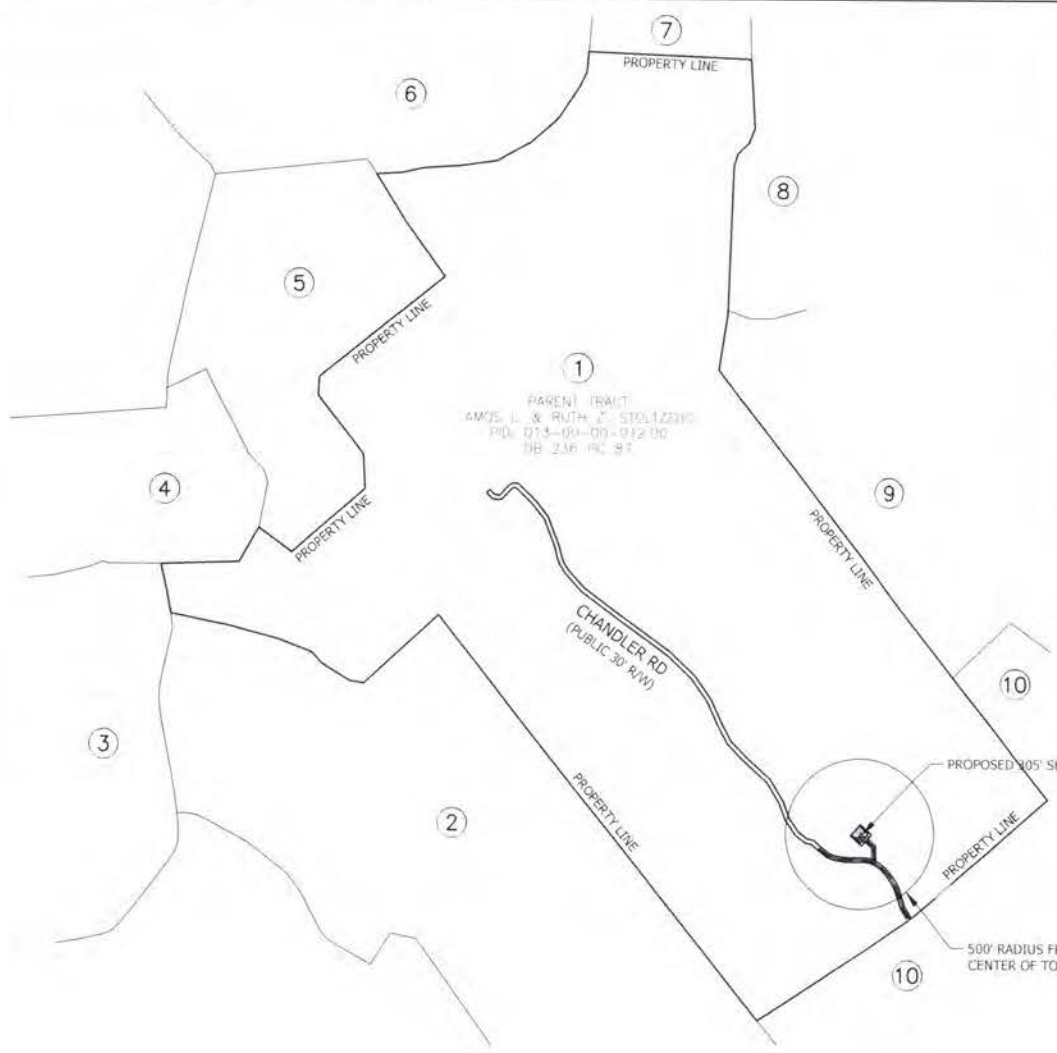
SHEET NUMBER:  
**C-1.0**



CALL KENTUCKY ONE CALL  
(800) 752-6007  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!







#	OWNER	ADDRESS	PID	REF
2	FRANCIS & VIRGINIA SMITH	1512 BETHEL RIDGE RD SHARPSBURG, KY 40374	013-00-00-011.00	-
3	LYNN & JUDY HARMON	1779 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-010.00	-
4	DOUGLAS & DONNA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.01	-
5	BRIAN & LORIA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.00	-
6	MARVIN E. VICE	175 SCRUB GRASS RD CARLISLE, KY 40311	013-00-00-003.00	-
7	CHRIST & RACHEL STOLTZFUS	1300 LONG LANE PEMBROKE, KY 42266	012-00-00-001.00	-
8	ROBERT DAREN O'VINGTON	1517 SHARP RD SHARPSBURG, KY 40374	019-00-00-001.00	-
9	JEREMY & DUSKY GINN	743 COYOTE RD SHARPSBURG, KY 40374	020-00-00-002.04	-
10	SHIRLEY & ELAINE GRIMES	37 SHILOH RD SHARPSBURG, KY 40374	013-00-00-015.00	-

NOTE:

- SEE SHT. C-1.0 FOR INFORMATION ON PROPERTIES #1.
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1 OVERALL ADJOINER'S DRAWING  
SCALE 0' 400' 800' 1200' 1600' 1"=800'



CALL KENTUCKY ONE CALL  
(800) 752-6007  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!



HARMONI

HARMONI TOWERS  
CHANDLER RD  
E.A.# 13147379  
PAGE# VIRTN047532  
PI# 10135678  
312 CHANDLER RD  
SHARPSBURG, KY 40374  
BATH COUNTY  
PROJECT# 2018-011-01-001-001-001

PROJECT NO: 11-264  
CHECKED BY: DLS

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
Q	9/29/20	DLS	ZONING DRAWINGS
T	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
4011  
Expires 12/31/20



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OVERALL ADJOINER'S DRAWING

SHEET NUMBER  
C-1.1

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



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

**VIA CERTIFIED MAIL**

Bobby C. Rogers  
County Judge Executive  
P.O. Box 39  
19 E. Main Street  
Owingsville, KY 40360

RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2020-00343  
Site Name: Bethel / Chandler Road

Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Uniti Towers LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 312 Chandler Road, Sharpsburg, KY 40374 (38° 16' 01.03" North latitude, 83° 50' 48.69" West longitude). The proposed facility will include a 305-foot tall tower, with an approximately 12-foot tall lightning arrestor attached at the top, for a total height of 317-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2020-00343 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us with any comments or questions you may have.

Sincerely,  
David A. Pike  
Attorney for Applicants  
enclosures



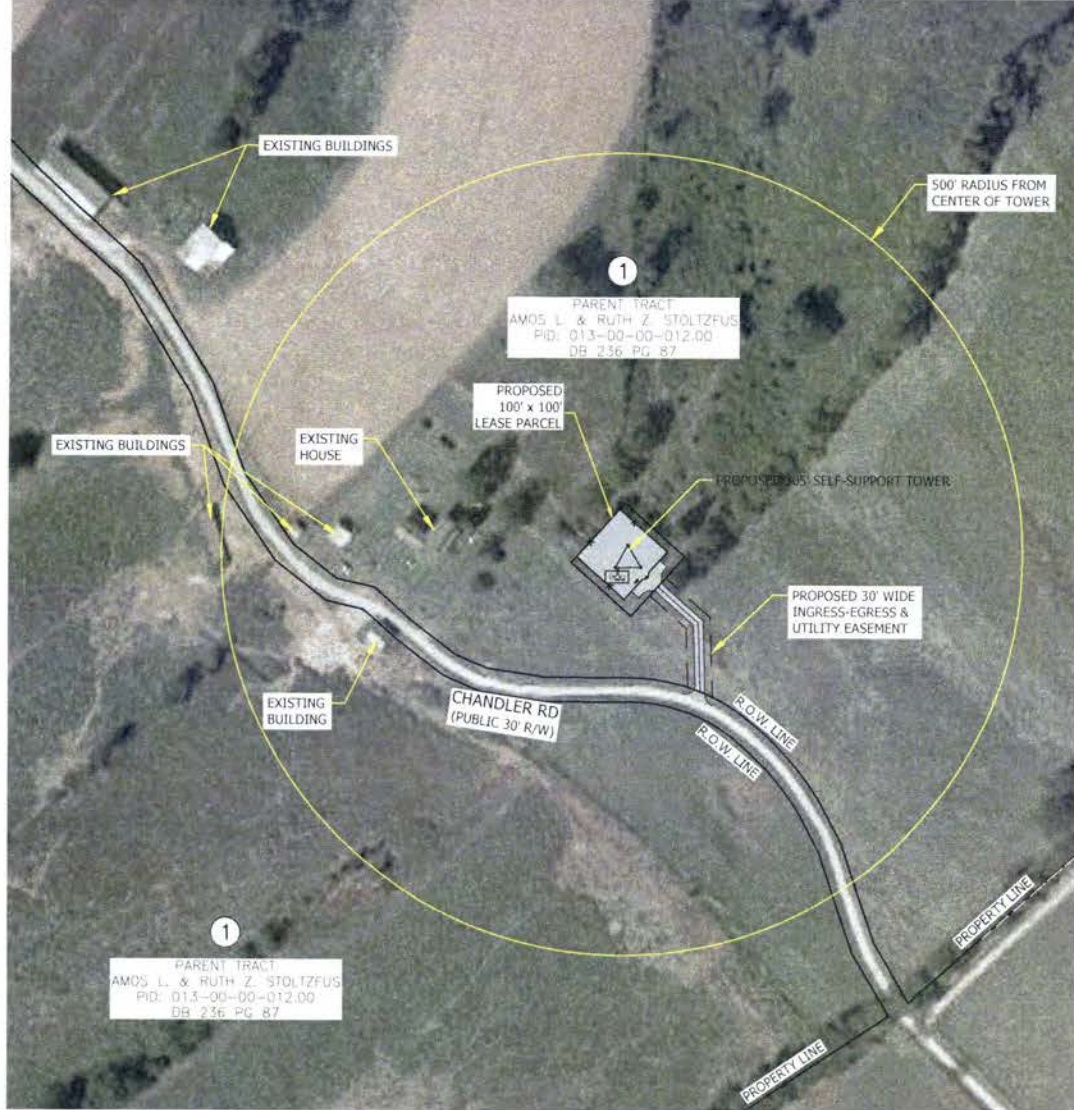
### Driving Directions to Proposed Tower Site

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3. Follow Suddith Street as it turns right and becomes E. High Street and travel approximately 0.1 miles.
4. Turn left onto KY-36 W and travel approximately 4.8 miles.
5. Turn right onto KY-1325 and travel approximately 7.6 miles.
6. Turn left onto KY-11 S and travel approximately 2.3 miles.
7. Turn right onto Cheyenne Road and travel approximately 233 feet.
8. Turn left onto Shiloh Road and travel approximately 417 feet.
9. Turn right onto Chandler Road and travel approximately 0.3 miles.
10. The site is located on the right at 312 Chandler Road, Sharpsburg, KY 40374.
11. The site coordinates are:
  - a. North 38 deg 16 min 01.03 sec
  - b. West 83 deg 50 min 48.69 sec



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





1 500' RADIUS & ADJOINER'S DRAWING SCALE



#	OWNER	ADDRESS	PID	REF
1	AMOS & RUTH STOLTZFUS	675 CHANDLER RD SHARPSBURG, KY 40374	013-00-00-012.00	DB 236 PG 87

- NOTE:
- SEE SHT. C-1.1 FOR INFORMATION ON PROPERTIES #2 - #10.
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HARMONI

HARMONI TOWERS  
CHANDLER RD  
1-A# 05147579  
PARCEL# AIRTNK047532  
PT# 10158678  
312 CHANDLER RD  
SHARPSBURG, KY 40374  
BATH COUNTY  
PROPOSED 50' SELF-SUPPORT TOWER

PROJECT NO: 11701  
CHECKED BY: DLS

REV	DATE	DRWN	DESCRIPTION
A	8/20/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
4011  
Expires 12/31/20



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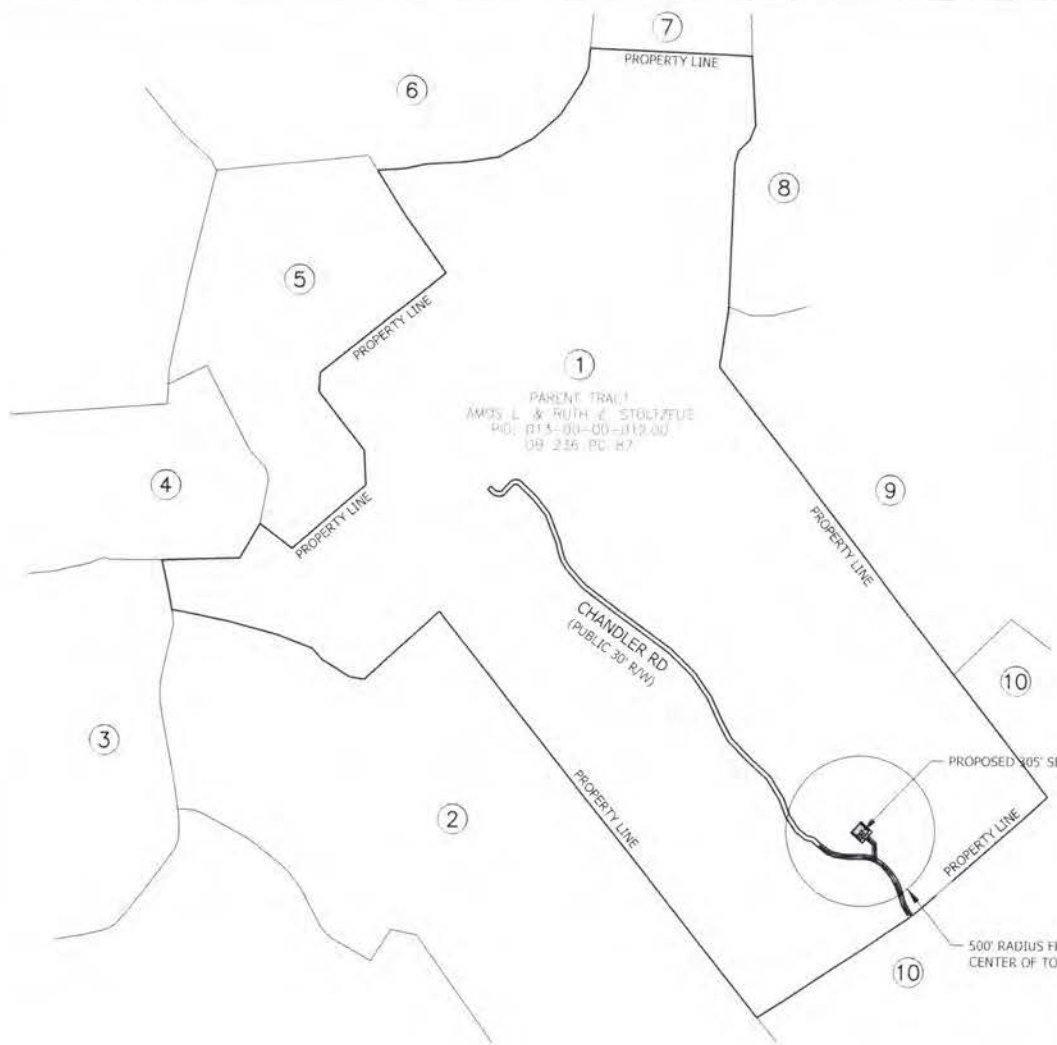
500' RADIUS & ADJOINER'S DRAWING

SHEET NUMBER:  
**C-1.0**



CALL KENTUCKY ONE CALL  
(800) 752-6007  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!





#	OWNER	ADDRESS	PID	REF
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3	LYNN & JUDY HARMON	1779 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-010.00	-
4	DOUGLAS & DONNA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.01	-
5	BRIAN & LORIA THOMAS	2140 LITTLE FLAT LEDFORD RD SHARPSBURG, KY 40374	013-00-00-004.00	-
6	MARVIN E. VICE	175 SCRUB GRASS RD CARLISLE, KY 40311	013-00-00-003.00	-
7	CHRIST & RACHEL STOLTZFUS	1300 LONG LANE PEMBROKE, KY 42266	012-00-00-001.00	-
8	ROBERT DAREN OVINGTON	1517 SHARP RD SHARPSBURG, KY 40374	019-00-00-001.00	-
9	JEREMY & DUSKY GINN	743 COYOTE RD SHARPSBURG, KY 40374	020-00-00-002.04	-
10	SHIRLEY & ELAINE GRIMES	37 SHILOH RD SHARPSBURG, KY 40374	013-00-00-015.00	-

NOTE:

- SEE SHIT, C-1.0 FOR INFORMATION ON PROPERTIES #1.
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1 OVERALL ADJOINER'S DRAWING  
SCALE 0 400' 800' 1200' 1600' 1"=800'



CALL KENTUCKY ONE CALL  
(800) 752-6007  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!



CHANDLER RD  
 PARSONS TOWERS  
 PAR 15147579  
 PAGE# MPIN K047532  
 PTH 1015468  
 312 CHANDLER RD  
 SHARPSBURG, KY 40374  
 BAYLUM COUNTY  
 (PROPOSED) 305' SELF-SUPPORT TOWER

PROJECT NO: 17-001  
CHECKED BY: DLS

ISSUED FOR

REV	DATE	DRWN	DESCRIPTION
A	8/26/20	DLS	ZONING DRAWINGS
0	9/29/20	DLS	ZONING DRAWINGS
1	10/14/20	MAS	ZONING DRAWINGS

B&T ENGINEERING, INC.  
4011  
Expires 12/31/20



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTIVE UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT.

OVERALL ADJOINER'S DRAWING

SHEET NUMBER  
**C-1.1**



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

**SITE NAME: BETHEL / CHANDLER ROAD**  
**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 and Uniti Towers LLC, a Delaware limited liability company propose 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 2020-00343 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Uniti Towers LLC, a Delaware limited liability company propose 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 2020-00343 in your correspondence.



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

VIA TELEPHONE: (606) 674-9994  
VIA EMAIL: [cecil@kynewsgroup.com](mailto:cecil@kynewsgroup.com)

Bath County News Outlook  
81A Water Street  
Owingsville, KY 40360

RE: Legal Notice Advertisement  
Site Name: Bethel / Chandler Road

Dear Bath County News Outlook:

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

#### NOTICE

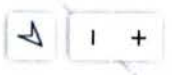
**New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Uniti Towers LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on 312 Chandler Road, Sharpsburg, KY 40374 (38° 16' 01.03" North latitude, 83° 50' 48.69" 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 2020-00343 in any correspondence sent in connection with this matter.**

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

Sincerely,  
Chris Shouse  
Pike Legal Group, PLLC



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



View Road

11



Little Flat Ledford Road

Conant Road

KY 11

Flemingburg Road

Chumble Road

Green Road

Cheyenne Road  
Loyte Road

Sharp Road

Flemingburg Road

KY 11

Highway Road

