

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

In the Matter of:

THE APPLICATION OF )  
NEW CINGULAR WIRELESS PCS, LLC, )  
A DELAWARE LIMITED LIABILITY COMPANY, )  
D/B/A AT&T MOBILITY )  
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC ) CASE NO.: 2019-00176  
CONVENIENCE AND NECESSITY TO CONSTRUCT )  
A WIRELESS COMMUNICATIONS FACILITY )  
IN THE COMMONWEALTH OF KENTUCKY )  
IN THE COUNTY OF CASEY )

SITE NAME: DUNNVILLE RELO / PHIL

RECEIVED

JUN 7 2019

PUBLIC SERVICE  
COMMISSION

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

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

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

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

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

3. Applicant is a limited liability company organized in the State of Delaware on October 20, 1994.

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

5. A Certificate of Authorization issued by the Kentucky Secretary of State for the Applicant entity is attached to this Application as part of **Exhibit A** and is hereby incorporated by reference.

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

7. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services

to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the Applicant's communications network that is designed to meet the increasing demands for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.

8. To address the above-described service needs, Applicant proposes to construct a WCF at 74 Antioch Road, Liberty, KY 42539 (37° 13' 26.77" North latitude, 84° 57' 18.92" 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 Tony and Camille Haggard and Marilyn and Noel Clayton pursuant to a Deed recorded at Deed Book 311, Page 488 in the office of the County Clerk. The proposed WCF will consist of a 230-foot tall tower, with an approximately 7-foot tall lightning arrestor attached at the top, for a total height of 237-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicant's radio electronics equipment and appurtenant equipment. The Applicant's equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

9. A list of utilities, corporations, or persons with whom the proposed WCF is

likely to compete is attached as **Exhibit D**.

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

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

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

13. 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 application for Kentucky Airport Zoning Commission ("KAZC") Approval to construct the tower is attached as **Exhibit F**.

15. 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. A copy of the lease agreement for the WCF site is attached as **Exhibit I**. Pursuant to the lease agreement Uniti Towers LLC, on Applicant's behalf, has acquired the right to use the WCF site and associated property rights. The lessee, Uniti Towers LLC, is a build-to-suit company under contract with the applicant.

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

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

24. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as

**Exhibit M.** A legal notice advertisement regarding the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located. A copy of the newspaper legal notice advertisement is attached as part of **Exhibit M.**

25. The general area where the proposed facility is to be located is rural and heavily wooded. The tower is well removed from existing residences.

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

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

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

set out as part of the Application.

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

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

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

Respectfully submitted,



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

## **LIST OF EXHIBITS**

- A - Certificate of Authority and 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 AND 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

**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> KNKN964	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA448	<b>Channel Block</b> B
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003291192

<b>Market Name</b> Kentucky 6 - Madison				
<b>Grant Date</b> 10-05-2010	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 10-01-2020	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>

**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	37-18-37.2 N	084-55-40.2 W	325.8	69.2	1043347

Address: 604 HATFIELD ROAD (76208)  
City: Liberty County: CASEY State: KY Construction Deadline:

Antenna: 1	Maximum Transmitting ERP in Watts:	140.820	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters)	59.800	102.600	65.700	61.100	108.000	120.600	100.900	65.400	
Transmitting ERP (watts)	192.800	103.500	11.600	0.400	0.600	0.500	8.800	94.400	
Antenna: 2	Maximum Transmitting ERP in Watts:	140.820	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters)	59.800	102.600	65.700	61.100	108.000	120.600	100.900	65.400	
Transmitting ERP (watts)	1.400	22.100	142.900	188.400	56.900	3.700	0.400	0.400	
Antenna: 3	Maximum Transmitting ERP in Watts:	140.820	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters)	59.800	102.600	65.700	61.100	108.000	120.600	100.900	65.400	
Transmitting ERP (watts)	1.300	0.400	0.400	3.300	49.500	179.900	153.100	27.200	

**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: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	37-32-40.8 N	084-17-40.6 W	398.7	128.0	1228453

Address: 521 FENTRESS LANE (76213)

City: Berea County: MADISON State: KY Construction Deadline: 05-19-2015

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)	172.500	170.300	101.700	65.000	99.300	140.700	147.900	171.700
Transmitting ERP (watts)	94.100	66.200	8.600	0.400	0.200	0.200	2.100	27.300

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)	172.500	170.300	101.700	65.000	99.300	140.700	147.900	171.700
Transmitting ERP (watts)	0.600	9.400	67.500	94.400	25.000	1.500	0.200	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)	172.500	170.300	101.700	65.000	99.300	140.700	147.900	171.700
Transmitting ERP (watts)	21.200	0.800	1.200	1.100	17.200	192.100	389.900	205.800

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	37-45-36.3 N	084-38-06.5 W	291.1	86.9	1043357

Address: 363 JESSE BRIM ROAD (76207)

City: DANVILLE County: GARRARD State: KY Construction Deadline: 05-19-2015

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)	112.000	109.800	147.300	118.900	97.300	106.100	107.500	134.700
Transmitting ERP (watts)	82.600	298.200	252.300	44.100	1.700	0.600	0.600	4.900

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)	112.000	109.800	147.300	118.900	97.300	106.100	107.500	134.700
Transmitting ERP (watts)	0.600	2.500	47.700	266.800	295.300	74.600	3.600	0.600

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	112.000	109.800	147.300	118.900	97.300	106.100	107.500	134.700
Transmitting ERP (watts)	1.800	0.200	0.200	0.300	5.900	48.600	81.200	26.400

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	37-24-08.4 N	084-52-12.5 W	344.4	123.1	1244845

Address: 1064 GEORGE BRANCH ROAD (79474)

City: HUSTONVILLE County: CASEY State: KY Construction Deadline: 05-19-2015

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	150.700	149.300	146.000	168.200	167.200	124.000	147.600
Transmitting ERP (watts)	141.900	76.200	8.600	0.300	0.500	0.400	6.500	69.500

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	150.700	149.300	146.000	168.200	167.200	124.000	147.600
Transmitting ERP (watts)	1.600	30.200	198.200	256.700	74.500	4.200	0.513	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)	113.900	150.700	149.300	146.000	168.200	167.200	124.000	147.600
Transmitting ERP (watts)	1.600	0.600	0.600	4.700	79.800	288.100	238.200	43.600

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	37-52-28.6 N	084-20-20.7 W	285.0	121.9	1002236

Address: 3600 LEXINGTON ROAD (76202)

City: RICHMOND County: MADISON State: KY Construction Deadline: 05-19-2015

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)	91.600	113.700	133.000	106.200	85.800	112.000	92.600	86.400
Transmitting ERP (watts)	261.200	136.300	13.900	0.600	0.800	0.700	11.000	124.300

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)	91.600	113.700	133.000	106.200	85.800	112.000	92.600	86.400
Transmitting ERP (watts)	2.000	37.500	246.600	319.500	92.700	5.200	0.639	0.800

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)	91.600	113.700	133.000	106.200	85.800	112.000	92.600	86.400
Transmitting ERP (watts)	1.800	0.610	0.610	5.000	84.500	305.100	258.200	45.100



Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	37-35-26.1 N	084-50-43.3 W	406.9	59.1	

Address: 4213 PERSIMMON KNOB ROAD (101147)

City: JUNCTION CITY County: BOYLE State: KY Construction Deadline: 05-19-2015

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)	168.700	171.100	158.800	149.200	115.800	133.900	101.600	177.600
Transmitting ERP (watts)	1.600	2.100	2.300	0.900	0.100	0.100	0.100	0.300

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)	168.700	171.100	158.800	149.200	115.800	133.900	101.600	177.600
Transmitting ERP (watts)	0.107	0.200	3.400	28.000	53.500	25.000	2.700	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)	168.700	171.100	158.800	149.200	115.800	133.900	101.600	177.600
Transmitting ERP (watts)	34.000	3.100	0.400	0.500	2.400	24.100	129.000	161.700

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	37-21-10.9 N	084-39-33.8 W	396.2	87.2	1257886

Address: 12900 US HWY 27 S (106194)

City: Waynesburg County: LINCOLN State: KY Construction Deadline: 05-19-2015

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)	107.700	134.700	131.900	154.400	120.400	118.300	145.400	145.200
Transmitting ERP (watts)	397.200	162.700	9.900	1.400	0.800	1.000	27.800	210.100

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)	107.700	134.700	131.900	154.400	120.400	118.300	145.400	145.200
Transmitting ERP (watts)	3.900	62.100	309.500	354.700	76.400	3.600	0.709	1.000

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)	107.700	134.700	131.900	154.400	120.400	118.300	145.400	145.200
Transmitting ERP (watts)	2.000	0.742	0.742	11.100	124.000	371.400	269.600	30.500

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-13-22.2 N	084-57-39.5 W	295.0	78.9	1263764

Address: 309 Antioch Church Rd (110472)  
City: Liberty County: CASEY State: KY Construction Deadline: 05-19-2015

Antenna: 4

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.900	41.300	39.900	47.800	59.300	71.200	92.000	74.100
Transmitting ERP (watts)	365.600	148.900	7.800	1.500	0.731	1.300	23.600	196.200

Antenna: 5

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.900	41.300	39.900	47.800	59.300	71.200	92.000	74.100
Transmitting ERP (watts)	2.900	29.300	156.900	196.700	41.400	3.800	0.500	0.700

Antenna: 6

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.900	41.300	39.900	47.800	59.300	71.200	92.000	74.100
Transmitting ERP (watts)	0.300	0.100	0.100	0.900	8.500	23.800	21.000	3.900

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
18	37-32-51.0 N	084-19-59.0 W	378.0	91.1	1018906

Address: 850 S. Dogwood Drive (112852)  
City: BERA County: MADISON State: KY Construction Deadline: 05-19-2015

Antenna: 4

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	168.900	159.200	126.200	70.300	118.900	123.900	150.200	185.600
Transmitting ERP (watts)	3.900	32.100	61.200	28.600	3.100	0.200	0.122	0.200

Antenna: 5

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	168.900	159.200	126.200	70.300	118.900	123.900	150.200	185.600
Transmitting ERP (watts)	0.300	0.400	1.600	18.000	92.500	111.200	26.100	2.500

Antenna: 6

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	168.900	159.200	126.200	70.300	118.900	123.900	150.200	185.600
Transmitting ERP (watts)	19.800	3.700	0.300	0.100	0.100	0.800	8.000	22.400

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	37-17-09.6 N	084-39-48.6 W	369.1	97.5	1047763

Address: 933 Ellison Pulaski County Line Road (87875)

City: EUBANKS County: LINCOLN State: KY Construction Deadline: 05-19-2015

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)	61.000	89.700	113.300	109.400	116.000	113.900	103.800	96.300
Transmitting ERP (watts)	207.000	86.900	7.100	0.900	0.414	0.500	13.500	104.300

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)	61.000	89.700	113.300	109.400	116.000	113.900	103.800	96.300
Transmitting ERP (watts)	2.800	28.800	154.300	193.500	40.700	3.700	0.500	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)	61.000	89.700	113.300	109.400	116.000	113.900	103.800	96.300
Transmitting ERP (watts)	1.900	0.400	0.400	6.900	57.500	193.500	147.100	15.900

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	37-38-56.8 N	084-57-46.0 W	289.0	48.2	

Address: 710 COX STREET (88217)

City: PERRYVILLE County: BOYLE State: KY Construction Deadline: 05-19-2015

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)	85.200	61.400	39.400	30.000	30.000	37.500	68.300	61.100
Transmitting ERP (watts)	68.700	32.100	3.400	0.200	0.137	0.200	4.400	36.000

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)	85.200	61.400	39.400	30.000	30.000	37.500	68.300	61.100
Transmitting ERP (watts)	0.700	10.100	52.900	63.100	17.400	1.300	0.200	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)	85.200	61.400	39.400	30.000	30.000	37.500	68.300	61.100
Transmitting ERP (watts)	0.400	0.126	0.126	1.900	20.000	63.100	50.600	7.800

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN964

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-35-48.9 N	084-19-23.5 W	276.5	84.1	1217686

Address: 1322 Walnut Meadow Road (37723)

City: Berea County: MADISON State: KY Construction Deadline: 05-19-2015

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)	69.600	67.700	85.700	30.000	36.000	34.900	73.800	71.000
Transmitting ERP (watts)	359.700	189.900	19.500	0.800	1.100	1.000	15.900	177.200

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)	69.600	67.700	85.700	30.000	36.000	34.900	73.800	71.000
Transmitting ERP (watts)	2.200	41.100	269.800	349.500	101.400	5.700	0.700	0.800

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)	69.600	67.700	85.700	30.000	36.000	34.900	73.800	71.000
Transmitting ERP (watts)	1.900	0.700	0.700	5.500	92.500	333.800	282.500	49.400

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	37-44-57.3 N	084-10-08.8 W	274.9	82.3	1230519

Address: 176 Kennedy Lane (39220)

City: Richmond County: MADISON State: KY Construction Deadline: 05-19-2015

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)	120.300	124.900	128.100	96.900	65.900	60.500	72.000	90.300
Transmitting ERP (watts)	95.500	46.000	4.500	0.200	0.200	0.200	3.600	41.000

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)	120.300	124.900	128.100	96.900	65.900	60.500	72.000	90.300
Transmitting ERP (watts)	0.700	8.600	43.500	49.700	13.500	0.900	0.100	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)	120.300	124.900	128.100	96.900	65.900	60.500	72.000	90.300
Transmitting ERP (watts)	5.900	0.722	0.900	2.300	42.400	278.600	361.000	104.700

Control Points:

Control Pt. No. 1

Address: 2601 Palumbo Drive

City: Lexington County: State: KY Telephone Number:

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

**Call Sign:** KNKN964

**File Number:**

**Print Date:**

**Waivers/Conditions:**

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

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



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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS 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.

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

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

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

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

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

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

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

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

**Call Sign:** WPOI255

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> WPOK659	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 10-29-2009	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 09-29-2019	<b>Print Date</b>
<b>Market Number</b> BTA423	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 1	
<b>Market Name</b> Somerset, KY			
<b>1st Build-out Date</b> 09-29-2004	<b>2nd Build-out Date</b> 09-29-2009	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

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

Conditions:

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

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:** WPOK659

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> WPXT205	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 06-02-2015	<b>Effective Date</b> 08-31-2018	<b>Expiration Date</b> 06-23-2025	<b>Print Date</b>
<b>Market Number</b> MTA026	<b>Channel Block</b> A	<b>Sub-Market Designator</b> 8	
<b>Market Name</b> Louisville-Lexington-Evansvill			
<b>1st Build-out Date</b> 06-23-2000	<b>2nd Build-out Date</b> 06-23-2005	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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

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

**Call Sign:** WPXT205

**File Number:**

**Print Date:**

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

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

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

**Call Sign:** WPXT205

**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

Table with Call Sign (WQGD755), File Number, and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

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 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.

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.

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:** 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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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> WQGD757	<b>File Number</b>
<b>Radio Service</b> AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 12-18-2006	<b>Effective Date</b> 02-20-2019	<b>Expiration Date</b> 12-18-2021	<b>Print Date</b>
<b>Market Number</b> BEA070	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Louisville, KY-IN			
<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:** WQGD757

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

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

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

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

<b>Call Sign</b> WQUZ670	<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> 09-26-2014	<b>Effective Date</b> 02-20-2019	<b>Expiration Date</b> 11-29-2021	<b>Print Date</b>
<b>Market Number</b> REA004	<b>Channel Block</b> D	<b>Sub-Market Designator</b> 10	
<b>Market Name</b> Mississippi Valley			
<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.

**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:** WQUZ670

**File Number:**

**Print Date:**

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

Reference Copy

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

**Call Sign:** WQUZ670

**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>
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy



**EXHIBIT B**

**SITE DEVELOPMENT PLAN:**

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



**UNITI SITE NAME:** PHIL  
**AT&T SITE NAME:** DUNVILLE RELO  
**PROJECT DESCRIPTION:** PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY  
**TOWER TYPE:** 230' SELF-SUPPORT (237' OVERALL)  
**SITE ADDRESS:** 74 ANTIOCH ROAD LIBERTY, KY 42539 (CASEY COUNTY)  
**JURISDICTION:** CASEY COUNTY  
**DISTURBED AREA:** 14,690± S.F. (0.34 AC)  
**PRESENT OCC. TYPE:** WOODED  
**CURRENT ZONING:** N/A  
**PARCEL #:** 055-28

PROJECT INFORMATION:



# at&t

**74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)**

**UNITI SITE NAME: PHIL  
 AT&T SITE NAME: DUNVILLE RELO  
 FA LOCATION CODE: 14605585**

APPLICANT/LESSEE:



# at&t

MEIDINGER TOWER  
 462 S 4TH ST, STE 2400  
 LOUISVILLE, KY 40202

PLANS PREPARED BY:

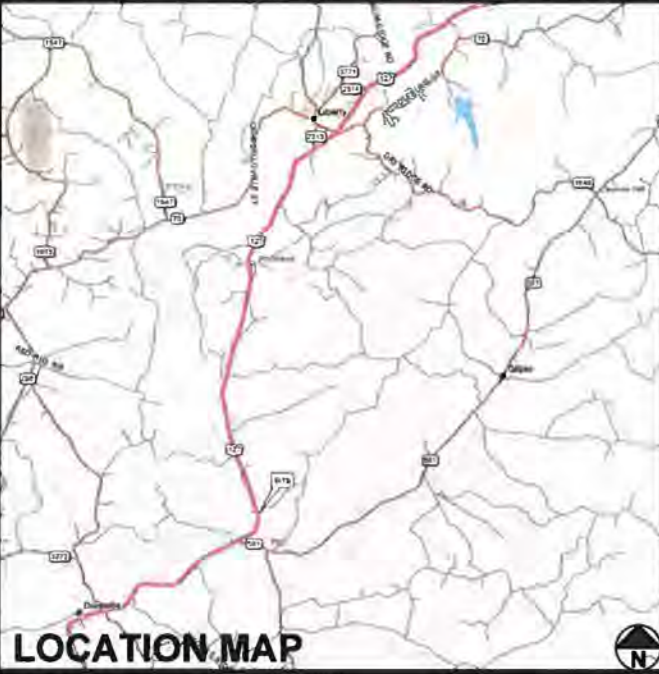


**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
 www.tepgroup.net

**PROJECT INFORMATION**

**LATITUDE** N 37° 13' 26.77" (NAD '83)  
**LONGITUDE** W 84° 57' 18.92" (NAD '83)  
**GROUND ELEVATION(AMSL)=** 970.12' ± (NAVD '88)

**1-A CERTIFICATION**



**DIRECTIONS FROM 825 CAMPBELLVILLE STREET, LIBERTY, KY 42539:**  
 TRAVEL 495 FT SOUTHEAST ON CAMPBELLVILLE ST TOWARD COURT HOUSE SQUARE. CONTINUE STRAIGHT AS CAMPBELLVILLE ST BECOMES MIDDLEBURG ST. TRAVEL 361 FT THEN TURN RIGHT ONTO RANDOLPH ST. TRAVEL 0.4 MI. TURN RIGHT ONTO US-127 S/WALLACE WILKINSON BLVD. TRAVEL 6.6 MI. TURN LEFT ONTO ANTIOCH RD AND TRAVEL 400 FT. THE SITE WILL BE ON YOUR RIGHT.  
 DIRECTIONS PREPARED BY JOHN BEST - (919) 703-4130

**DRIVING DIRECTIONS**

**TOWER OWNER:**  
 NAME: UNITI TOWERS  
 ADDRESS: 10801 EXECUTIVE CENTER DR  
 CITY, STATE, ZIP: SHANNON BUILDING, SUITE 100 LITTLE ROCK, AR 72211  
 CONTACT: ANDRELLA SLAUGHTER  
 PHONE: (501) 850-0820  
**APPLICANT/LESSEE:**  
 NAME: NEW CINGULAR WIRELESS PCS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AT&T MOBILITY  
 ADDRESS: MEIDINGER TOWER  
 CITY, STATE, ZIP: 462 S 4TH ST, STE 2400 LOUISVILLE, KY 40202  
 CONTACT: ERIN WOODARD  
 PHONE: (615) 305-3479  
**CIVIL ENGINEER:**  
 NAME: TOWER ENGINEERING PROFESSIONALS  
 ADDRESS: 326 TRYON ROAD  
 CITY, STATE, ZIP: RALEIGH, NC 27603  
 CONTACT: GRAHAM M. ANDRES, P.E.  
 PHONE: (919) 661-6351  
**ELECTRICAL ENGINEER:**  
 NAME: TOWER ENGINEERING PROFESSIONALS  
 ADDRESS: 326 TRYON ROAD  
 CITY, STATE, ZIP: RALEIGH, NC 27603  
 CONTACT: GRAHAM M. ANDRES, P.E.  
 PHONE: (919) 661-6351  
**SURVEYOR:**  
 NAME: TOWER ENGINEERING PROFESSIONALS  
 ADDRESS: 326 TRYON ROAD  
 CITY, STATE, ZIP: RALEIGH, NC 27603  
 CONTACT: TIMOTHY L. FISH, P.L.S.  
 PHONE: (919) 661-6351

**CONTACT INFORMATION**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:  
 1. KENTUCKY BUILDING CODE (2013 EDITION)  
 2. ANS/TIA-222-G-2-2009  
 3. 2017 NEC  
 4. LOCAL BUILDING CODE  
 5. CITY/COUNTY ORDINANCES


**CODE COMPLIANCE**

- INSTALL GRAVEL ACCESS DRIVE
- GRADE SITE AND INSTALL GRAVEL COMPOUND
- INSTALL SELF SUPPORT TOWER
- INSTALL EQUIPMENT PAD AND EQUIPMENT CABINETS
- INSTALL H-FRAME AND METER
- INSTALL PROPOSED ANTENNAS ON TOWER
- RUN COAX FROM CABINETS UP TO ANTENNAS
- INSTALL COMPOUND FENCING
- CONNECT SITE TO UTILITY POWER
- REMOVE EXCESS CONSTRUCTION MATERIALS AND DEMOBILIZE FROM SITE

**SCOPE OF WORK**

**PROPERTY OWNER:**  
 NAME: TONY HAGGARD  
 ADDRESS: 881 WEST RAILROAD STREET  
 CITY, STATE, ZIP: STANTON, KY 40380  
 CONTACT: BEVERLY BAKER  
 PHONE: UNKNOWN  
**UTILITIES:**  
**POWER COMPANY:** CLARK ENERGY COOP  
 CONTACT: CUSTOMER SERVICE (859) 744-4251  
 PHONE: UNKNOWN  
**POLE # NEAR SITE:** UNKNOWN  
**TELEPHONE COMPANY:** AT&T  
 CONTACT: CUSTOMER SERVICE (888) 321-2375  
 PHONE: (606) 663-5742  
**PEDESTAL # NEAR SITE:** UNKNOWN

PLANS PREPARED FOR:



UNITI TOWERS  
 10801 EXECUTIVE CENTER DRIVE  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

SHEET	DESCRIPTION	REV
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C1A	PROPERTY OWNER MAP	4
C2	COMPOUND DETAIL	4
C3	TOWER ELEVATION	4
C4	EQUIPMENT LAYOUT	4
C5	GENERATOR DETAILS	4
C6	CABINET DETAILS	4
C7	FENCE DETAILS	4
C8	ICE BRIDGE DETAILS I	4
C9	ICE BRIDGE DETAILS II	4
C10	ANTENNA MOUNTING DETAILS	4
C11	ACCESS ROAD DETAILS	4
C12	GRADING AND EROSION CONTROL PLAN	4
C13	SILT FENCE DETAILS	4
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**INDEX OF SHEETS**

REV	DATE	ISSUED FOR:
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3	06-04-19	CONSTRUCTION
2	05-08-19	CONSTRUCTION
1	03-19-19	CONSTRUCTION
0	02-25-19	PRELIMINARY

DRAWN BY: GSM CHECKED BY: GLB

SEAL:

June 5, 2019

SEAL:

SHEET NUMBER: **T-1**  
 REVISION: **4**  
 TEP#: 133859.173893



**PROJECT NOTES:**


1. ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED UNITI OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING TO HAVE SUFFICIENT EXPERIENCE AND ABILITY, IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF KENTUCKY.
3. THE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G-2-2009 AND CONFORM TO THE REQUIREMENTS OF THE KENTUCKY BUILDING CODE, 2013 EDITION.
4. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE KENTUCKY BUILDING CODE, 2013 EDITION.
5. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
6. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
9. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK. RENTAL CHARGES, SAFETY, PROTECTION, AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE OWNER PROJECT MANAGER.
12. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
13. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
15. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
16. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
17. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

18. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
19. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
20. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH OWNER SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO OWNER PRIOR TO THE START OF THE WORK ON THE PROJECT.
21. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING.
22. THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH ONE 55 GALLON BARREL, AND TRASH BAGS, AND SHALL REMOVE TRASH, DEBRIS, ETC., ON A DAILY BASIS.
23. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING THE PROPOSAL. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER PROJECT ENGINEER FOR FACILITIES/CONSTRUCTION.
24. THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF RETAINAGE. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.

**UTILITY NOTES**

1. APPLY FOR THE UTILITY SERVICE (ELECTRIC) NO LATER THAN THE NEXT BUSINESS DAY FOLLOWING AWARD OF CONTRACT. COORDINATE WITH THE ELECTRIC UTILITY COMPANY FOR EXACT TRANSFORMER LOCATION, METERING REQUIREMENTS, AND THE SERVICE ROUTING. COORDINATE WITH THE TELEPHONE UTILITY COMPANY FOR EXACT TELEPHONE REQUIREMENTS AND ROUTING OF SERVICE.
2. ALL UTILITY RELATED WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE UTILITY REQUIREMENTS. FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT UTILITIES AND LOCATOR SERVICE A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION. (KY ONE-CALL 800-752-6007).
4. CONTRACTOR SHALL PROVIDE TRENCHING AND CONDUITS AS SHOWN OR AS REQUIRED BY LOCAL UTILITY.
5. NO PENETRATIONS TO THE TOWER FOUNDATION OF ANY KIND.

PLANS PREPARED FOR:

  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:

  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:

  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: 919 661-6351  
 www.tepgroup.net

SEAL:



June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**PROJECT NOTES**

SHEET NUMBER:	REVISION:
<b>N-1</b>	<b>4</b>
TEP#133859-17385	

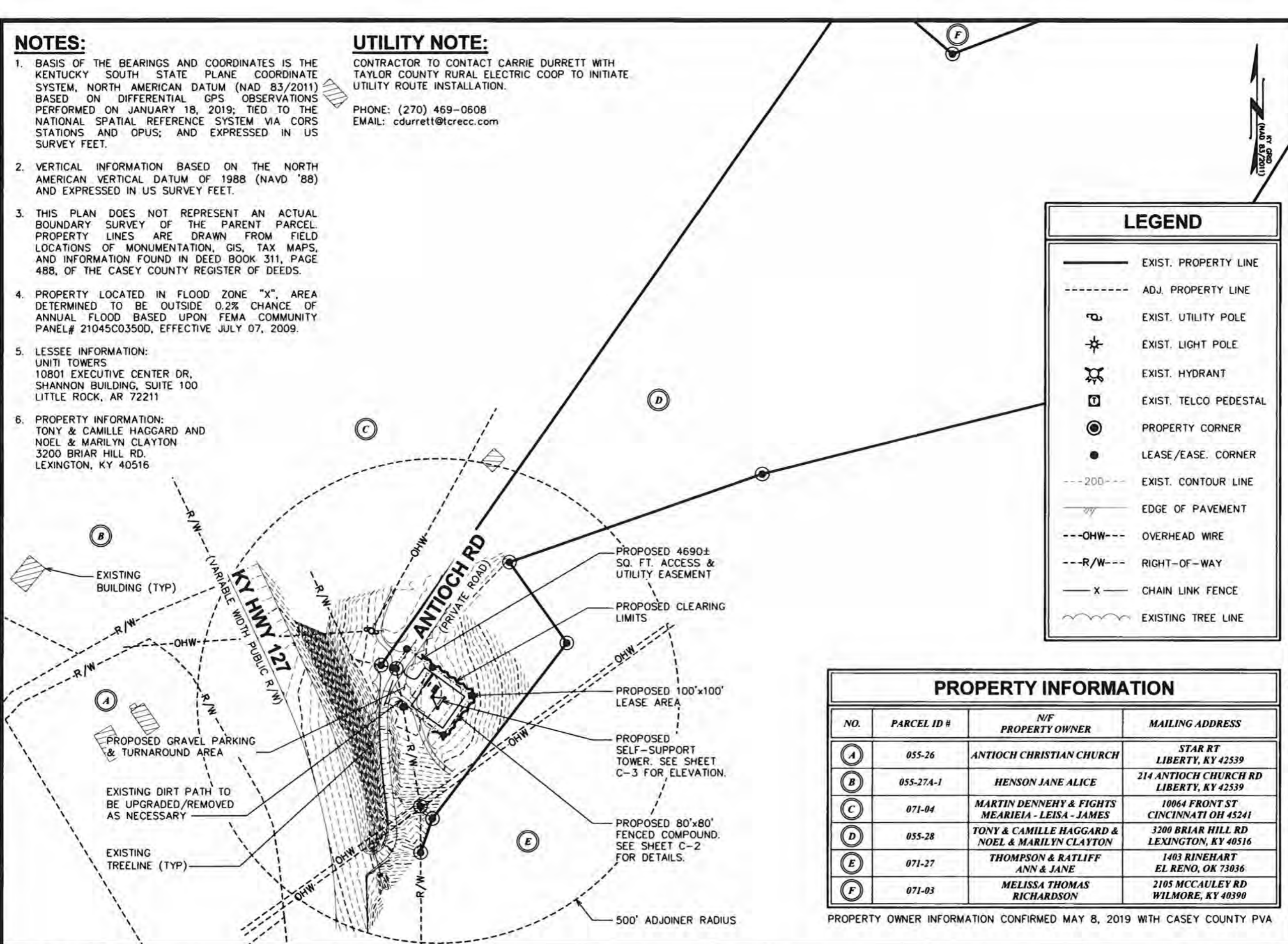


**NOTES:**

1. BASIS OF THE BEARINGS AND COORDINATES IS THE KENTUCKY SOUTH STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JANUARY 18, 2019; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS AND OPUS; AND EXPRESSED IN US SURVEY FEET.
2. VERTICAL INFORMATION BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND EXPRESSED IN US SURVEY FEET.
3. THIS PLAN DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE PARENT PARCEL. PROPERTY LINES ARE DRAWN FROM FIELD LOCATIONS OF MONUMENTATION, GIS, TAX MAPS, AND INFORMATION FOUND IN DEED BOOK 311, PAGE 488, OF THE CASEY COUNTY REGISTER OF DEEDS.
4. PROPERTY LOCATED IN FLOOD ZONE "X", AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOOD BASED UPON FEMA COMMUNITY PANEL# 21045C0350D, EFFECTIVE JULY 07, 2009.
5. LESSEE INFORMATION:  
UNITI TOWERS  
10801 EXECUTIVE CENTER DR,  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211
6. PROPERTY INFORMATION:  
TONY & CAMILLE HAGGARD AND  
NOEL & MARILYN CLAYTON  
3200 BRIAR HILL RD.  
LEXINGTON, KY 40516

**UTILITY NOTE:**

CONTRACTOR TO CONTACT CARRIE DURRETT WITH TAYLOR COUNTY RURAL ELECTRIC COOP TO INITIATE UTILITY ROUTE INSTALLATION.  
PHONE: (270) 469-0608  
EMAIL: cdurrett@tcrecc.com



**LEGEND**

- EXIST. PROPERTY LINE
- - - ADJ. PROPERTY LINE
- ⊕ EXIST. UTILITY POLE
- ⊙ EXIST. LIGHT POLE
- ⊗ EXIST. HYDRANT
- ⊠ EXIST. TELCO PEDESTAL
- PROPERTY CORNER
- LEASE/EASE. CORNER
- - - 200 - - - EXIST. CONTOUR LINE
- EDGE OF PAVEMENT
- - - OHW - - - OVERHEAD WIRE
- - - R/W - - - RIGHT-OF-WAY
- x - CHAIN LINK FENCE
- ~ EXISTING TREE LINE

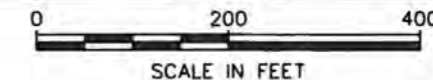
**PROPERTY INFORMATION**

NO.	PARCEL ID #	N/F PROPERTY OWNER	MAILING ADDRESS
(A)	055-26	ANTIOCH CHRISTIAN CHURCH	STAR RT LIBERTY, KY 42539
(B)	055-27A-1	HENSON JANE ALICE	214 ANTIOCH CHURCH RD LIBERTY, KY 42539
(C)	071-04	MARTIN DENNEHY & FIGHTS MEARIEIA - LEISA - JAMES	10064 FRONT ST CINCINNATI OH 45241
(D)	055-28	TONY & CAMILLE HAGGARD & NOEL & MARILYN CLAYTON	3200 BRIAR HILL RD LEXINGTON, KY 40516
(E)	071-27	THOMPSON & RATLIFF ANN & JANE	1403 RINEHART EL RENO, OK 73036
(F)	071-03	MELISSA THOMAS RICHARDSON	2105 MCCAULEY RD WILMORE, KY 40390

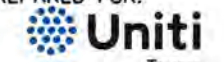
PROPERTY OWNER INFORMATION CONFIRMED MAY 8, 2019 WITH CASEY COUNTY PVA

**SITE PLAN**

SCALE: 1" = 200'



PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



June 5, 2019

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**SITE PLAN**

SHEET NUMBER:	REVISION:
<b>C-1</b>	<b>4</b>
TEP#: 133859.17385	



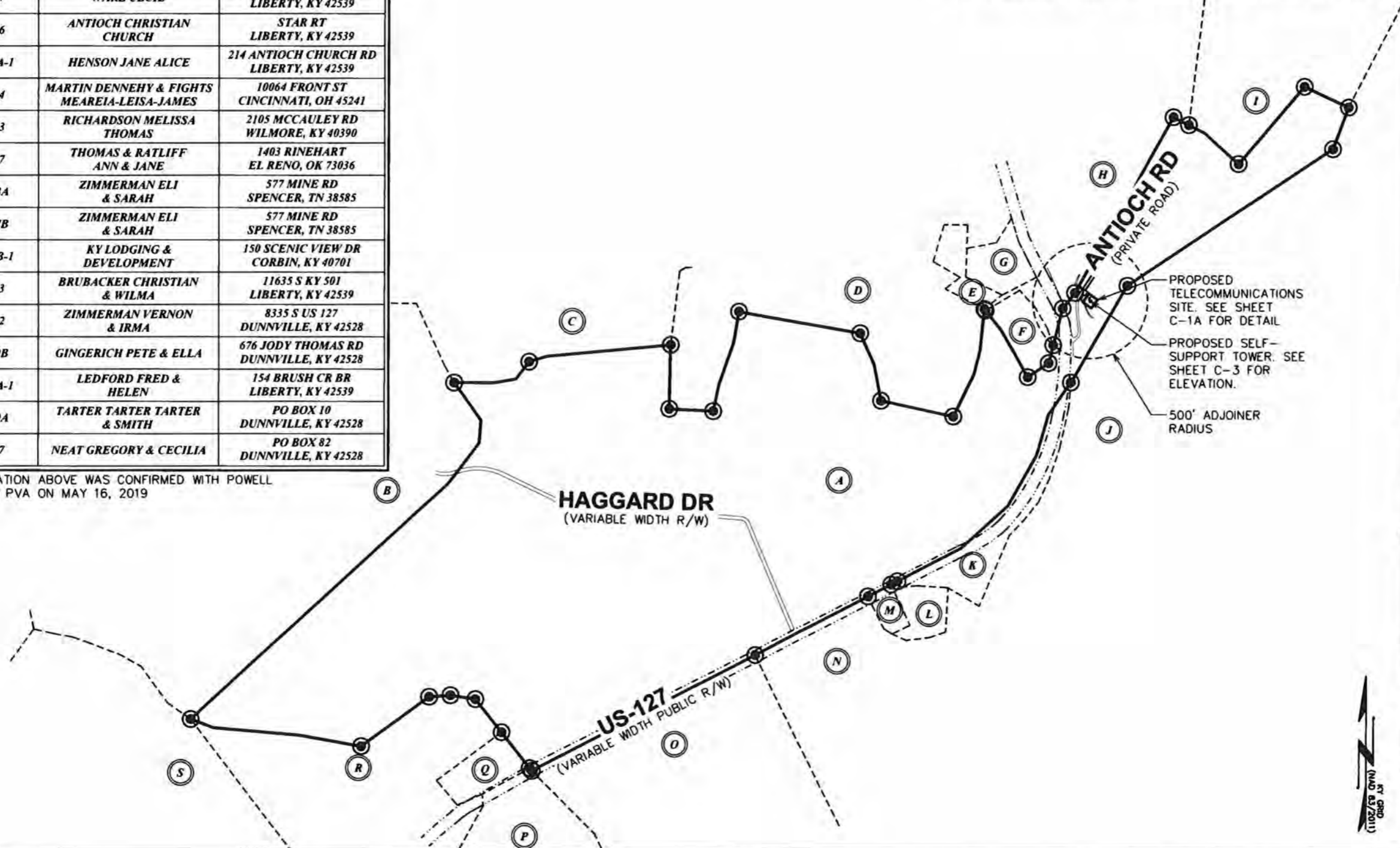
**PROPERTY INFORMATION**

NO.	PARCEL ID #	N/F PROPERTY OWNER	MAILING ADDRESS
A	055-28	HAGGARD & CLAYTON	3200 BRIAR HILL RD LEXINGTON, KY 40516
B	055-29	HAGGARD HOWARD C MRS THELMA	972 HAGGARD DR LIBERTY, KY 42539
C	055-16	TARTER TARTER TARTER & SMITH	PO BOX 10 DUNNVILLE, KY 42528
D	055-27A-5	NEAT BRAD & ASHLEY	761 RIFFE CREEK RD DUNNVILLE, KY 42528
E	055-27	WARE CECIL	252 ANTIOCH CHURCH RD LIBERTY, KY 42539
F	055-26	ANTIOCH CHRISTIAN CHURCH	STAR RT LIBERTY, KY 42539
G	055-27A-1	HENSON JANE ALICE	214 ANTIOCH CHURCH RD LIBERTY, KY 42539
H	071-04	MARTIN DENNEHY & FIGHTS MEAREIA-LEISA-JAMES	10064 FRONT ST CINCINNATI, OH 45241
I	071-03	RICHARDSON MELISSA THOMAS	2105 MCCAULEY RD WILMORE, KY 40390
J	071-27	THOMAS & RATLIFF ANN & JANE	1403 RINEHART EL RENO, OK 73036
K	055-28A	ZIMMERMAN ELI & SARAH	577 MINE RD SPENCER, TN 38585
L	071-27B	ZIMMERMAN ELI & SARAH	577 MINE RD SPENCER, TN 38585
M	071-27B-1	KY LODGING & DEVELOPMENT	150 SCENIC VIEW DR CORBIN, KY 40701
N	056-13	BRUBACKER CHRISTIAN & WILMA	11635 S KY 501 LIBERTY, KY 42539
O	056-12	ZIMMERMAN VERNON & IRMA	8335 S US 127 DUNNVILLE, KY 42528
P	056-09B	GINGERICH PETE & ELLA	676 JODY THOMAS RD DUNNVILLE, KY 42528
Q	056-09A-1	LEDFORD FRED & HELEN	154 BRUSH CR BR LIBERTY, KY 42539
R	056-09A	TARTER TARTER TARTER & SMITH	PO BOX 10 DUNNVILLE, KY 42528
S	056-07	NEAT GREGORY & CECILIA	PO BOX 82 DUNNVILLE, KY 42528

\*NOTE: INFORMATION ABOVE WAS CONFIRMED WITH POWELL COUNTY PVA ON MAY 16, 2019

**NOTES:**

1. THE BASIS OF THE BEARINGS AND COORDINATES IS THE KENTUCKY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011), BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JANUARY 18, 2019; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS AND OPUS; AND EXPRESSED IN US SURVEY FEET.
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF NAVD 1988 IN FEET.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE "X." AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL 21045C0350D, EFFECTIVE JULY 07, 2009.



PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRIVON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: 919-661-6351  
 www.tepgroup.net

SEAL:  
  
 GRAHAM M. ANDRES  
 29939  
 LICENSED PROFESSIONAL ENGINEER  
 June 5, 2019

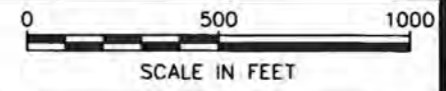
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

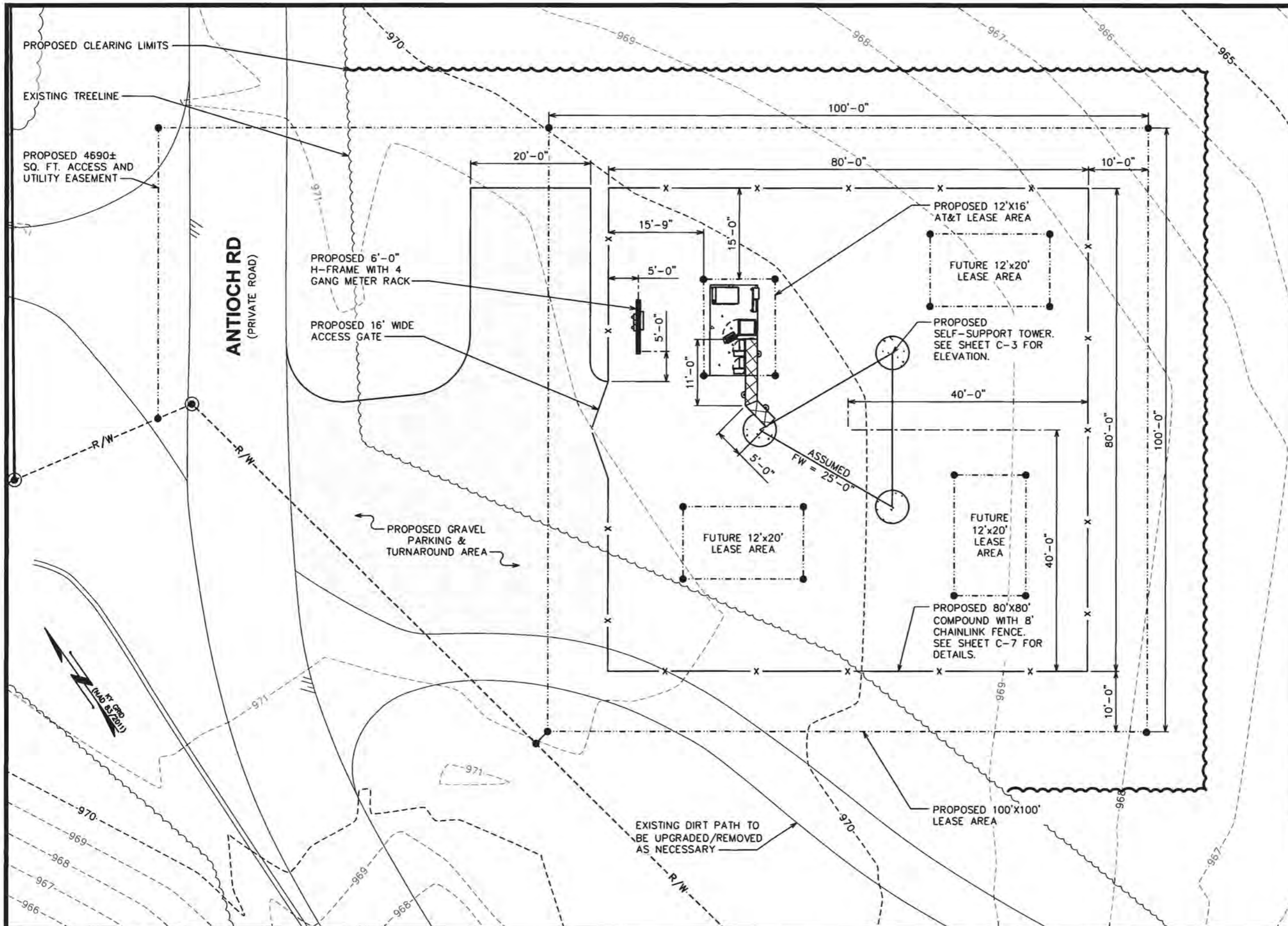
SHEET TITLE:  
**PROPERTY OWNER MAP**

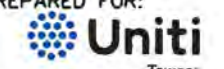
SHEET NUMBER: **C-1A** REVISION: **4**  
 TEP#: 133659.17305

**SITE PLAN**  
 SCALE: 1" = 1000'







PLANS PREPARED FOR:  
  
 Towers  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
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PROJECT INFORMATION:  
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 29939  
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 June 5, 2011

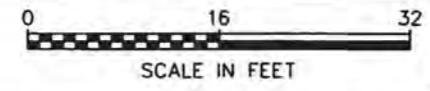
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**COMPOUND DETAIL**

SHEET NUMBER: **C-2** REVISION: **4**  
 TEP#: 133859.17385

**COMPOUND DETAIL**  
 SCALE: 1/8" = 1'-0"





- 237'-0" T/ LIGHTNING ROD
- 230'-0" T/ TOWER
- 225'-0" Q/AT&T ANTENNAS

PROPOSED TOWER LIGHTING BY OTHERS (TYP)

PROPOSED 7' LIGHTNING ROD

PROPOSED SECTOR MOUNT (TYP OF 3)

PROPOSED AT&T ANTENNA (TYP OF 6)

FUTURE ANTENNA BY OTHERS (TYP OF 3)

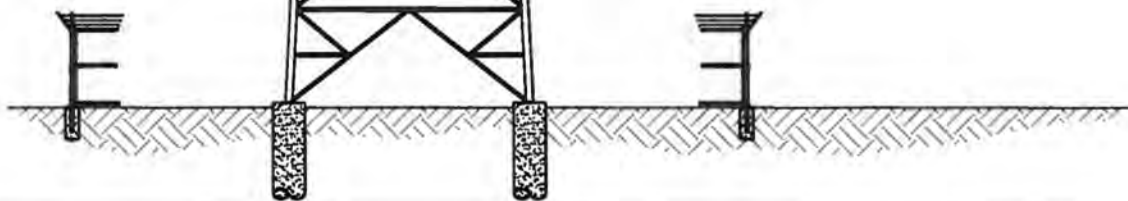
**NOTES:**

1. PROPOSED CABLES TO BE ROUTED PER SPECIFICATIONS OF STRUCTURAL ANALYSIS
2. PROPOSED CABLES TO BE MOUNTED TO WAVEGUIDE LADDER (PROVIDED BY CONTRACTOR) USING SNAP STAK HANGERS.
3. THE TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TOWER IN THE FIELD MAY VARY.
4. CONTRACTOR TO VERIFY FINAL LOADING WITH PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION. CONTACT VERTICAL BRIDGE IN THE EVENT OF ANY DISCREPANCIES.

PROPOSED SIDE LIGHTS

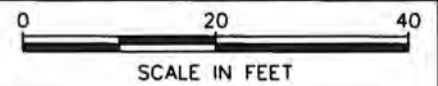
PROPOSED SELF-SUPPORT TOWER

- 0'-0" (REFERENCE) T/ GRADE



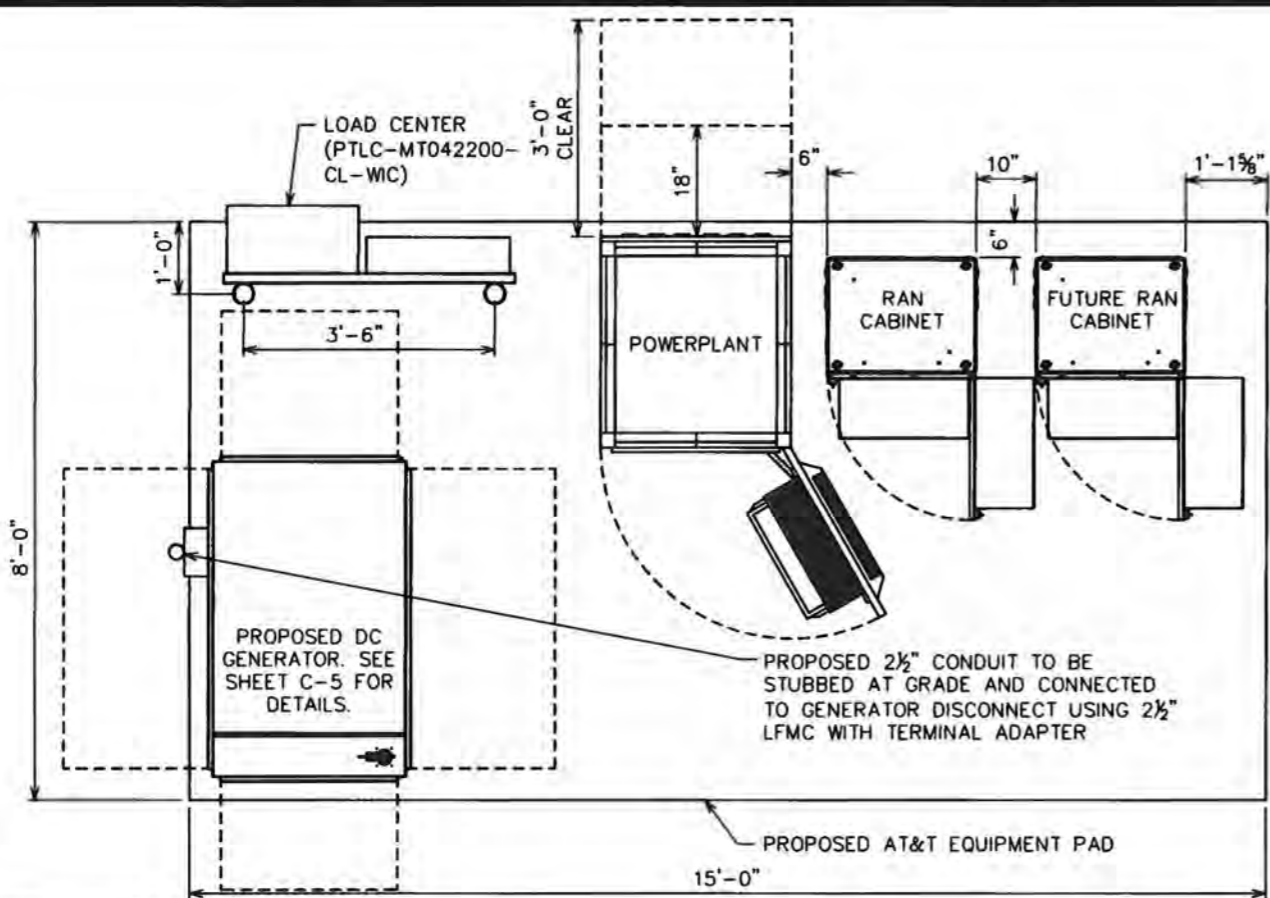
**TOWER ELEVATION**

SCALE: 1" = 20'



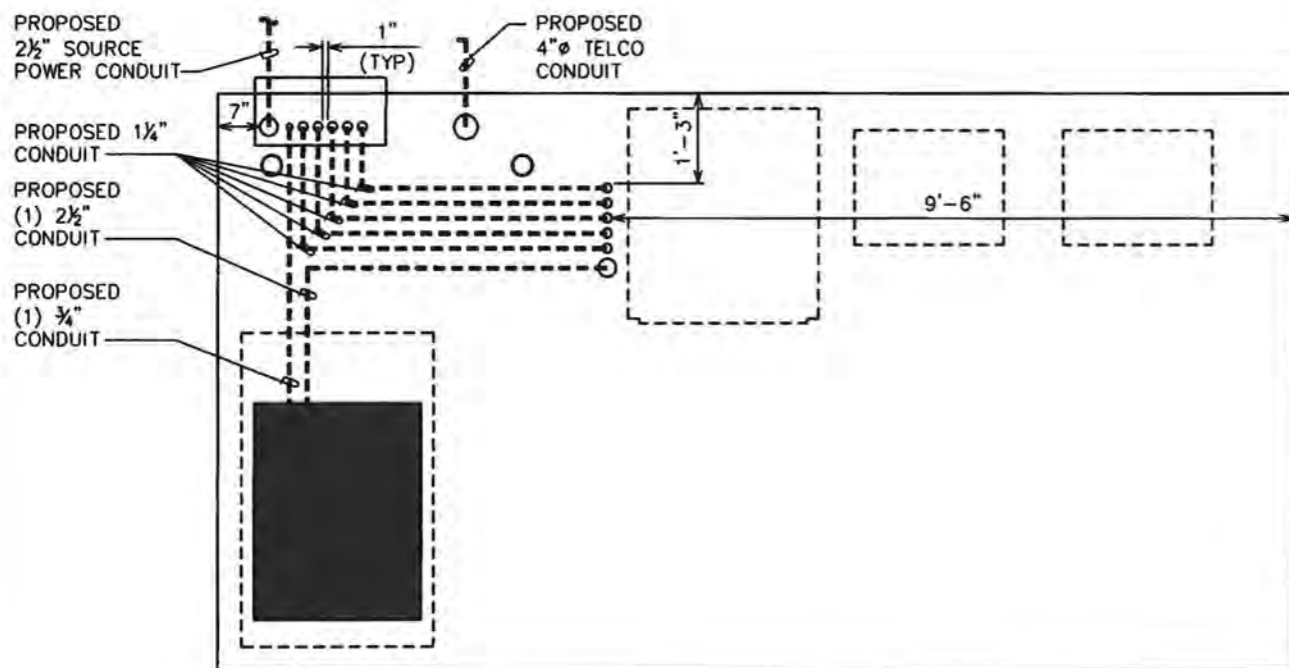
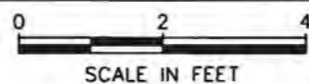
<p>SHEET NUMBER: <b>C-3</b></p> <p>REVISION: <b>4</b></p> <p>TEP#: 133859.17385</p>	<p>SHEET TITLE: <b>TOWER ELEVATION</b></p>	<table border="1"> <tr><td>4</td><td>06-05-19</td><td>CONSTRUCTION</td></tr> <tr><td>3</td><td>06-04-19</td><td>CONSTRUCTION</td></tr> <tr><td>REV</td><td>DATE</td><td>ISSUED FOR:</td></tr> <tr><td colspan="3">DRAWN BY: GSM CHECKED BY: GLB</td></tr> </table>	4	06-05-19	CONSTRUCTION	3	06-04-19	CONSTRUCTION	REV	DATE	ISSUED FOR:	DRAWN BY: GSM CHECKED BY: GLB			<p>SEAL:</p> <p>June 5, 2019</p>	<p><b>TOWER ENGINEERING PROFESSIONALS</b></p> <p>326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 861-6351 www.teppro.com</p>	<p>PLANS PREPARED BY:</p> <p><b>UNITI SITE NAME: PHIL</b> <b>AT&amp;T SITE NAME: DUNVILLE RELO</b> <b>FA 14605585</b></p> <p>74 ANTOCH ROAD LIBERTY, KY 42539 (CASEY COUNTY)</p>	<p>PROJECT INFORMATION:</p> <p><b>UNITI SITE NAME: PHIL</b> <b>AT&amp;T SITE NAME: DUNVILLE RELO</b> <b>FA 14605585</b></p>	<p>PLANS PREPARED FOR:</p> <p><b>at&amp;t</b></p> <p>MEIDINGER TOWER 462 S 4TH ST, STE 240 LOUISVILLE, KY 40202</p>	<p>PLANS PREPARED FOR:</p> <p><b>Uniti</b></p> <p>10801 EXECUTIVE CENTER DR. SHANNON BUILDING, SUITE 100 LITTLE ROCK, AR 72211</p>
4	06-05-19	CONSTRUCTION																		
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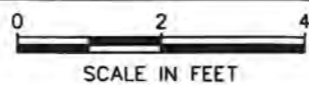
**EQUIPMENT LAYOUT**

SCALE: 3/8" = 1'-0"



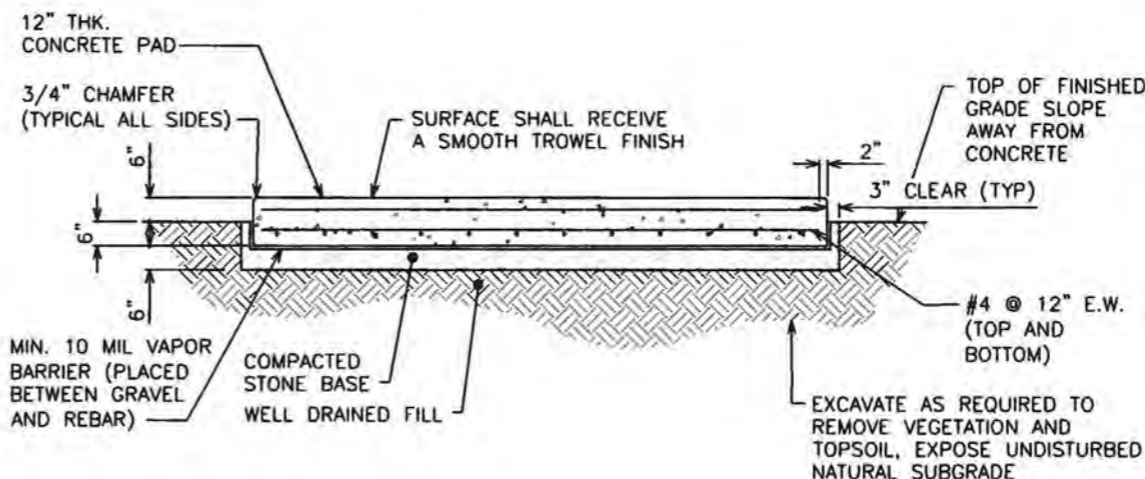
**ELEVATION PAD CONDUIT LAYOUT**

SCALE: 3/8" = 1'-0"



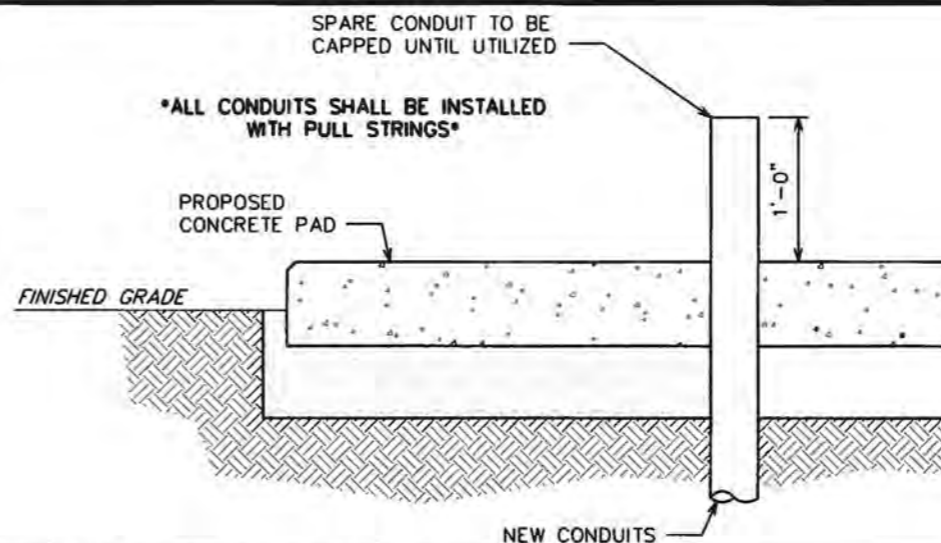
**GENERAL FOUNDATION NOTES:**

1. FOUNDATION DESIGN IS BASED ON A 2000 PSF SOIL BEARING CAPACITY. IF OTHER CONDITIONS EXIST, FOUNDATION SHALL BE REDESIGNED. CONTRACTOR SHALL HAVE SOIL BEARING CAPACITY VERIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
2. CONCRETE SHALL BE 3000 PSI @ 28 DAYS.
3. REBAR FY = 60,000 PSI ASTM A615 GRADE 60
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.
5. CONCRETE EXPOSED TO FREEZING AND THAWING SHALL BE AIR ENTRAINED PER THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE.
6. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN 1/4".
7. OVERLAP SPLICES ARE ALLOWED FOR REINFORCING BARS. USE 24" MINIMUM OVERLAP.
8. CONTRACTOR SHALL VERIFY LOCATION OF CUT-OUTS PRIOR TO INSTALLATION.
9. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE".
10. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE.
11. DESIGN SHALL BE PER KENTUCKY BUILDING CODE, 2013 EDITION.
12. FROST DEPTH FOR CASEY COUNTY, KY = 30"



**CONCRETE PAD DETAIL**

SCALE: N.T.S.



**CONDUIT PENETRATION DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE (919) 661-6351  
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SEAL:



June 5, 2011

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REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**EQUIPMENT LAYOUT**

SHEET NUMBER:

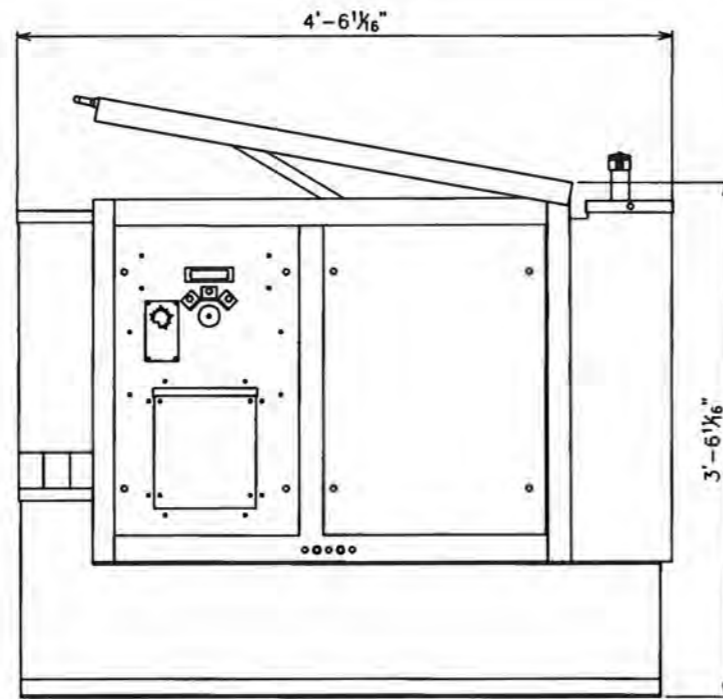
**C-4**

REVISION:

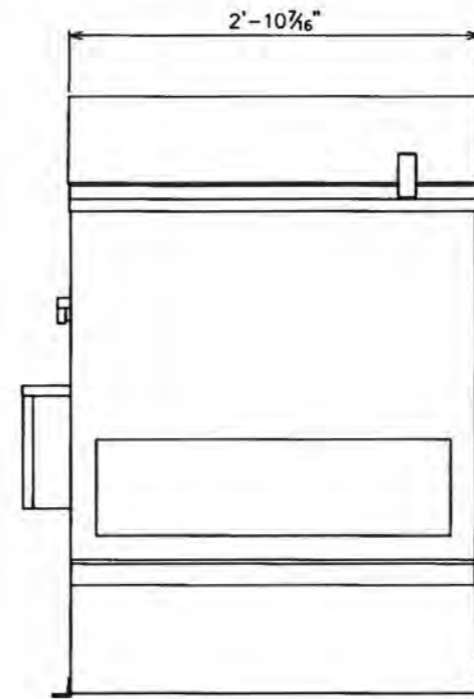
**4**

TEP#133859.17385





FRONT VIEW




SIDE VIEW

**WEIGHT**  
 502KG (1106LB) (10 kW DIESEL)  
 566KG (1248LB) (15 kW DIESEL)

**POLAR POWER 8220-603 DIESEL GENERATOR**


SCALE: N.T.S.

PLANS PREPARED FOR:  
  
 Towers  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
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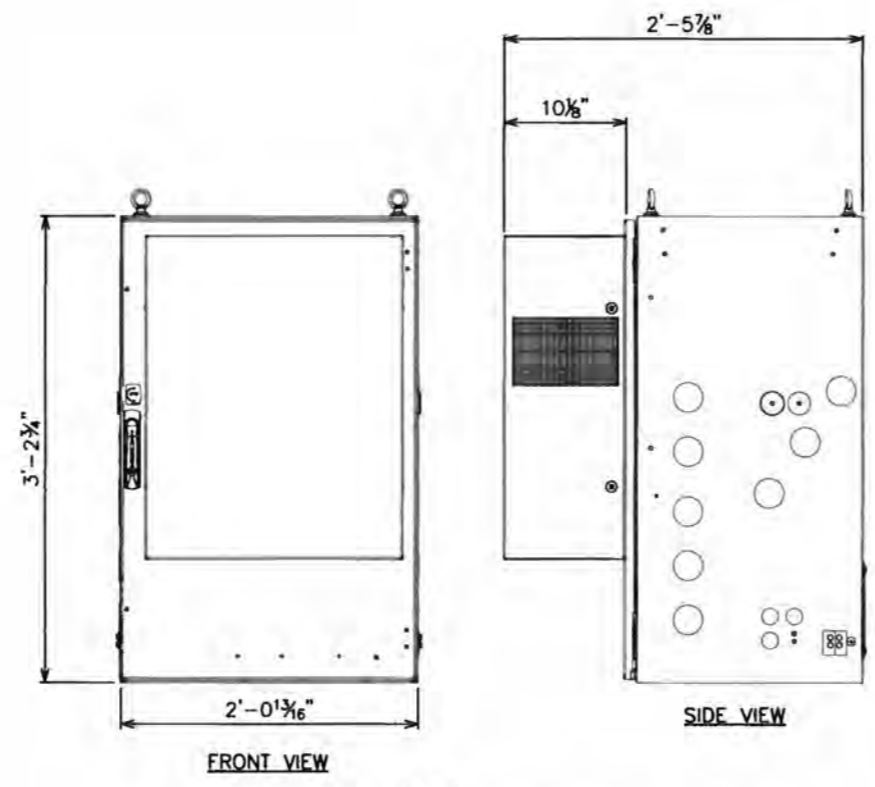
SEAL:  
  
 GRAHAM M. ANDRES  
 29939  
 LICENSED PROFESSIONAL ENGINEER  
 June 5, 201

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DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**GENERATOR DETAILS**

SHEET NUMBER: **C-5** REVISION: **4**  
 TEP#: 133859.17385



**WEIGHT**  
 63.50KG (140LB) - EMPTY  
 136KG (300LB) - FULLY LOADED

PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
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 74 ANTIOCH ROAD  
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 June 5, 201

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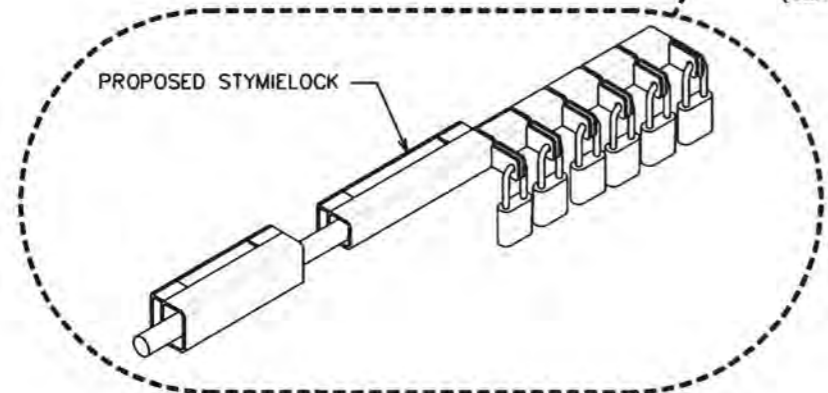
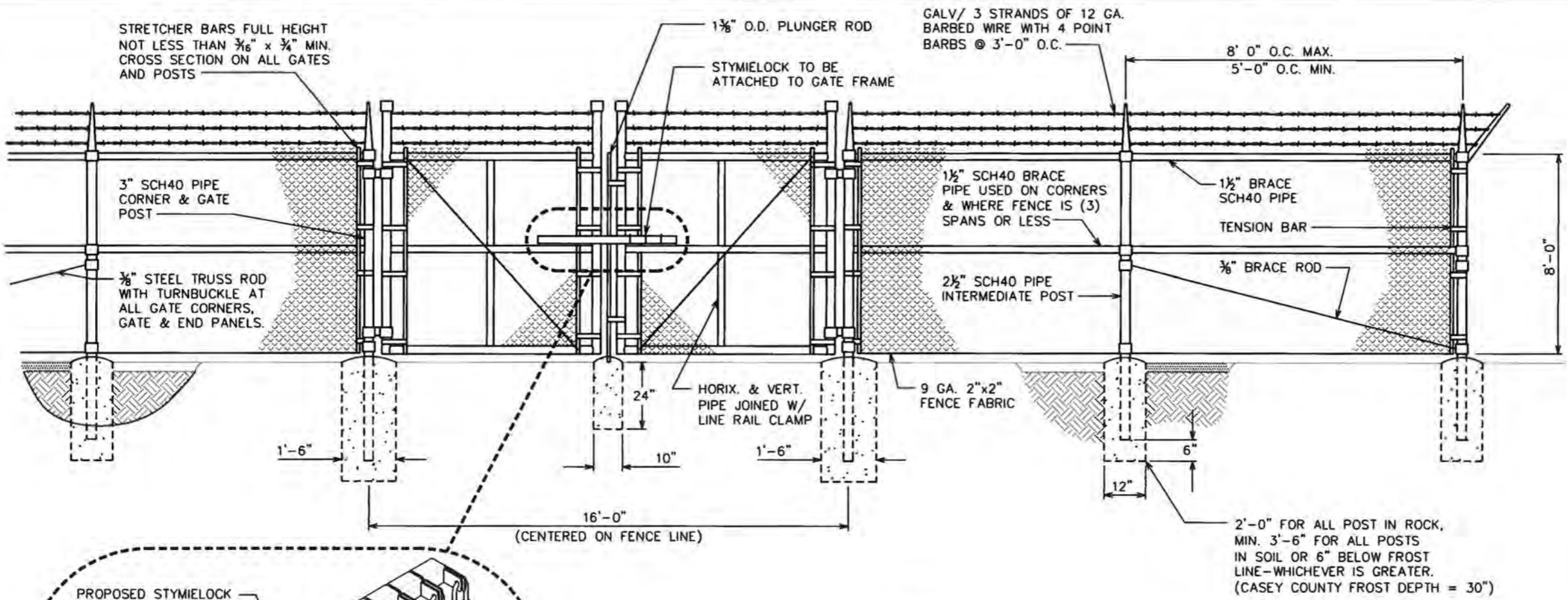
DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**CABINET DETAILS**

SHEET NUMBER: **C-6** REVISION: **4**  
 TEP#: 133859.17385

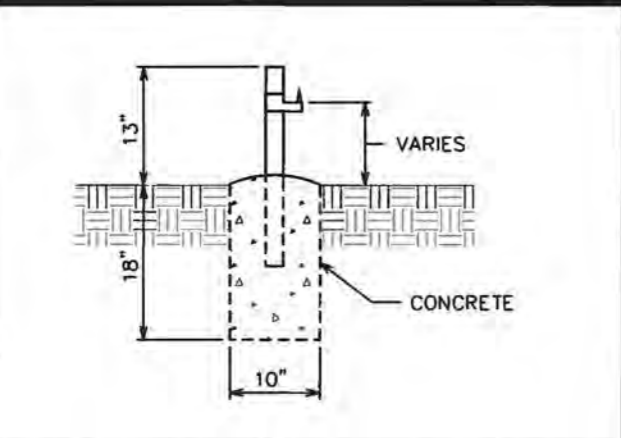
**PURCELL FLX21 CABINET DETAIL**  
 SCALE: N.T.S.





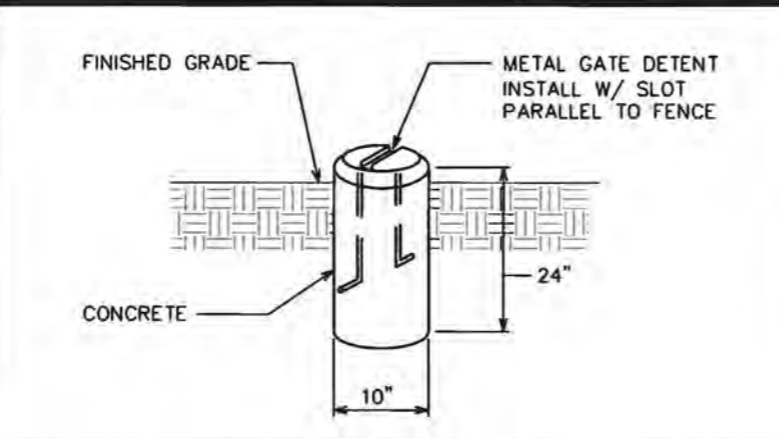
**TYPICAL FENCE ELEVATION**

SCALE: N.T.S.



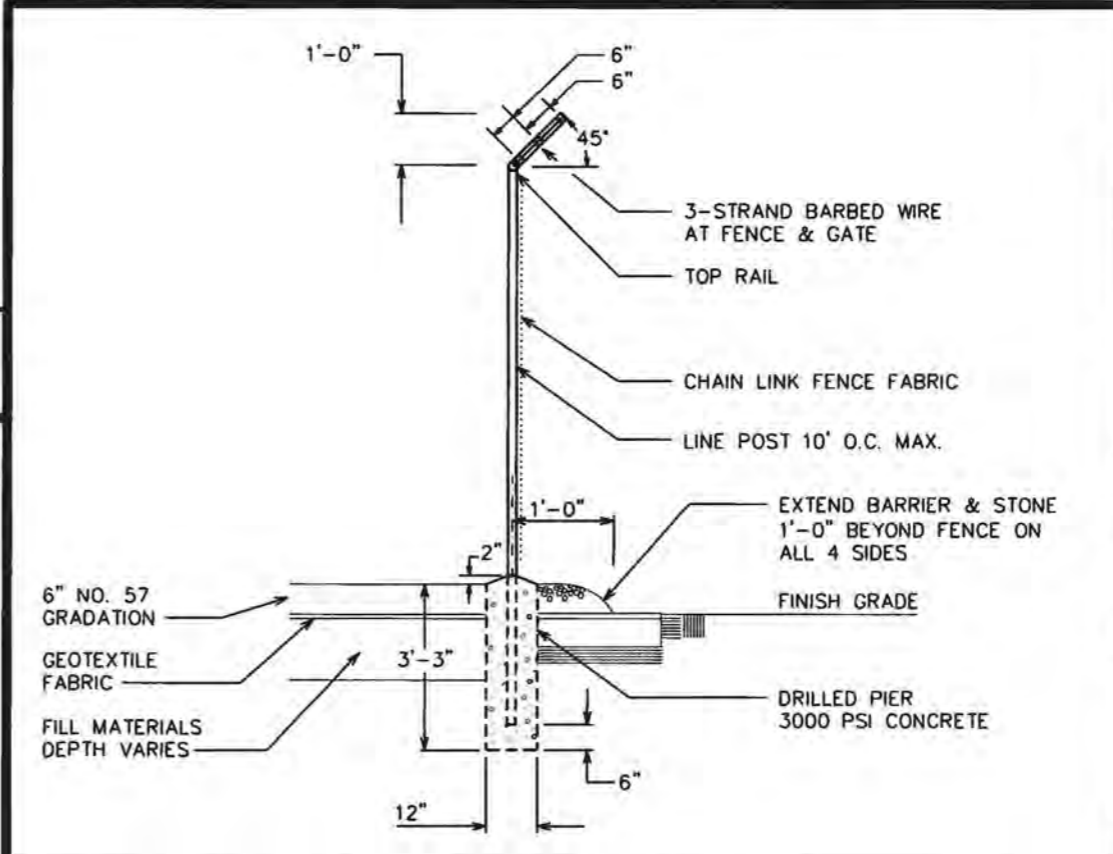
**GATE STOP / KEEPER DETAIL**

SCALE: N.T.S.



**GATE DETENT DETAIL**

SCALE: N.T.S.



**FENCE / BARBED WIRE ARM DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:  
**Uniti**  
 Towers  
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 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
**at&t**  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
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SEAL:  
**GRAHAM M. ANDRES**  
 29939  
 LICENSED PROFESSIONAL ENGINEER  
 June 5, 201

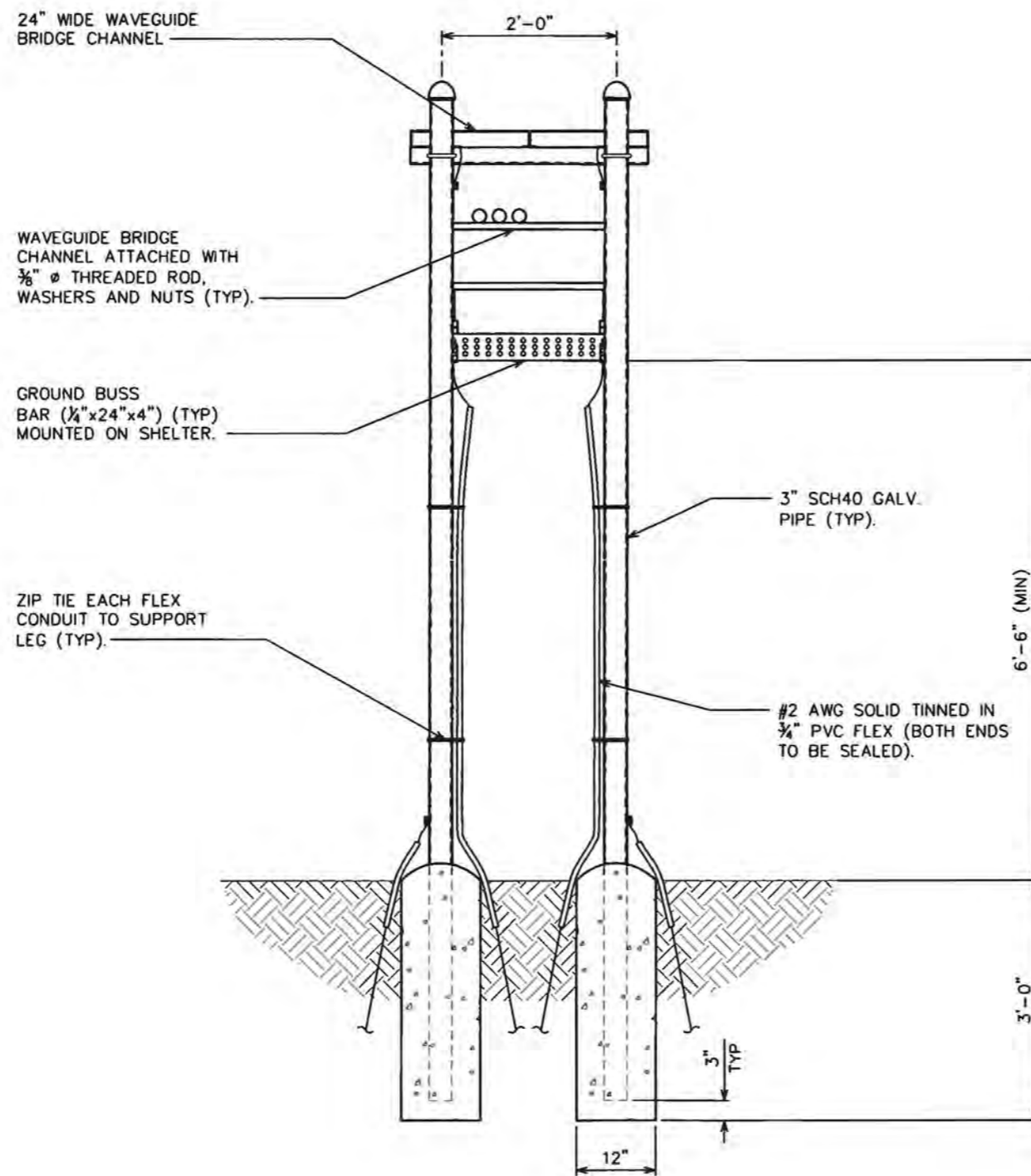
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**FENCE DETAILS**

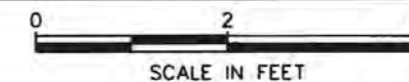
SHEET NUMBER: **C-7** REVISION: **4**  
 TEP#: 33859.17385






**ICE BRIDGE DETAILS - FRONT VIEW**

SCALE: 1/2" = 1'-0"



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 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 2401  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
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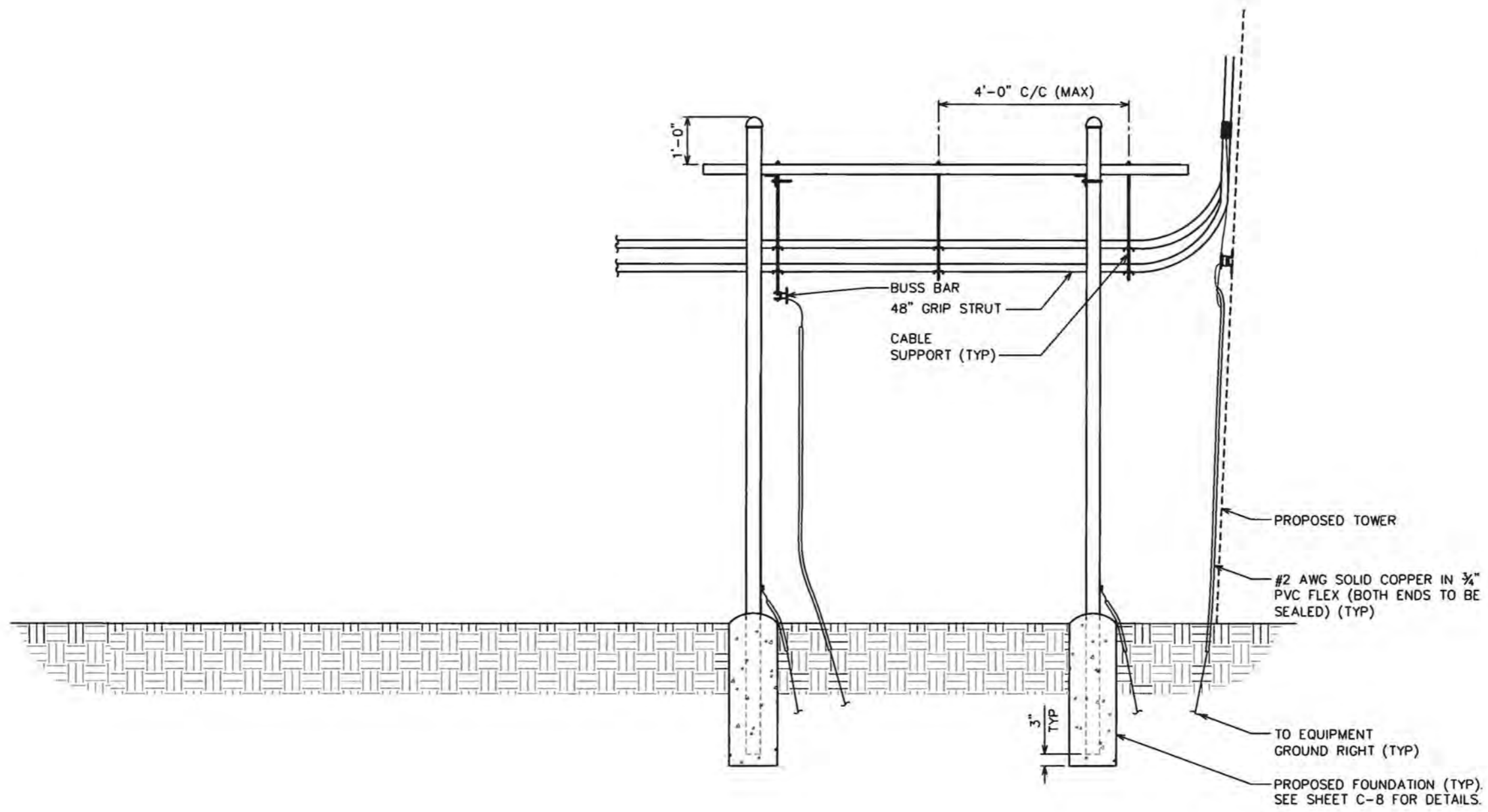
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DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**ICE BRIDGE  
 DETAILS I**

SHEET NUMBER: **C-8** REVISION: **4**  
 TEP#: 133859.17385



**ICE BRIDGE DETAILS - SIDE VIEW**

SCALE: 3/8" = 1'-0"




PLANS PREPARED FOR:  
  
 Towers  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

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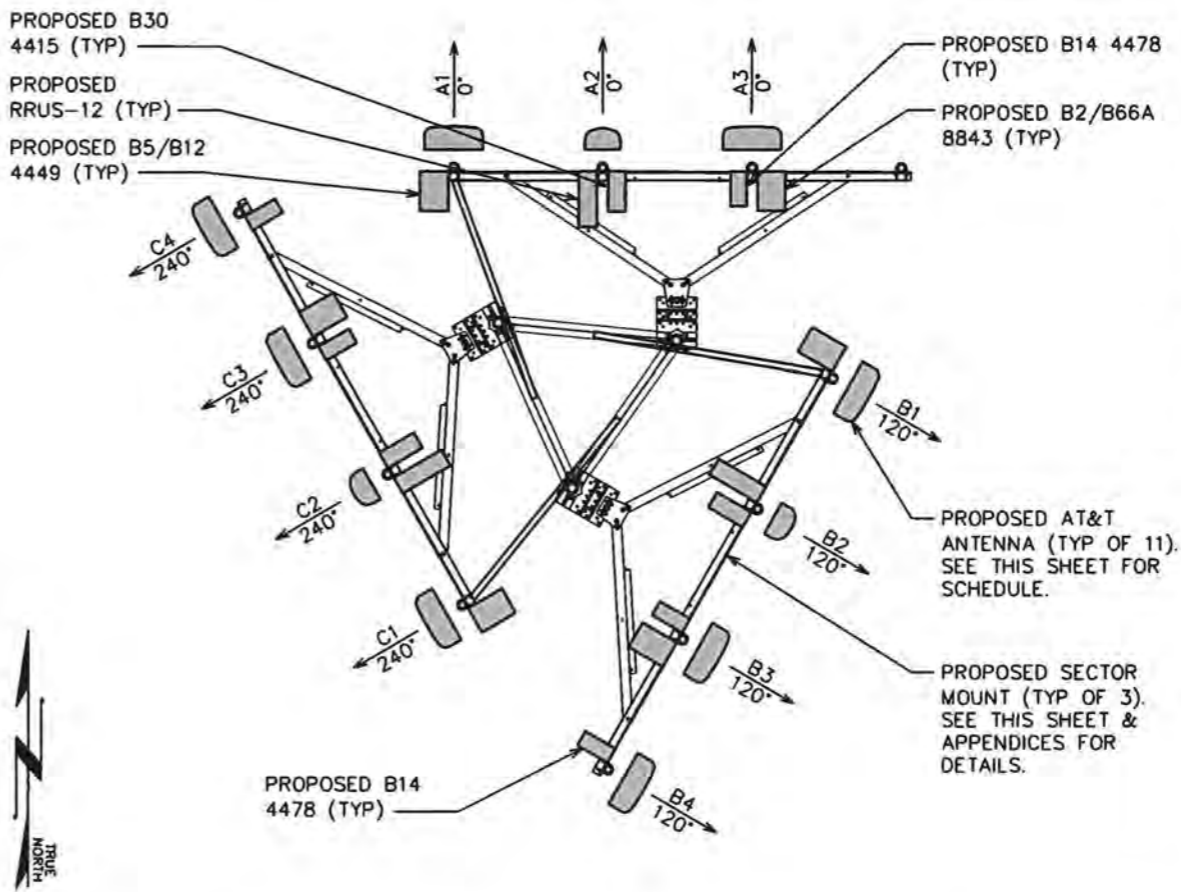
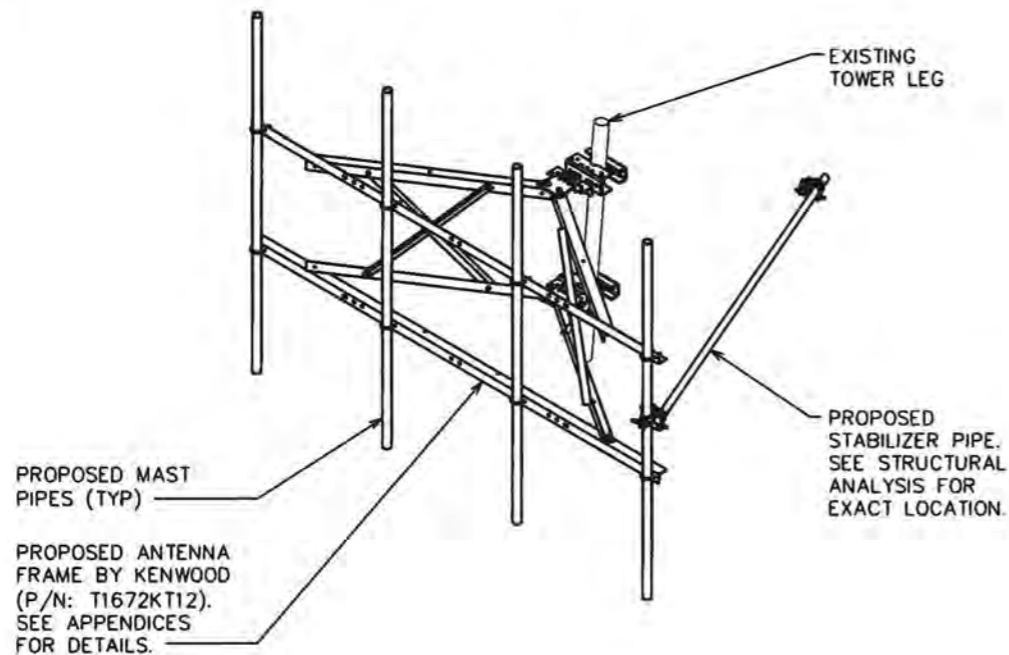
SHEET TITLE:  
**ICE BRIDGE DETAILS II**

SHEET NUMBER: **C-9** REVISION: **4**  
 TEP#: 133859.17385



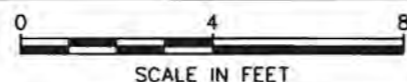
**NOTES:**

1. AN APPROVED EQUIVALENT ANTENNA MOUNT IS ACCEPTABLE WITH APPROVAL FROM THE AT&T PROJECT MANAGER.
2. LEG SIZE (CONTRACTOR TO VERIFY WITH TOWER MANUFACTURER): UNKNOWN.
3. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE MOUNT PURCHASED WILL SATISFY THE ANTENNA LOADING REQUIREMENTS AS DETERMINED BY THE CARRIER.



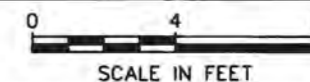
**PROPOSED MOUNT DETAIL**

SCALE: 1/4" = 1'-0"



**PROPOSED ANTENNA ORIENTATION**

SCALE: 3/16" = 1'-0"



**GENERAL NOTES:**

1. THIS ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
4. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL, CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWN TILT WITH AT&T.
5. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.
6. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT OR THE TOWER. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT AND TOWER CAN SUPPORT ADDITIONAL LOADS.
7. EXISTING LOADING INFORMATION PROVIDED BY MASTEC, AT&T RFDS ID: 3059695.
8. CABLE LENGTH TAKEN FROM AT&T RFDS. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING MATERIALS.

**PROPOSED ANTENNA/CABLE SCHEDULE**

ANT. MARK	SECTOR	TECH.	STATUS	MANUFACTURER/ MODEL #	AZIMUTH (TN)	RAD CENTER	MECH. D-TILT	ELEC. D-TILT	TMA MODEL	FIBER CABLE	CABLE LENGTH	DC CABLE	SURGE PROTECTION	RRU MODEL
A1	ALPHA	LTE 700 LTE 850 5G 850	PROPOSED	COMMSCOPE NNH4-650-R6	0°	225'	0°	2' 2'	-	(1) FIBER <sub>16</sub>	260'±	(1)	(1) DC5-48-60-18-BF	(1) B5/B12 4449
A2	ALPHA	UMTS 850 LTE WCS	PROPOSED	ANDREW SBNH-1065C	0°	225'	0°	2' 2'	(1) RRUS-12 (1) B30 4415					
A3	ALPHA	LTE 700 LTE AWS LTE 1900	PROPOSED	COMMSCOPE NNH4-650-R6	0°	225'	0°	2' 2'	(1) 4478 B5 (1) B2/B66 8843					
A4	ALPHA	-	-	-	-	-	-	-	-					
B1	BETA	LTE 700	PROPOSED	COMMSCOPE NNH4-650-R6	120°	225'	0°	5'	-	(1) FIBER <sub>16</sub>	260'±	(1)	(1) DC5-48-60-18-BF	(1) B5/B12 4449
B2	BETA	UMTS 850 LTE WCS	PROPOSED	ANDREW SBNH-1065C	120°	225'	0°	5' 2'	(1) RRUS-12 (1) B30 4415					
B3	BETA	LTE 850 5G 850 LTE AWS LTE 1900	PROPOSED	COMMSCOPE NNH4-650-R6	120°	225'	0°	5' 2'	(1) 4478 B5 (1) B2/B66 8843					
B4	BETA	LTE 700	PROPOSED	COMMSCOPE NNH4-650-R6	120°	225'	0°	2'	(1) B14 4478					
G1	GAMMA	LTE 700	PROPOSED	COMMSCOPE NNH4-650-R6	240°	225'	0°	11'	-	-	-	-	-	(1) B5/B12 4449
G2	GAMMA	UMTS 850 LTE WCS	PROPOSED	ANDREW SBNH-1065C	240°	225'	0°	12' 2'	(1) RRUS-12 (1) B30 4415					
G3	GAMMA	LTE 850 5G 850 LTE AWS LTE 1900	PROPOSED	COMMSCOPE NNH4-650-R6	240°	225'	0°	12' 6' 8"	(1) 4478 B5 (1) B2/B66 8843					
G4	GAMMA	LTE 700	PROPOSED	COMMSCOPE NNH4-650-R6	240°	225'	0°	2'	(1) B14 4478					

**PROPOSED ANTENNA/CABLE SCHEDULE**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**ANTENNA MOUNTING DETAILS**

SHEET NUMBER:

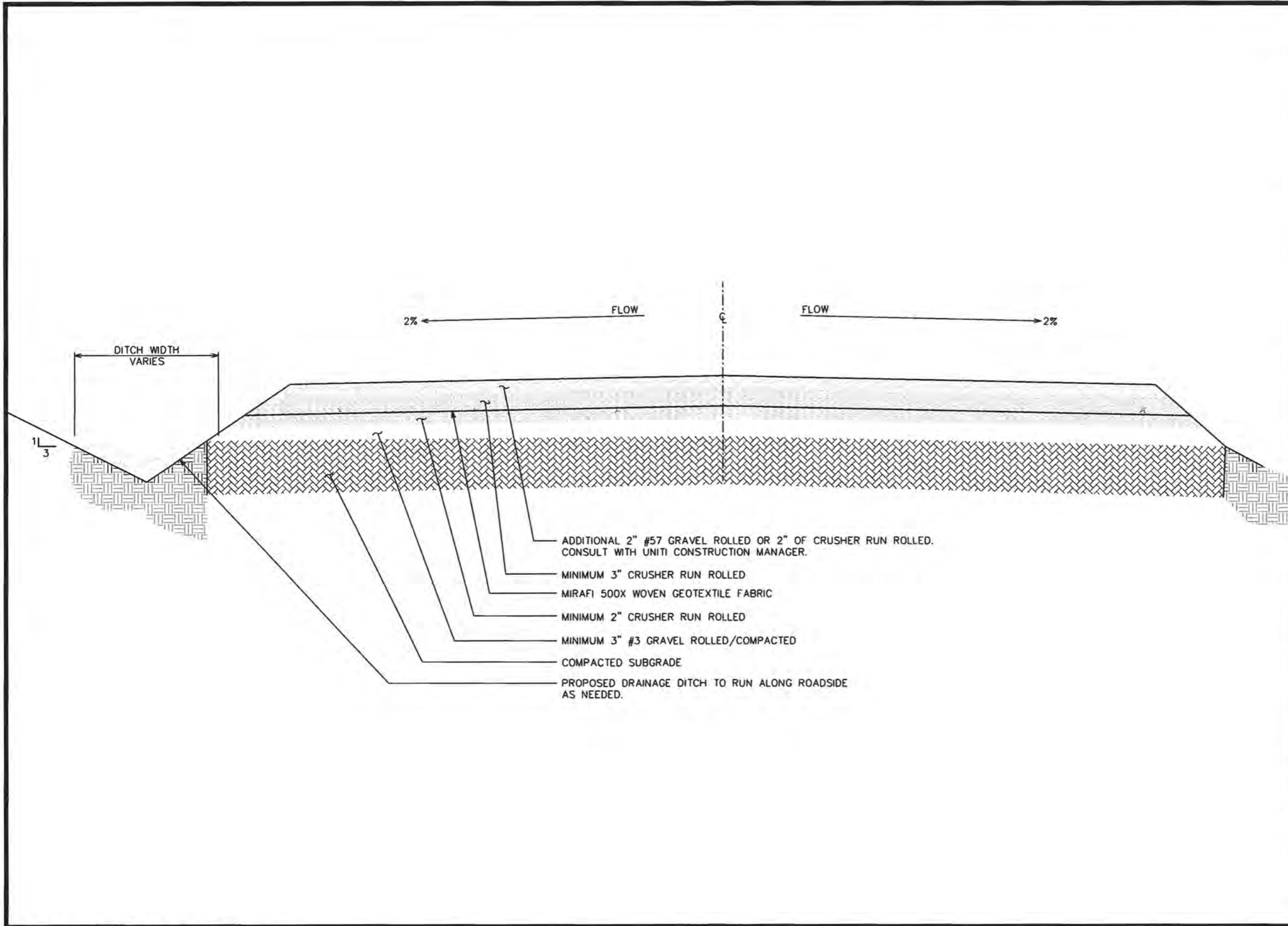
**C-10**

REVISION:

**4**

TEP#: 133859.17385






- ADDITIONAL 2" #57 GRAVEL ROLLED OR 2" OF CRUSHER RUN ROLLED. CONSULT WITH UNITI CONSTRUCTION MANAGER.
- MINIMUM 3" CRUSHER RUN ROLLED
- MIRAFI 500X WOVEN GEOTEXTILE FABRIC
- MINIMUM 2" CRUSHER RUN ROLLED
- MINIMUM 3" #3 GRAVEL ROLLED/COMPACTED
- COMPACTED SUBGRADE
- PROPOSED DRAINAGE DITCH TO RUN ALONG ROADSIDE AS NEEDED.

**STANDARD ROAD SECTION**

SCALE: N.T.S.

PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME: DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:  
  
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 www.tepgroup.net

SEAL:  
  
 GRAHAM M. ANDRES  
 28939  
 LICENSED PROFESSIONAL ENGINEER  
 June 5, 201

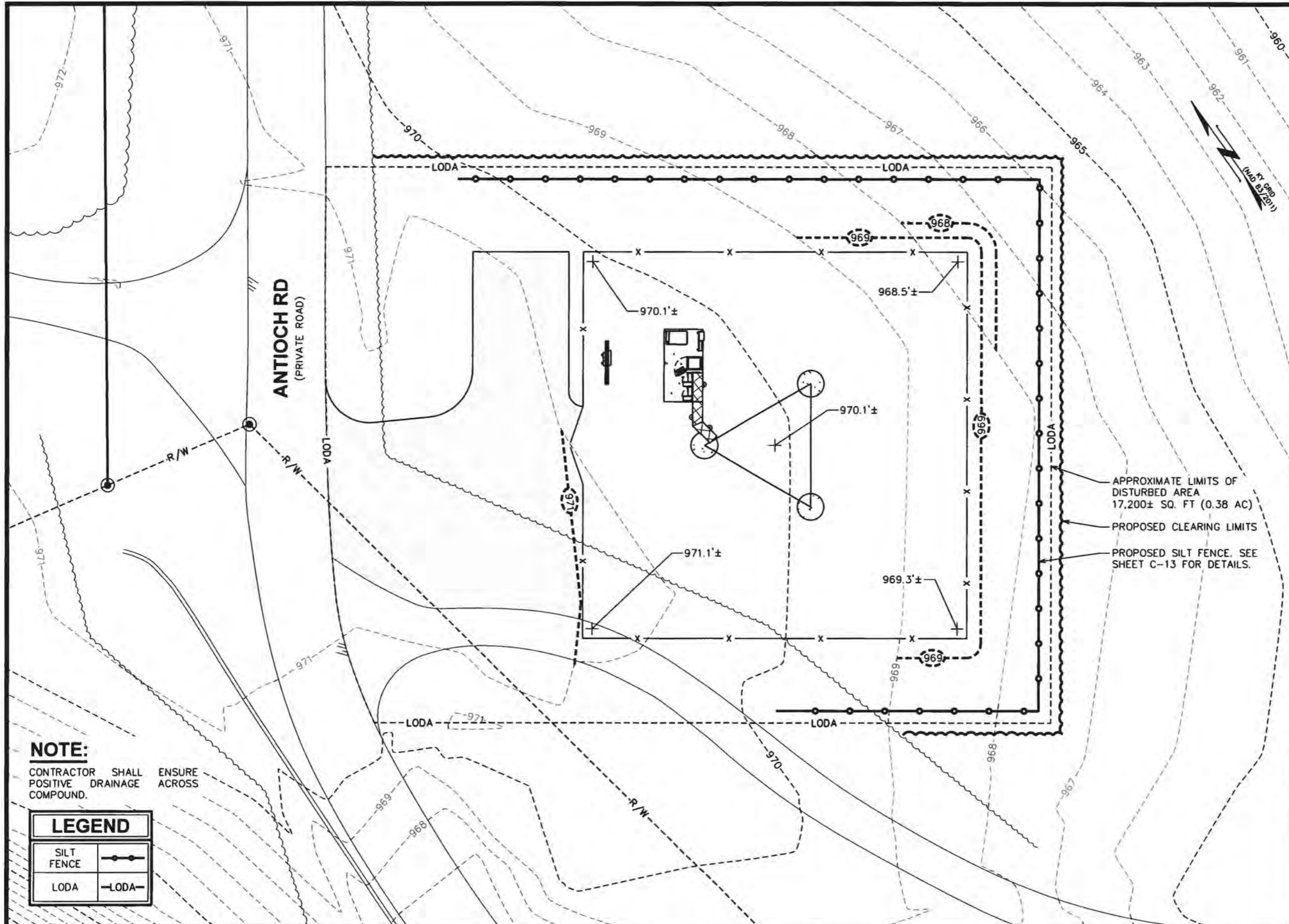
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**ACCESS ROAD DETAILS**

SHEET NUMBER: **C-11** REVISION: **4**  
 TEP#: 133859.17305





**NOTE:**

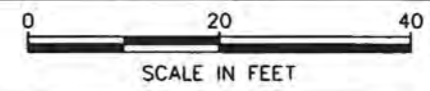
CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS COMPOUND.

LEGEND	
SILT FENCE	
LODA	

APPROXIMATE LIMITS OF DISTURBED AREA  
17,200± SQ. FT (0.38 AC)  
PROPOSED CLEARING LIMITS  
PROPOSED SILT FENCE. SEE SHEET C-13 FOR DETAILS.

**GRADING & EROSION CONTROL PLAN**

SCALE: 1" = 20'



PLANS PREPARED FOR:  
**Uniti**  
 Towers  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
**at&t**  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME: DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:  
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 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
[www.tepgroup.net](http://www.tepgroup.net)

SEAL:  
  
 GRAHAM M. ANDRES  
 29939  
 LICENSED PROFESSIONAL ENGINEER  
 June 5, 2011

REV	DATE	ISSUED FOR:
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION

DRAWN BY: GSM CHECKED BY: GLB

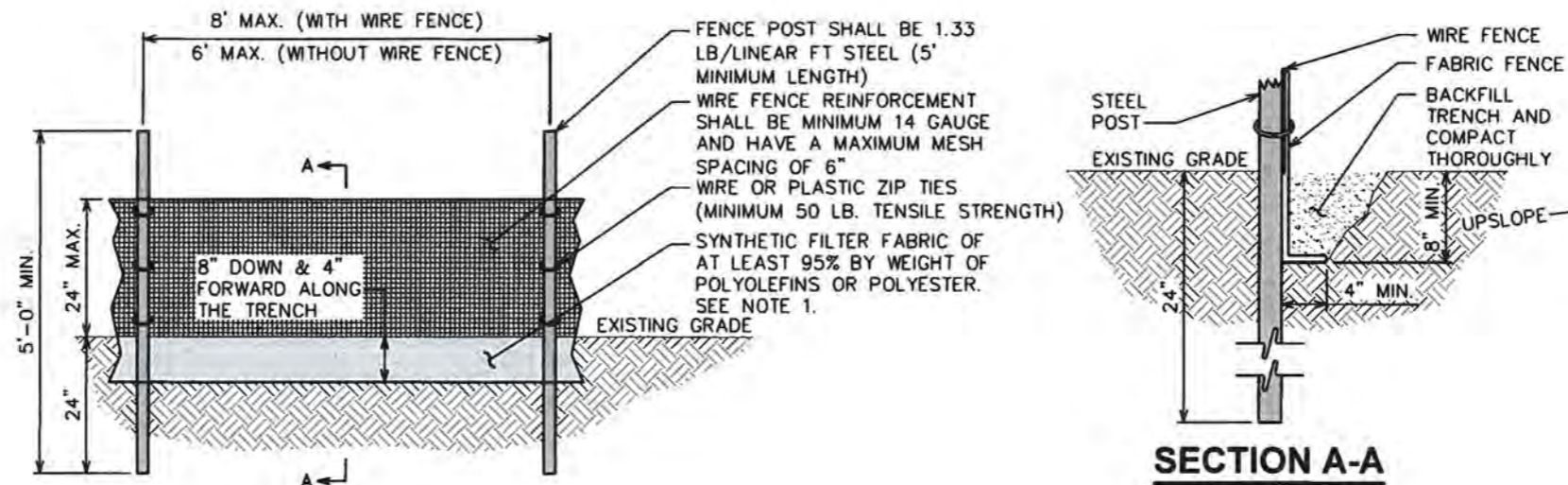
SHEET TITLE:  
**GRADING & EROSION CONTROL PLAN**

SHEET NUMBER: **C-12** REVISION: **4**  
 TEP#: 133859.17385



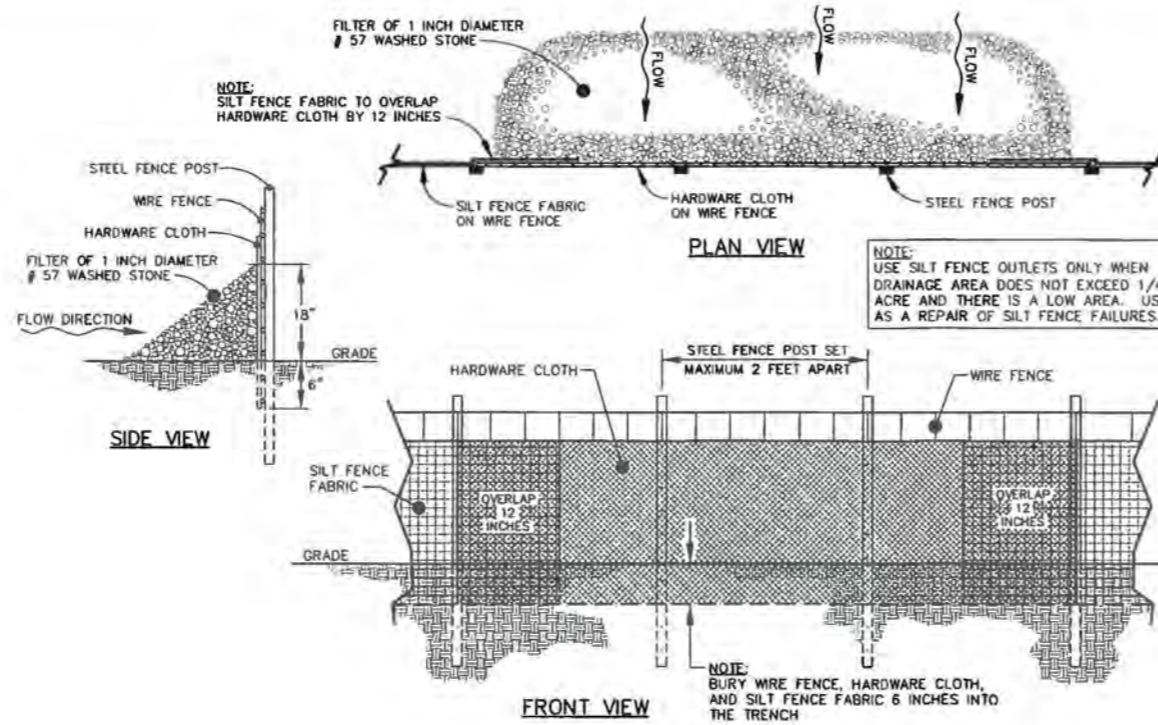
**NOTES:**

1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



**SILT FENCE DETAIL**

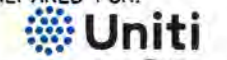
SCALE: N.T.S.



**STANDARD SILT FENCE OUTLET DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE (919) 661-6351  
www.tepgroup.net

SEAL:



4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**SILT FENCE**  
**DETAILS**

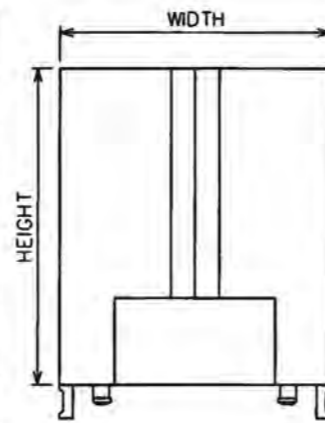
SHEET NUMBER:	REVISION:
<b>C-13</b>	<b>4</b>
TEP#: 133859.17385	



SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-A2	15.2"	3.4"	16.4"	22 LBS
4415 (B25)	13.2"	5.4"	15"	46 LBS
4415 (B30)	13.4"	5.9"	16.5"	46 LBS
4426 (B66)	13.2"	5.8"	15"	48.4 LBS
4449 (B5/B12)	13.2"	9.4"	17.9"	70.4 LBS
4478	13.2"	7.4"	15"	59.9 LBS

NOTE: DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.



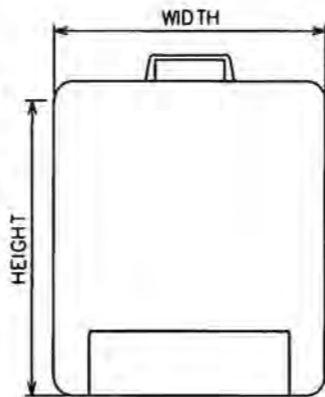
**REMOTE RADIO HEAD DETAIL - RRUS-11**

SCALE: N.T.S.

SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-12	18.5"	7.5"	20.4"	50 LBS
RRUS-E2	18.5"	7.5"	20.4"	60 LBS

NOTE: DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.



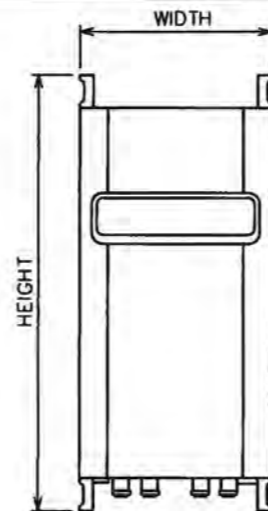
**REMOTE RADIO HEAD DETAIL - RRUS-12**

SCALE: N.T.S.

SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-A2	12.1"	7"	27.2"	22 LBS
RRUS-32	12.1"	7"	27.2"	53 LBS
RRUS-32 (B66A)	12.1"	7"	27.2"	53 LBS

NOTE: DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.

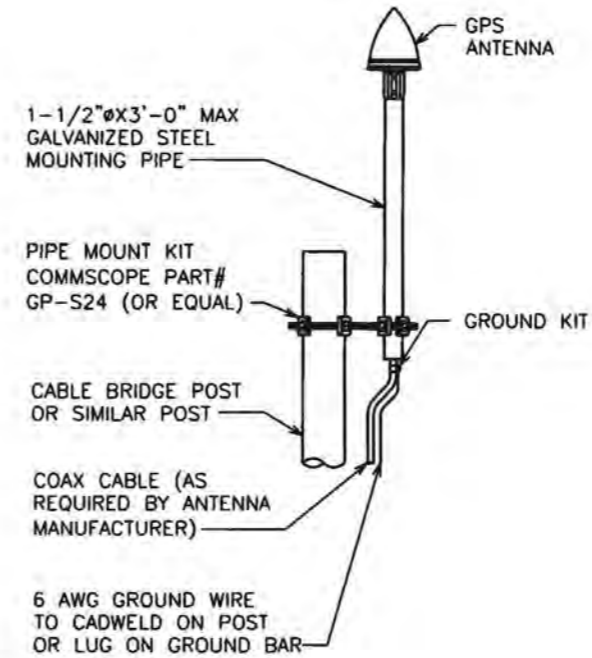


**REMOTE RADIO HEAD DETAIL - RRUS-4478 B5**

SCALE: N.T.S.

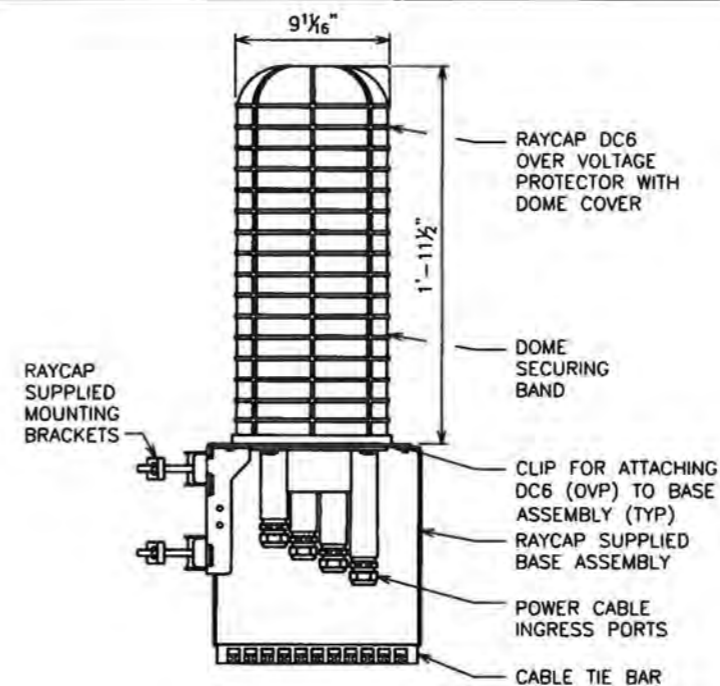
**GPS ANTENNA DETAILS**

SCALE: N.T.S.

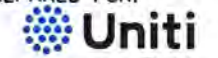


**RAYCAP (SQUID) DETAILS**

SCALE: N.T.S.



PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 2401  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH NC 27603-3530  
OFFICE (919) 661-6351  
www.tepgroup.net

SEAL:



June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**RRH ANTENNA & EQUIPMENT SPECIFICATIONS**

SHEET NUMBER: REVISION:

**C-14**

**4**

TEP#: 33859.17389



**NOTES:**

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ADDITIONAL E911 ADDRESS SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
4. ADDITIONAL FCC REGISTRATION # SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF. SIGN SHALL MEASURE (20" LONG x 4" TALL). THE LETTERS SHALL BE 1" AND THE NUMBERS SHALL BE 2".
5. RECOMMENDED SOURCES FOR OBTAINING SIGNAGE:

ST. CLAIR SIGNS  
3184 WADE HAMPTON BOULEVARD  
TAYLORS, SC 29687  
(864) 244-0040

RF EXPOSURE SIGNS  
RICHARD TELL ASSOCIATES  
3433 RINGSTAR ROAD, SUITE 3  
NORTH LAS VEGAS, NV 89030  
(702) 645-3338

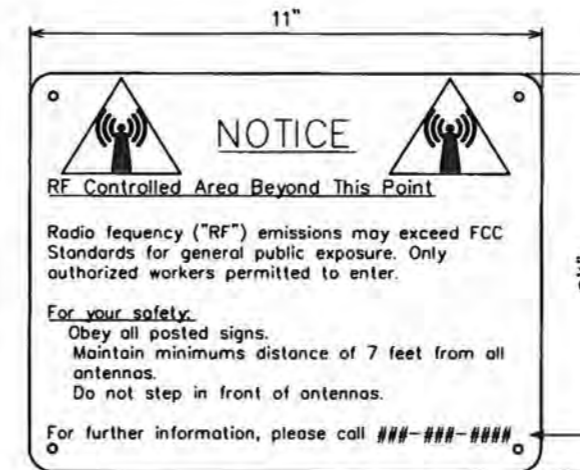
EXCEL SIGN & DECAL  
1509 NORTH MILPITAS BLVD.  
MILPITAS, CA 95035  
(408) 942-8881



CONTRACTOR SHALL VERIFY ADDRESS PRIOR TO ORDERING SIGNAGE.

RED LETTERS (ALL OTHERS BLACK)

CONTRACTOR TO COORDINATE NUMBERS (TYP)



CONTRACTOR TO COORDINATE NUMBERS (TYP)

RF NOTICE SIGN (WHITE METAL SIGN W/BLACK LETTERING)

PLANS PREPARED FOR:  
**Uniti**  
Towers  
10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
**at&t**  
MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME: DUNVILLE RELO**  
**FA 14605585**  
74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
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www.tepgroup.net

SEAL:  
  
GRAHAM M. ANDRES  
29939  
LICENSED PROFESSIONAL ENGINEER  
June 5, 2011

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**SIGNAGE DETAILS I**


SHEET NUMBER: **C-15** REVISION: **4**  
TEP#: 133859.17385

**TYPICAL SIGNS AND SPECIFICATIONS**

SCALE: N.T.S.



property of



**AUTHORIZED PERSONNEL ONLY!**

In case of emergency or prior to performing maintenance on this site, call 1-800-638-2822 and reference cell site number:

- ① WHITE/BLUE BACKGROUND W/ BLACK LETTERING  
 QUANTITY: (1)  
 SIZE: 9"x12"  
 (TO BE MOUNTED ON EQUIPMENT SHELTER DOOR ADJACENT TO COMPOUND ENTRY - SEE NOTE 3)

**DO NOT CLIMB TOWER WITHOUT OWNER'S WRITTEN PERMISSION**

- ③ WHITE BACKGROUND W/ RED LETTERING  
 QUANTITY: (1)  
 (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB)

**NOTICE**



Radio Frequency fields beyond this point may exceed the FCC general public exposure limit.

OBEDIENCE TO ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RADIO FREQUENCY ENVIRONMENTS.

In accordance with Federal Communications Commission rules on radio frequency exposure 47 CFR 1.1307(n)

- ② WHITE/BLUE BACKGROUND W/ BLACK LETTERING  
 QUANTITY: (1)  
 (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB)

**000**

- ④ WHITE BACKGROUND W/ BLACK LETTERING  
 E911 STREET #  
 QUANTITY: (1 TYP)  
 LETTERS MUST BE A MINIMUM 6" TALL  
 (TO BE MOUNTED ON THE GATE OF COMPOUND)

- ① SITE IDENTIFICATION SIGN  
 ② FCC/RF EXPOSURE SIGN  
 ③ TOWER CLIMBING SIGN  
 ④ STREET ADDRESS SIGN

**NOTES:**

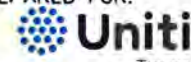
- SIGNS SHALL MEASURE 8"x12", BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
- SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
- AT&T SITE # AND EMERGENCY CONTACT # SHALL BE MOUNTED ON THE EQUIPMENT SHELTER DOOR ADJACENT TO THE COMPOUND ENTRY WITH PERMANENT SET ADHESIVE. TWO-SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL ADHESIVE SETS.
- ADDITIONAL E911 ADDRESS SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF. LETTERING ON 911 ADDRESS SIGNS MUST BE A MINIMUM OF 6" TALL.
- ADDITIONAL FCC REGISTRATION # SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
- RECOMMENDED SOURCE FOR OBTAINING SIGNAGE:

ST. CLAIR SIGNS  
 3184 WADE HAMPTON BLVD.  
 TAYLORS, SC 29687  
 (864) 244-0040

RF EXPOSURE SIGNS  
 RICHARD TELL ASSOCIATES  
 3433 RINGSTAR ROAD, SUITE 3  
 NORTH LAS VEGAS, NV 89030  
 (702) 645-3338

**SIGNAGE DETAILS**


SCALE: N.T.S.

PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME: DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: 919-661-6351  
 www.tepgroup.net

SEAL:  
  
 June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**SIGNAGE DETAILS II**

SHEET NUMBER: **C-16** REVISION: **4**  
 TEP#: 133859.17385



**SCOPE:**

- 1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

**CODES:**

- 1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
  - A. THE NATIONAL ELECTRICAL SAFETY CODE
  - B. THE NATIONAL ELECTRIC CODE - NFPA-70
  - C. REGULATIONS OF THE SERVING UTILITY COMPANY
  - D. LOCAL AND STATE AMENDMENTS
  - E. THE INTERNATIONAL ELECTRIC CODE - IEC (WHERE APPLICABLE)
- 2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
- 3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

**TESTING:**

- 1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

**GUARANTEE:**

- 1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
- 2. THE WARRANTY CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

**UTILITY CO-ORDINATION:**

- 1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

**EXAMINATION OF SITE:**

- 1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

**CUTTING, PATCHING AND EXCAVATION:**

- 1. COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
- 3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

**RACEWAYS / CONDUITS GENERAL:**

- 1. CONDUITS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUITS.
- 2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

**EXTERIOR CONDUIT:**

- 1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
- 2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
- 3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
- 4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.
- 5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER.

**INTERIOR CONDUIT:**

- 1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
- 2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
- 3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

**EQUIPMENT:**

- 1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
- 3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

**CONDUCTORS:**

- 1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
- 2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
- 3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
  - B. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.
  - C. CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
  - D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- 4. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

**UL COMPLIANCE:**

- 1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

**GROUNDING:**

- 1. ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
- 2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.
- 3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 - "LIGHTNING PROTECTION" AS A MINIMUM.
- 4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).

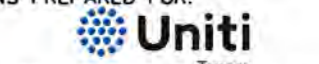
**ABBREVIATIONS AND LEGEND**

A	- AMPERE	PNLBD	- PANELBOARD
AFG	- ABOVE FINISHED GRADE	PVC	- RIGID NON-METALLIC CONDUIT
ATS	- AUTOMATIC TRANSFER SWITCH	RGS	- RIGID GALVANIZED STEEL CONDUIT
AWG	- AMERICAN WIRE GAUGE	SW	- SWITCH
BCW	- BARE COPPER WIRE	TGB	- TOWER GROUND BAR
BFG	- BELOW FINISHED GRADE	UL	- UNDERWRITERS LABORATORIES
BKR	- BREAKER	V	- VOLTAGE
C	- CONDUIT	W	- WATTS
CKT	- CIRCUIT	XFMR	- TRANSFORMER
DISC	- DISCONNECT	XMTR	- TRANSMITTER
EGR	- EXTERNAL GROUND RING		
EMT	- ELECTRIC METALLIC TUBING		
FSC	- FLEXIBLE STEEL CONDUIT		
GEN	- GENERATOR		
GPS	- GLOBAL POSITIONING SYSTEM		
GRD	- GROUND		
IGB	- ISOLATED GROUND BAR		
IGR	- INTERIOR GROUND RING (HALO)		
KW	- KILOWATTS		
NEC	- NATIONAL ELECTRIC CODE		
PCS	- PERSONAL COMMUNICATION SYSTEM		
PH	- PHASE		
PNL	- PANEL		

----	E	----	UNDERGROUND ELECTRICAL CONDUIT
----	T	----	UNDERGROUND TELEPHONE CONDUIT
	⊕		KILOWATT-HOUR METER
-----			UNDERGROUND BONDING AND GROUNDING CONDUCTOR.
	⊗		GROUND ROD
	●		CADWELD
	⊠		GROUND ROD WITH INSPECTION WELL

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
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GRAHAM M. ANDRES  
29939  
LICENSED PROFESSIONAL ENGINEER

June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**ELECTRICAL NOTES**

SHEET NUMBER:

**E-1**

REVISION:

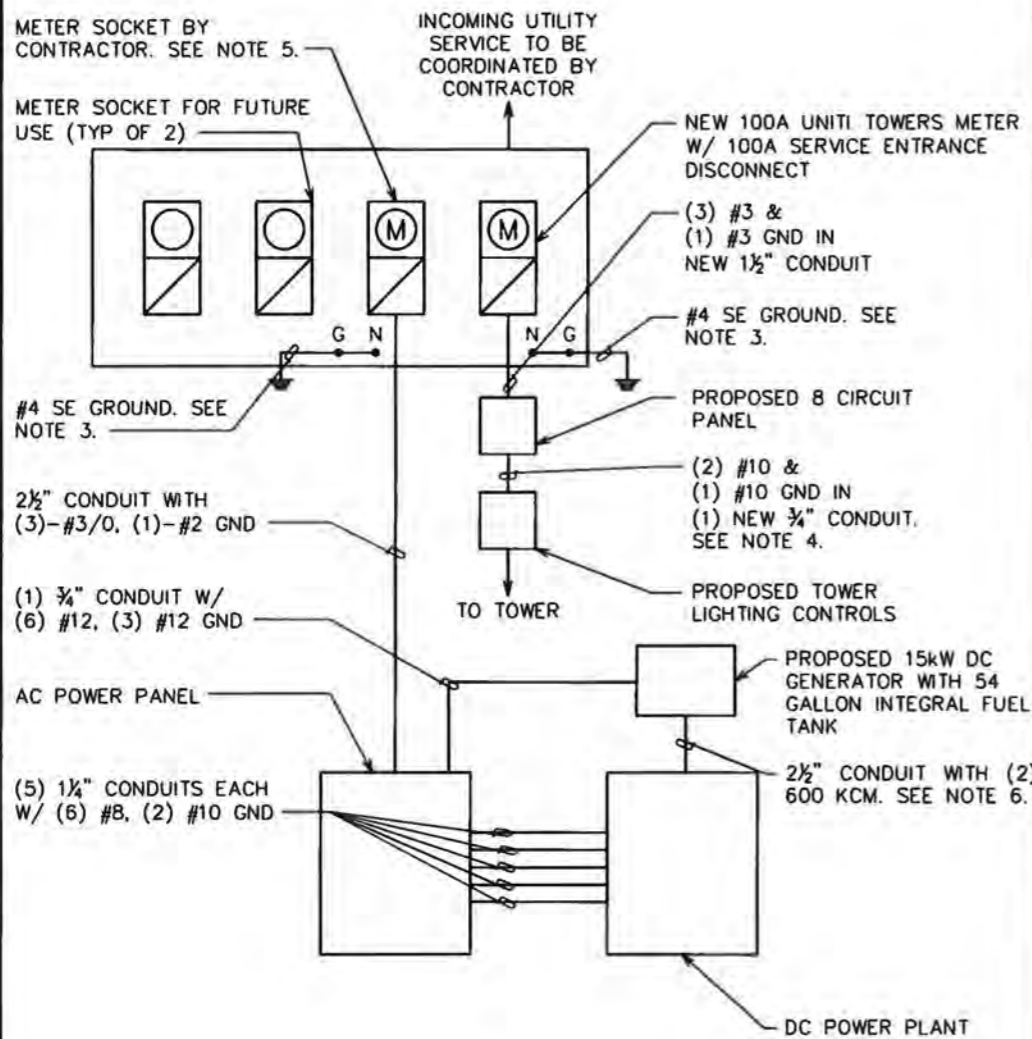
**4**

TEP#: 133859.17385



**ONE-LINE DIAGRAM NOTES:**

1. ELECTRICAL SERVICE SHALL BE 100A, 240/120V, 1 $\phi$ , 3W.
2. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
3. GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.
4. CONDUCTOR SIZES BASED ON TYPICAL CONFIGURATIONS. CONTRACTOR WILL VERIFY WITH MANUFACTURER SPECIFICATIONS BEFORE ORDERING OR INSTALLING PARTS.
5. INSTALL A 200 AMP METER BASE AS DIRECTED BY THE UTILITY COMPANY.
6. 600 KCM GEN CONDUCTORS ARE BASED ON A GEN BREAKER WITH A MAXIMUM RATING OF 400 A.

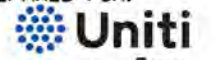


**120/240V 100A UNITI TOWERS POWER PANEL SCHEDULE**

LOAD SERVED	VOLT AMPERES (WATTS)		WIRE	BREAKER		CKT #	PHASE	CKT #	BREAKER		WIRE	VOLT AMPERES (WATTS)		LOAD SERVED
	L1	L2		P	TRIP				TRIP	P		L1	L2	
TOWER LIGHTS	2880		10	1	30*	1	A	2	-	-	-	-		SPARE
SPARE						3	B	4	-	-	-			SPARE
SPARE						5	A	6	-	-	-			SPARE
SPARE						7	B	8	-	-	-			SPARE
VOLT AMPS	2880													VOLT AMPS
				L1 VOLT AMPERES		2880	0	L2 VOLT AMPERES						
						2880		TOTAL VOLT AMPERES						
						12		TOTAL AMPS						
						15		AMPS X 125%						
						16.5		X 110% FOR MAIN						

\*NOTE - BREAKER SIZES ARE BASED ON TYPICAL CONFIGURATIONS. CONTRACTOR WILL VERIFY WITH MANUFACTURER SPECIFICATIONS BEFORE ORDERING OR INSTALLING PARTS.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

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**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
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June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**ONE-LINE DIAGRAM & UNITI TOWERS POWER PANEL SCHEDULE**

SHEET NUMBER:

**E-2**

REVISION:

**4**

TEP#: 133859.17385

**ONE-LINE DIAGRAM**

SCALE: N.T.S.

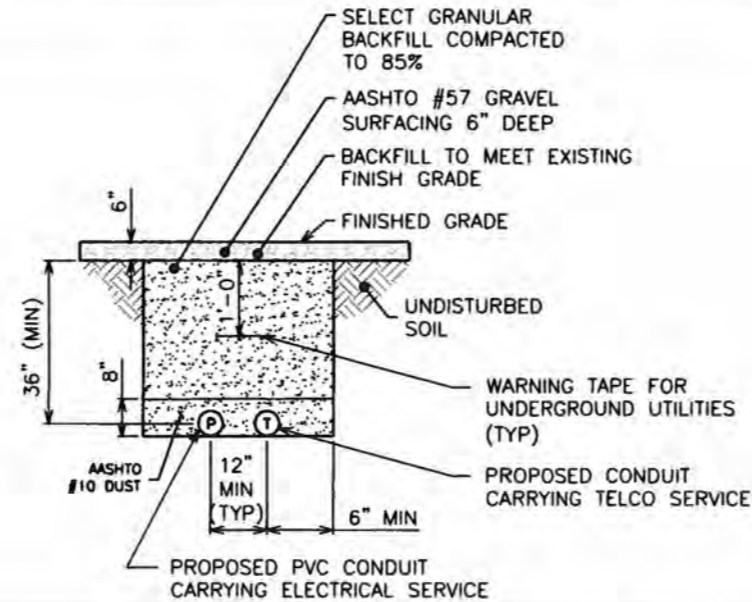
**UNITY TOWER POWER PANEL SCHEDULE**

SCALE: N.T.S.



**NOTE:**

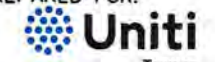
EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH OSHA AND ALL APPLICABLE CODES.



**TYPICAL TRENCH DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
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LOUISVILLE, KY 40202

PROJECT INFORMATION:

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LIBERTY, KY 42539  
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PLANS PREPARED BY:



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3	06-04-19	CONSTRUCTION
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DRAWN BY: G5M CHECKED BY: GLB

SHEET TITLE:  
**AT&T POWER PANEL SCHEDULE & TRENCH DETAILS**

SHEET NUMBER: **E-3** REVISION: **4**  
TEP#: 133859.17385

**NOTES:**

- CONTRACTOR TO LIMIT TOTAL DC LOAD TO 16,000 WATTS
- BREAKER SIZE ASSUMED, BASED ON TYPICAL VALUES. CONTRACTOR SHALL VERIFY SIZE WITH MANUFACTURER PRIOR TO CONSTRUCTION.

LOADING SHOWN PROVIDED BY UNITI TOWERS

**PROPOSED 200A, 120/240 VAC AT&T POWER PANEL SCHEDULE**

LOAD SERVED	VOLT AMPERES (WATTS)		WIRE	G	TRIP	CKT #	PHASE	CKT #	TRIP	G	WIRE	VOLT AMPERES (WATTS)		LOAD SERVED
	L1	L2										L1	L2	
RECTIFIER #1	1400	1400	6	10	30	1	A	2	30	10	6	1400	1400	RECTIFIER #5
						3	B	4						
RECTIFIER #2	1400	1400	6	10	30	5	A	6	30	10	6	1400	1400	RECTIFIER #6
						7	B	8						
RECTIFIER #3	1400	1400	6	10	30	9	A	10	30	10	6	1400	1400	RECTIFIER #7
						11	B	12						
RECTIFIER #4	1400	1400	6	10	30	13	A	14	30	10	6	1400	1400	RECTIFIER #8
						15	B	16						
-	-	-	-	-	-	17	A	18	30	10	6	1400	1400	RECTIFIER #9
						19	B	20						
GFCI RECEPTACLES	360		12	12	20	21	A	22	-	-	-	-	-	-
OPTIONAL FIBER BOX REC.		180	12	12	20	23	B	24	-	-	-	-	-	-
BATTERY CHARGER	240		12	12	20*	25	A	26	-	-	-	-	-	-
BLOCK HEATER		1500	12	12	20*	27	B	28	-	-	-	-	-	-
OIL HEATER	180		12	12	20*	29	A	30	-	-	-	-	-	-
VOLT AMPS	6380	7280										7000	7000	VOLT AMPS
	L1 VOLT AMPERES		13380		14280		L2 VOLT AMPERES							
	L2 AMPS		111.5		119		L1 AMPS							
			119				MAX AMPS							
			148.8				*MAX AMPS X 125%							

\*SEE NOTE 2 ABOVE

**PANELBOARD SCHEDULE**

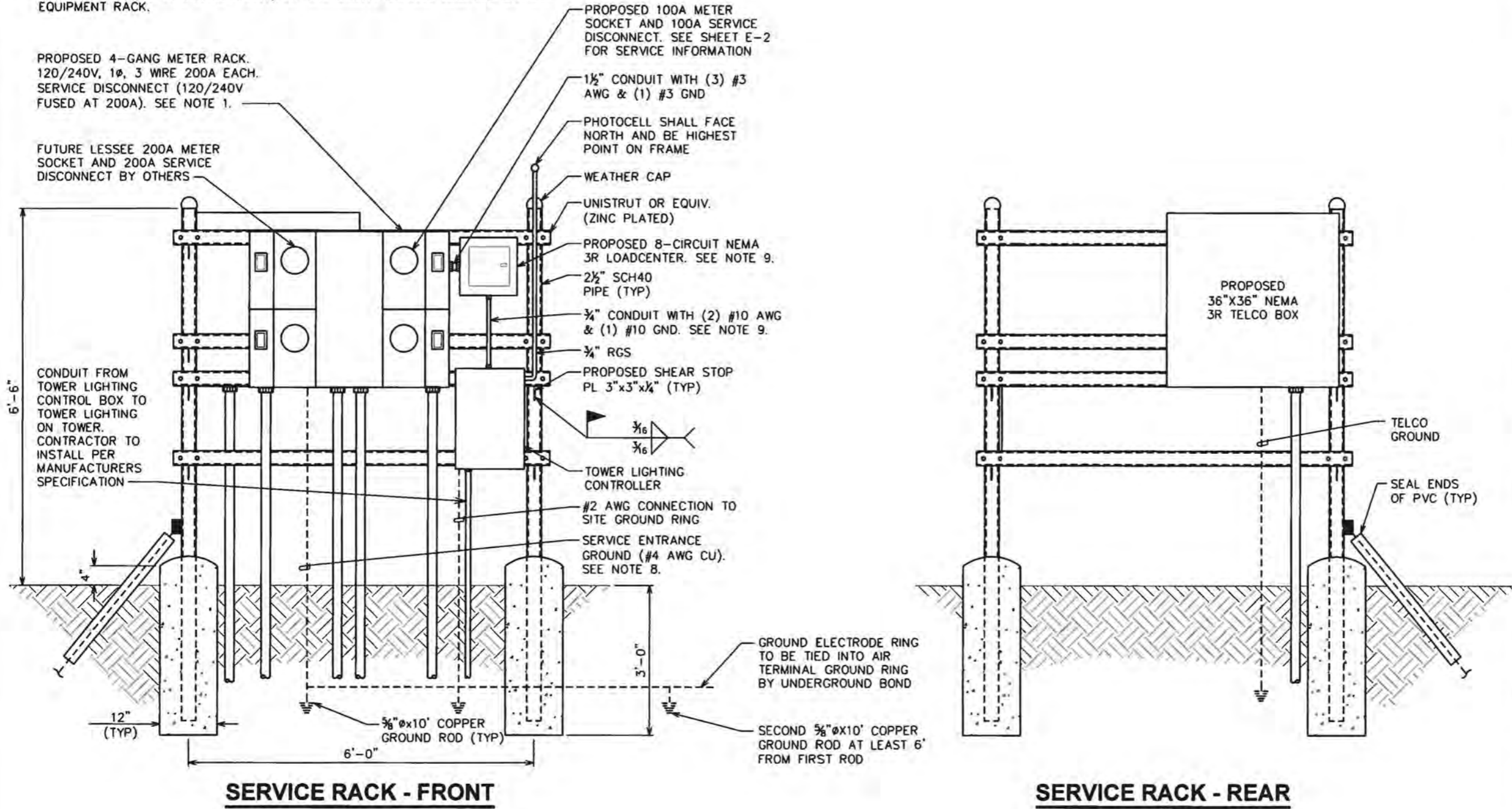
SCALE: N.T.S.



**NOTES:**

- ① WATT-HOUR SOCKETS/SERVICE DISCONNECT MEANS. UTILITY COMPANY TO PROVIDE METERS. PROVIDE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
- ② ALL NEW STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 G90 AFTER FABRICATION.
- ③ FIELD ABRASIONS SHALL BE TOUCH UP PAINTED WITH ZINC RICH GALVANIZING REPAIR IN ACCORDANCE WITH ASTM A780.
- ④ ALL EXPOSED ENDS OF CONDUIT SHALL HAVE WEATHERPROOF CAPS.
- ⑤ PROVIDE 200LB. TEST PULL WIRES IN EACH TELEPHONE AND POWER CONDUIT. STUB CONDUITS INTO ENCLOSURE AND LABEL.
- ⑥ THE POWER COMPANY SHALL TERMINATE THE POWER CABLES (SUPPLIED AND INSTALLED BY THE POWER COMPANY) AT THE UTILITY METERS LOCATED ON THE EQUIPMENT RACK.

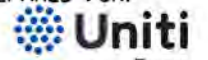
- ⑦ CONTRACTOR TO VERIFY RACK DIMENSIONS AND STRUT SPACING RELATIVE TO METER BASE MODEL NUMBER.
- ⑧ GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.
- ⑨ BREAKER AND CONDUCTOR SIZES ARE BASED ON TYPICAL CONFIGURATIONS. CONTRACTOR WILL VERIFY WITH MANUFACTURER SPECIFICATIONS BEFORE ORDERING OR INSTALLING PARTS.



**SERVICE RACK DETAILS**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
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OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**UNITI TOWERS**  
**SERVICE RACK**  
**DETAILS**

SHEET NUMBER:

**E-4**

REVISION:

**4**

TEP#: 133859, 17385



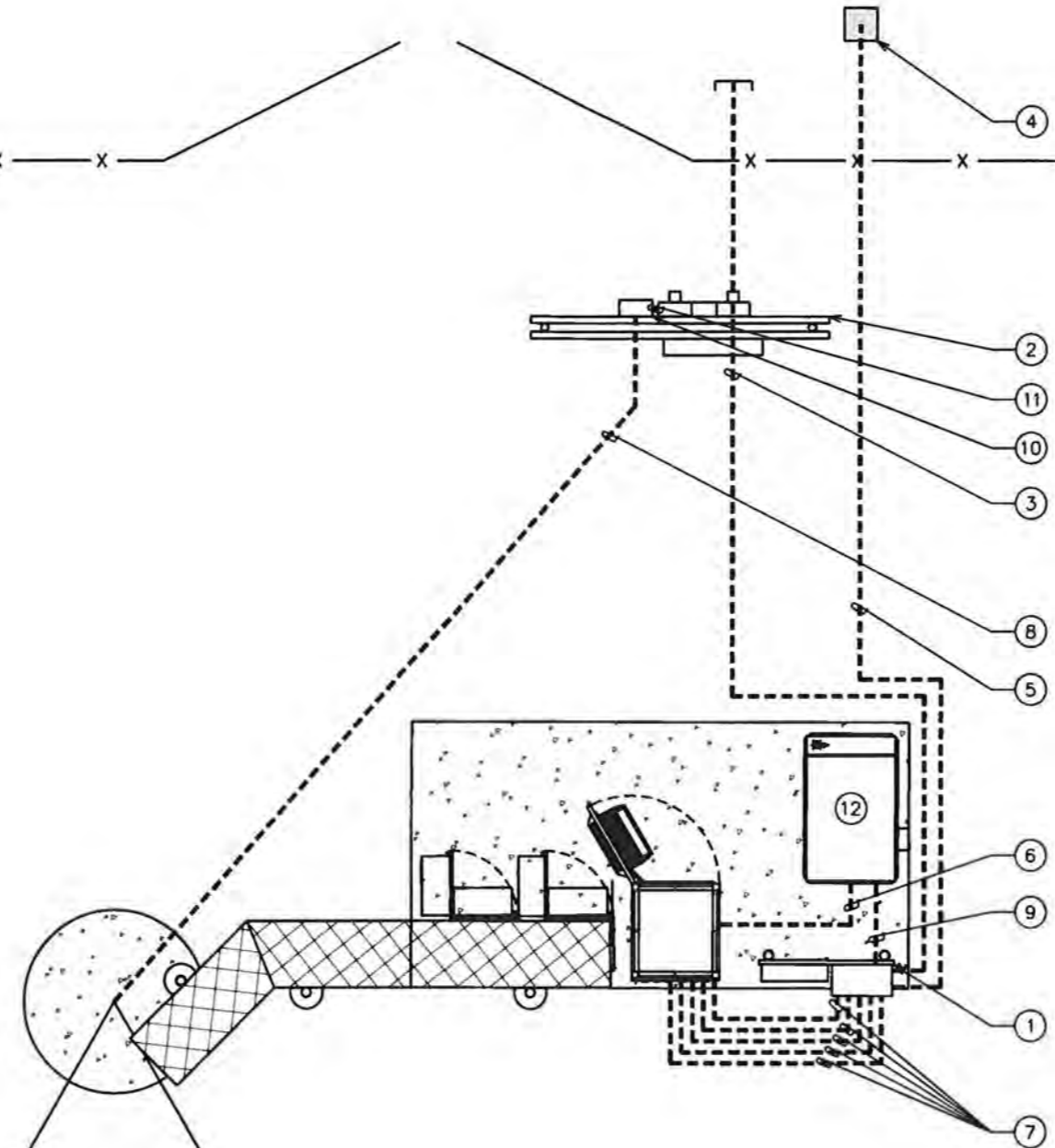


**PLAN NOTES:**

- ① PROPOSED H-FRAME
- ② PROPOSED SERVICE RACK
- ③ PROPOSED 2½" PVC CONDUIT FROM LOAD CENTER TO 200A METER
- ④ PROPOSED 4" PVC CONDUIT FOR FIBER FROM TELCO CABINET TO FIBER HANDHOLE FOR LEC MEET ME POINT. FIBER LOCATION IS TO BE ESTABLISHED WITH LEC PRIOR TO INSTALLATION.
- ⑤ (1) 4" TELCO CONDUIT W/ (3) 1½" INNERDUCTS PULL STRING FOR FIBER POWER LEADS STUBBED UP IN FIBER HANDHOLE. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL TELEPHONE COMPANY.
- ⑥ (1) 2½" CONDUIT FROM GEN TO DC POWER PLANT
- ⑦ (5) 1½" CONDUITS FROM LOAD CENTER TO DC POWER PLANT
- ⑧ NEW CONDUIT FROM LOAD CENTER TO LIGHTS ON TOWER
- ⑨ (1) ¾" CONDUIT FROM LOAD CENTER TO GEN
- ⑩ NEW LOAD CENTER FOR TOWER LIGHTING
- ⑪ NEW CONDUIT FROM LOAD CENTER TO 100A UNIT TOWERS METER
- ⑫ PROPOSED GENERATOR, SEE SHEET C-5 FOR DETAILS.

**TRENCHING NOTES:**

- 1. PRIOR TO ANY DIGGING, THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES ON SITE.
- 2. A MINIMUM SEPARATION OF 12" IS REQUIRED BETWEEN THE POWER AND FIBER CONDUITS



**SERVICE ROUTING PLAN**

SCALE: 3/8" = 1'-0"



PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
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**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

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 www.tepgroup.net

SEAL:

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3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

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SHEET TITLE:  
**SERVICE ROUTING PLAN**

SHEET NUMBER: **E-5** REVISION: **4**  
 TEP#: 133859.17385

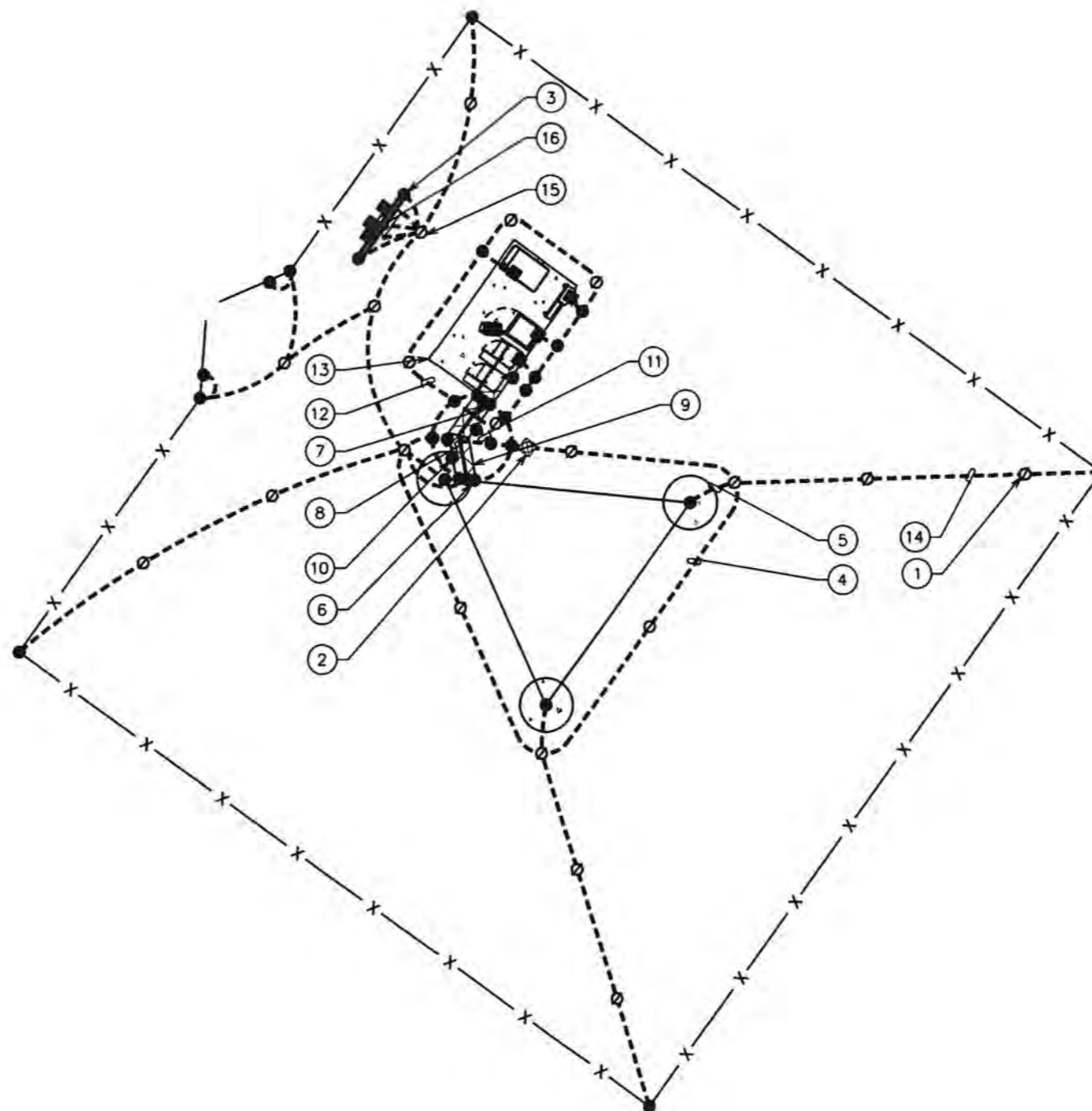


**DRAWING NOTES:**

- ① GROUND ROD 5/8"x10' LONG (TYP)
- ② GROUND ROD WITH INSPECTION WELL (TYP)
- ③ CADWELD (TYP)
- ④ TOWER GROUND RING
- ⑤ (2) #2 AWG SOLID BARE TINNED COPPER BONDS BETWEEN TOWER AND TOWER GROUND RING (INSTALL (2) LEADS ON RING ON EITHER SIDE OF THE GROUND ROD IN OPPOSITE DIRECTIONS ON RING. (1) MINIMUM BOND PER TOWER LEG AND (2) MINIMUM BONDS PER TOWER).
- ⑥ PROPOSED TOWER BUS BAR
- ⑦ PROPOSED ICE BRIDGE BUS BAR
- ⑧ #2 AWG BARE SOLID TINNED COPPER WIRE BETWEEN BUS BARS
- ⑨ PROPOSED ICE BRIDGE
- ⑩ PROPOSED ICE BRIDGE POST (TYP)
- ⑪ #2 AWG ICE BRIDGE BOND BURIED 30" BFG (TYP)
- ⑫ PROPOSED EQUIPMENT GROUND RING
- ⑬ PROPOSED AT&T 15'x7' CONCRETE EQUIPMENT PAD
- ⑭ PROPOSED TOWER BONDING TO FENCE (TYP)
- ⑮ SERVICE GROUND ROD SIZE MINIMUM PER NEC OR AS OTHERWISE NOTED (TYP)
- ⑯ BOND ELECTRICAL SERVICE TO GROUND RING

**GROUNDING NOTES**

- 1. GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 AWG BARE TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 30" BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MIN. 15'-0" MAX)
- 2. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS/ BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250.30.
- 3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.



PLANS PREPARED FOR:  
**Uniti**  
 Towers  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 611-6351  
 www.tepgroup.net

SEAL:  
  
 GRAHAM M. ANDRES  
 29939  
 LICENSED PROFESSIONAL ENGINEER

June 5, 201

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

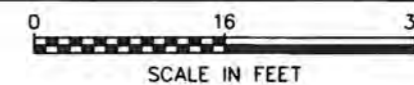
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SHEET TITLE:  
**TOWER GROUNDING PLAN**

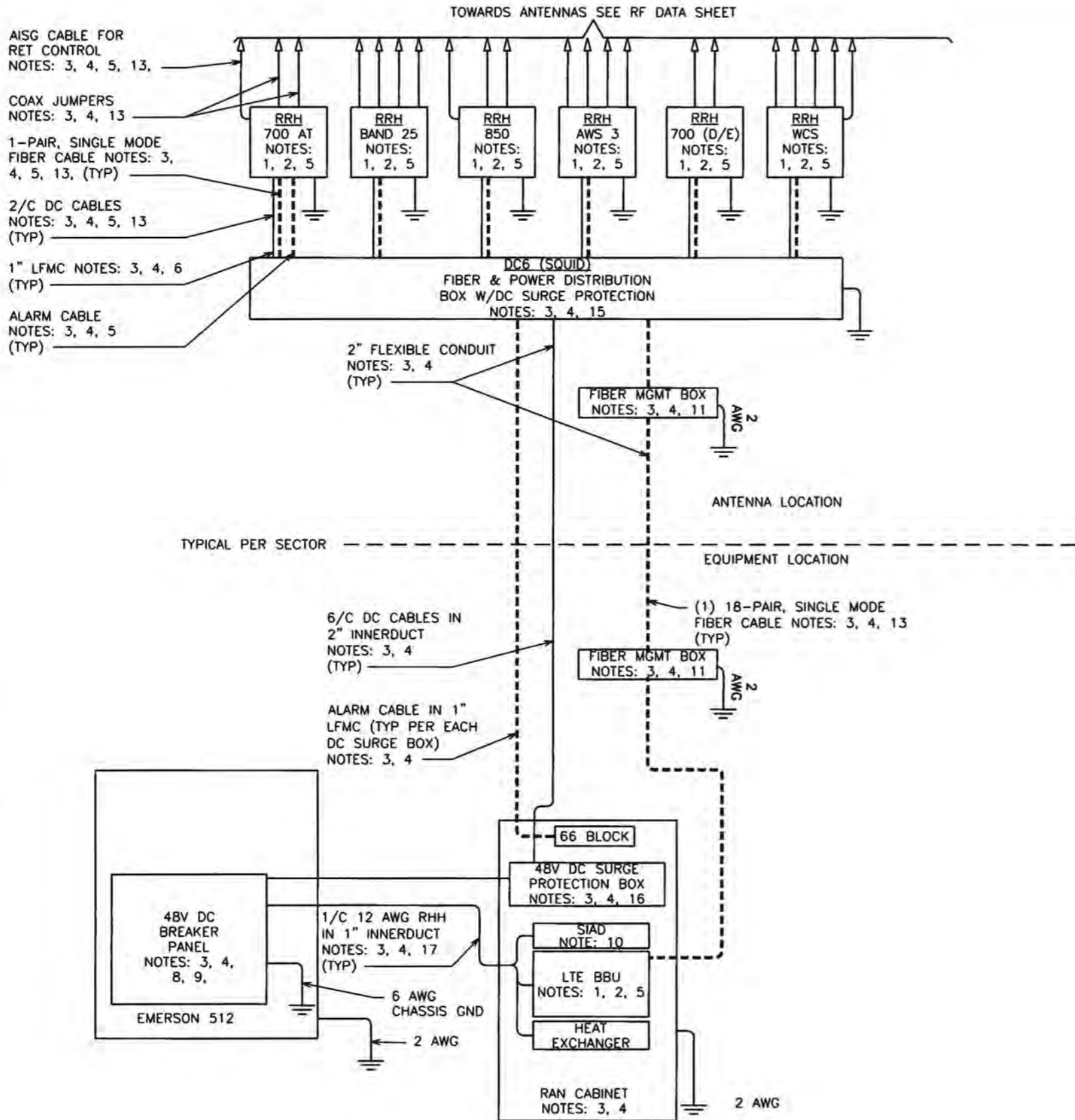
SHEET NUMBER: **E-6** REVISION: **4**  
 TEP#: 133859.17385

**TOWER GROUNDING PLAN**

SCALE: 1/8" = 1'-0"







**NOTES:**

1. FURNISHED BY OEM/AT&T.
2. INSTALLED BY OEM OR AS SCOPED BY MARKET.
3. FURNISHED BY OTHERS
4. INSTALLED BY OTHERS
5. FINAL CONNECTION BY OEM OR AS SCOPED BY MARKET.
6. OPEN END OF LFMC TO BE LEFT WEATHERPROOFED UNTIL TERMINATED.
7. DELETED.
8. BREAKERS SPECIFIED SOLD SEPARATELY.
9. BREAKERS TO BE TAGGED AND LOCKED OUT.
10. SIAD IS FURNISHED AND INSTALLED BY OTHERS AND INCLUDES POWER CONNECTIONS AND FIBER TO THE UNIT OR AS SCOPED BY MARKET. INSTALL 10 AWG CHASSIS GROUND, PROVIDE (2) 10A BREAKERS FROM A 24V DC POWER SOURCE OR (2) 5A BREAKERS FROM A 48V DC POWER SOURCE AND CONNECT USING MFR POWER CABLE WITH SPECIAL CONNECTOR.
11. FIBER MANAGEMENT BOX IS J-SOURCE MODEL 12126FM4SEC.
12. LEC TO FURNISH AND INSTALL NETWORK INTERFACE DEVICE.
13. LEAVE COILED AND PROTECTED UNTIL TERMINATED.
14. SEE DETAIL 1408 FOR DC POWER CABLE SIZES.
15. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC6-48-60-18-8F.
16. POWER DISTRIBUTION W/DC SURGE PROTECTION BOX SHALL BE RAYCAP MODEL DC6-48-60-0-18.
17. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX OR KS24194, COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS 1 (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL COPPER, CLASS B STRANDED WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/ 75°C WET INSTALLATION.
18. 10A FUSE FOR HEAT EXCHANGER FURNISHED AND INSTALLED BY OTHERS.
19. DELETED
20. GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
21. RET CONTROL FROM THE RRH IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
22. DELETED.
23. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC6-48-60-0-1E.
24. FIBER MANAGEMENT BOX IS COMMSCOPE MODEL FB 18188.
25. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC12-48-60-0-25E.

PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 240  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
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**AT&T SITE NAME: DUNVILLE RELO**  
**FA 14605585**  
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 June 5, 2011

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**DC/FIBER SYSTEM DIAGRAM**

SHEET NUMBER: **E-7** REVISION: **4**  
 TEP#133859.17385

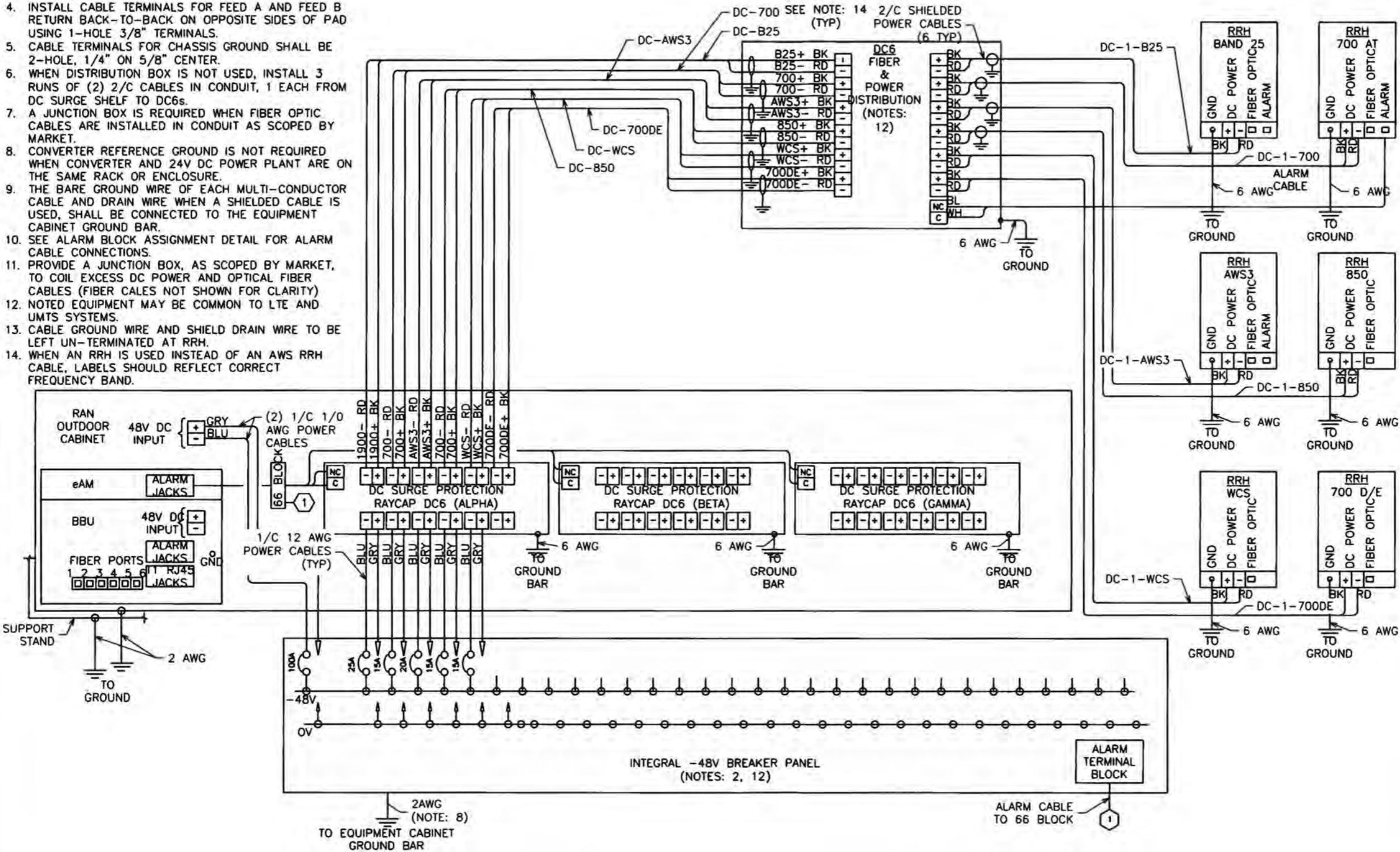
**DC/FIBER SYSTEM DIAGRAM**

SCALE: N.T.S.



**NOTES:**

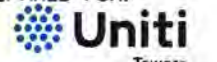
1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. "A-AWS+".
2. INSTALL ON IN AUXILIARY EQUIPMENT CABINET.
3. CABLE TERMINALS FOR +24V INPUT FEED A, FEED B AND REFERENCE GROUND SHALL BE 2-HOLE: 3/8" ON 1" CENTER.
4. INSTALL CABLE TERMINALS FOR FEED A AND FEED B RETURN BACK-TO-BACK ON OPPOSITE SIDES OF PAD USING 1-HOLE 3/8" TERMINALS.
5. CABLE TERMINALS FOR CHASSIS GROUND SHALL BE 2-HOLE, 1/4" ON 5/8" CENTER.
6. WHEN DISTRIBUTION BOX IS NOT USED, INSTALL 3 RUNS OF (2) 2/C CABLES IN CONDUIT, 1 EACH FROM DC SURGE SHELF TO DC6s.
7. A JUNCTION BOX IS REQUIRED WHEN FIBER OPTIC CABLES ARE INSTALLED IN CONDUIT AS SCOPED BY MARKET.
8. CONVERTER REFERENCE GROUND IS NOT REQUIRED WHEN CONVERTER AND 24V DC POWER PLANT ARE ON THE SAME RACK OR ENCLOSURE.
9. THE BARE GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE AND DRAIN WIRE WHEN A SHIELDED CABLE IS USED, SHALL BE CONNECTED TO THE EQUIPMENT CABINET GROUND BAR.
10. SEE ALARM BLOCK ASSIGNMENT DETAIL FOR ALARM CABLE CONNECTIONS.
11. PROVIDE A JUNCTION BOX, AS SCOPED BY MARKET, TO COIL EXCESS DC POWER AND OPTICAL FIBER CABLES (FIBER CALES NOT SHOWN FOR CLARITY)
12. NOTED EQUIPMENT MAY BE COMMON TO LTE AND UMTS SYSTEMS.
13. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRH.
14. WHEN AN RRH IS USED INSTEAD OF AN AWS RRH CABLE, LABELS SHOULD REFLECT CORRECT FREQUENCY BAND.



**DC WIRING SYSTEM DIAGRAM**

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 2401  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

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PLANS PREPARED BY:



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SEAL:



June 5, 201

4	06-05-19	CONSTRUCTION
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REV	DATE	ISSUED FOR:

DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**DC WIRING SYSTEM DIAGRAM**

SHEET NUMBER: REVISION:

**E-8**

**4**

TEP#133859.17385



## GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTI-OXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
- IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
- EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE VERIZON WIRELESS CONSTRUCTION MANAGER.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A METROPCS REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
- WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

## GROUNDING NOTES

SCALE: N.T.S.

## CABLE COLOR CODING NOTES:

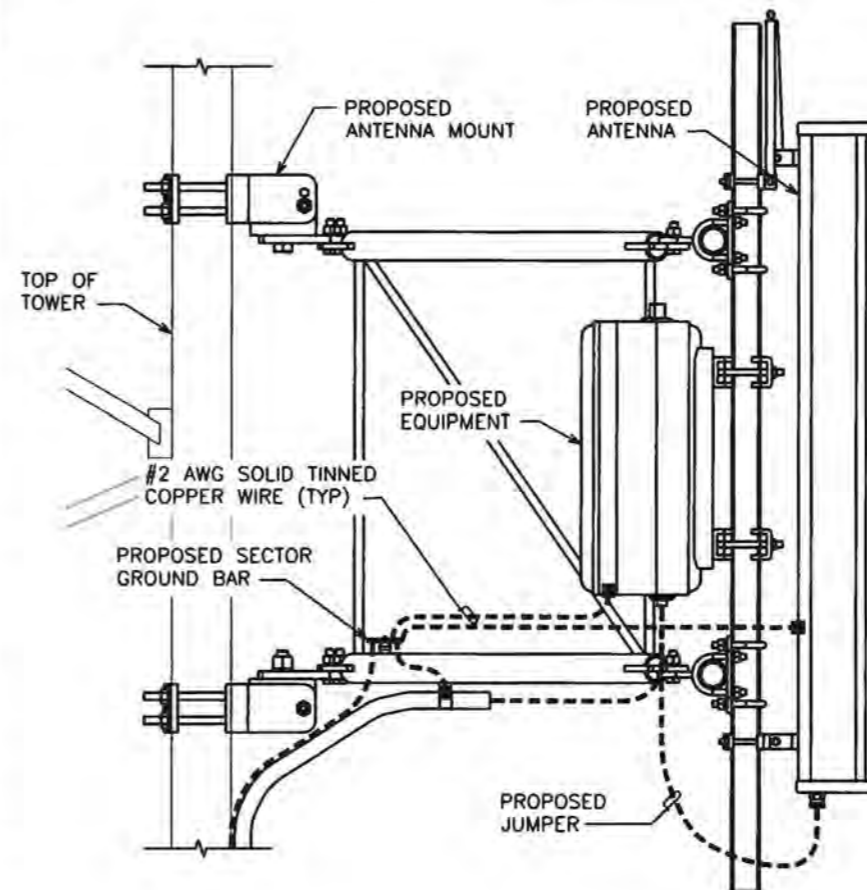
- SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
- THE ANTENNA SYSTEM CABLES SHALL BE LABELED WITH VINYL TAPE EXCEPT IN LOCATIONS WHERE ENVIRONMENTAL CONDITIONS CAUSE PHYSICAL DAMAGE, THEN PHYSICAL TAGS ARE PREFERRED.
- THE STANDARD IS BASED ON EIGHT COLORED TAPES - RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE & VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR SUBCONTRACTOR ON SITE.
- USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLES BY SECTOR AND NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
- WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN GSM/3G AND IS-136 TDMA IS ENCOUNTERED, THE SUBCONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING AND TAGGING STANDARD THAT IS OUTLINED IN THE CURRENT VERSION OF ND-00027. IN THE ABSENCE OF AN EXISTING COLOR CODING TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
- ALL COLOR BANDS INSTALLED AT THE TOP OF TOWER SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE IN BETWEEN EACH COLOR.
- ALL COLOR CODES SHALL BE INSTALLED AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
- IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE GSM TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

## CABLE MARKING TAGS:

WHEN USING THE ALTERNATIVE LABELING METHOD, EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL ID TAG MADE OF STAINLESS STEEL OR BRASS. THE TAG SHALL BE 1-1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS INDICATING THE SECTOR, ANTENNA POSITION AND CABLE NUMBER. ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE AT THE SAME LOCATION AS DEFINED ABOVE. THE TAG SHOULD BE LABELED AS SHOWN ON THE "GSM AND UMTS LINE TAG" DETAIL.

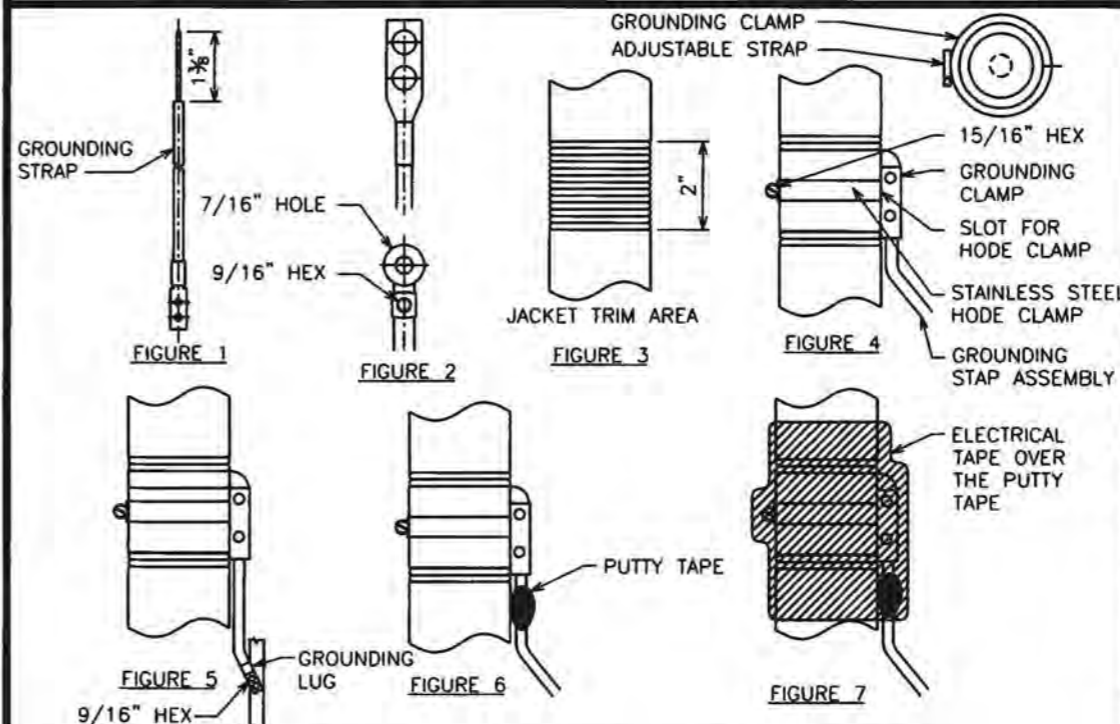
### CABLE MARKING LOCATIONS TABLE

NO.	LOCATIONS
1	EACH JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS AT THE TOP JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS PRIOR TO ENTERING THE BTS OR SHELTER.
3	CABLE ENTRY PORT ON THE INTERIOR OF SHELTER.
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.



## ANTENNA & CABLE GROUNDING

SCALE: N.T.S.



## GROUNDING STRAP WEATHERPROOFING DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:



10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:



MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:

**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:



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RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



June 5, 201

REV	DATE	ISSUED FOR:
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DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:

**TOWER GROUNDING**  
**PLAN & DETAILS**

SHEET NUMBER:

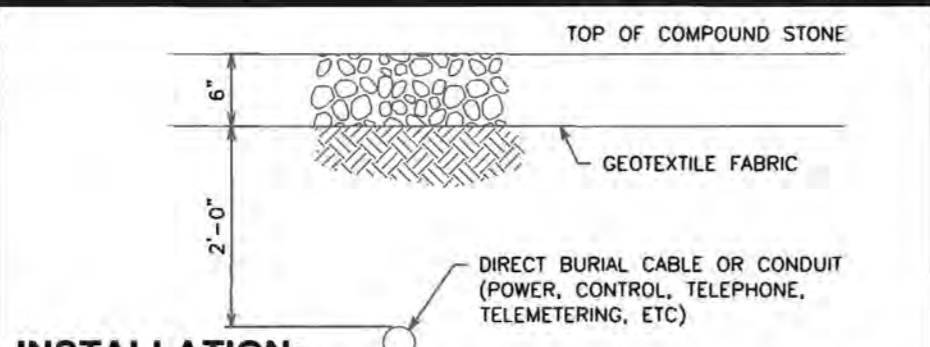
**E-9**

REVISION:

**4**

TEP# 33859.17385





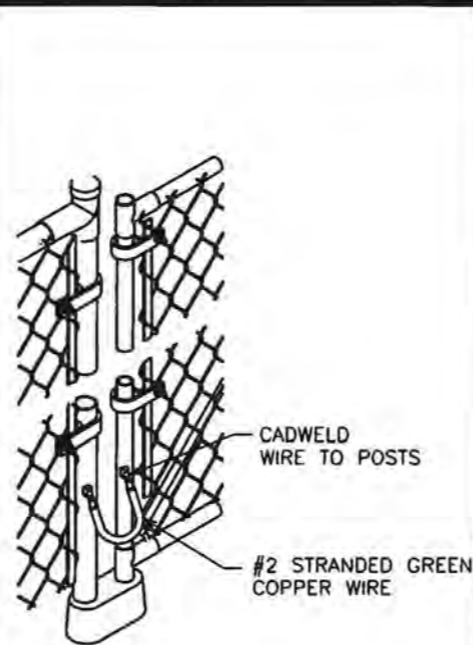
**INSTALLATION:**

1. THE TAPE SHALL BE LAID DIRECTLY ABOVE THE CABLE OR CONDUIT UNDER RIGID TYPE AND OIL MAT PAVEMENTS, AND DIRECTLY ON TOP OF THE COMPACTED EARTH SUBGRADE IMMEDIATELY BEFORE RESTORING THE PAVEMENT.
2. IN OPEN AREAS, THE TAPE SHALL BE LAID DURING THE BACKFILLING OPERATION ON SMOOTH, COMPACTED BACKFILL AT A DISTANCE OF 8" BELOW THE SURFACE OF THE AREA.
3. THE ENDS OF THE TAPE SHALL BE LAPPED APPROXIMATELY SIX (6) INCHES.
4. TAPE SHALL BE THE COLOR AS INDICATED AND HAVE THE FOLLOWING MARKINGS:

RED	CAUTION	CAUTION	CAUTION
	BURIED ELECTRIC LINE BELOW		
ORANGE	CAUTION	CAUTION	CAUTION
	BURIED TELEPHONE LINE BELOW		

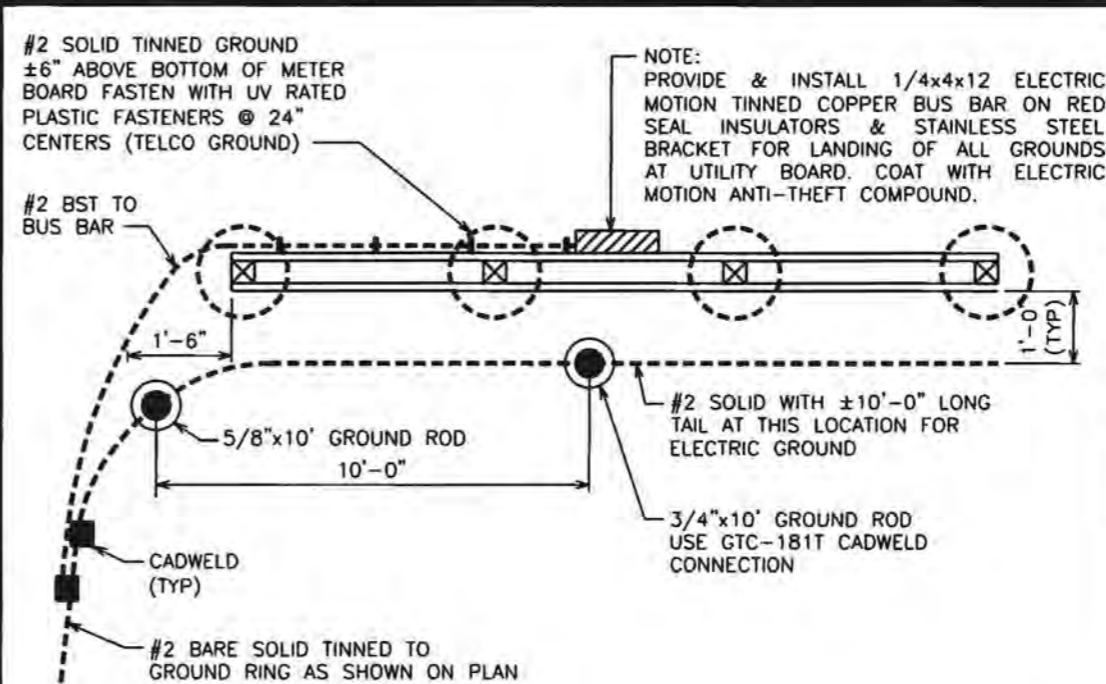
**STANDARD MARKER TAPE DETAIL**

SCALE: N.T.S.



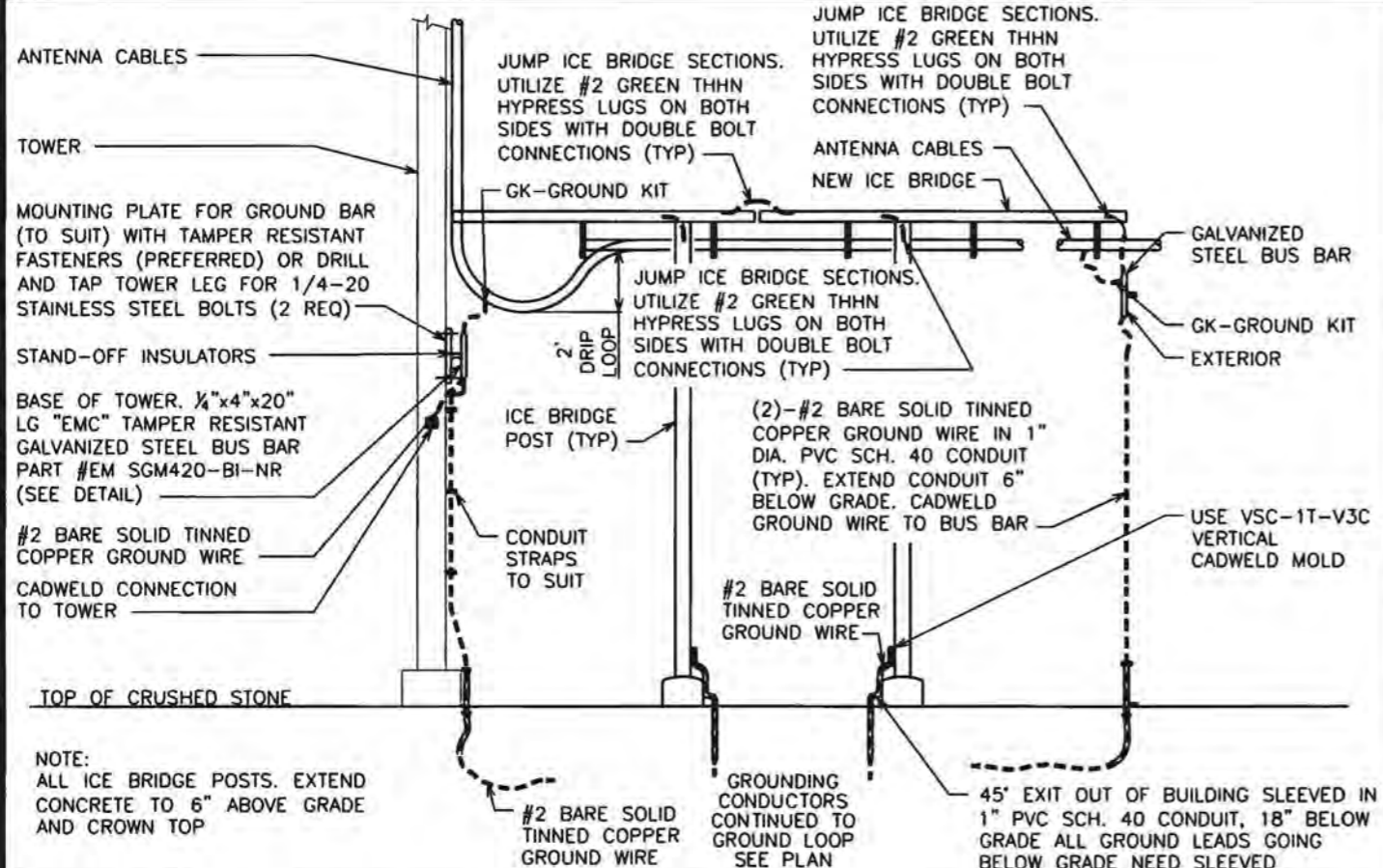
**GATE GROUND DETAIL**

SCALE: N.T.S.



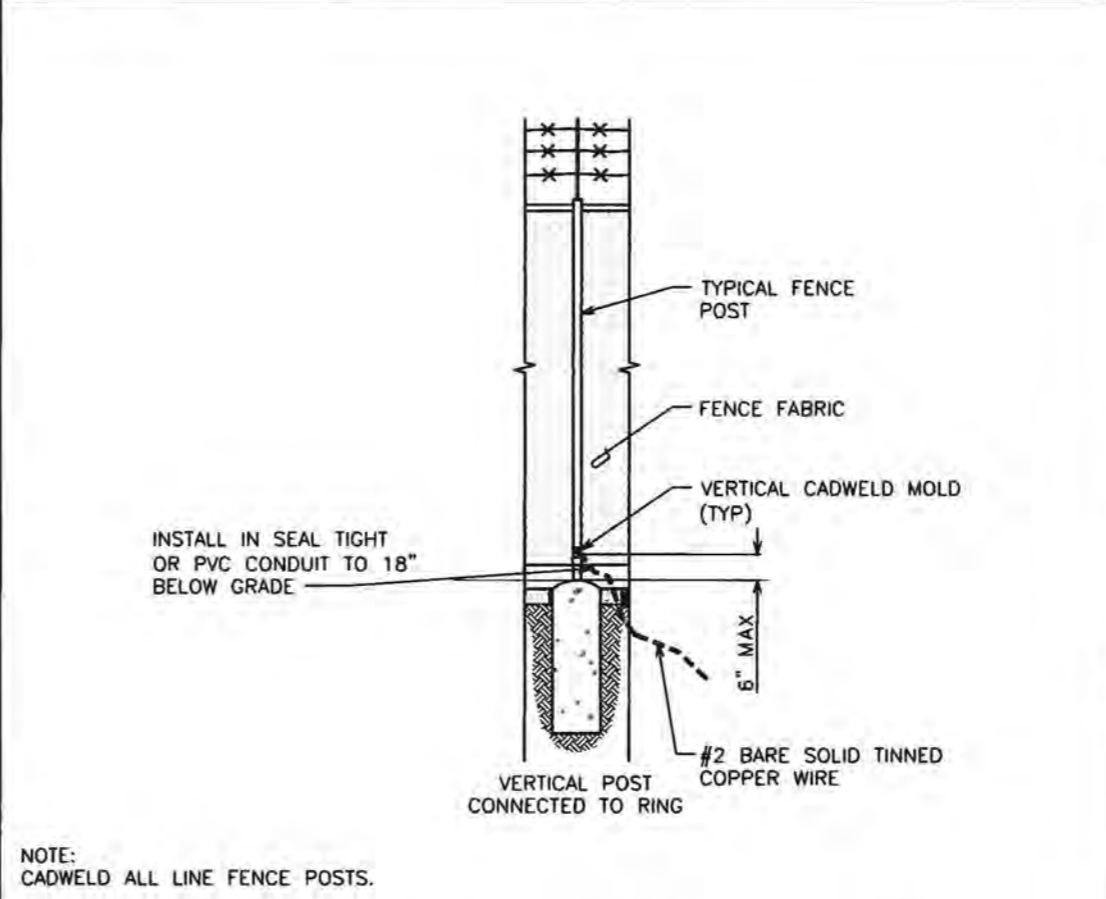
**METER BOARD UTILITY GROUNDING DETAIL**

SCALE: N.T.S.



**COAXIAL GROUNDING AT ICE BRIDGE**

SCALE: N.T.S.



**TYPICAL FENCE POST GROUNDING DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:  
**Uniti**  
 Towers  
 10801 EXECUTIVE CENTER DR.  
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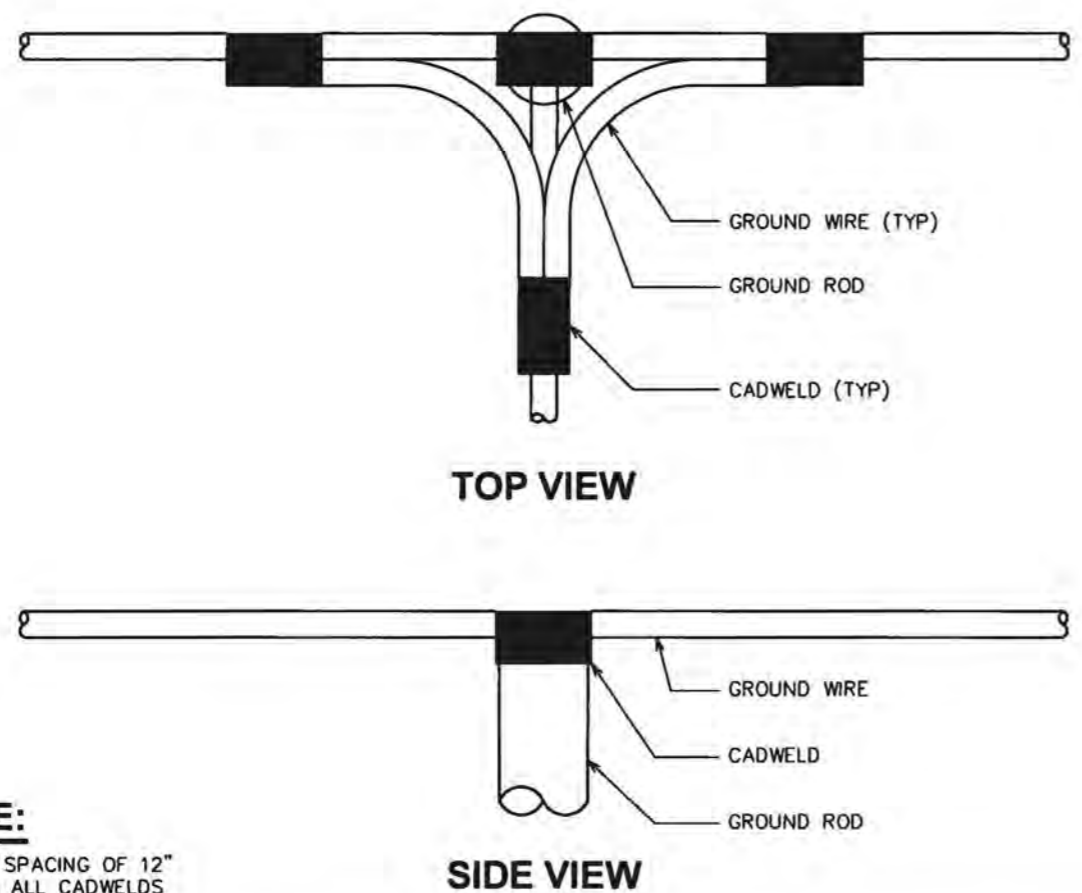
4	06-05-19	CONSTRUCTION
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REV	DATE	ISSUED FOR:

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SHEET TITLE:  
**GROUNDING DETAILS I**

SHEET NUMBER: **E-10** REVISION: **4**  
 TEP#: 133859.17385

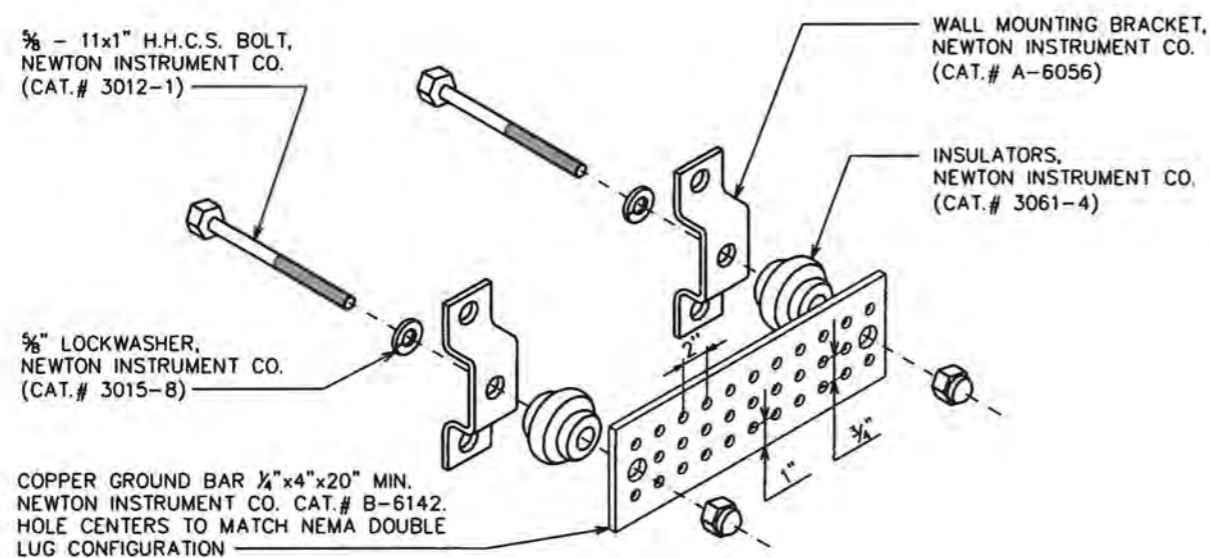




**NOTE:**  
MINIMUM SPACING OF 12"  
BETWEEN ALL CADWELDS

**CADWELD GROUNDING DETAIL**

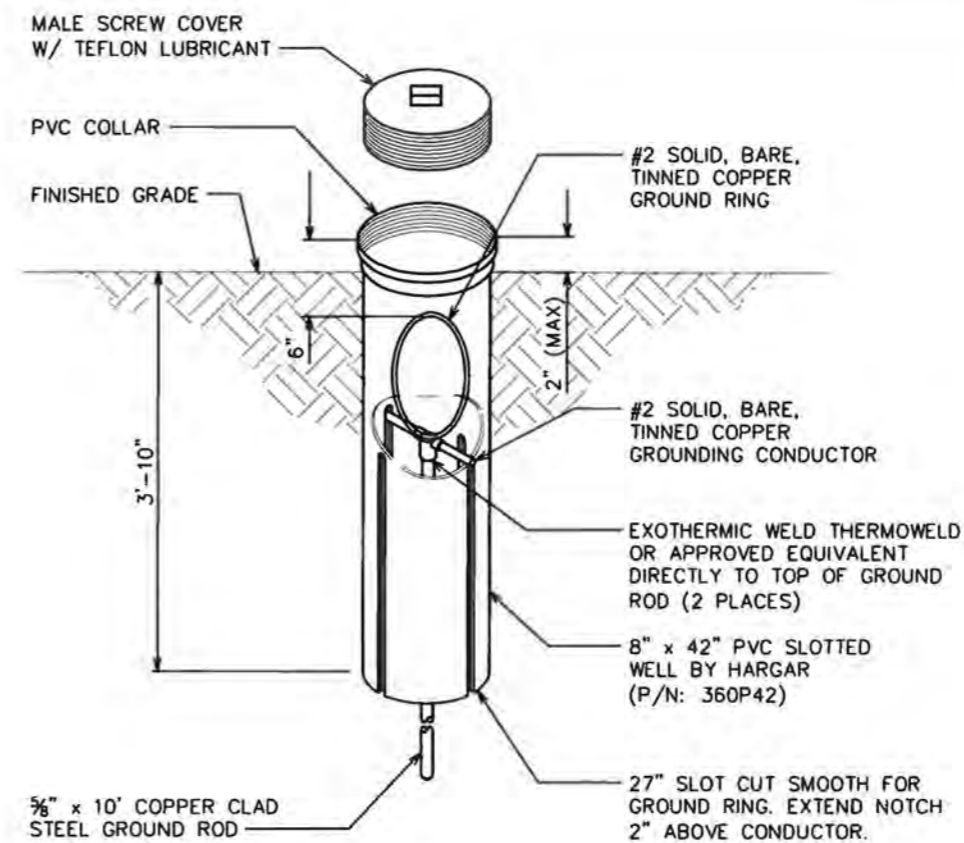
SCALE: N.T.S.



**NOTE:**  
GROUND BAR SHALL BE SIZED TO ACCOMMODATE  
ALL GROUNDING CONNECTIONS REQUIRED AS WELL  
AS PROVIDE 50% SPARE CAPACITY

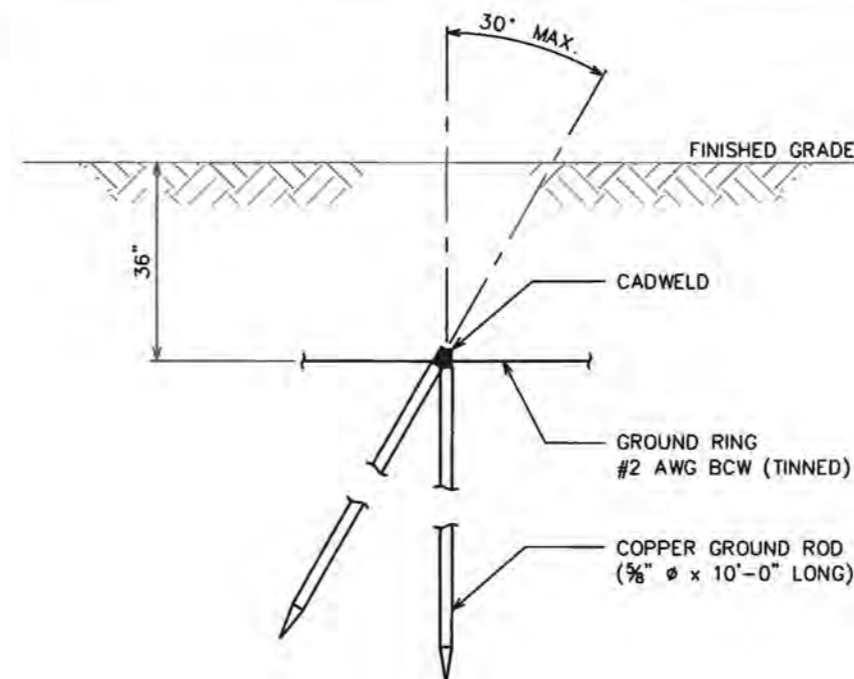
**STANDARD GROUND BAR DETAIL**

SCALE: N.T.S.



**GROUND ROD WITH INSPECTION WELL DETAIL**

SCALE: N.T.S.



**COPPER-CLAD STEEL GROUND ROD DETAIL**

SCALE: N.T.S.

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Towers  
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**STATE OF KENTUCKY**  
**GRAHAM M. ANDRES**  
29939  
**PROFESSIONAL ENGINEER**  
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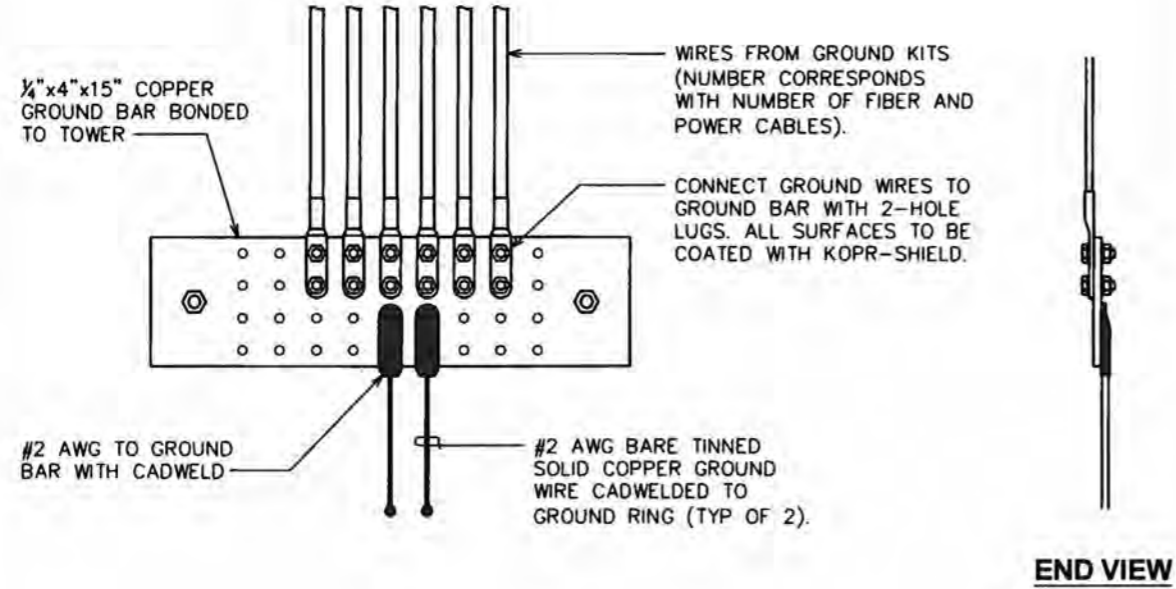
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DRAWN BY: GSM CHECKED BY: GLB

SHEET TITLE:  
**GROUNDING  
DETAILS II**

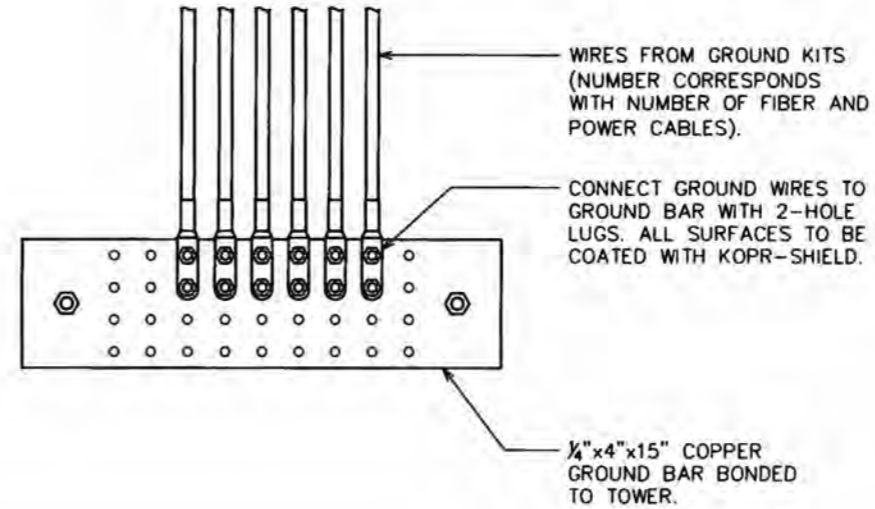
SHEET NUMBER: **E-11** REVISION: **4**  
TEP#: 33859.17385





END VIEW

**NOTE:**  
THE CONTRACTOR SHALL UTILIZE AN INTERMEDIATE GROUND BAR FOR ANTENNA RAD CENTERS OVER 200'.

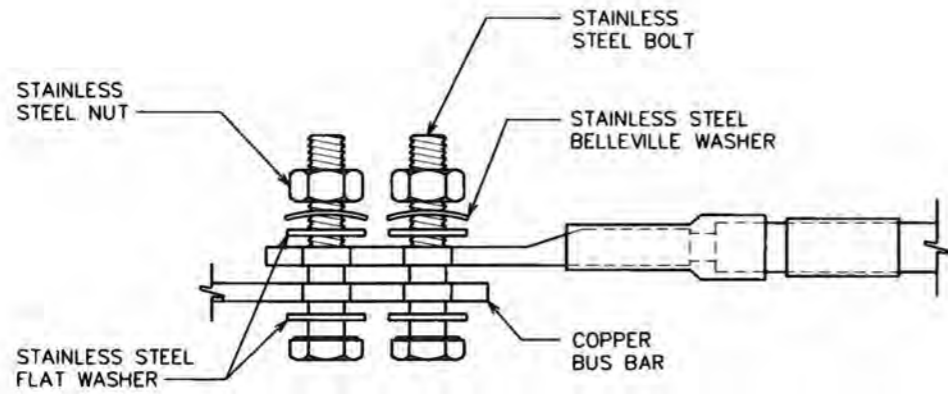


**LOWER GROUND BAR**

SCALE: N.T.S.

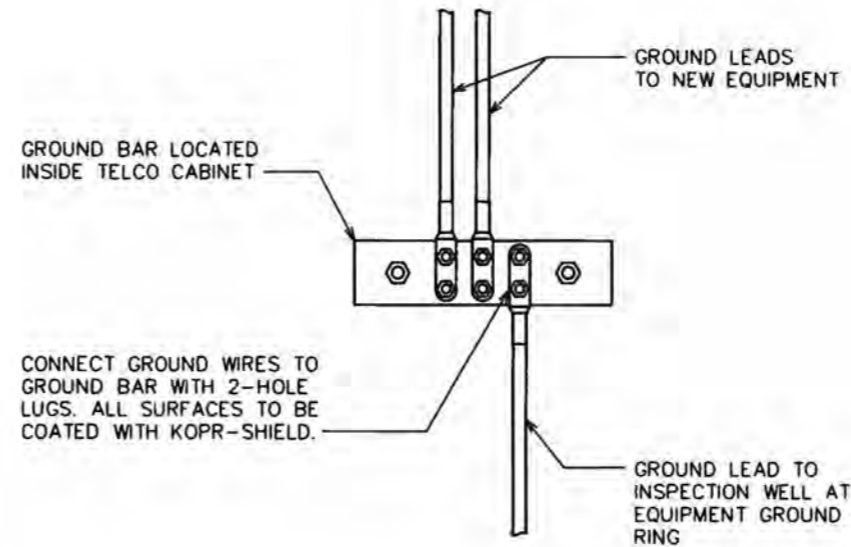
**UPPER / INTERMEDIATE GROUND BAR**

SCALE: N.T.S.



**NOTES:**

1. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL, INCLUDING THE BELLEVILLE WASHERS. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY; INSERT A DRAGON TOOTH WASHER BETWEEN THE LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.



**LUG DETAIL**

SCALE: N.T.S.

**GROUND BAR IN TELCO CABINET**

SCALE: N.T.S.

PLANS PREPARED FOR:  
**Uniti**  
Towers  
10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
**at&t**  
MEIDINGER TOWER  
462 S 4TH ST, STE 240  
LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNVILLE RELO**  
**FA 14605585**  
74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:  
**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-8530  
OFFICE: (919) 661-4351  
www.tepgroup.net

SEAL:  
**GRAHAM M. ANDRES**  
28939  
PROFESSIONAL ENGINEER  
June 5, 201

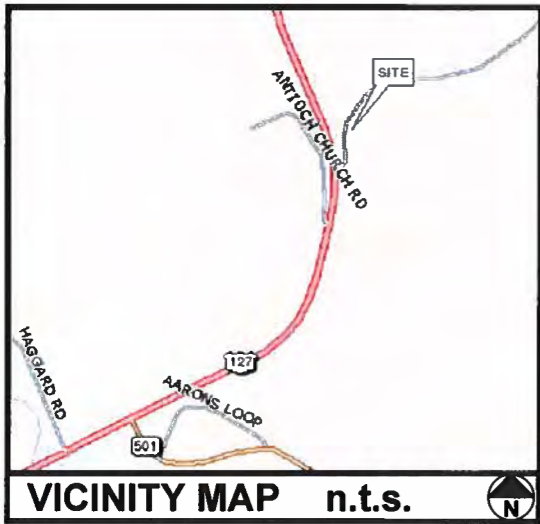
REV	DATE	ISSUED FOR:
4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION

DRAWN BY: G5M CHECKED BY: GLB

SHEET TITLE:  
**GROUNDING DETAILS III**

SHEET NUMBER: **E-12** REVISION: **4**  
TEP#: 133859.17385





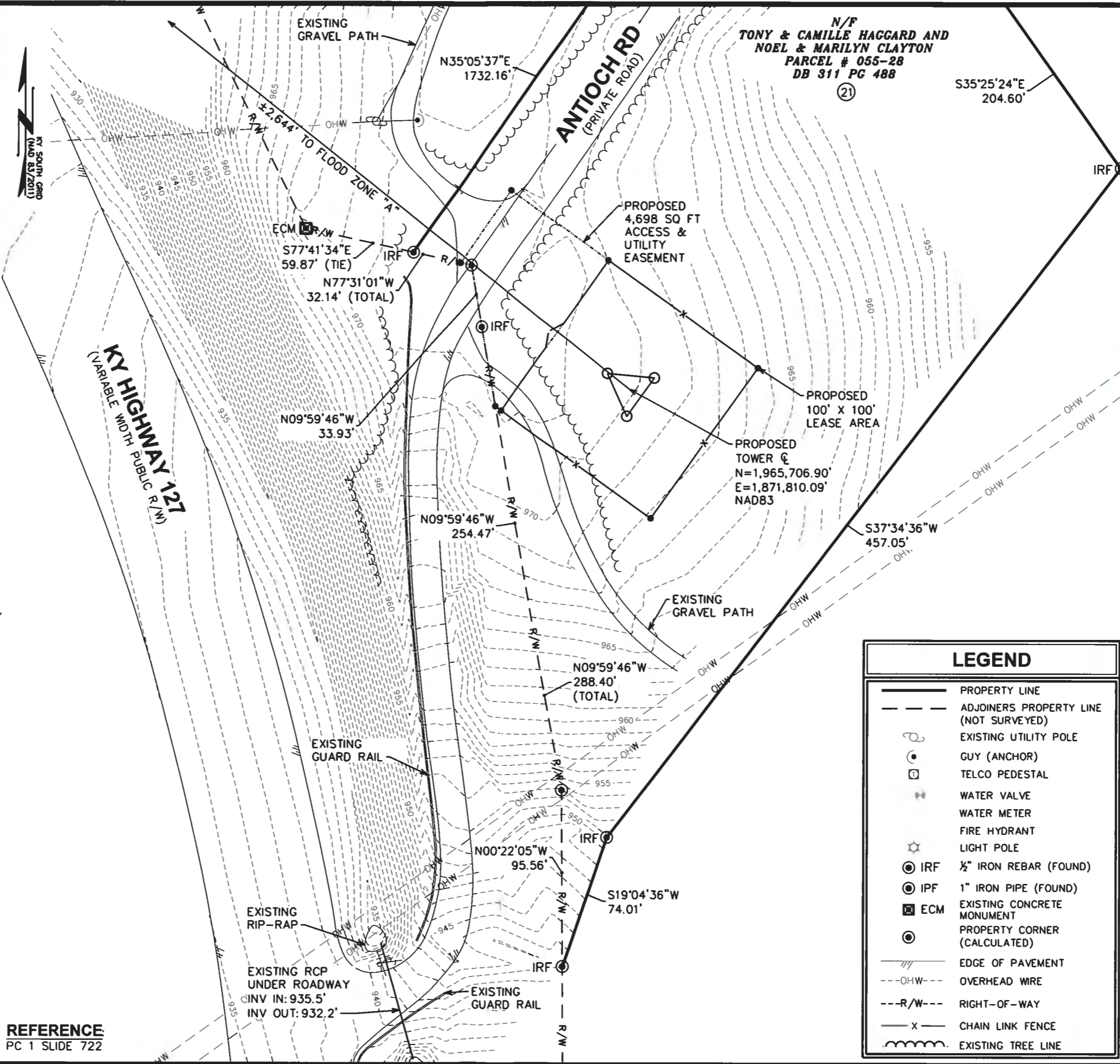
**NOTES:**

1. PLAN PREPARED WITH THE BENEFIT OF A TITLE REPORT.
2. PLAN DOES NOT REPRESENT AN ALTA/NSPS LAND TITLE SURVEY.
3. BASIS OF THE BEARINGS AND COORDINATES IS THE KENTUCKY SOUTH STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JANUARY 18, 2019; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS AND OPUS; AND EXPRESSED IN US SURVEY FEET.
4. VERTICAL INFORMATION BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND EXPRESSED IN US SURVEY FEET.
5. THIS PLAN DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE PARENT PARCEL. PROPERTY LINES ARE DRAWN FROM FIELD LOCATIONS OF MONUMENTATION, GIS, TAX MAPS, AND INFORMATION FOUND IN DEED BOOK 311, PAGE 488, OF THE CASEY COUNTY REGISTER OF DEEDS.
6. PROPERTY LOCATED IN FLOOD ZONE "X", AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOOD BASED UPON FEMA COMMUNITY PANEL# 21045C0350D, EFFECTIVE JULY 07, 2009.
7. LESSEE INFORMATION:  
UNITI TOWERS  
10801 EXECUTIVE CENTER DR,  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211
8. PROPERTY INFORMATION:  
TONY & CAMILLE HAGGARD AND  
NOEL & MARILYN CLAYTON  
3200 BRIAR HILL RD.  
LEXINGTON, KY 40516

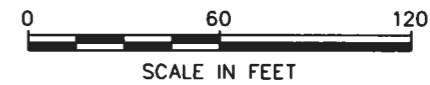
**1A CERTIFICATE**

LATITUDE: N 37° 13' 26.77" (NAD '83)  
 LONGITUDE: W 84° 57' 18.92" (NAD '83)  
 GROUND ELEV. (AMSL): 970.12± (NAVD '88)

REFERENCE  
PC 1 SLIDE 722



LEGEND	
	PROPERTY LINE
	ADJOINERS PROPERTY LINE (NOT SURVEYED)
	EXISTING UTILITY POLE
	GUY (ANCHOR)
	TELCO PEDESTAL
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	LIGHT POLE
	1/2" IRON REBAR (FOUND)
	1" IRON PIPE (FOUND)
	EXISTING CONCRETE MONUMENT
	PROPERTY CORNER (CALCULATED)
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE



**SITE SURVEY**  
SCALE: 1" = 60'

PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR,  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PROJECT INFORMATION:  
**PHIL (DUNVILLE RELO)**  
**14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PREPARED BY:  
  
**TEP OPCO, LLC**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 (919) 661-6351  
 COA # 940

**SURVEYOR CERTIFICATE**  
 I, TIMOTHY L. FISH, CERTIFY THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE TO THE SURVEYING STANDARDS OF THE COMMONWEALTH OF KENTUCKY, THIS 30TH DAY OF MAY, 2019.

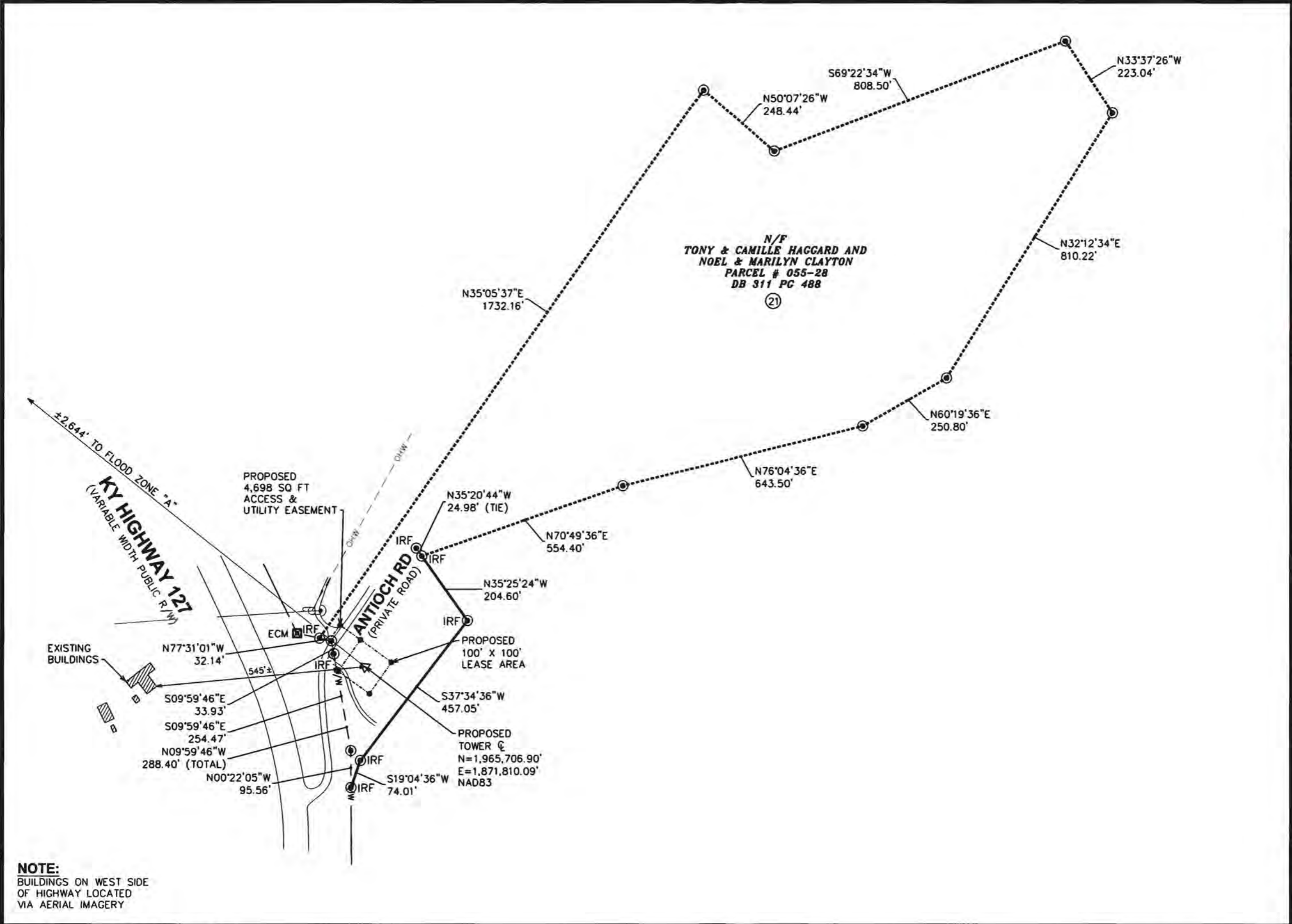
STATE OF KENTUCKY  
**TIMOTHY L. FISH**  
 4178  
 LICENSED  
 PROFESSIONAL  
 LAND SURVEYOR

**TIMOTHY L. FISH**  
 COMMONWEALTH OF KENTUCKY  
 PROFESSIONAL LAND SURVEYOR  
 LIC. NO. 4178

SHEET TITLE:

**SITE SURVEY**

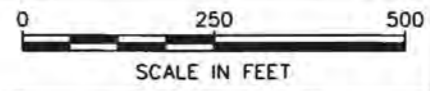
DATE: 05/30/2019 REVISION: 2  
 SHEET #: 1 OF 5 TEP #: 13385



**NOTE:**  
BUILDINGS ON WEST SIDE  
OF HIGHWAY LOCATED  
VIA AERIAL IMAGERY

**PROPERTY OVERVIEW**

SCALE: 1" = 250'



PREPARED FOR:  
**Uniti**  
Towers  
10801 EXECUTIVE CENTER DR,  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PROJECT INFORMATION:  
**PHIL (DUNVILLE RELO)**  
**14605585**  
74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PREPARED BY:  
**TEP OPCO, LLC**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
(919) 661-6351  
COA # 940

**SURVEYOR CERTIFICATE**

I, TIMOTHY L. FISH, CERTIFY THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE TO THE SURVEYING STANDARDS OF THE COMMONWEALTH OF KENTUCKY, THIS 30TH DAY OF MAY, 2019.

STATE of KENTUCKY  
**TIMOTHY L. FISH**  
4178  
LICENSED  
PROFESSIONAL  
LAND SURVEYOR

*Timothy L. Fish*  
**TIMOTHY L. FISH**  
COMMONWEALTH OF KENTUCKY  
PROFESSIONAL LAND SURVEYOR  
LIC. NO. 4178

SHEET TITLE:

**PROPERTY OVERVIEW**

DATE: 05/30/2019	REVISION: 2
SHEET #: 2 OF 5	TEP #: 13385



**LEGAL DESCRIPTION OF 100' X 100' LEASE AREA**

ALL THAT CERTAIN LEASE AREA, SITUATE, LYING AND BEING IN CASEY COUNTY, KENTUCKY, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 311 AT PAGE 488 OF THE CASEY COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON REBAR FOUND ON THE SOUTHEASTERN LIMITS OF THE PARCEL DESCRIBED IN DEED BOOK 311 AT PAGE 488, HAVING KENTUCKY SOUTH STATE PLANE COORDINATES OF NORTHING = 1,965,464.39', AND EASTING = 1,871,798.39'; THENCE, FROM THE POINT OF COMMENCEMENT, NORTH 07°40'23" EAST A DISTANCE OF 174.31 FEET TO A POINT ON THE SOUTHERN CORNER OF THE HEREIN DESCRIBED 100' X 100' LEASE AREA, SAID POINT BEING THE TRUE POINT OF BEGINNING, HAVING KENTUCKY SOUTH STATE PLANE COORDINATES OF NORTHING = 1,965,637.14', AND EASTING = 1,871,821.67'; THENCE, FROM THE POINT OF BEGINNING, NORTH 54°25'27" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE NORTH 35°34'33" EAST A DISTANCE OF 100.00 FEET TO A POINT; THENCE SOUTH 54°25'27" EAST A DISTANCE OF 100.00 FEET TO A POINT; THENCE SOUTH 35°34'33" WEST A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

SAID LEASE AREA PARCEL CONTAINING 10,000 SQUARE FEET OR 0.23 ACRES MORE OR LESS.

**LEGAL DESCRIPTION OF 4,698 SQ FT ACCESS & UTILITY EASEMENT**

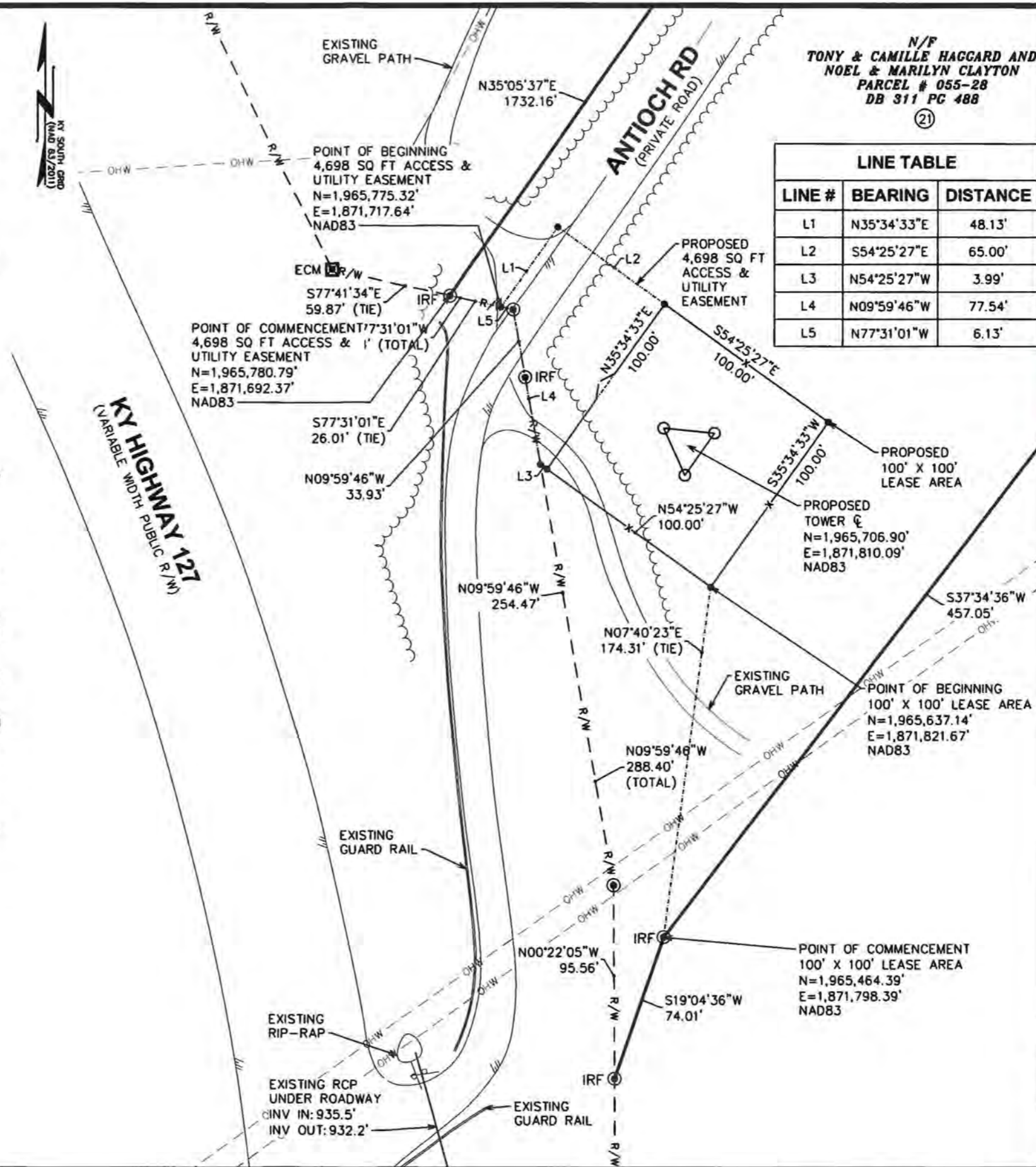
ALL THAT CERTAIN EASEMENT AREA, SITUATE, LYING AND BEING IN CASEY COUNTY, KENTUCKY, BEING A PORTION OF THE LANDS DESCRIBED IN DEED BOOK 311 AT PAGE 488 OF THE CASEY COUNTY REGISTER OF DEEDS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING IRON REBAR FOUND ON THE NORTHEASTERN RIGHT OF WAY OF KENTUCKY HIGHWAY 127, SAID IRON BEING THE WESTERN CORNER OF THE PARCEL DESCRIBED IN DEED BOOK 311, PAGE 488, HAVING KENTUCKY SOUTH STATE PLANE COORDINATES OF NORTHING = 1,965,780.79', AND EASTING = 1,871,692.37'; THENCE, FROM THE POINT OF COMMENCEMENT AND WITH THE NORTHEASTERN RIGHT OF WAY OF KENTUCKY HIGHWAY 127, SOUTH 77°31'01" EAST A DISTANCE OF 26.01 FEET TO A POINT ON THE WESTERN CORNER OF THE HEREIN DESCRIBED 4,698 SQ FT ACCESS AND UTILITY EASEMENT, SAID POINT BEING THE TRUE POINT OF BEGINNING HAVING KENTUCKY SOUTH STATE PLANE COORDINATES OF: NORTHING = 1,965,775.32'; AND EASTING = 1,871,717.64'; THENCE, FROM THE POINT OF BEGINNING AND LEAVING THE NORTHEASTERN RIGHT OF WAY OF KENTUCKY HIGHWAY 127, NORTH 35°34'33" EAST A DISTANCE OF 48.13 FEET TO A POINT; THENCE SOUTH 54°25'27" EAST A DISTANCE OF 65.00 FEET TO A POINT ON THE NORTHERN CORNER OF THE AFORE DESCRIBED 100' X 100' LEASE AREA; THENCE, WITH THE NORTHWESTERN LIMITS OF SAID LEASE AREA, SOUTH 35°34'33" WEST A DISTANCE OF 100.00 FEET TO A POINT; THENCE, LEAVING SAID LIMITS, NORTH 54°25'27" WEST A DISTANCE OF 3.99 FEET TO A POINT ON THE NORTHEASTERN RIGHT OF WAY OF KENTUCKY HIGHWAY 127; THENCE, WITH SAID RIGHT OF WAY, NORTH 09°59'46" WEST A DISTANCE OF 77.54 FEET TO A POINT, PASSING AND IRON REBAR FOUND AT 43.61 FEET; THENCE, CONTINUING WITH SAID RIGHT OF WAY, NORTH 77°31'01" WEST A DISTANCE OF 6.13 FEET TO THE POINT OF BEGINNING.

SAID EASEMENT AREA PARCEL CONTAINING 4,698 SQUARE FEET OR 0.11 ACRES MORE OR LESS.

**LEGAL DESCRIPTIONS**

SCALE: 1" = 60'



N/F  
**TONY & CAMILLE HAGGARD AND  
 NOEL & MARILYN CLAYTON**  
 PARCEL # 055-28  
 DB 311 PG 488  
 (21)

PREPARED FOR:



10801 EXECUTIVE CENTER DR,  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PROJECT INFORMATION:

**PHIL (DUNVILLE RELO)  
 14605585**

74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

PREPARED BY:

**TEP OPCO, LLC**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 (919) 661-6351  
 COA # 940

**SURVEYOR CERTIFICATE**

I, TIMOTHY L. FISH, CERTIFY THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE TO THE SURVEYING STANDARDS OF THE COMMONWEALTH OF KENTUCKY, THIS 30TH DAY OF MAY, 2019.



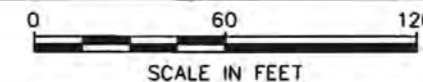
*Timothy L. Fish*

**TIMOTHY L. FISH**  
 COMMONWEALTH OF KENTUCKY  
 PROFESSIONAL LAND SURVEYOR  
 LIC. NO. 4178

SHEET TITLE:

**LEGAL DESCRIPTIONS**

DATE: 05/30/2019 REVISION: 2  
 SHEET #: 3 OF 5 TEP #: 13385





## SCHEDULE B - SECTION II EXCEPTIONS

US TITLE SOLUTIONS  
REPORT OF TITLE  
FILE NO: 61656-KY1809-5039  
COMMITMENT EFFECTIVE DATE: OCTOBER 2, 2018  
SCHEDULE B - SECTION II

1. TAXES, TAX LIENS, TAX SALES, WATER RATES, SEWER AND ASSESSMENTS SET FORTH IN SCHEDULE HEREIN. (NOT A SURVEY ITEM)
2. MORTGAGES RETURNED HEREIN. (-0-). SEE SEPARATE MORTGAGE SCHEDULE. (NOT A SURVEY ITEM)
3. ANY STATE OF FACTS WHICH AN ACCURATE SURVEY MIGHT SHOW OR SURVEY EXCEPTIONS SET FORTH HEREIN. (NOT A SURVEY ITEM)
4. RIGHTS OF TENANTS OR PERSON IN POSSESSION. (NOT A SURVEY ITEM)  
(JUDGMENTS, LIENS AND UCC)
5. NONE WITHIN PERIOD SEARCHED  
(COVENANTS/RESTRICTIONS)
6. NONE WITHIN PERIOD SEARCHED  
(EASEMENTS AND RIGHTS OF WAY)
7. DEED BY AARON HAGGARD, ARLIE HAGGARD, WIFE, J.R. HAGGARD AND HOWARD HAGGARD, SONS TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE DEPARTMENT OF HIGHWAYS, DATED 9/7/1950 RECORDED 4/2/1951 IN BOOK 62 PAGE 404. NOTES: ROAD AND DRAINAGE PURPOSES (UNABLE TO PLOT)
8. DEED BY L.C. GADBERRY AND NELLE M. GADBERRY, WIFE TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE DEPARTMENT OF HIGHWAYS, DATED 9/1/1950 RECORDED 4/3/1951 IN BOOK 62 PAGE 405. NOTES: ROAD AND DRAINAGE PURPOSES (UNABLE TO PLOT)
9. DEED FOR HIGHWAY PURPOSES BY A.C. HAGGARD AND ARLIE HAGGARD (WIFE); HOWARD C. HAGGARD, J.R. HAGGARD AND CASEY COUNTY BANK E.C. MOORE (PRES.) TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE DEPARTMENT OF HIGHWAYS, DATED 8/26/1953 RECORDED 1/6/1954 IN BOOK 64 PAGE 549. (UNABLE TO PLOT)
10. DEED BY A.C. HAGGARD AND ARLIE HAGGARD (WIFE), HOWARD C. HAGGARD (SON), J.R. HAGGARD (SON), CASEY COUNTY BANK E.C. MOORE, PRES. TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE DEPARTMENT OF HIGHWAYS, DATED 11/16/1953 RECORDED 1/15/1954 IN BOOK 64 PAGE 551. NOTES: ROAD PURPOSES (UNABLE TO PLOT)
11. TELECOMMUNICATIONS EASEMENT BY ANN GADBERRY THOMPSON AND JANE GADBERRY RATLIFF TO GENERAL TELEPHONE COMPANY OF KENTUCKY, DATED 9/15/1983 RECORDED 11/9/1983 IN BOOK 124 PAGE 71. NOTES: TELECOMMUNICATIONS FACILITY PURPOSES (DOES NOT AFFECT PARENT PARCEL)
12. DEED OF CONVEYANCE BY ANN GADBERRY THOMPSON AND MAURICE E. THOMPSON, JR., HER HUSBAND; JANE GADBERRY RATLIFF AND DAVID H. RATLIFF, HER HUSBAND TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, DATED 11/28/1990 RECORDED 3/6/1991 IN BOOK 151 PAGE 495. NOTES: ROAD PURPOSES (DOES NOT AFFECT PARENT PARCEL)
13. DEED OF CONVEYANCE BY ANN GADBERRY THOMPSON AND MAURICE E. THOMPSON, JR., HER HUSBAND; JANE GADBERRY RATLIFF AND DAVID H. RATLIFF, HER HUSBAND TO COMMONWEALTH OF KENTUCKY FOR THE USE AND BENEFIT OF THE TRANSPORTATION CABINET, DATED 1/31/1997 RECORDED 4/3/1997 IN BOOK 180 PAGE 290. NOTES: ROAD PURPOSES (UNABLE TO PLOT)
14. EASEMENT BY J.R. HAGGARD TO EAST CASEY COUNTY WATER DISTRICT, DATED 9/6/2005 RECORDED 9/27/2006 IN BOOK 244 PAGE 812. NOTES: WATER SERVICE PURPOSES (UNABLE TO PLOT)
15. EASEMENT BY TONY HAGGARD AND CAMILLE HAGGARD, HUSBAND AND WIFE TO EAST CASEY COUNTY WATER DISTRICT, DATED 9/17/2005 RECORDED 9/27/2006 IN BOOK 244 PAGE 808. NOTES: WATER SERVICE PURPOSES (UNABLE TO PLOT)
16. EASEMENT BY NOEL CLAYTON AND MARILYN CLAYTON, HUSBAND AND WIFE TO EAST CASEY COUNTY WATER DISTRICT, DATED 9/12/2005 RECORDED 9/27/2006 IN BOOK 244 PAGE 804. NOTES: WATER SERVICE PURPOSES (UNABLE TO PLOT)
17. WARRANTY EASEMENT DEED FOR A PERIOD OF 30 YEARS BY ANN GADBERRY THOMPSON AND HUSBAND, MAURICE E. THOMPSON, JR. AND JANE G. RATLIFF AND HUSBAND, DAVID H. RATLIFF TO UNITED STATES OF AMERICA, DATED 9/7/2010 RECORDED 9/27/2010 IN BOOK 270 PAGE 832. NOTES: PURPOSE IS TO RESTORE, PROTECT, MANAGE, MAINTAIN, AND ENHANCE THE FUNCTIONAL VALUES OF WETLANDS AND OTHER LANDS (DOES NOT AFFECT PARENT PARCEL)  
(OTHER FILED DOCUMENTS)
18. PLAT FOR ANN THOMPSON AND JANE RATLIFF WRP IN BOOK 1 PAGE 893/894. (DOES NOT AFFECT PARENT PARCEL)
19. OIL AND GAS LEASE AGREEMENT BETWEEN A.C. HAGGARD FARMS-HOWARD HAGGARD ADMINISTRATOR AND DAVID D. MASSIE DATED 8/10/1983 RECORDED 8/13/1983 IN BOOK 123 PAGE 98 NOTES: PLEASE SEE ASSIGNMENT RECORDED 02/10/1984 IN BOOK 125 PAGE 51. ASSIGNED TO RUBY MCQUEARY. (UNABLE TO PLOT)
20. OIL AND GAS LEASE AGREEMENT BETWEEN A.C. HAGGARD FARMS-HOWARD HAGGARD ADMINISTRATOR AND DAVID D. MASSIE DATED 8/10/1983 RECORDED 8/13/1983 IN BOOK 123 PAGE 100 NOTES: PLEASE SEE ASSIGNMENT RECORDED 02/10/1984 IN BOOK 125 PAGE 39. ASSIGNED TO RUBY MCQUEARY. (UNABLE TO PLOT)
21. SURVEY PLAT FOR HAGGARD FARM RETRACEMENT RECORDED 5/12/2007 IN BOOK 1 PAGE 721. (DOES NOT AFFECT PARENT PARCEL)
22. SURVEY PLAT FOR AARON HAGGARD FAMILY RECORDED 5/12/2007 IN BOOK 1 PAGE 722. (AFFECTS PARENT PARCEL, SEE SURVEY HEREIN)

## TITLE EXCEPTIONS

PREPARED FOR:



10801 EXECUTIVE CENTER DR,  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PROJECT INFORMATION:

**PHIL (DUNVILLE RELO)  
14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)


PREPARED BY:

 **TEP OPCO, LLC**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
(919) 661-6351  
COA # 940

## SURVEYOR CERTIFICATE

I, TIMOTHY L. FISH, CERTIFY THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE TO THE SURVEYING STANDARDS OF THE COMMONWEALTH OF KENTUCKY, THIS 30TH DAY OF MAY, 2019.





**TIMOTHY L. FISH**  
COMMONWEALTH OF KENTUCKY  
PROFESSIONAL LAND SURVEYOR  
LIC. NO. 4178

SHEET TITLE:

**TITLE EXCEPTIONS**

DATE: 05/30/2019 REVISION: 2  
SHEET #: 4 OF 5 TEP #: 13385



# TITLE LEGAL DESCRIPTION

## PARCEL ONE

A CERTAIN PARCEL OF LAND LYING ON THE WATERS OF THE SOUTH FORK OF GREEN RIVER ON THE WEST SIDE OF U.S. ROUTE NO. 127 ABUTTING THE HAGGARD AND ANTIOCH CHURCH COUNTY ROADS IN THE PHIL AREA OF CASEY COUNTY KENTUCKY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A SURVEY MONUMENT (5/8 DIAMETER REBAR WITH CAP STAMPED RAMSES PLS #1953 BEING TYPICAL OF ALL MONUMENTS FOUND OR SET THIS SURVEY UNLESS OTHERWISE NOTED) SET AT A FOUND CONCRETE RIGHT OF WAY MARKER ON THE WEST SIDE OF U.S. ROUTE NO. 127 NEARLY OPPOSITE THE CENTERLINE EXTENDED OF KENTUCKY ROUTE NO. 910 AT THE JUNCTION NEAR THE BOTTOM OF THE ANTIOCH HILL; THENCE A TIE LINE SO AS TO EXCLUDE THE TAYLOR COUNTY RECC SUBSTATION SEE DEED BOOK 63 PAGE 08 NORTH 73 DEGREES 50 MINUTES 37 SECONDS WEST 769.94 FT. TO A SURVEY MONUMENT SET ON THE EAST SIDE OF THE HAGGARD ROAD AT THE SOUTH CORNER OF THE SUBSTATION; THENCE ALONG THE HAGGARD ROAD NORTH 23 DEGREES 46 MINUTES 04 SECONDS WEST 208.50 FT. TO A FOUND CIRCULAR MONUMENT (A WITNESS MONUMENT WAS SET BEARING SOUTH 54 DEGREES 05 MINUTES 50 SECONDS WEST 0.57 FEET DISTANT); THENCE LEAVING THE HAGGARD ROAD, NORTH 66 DEGREES 13 MINUTES 56 SECONDS EAST 208.50 FT. TO A SURVEY MONUMENT SET IN A FIELD; THENCE SOUTH 23 DEGREES 46 MINUTES 04 SECONDS EAST 208.50 FT. TO A SURVEY MONUMENT SET IN A FIELD; THENCE SOUTH 66 DEGREES 13 MINUTES 56 SECONDS WEST 250.08 FT. TO THE SOUTH CORNER OF THE SUBSTATION; THENCE THE REVERSE OF THE AFORESAID TIE LINE SOUTH 73 DEGREES 50 MINUTES 37 SECONDS EAST 769.94 FT. TO THE POINT OF BEGINNING OF THIS SURVEY; THENCE DESCRIBING THE OUTSIDE BOUNDARY ALONG THE WEST RIGHT OF WAY OF REBUILT U.S. ROUTE NO. 127 AT VARYING DISTANCES FROM THE CENTERLINE SOUTH 59 DEGREES AND 37 SECONDS WEST 550.72 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT MARKER; THENCE SOUTH 34 DEGREES 56 MINUTES 38 SECONDS WEST 54.08 FT. TO A SURVEY MONUMENT SET NORTHEAST OF THE HAGGARD ROAD; THENCE SOUTH 31 DEGREES 14 MINUTES 23 SECONDS WEST 37.92 FT. CROSSING THE HAGGARD ROAD TO A SURVEY MONUMENT SET ON THE EXISTING RIGHT OF WAY OF U.S. ROUTE NO. 127; THENCE WITH THE EXISTING RIGHT OF WAY APPROXIMATELY 50 FT. FROM THE CENTERLINE, SOUTH 62 DEGREES 20 MINUTES 50 SECONDS WEST (PASSING WITNESS MONUMENTS SET AT 812.54, 1,539.34 AND 2,360.23 FT.) TO A POINT IN THE SOUTH FORK CREEK; THENCE ALONG THE MEANDERS OF THE CREEK NEAR THE CENTERLINE WITH JEFFREY BENTLEY DEED BOOK 242 PAGE 22, NORTH 45 DEGREES 57 MINUTES 10 SECONDS WEST 445.36 FT. TO A POINT; THENCE WITH THE R F TARTER ESTATE DEED BOOK 137 PAGE 329 CONTINUING ALONG THE CREEK, NORTH 41 DEGREES 54 MINUTES 41 SECONDS WEST 146.71 FT.; NORTH 35 DEGREES 42 MINUTES 06 WEST 171.77 FT. TO A POINT IN THE CREEK (A WITNESS MONUMENT WITH AN ASH AND ELM POINTERS WAS SET ON THE BANK BEARING NORTH 37 DEGREES 56 MINUTES 55 SECONDS EAST 70.31 FT.); THENCE CONTINUING ALONG THE CREEK NORTH 72 DEGREES 23 MINUTES 07 SECONDS WEST 75.68 FT.; SOUTH 79 DEGREES 54 MINUTES 54 SECONDS WEST 158.60 FT.; SOUTH 60 DEGREES 23 MINUTES 08 SECONDS WEST 137.51 FT.; SOUTH 63 DEGREES 46 MINUTES 56 SECONDS WEST 244.62 FT. TO A POINT IN THE CREEK (A WITNESS MONUMENT WITH AN ELM POINTER WAS SET ON THE BANK BEARING NORTH 34 DEGREES 30 MINUTES 05 SECONDS WEST 30.00 FT. DISTANT); THENCE CONTINUING ALONG THE CREEK SOUTH 49 DEGREES 00 MINUTES 27 SECONDS WEST 235.47 FT.; SOUTH 39 DEGREES 22 MINUTES 17 SECONDS WEST 167 FT.; NORTH 63 DEGREES 45 MINUTES 44 SECONDS WEST 211.23 FT.; NORTH 83 DEGREES 17 MINUTES 25 SECONDS WEST 232.16 FT. TO A POINT IN THE CREEK (A WITNESS MONUMENT WITH A POPLAR POINTER WAS SET ON THE BANK BEARING NORTH 04 DEGREES 07 MINUTES 59 SECONDS EAST 85.00 FT. DISTANT); THENCE CONTINUING WITH THE CREEK WITH GREGORY NEAT DEED BOOK 147 PAGE 83, NORTH 86 DEGREES 47 MINUTES 04 SECONDS WEST A DISTANCE OF 657.00 FT.; NORTH 78 DEGREES 32 MINUTES 46 SECONDS WEST 191.15 FT. TO A POINT IN THE CREEK; THENCE LEAVING THE CREEK WITH THE HOWARD HAGGARD ESTATE DEED BOOK 78 PAGE 587 TRACT 1, NORTH 45 DEGREES 46 MINUTES 41 SECONDS EAST (PASSING A WITNESS MONUMENT WITH A MAPLE POINTER SET AT 96.00 FT. AND A WITNESS MONUMENT SET ON THE SOUTH SIDE OF THE HAGGARD ROAD WITH A MAPLE POINTER AT 2,952.93 FT.) CROSSING THE ROAD TO A SURVEY MONUMENT SET WITH A SMALL BEECH AND HICKORY POINTERS ON A HILLSIDE; THENCE NORTH 37 DEGREES 46 MINUTES 41 SECONDS EAST 115.50 FT. TO A SURVEY MONUMENT SET WITH A WHITE OAK POINTER; THENCE NORTH 11 DEGREES 46 MINUTES 41 SECONDS EAST UP A FLAT RIDGE ON THE RIGHT SIDE OF A HOLLOW EAST OF A SPRING, A DISTANCE OF 547.49 FT. TO A SURVEY MONUMENT SET WITH A 22 IN. DIAMETER POPLAR MARKED AS A POINTER IN THE LINE OF HOWARD VAUGHT DEED BOOK 74 PAGE 17; THENCE WITH VAUGHT NORTH 86 DEGREES 27 MINUTES 32 SECONDS EAST 1,311.11 FT. TO A SURVEY MONUMENT SET AT A FENCE CORNER NEAR THE EDGE OF A FIELD COMMON TO ELWOOD HOSKINS DEED BOOK 84 PAGE 420 TRACT 2; THENCE SOUTH 01 DEGREES 53 MINUTES 00 SECONDS WEST ALONG OR NEAR A FENCE, A DISTANCE OF 225.01 FT. TO A SURVEY MONUMENT SET WITH A LARGE POPLAR AND MAPLE AS POINTERS JUST SOUTHWEST OF THE CORNER OF A FIELD; THENCE SOUTH 89 DEGREES 52 MINUTES 00 SECONDS EAST 379.13 FT. TO A SURVEY MONUMENT SET WITH TWO SMALL MAPLE POINTERS JUST SOUTHEAST OF THE EDGE OF A FIELD; THENCE NORTH 12 DEGREES 53 MINUTES 00 SECONDS EAST ALONG OR NEAR AN OLD FENCE LINE, A DISTANCE OF 783.75 FT. TO A SURVEY MONUMENT SET NORTHWEST OF THE INTERSECTION OF A FENCE; THENCE SOUTH 82 DEGREES 05 MINUTES 50 SECONDS EAST (PASSING A WITNESS MONUMENT SET AT 682.73) RUNNING NEAR A MEANDERING FENCE, A DISTANCE OF 1,053.13 FT. TO A SURVEY MONUMENT SET NEAR A LARGE MAPLE IN A FENCE CORNER; THENCE SOUTH 18 DEGREES 07 MINUTES 00 SECONDS EAST 610.50 FT. TO A LARGE ASH IN A FENCE CORNER (A WITNESS MONUMENT WAS SET BEARING NORTH 69 DEGREES 53 MINUTES 42 SECONDS WEST 15.10 FT. DISTANT); THENCE SOUTH 82 DEGREES 53 MINUTES 59 SECONDS EAST ALONG AN OLD FENCE (PASSING A WITNESS MONUMENT WITH A MAPLE POINTER SET AT 598.57 FT.) A DISTANCE OF 637.54 TO A POINT AT OR NEAR THE CENTERLINE INTERSECTION OF OLD KENTUCKY ROUTE NO. 35; THENCE ALONG THE CENTERLINE OF THE SAME NORTH 04 DEGREES 41 MINUTES 53 SECONDS WEST 111.28 FT.; NORTH 05 DEGREES 52 MINUTES 20 SECONDS EAST 92.96 FT.; NORTH 12 DEGREES 21 MINUTES 40 SECONDS EAST 80.34 FT.; NORTH 24 DEGREES 48 MINUTES 59 SECONDS EAST 231.21 FT.; NORTH 14 DEGREES 23 MINUTES 48 SECONDS EAST 113.45 FT.; NORTH 07 DEGREES 41 MINUTES 39 SECONDS EAST 191.25; NORTH 23 DEGREES 58 MINUTES 41 SECONDS EAST 66.82 FT.; NORTH 45 DEGREES 55 MINUTES 48 SECONDS EAST 34.39 FT.; NORTH 60 DEGREES 52 MINUTES 19 SECONDS EAST 71.27 FT. TO A POINT IN THE ROAD; THENCE LEAVING ROAD WITH THE ANTIOCH CEMETERY BOOK 53 PAGE 553 AND DEED BOOK 85 PAGE 592, SOUTH 17 DEGREES 17 MINUTES 00 SECONDS EAST (PASSING A LARGE MAPLE AT 26.83 FT. AND A WITNESS MONUMENT SET AT 33.43 FT.) A TOTAL DISTANCE OF 135.22 FT. TO A SURVEY MONUMENT SET; THENCE WITH A TRACT DEEDED BY THE HAGGARD FAMILY TO THE CEMETERY (NOT OF RECORD AT THIS TIME) SOUTH 06 DEGREES 00 MINUTES 03 SECONDS EAST 521.62 FT. TO A SURVEY MONUMENT SET APPROXIMATELY 50 FT. PERPENDICULARLY TO THE WEST FROM THE CENTERLINE OF A POWER LINE; THENCE NORTH 53 DEGREES 12 MINUTES 59 SECONDS EAST PARALLELING THE CENTERLINE OF THE POWER LINE AT 50 FT. TO THE NORTHWEST, A DISTANCE OF 310.63 FT. TO A SURVEY MONUMENT SET HAVING THE POSITION OF NORTH 1,965,266.89 FT., EAST 1,871,378.91 FT. ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM SOUTH ZONE (NAD 1983); THENCE NORTH 79 DEGREES 17 MINUTES 51 SECONDS EAST 137.99 FT. TO A SURVEY MONUMENT SET ON THE WEST SIDE OF THE ANTIOCH RIDGE ROAD AND ON THE WEST RIGHT OF WAY OF U.S. ROUTE NO. 127; THENCE WITH THE RIGHT OF WAY AT VARYING DISTANCES FROM THE CENTERLINE WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 1,178.24 FT., AND ARC OF 78.79 FT. WITH THE CHORD BEING DESCRIBED AS SOUTH 02 DEGREES 46 MINUTES 37 SECONDS EAST 78.77 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; THENCE SOUTH 13 DEGREES 22 MINUTES 48 SECONDS WEST 522.72 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; SOUTH 16 MINUTES 32 SECONDS WEST 416.41 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; SOUTH 40 DEGREES 01 MINUTES 50 SECONDS WEST 474.33 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; THENCE SOUTH 64 DEGREES 30 MINUTES 07 SECONDS WEST 418.38 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER ON THE EASTSIDE OF OLD KENTUCKY ROUTE NO. 35; THENCE WITH A RIGHT OF WAY OFFSET NORTH 46 DEGREES 42 MINUTES 16 SECONDS WEST 40.12 FT. CROSSING THE OLD HIGHWAY, A DISTANCE OF 40.12 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; THENCE A CONTINUING WITH THE RIGHT WAY SOUTH 57 DEGREES 32 MINUTES 45 SECONDS WEST 262.61 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; THENCE SOUTH 59 DEGREES 32 MINUTES 59 SECONDS WEST 501.24 FT. TO THE POINT OF BEGINNING CONTAINING 284.22 ACRES +/- SUBJECT TO COUNTY ROAD RIGHTS OF WAY AS SURVEYED AND PLATTED AT VARIOUS TIMES FROM SEPTEMBER 1998 TO JANUARY 2,2007 BY RICHARD ALLAN MONTGOMERY KENTUCKY LPLS #1953. A TRUE COPY OF SAID PLAT IS RECORDED IN PLAT CABINET 1 @ SLIDE 721 OFFICE OF THE CLERK OF CASEY COUNTY AT LIBERTY KENTUCKY AS A BINDING PART OF THIS INSTRUMENT AS IF ATTACHED HERETO.

## PARCEL TWO

LAND-IT: REPORT OF TITLE FOR SITE FA 14605585 PAGE 4 OF 12 HTTP://WWW.LAND-IT.COM/USTREPORTS/HTMLREPORTS/84691.HTM 10/4/2018 A CERTAIN PARCEL OF LAND LYING ON THE RIDGE BETWEEN THE TRACE, SOUTH FORKS AND THE MAIN CHANNEL OF GREEN RIVER ON THE EASTSIDE OF U.S. ROUTE NO. 127 AT THE JOB THE ANTIOCH RIDGE ROAD IN THE PHIL AREA OF CASEY COUNTY KENTUCKY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A P K. NAIL AND SURVEY IDENTIFICATION TAG (RAM LPLS #1953) SET IN THE EDGE OF THE PAVEMENT ON THE NORTHWEST SIDE OF THE ANTIOCH RIDGE COUNTY ROAD NEAR THE TOP OF THE HILL COMING FROM THE U.S. ROUTE NO. 127 JUNCTION AND ON THE EAST RIGHT OF WAY OF NEWLY CONSTRUCTED U.S. 127 (CIRCA 1990) THENCE ALONG THE RIGHT OF WAY SOUTH 11 DEGREES 17 MINUTES 20 SECONDS EAST [CROSSING THE ANTIOCH RIDGE ROAD (PASSING A WITNESS MONUMENT (5/8 DIAMETER REBAR WITH CAP STAMPED RAMSES PLS # 1953 BEING TYPICAL OF ALL MONUMENTS FOUND OR SET THIS SURVEY) SET AT 30.27 FT.) AND A POWER LINE, A TOTAL DISTANCE OF 288.40 FT. TO A SURVEY MONUMENT SET AT A FOUND CONCRETE RIGHT OF WAY MARKER; SOUTH 01 DEGREES 39 MINUTES 39 SECONDS EAST 95.56 FT. TO A SURVEY MONUMENT SET ON THE RIGHT OF WAY COMMON TO ANN THOMPSON AND JANE RATLIFF (NEE GADBERRY) DEED BOOK 78 PAGE 259 TRACT 1; THENCE LEAVING THE RIGHT OF WAY WITH THE LINES OF A TRACT DEEDED BY F. L. COMPTON (FORMER OWNER OF THE HAGGARD PROPERTY) TO J. F. GADBERRY IN DEED BOOK 51 PAGE 613, NORTH 17 DEGREES 47 MINUTES 02 SECONDS EAST 74.01 FT. TO A SURVEY MONUMENT SET; NORTH 36 DEGREES 17 MINUTES 02 SECONDS EAST CROSSING A POWER LINE, A DISTANCE OF 457.05 FT. TO A SURVEY MONUMENT SET WITH 2 MAPLE POINTERS; THENCE NORTH 36 DEGREES 42 MINUTES 58 SECONDS WEST 204.60 FT. TO A SURVEY MONUMENT SET SOUTH OF THE ANTIOCH RIDGE ROAD; THENCE NORTH 69 DEGREES 32 MINUTES 2 SECONDS EAST CROSSING THE ROAD, A DISTANCE OF 554.40 FT. TO A SURVEY MONUMENT SET WITH A BEECH POINTER ON THE NORTH SIDE OF THE ROAD; THENCE NORTH 74 DEGREES 47 MINUTES 2 SECONDS EAST (CROSSING THE ROAD AND A POWER LINE), A DISTANCE OF 643.50 FT. TO A SURVEY MONUMENT SET WITH A LARGE MAPLE AND SMALL CHERRY POINTER ON THE SOUTH SIDE OF ROAD; THENCE NORTH 59 DEGREES 02 MINUTES 02 SECONDS EAST 250.80 FT. TO A SURVEY MONUMENT SET; THEN NORTH 30 DEGREES 55 MINUTES 00 SECONDS EAST (GRADUALLY ANGLING BACK TOWARD THE ROAD), A DISTANCE OF 810.22 FT. TO A SURVEY MONUMENT SET WITH A WHITE OAK POINTER SOUTH OF THE ROAD COMMON TO C J BELL DEED BOOK 192 PAGE 472 PARCEL 1; THENCE NORTH 34 DEGREES 55 MINUTES 00 SECONDS WEST (CROSSING THE ROAD) 223.04 FT TO A SURVEY MONUMENT SET WITH A MAPLE POINTER NORTHWEST OF AN OLD BARBED WIRE FENCE; THENCE SOUTH 68 DEGREES 05 MINUTES 00 SECONDS WEST 808.50 FT. TO A SURVEY MONUMENT SET WITH AN 18 INCH DIAMETER HICKORY AS POINTER NEAR A FENCE CORNER AND THE SOUTHWEST EDGE OF AN OLD FIELD COMMON TO WILL R. FIGHTS DEED BOOK 70 PAGE 621; THENCE SOUTH 33 DEGREES 48 MINUTES 03 SECONDS WEST CROSSING A HOLLOW, STRIKING AN OLD FENCE LINE (PASSING A WITNESS MONUMENT SET AT 915.81 FT.) A DISTANCE OF 1732.16 FT. TO A SURVEY MONUMENT SET ON THE EAST RIGHT OF WAY OF U.S. ROUTE NO. 127 (A FOUND CONCRETE RIGHT OF WAY MARKER BEARS NORTH 78 DEGREES 48 MINUTES 35 SECONDS WEST 32.14 FT. DISTANT); THENCE ALONG THE RIGHT OF WAY SOUTH 78 DEGREES 48 MINUTES 35 SECONDS EAST 32.14 FT. TO THE POINT OF BEGINNING CONTAINING 28.51 ACRES +/- SUBJECT TO COUNTY ROAD RIGHT OF WAY AS SURVEYED AND PLATTED BY RICHARD ALLAN MONTGOMERY KENTUCKY LPLS #1953 FROM MAY 1998 TO MARCH 23, 2007. A TRUE COPY OF SAID PLAT IS RECORDED IN PLAT CABINET 1 @ SLIDE 722 OFFICE OF THE CLERK OF CASEY COUNTY AT LIBERTY KENTUCKY AS A BINDING PART OF THIS INSTRUMENT AS IF ATTACHED HERE TO.

# TITLE EXCEPTIONS

PREPARED FOR:



10801 EXECUTIVE CENTER DR,  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PROJECT INFORMATION:

**PHIL (DUNVILLE RELO)  
14605585**

74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PREPARED BY:

**TEP OPCO, LLC**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
(919) 661-6351  
COA # 940

# SURVEYOR CERTIFICATE

I, TIMOTHY L. FISH, CERTIFY THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE TO THE SURVEYING STANDARDS OF THE COMMONWEALTH OF KENTUCKY, THIS 30TH DAY OF MAY, 2019.



*Timothy L. Fish*

**TIMOTHY L. FISH**  
COMMONWEALTH OF KENTUCKY  
PROFESSIONAL LAND SURVEYOR  
LIC. NO. 4178

SHEET TITLE:

# TITLE EXCEPTIONS

DATE: 05/30/2019 REVISION: 2  
SHEET #: 5 OF 5 TEP #: 13385



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





March 25, 2019

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

RE: Site Name – Dunnville  
Proposed Cell Tower  
37 13 26.77 North Latitude, 84 57 18.92 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  
Construction Manager – Tennessee/Kentucky Market  
Uniti Towers LLC  
(985) 707-6175



**Structural Design Report**

230' S3TL Series HD1 Self-Supporting Tower

Site: Phil, KY

Site Number: 14605584

Prepared for: UNITI TOWERS/CS&L

by: Sabre Towers & Poles™

Job Number: 19-8207-JAC

Revision A

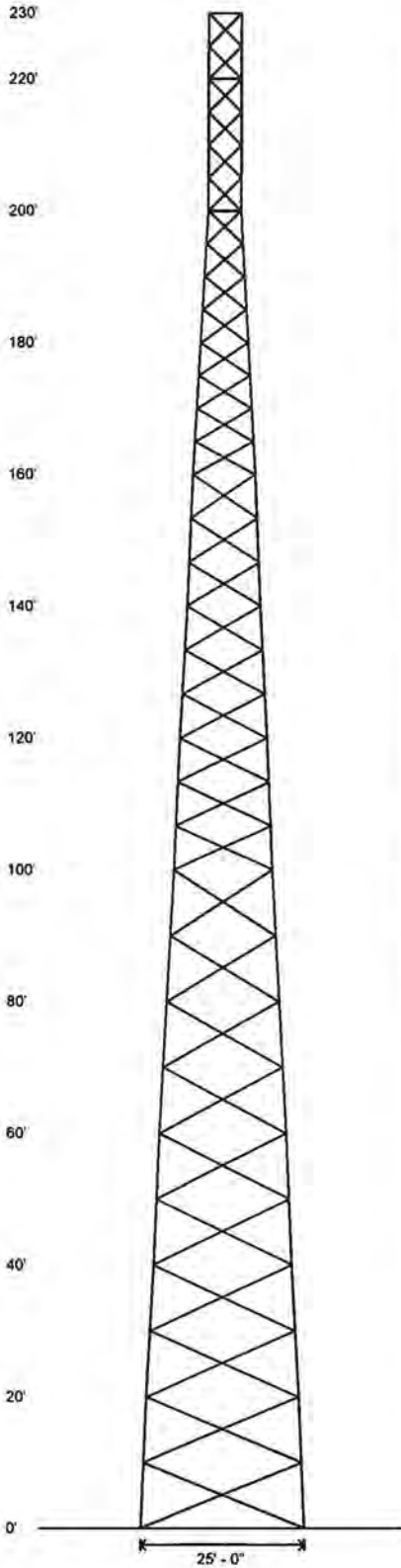
May 15, 2019

Tower Profile.....	1
Foundation Design Summary (Preliminary) (Option 1).....	2
Foundation Design Summary (Preliminary) (Option 2).....	3
Maximum Leg Loads.....	4
Maximum Diagonal Loads.....	5
Maximum Foundation Loads.....	6
Calculations.....	7-23





Legs	8.625 OD X .500	8.625 OD X .322	5.563 OD X .500	4.500 OD X .337	4.000 OD X .318	2.875 OD X .276	A
Diagonals	L 4 X 4 X 1/4	L 3 1/2 X 3 1/2 X 1/4	L 3 X 3 X 3/16	L 2 X 2 X 3/16	L 2 X 2 X 1/8	L 2 X 2 X 3/16	C
Horizontals			NONE			NONE	D E C
Brace Bolts	(2) 5/8"	(1) 3/4"		(1) 5/8"			
Top Face Width	23'	19'	15'	13'	11'	7'	5'
Panel Count/Height	5313	4654	3009	3145	2309	1598	1416
Section Weight							1175
							408



### Designed Appurtenance Loading

Elev	Description	Tx-Line
225		(6) 1 1/2"
225	(1) 40,000 sq. in. antenna loading (below top)	(9) 1 5/8"
213		(6) 1 1/2"
213	(1) 30,000 sq. in. antenna loading (below top)	(9) 1 5/8"
201		(8) 1 1/2"
201	(1) 30,000 sq. in. antenna loading (below top)	(9) 1 5/8"
189	(2) Leg Dish Mount	
189	(2) 6' Solid Dish W/ Radome	(2) 1 5/8"
177	(2) Leg Dish Mount	
177	(2) 6' Solid Dish W/ Radome	(2) 1 5/8"

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

Wind Speed (No Ice)	105 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	970 ft

### Base Reactions

Total Foundation		Individual Footing	
Shear (kips)	59.15	Shear (kips)	36.51
Axial (kips)	163.57	Compression (kips)	406
Moment (ft-kips)	8313	Uplift (kips)	354
Torsion (ft-kips)	22.55		

### Material List

Display	Value
A	2.375 OD X .154
B	L 2 1/2 X 2 1/2 X 3/16
C	L 2 X 2 X 1/8
D	L 2 X 2 X 3/16
E	NONE

### Notes

- 1) All legs are A500 (50 ksi Min. Yield).
- 2) All braces are A572 Grade 50.
- 3) All brace bolts are A325-X.
- 4) The tower model is S3TL Series HD1.
- 5) Transmission lines are to be attached to standard 12 hole waveguide ladders with stackable hangers.
- 6) Azimuths are relative (not based on true north).
- 7) Foundation loads shown are maximums.
- 8) All unequal angles are oriented with the short leg vertical.
- 9) Weights shown are estimates. Final weights may vary.
- 10) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2018 Kentucky Building Code.
- 11) Tower Rating: 97.13%



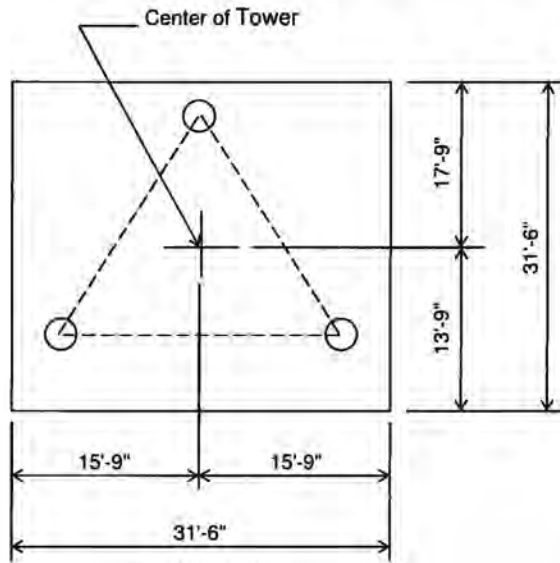
Sabre Communications Corporation  
7101 Southbridge Drive  
P.O. Box 658  
Sioux City, IA 51102-0658  
Phone (712) 256-6990  
Fax (712) 274-8814

Job: 19-8207-JAC-RA  
Customer: UNITI TOWERS/CS&L  
Site Name: Phil, KY 14605584  
Description: 230' S3TL  
Date: 5/15/2019 By: REB

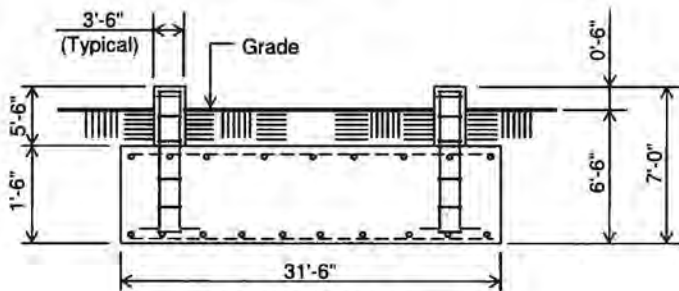
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**Customer: UNITI TOWERS/CS&L**  
**Site: Phil, KY 14605584**  
230 ft. Model S3TL Series HD1 Self Supporting Tower

**PRELIMINARY -NOT FOR CONSTRUCTION-**



**PLAN VIEW**



**ELEVATION VIEW**

(61.0 cu. yds.)  
(1 REQD.; NOT TO SCALE)

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

**Notes:**

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6) 5' of soil cover is required over the entire area of the foundation slab.
- 7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule per Mat and per Pier	
<b>Pier</b>	(18) #7 vertical rebar w/ hooks at bottom w/ #4 rebar ties, two (2) within top 5" of pier then 4" C/C
<b>Mat</b>	(62) #8 horizontal rebar evenly spaced each way top and bottom. (248 total)
Anchor Bolts per Leg	
(6) 1.5" dia. x 78" F1554-105 on a 13.25" B.C. w/ 9.5" max. projection above concrete.	

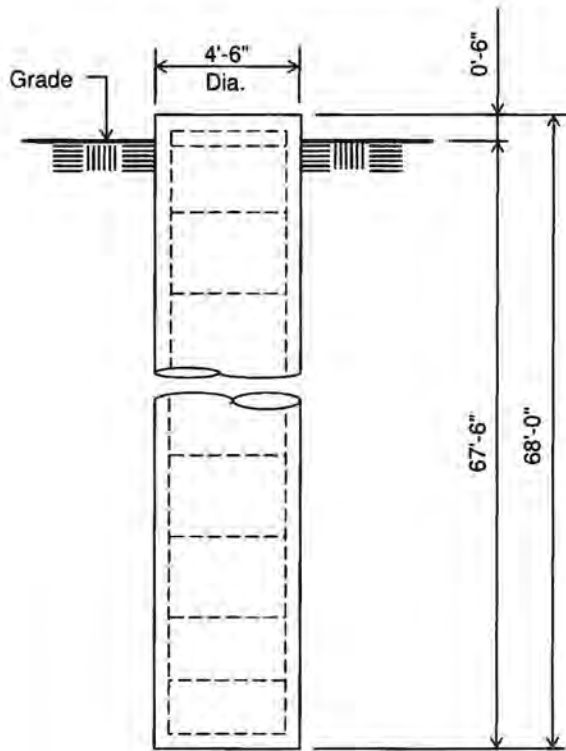


**Customer: UNITI TOWERS/CS&L**

**Site: Phil, KY 14605584**

230 ft. Model S3TL Series HD1 Self Supporting Tower

**PRELIMINARY -NOT FOR CONSTRUCTION-**



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**ELEVATION VIEW**

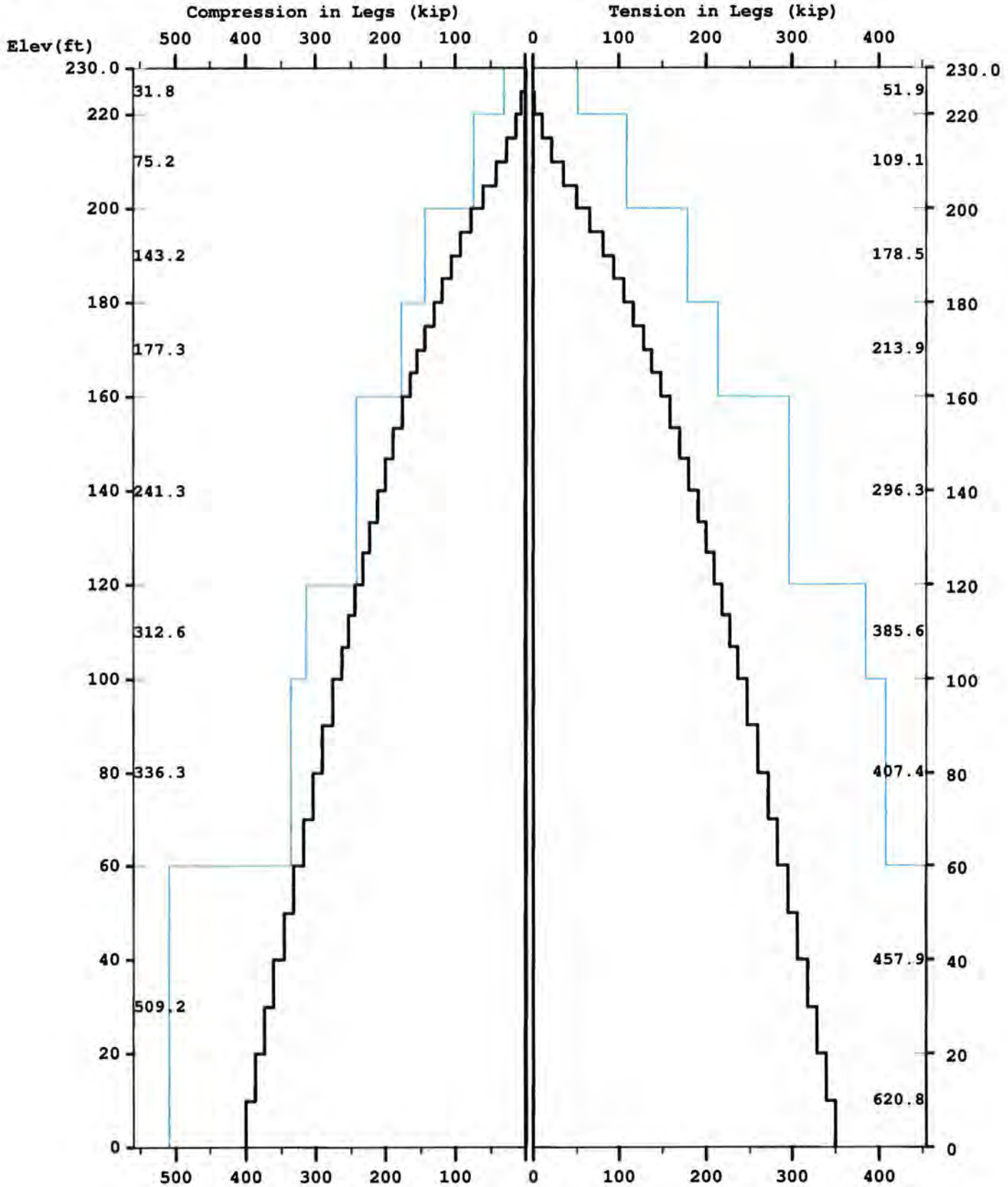
(40.1 cu. yds.)

(3 REQUIRED; NOT TO SCALE)

Rebar Schedule per Pier	
Pier	(14) #9 vertical rebar w/ #4 ties, two (2) within top 5" of pier then 12" C/C
Anchor Bolts per Leg	
	(6) 1.5" dia. x 78" F1554-105 on a 13.25" B.C. w/ 9.5" max. projection above concrete.

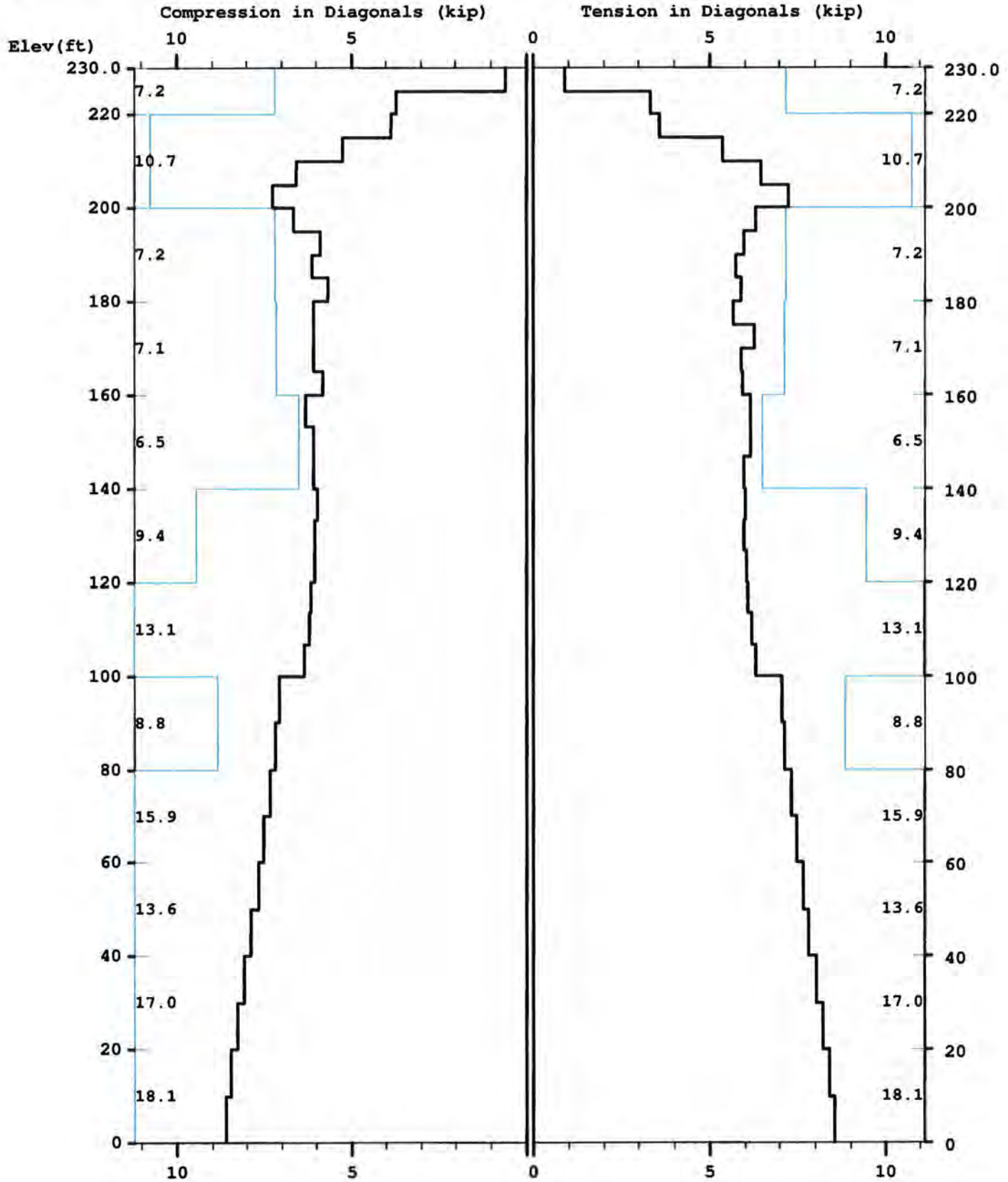
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Maximum



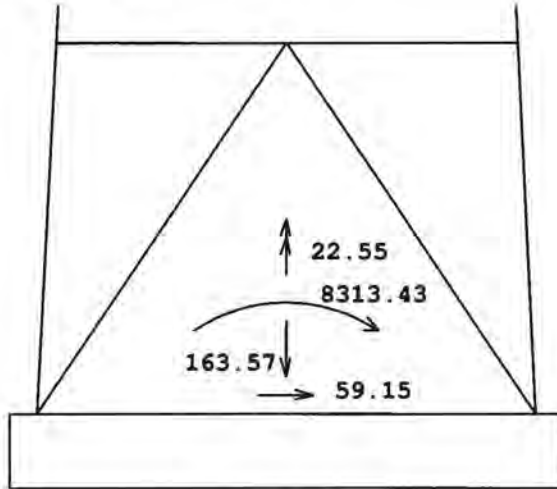


Maximum

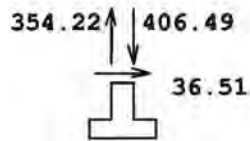
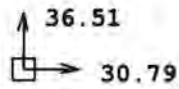


Maximum

TOTAL FOUNDATION LOADS (kip, ft-kip)



INDIVIDUAL FOOTING LOADS (kip)





Latticed Tower Analysis (Unguyed)  
 Processed under license at:

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Sabre Towers and Poles

on: 15 may 2019 at: 8:29:44

MAST GEOMETRY ( ft )

PANEL TYPE	NO.OF LEGS	ELEV.AT BOTTOM	ELEV.AT TOP	F.W..AT BOTTOM	F.W..AT TOP	TYPICAL PANEL HEIGHT
X	3	225.00	230.00	5.00	5.00	5.00
X	3	220.00	225.00	5.00	5.00	5.00
X	3	215.00	220.00	5.00	5.00	5.00
X	3	200.00	215.00	5.00	5.00	5.00
X	3	195.00	200.00	5.50	5.00	5.00
X	3	180.00	195.00	7.00	5.50	5.00
X	3	160.00	180.00	9.00	7.00	5.00
X	3	140.00	160.00	11.00	9.00	6.67
X	3	120.00	140.00	13.00	11.00	6.67
X	3	100.00	120.00	15.00	13.00	6.67
X	3	80.00	100.00	17.00	15.00	10.00
X	3	60.00	80.00	19.00	17.00	10.00
X	3	40.00	60.00	21.00	19.00	10.00
X	3	20.00	40.00	23.00	21.00	10.00
X	3	0.00	20.00	25.00	23.00	10.00

MEMBER PROPERTIES

MEMBER TYPE	BOTTOM ELEV ft	TOP ELEV ft	X-SECTN AREA in.sq	RADIUS OF GYRAT in	ELASTIC MODULUS ksi	THERMAL EXPANSN /deg
LE	220.00	230.00	1.075	0.787	29000.	0.0000117
LE	200.00	220.00	2.254	0.787	29000.	0.0000117
LE	180.00	200.00	3.678	0.787	29000.	0.0000117
LE	160.00	180.00	4.407	0.787	29000.	0.0000117
LE	120.00	160.00	6.111	0.787	29000.	0.0000117
LE	100.00	120.00	7.952	0.787	29000.	0.0000117
LE	60.00	100.00	8.399	0.787	29000.	0.0000117
LE	0.00	60.00	12.763	0.787	29000.	0.0000117
DI	220.00	230.00	0.484	0.626	29000.	0.0000117
DI	200.00	220.00	0.715	0.626	29000.	0.0000117
DI	160.00	200.00	0.484	0.626	29000.	0.0000117
DI	140.00	160.00	0.715	0.626	29000.	0.0000117
DI	120.00	140.00	0.902	0.626	29000.	0.0000117
DI	80.00	120.00	1.090	0.626	29000.	0.0000117
DI	40.00	80.00	1.688	0.626	29000.	0.0000117
DI	0.00	40.00	1.938	0.626	29000.	0.0000117
HO	225.00	230.00	0.484	0.626	29000.	0.0000117
HO	215.00	220.00	0.715	0.626	29000.	0.0000117
HO	195.00	200.00	0.484	0.626	29000.	0.0000117

FACTORED MEMBER RESISTANCES

BOTTOM ELEV ft	TOP ELEV ft	LEGS		DIAGONALS		HORIZONTALS		INT BRACING	
		COMP kip	TENS kip	COMP kip	TENS kip	COMP kip	TENS kip	COMP kip	TENS kip
225.0	230.0	31.84	51.90	7.16	7.16	7.16	7.16	0.00	0.00
220.0	225.0	31.84	51.90	7.16	7.16	0.00	0.00	0.00	0.00
215.0	220.0	75.23	109.12	10.74	10.74	10.72	10.72	0.00	0.00
200.0	215.0	75.23	109.12	10.74	10.74	0.00	0.00	0.00	0.00
195.0	200.0	143.18	178.48	7.16	7.16	7.16	7.16	0.00	0.00
180.0	195.0	143.18	178.48	7.16	7.16	0.00	0.00	0.00	0.00
160.0	180.0	177.29	213.88	7.13	7.13	0.00	0.00	0.00	0.00
140.0	160.0	241.28	296.33	6.51	6.51	0.00	0.00	0.00	0.00
120.0	140.0	241.28	296.33	9.45	9.45	0.00	0.00	0.00	0.00
100.0	120.0	312.59	385.58	13.10	13.10	0.00	0.00	0.00	0.00
80.0	100.0	336.31	407.40	8.84	8.84	0.00	0.00	0.00	0.00
60.0	80.0	336.31	407.40	15.88	15.88	0.00	0.00	0.00	0.00

19-8207-JAC-RA									
40.0	60.0	509.22	457.90	13.59	13.59	0.00	0.00	0.00	0.00
20.0	40.0	509.22	457.90	17.02	17.02	0.00	0.00	0.00	0.00
0.0	20.0	509.22	620.80	18.13	18.13	0.00	0.00	0.00	0.00

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

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LOADING CONDITION A

105 mph wind with no ice. Wind Azimuth: 0°

MAST LOADING

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	225.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	225.0	0.00	0.0	0.0	6.57	7.20	0.00	0.00
C	213.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	213.0	0.00	0.0	0.0	4.87	4.80	0.00	0.00
C	201.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	201.0	0.00	0.0	0.0	4.81	4.80	0.00	0.00
D	230.0	0.00	180.0	0.0	0.06	0.04	0.00	0.00
D	225.0	0.00	180.0	0.0	0.06	0.04	0.00	0.00
D	225.0	0.00	42.0	0.0	0.10	0.05	0.04	0.08
D	220.0	0.00	42.0	0.0	0.10	0.05	0.04	0.08
D	220.0	0.00	42.0	0.0	0.11	0.09	0.04	0.08
D	215.0	0.00	42.0	0.0	0.11	0.09	0.04	0.08
D	215.0	0.00	53.9	0.0	0.12	0.09	0.05	0.09
D	210.0	0.00	53.9	0.0	0.12	0.09	0.05	0.09
D	210.0	0.00	59.8	0.0	0.13	0.10	0.06	0.10
D	200.0	0.00	66.3	0.0	0.13	0.10	0.06	0.10
D	200.0	0.00	93.6	0.0	0.15	0.13	0.06	0.10
D	190.0	0.00	96.0	0.0	0.14	0.13	0.06	0.09
D	190.0	0.00	93.0	0.0	0.15	0.13	0.07	0.10
D	180.0	0.00	93.9	0.0	0.15	0.13	0.07	0.10
D	180.0	0.00	86.3	0.0	0.15	0.14	0.07	0.09
D	175.0	0.00	86.3	0.0	0.15	0.14	0.07	0.09
D	175.0	0.00	83.5	0.0	0.17	0.15	0.06	0.07
D	160.0	0.00	85.9	0.0	0.17	0.15	0.05	0.06
D	160.0	0.00	78.7	0.0	0.16	0.18	0.07	0.07
D	140.0	0.00	81.0	0.0	0.17	0.18	0.06	0.07
D	140.0	0.00	74.9	0.0	0.17	0.19	0.09	0.08
D	120.0	0.00	76.6	0.0	0.18	0.19	0.08	0.07
D	120.0	0.00	72.2	0.0	0.19	0.23	0.10	0.08
D	100.0	0.00	73.5	0.0	0.19	0.23	0.09	0.08
D	100.0	0.00	70.2	0.0	0.18	0.22	0.11	0.08
D	80.0	0.00	71.0	0.0	0.18	0.23	0.11	0.08
D	80.0	0.00	68.6	0.0	0.18	0.26	0.13	0.08
D	60.0	0.00	69.2	0.0	0.18	0.26	0.12	0.08
D	60.0	0.00	67.3	0.0	0.18	0.32	0.14	0.08
D	40.0	0.00	67.8	0.0	0.18	0.32	0.13	0.09
D	40.0	0.00	66.2	0.0	0.18	0.34	0.16	0.08
D	20.0	0.00	66.7	0.0	0.18	0.34	0.15	0.09
D	20.0	0.00	65.4	0.0	0.16	0.35	0.17	0.08
D	0.0	0.00	65.7	0.0	0.16	0.35	0.16	0.08

ANTENNA LOADING

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT		.....ANTENNA FORCES.....			
			RAD ft	AZI	AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
STD+R	189.0	0.0	5.0	0.0	0.69	0.00	0.24	0.00
STD+R	189.0	180.0	5.0	120.0	-0.56	0.00	0.24	0.00
STD+R	177.0	0.0	5.7	0.0	0.69	0.00	0.24	0.00
STD+R	177.0	180.0	5.7	120.0	-0.55	0.00	0.24	0.00

LOADING CONDITION M



105 mph wind with no ice, wind Azimuth: 0°

MAST LOADING

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LOAD TYPE	ELEV ft	APPLY.. RADIUS ft	LOAD..AT AZI	LOAD AZI	..... FORCES.....		..... MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	225.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	225.0	0.00	0.0	0.0	6.57	5.40	0.00	0.00
C	213.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	213.0	0.00	0.0	0.0	4.87	3.60	0.00	0.00
C	201.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	201.0	0.00	0.0	0.0	4.81	3.60	0.00	0.00
D	230.0	0.00	180.0	0.0	0.06	0.03	0.00	0.00
D	225.0	0.00	180.0	0.0	0.06	0.03	0.00	0.00
D	225.0	0.00	42.0	0.0	0.10	0.04	0.03	0.08
D	220.0	0.00	42.0	0.0	0.10	0.04	0.03	0.08
D	220.0	0.00	42.0	0.0	0.11	0.06	0.03	0.08
D	215.0	0.00	42.0	0.0	0.11	0.06	0.03	0.08
D	215.0	0.00	53.9	0.0	0.12	0.07	0.04	0.09
D	210.0	0.00	53.9	0.0	0.12	0.07	0.04	0.09
D	210.0	0.00	59.8	0.0	0.13	0.07	0.04	0.10
D	200.0	0.00	66.3	0.0	0.13	0.08	0.04	0.10
D	200.0	0.00	93.9	0.0	0.15	0.09	0.04	0.10
D	175.0	0.00	86.0	0.0	0.15	0.10	0.05	0.09
D	175.0	0.00	83.5	0.0	0.17	0.11	0.05	0.07
D	160.0	0.00	85.9	0.0	0.17	0.11	0.04	0.06
D	160.0	0.00	78.7	0.0	0.16	0.13	0.05	0.07
D	140.0	0.00	81.0	0.0	0.17	0.13	0.05	0.07
D	140.0	0.00	74.9	0.0	0.17	0.14	0.06	0.08
D	120.0	0.00	76.6	0.0	0.18	0.15	0.06	0.07
D	120.0	0.00	72.2	0.0	0.19	0.17	0.08	0.08
D	100.0	0.00	73.5	0.0	0.19	0.18	0.07	0.08
D	100.0	0.00	70.2	0.0	0.18	0.17	0.08	0.08
D	80.0	0.00	71.0	0.0	0.18	0.17	0.08	0.08
D	80.0	0.00	68.6	0.0	0.18	0.19	0.10	0.08
D	60.0	0.00	69.2	0.0	0.18	0.20	0.09	0.08
D	60.0	0.00	67.3	0.0	0.18	0.24	0.11	0.08
D	40.0	0.00	67.8	0.0	0.18	0.24	0.10	0.09
D	40.0	0.00	66.2	0.0	0.18	0.25	0.12	0.08
D	20.0	0.00	66.7	0.0	0.18	0.26	0.11	0.09
D	20.0	0.00	65.4	0.0	0.16	0.26	0.13	0.08
D	0.0	0.00	65.7	0.0	0.16	0.26	0.12	0.08

ANTENNA LOADING

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..... ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT		..... ANTENNA FORCES.....			
			RAD ft	AZI	AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
STD+R	189.0	0.0	5.0	0.0	0.69	0.00	0.18	0.00
STD+R	189.0	180.0	5.0	120.0	-0.56	0.00	0.18	0.00
STD+R	177.0	0.0	5.7	0.0	0.69	0.00	0.18	0.00
STD+R	177.0	180.0	5.7	120.0	-0.55	0.00	0.18	0.00

LOADING CONDITION Y

30 mph wind with 1.5 ice, wind Azimuth: 0°

MAST LOADING

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LOAD TYPE	ELEV ft	APPLY.. RADIUS ft	LOAD..AT AZI	LOAD AZI	..... FORCES.....		..... MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	225.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	225.0	0.00	0.0	0.0	0.73	12.65	0.00	0.00
C	213.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	213.0	0.00	0.0	0.0	0.55	8.41	0.00	0.00

19-8207-JAC-RA								
C	201.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	201.0	0.00	0.0	0.0	0.55	8.39	0.00	0.00
D	230.0	0.00	180.0	0.0	0.01	0.18	0.00	0.00
D	225.0	0.00	180.0	0.0	0.01	0.18	0.00	0.00
D	225.0	0.00	42.0	0.0	0.01	0.24	0.20	0.01
D	220.0	0.00	42.0	0.0	0.01	0.24	0.20	0.01
D	220.0	0.00	42.0	0.0	0.01	0.30	0.20	0.01
D	215.0	0.00	42.0	0.0	0.01	0.30	0.20	0.01
D	215.0	0.00	58.7	0.0	0.01	0.31	0.20	0.01
D	210.0	0.00	58.7	0.0	0.01	0.31	0.20	0.01
D	210.0	0.00	69.1	0.0	0.01	0.34	0.21	0.01
D	205.0	0.00	69.1	0.0	0.01	0.34	0.21	0.01
D	205.0	0.00	75.3	0.0	0.01	0.35	0.21	0.01
D	200.0	0.00	75.3	0.0	0.01	0.35	0.21	0.01
D	200.0	0.00	99.5	0.0	0.02	0.44	0.23	0.01
D	195.0	0.00	99.5	0.0	0.02	0.44	0.23	0.01
D	195.0	0.00	101.9	0.0	0.02	0.41	0.21	0.01
D	190.0	0.00	101.9	0.0	0.02	0.41	0.21	0.01
D	190.0	0.00	97.3	0.0	0.02	0.42	0.25	0.01
D	180.0	0.00	97.9	0.0	0.02	0.43	0.25	0.01
D	180.0	0.00	89.3	0.0	0.02	0.46	0.25	0.01
D	175.0	0.00	89.3	0.0	0.02	0.46	0.25	0.01
D	175.0	0.00	83.6	0.0	0.02	0.48	0.19	0.00
D	170.0	0.00	83.6	0.0	0.02	0.48	0.19	0.00
D	170.0	0.00	84.6	0.0	0.02	0.49	0.18	0.00
D	165.0	0.00	84.6	0.0	0.02	0.49	0.18	0.00
D	165.0	0.00	85.6	0.0	0.02	0.49	0.17	0.00
D	160.0	0.00	85.6	0.0	0.02	0.49	0.17	0.00
D	160.0	0.00	79.2	0.0	0.02	0.51	0.23	0.00
D	153.3	0.00	79.2	0.0	0.02	0.51	0.23	0.00
D	153.3	0.00	80.2	0.0	0.02	0.51	0.22	0.00
D	146.7	0.00	80.2	0.0	0.02	0.51	0.22	0.00
D	146.7	0.00	81.1	0.0	0.02	0.52	0.20	0.00
D	140.0	0.00	81.1	0.0	0.02	0.52	0.20	0.00
D	140.0	0.00	75.8	0.0	0.02	0.55	0.28	0.00
D	133.3	0.00	75.8	0.0	0.02	0.55	0.28	0.00
D	133.3	0.00	76.6	0.0	0.02	0.56	0.26	0.00
D	126.7	0.00	76.6	0.0	0.02	0.56	0.26	0.00
D	126.7	0.00	77.3	0.0	0.02	0.56	0.25	0.00
D	120.0	0.00	77.3	0.0	0.02	0.56	0.25	0.00
D	120.0	0.00	73.4	0.0	0.02	0.62	0.32	0.00
D	100.0	0.00	74.5	0.0	0.02	0.63	0.29	0.00
D	100.0	0.00	71.7	0.0	0.02	0.59	0.36	0.00
D	90.0	0.00	71.7	0.0	0.02	0.59	0.36	0.00
D	90.0	0.00	72.4	0.0	0.02	0.60	0.34	0.00
D	80.0	0.00	72.4	0.0	0.02	0.60	0.34	0.00
D	80.0	0.00	70.3	0.0	0.02	0.65	0.41	0.00
D	70.0	0.00	70.3	0.0	0.02	0.65	0.41	0.00
D	70.0	0.00	70.8	0.0	0.02	0.66	0.39	0.00
D	60.0	0.00	70.8	0.0	0.02	0.66	0.39	0.00
D	60.0	0.00	69.2	0.0	0.02	0.71	0.45	0.00
D	40.0	0.00	69.6	0.0	0.02	0.72	0.43	0.00
D	40.0	0.00	68.3	0.0	0.02	0.75	0.49	0.00
D	20.0	0.00	68.6	0.0	0.02	0.75	0.47	0.00
D	20.0	0.00	67.8	0.0	0.02	0.77	0.60	0.00
D	10.0	0.00	67.8	0.0	0.02	0.77	0.60	0.00
D	10.0	0.00	68.3	0.0	0.02	0.84	0.74	0.00
D	0.0	0.00	68.3	0.0	0.02	0.84	0.74	0.00

ANTENNA LOADING

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.....ANTENNA.....	ATTACHMENT				.....ANTENNA FORCES.....			
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
STD+R	189.0	0.0	5.0	0.0	0.06	0.00	0.81	0.00
STD+R	189.0	180.0	5.0	120.0	-0.05	0.00	0.81	0.00
STD+R	177.0	0.0	5.7	0.0	0.06	0.00	0.81	0.00
STD+R	177.0	180.0	5.7	120.0	-0.05	0.00	0.81	0.00

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MAXIMUM ANTENNA AND REFLECTOR ROTATIONS:

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ELEV	AZI	TYPE	.....BEAM DEFLECTIONS (deg).....			
ft	deg	*	PITCH	YAW	ROLL	TOTAL
189.0	0.0	STD+R	-1.295 J	0.104 P	-1.430 G	1.298 D



189.0	180.0	STD+R	1.295	J	0.104	P	1.430	G	1.298	D
177.0	0.0	STD+R	-1.137	J	0.089	P	-1.262	G	1.139	D
177.0	180.0	STD+R	1.137	J	0.089	P	1.262	G	1.139	D

19-8207-JAC-RA

MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
230.0	-----	-----	0.39 M	0.00 A
	0.22 S	0.89 G		
225.0	-----	-----	0.09 G	0.00 A
	1.83 M	3.34 M		
220.0	-----	-----	1.55 A	0.00 A
	10.35 M	3.59 M		
215.0	-----	-----	0.20 A	0.00 A
	20.66 M	5.36 H		
210.0	-----	-----	0.07 S	0.00 A
	34.55 M	6.46 T		
205.0	-----	-----	0.29 A	0.00 A
	50.89 M	7.24 H		
200.0	-----	-----	0.80 S	0.00 A
	66.05 M	6.32 M		
195.0	-----	-----	0.30 I	0.00 A
	80.94 M	5.99 H		
190.0	-----	-----	0.04 S	0.00 A
	93.22 M	5.77 T		
185.0	-----	-----	0.24 I	0.00 A
	105.64 M	5.91 F		
180.0	-----	-----	0.06 M	0.00 A
	116.78 M	5.67 R		
175.0	-----	-----	0.15 A	0.00 A
	127.62 M	6.26 F		
170.0	-----	-----	0.10 A	0.00 A
	137.93 M	5.89 R		
165.0	-----	-----	0.12 A	0.00 A
	147.69 M	5.92 F		
160.0	-----	-----	0.11 A	0.00 A
	158.17 M	6.17 R		
153.3	-----	-----	0.13 A	0.00 A
	169.61 M	6.15 F		
146.7	-----	-----	0.10 A	0.00 A
	180.29 M	5.98 R		
140.0	-----	-----	0.11 A	0.00 A
	190.51 M	6.03 F		
133.3	-----	-----	0.07 A	0.00 A
	200.26 M	5.97 R		
126.7	-----	-----	0.10 A	0.00 A
	209.68 M	6.06 F		
120.0	-----	-----	0.07 A	0.00 A
	218.79 M	6.09 R		
113.3	-----	-----	0.13 A	0.00 A
	227.63 M	6.21 F		
106.7	-----	-----	0.05 A	0.00 A
	236.35 M	6.30 R		
100.0	-----	-----	0.12 A	0.00 A
	246.82 M	7.04 F		
90.0	-----	-----	0.12 A	0.00 A
	259.35 M	7.14 R		
80.0	-----	-----	0.07 A	0.00 A
	271.41 M	7.30 F		
70.0	-----	-----	0.10 A	0.00 A
	283.28 M	7.45 R		
60.0	-----	-----	0.06 A	0.00 A
	294.82 M	7.65 F		
50.0	-----	-----	0.06 A	0.00 A
	306.13 M	7.82 R		
40.0	-----	-----	0.06 A	0.00 A
	317.23 M	8.03 F		
30.0	-----	-----	0.05 A	0.00 A
	328.17 M	8.22 R		
20.0	-----	-----	0.00 A	0.00 A
	338.95 M	8.42 F		
10.0	-----	-----	0.05 A	0.00 A
	349.51 M	8.55 R		
0.0	-----	-----	0.00 A	0.00 A

## MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
230.0	----- -0.69 A	----- -0.59 M	-0.59 G	0.00 A
225.0	----- -5.80 G	----- -3.72 G	-0.05 M	0.00 A
220.0	----- -14.80 G	----- -3.87 G	-1.15 S	0.00 A
215.0	----- -27.69 G	----- -5.25 N	-0.13 S	0.00 A
210.0	----- -42.88 G	----- -6.56 H	-0.08 A	0.00 A
205.0	----- -60.42 G	----- -7.26 H	-0.21 S	0.00 A
200.0	----- -78.11 G	----- -6.65 G	-0.99 I	0.00 A
195.0	----- -94.03 G	----- -5.89 N	-0.23 S	0.00 A
190.0	----- -106.77 G	----- -6.13 F	-0.04 A	0.00 A
185.0	----- -120.30 G	----- -5.68 R	-0.18 S	0.00 A
180.0	----- -131.70 G	----- -6.09 F	-0.07 C	0.00 A
175.0	----- -143.85 G	----- -6.07 R	-0.11 S	0.00 A
170.0	----- -154.46 G	----- -6.09 F	-0.10 S	0.00 A
165.0	----- -165.15 G	----- -5.80 R	-0.10 S	0.00 A
160.0	----- -176.19 G	----- -6.32 F	-0.10 S	0.00 A
153.3	----- -188.85 G	----- -6.07 R	-0.11 S	0.00 A
146.7	----- -200.36 G	----- -6.09 F	-0.09 S	0.00 A
140.0	----- -211.76 G	----- -5.98 R	-0.09 S	0.00 A
133.3	----- -222.47 G	----- -6.05 F	-0.06 S	0.00 A
126.7	----- -233.07 G	----- -6.03 R	-0.08 S	0.00 A
120.0	----- -243.29 G	----- -6.16 F	-0.06 S	0.00 A
113.3	----- -253.46 G	----- -6.21 F	-0.11 S	0.00 A
106.7	----- -263.45 G	----- -6.34 F	-0.05 S	0.00 A
100.0	----- -275.55 G	----- -7.07 F	-0.10 S	0.00 A
90.0	----- -290.01 G	----- -7.19 F	-0.10 S	0.00 A
80.0	----- -304.15 G	----- -7.33 F	-0.06 S	0.00 A
70.0	----- -318.18 G	----- -7.52 F	-0.09 S	0.00 A
60.0	----- -332.13 G	----- -7.68 F	-0.05 S	0.00 A
50.0	----- -345.99 G	----- -7.88 F	-0.05 S	0.00 A
40.0	----- -359.76 G	----- -8.06 F	-0.05 S	0.00 A
30.0	----- -373.44 G	----- -8.28 F	-0.04 S	0.00 A
20.0	----- -387.03 G	----- -8.44 F	0.00 S	0.00 A
10.0	----- -400.39 G	----- -8.62 F	-0.04 S	0.00 A
0.0	-----	-----	0.00 A	0.00 A

FORCE/RESISTANCE RATIO IN LEGS



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MAST ELEV ft	-- LEG COMPRESSION --			---- LEG TENSION ----		
	MAX COMP	COMP RESIST	FORCE/ RESIST RATIO	MAX TENS	TENS RESIST	FORCE/ RESIST RATIO
230.00	0.69	31.84	0.02	0.22	51.90	0.00
225.00	5.80	31.84	0.18	1.83	51.90	0.04
220.00	14.80	75.23	0.20	10.35	109.12	0.09
215.00	27.69	75.23	0.37	20.66	109.12	0.19
210.00	42.88	75.23	0.57	34.55	109.12	0.32
205.00	60.42	75.23	0.80	50.89	109.12	0.47
200.00	78.11	143.18	0.55	66.05	178.48	0.37
195.00	94.03	143.18	0.66	80.94	178.48	0.45
190.00	106.77	143.18	0.75	93.22	178.48	0.52
185.00	120.30	143.18	0.84	105.64	178.48	0.59
180.00	131.70	177.29	0.74	116.78	213.88	0.55
175.00	143.85	177.29	0.81	127.62	213.88	0.60
170.00	154.46	177.29	0.87	137.93	213.88	0.64
165.00	165.15	177.29	0.93	147.69	213.88	0.69
160.00	176.19	241.28	0.73	158.17	296.33	0.53
153.33	188.85	241.28	0.78	169.61	296.33	0.57
146.67	200.36	241.28	0.83	180.29	296.33	0.61
140.00	211.76	241.28	0.88	190.51	296.33	0.64
133.33	222.47	241.28	0.92	200.26	296.33	0.68
126.67	233.07	241.28	0.97	209.68	296.33	0.71
120.00	243.29	312.59	0.78	218.79	385.58	0.57
113.33	253.46	312.59	0.81	227.63	385.58	0.59
106.67	263.45	312.59	0.84	236.35	385.58	0.61
100.00	275.55	336.31	0.82	246.82	407.40	0.61
90.00	290.01	336.31	0.86	259.35	407.40	0.64
80.00	304.15	336.31	0.90	271.41	407.40	0.67
70.00	318.18	336.31	0.95	283.28	407.40	0.70
60.00	332.13	509.22	0.65	294.82	457.90	0.64
50.00	345.99	509.22	0.68	306.13	457.90	0.67
40.00	359.76	509.22	0.71	317.23	457.90	0.69
30.00	373.44	509.22	0.73	328.17	457.90	0.72
20.00	387.03	509.22	0.76	338.95	620.80	0.55
10.00	400.39	509.22	0.79	349.51	620.80	0.56
0.00						

FORCE/RESISTANCE RATIO IN DIAGONALS

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MAST	-- DIAG COMPRESSION --		--- DIAG TENSION ---	
	FORCE/	FORCE/	FORCE/	FORCE/

19-8207-JAC-RA

ELEV ft	MAX COMP	COMP RESIST	RESIST RATIO	MAX TENS	TENS RESIST	RESIST RATIO
230.00	0.59	7.16	0.08	0.89	7.16	0.12
225.00	3.72	7.16	0.52	3.34	7.16	0.47
220.00	3.87	10.74	0.36	3.59	10.74	0.33
215.00	5.25	10.74	0.49	5.36	10.74	0.50
210.00	6.56	10.74	0.61	6.46	10.74	0.60
205.00	7.26	10.74	0.68	7.24	10.74	0.67
200.00	6.65	7.16	0.93	6.32	7.16	0.88
195.00	5.89	7.16	0.82	5.99	7.16	0.84
190.00	6.13	7.16	0.86	5.77	7.16	0.81
185.00	5.68	7.16	0.79	5.91	7.16	0.83
180.00	6.09	7.13	0.85	5.67	7.13	0.80
175.00	6.07	7.13	0.85	6.26	7.13	0.88
170.00	6.09	7.13	0.85	5.89	7.13	0.83
165.00	5.80	7.13	0.81	5.92	7.13	0.83
160.00	6.32	6.51	0.97	6.17	6.51	0.95
153.33	6.07	6.51	0.93	6.15	6.51	0.94
146.67	6.09	6.51	0.93	5.98	6.51	0.92
140.00	5.98	9.45	0.63	6.03	9.45	0.64
133.33	6.05	9.45	0.64	5.97	9.45	0.63
126.67	6.03	9.45	0.64	6.06	9.45	0.64
120.00	6.16	13.10	0.47	6.09	13.10	0.46
113.33	6.21	13.10	0.47	6.21	13.10	0.47
106.67	6.34	13.10	0.48	6.30	13.10	0.48
100.00	7.07	8.84	0.80	7.04	8.84	0.80
90.00	7.19	8.84	0.81	7.14	8.84	0.81
80.00	7.33	15.88	0.46	7.30	15.88	0.46
70.00	7.52	15.88	0.47	7.45	15.88	0.47
60.00	7.68	13.59	0.57	7.65	13.59	0.56
50.00	7.88	13.59	0.58	7.82	13.59	0.58
40.00	8.06	17.02	0.47	8.03	17.02	0.47
30.00	8.28	17.02	0.49	8.22	17.02	0.48
20.00	8.44	18.13	0.47	8.42	18.13	0.46
10.00	8.62	18.13	0.48	8.55	18.13	0.47
0.00						

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

-----LOAD-----COMPONENTS-----				TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
36.51 G	30.79 K	406.49 G	-354.22 M	36.51 G



19-8207-JAC-RA  
 MAXIMUM TOTAL LOADS ON FOUNDATION : (kip & kip-ft)

-----HORIZONTAL-----			DOWN	-----OVERTURNING-----			TORSION
NORTH	EAST	TOTAL		NORTH	EAST	TOTAL	
		@				@	
		0.0				0.0	
59.2	-51.4	59.2	163.6	8313.4	7315.6	8313.4	22.5
G	P	G	i	G	J	G	X

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 Latticed Tower Analysis (Unguyed) (c)2017 Guymast Inc. 416-736-7453  
 Processed under license at:  
 Sabre Towers and Poles on: 15 may 2019 at: 8:30:19  
 =====

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

LOADING CONDITION A =====

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

MAST LOADING  
 =====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	225.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	225.0	0.00	0.0	0.0	2.14	6.00	0.00	0.00
C	213.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	213.0	0.00	0.0	0.0	1.59	4.00	0.00	0.00
C	201.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00
C	201.0	0.00	0.0	0.0	1.57	4.00	0.00	0.00
D	230.0	0.00	180.0	0.0	0.02	0.03	0.00	0.00
D	225.0	0.00	180.0	0.0	0.02	0.03	0.00	0.00
D	225.0	0.00	42.0	0.0	0.03	0.05	0.04	0.03
D	220.0	0.00	42.0	0.0	0.03	0.05	0.04	0.03
D	220.0	0.00	42.0	0.0	0.04	0.07	0.04	0.02
D	215.0	0.00	42.0	0.0	0.04	0.07	0.04	0.02
D	215.0	0.00	53.6	0.0	0.04	0.08	0.04	0.03
D	200.0	0.00	66.1	0.0	0.04	0.09	0.05	0.03
D	200.0	0.00	93.9	0.0	0.05	0.11	0.05	0.03
D	180.0	0.00	94.2	0.0	0.05	0.11	0.05	0.03
D	180.0	0.00	85.4	0.0	0.05	0.12	0.06	0.03
D	160.0	0.00	84.9	0.0	0.06	0.13	0.04	0.02
D	160.0	0.00	78.7	0.0	0.06	0.15	0.06	0.02
D	140.0	0.00	81.0	0.0	0.06	0.15	0.05	0.02
D	140.0	0.00	74.9	0.0	0.06	0.16	0.07	0.02
D	120.0	0.00	76.6	0.0	0.06	0.16	0.06	0.02
D	120.0	0.00	72.2	0.0	0.06	0.19	0.08	0.03
D	100.0	0.00	73.5	0.0	0.06	0.19	0.08	0.02
D	100.0	0.00	70.2	0.0	0.06	0.19	0.09	0.03
D	80.0	0.00	71.0	0.0	0.06	0.19	0.09	0.03
D	80.0	0.00	68.6	0.0	0.06	0.21	0.11	0.03
D	60.0	0.00	69.2	0.0	0.06	0.22	0.10	0.03
D	60.0	0.00	67.3	0.0	0.06	0.26	0.12	0.03
D	40.0	0.00	67.8	0.0	0.06	0.27	0.11	0.03
D	40.0	0.00	66.2	0.0	0.06	0.28	0.13	0.03

19-8207-JAC-RA								
D	20.0	0.00	66.7	0.0	0.06	0.29	0.12	0.03
D	20.0	0.00	65.4	0.0	0.05	0.29	0.14	0.02
D	0.0	0.00	65.7	0.0	0.05	0.29	0.14	0.02

ANTENNA LOADING

ANTENNA TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
STD+R	189.0	0.0	5.0	0.0	0.23	0.00	0.20	0.00
STD+R	189.0	180.0	5.0	120.0	-0.18	0.00	0.20	0.00
STD+R	177.0	0.0	5.7	0.0	0.22	0.00	0.20	0.00
STD+R	177.0	180.0	5.7	120.0	-0.18	0.00	0.20	0.00

MAXIMUM MAST DISPLACEMENTS:

ELEV ft	DEFLECTIONS (ft)			TILTS (DEG)		TWIST DEG
	NORTH	EAST	DOWN	NORTH	EAST	
230.0	1.022 G	0.921 J	0.014 G	0.584 G	0.535 J	0.035 D
225.0	0.972 G	0.874 J	0.013 G	0.585 G	0.536 J	0.035 D
220.0	0.920 G	0.827 J	0.013 G	0.581 G	0.532 J	0.035 D
215.0	0.869 G	0.780 J	0.012 G	0.575 G	0.526 J	0.035 D
210.0	0.819 G	0.734 J	0.012 G	0.563 G	0.515 J	0.035 D
205.0	0.769 G	0.689 J	0.011 G	0.544 G	0.496 J	0.035 D
200.0	0.722 G	0.646 J	0.011 G	0.516 G	0.470 J	0.035 D
195.0	0.676 G	0.604 J	0.010 G	0.497 G	0.451 J	0.035 D
190.0	0.633 G	0.565 J	0.010 G	0.475 G	0.431 J	0.034 D
185.0	0.591 G	0.527 J	0.010 G	0.452 G	0.409 J	0.032 D
180.0	0.551 G	0.491 J	0.009 G	0.428 G	0.386 J	0.030 D
175.0	0.514 G	0.457 J	0.009 G	0.407 G	0.367 J	0.028 D
170.0	0.478 G	0.425 J	0.008 G	0.386 G	0.347 J	0.025 D
165.0	0.444 G	0.394 J	0.008 G	0.364 G	0.327 J	0.023 D
160.0	0.412 G	0.366 J	0.008 G	0.343 G	0.307 J	0.020 D
153.3	0.372 G	0.330 J	0.007 G	0.322 G	0.288 J	0.018 D
146.7	0.335 G	0.297 J	0.007 G	0.300 G	0.269 J	0.016 D
140.0	0.300 G	0.266 J	0.007 G	0.279 G	0.249 J	0.015 D
133.3	0.268 G	0.237 J	0.006 G	0.258 G	0.230 J	0.013 D
126.7	0.238 G	0.211 J	0.006 G	0.237 G	0.211 J	0.012 D
120.0	0.211 G	0.187 J	0.005 G	0.216 G	0.192 J	0.011 D
113.3	0.186 G	0.164 J	0.005 G	0.200 G	0.178 J	0.010 D
106.7	0.163 G	0.144 J	0.005 G	0.185 G	0.164 J	0.009 D
100.0	0.142 G	0.125 J	0.005 G	0.169 G	0.150 J	0.008 L
90.0	0.113 G	0.099 J	0.004 G	0.147 G	0.130 J	0.007 L
80.0	0.088 G	0.077 J	0.004 G	0.125 G	0.111 J	0.006 L
70.0	0.067 G	0.059 J	0.003 G	0.103 G	0.092 J	0.005 L
60.0	0.050 G	0.044 J	0.003 G	0.082 G	0.072 J	0.004 L
50.0	0.036 G	0.031 J	0.002 G	0.068 G	0.060 J	0.004 L
40.0	0.024 G	0.021 J	0.002 G	0.054 G	0.048 J	0.003 L
30.0	0.015 G	0.013 J	0.001 H	0.040 G	0.036 J	0.002 L
20.0	0.008 G	-0.007 D	0.001 B	0.027 G	0.024 J	0.001 L
10.0	0.002 G	0.002 J	0.000 G	0.013 G	0.012 J	0.001 L
0.0	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A

MAXIMUM ANTENNA AND REFLECTOR ROTATIONS:

ELEV ft	AZI deg	TYPE *	BEAM DEFLECTIONS (deg)			
			PITCH	YAW	ROLL	TOTAL
189.0	0.0	STD+R	-0.427 J	0.034 D	-0.471 G	0.427 J
189.0	180.0	STD+R	0.427 J	0.034 D	0.471 G	0.427 J
177.0	0.0	STD+R	-0.375 J	0.029 D	-0.415 G	0.375 J
177.0	180.0	STD+R	0.375 J	0.029 D	0.415 G	0.375 J

MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
230.0	0.00 A	0.37 G	0.06 A	0.00 A
225.0			0.04 G	0.00 A



19-8207-JAC-RA

220.0	0.00 A	0.99 A	0.63 A	0.00 A
215.0	1.99 A	1.11 A	0.09 A	0.00 A
210.0	4.58 A	1.80 H	0.02 G	0.00 A
205.0	8.78 A	2.09 H	0.12 A	0.00 A
200.0	13.83 A	2.37 H	0.21 G	0.00 A
195.0	18.06 A	1.98 A	0.12 I	0.00 A
190.0	22.64 A	2.00 H	0.01 G	0.00 A
185.0	26.57 A	1.82 F	0.10 I	0.00 A
180.0	30.37 A	1.98 F	0.02 A	0.00 A
175.0	33.97 A	1.78 F	0.07 I	0.00 A
170.0	37.17 A	2.11 F	0.04 A	0.00 A
165.0	40.53 A	1.86 F	0.05 I	0.00 A
160.0	43.49 A	1.98 F	0.04 A	0.00 A
153.3	46.83 A	1.97 F	0.05 A	0.00 A
146.7	50.29 A	2.05 F	0.04 A	0.00 A
140.0	53.63 A	1.93 F	0.04 A	0.00 A
133.3	56.72 A	2.01 F	0.03 A	0.00 A
126.7	59.73 A	1.95 F	0.04 A	0.00 A
120.0	62.57 A	2.01 F	0.02 A	0.00 A
113.3	65.34 A	2.00 F	0.05 A	0.00 A
106.7	67.96 A	2.06 F	0.02 A	0.00 A
100.0	70.57 A	2.07 F	0.04 A	0.00 A
90.0	73.68 A	2.34 F	0.04 A	0.00 A
80.0	77.44 A	2.37 F	0.03 A	0.00 A
70.0	81.01 A	2.45 F	0.04 A	0.00 A
60.0	84.52 A	2.50 F	0.02 A	0.00 A
50.0	87.85 A	2.59 F	0.02 A	0.00 A
40.0	91.08 A	2.64 F	0.02 A	0.00 A
30.0	94.20 A	2.73 F	0.02 A	0.00 A
20.0	97.29 A	2.78 F	0.00 A	0.00 A
10.0	100.28 A	2.87 F	0.02 A	0.00 A
0.0	103.23 A	2.90 F	0.00 A	0.00 A

MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
230.0	-0.36 A	-0.10 A	-0.25 G	0.00 A
225.0	-3.03 G	-1.33 G	0.00 A	0.00 A

19-8207-JAC-RA

220.0	-----		-0.24 G	0.00 A
	-6.11 G	-1.34 G		
215.0	-----		-0.02 G	0.00 A
	-11.05 G	-1.69 B		
210.0	-----		-0.03 A	0.00 A
	-16.36 G	-2.18 H		
205.0	-----		-0.04 G	0.00 A
	-22.40 G	-2.39 B		
200.0	-----		-0.37 I	0.00 A
	-28.85 G	-2.26 G		
195.0	-----		-0.05 G	0.00 A
	-34.33 G	-1.89 B		
190.0	-----		-0.01 A	0.00 A
	-38.59 G	-2.06 F		
185.0	-----		-0.04 G	0.00 A
	-43.26 G	-1.81 F		
180.0	-----		-0.03 C	0.00 A
	-47.04 G	-2.06 F		
175.0	-----		-0.02 G	0.00 A
	-51.32 G	-1.92 F		
170.0	-----		-0.03 C	0.00 A
	-54.82 G	-2.05 F		
165.0	-----		-0.02 G	0.00 A
	-58.52 G	-1.86 F		
160.0	-----		-0.03 G	0.00 A
	-62.23 G	-2.12 F		
153.3	-----		-0.03 G	0.00 A
	-66.65 G	-1.97 F		
146.7	-----		-0.02 G	0.00 A
	-70.59 G	-2.04 F		
140.0	-----		-0.02 G	0.00 A
	-74.59 G	-1.96 F		
133.3	-----		-0.02 G	0.00 A
	-78.31 G	-2.03 F		
126.7	-----		-0.02 G	0.00 A
	-82.05 G	-1.98 F		
120.0	-----		-0.02 G	0.00 A
	-85.65 G	-2.06 F		
113.3	-----		-0.03 G	0.00 A
	-89.29 G	-2.06 F		
106.7	-----		-0.01 G	0.00 A
	-92.85 G	-2.12 F		
100.0	-----		-0.03 G	0.00 A
	-97.19 G	-2.36 F		
90.0	-----		-0.03 G	0.00 A
	-102.38 G	-2.42 F		
80.0	-----		-0.02 G	0.00 A
	-107.52 G	-2.47 F		
70.0	-----		-0.02 G	0.00 A
	-112.65 G	-2.55 F		
60.0	-----		-0.01 G	0.00 A
	-117.84 G	-2.61 F		
50.0	-----		-0.01 G	0.00 A
	-123.05 G	-2.69 F		
40.0	-----		-0.01 G	0.00 A
	-128.27 G	-2.75 F		
30.0	-----		-0.01 G	0.00 A
	-133.47 G	-2.84 F		
20.0	-----		0.00 G	0.00 A
	-138.66 G	-2.89 F		
10.0	-----		-0.01 G	0.00 A
	-143.78 G	-2.96 F		
0.0	-----		0.00 A	0.00 A

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

=====				
LOAD		COMPONENTS		TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
12.85 G	10.86 K	146.15 G	-104.51 A	12.85 G

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

=====						
HORIZONTAL			DOWN	OVERTURNING		TORSION
NORTH	EAST	TOTAL		NORTH	EAST	TOTAL
		@				@
		0.0				0.0



19-8207-JAC-RA

19.8	-17.2	19.8	56.3	2758.1	2432.4	2758.1	7.4
G	D	G	F	G	J	G	L

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

Tower Description 230' S3TL Series HD1  
 Customer UNITI TOWERS/CS&L  
 Project Number 19-8207-JAC  
 Date 5/15/2019  
 Engineer DJH

<b>Overall Loads:</b>			
Factored Moment (ft-kips)	8404.05		
Factored Axial (kips)	163.57		
Factored Shear (kips)	59.79		
<b>Individual Leg Loads:</b>			Tower eccentric from mat (ft)= 2
Factored Uplift (kips)	358.00		
Factored Download (kips)	411.00		
Factored Shear (kips)	37.00		
Width of Tower (ft)	25	Allowable Bearing Pressure (ksf)	2.50
Ultimate Bearing Pressure	5.00	Safety Factor	2.00
Bearing $\Phi$ s	0.75		
Bearing Design Strength (ksf)	3.75	Max. Factored Net Bearing Pressure (ksf)	3.20
Water Table Below Grade (ft)	999		
Width of Mat (ft)	31.5	Minimum Mat Width (ft)	30.83
Thickness of Mat (ft)	1.5		
Depth to Bottom of Slab (ft)	6.5		
Bolt Circle Diameter (in)	13.25		
Effective Anchor Bolt Embedment	65.125	Minimum Pier Diameter (ft)	2.44
Diameter of Pier (ft)	3.5	Equivalent Square b (ft)	3.10
Ht. of Pier Above Ground (ft)	0.5		
Ht. of Pier Below Ground (ft)	5		
Quantity of Bars in Mat	62	Recommended Spacing (in)	6 to 12
Bar Diameter in Mat (in)	1		
Area of Bars in Mat (in <sup>2</sup> )	48.69		
Spacing of Bars in Mat (in)	6.08		
Quantity of Bars Pier	18		
Bar Diameter in Pier (in)	0.875	Minimum Pier A <sub>s</sub> (in <sup>2</sup> )	6.93
Tie Bar Diameter in Pier (in)	0.5	Recommended Spacing (in)	5 to 12
Spacing of Ties (in)	4		
Area of Bars in Pier (in <sup>2</sup> )	10.82		
Spacing of Bars in Pier (in)	5.93		
f'c (ksi)	4.5		
f <sub>y</sub> (ksi)	60		
Unit Wt. of Soil (kcf)	0.11		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd <sup>3</sup> )	61.00		



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

**Two-Way Shear:**

Average d (in)	14		
$\phi v_c$ (ksi)	0.201	$v_u$ (ksi)	0.147
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.302		
$\phi v_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}$	0.238		
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.201		
Shear perimeter, $b_o$ (in)	204.89		
$\beta_c$	1		

**Stability:**

Overturning Design Strength (ft-k)	11596.8	Factored Overturning Moment (ft-k)	8822.6
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**One-Way Shear:**

$\phi V_c$ (kips)	532.5	$V_u$ (kips)	426.4
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**Pier Design:**

Design Tensile Strength (kips)	584.5	$T_u$ (kips)	358.0
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**Shear:**

$\phi$	0.75		
$V_c$ (kips)	91.5		
$V_s$ (kips)	197.9	$V_{s,max}$ (kips)	757.3
$\phi V_n$ (kips)	217.1	$V_u$ (kips)	37.0
Maximum Spacing (in)	11.15	(Only if Shear Ties are Required)	
Actual Hook Development (in)	13.00	Req'd Hook Development $l_{dh}$ (in) - Tension	10.96
		Req'd Hook Development $l_{dc}$ (in) - Compression	11.81

**Anchor Bolt Pull-Out:**

$N_{ua} / \phi N_n$	0.74	$V_{ua} / \phi V_n$	0.11
Pier Rebar Development Length (in)	54.82	Required Length of Development (in)	23.48

**Flexure in Slab:**

$\phi M_n$ (ft-kips)	2846.4	$M_u$ (ft-kips)	2833.9
a (in)	2.02		
Steel Ratio	0.00920		
$\beta_1$	0.825		
Maximum Steel Ratio ( $\rho_l$ )	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	94.01	Required Development in Pad (in)	13.21

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

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

Tower Description 230' S3TL Series HD1  
 Customer Name UNITI TOWERS/CS&L  
 Job Number 19-8207-JAC  
 Date 5/15/2019  
 Engineer DJH

Factored Uplift (kips)	358
Factored Download (kips)	411
Factored Shear (kips)	37
Ultimate Bearing Pressure	9
Bearing $\phi_s$	0.75
Bearing Design Strength (ksf)	6.75
Water Table Below Grade (ft)	999
Bolt Circle Diameter (in)	13.25
Effective Anchor Bolt Embedment	65.125
Pier Diameter (ft)	4.5
Ht. Above Ground (ft)	0.5
Pier Length Below Ground (ft)	67.5
Quantity of Bars	14
Bar Diameter (in)	1.128
Area of Bars (in <sup>2</sup> )	13.99
Spacing of Bars (in)	10.21
Tie Bar Diameter (in)	0.5
Spacing of Ties (in)	12
$f'_c$ (ksi)	4.5
$f_y$ (ksi)	60

Minimum Pier Diameter (ft) 2.44

Minimum Area of Steel (in<sup>2</sup>) 11.45

Unit Wt. of Concrete (kcf)	0.15
Download Friction $\phi_s$	0.75
Uplift Friction $\phi_s$	0.75
Volume of Concrete (yd <sup>3</sup> )	40.06
Skin Friction Factor for Uplift	1
Ignore Bottom Length in Download?	<input type="checkbox"/>

Length to Ignore Download (ft)  
0

Depth at Bottom of Layer (ft)	Ult. Skin Friction (ksf)	(Ult. Skin Friction)*(Uplift Factor)	$\gamma$ (kcf)
67.5	0.50	0.50	0.11
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0
0	0.00	0.00	0



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

**Download:**

Factored Net Weight of Concrete (kips)	53.0		
Bearing Design Strength (kips)	107.4		
Skin Friction Design Strength (kips)	357.8		
Download Design Strength (kips)	465.2	Factored Net Download (kips)	464.0

**Uplift:**

Nominal Skin Friction (kips)	477.1		
W <sub>c</sub> , Weight of Concrete (kips)	162.2		
W <sub>R</sub> , Soil Resistance (kips)	13854.3		
$\phi_s W_{r+0.9W_c}$ (kips)	10536.7		
Uplift Design Strength (kips)	503.8	Factored Uplift (kips)	358.0

**Tension:**

Design Tensile Strength (kips)	755.5	T <sub>u</sub> (kips)	358.0
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**Shear:**

$\phi$	0.75		
V <sub>c</sub> (kips)	215.1		
V <sub>s</sub> (kips)	84.8	V <sub>s,max</sub> (kips)	1251.9
$\phi V_n$ (kips)	225.0	V <sub>u</sub> (kips)	37.0

**Anchor Bolt Pull-Out:**

N <sub>ua</sub> / $\phi N_n$	0.57	V <sub>ua</sub> / $\phi V_n$	0.11
Rebar Development Length (in)	50.70	Required Length of Development (in)	30.27

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

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



# KY Public Service Commission

## Master Utility Search

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

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


	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>	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
<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>	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	Clayton	WA
<a href="#">View</a>	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
<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	B	Hiawatha	IA
<a href="#">View</a>	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
<a href="#">View</a>	4100700	Cellco Partnership dba Verizon	Cellular	A	Basking	NJ

		Wireless			Ridge	
<a href="#">View</a>	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
<a href="#">View</a>	4111150	Comcast OTR1, LLC	Cellular	D	Philadelphia	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	C	Long Island City	NY
<a href="#">View</a>	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4111200	Dynalink Communications, Inc.	Cellular	C	Brooklyn	NY
<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>	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>	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>	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
<a href="#">View</a>	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<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	Tulsa	OK
<a href="#">View</a>	22215360	KDDI America, Inc.	Cellular	D	New York	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>	4111250	Liberty Mobile Wireless, LLC	Cellular	D	Sunny Isles Beach	FL
<a href="#">View</a>	4111550	Lingo Telecom of the South, LLC	Cellular	C	Atlanta	GA
<a href="#">View</a>	4111400	Locus Telecommunications, LLC	Cellular	A	Fort Lee	NJ
<a href="#">View</a>	4110900	Lunar Labs, Inc.	Cellular	D	Detroit	MI
<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>	4109650	Mitel Cloud Services, Inc.	Cellular D	Mesa	AZ
<a href="#">View</a>	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular A	San Antonio	TX
<a href="#">View</a>	10900	New Par dba Verizon Wireless	Cellular A	Basking Ridge	NJ
<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>	4202100	Powertel/Memphis, Inc. dba T- Mobile	Cellular A	Bellevue	WA
<a href="#">View</a>	4107700	Puretalk Holdings, LLC	Cellular A	Covington	GA
<a href="#">View</a>	4111350	Q LINK MOBILE LLC	Cellular D	Dania Beach	FL
<a href="#">View</a>	4106700	Q Link Wireless, LLC	Cellular B	Dania	FL
<a href="#">View</a>	4108700	Ready Wireless, LLC	Cellular B	Hiawatha	IA
<a href="#">View</a>	4110500	Republic Wireless, Inc.	Cellular B	Raleigh	NC
<a href="#">View</a>	4111100	ROK Mobile, Inc.	Cellular D	Culver City	CA
<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	Freemont	NE
<a href="#">View</a>	4106300	SI Wireless, LLC	Cellular A	Carbondale	IL
<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 C	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>	4109550	Stream Communications, LLC	Cellular D	Dallas	TX
<a href="#">View</a>	4111600	STX Group LLC dba Twigby	Cellular C	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	Carrollton	TX
<a href="#">View</a>	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular D	Portland	ME
<a href="#">View</a>	4107200	Telefonica USA, Inc.	Cellular D	Miami	FL
<a href="#">View</a>	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>	4105700	Virgin Mobile USA, L.P.	Cellular A	Atlanta	GA
<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.  
 2019-ASO-7598-OE

Issued Date: 05/06/2019

Mrs. Ginger C. Majors  
 Uniti Towers  
 10802 Executive Center Drive  
 Benton Bldg, Ste 300  
 Little Rock, AR 72211

**\*\* 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 Phil  
 Location:            Liberty, KY  
 Latitude:            37-13-26.77N NAD 83  
 Longitude:          84-57-18.92W  
 Heights:             970 feet site elevation (SE)  
                           237 feet above ground level (AGL)  
                           1207 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 11/06/2020 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) 553-4199, or [Dianne.Marin@FAA.GOV](mailto:Dianne.Marin@FAA.GOV). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-7598-OE.

**Signature Control No: 398199787-404794826**

( DNE )

Dianne Marin  
Technician

Attachment(s)  
Case Description  
Frequency Data  
Map(s)

cc: FCC

**Case Description for ASN 2019-ASO-7598-OE**

Proposed 235-ft (242-ft with appurtenances) lattice communication tower



**Frequency Data for ASN 2019-ASO-7598-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





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



KENTUCKY TRANSPORTATION CABINET  
KENTUCKY AIRPORT ZONING COMMISSION

TC 55-2  
Rev. 05/2017  
Page 2 of 2

**APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE**

APPLICANT (name) DANTE TOWERS, LLC		PHONE 678-428-7845	FAX N/A	KY AERONAUTICAL STUDY #	
ADDRESS (street) 10801 EXECUTIVE CENTER DR, #100		CITY LITTLE ROCK		STATE AR	ZIP 72211
APPLICANT'S REPRESENTATIVE (name) GREGORY TAYLOR		PHONE 470-226-6664	FAX N/A		
ADDRESS (street) 909 LOPEZ LN		CITY MARIETTA		STATE GA	ZIP 30655
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days )				Start TBD End TBD	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building		MARKING/PAINTING/LIGHTING PREFERRED			
<input checked="" type="checkbox"/> Antenna Tower		<input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity			
<input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank		<input type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white			
<input type="checkbox"/> Landfill <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Other TBD			
LATITUDE 37 ° 13 ' 26 .77 "		LONGITUDE 84 ° 57 ' 18 .92 "		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27	
<input type="checkbox"/> Other					
NEAREST KENTUCKY City LIBERTY County CASHE		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT BLUE GRASS AIRPORT - KLEX			
SITE ELEVATION (AMSL, feet) 970'		TOTAL STRUCTURE HEIGHT (AGL, feet) 237'		CURRENT (FAA aeronautical study #) 2019-ASO-7598-02	
OVERALL HEIGHT (site elevation plus total structure height, feet) 1,207'				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 5.7 miles (approx)				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) SSW					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)					
DESCRIPTION OF PROPOSAL CONSTRUCT NEW 237' SELF-SUPPORT TOWER WITH RELATED ANTENNAS + GROUND EQUIPMENT					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 2/27/19					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME GREGORY TAYLOR		TITLE PROJ. MGR.		SIGNATURE 	
				DATE 3/27/19	
COMMISSION ACTION					
<input type="checkbox"/> Chairperson, KAZC					
<input type="checkbox"/> Administrator, KAZC					
<input type="checkbox"/> Approved		SIGNATURE		DATE	
<input type="checkbox"/> Disapproved					



**EXHIBIT G  
GEOTECHNICAL REPORT**

Date: **June 5, 2019**

Andrella Slaughter  
Uniti Towers  
10801 Executive Center Dr., Shannon Building, Suite 100  
Little Rock, AR 72211  
Office: (501) 850-0820



Tower Engineering Professionals, Inc.  
326 Tryon Road  
Raleigh, NC 27603  
(919) 661-6351  
[Geotech@tepgroup.net](mailto:Geotech@tepgroup.net)

**Subject: Subsurface Exploration Report**

<b>Uniti Towers Designation:</b>	<b>Site Number:</b>	KYLEX2006
	<b>Site Name:</b>	Phil
<b>Engineering Firm Designation:</b>	<b>TEP Project Number:</b>	133859.173896
<b>Site Data:</b>	<b>74 Antioch Road, Liberty, KY 42539 (Casey County)</b> <b>Latitude N37° 13' 26.8", Longitude W84° 57' 18.9"</b> <b>230 Foot - Proposed Self Supporting Tower</b>	

Dear Andrella Slaughter,

*Tower Engineering Professionals, Inc. (TEP)* is pleased to submit this "**Subsurface Exploration Report**" to evaluate subsurface conditions in the tower area as they pertain to providing support for the tower foundation.

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions in this report are based on the applicable standards of TEP's practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

TEP assumes the current ground surface elevation; tower location and subsequent centerlines provided are correct and are consistent with the elevation and centerlines to be used for construction of the structure. Should the ground surface elevation be altered and/or the tower location be moved or shifted TEP should be contacted to determine if additional borings are necessary.

The analyses and recommendations submitted herein are based, in part, upon the data obtained from the subsurface exploration. The soil conditions may vary from what is represented in the boring logs. While some transitions may be gradual, subsurface conditions in other areas may be quite different. Should actual site conditions vary from those presented in this report, TEP should be provided the opportunity to amend its recommendations as necessary.

We at *Tower Engineering Professionals, Inc.* appreciate the opportunity of providing our continuing professional services to you and Uniti Towers. If you have any questions or need further assistance on this or any other projects please give us a call.

Report Prepared/Reviewed by: George H. Taylor-Maule, E.I. / John D. Longest, P.E.

Respectfully submitted by:

William H. Martin, P.E.





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## 1) PROJECT DESCRIPTION

Based on the preliminary drawings, it is understood a self supporting communications tower will be constructed at the referenced site. The structure loads will be provided by the tower manufacturer.

## 2) SITE EXPLORATION

The field exploration included the performance of one soil test boring (B-1) to the auger refusal depth of 21.5 feet (bgs) at the approximate location of the proposed self supporting tower. The boring was performed by a truck mounted drill rig using continuous flight hollow stem augers to advance the hole. Split-spoon samples and Standard Penetration Resistance Values (N-values) were obtained in accordance with ASTM D 1586 at a frequency of four samples in the top 10 feet and two samples until refusal.

The Split-spoon samples were transported to the TEP laboratory where they were classified by a Geotechnical Engineer in general accordance with the Unified Soil Classification System (USCS), using visual-manual identification procedures (ASTM D 2488).

Diamond-bit core drilling procedures were used to help determine the character and continuity of the rock in boring B-1. The core drilling procedures were in accordance with ASTM Specification D-2113. Rock core samples of the materials penetrated were protected and retained in a swivel-mounted inner tube of the core barrel. Upon completion of the drill run, the core barrel was brought to the surface and samples removed and placed in standard boxes. The samples were classified by a Geotechnical Engineer and the "Recovery" and "Rock Quality Designation" were determined.

The "Recovery" is the ratio of the sample length obtained to the length drilled, expressed as a percent. The "Rock Quality Designation" (RQD) is the percent of the recovered rock samples in lengths of four or more inches, compared to the total length of the core run. This designation is generally applied to samples of NWX size (2-1/8 inch diameter) or larger and to samples described as moderately hard or harder. The percent recovery and RQD are related to rock soundness and continuity. Generalized rock descriptions, percent recovery, and the RQD value are shown on the boring log.

A Boring Location Plan showing the approximate boring location, a Boring Log presenting the subsurface information obtained and a brief guide to interpreting the boring log are included in the Appendix.

## 3) SITE CONDITIONS

The site is located at 74 Antioch Road in Liberty, Casey County, Kentucky. The proposed tower and compound are to be located in a wooded area with proposed access from the west. The ground topography is lightly sloping.



#### **4) SUBSURFACE CONDITIONS**

The following description of subsurface conditions is brief and general. For more detailed information, the individual Boring Log contained in Appendix B - Boring Log may be consulted.

##### **4.1) Soil**

The USCS classification of the materials encountered in the boring include ML, CL, SC and Limestone. The Standard Penetration Resistance ("N" Values) recorded in the materials ranged from 7 blows per foot to 50 blows per 4 inches of penetration.

##### **4.2) Rock**

Limestone was encountered at a depth of 21.5 feet (bgs) in the boring. Refusal of auger advancement was encountered at a depth of 21.5 feet (bgs) in the boring. Drillers noted weathered siltstone starting at 8 feet (bgs) based on drilling conditions.

##### **4.3) Subsurface Water**

Subsurface water was encountered at a depth of 13 feet (bgs) in the boring at the time of drilling. It should be noted the subsurface water level will fluctuate during the year, due to seasonal variations and construction activity in the area.

##### **4.4) Frost**

The TIA frost depth for Casey County, Kentucky is 30 inches.

## 5) TOWER FOUNDATION DESIGN

Based on the boring data, it is the opinion of TEP that a pier for each leg extending to a single large mat foundation, an individual pier and spread footing for each leg or a single drilled shaft for each leg can be used to support the new tower. If the drilled shaft foundation option is utilized, design of the foundation should be adjusted to terminate in a known material. The following presents TEP's conclusions and recommendations regarding the foundation types.

### 5.1) Shallow Foundation

The foundation should bear a minimum of 30 inches below the ground surface to penetrate the frost depth and with sufficient depth to withstand the overturning of the tower. To resist the overturning moment, the weight of the concrete and any soil directly above the foundation can be used. TEP recommends that the foundation designer specify a minimum unit weight for compacted backfill over the new foundation based on what is required to resist overturning of shallow foundations. The values are based on the current ground surface elevation and soils bearing in undisturbed native soils.

Based on preliminary site information the site is located on lightly sloping ground, with approximately 4 feet of elevation change across the planned 100 foot lease area. It is recommended that foundation designs account for site grades being raised with excavation spoils or that foundation drawings specify minimum embedment depths based on existing site elevations and factor in ground slopes.

**Table 1 - Shallow Foundation Analysis Parameters – Boring B-1**

Depth		Soil	Gross Ultimate Bearing <sup>1,2,3</sup> (psf)	Cohesion <sup>1</sup> (psf)	Friction Angle <sup>1</sup> (degrees)	Effective Unit Weight (pcf)	Friction Factor
Top	Bottom						
0	2.5	ML <sup>4</sup>	3150	500	-	108	0.30
2.5	3.5	ML	6425	1000	-	108	0.30
3.5	6	ML	11875	2525	-	113	0.30
6	8.5	CL	12550	2775	-	113	0.30
8.5	13	SC	13250	-	32	50	0.39

Notes:

- 1) These values should be considered ultimate soil parameters.
- 2) A minimum factor of safety of 2 is recommended for allowable bearing.
- 3) The soil values are based on a maximum foundation size of 50 foot squared and less than 1 inch of settlement. If the foundation design size exceeds this dimension TEP should be contacted to re-evaluate soil parameters based on the actual foundation size.
- 4) The provided shear strength parameters have been reduced by 50% for cohesion or to 28 degrees for friction angle considering strength losses associated with freeze/thaw.

Bearing above the seasonal frost depth may lead to settlement and rotation, settlement of the base, and potential and progressive movement downhill. Foundations bearing above the frost depth may experience fluctuations in vertical movements with the annual frost/thaw. If tower foundation bears above frost depth, more frequent maintenance visits should be made.

Rock was encountered at a depth of 21.5 feet (bgs) in the boring, and partially weathered rock was noted as shallow as 8 feet (bgs) by the drillers. It is common for the depth of the rock surface to vary in this region. It may be necessary to adjust foundation designs to minimize shallow foundation embedment depth in order to prevent excessive rock excavation at this site. Please refer to the individual boring logs for more specific information.



## 5.2) Drilled Shaft Foundation

The following values may be used for design of drilled shaft foundations. TEP recommends the side frictional and lateral resistance values developed in the top section of the caisson for a depth equal to the half the diameter of the caisson or the frost depth, whichever is greater, be neglected in the calculations. The values are based on the current ground surface elevation.

**Table 2 - Drilled Shaft Foundation Analysis Parameters**

Depth		Soil	Gross Ultimate Bearing <sup>1,2</sup> (psf)	Ultimate Side Frictional Resistance <sup>1,3</sup> (psf)	Cohesion <sup>1</sup> (psf)	Friction Angle <sup>1</sup> (degrees)	Effective Unit Weight (pcf)
Top	Bottom						
0	2.5	ML <sup>4</sup>	3050	500	500	-	108
2.5	3.5	ML	6925	750	1000	-	108
3.5	6	ML	18200	1260	2525	-	113
6	8.5	CL	21450	1380	2775	-	113
8.5	13	SC	18750	460	-	32	50
13	18.5	SC	30800	620	-	34	50
18.5	21.5	SC	118175	1010	-	45	55
21.5	31.5	Limestone <sup>5</sup>	235400	8500	800	45	87

Notes:

- 1) These values should be considered ultimate soil parameters.
- 2) A minimum factor of safety of 2 is recommended for allowable bearing. If the bearing depth of the foundation is less than 5 diameters below the ground surface the bearing values listed in Table 1 – Shallow Foundation Analysis Parameters should be utilized.
- 3) A minimum factor of safety of 2 is recommended for allowable side frictional resistance.
- 4) The provided shear strength parameters have been reduced by 50% for cohesion or to 28 degrees for friction angle considering strength losses associated with freeze/thaw.
- 5) Side frictional resistance values are being provided assuming that drilled shafts are being fully socketed in rock at this depth. Rock socket depths may need to be adjusted should rock be encountered at a deeper depth.

Relying on soil strengths above the seasonal frost depth may lead to settlement and rotation of the base. Where analysis of foundations relies on strengths of soils above the frost depth, more frequent maintenance visits should be made to check plumb and verify vertical movements of the foundation haven't occurred.

### 5.3) Modulus of Subgrade Reaction

A vertical modulus of subgrade reaction and a horizontal modulus of subgrade reaction may be derived using the following equations and soil parameters for analysis of foundations.

$$k_{s-v} = 12 (SF) Q_a$$
$$k_{s-h} = k_{s-v} B$$

$Q_a$  = Allowable Bearing Capacity (ksf)

SF = Factor of Safety

B = Base width (ft), use 1 if  $B < 1$  ft.

$k_{s-v}$  = Vertical Modulus of Subgrade Reaction (kcf)

$k_{s-h}$  = Horizontal Modulus of Subgrade Reaction (ksf)

### 6) SOIL RESISTIVITY

Soil resistivity was performed at the TEP laboratory in accordance with ASTM G187-05 (Standard Test Method for Measurement of Soil Resistivity Using the Two Electrode Soil Box Method). Test results indicated a result of 21,000 ohms-cm.



## **7) CONSTRUCTION CONSIDERATIONS - SHALLOW FOUNDATION**

### **7.1) Excavation**

The boring data indicates excavation to the expected subgrade level for the shallow foundation will extend through silt and clay. A large tracked excavator with rock teeth and/or a pneumatic hammer may be necessary to remove the materials with minimal to moderate difficulty. TEP anticipates the depth to the surface of the rock will vary outside of the boring location. Bedrock outcroppings are common to this geographic region and may also be encountered in the excavation area.

Excavations should be sloped or shored in accordance with local, state and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. It is the responsibility of the contractor for site safety. This information is provided as a service and under no circumstance should TEP be assumed responsible for construction site safety.

### **7.2) Foundation Evaluation/Subgrade Preparation**

After excavation to the design elevation for the footing, the materials should be evaluated by a Geotechnical Engineer or a representative of the Geotechnical Engineer prior to reinforcement and concrete placement. This evaluation should include probing, shallow hand auger borings and dynamic cone penetrometer testing (ASTM STP-399) to help verify that suitable residual material lies directly under the foundation and to determine the need for any undercut and replacement of unsuitable materials. Loose surficial material should be compacted in the excavation prior to reinforcement and concrete placement to stabilize surface soil that may have become loose during the excavation process. TEP recommends a 6-inch layer of compacted crushed stone be placed just after excavation to aid in surface stability.

Rock was encountered in the boring. If the foundation excavation shows that only a portion of the foundation will bear on rock, with a portion bearing on soil, then the entire footprint should be over-excavated by a minimum of 6 inches and the bearing elevation should be re-established with a coarse graded aggregate.

### **7.3) Fill Placement and Compaction**

Backfill materials placed above the shallow foundation to the design subgrade elevation should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. To be considered for use, backfill materials should have a maximum dry density of at least 100 pounds per cubic foot as determined by standard Proctor (ASTM D 698), a Liquid Limit no greater than 40, a Plasticity Index no greater than 20, a maximum particle size of 4 inches, and 20 percent or less of the material having a particle size between 2 and 4 inches. Because small handheld or walk-behind compaction equipment will most likely be used, backfill should be placed in thin horizontal lifts not exceeding 6 inches (loose).

Fill placement should be monitored by a qualified Materials Technician working under the direction of a Geotechnical Engineer. In addition to the visual evaluation, a sufficient amount of in-place field density tests should be conducted to confirm the required compaction is being attained.

### **7.4) Reuse of Excavated Soil**

The silt and clay that meets the above referenced criteria can be utilized as backfill based on dry soil and site conditions at the time of construction.

## 8) CONSTRUCTION CONSIDERATIONS - DRILLED SHAFTS

Based on TEP's experience a conventional drilled shaft rig (Hughes Tool LDH or equivalent) can be used to excavate to the auger refusal depth of TEP's boring. An earth auger can typically penetrate the materials encountered to the auger refusal depth of the boring with minimal to moderate difficulty. Materials below a depth of 18.5 feet (bgs) may require a coring bit or roller-bit to remove the material. Bedrock outcroppings are sometimes encountered in this geographic region and may be encountered outside of the boring location. Special excavation equipment may be necessary for a shaft greater than 60-inches in diameter. If hole collapse is encountered during construction, the design and geotechnical engineers should be contacted immediately to make any necessary adjustments.

Due to the sandy soil, the contractor should elect to utilize the "slurry" method for shaft construction. The following are general procedure recommendations in drilled shaft construction using the "slurry" method:

- 1) Slurry drilled shafts are constructed by conventional caisson drill rigs excavating beneath a drilling mud slurry. Typically, the slurry is introduced into the excavation after the groundwater table has been penetrated and/or the soils on the sides of the excavation are observed to be caving-in. When the design shaft depth is reached, fluid concrete is placed through a tremie pipe at the bottom of the excavation.
- 2) The slurry level should be maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the subsurface water level.
- 3) Inspection during excavation should include verification of plumbness, 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 prior to concreting.
- 4) A removable steel casing may be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Loose soils in the bottom of the shaft should be removed.
- 5) The specific gravity or relative density of the drilling mud slurry should be monitored from the initial mixing to the completion of the excavation. An increase in the specific gravity or density of the drilling slurry by as much as 10 percent is indicative of soil particles settling out of the slurry onto the bottom of the excavation. This settling will result in a reduction of the allowable bearing capacity of the bottom of the drilled shaft.
- 6) After approval, the drilled shaft should be concreted as soon as practical using a tremie pipe.
- 7) For slurry drilled shafts, the concrete should have a 6 to 8 inch slump prior to discharge into the tremie. The bottom of the tremie should be set at about one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie should be used, or a sliding plug introduced into the tremie before the concrete, to reduce the potential for the concrete being contaminated by the slurry. The bottom of the tremie must be maintained in concrete during placement, which should be continuous.
- 8) The protective steel casing should be extracted as concrete is placed. A head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the casing.
- 9) Additional concrete should be placed via the tremie causing the slurry to overflow from the excavation in order to reduce the likelihood of slurry pockets remaining in the drilled shaft.

If variability in the subsurface materials is encountered, a representative of the Geotechnical Engineer should verify that the design parameters are valid during construction. Modification to the design values presented above may be required in the field.



**APPENDIX A**  
**BORING LAYOUT**





**APPENDIX B**  
**BORING LOG**



Tower Engineering Professionals, Inc.  
 326 Tryon Road  
 Raleigh, NC 27603  
 Telephone: 919.661.6351  
 Email: geotech@tepgroup.net

# LOG OF BORING B-1

1 OF 1

PROJECT: **Phil** SITE ID: **14605585** TEP NO.: **133859**

DATE STARTED: **5/23/2019** DRILLING METHOD: **Hollow Stem Auger** HOLE SIZE: **3 1/4in** CITY, STATE: **Liberty, Kentucky**  
 DATE COMPLETE: **5/24/2019** HAMMER WEIGHT/FALL: **140lbs / 30in** HAMMER TYPE: **Automatic** TOTAL DEPTH: **31.5 FT** DRILL RIG TYPE: **D-50**  
 GROUND EL.: \_\_\_\_\_ LOGGED BY: **GTM** CHECKED BY: **JDL** BACKFILL: **Cuttings** DEPTH/EL. GROUNDWATER: **▽ 13.0/ ATD**  
 BORING LOCATION: **At the approximate location of the proposed tower**

SAMPLE NUMBER	SAMPLE LENGTH (INCHES)	BLOW COUNTS (N) REC% / ROD%	ELEVATION (FEET)	DEPTH (FEET)	SAMPLE GRAPHIC	USCS GRAPHIC	DESCRIPTION AND CLASSIFICATION	REMARKS	POCKET PEN TSF	UNCONFINED STRENGTH, PSF	UNIT WEIGHT PCF
S1	18	3-3-4 (7)					0.0-3.5: Medium stiff, brown, sandy SILT (ML), trace roots, moist		1.75		
S2	18	4-7-16 (23)		5			3.5-6.0: to very stiff, mottled orangish brown		3		
S3	18	5-12-12 (24)					6.0-8.5: Very stiff, orangish brown, sandy lean CLAY (CL), moist		2.5		
S4	18	4-5-5 (10)		10			8.5-13.5: Loose, orangish brown, fine to coarse, clayey SAND (SC), wet	Driller note: Weathered siltstone encountered at 8 to 21.5 feet			
S5	18	6-7-8 (15)		15			13.5-18.5: to medium dense				
S6	10	7-50/4"		20			18.5-21.5: to very dense				
R1	120	98 / 68		25			21.5-31.5: Auger refusal at 21.5 feet (bgs) Gray, fine to medium grained, LIMESTONE, moderately weathered, moderately fractured, moist -clastic 24.0: Unconfined compressive strength: 4675 psi 26.5: highly fractured 28.0: quartz inclusion Unconfined compressive strength: 2450 psi	Driller note: Siltstone encountered at 21.5 feet to the end of coring			157
							31.5: Rock Core Terminated Calibrated Energy Transfer Ratio: 88.1%				





Tower Engineering Professionals, Inc.  
 326 Tryon Road  
 Raleigh, NC 27603  
 Telephone: 919-661-6351  
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## Key to Soil Symbols and Terms

### TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE-GRAINED SOILS** (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

<u>Descriptive Terms</u>	<u>SPT Blow Count</u>
Very Loose	< 4
Loose	4 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	> 50

**FINE-GRAINED SOILS** (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

<u>Descriptive Terms</u>	<u>SPT Blow Count</u>
Very Soft	< 2
Soft	2 to 4
Medium Stiff	5 to 8
Stiff	9 to 15
Very Stiff	16 to 30
Hard	> 30

### GENERAL NOTES

1. Classifications are based on the Unified Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.

2. Surface elevations are based on topographic maps and estimated locations and should be considered approximate.

3. Descriptions on these boring logs apply only at the specific boring locations and at the time the borings were made. They are not guaranteed to be representative of subsurface condition at other locations or times.

Group Symbols	Typical Names	Sampler Symbols
	GW Well-graded gravels, gravel-sand mixtures, little or no fines	<input checked="" type="checkbox"/> Split Spoon <input checked="" type="checkbox"/> Standard Penetration Test (SPT) <input checked="" type="checkbox"/> Pushed Shelby Tube <input checked="" type="checkbox"/> Auger Cuttings <input checked="" type="checkbox"/> Grab Sample <input checked="" type="checkbox"/> Dynamic Cone Penetrometer <input checked="" type="checkbox"/> Hand Auger <input checked="" type="checkbox"/> Rock Core
	GP Poorly-graded gravels, little or no fines/sands	
	GM Silty gravels, gravel-sand-silt mixtures	
	GC Clayey gravels, gravel-sand-silt mixtures	
	SW Well-graded sands, gravelly sands, little or no fines	
	SP Poorly-graded sands, little or no fines/sands/gravels	
	SM Silty sands, sand-silt mixtures	
	SC Clayey sands, sand-clay mixtures	
	ML Inorganic silts and very fine sands, rock floor, silty or clayey fine sands or clayey silts with slight plasticity	<b>Log Abbreviations</b> ATD - At Time of Drilling AD - After Drilling EOD - End of Drilling RMR - Rock Mass Rating WOH - Weight of Hammer WOR - Weight of Rod REC - Rock Core Recovery RQD - Rock Quality Designation
	CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
	OL Organic silts and organic silty clays of low plasticity	
	MH Inorganic silts, micaceous or distomaceous fine sandy or silty soils, elastic silts	
	CH Inorganic clays of high plasticity, fat clays	
	OH Organic clays of medium to high plasticity, organic silts	
	PT Peat and other highly organic soils	



# **Information Regarding This Subsurface Exploration Report**

The information contained in this report has been specifically tailored to the needs of the client at the time the report was provided, for the specific purpose of the project named in this report. The attached report may not address the needs of contractors, civil engineers, or structural engineers. Anyone other than the named client should consult with the geotechnical engineer prior to utilizing the information contained in the report.

It is always recommended that the full report be read. While certain aspects of the report may seem unnecessary or irrelevant; just as each project and site are unique, so are the subsurface investigation reports and the information contained in them. Several factors can influence the contents of these reports, and the geotechnical engineer has taken into consideration the specific project, the project location, the client's objectives, potential future improvements, etc. If there is any question about whether the attached report pertains to your specific project or if you would like to verify that certain factors were considered in the preparation of this report, it is recommended that you contact the geotechnical engineer.

Geotechnical subsurface investigations often are prepared during the preliminary stages of a project and aspects of the project may change later on. Some changes may require a report revision or additional exploration. Some changes that often need to be brought to the attention of the geotechnical engineer include changes in location, size and/or type of structure, modifications to existing structures, grading around the project site, etc. Some naturally occurring changes can also develop that impact the information contained in this geotechnical report such as earthquakes, landslides, floods, subsurface water levels changing, etc. It is always recommended that the geotechnical be informed of known changes at the project site.

Subsurface exploration reports are generated based on the analysis and professional opinions of a geotechnical engineer based on the results of field and laboratory data. Often subsurface conditions can vary – sometimes significantly – across a site and over short distances. It often is helpful to retain the geotechnical engineer's services during the construction process. Otherwise, the geotechnical cannot assume responsibility or liability for report recommendations which may have needed to change based on changing site conditions or misinterpretation of recommendations.

Geotechnical engineers assemble testing and/or boring logs based on their interpretation of field and laboratory data. Testing and/or boring logs should always be coupled with the subsurface exploration report. The geotechnical engineer and Tower Engineering Professionals cannot be held reliable for interpretations, analyses, or recommendations based solely on the testing and/or boring log if it is independent of the prepared report.

The scope of the subsurface exploration report does not include an assessment or analysis of environmental conditions, determination of the presence or absence of wetlands or hazardous or toxic materials on or below the ground surface. Any notes regarding odors, fill, debris, or anything of that nature are offered as general information for the client, often to help identify or delineate natural soil boundaries.

For additional information, please contact the geotechnical engineer named in the attached report.

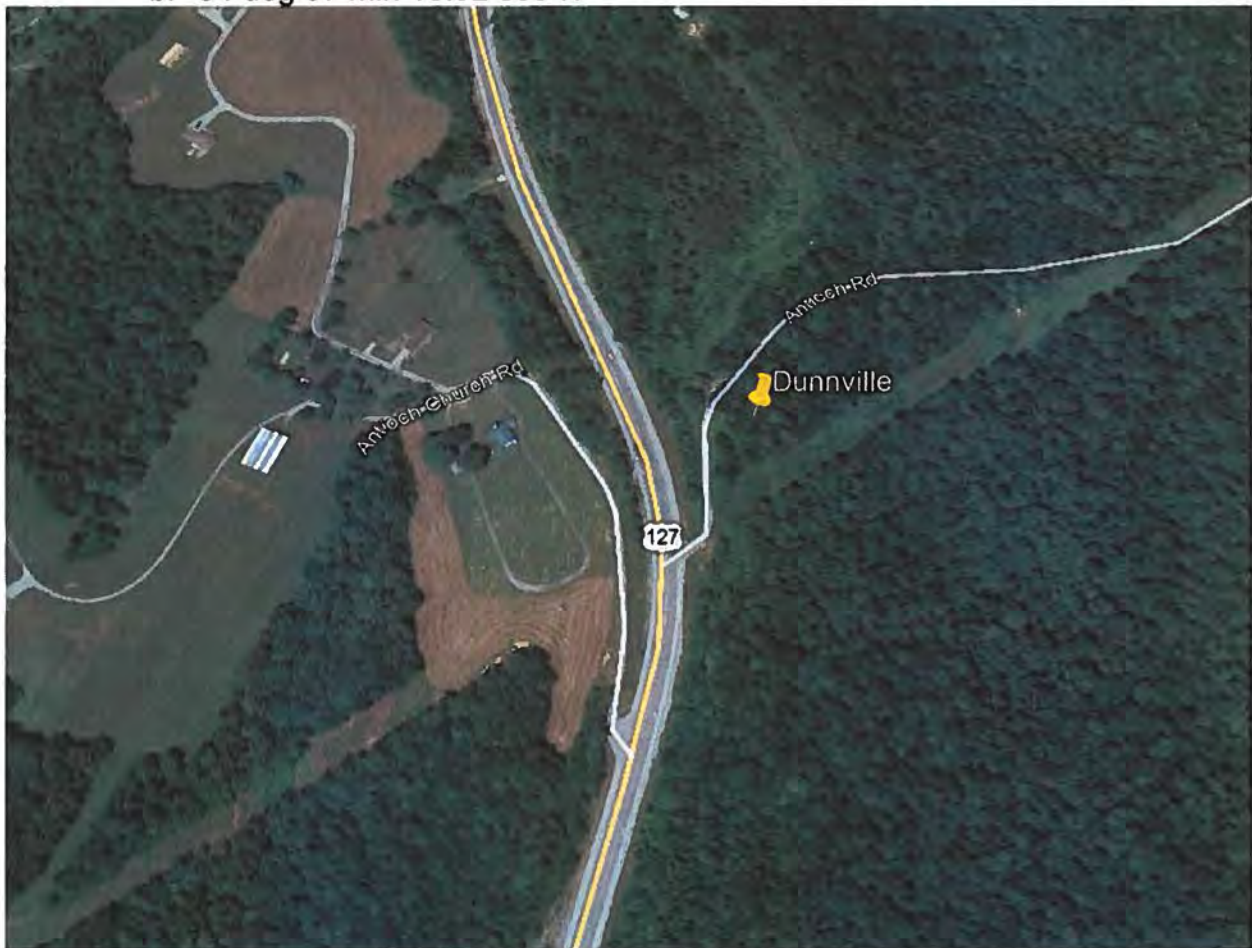




**EXHIBIT H**  
**DIRECTIONS TO WCF SITE**

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

1. Beginning at 625 Campbellsville Street, Liberty, KY 42539 head southeast (toward Court House Square) on Campbellsville Street and travel approximately 495 feet.
2. Continue onto Middleburg Street and travel approximately 361 feet.
3. Turn right onto Randolph Street and travel approximately 0.4 miles.
4. Turn right onto US-127 S / Wallace Wilkinson Blvd and travel approximately 6.6 miles.
5. Turn left onto Antioch Road and travel approximately 385 feet. The site is on the right on Antioch Road, Liberty, KY 42539.
6. The site coordinates are
  - a. 37 deg 13 min 26.77 sec N
  - b. 84 deg 57 min 18.92 sec W



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

Market: TENNESSEE/KENTUCKY  
UNITI Site Number: KYLEX2006  
UNITI Site Name: PHIL

Fixed Asset Number: 14605585

## 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 Tony Haggard and Camille Haggard & Marilyn Clayton and Noel Clayton having a mailing address of 3200 Briar Hill Road, Lexington, Kentucky 40516, 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 or near the intersection of Hwy 127 and Antioch Road, Liberty, KY 42539, in the County of Casey, 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 Landlord's contiguous, adjoining or surrounding property (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 nine (9) 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 equal to the Rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "**Holdover Term**"), subject to the terms and conditions of this Agreement.

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

**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) Upon the commencement of each Term, the monthly Rent will increase by [REDACTED] over the Rent paid during the previous Term.

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

**5. APPROVALS.**

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for 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 equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: 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]. 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 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 the Term. Within one hundred twenty (120) days after the termination of this Agreement, Tenant will remove all of Tenant's above-ground improvements and Tenant will, to the extent reasonable, restore the Premises to its condition at the commencement of this Agreement, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation, nor will Tenant be required to remove from the Premises or the Property any structural steel or any foundations or underground utilities.

**14. MAINTENANCE/UTILITIES.**

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all

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

(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 Bldg, Suite 100  
  Little Rock AR 72211  
Main Telephone:               501.850.0820

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

If to Landlord:                 Tony Haggard, Et al  
  3200 Briar Hill Rd  
  Lexington, KY 40516  
  (859) 536-0509

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.

**21. TAXES.**

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

(b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than 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 following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax 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.

**[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"**

**TONY HAGGARD**

By: Tony Haggard  
Print Name: Tony Haggard  
Its: Tony Haggard Partner  
Date: 10/14/2018

**CAMILLE HAGGARD**

By: Camille Haggard  
Print Name: Camille Haggard  
Its: Partner  
Date: 10/14/2018

**MARILYN CLAYTON**

By: Marilyn Clayton  
Print Name: Marilyn Clayton  
Its: Partner  
Date: 10/14/2018

**NOEL CLAYTON**

By: Noel Clayton  
Print Name: Noel Clayton  
Its: Partner  
Date: 10/14/2018

**"TENANT"**

**Uniti Towers LLC**

By: Gigi Majors  
Print Name: Gigi Majors  
Its: VP-Real Estate  
Date: 12-14-18

[ACKNOWLEDGMENTS APPEAR ON NEXT PAGE]

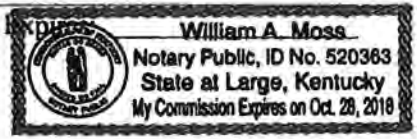
**LANDLORD ACKNOWLEDGMENT**

STATE OF Kentucky  
COUNTY OF FAYETTE ) ss:

BE IT REMEMBERED, that on this 14 day of Oct, 2017 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared Marilyn Clayton who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

William A. Moss

Notary Public:  
My Commission Expires

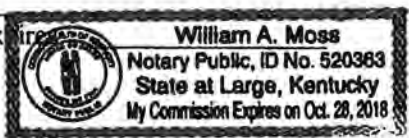


STATE OF Kentucky  
COUNTY OF FAYETTE ) ss:

BE IT REMEMBERED, that on this 14 day of Oct, 2018 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared Marilyn Clayton who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

William A. Moss

Notary Public:  
My Commission Expires





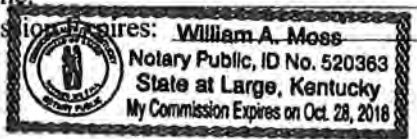
**LANDLORD ACKNOWLEDGMENT**

STATE OF Kentucky )  
 ) ss:  
COUNTY OF Fayette )

BE IT REMEMBERED, that on this 14 day of Oct, 2018 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared Tony Hoggard who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

William A. Moss

Notary Public:  
My Commission Expires:

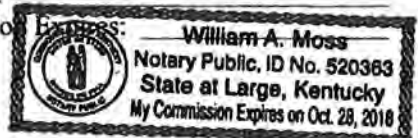


STATE OF Kentucky )  
 ) ss:  
COUNTY OF FAYETTE )

BE IT REMEMBERED, that on this 14 day of oct, 2018 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared Carille Hoggard who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

William A. Moss

Notary Public:  
My Commission Expires:



**TENANT ACKNOWLEDGMENT**

STATE OF Arkansas  
COUNTY OF Pulaski } ss:

On the 14th day of December, 2016 before me personally appeared Gigi Nasors who acknowledged under oath that he/ she is the VP 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.

**ASHLEY CARPENTER**  
Pulaski County  
Commission Number 12704185  
Notary Public - Arkansas  
My Commission Expires April 30, 2028

Ashley Carpenter  
Notary Public: 12704185  
My Commission Expires: 4-30-2028



## EXHIBIT 1

### DESCRIPTION OF PREMISES

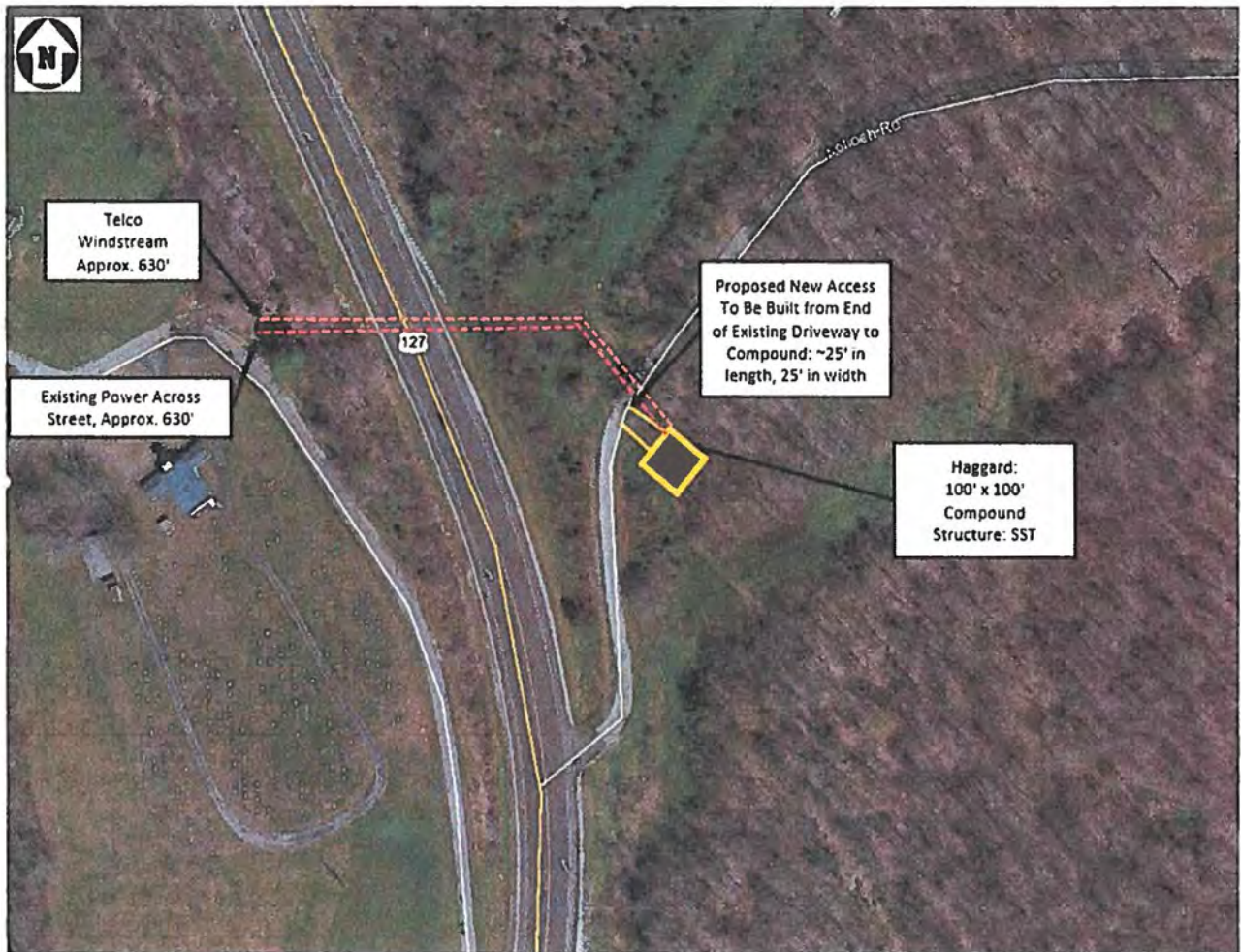
Page \_\_\_ of \_\_\_

to the Option Lease Agreement dated \_\_\_\_\_, 20\_\_\_, by and between Tony Haggard, as Landlord, and Uniti Towers LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

A certain parcel of land lying on the ridge between the Trace, South forks and the main channel of Green River on the eastside of U.S. Route No. 127 at the job the Antioch Ridge Road in the Phil area of Casey County Kentucky and being more particularly described as follows:  
Beginning at a P K. Nail and survey identification tag (RAM LPLS #1953) set in the edge of the pavement on the northwest side of the Antioch Ridge county road near the top of the hill coming from the U.S. Route No. 127 junction and on the east right of way of newly constructed U.S. 127 (circa 1990) thence along the right of way South 11 degrees 17 minutes 20 seconds East [crossing the Antioch Ridge Road [passing a witness monument (5/8 diameter rebar with cap stamped RAMSES PLS # 1953 being typical of all monuments found or set this survey) set at 30.27 ft.] and a power line, a total distance of 288.40 ft. to a survey monument set at a found concrete right of way marker; South 01 Degrees 39 minutes 39 seconds East 95.56 ft. to a survey monument set on the right of way common to Ann Thompson and Jane Ratliff (nee Gadberry) deed book 78 page 259 Tract 1; thence leaving the right of way with the lines of a tract deeded by F. L. Compton (former owner of the Haggard property) to J. F. Gadberry in deed book 51 page 613, North 17 degrees 47 minutes 02 seconds East 74.01 ft. to a survey monument set; North 36 degrees 17 minutes 02 seconds East crossing a power line, a distance of 457.05 ft. to a survey monument set with 2 maple pointers; thence North 36 degrees 42 minutes 58 seconds West 204.60 ft. to a survey monument set south of the Antioch Ridge Road; thence North 69 degrees 32 minutes 2 seconds East crossing the road, a distance of 554.40 ft. to a survey monument set with a beech pointer on the north side of the road; thence North 74 degrees 47 minutes 2 seconds East (crossing the road and a power line), a distance of 643.50 ft. to a survey monument set with a large maple and small cherry pointer on the south side of road; thence North 59 degrees 02 minutes 02 seconds East 250.80 ft. to a survey monument set; then North 30 degrees 55 minutes 00 seconds East (gradually angling back toward the road), a distance of 810.22 ft. to a survey monument set with a white oak pointer south of the road common to C J Bell deed book 192 page 472 parcel 1; thence North 34 degrees 55 minutes 00 seconds West (crossing the road) 223.04 ft to a survey monument set with a maple pointer northwest of an old barbed wire fence; thence South 68 degrees 05 minutes 00 seconds West 808.50 ft. to a survey monument set with an 18 inch diameter hickory as pointer near a fence corner and the southwest edge of an old field common to Will R. Fights deed book 70 page 621; thence South 33 degrees 48 minutes 03 seconds West crossing a hollow, striking an old fence line (passing a witness monument set at 915.81 ft.)

The Premises are described and/or depicted as follows:



**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 11**

**ENVIRONMENTAL DISCLOSURE**

Landlord represents and warrants that the Property, as of the Effective Date, is free of hazardous substances except as follows:

[INSERT AS APPLICABLE]

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



**Dunnville Relo – Notice List**

HAGGARD & CLAYTON  
TONY & CAMILLE - MARILYN & NOEL  
3200 BRIAR HILL RD  
LEXINGTON, KY 40516

HAGGARD HOWARD C MRS THELMA  
972 HAGGARD DR  
LIBERTY, KY 42539

TARTER TARTER TARTER & SMITH  
PO BOX 10  
DUNNVILLE, KY 42528

NEAT BRAD & ASHLEY  
761 RIFFE CREEK RD  
DUNNVILLE, KY 42528

WARE CECIL  
252 ANTIOCH CHURCH RD  
LIBERTY, KY 42539

ANTIOCH CHRISTIAN CHURCH  
STAR RT  
LIBERTY, KY 42539

ANTIOCH CHRISTIAN CHURCH  
212 ANTIOCH CHURCH RD  
LIBERTY, KY 42539

HENSON JANE ALICE  
214 ANTIOCH CHURCH RD  
LIBERTY, KY 42539

MARTIN DENNEHY & FIGHTS  
MEARIEIA - LEISA - JAMES  
10064 FRONT ST  
CINCINNATI, OH 45241

RICHARDSON MELISSA THOMAS  
2105 MCCAULEY RD  
WILMORE, KY 40390

THOMPSON & RATLIFF  
ANN & JANE  
1403 RINEHART  
EL RENO, OK 73036

ZIMMERMAN ELI & SARAH  
577 MINE RD  
SPENCER, TN 38585

KY LODGING & DEVELOPMENT  
150 SCENIC VIEW DR  
CORBIN, KY 40701

BRUBACKER CHRISTIAN & WILMA  
11635 S KY 501  
LIBERTY, KY 42539

ZIMMERMAN VERNON & IRMA  
8335 S US 127  
DUNNVILLE, KY 42528

GINGERICH PETE & ELLA  
676 JODY THOMAS RD  
DUNNVILLE, KY 42528

LEDFORD FRED & HELEN  
154 BRUSH CR BR  
LIBERTY, KY 42539

LEDFORD FRED & HELEN  
154 BRUSH CREEK RD  
LIBERTY KY 42539

NEAT GREGORY & CECILIA  
PO BOX 82  
DUNNVILLE, KY 42528



**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: Dunnville Relo**

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 74 Antioch Road, Liberty, KY 42539 (37° 13' 26.77" North latitude, 84° 57' 18.92" West longitude). The proposed facility will include a 230-foot tall antenna tower, plus a 7-foot lightning arrester and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00176 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 Applicant

enclosures



## Driving Directions to Proposed Tower Site

1. Beginning at 625 Campbellsville Street, Liberty, KY 42539 head southeast (toward Court House Square) on Campbellsville Street and travel approximately 495 feet.
2. Continue onto Middleburg Street and travel approximately 361 feet.
3. Turn right onto Randolph Street and travel approximately 0.4 miles.
4. Turn right onto US-127 S / Wallace Wilkinson Blvd and travel approximately 6.6 miles.
5. Turn left onto Antioch Road and travel approximately 385 feet. The site is on the right on Antioch Road, Liberty, KY 42539.
6. The site coordinates are
  - a. 37 deg 13 min 26.77 sec N
  - b. 84 deg 57 min 18.92 sec W



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

**PROPERTY INFORMATION**

NO.	PARCEL ID #	N/F PROPERTY OWNER	MAILING ADDRESS
A	055-28	HAGGARD & CLAYTON	3200 BRIAR HILL RD LEXINGTON, KY 40514
B	055-29	HAGGARD HOWARD C MRS THELMA	972 HAGGARD DR LIBERTY, KY 42539
C	055-16	TARTER TARTER TARTER & SMITH	PO BOX 10 DUNNVILLE, KY 42528
D	055-27A-5	NEAT BRAD & ASHLEY	761 RIFFE CREEK RD DUNNVILLE, KY 42528
E	055-27	WARE CECIL	252 ANTIOCH CHURCH RD LIBERTY, KY 42539
F	055-26	ANTIOCH CHRISTIAN CHURCH	STAR RT LIBERTY, KY 42539
G	055-27A-1	HENSON JANE ALICE	214 ANTIOCH CHURCH RD LIBERTY, KY 42539
H	071-04	MARTIN DENNEHY & FIGHTS MEAREIA-LEISA-JAMES	10964 FRONT ST CINCINNATI, OH 45241
I	071-03	RICHARDSON MELISSA THOMAS	2105 MCCAULEY RD WILMORE, KY 40390
J	071-27	THOMAS & RATLIFF ANN & JANE	1403 RINEHART EL RENO, OK 73036
K	055-28A	ZIMMERMAN ELI & SARAH	577 MINE RD SPENCER, TN 38585
L	071-27B	ZIMMERMAN ELI & SARAH	577 MINE RD SPENCER, TN 38585
M	071-27B-1	KY LODGING & DEVELOPMENT	150 SCENIC VIEW DR CORBIN, KY 40701
N	056-13	BRUBACKER CHRISTIAN & WILMA	11635 S KY 501 LIBERTY, KY 42539
O	056-12	ZIMMERMAN VERNON & IRMA	8335 S US 127 DUNNVILLE, KY 42528
P	056-09B	GINGERICH PETE & ELLA	676 JODY THOMAS RD DUNNVILLE, KY 42528
Q	056-09A-1	LEDFORD FRED & HELEN	154 BRUSH CR BR LIBERTY, KY 42539
R	056-09A	TARTER TARTER TARTER & SMITH	PO BOX 10 DUNNVILLE, KY 42528
S	056-07	NEAT GREGORY & CECILIA	PO BOX 82 DUNNVILLE, KY 42528

\*NOTE: INFORMATION ABOVE WAS CONFIRMED WITH POWELL COUNTY PVA ON MAY 16, 2019

**NOTES:**

1. THE BASIS OF THE BEARINGS AND COORDINATES IS THE KENTUCKY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011), BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JANUARY 18, 2019; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS AND OPUS; AND EXPRESSED IN US SURVEY FEET
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF NAVD 1988 IN FEET
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL 21045C03500, EFFECTIVE JULY 07, 2009

PLANS PREPARED FOR:  
  
 10801 EXECUTIVE CENTER DR.  
 SHANNON BUILDING, SUITE 100  
 LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
  
 MEIDINGER TOWER  
 462 S 4TH ST, STE 2400  
 LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNIFI SITE NAME: PHIL**  
**AT&T SITE NAME:**  
**DUNNVILLE RELO**  
**FA 14605585**  
 74 ANTIOCH ROAD  
 LIBERTY, KY 42539  
 (CASEY COUNTY)

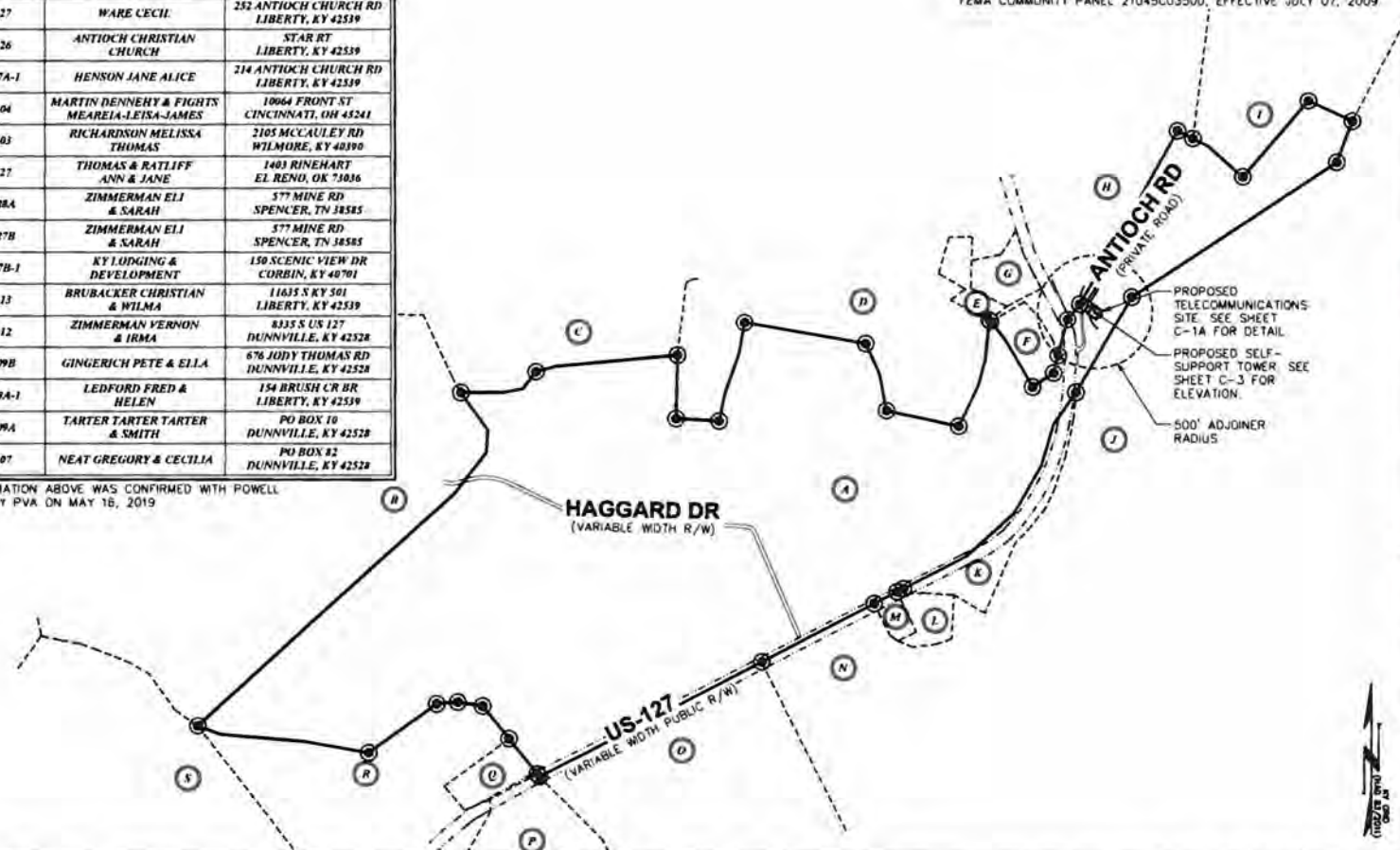
PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRICON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: 919.661.6351  
 www.tepgroup.net

SEAL:  
  
 June 5, 2019

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:
DRAWN BY: GSM		CHECKED BY: GLB

SHEET TITLE:  
**PROPERTY OWNER MAP**

SHEET NUMBER: <b>C-1A</b>	REVISION: <b>4</b>
TEP # 133659 / 73893	



**SITE PLAN**  
 SCALE: 1" = 1000'



**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**

Randy Dial  
County Judge Executive  
P.O. Box 306  
Liberty, KY 42539

**RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2019-00176  
Site Name: Dunnville Relo**

Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 74 Antioch Road, Liberty, KY 42539 (37° 13' 26.77" North latitude, 84° 57' 18.92" West longitude). The proposed facility will include a 230-foot tall antenna tower, plus a 7-foot lightning arrester and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00176 in any correspondence sent in connection with this matter.

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

Sincerely,  
David A. Pike  
Attorney for Applicant

enclosures



## Driving Directions to Proposed Tower Site

1. Beginning at 625 Campbellsville Street, Liberty, KY 42539 head southeast (toward Court House Square) on Campbellsville Street and travel approximately 495 feet.
2. Continue onto Middleburg Street and travel approximately 361 feet.
3. Turn right onto Randolph Street and travel approximately 0.4 miles.
4. Turn right onto US-127 S / Wallace Wilkinson Blvd and travel approximately 6.6 miles.
5. Turn left onto Antioch Road and travel approximately 385 feet. The site is on the right on Antioch Road, Liberty, KY 42539.
6. The site coordinates are
  - a. 37 deg 13 min 26.77 sec N
  - b. 84 deg 57 min 18.92 sec W



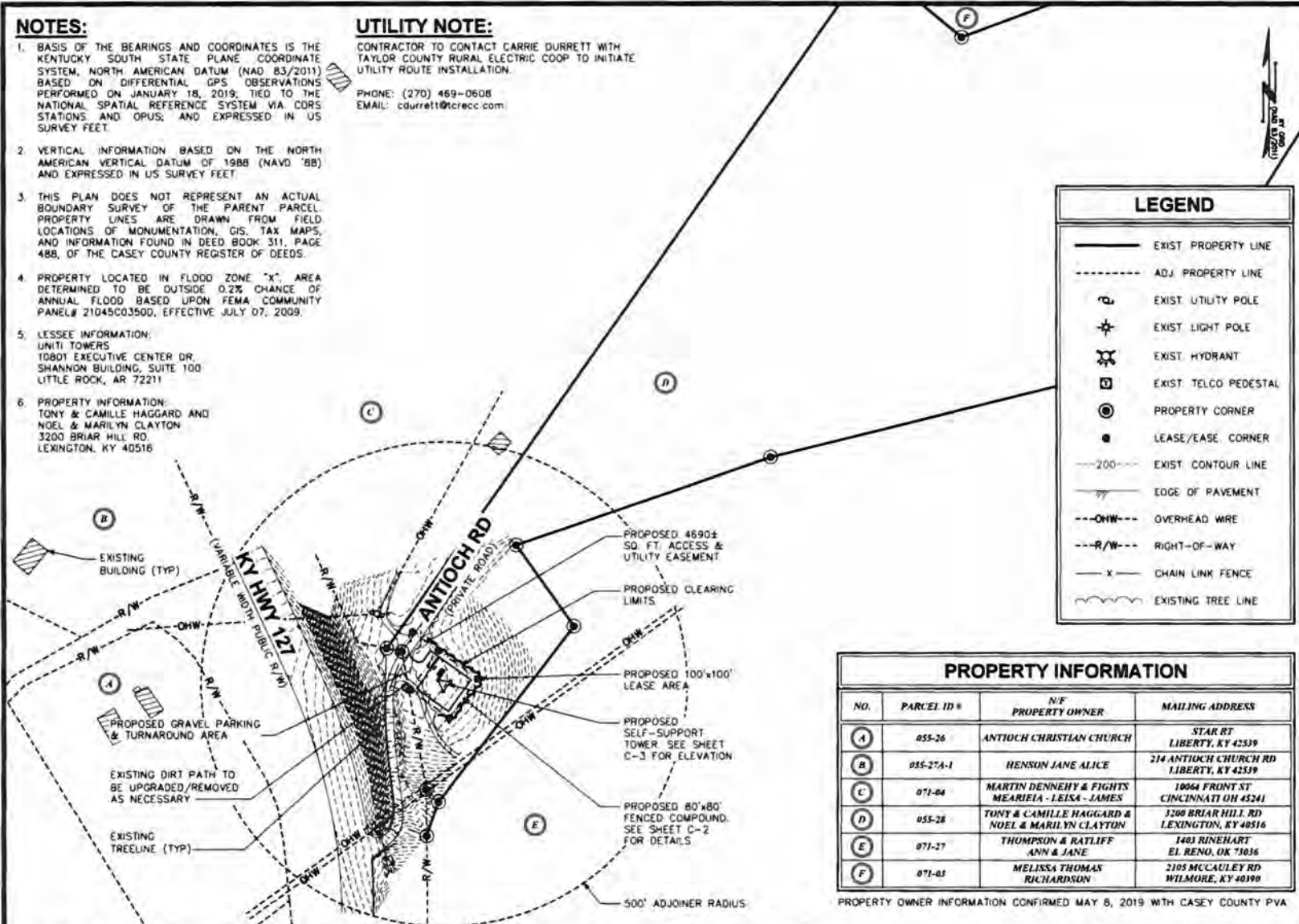
Prepared by:  
Chris Shouse  
Pike Legal Group PLLC  
1578 Highway 44 East, Suite 6  
P.O. Box 369  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293

**NOTES:**

1. BASIS OF THE BEARINGS AND COORDINATES IS THE KENTUCKY SOUTH STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JANUARY 18, 2019, TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATIONS AND OPUS; AND EXPRESSED IN US SURVEY FEET.
2. VERTICAL INFORMATION BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND EXPRESSED IN US SURVEY FEET.
3. THIS PLAN DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE PARENT PARCEL. PROPERTY LINES ARE DRAWN FROM FIELD LOCATIONS OF MONUMENTATION, GIS, TAX MAPS, AND INFORMATION FOUND IN DEED BOOK 311, PAGE 488, OF THE CASEY COUNTY REGISTER OF DEEDS.
4. PROPERTY LOCATED IN FLOOD ZONE "X". AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOOD BASED UPON FEMA COMMUNITY PANEL# 21045C03500, EFFECTIVE JULY 07, 2009.
5. LESSEE INFORMATION:  
UNITI TOWERS  
10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211
6. PROPERTY INFORMATION:  
TONY & CAMILLE HAGGARD AND  
NOEL & MARILYN CLAYTON  
3200 BRIAR HILL RD.  
LEXINGTON, KY 40516

**UTILITY NOTE:**

CONTRACTOR TO CONTACT CARRIE DURRETT WITH TAYLOR COUNTY RURAL ELECTRIC COOP TO INITIATE UTILITY ROUTE INSTALLATION.  
PHONE: (270) 469-0608  
EMAIL: cdurrett@tcrecc.com



LEGEND	
	EXIST. PROPERTY LINE
	ADJ. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. LIGHT POLE
	EXIST. HYDRANT
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	LEASE/EASE CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

PROPERTY INFORMATION			
NO.	PARCEL ID #	N/F PROPERTY OWNER	MAILING ADDRESS
A	055-26	ANTIOCH CHRISTIAN CHURCH	STAR RT LIBERTY, KY 42539
B	055-27A-1	HENSON JANE ALICE	214 ANTIOCH CHURCH RD LIBERTY, KY 42539
C	071-04	MARTIN DENNEHY & FIGHTS MEARIEA - LEISA - JAMES	10064 FRONT ST CINCINNATI OH 45241
D	055-28	TONY & CAMILLE HAGGARD & NOEL & MARILYN CLAYTON	3200 BRIAR HILL RD LEXINGTON, KY 40516
E	071-27	THOMPSON & RATLIFF ANN & JANE	1403 RINEHART EL RENO, OK 75036
F	071-03	MELISSA THOMAS RICHARDSON	2105 MCCAULEY RD WILMURE, KY 40390

PROPERTY OWNER INFORMATION CONFIRMED MAY 8, 2019 WITH CASEY COUNTY PVA



**SITE PLAN**  
SCALE: 1" = 200'

PLANS PREPARED FOR:  
**Uniti Towers**  
10801 EXECUTIVE CENTER DR.  
SHANNON BUILDING, SUITE 100  
LITTLE ROCK, AR 72211

PLANS PREPARED FOR:  
**at&t**  
MEIDINGER TOWER  
462 S 4TH ST, STE 2400  
LOUISVILLE, KY 40202

PROJECT INFORMATION:  
**UNITI SITE NAME: PHIL AT&T SITE NAME: DUNVILLE RELO FA 14605585**  
74 ANTIOCH ROAD  
LIBERTY, KY 42539  
(CASEY COUNTY)

PLANS PREPARED BY:  
**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 651-6351  
www.teppro.net

SEAL:  
  
GRAHAM M. ANDRES  
289938  
LICENSED PROFESSIONAL ENGINEER  
June 5, 2019

4	06-05-19	CONSTRUCTION
3	06-04-19	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: GSM    CHECKED BY: GLB

SHEET TITLE:  
**SITE PLAN**

SHEET NUMBER: <b>C-1</b>	REVISION: <b>4</b>
-----------------------------	-----------------------

TEP # 33659 173693



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

**SITE NAME: DUNNVILLE RELO**  
**NOTICE SIGNS**

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

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00176 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility proposes to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2019-00176 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: 606-787-7171**

The Casey County News  
720 Campbellsville St  
Liberty, KY 42539

RE: Legal Notice Advertisement  
Site Name: Dunnville Relo

Dear Casey County News:

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

**NOTICE**

**New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on 74 Antioch Road, Liberty, KY 42539 (37° 13' 26.77" North latitude, 84° 57' 18.92" 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 2019-00176 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**



Dunnville Relo (New FA:14605585)

