

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

In the Matter of:

THE APPLICATION OF)	
CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS)	
AND VB BTS II, LLC D/B/A VERTICAL BRIDGE FOR)	
ISSUANCE OF A CERTIFICATE OF PUBLIC)	CASE NO. 2024-00023
CONVENIENCE AND NECESSITY TO CONSTRUCT)	
A WIRELESS COMMUNICATIONS FACILITY)	
IN THE COMMONWEALTH OF KENTUCKY)	
IN THE COUNTY OF CALDWELL)	

SITE NAME: WALTONIA ROAD

* * * * *

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

Cellco Partnership, d/b/a Verizon Wireless and VB BTS II, LLC d/b/a Vertical Bridge (“Co-Applicants”), by counsel, pursuant to (i) KRS §§278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully 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 Co-Applicants with wireless communications services.

In support of this Application, Co-Applicants respectfully provide and state the following information:

1. The complete name and address of the Co-Applicants:
 - a. Cellco Partnership, d/b/a Verizon Wireless, having a local address of 2902 Ring Road, Elizabethtown, KY 42701.

b. VB BTS II, LLC d/b/a Vertical Bridge, having an address of 750 Park of Commerce Dr, Boca Raton, FL 33487.

2. Co-Applicants;

a. Cellco Partnership, d/b/a Verizon Wireless is a Delaware general partnership, and a copy of the Statement of Good Standing from Delaware and Amended Certificate of Assumed Name is on file with the Secretary of State of Commonwealth of Kentucky is included as part of **Exhibit A**.

b. VB BTS II, LLC d/b/a Vertical Bridge is a Delaware Limited Liability Company organized in the State of Delaware. We attest that VB BTS II, LLC d/b/a Vertical Bridge, LLC is in good standing with the State of Delaware and is also authorized to transact business in the Commonwealth of Kentucky. A copy of the Delaware Certificate of Formation and Certificate of Good Standing is included as part of **Exhibit A**. The Certificate of Authority is on file with the Secretary of State of Commonwealth of Kentucky and is included as part of **Exhibit A**.

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

4. The Co-Applicant, Cellco Partnership, d/b/a Verizon Wireless operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Co-Applicants' FCC Application and Licenses

with Authorization to provide wireless services are attached to this Application as part of **Exhibit B**, and the facility will be constructed and operated in accordance with applicable FCC regulations.

5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Co-Applicants' services to an area currently not served or not adequately served by the Co-Applicants by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. A statement from Co-Applicant's RF Design Engineer outlining said need is attached as **Exhibit Q** along with Propagation Maps attached as **Exhibit R**. The WCF is an integral link in the Co-Applicant's network design that must be in place to provide adequate coverage to the service area.

6. To address the above-described service needs, Co-Applicants propose to construct a WCF on the northeast side of Old Cobb Road, southeast of the intersection of Old Cobb Road and KY-672, Princeton, KY 42445 (North Latitude: (37° 00' 38.44", West Longitude 87° 45' 45.87")), 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 Margie Cortner pursuant to a Deed recorded at Deed Book D226, Page 732 in the office of the County Clerk. The proposed WCF will consist of a 290-foot-tall tower, with an approximately 10-foot-tall lightning arrestor attached at the top, for a total height of 300-feet with guyed wires. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Co-Applicant's radio electronics equipment and appurtenant equipment. The Co-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 C** and **Exhibit D**.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete along with a map showing the proposed location as well as the identified like facilities is attached as **Exhibit E**.

8. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of the Co-Applicant, Cellco Partnership, d/b/a Verizon Wireless has also been included as part of **Exhibit C**.

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

10. Co-Applicants have 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 Co-Applicant's antennas on an existing structure. When suitable towers or structures exist, Co-Applicant's attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Co-Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site. A statement from Co-Applicant, Cellco Partnership, d/b/a Verizon Wireless's RF Design Engineer outlining exploration of co-location opportunities is attached as **Exhibit Q**.

11. A copy of the Application for Federal Aviation Administration’s (“FAA”) is attached as **Exhibit F**. The FAA Determination of No Hazard to Air Navigation will be filed when received.
12. A copy of Application to the Kentucky Airport Zoning Commission (“KAZC”) is attached as **Exhibit G**. The approval from KAZC will be submitted when received.
13. A geotechnical engineering report was performed by Delta Oaks Group, 4904 Professional Court, Second Floor, Raleigh, NC 27609, dated January 11, 2024, and is attached as **Exhibit H**. The name and address of the geotechnical engineering firm and the professional engineer registered in Kentucky who prepared the report are included as part of **Exhibit S**.
14. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit I**. The name and telephone number of the preparer of **Exhibit I** are included as part of this exhibit.
15. Co-Applicants, pursuant to a written agreement, have acquired the right to use the WCF site and associated property rights. A copy of the agreement is attached as **Exhibit J**.
16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit D** 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. The identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibit S**.

17. The Construction Manager for the proposed facility is Vince Caprino and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibit S**.

18. As noted on the Survey attached as part of **Exhibit C**, the surveyor has determined that the tower site and access easement are not within any flood hazard area per Flood Hazard Boundary Map, Community Panel Number 21033C0275D, Dated April, 19, 2019.

19. Attached as **Exhibit K** is the Notification List with screen shots of the PVA records verified and updated using the Caldwell County PVA on February 7, 2024.

20. Co-Applicants have sent certified notices to 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 informed of his or her right to request intervention. A copy of the form of the notice sent by certified mail to each landowner on February 8, 2024, is attached as **Exhibit L**. Six (6) notices were sent to surrounding property owners; six (6) notice green cards have been returned. Copies of the mailed envelopes and returned green cards are included in **Exhibit L**. With this evidence, there are no unaccountable notices.

21. Co-Applicants have notified the applicable County Judge/Executive by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will be processed and informed the County Judge/Executive of his/her right to request intervention. The notice was mailed February

8, 2024 A copy of the notice along with a copy of the mailed envelope and the returned green card is attached as **Exhibit M**.

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

23. 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 **Exhibit O**.

24. The area of the proposed facility is in the unincorporated area of Caldwell County, Kentucky. The site is located on the northeast side of Old Cobb Road, southeast of the intersection of Old Cobb Road and KY-672, Princeton, KY 42445. The site is utilized for agricultural production and the area is mostly large farm properties and smaller residential properties. The terrain in the area is hilly with areas of tree growth. The site is approximately 12 miles southeast of Princeton, KY. There is no Plan Commission in this area of Caldwell County, outside of the City of Princeton. The general area where the facility is proposed is open, tilled area and, removed a significant distance from any residential structures. The nearest residential structure is 1026' feet from the proposed tower site.

26. The process that was used by the Co-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. Co-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 Co-Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Co-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 P**.

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, as set out and documented in the RF Design Engineers' Statement of Need and Propagation Maps attached as **Exhibit Q and R**. The proposed tower will expand and improve voice and data service for Verizon Wireless customers.

28. Attached hereto as **Exhibit T** please find an Affidavit of Certification for all information contained in this application.

29. 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:

Russell L. Brown
Clark, Quinn, Moses, Scott & Grahn, LLP
320 North Meridian Street, Suite 1100
Indianapolis, IN 46204
Phone: (317) 637-1321
FAX: (317) 687-2344
Email: rbrown@clarkquinnlaw.com
Attorney for Cellco Partnership d/b/a Verizon Wireless

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

Respectfully submitted,



Russell L. Brown
Clark, Quinn, Moses, Scott & Grahn, LLP
320 North Meridian Street, Suite 1100
Indianapolis, IN 46204
Phone: (317) 637-1321 / FAX: (317) 687-2344
Email: rbrown@clarkquinnlaw.com
Attorney for Cellco Partnership d/b/a Verizon Wireless

LIST OF EXHIBITS

- A Co-Applicant Entities
- B FCC Application and License Documentation
- C Site Development Plan:
 - 500' Vicinity Map Legal Descriptions
 - Flood Plain Certification Site Plan
 - Vertical Tower Profile
- D Tower and Foundation Design
- E Competing Utilities, Corporations, or Persons List
And Map of Like Facilities in Vicinity

- F FAA Application
- G KAZC Application
- H Geotechnical Report
- I Directions to WCF Site
- J Recorded Memorandum Lease
- K Notification Listing with PVA Screen Shots
- L Property Owner Notification
- M County Judge Executive notice
- N Posted Notices
- O Newspaper Legal Notice Advertisement
- P Radio Frequency Design Search Area
- Q RF Design Engineer Statement of Need
- R Propagation Maps
- S List of Qualified Professionals
- T Affidavit of Certification

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "CELLCO PARTNERSHIP" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-SEVENTH DAY OF APRIL, A.D. 2023.

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



Jeffrey W. Bullock, Secretary of State

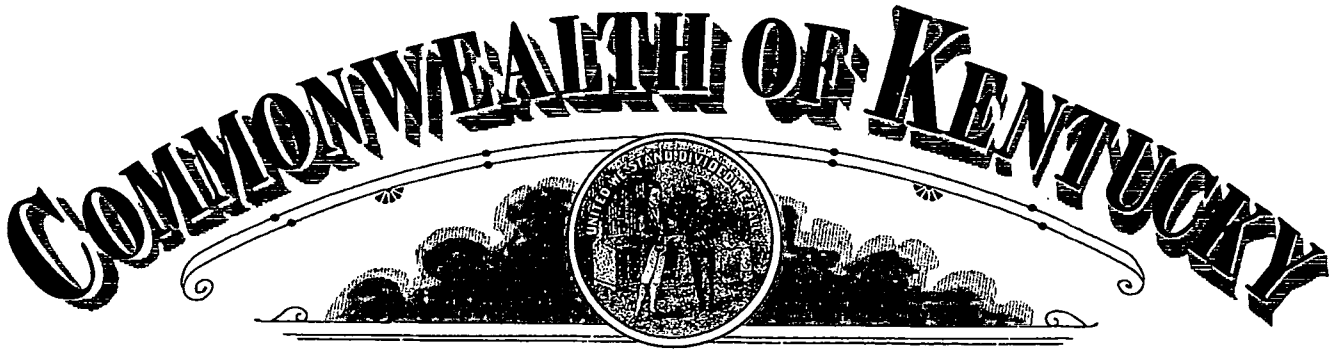
3341134 8300

SR# 20231665976

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203227418

Date: 04-27-23



Michael G. Adams
Secretary of State

Certificate

I, Michael G. Adams, Secretary of State for the Commonwealth of Kentucky, do hereby certify that the foregoing writing has been carefully compared by me with the original thereof, now in my official custody as Secretary of State and remaining on file in my office, and found to be a true and correct copy of

CERTIFICATE OF ASSUMED NAME OF VERIZON WIRELESS ADOPTED BY
GENERAL PARTNERS OF CELLCO PARTNERSHIP FILED JUNE 21, 2006.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my
Official Seal at Frankfort, Kentucky, this 10th day of May, 2023.



Michael G. Adams

Michael G. Adams
Secretary of State
Commonwealth of Kentucky
kdcoleman/0641227 - Certificate ID: 290787

COMMONWEALTH OF KENTUCKY
TREY GRAYSON
SECRETARY OF STATE



0641227.07

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C226

Trey Grayson
Secretary of State
Received and Filed

06/21/2006 12:06:09 PM
Fee Receipt: \$20.00

CERTIFICATE OF ASSUMED NAME

This certifies that the assumed name of
Verizon Wireless

[Name under which the business will be conducted]

has been adopted by See Addendum

[Real name - KRS 365.015(1)]

which is the "real name" of (YOU MUST CHECK ONE)

a Domestic General Partnership

a Foreign General Partnership

a Domestic Registered Limited Liability Partnership

a Foreign Registered Limited Liability Partnership

a Domestic Limited Partnership

a Foreign Limited Partnership

a Domestic Business Trust

a Foreign Business Trust

a Domestic Corporation

a Foreign Corporation

a Domestic Limited Liability Company

a Foreign Limited Liability Company

a Joint Venture

organized and existing in the state or country of Delaware, and whose address is

One Verizon Way

Basking Ridge

NJ

07920

Street address, if any

City

State

Zip Code

The certificate of assumed name is executed by

NYNEX PCS Inc.

Jane A. Schapker - Assistant Secretary

Print or type name and title

June 15, 2006

Date

Signature

Print or type name and title

Date

Addendum

The full name of the Partnership is Cellco Partnership; a Delaware general partnership with its headquarters located One Verizon Way, Basking Ridge NJ 07920-1097.

General Partners of Cellco Partnership	Address
Bell Atlantic Cellular Holdings, L.P.	One Verizon Way Basking Ridge, NJ 07920
NYNEX PCS Inc.	One Verizon Way Basking Ridge, NJ 07920
PCSCO Partnership	One Verizon Way Basking Ridge, NJ 07920
GTE Wireless Incorporated	One Verizon Way Basking Ridge, NJ 07920
GTE Wireless of Ohio Incorporated	One Verizon Way Basking Ridge, NJ 07920
PCS Nucleus, L.P.	2999 Oak Road, 7 th Floor Walnut Creek, CA 94597
JV PartnerCo, LLC	2999 Oak Road, 7 th Floor Walnut Creek, CA 94597

Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "VB BTS II, LLC", FILED IN THIS OFFICE ON THE EIGHTH DAY OF JUNE, A.D. 2022, AT 1:01 O`CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

6844426 8100
SR# 20222658754

Authentication: 203631822
Date: 06-08-22

You may verify this certificate online at corp.delaware.gov/authver.shtml

STATE OF DELAWARE
CERTIFICATE OF FORMATION
OF LIMITED LIABILITY COMPANY

The undersigned authorized person, desiring to form a limited liability company pursuant to the Limited Liability Company Act of the State of Delaware, hereby certifies as follows:

1. The name of the limited liability company is _____
VB BTS II, LLC

2. The Registered Office of the limited liability company in the State of Delaware is located at _____ 850 New Burton Road, Suite 201 _____ (street), in the City of _____ Dover _____, Zip Code _____ 19904 _____. The name of the Registered Agent at such address upon whom process against this limited liability company may be served is _____
COGENCY GLOBAL INC.

State of Delaware
Secretary of State
Division of Corporations
Delivered 01:01 PM 06/08/2022
FILED 01:01 PM 06/08/2022
SR 20222658754 - File Number 6844426

By: _____ /s/ Daniel Marinberg
Authorized Person

Name: _____ Daniel Marinberg
Print or Type

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "VB BTS II, LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-THIRD DAY OF JANUARY, A.D. 2023.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "VB BTS II, LLC" WAS FORMED ON THE EIGHTH DAY OF JUNE, A.D. 2022.

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




Jeffrey W. Bullock, Secretary of State

6844426 8300

SR# 20230223025

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 202551773

Date: 01-23-23



202303080004

FAYETTE CO, KY FEE \$46.00

PRESENTED / LODGED: 03-08-2023 08:19:15 AM

RECORDED: 03-08-2023

SUSAN LAMB
CLERK
BY: HALLIE WOOSLEY
DEPUTY CLERK

BK: IB 428

PG: 690-690



COMMONWEALTH OF KENTUCKY
MICHAEL G. ADAMS, SECRETARY OF STATE

1265644.06

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ADD

Michael G. Adams
Kentucky Secretary of State
Received and Filed:
3/7/2023 12:33 PM
Fee Receipt: \$90.00

Division of Business Filings
P.O. Box 718
Frankfort, KY 40602
(502) 564-3490
www.sos.ky.gov

Certificate of Authority
(Foreign Business Entity)

FBE

Pursuant to the provisions of KRS 14A-03D the undersigned hereby applies for authority to transact business in Kentucky on behalf of the entity named below and, for that purpose, submits the following statements:

1. The entity is a:
- | | | | | | |
|--------------------------|---------------------|-------------------------------------|----------------------------------|--------------------------|--|
| <input type="checkbox"/> | profit corporation | <input checked="" type="checkbox"/> | nonprofit corporation | <input type="checkbox"/> | professional limited liability company |
| <input type="checkbox"/> | business trust | <input type="checkbox"/> | limited liability company | <input type="checkbox"/> | statutory trust |
| <input type="checkbox"/> | limited partnership | <input type="checkbox"/> | lld cooperative association | <input type="checkbox"/> | other |
| <input type="checkbox"/> | non-profit llc | <input type="checkbox"/> | professional service corporation | | |

2. The name of the entity is VB BTS II, LLC
(The name must be identical to the name on record with the Secretary of State.)

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

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

5. The date of organization is 6/8/2022 and the period of duration is _____
(If left blank, duration is considered perpetual.)

6. The mailing address of the entity's principal office is 750 Park of Commerce Drive, Suite 200
Street Address Boca Raton City FL State 33487 Zip Code

7. The street address of the entity's registered office in Kentucky is 828 Lane Allen Road, Suite 219
Street Address (No P.O. Box Numbers) Lexington City KY State 40504 Zip Code

and the name of the registered agent at that office is Cogency Global Inc.

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

<u>Daniel Marinberg</u>	<u>750 Park of Commerce Dr, Ste 200</u>	<u>Boca Raton</u>	<u>FL</u>	<u>33487</u>
Name	Street or P.O. Box	City	State	Zip Code
_____ Name	_____ Street or P.O. Box	_____ City	_____ State	_____ Zip Code
_____ Name	_____ Street or P.O. Box	_____ City	_____ State	_____ Zip Code

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

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

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

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

13. This application will be effective upon filing.

[Signature]
Signature of Authorized Representative Adam B. Ginder-Vice President & Associate General Counsel Printed Name & Title 03/07/23 Date

I, Cogency Global Inc. consent to serve as the registered agent on behalf of the business entity.
Type/Print Name of Registered Agent

[Signature] ERIC B HOOD ASSISTANT SECRETARY 3/7/23
Signature of Registered Agent Printed Name Title Date

ASR Application Search

Application A1274644**Application Detail**

File Number	A1274644	Constructed	
Registration Number		Dismantled	
NEPA		EMI	No

Application Information

Status	Pending	Date Received	01/30/2024
Purpose	New	Entered	01/30/2024
Mode	Interactive		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	37-00-38.4 N 087-45-45.9 W	Address	Old Cobb Road
City, State	Princeton , KY		
Zip	42445	County	CALDWELL
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	171.9	Overall Height Above Ground (AGL)	91.4
Overall Height Above Mean Sea Level	263.3	Overall Height Above Ground w/o Appurtenances	88.4

Proposed Marking and/or Lighting

FAA Style E

FAA Notification

FAA Study	FAA Issue Date
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Owner & Contact Information

FRN	0033815929	Owner Entity	Limited Liability Company
		Type	

Owner

The Towers, LLC	P: (561)406-4023
Attention To: Matthew Bonfante	F:
750 Park of Commerce Drive	E: fcc-faa@verticalbridge.com
Boca Raton , FL 33487	

Contact

Bonfante , Matthew	P: (561)406-4023
Attention To: Matthew Bonfante	F:
750 Park of Commerce Drive	E: fcc-faa@verticalbridge.com
Boca Raton , FL 33487	

Environmental Compliance

Does the applicant request a Waiver of the Commission's rules for environmental notice?	Is the applicant submitting an Environmental Assessment?
No	No

Is another Federal Agency taking responsibility for environmental review?

Does the applicant certify to No Significant Environmental Effect pursuant to Section

No

Reason for another Federal Agency taking responsibility for environmental review

Basis for Certification

Name of Federal Agency

Local Notice Date

National Notice Date

03/29/2024

Certification

Authorized Party Bonfante, Matthew Title Regulatory Compliance Specialist

Receipt Date 01/30/2024

Comments

Comments

None

History

Date

Event

01/30/2024

New Application Received

Trans Log

Date

Description

Existing Value

Requested Value

None

Pleadings

Pleading Type

Filer Name

Description

Date Entered

None

Automated Letters

Date

Description

None

Attachments

Type

Description

Date Entered

None

CLOSE WINDOW

REFERENCE COPY

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**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: LICENSING MANAGER
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign KNKN871	File Number 0009611092
Radio Service CL - Cellular	
Market Numer CMA444	Channel Block B
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003290673

Market Name Kentucky 2 - Union
--

Grant Date 08-31-2021	Effective Date 08-31-2021	Expiration Date 10-01-2031	Five Yr Build-Out Date	Print Date 08-31-2021
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Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	37-30-51.2 N	087-30-18.0 W	139.9	91.4	1030659

Address: 2138 SR 1405

City: SLAUGHTERS **County:** WEBSTER **State:** KY **Construction Deadline:**

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	104.300	99.100	103.400	105.700	89.600	78.600	86.500	103.800
Transmitting ERP (watts)	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

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: CELLCO PARTNERSHIP

Call Sign: KNKN871

File Number: 0009611092

Print Date: 08-31-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	37-16-53.0 N	087-29-17.0 W	176.8	90.8	1030654

Address: 1369 SAND CUT RD

City: Madisonville County: HOPKINS State: KY Construction Deadline:

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)	127.800	138.700	133.200	133.500	121.500	113.200	123.000	142.100
Transmitting ERP (watts)	208.970	190.560	12.020	1.000	0.500	0.500	0.630	30.910

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)	127.800	138.700	133.500	133.500	121.500	113.200	123.000	142.100
Transmitting ERP (watts)	0.500	0.540	19.950	190.560	208.940	20.420	1.070	0.500

Antenna: 7

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	127.800	138.700	133.500	133.500	121.500	113.200	123.000	142.100
Transmitting ERP (watts)	1.000	1.910	1.000	1.000	6.310	213.810	501.220	190.560

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	36-57-17.4 N	087-51-07.6 W	172.2	123.1	1030739

Address: (Hopson) RT 4 BOX 58 814999

City: Princeton County: CALDWELL State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	135.700	130.000	144.600	143.600	151.900	144.500	138.300	138.900
Transmitting ERP (watts)	18.030	88.290	65.450	2.610	0.360	0.200	0.200	0.350

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	135.700	130.000	144.600	143.600	151.900	144.500	138.300	138.900
Transmitting ERP (watts)	0.420	0.420	2.640	89.540	209.890	79.800	0.420	0.800

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)	135.700	130.000	144.600	143.600	151.900	144.500	138.300	138.900
Transmitting ERP (watts)	55.210	1.870	1.030	0.840	1.150	19.590	283.140	381.940

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN871

File Number: 0009611092

Print Date: 08-31-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	37-19-00.3 N	088-04-34.3 W	237.4	90.5	1030656

Address: (Marion) 11 Brairwood Drive

City: Marion County: CRITTENDEN State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	162.700	163.300	176.200	156.900	167.800	184.500	160.300	175.600
Transmitting ERP (watts)	271.010	402.110	56.170	1.380	1.090	1.090	1.090	16.570

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)	162.700	163.300	176.200	156.900	167.800	184.500	160.300	175.600
Transmitting ERP (watts)	1.090	1.090	54.770	411.390	270.910	18.590	1.090	1.090

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)	162.700	163.300	176.200	156.900	167.800	184.500	160.300	175.600
Transmitting ERP (watts)	2.710	0.550	0.550	0.550	2.110	63.550	191.830	63.550

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	37-19-19.5 N	087-30-03.8 W	144.5	99.1	1040639

Address: 54 W LAKE ST

City: Madisonville County: HOPKINS State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.900	120.000	110.700	105.000	90.400	94.900	118.300	102.200
Transmitting ERP (watts)	91.200	87.100	85.110	85.110	89.130	87.100	89.130	89.130

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	37-39-38.0 N	087-55-11.5 W	153.6	121.9	1030655

Address: (Morganfield) 996 TP LUCKETTE RD

City: Morganfield County: UNION State: KY Construction Deadline:

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.600	126.500	124.600	100.000	131.200	122.100	129.400	122.600
Transmitting ERP (watts)	355.170	248.530	31.970	1.840	0.810	0.810	2.870	89.690

Antenna: 3

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.600	126.500	124.600	100.000	131.200	122.100	129.400	122.600
Transmitting ERP (watts)	0.890	27.540	263.030	389.050	97.720	5.890	0.810	0.810

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN871

File Number: 0009611092

Print Date: 08-31-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	37-39-38.0 N	087-55-11.5 W	153.6	121.9	1030655

Address: (Morganfield) 996 TP LUCKETTE RD

City: Morganfield County: UNION State: KY Construction Deadline:

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)	130.600	126.500	124.600	100.000	131.200	122.100	129.400	122.600
Transmitting ERP (watts)	0.680	0.680	0.680	2.630	61.490	217.250	146.520	15.150

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	37-02-00.0 N	088-22-10.0 W	105.5	106.7	1040303

Address: (Calvert City) 641 Jary Johnson Rd.

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

Antenna: 2

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	23.380	330.300	378.360	36.130	0.970	0.970	0.970	0.970

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)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	0.970	0.970	0.970	14.730	240.930	357.480	49.940	1.230

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)	78.900	77.600	88.100	83.000	68.600	85.300	97.900	93.100
Transmitting ERP (watts)	63.740	2.060	0.660	0.660	0.660	4.020	107.530	274.970

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	37-36-46.0 N	087-29-35.0 W	118.0	91.0	1034040

Address: EASTWOOD FERRY ROAD

City: SEBREE County: WEBSTER State: KY Construction Deadline: 02-23-2006

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)	73.800	88.300	72.700	87.800	81.700	80.900	73.100	79.800
Transmitting ERP (watts)	0.560	0.200	0.200	0.280	2.400	42.760	89.330	12.910

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)	73.800	88.300	72.700	87.800	81.700	80.900	73.100	79.800
Transmitting ERP (watts)	55.080	0.490	0.200	0.200	0.200	0.200	0.200	39.900

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN871

File Number: 0009611092

Print Date: 08-31-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	37-36-46.0 N	087-29-35.0 W	118.0	91.0	1034040

Address: EASTWOOD FERRY ROAD

City: SEBREE County: WEBSTER State: KY Construction Deadline: 02-23-2006

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)	73.800	88.300	72.700	87.800	81.700	80.900	73.100	79.800
Transmitting ERP (watts)	0.200	0.200	0.200	5.380	97.950	4.910	0.210	0.200

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	36-46-54.2 N	088-03-28.1 W	199.0	126.5	1205551

Address: SR 80/US 68 & Trace

City: Golden Pond County: TRIGG State: KY Construction Deadline:

Antenna: 1

Maximum Transmitting ERP in Watts:	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	165.000	178.000	160.000	175.000	171.000	167.000	177.000	184.000
Transmitting ERP (watts)	96.610	96.610	96.610	96.610	96.610	96.610	96.610	96.610

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-14-55.1 N	088-20-42.2 W	175.8	108.8	1231318

Address: 738 Mitchell Road

City: Burna County: LIVINGSTON State: KY Construction Deadline: 02-23-2006

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)	116.800	144.900	144.500	172.100	154.500	163.300	146.900	139.500
Transmitting ERP (watts)	50.060	6.450	0.130	0.130	0.130	1.990	13.790	50.060

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)	116.800	144.900	144.500	172.100	154.500	163.300	146.900	139.500
Transmitting ERP (watts)	4.780	26.880	61.590	32.320	2.880	0.130	0.130	0.600

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)	116.800	144.900	144.500	172.100	154.500	163.300	146.900	139.500
Transmitting ERP (watts)	0.130	0.130	0.130	2.750	15.470	52.420	46.720	5.120

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN871

File Number: 0009611092

Print Date: 08-31-2021

Control Points:

Control Pt. No. 2

Address: 500 West Dove Road

City: Southlake **County:** TARRANT **State:** TX **Telephone Number:** (800)264-6620

Waivers/Conditions:

NONE

Reference Copy

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WQGA718), File Number (0009793647), and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz))

FCC Registration Number (FRN): 0003290673

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.

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: CELLCO PARTNERSHIP

Call Sign: WQGA718

File Number: 0009793647

Print Date: 02-23-2022

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WQGA960), File Number (0009775572), and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

FCC Registration Number (FRN): 0003290673

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.

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: CELLCO PARTNERSHIP

Call Sign: WQGA960

File Number: 0009775572

Print Date: 01-05-2022

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WQGD606), File Number (0009565676), and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz))

FCC Registration Number (FRN): 0003290673

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.

Special Condition for AU/name change (6/4/2016): 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: CELLCO PARTNERSHIP

Call Sign: WQGD606

File Number: 0009565676

Print Date: 07-09-2022

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WQJQ692), File Number, and Radio Service (WU - 700 MHz Upper Band (Block C)).

FCC Registration Number (FRN): 0003290673

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:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

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: CELLCO PARTNERSHIP

Call Sign: WQJQ692

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE ENGINEERING
ALPHARETTA, GA 30022

Call Sign WQXD435	File Number
Radio Service AT - AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date 02-04-2016	Effective Date 12-04-2019	Expiration Date 02-04-2028	Print Date
Market Number CMA444	Channel Block G	Sub-Market Designator 0	
Market Name Kentucky 2 - Union			
1st Build-out Date 02-04-2022	2nd Build-out Date 02-04-2028	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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: CELLCO PARTNERSHIP

Call Sign: WQXD435

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign WREF206	File Number
Radio Service UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

Grant Date 10-02-2019	Effective Date 10-02-2019	Expiration Date 10-02-2029	Print Date
Market Number C21033	Channel Block L2	Sub-Market Designator 0	
Market Name CALDWELL, KY			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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: CELLCO PARTNERSHIP

Call Sign: WREF206

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE ENGINEERING
ALPHARETTA, GA 30022

Call Sign WRHG984	File Number 0010283156
Radio Service UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

Grant Date 06-04-2020	Effective Date 11-18-2022	Expiration Date 06-04-2030	Print Date 03-15-2023
Market Number PEA243	Channel Block M1	Sub-Market Designator 0	
Market Name Paducah, KY			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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: CELLCO PARTNERSHIP

Call Sign: WRHG984

File Number: 0010283156

Print Date: 03-15-2023

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

REFERENCE COPY

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



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE ENGINEERING
ALPHARETTA, GA 30022

Call Sign WRHG994	File Number 0010283156
Radio Service UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

Grant Date 06-04-2020	Effective Date 11-18-2022	Expiration Date 06-04-2030	Print Date 03-15-2023
Market Number PEA243	Channel Block N1	Sub-Market Designator 0	
Market Name Paducah, KY			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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: CELLCO PARTNERSHIP

Call Sign: WRHG994

File Number: 0010283156

Print Date: 03-15-2023

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

REFERENCE COPY

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



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRNG985), File Number, and Radio Service (PM - 3.7 GHz Service)

FCC Registration Number (FRN): 0003290673

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 final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

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: CELLCO PARTNERSHIP

Call Sign: WRNG985

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

REFERENCE COPY

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



**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign WRNG990	File Number
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date 07-23-2021	Effective Date 07-23-2021	Expiration Date 07-23-2036	Print Date
Market Number PEA243	Channel Block B1	Sub-Market Designator 0	
Market Name Paducah, KY			
1st Build-out Date 07-23-2029	2nd Build-out Date 07-23-2033	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNG990

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

PROJECT SUMMARY

SITE NAME:	EV WALTONIA ROAD
SITE ADDRESS:	OLD COBB ROAD PRINCETON, KY 42445
COUNTY:	CALDWELL
JURISDICTION:	KENTUCKY PSC
LAND USE:	AGRICULTURAL
PARCEL ID:	94-13A
SITE COORDINATES:	1A
LATITUDE:	37° 00' 38.44" N (NAD83)
LATITUDE:	37.010678°
LONGITUDE:	87° 45' 45.87" W (NAD83)
LONGITUDE:	-87.762742°
ELEVATION:	564.1' AMSL (NAVD88)
FUZE PROJECT ID:	2115970
PSLC CODE:	492779
PROPERTY OWNER:	MARGIE CORTNER 514 OLD COBB RD PRINCETON, KY 42728
PROPERTY OWNER CONTACT:	MARGIE CORTNER (270) 963-0286
TOWER OWNER:	VERTICAL BRIDGE 750 PARK OF COMMERCE DR BOCA RATON, FL 33487
TOWER OWNER CONTACT:	GRETCHEN BLANTON (704) 472-0374
STRUCTURE TYPE:	GUYED TOWER
TOWER HEIGHT:	290'-0"
ENVIRONMENTAL REQ.:	N/A
OCCUPANCY:	UNMANNED
SITE TYPE:	RAWLAND
POWER COMPANY:	PENNYRILE R.E.C.C.
CONTACT:	TBD
PHONE:	(270) 651-2191
COMMUNICATIONS:	AT&T
PHONE:	(270) 678-2111
FIRE DEPARTMENT:	PRINCETON FIRE DEPARTMENT
PHONE:	(270) 365-2022
POLICE DEPARTMENT:	CALDWELL COUNTY SHERIFF
PHONE:	(270) 365-2088

DIRECTIONS FROM CALDWELL COUNTY DISTRICT COURTHOUSE:
HEAD NORTHWEST ON US-62 W / KY-139 / KY-293 / W MARKET ST TOWARD
KY-293 / W COURT SQ (92 FT), TURN LEFT ONTO KY-293 / W COURT SQ,
THEN IMMEDIATELY TURN LEFT ONTO US-62 E / KY-91 / KY-293 / W MAIN ST
(0.2 MI), KEEP RIGHT TO STAY ON KY-91 / HOPKINSVILLE ST (9.3 MI), TURN
RIGHT ONTO KY-672 / STATE ROUTE 672 (2.6 MI), TURN LEFT ONTO OLD
COBB RD (0.2 MI), ARRIVE AT OLD COBB RD ON THE LEFT. THE LAST
INTERSECTION BEFORE YOUR DESTINATION IS KY-672 / STATE ROUTE 672.
IF YOU REACH HARDY MILL RD, YOU'VE GONE TOO FAR.

STRUCTURAL REVIEW

CONTRACTOR SHALL ATTAIN AND VERIFY STRUCTURAL EVALUATION
REPORT OF EXISTING TOWER FOR EXACT PLACEMENT OF ANTENNAS AND
COAX CABLES. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF
THE STRUCTURAL EVALUATION REPORT AND NOTIFY VERIZON'S
CONSTRUCTION MANAGER IN THE CASE OF ANY DISCREPANCIES. ANY
STRUCTURAL MODIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO THE
INSTALLATION OF ANTENNAS.



EV WALTONIA ROAD OLD COBB ROAD PRINCETON, KY 42445



APPLICABLE CODES

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 CONSTRUCTED TO PERMIT WORK
NOT CONFORMING TO THESE CODES.

- 2018 KENTUCKY BUILDING CODE (2015 INTERNATIONAL BUILDING CODE)
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE (COMMERCIAL)
- 2009 INTERNATIONAL ENERGY CONSERVATION CODE (RESIDENTIAL)
- 2012 INTERNATIONAL FIRE CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL RESIDENTIAL CODE

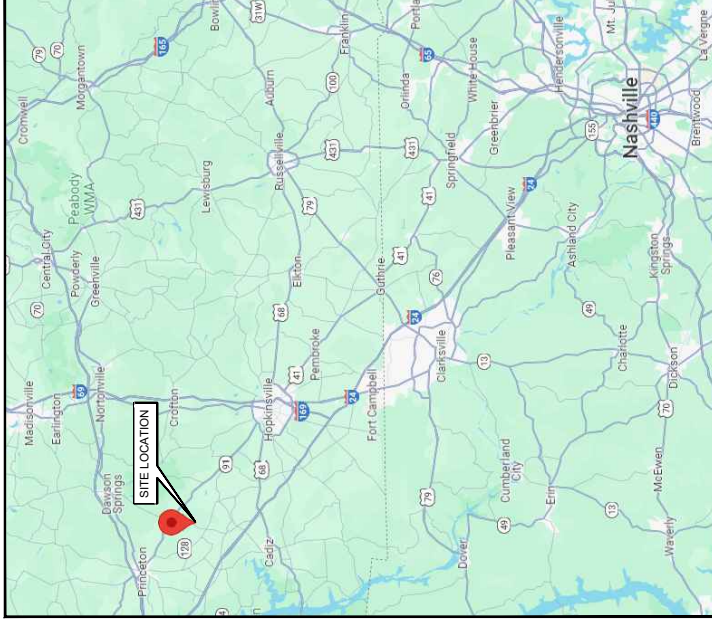
ACCESSIBILITY REQUIREMENTS:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN
ACCORDANCE WITH THE 2015 IBC BUILDING CODE.

SCOPE OF WORK

- INSTALL A NEW 290'-0" GUYED TOWER WITH 10'-0" LIGHTNING ROD (OVERALL 300'-0")
- INSTALL A NEW 80' X 80' CHAINLINK FENCED COMPOUND WITHIN A 100' X 100' LEASE AREA
- INSTALL A NEW UTILITY H-FRAME WITHIN THE NEW FENCED COMPOUND
- INSTALL A NEW TOWER, COMPOUND AND EQUIPMENT GROUNDING SYSTEM
- INSTALL NEW ANTENNAS, LINES, COAX, GPS AND RADIO EQUIPMENT
- INSTALL NEW UNDERGROUND POWER AND FIBER CONDUITS WITHIN THE DESIGNATED UTILITY EASEMENT TO NEW UTILITY H-FRAME
- INSTALL A NEW 7'-0"X11'-0" CONCRETE GENERATOR PAD
- INSTALL A NEW 4'-0"X9'-6" CONCRETE EQUIPMENT PAD
- INSTALL A NEW 4'-0"X10'-0" CONCRETE TANK PAD

ALL WORK MUST BE DONE IN ACCORDANCE TO THE DRAWINGS.

VICINITY MAP



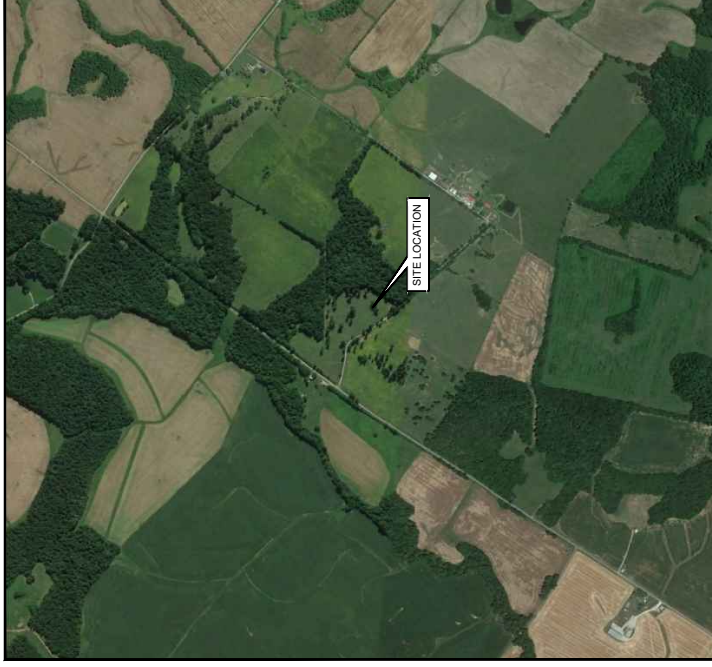
NOT TO SCALE

DIRECTIONS FROM LOUISVILLE SWITCH 2441 HOLLOWAY RD, LOUISVILLE, KY 40296: HEAD SOUTH ON HOLLOWAY RD TOWARD SCHUTTE STATION PL (0.54 FT), TURN LEFT ONTO SCHUTTE STATION PL (0.3 MI), ROAD NAME CHANGES TO PLANTSIDE DR (0.6 MI), TURN LEFT ONTO BLANKENBAKER PKWY (0.7 MI), TAKE THE RAMP ON THE RIGHT FOR I-64 EAST AND HEAD TOWARD LEXINGTON (1.6 MI), AT EXIT 19A, HEAD RIGHT ON THE RAMP FOR I-265 / KY-841 SOUTH TOWARD GENE SNYDER FREEWAY (2.8 MI), ROAD NAME CHANGES TO I-265 W / KY-841 W (12.5 MI), AT EXIT 10-B, HEAD RIGHT ON THE RAMP FOR I-65 SOUTH TOWARD NASHVILLE (3.9 MI), AT EXIT 91C-A, HEAD RIGHT ON THE RAMP FOR US-31W TOWARD ELIZABETHTOWN / PADUCAH (0.4 MI), KEEP LEFT, HEADING TOWARD LEITCHFIELD / PADUCAH (75.1 MI), ROAD NAME CHANGES TO WESTERN KENTUCKY PKWY (2.1 MI), ROAD NAME CHANGES TO WESTERN KENTUCKY PKWY W (21.7 MI), KEEP STRAIGHT TO GET ONTO I-69 S (12.8 MI), AT EXIT 92, HEAD RIGHT ON THE RAMP FOR KY-109 / INDUSTRIAL PARK RD TOWARD DAWSON SPRINGS (0.3 MI), TURN LEFT ONTO KY-109 / INDUSTRIAL PARK RD TOWARD DAWSON SPRINGS (1.8 MI), TURN RIGHT ONTO US-62 E / KY-109 / E ARCADIA AVE (1.8 MI), TURN LEFT ONTO KY-672 / STATE ROUTE 672 (12.5 MI), TURN LEFT ONTO OLD COBB RD (0.2 MI), ARRIVE AT OLD COBB RD ON THE LEFT. THE LAST INTERSECTION BEFORE YOUR DESTINATION IS KY-672 / STATE ROUTE 672. IF YOU REACH HARDY MILL RD, YOU'VE GONE TOO FAR.

SHEET INDEX

NO.	DESCRIPTION
T1	TITLE SHEET
S1	SURVEY - COVER SHEET
S2	SURVEY - OVERVIEW MAP
S3	SURVEY - SITE SURVEY
S4	SURVEY - LESSEE'S BOUNDARIES
S5	SURVEY - DESCRIPTIONS
S6	SURVEY - TITLE
Z1	COUNTY TOWER MAP
Z2	OVERALL SITE PLAN WITH AERIAL OVERLAY
Z3	OVERALL SITE PLAN WITHOUT AERIAL OVERLAY
Z4	TOWER LOCATION PLAN
Z5	SITE PLAN
Z6	EROSION CONTROL SITE PLAN
Z7	DIMENSION SITE PLAN
Z8	TOWER ELEVATION
Z9	SITE DETAILS
Z10	SITE DETAILS
Z11	SITE DETAILS

AERIAL MAP



NOT TO SCALE

CALL 811
1 (800) 752-6007
www.kentucky811.com
CONTRACTOR TO CALL KENTUCKY ONE-CALL SYSTEMS AT LEAST (2) FULL WORKING DAYS PRIOR TO DIGGING.

SHEET SCALE FACTOR:
PLOT SIZE:
11" x 17" TO SCALE



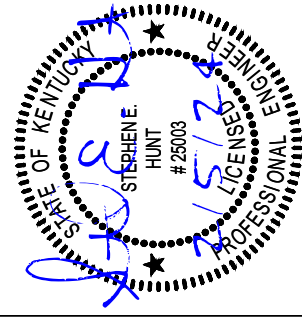
1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY: DLS
CHECKED BY: SEH

REVISIONS

#	DATE	BY	DESCRIPTION
6	02/05/24	PLS	FINAL ZONING ISSUE
5	02/02/24	MBJ	FINAL ZONING ISSUE
4	01/25/24	MBJ	FINAL ZONING ISSUE
3	01/18/24	MBJ	FINAL ZONING ISSUE
2	02/16/23	MBJ	FINAL ZONING ISSUE
1	02/16/23	MBJ	FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : TITLE SHEET

DRAWING #: T1
REVISION: 6

GENERAL NOTES:

- This Survey is prepared exclusively to show site conditions and/or for use in support of instruments related to Leases and Easements as may be shown hereon. Any property boundary information shown hereon is a composite of information gathered from current or previous Surveys, Plat & Deed Description and/or Assessor's Tax Maps as may be referenced hereon. This Survey is not a Boundary Survey of any Tax Parcels or Deed Tracts, and does not create, combine, or divide any existing properties.
- Survey shown hereon was performed under the supervision of a state-registered Land Surveyor and conforms to all applicable State Board Requirements.
- Instruments Used: One or more of: Topcon Total Station, Topcon Hiperlite Plus GPS, Carlson Surveyor Data Collector, DJI UAV.
- Where shown, improvements (utilities, buildings, trees, fences, etc.) are based on field Survey and/or aerial mapping.
- Any Underground Utilities shown according to surface markings made by others, found at time of survey. Additional marked utilities outside the area covered by this survey map may be shown in provided CAD Files. Utility Markings may not be comprehensive: this survey does not relieve design and construction personnel of the responsibility to determine the locations of underground utilities prior to land disturbance activities.
- This Survey is presented in the format required by Clients. Clients are advised that Official Jurisdictions may require the Survey to be presented in another format with additional notes and certifications. In the event other formats, notes or certifications are requested by applicable jurisdictions, it is the responsibility of the Client to request same be prepared by Surveyor. Survey as published is not intended to be suitable for recording as a Subdivision Plat.
- This survey may have been reduced or enlarged in size due to subsequent reproduction. This should be taken into consideration when obtaining scaled data.
- Geographic Coordinates, if published, meet FAA Accuracy Code 1A, and are accurate to within ± 20 feet horizontally and to within ± 3 feet vertically.
- Any Flood Zone information presented hereon is according to current FEMA Flood Map information as may be referenced hereon. No Flood Elevation Survey of Certification performed.
- This survey is not valid without the original signature seal of a State-Licensed Land Surveyor, and is not complete without the total of sheets as specified in Survey Title Blocks.

SURVEYOR'S CERTIFICATION

To: Verizon Wireless:
I hereby certify (or state) that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.



Travis L. Shields
Kentucky PLS
License No. 4246

PROPOSED TOWER LOCATION DATA

Latitude: NORTH: 37.010678° 37° 00' 38.44"
Longitude: WEST: 87.762742° 87° 45' 45.87"
Ground Elev: 564.1 FEET AMSL (NAVD88)
Benchmark: DK3316 KYTB

PARENT TAX PARCEL

MARGERIE CORTNER
TAX PARCEL: 94-13F

NORTH ORIENTATION

KENTUCKY SOUTH STATE PLANE COORDINATE SYSTEM
Based on GPS Survey relative to NGS CORS Network, NAD83 (2011)
ELEVATION DATUM: NAVD88, GEOID 12B
DATE OF SURVEY: 09-12-2022
Method: RTK (CORS); Confidence Level: 95%
Positional Accuracy: HZ $\pm 0.10'$
EPOCH 2010.0000

FLOOD DATA

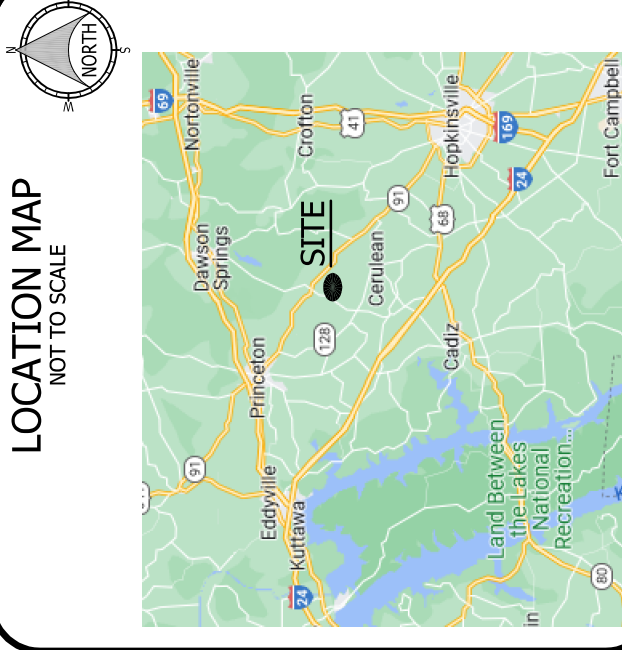
FEMA FLOOD MAP PANEL: 21033C0275D, Effective Date: 04-19-2019
Surveyed Area appears to lie within: ZONE X (Areas of Minimal Flood Hazard)

TITLE EXAMINATION:

See Sheet #6

LOCATION MAP

NOT TO SCALE

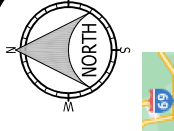


LEGEND

* PROPOSED TOWER CENTER	
◆ SITE BENCHMARK	
R/W RIGHT-OF-WAY	———
C/L CENTER LINE	———
AUF ACCESS & UTILITY/FIBER EASEMENT	———
ESMT POINT OF COMMENCEMENT	———
P.O.C. POINT OF BEGINNING	———
P.O.B. POINT OF TERMINUS	———
P.O.T. SQUARE FEET	———
Sq Ft	———
PAVEMENT EDGE	———
FENCE	———
DITCH	———
5' CONTOURS	———
1' CONTOURS	———
PUBLIC R/W	———
TAX PARCEL BOUNDARY	———
TIE LINE	———
LESSEE'S PREMISES	———
LESSEE'S EASEMENTS	———

SURVEY ISSUE DATA

#	DETAILS	DATE	DRAWN	APP
0	Original Survey Issue	10-03-2022	NB	TLS
1	Add Guy Easements	11-07-2023	NB	TLS



THE
LAND CONSULTANTS
LLC
5449 Highway #41
Jasper, TN 37347
(423) 304-6722

PREPARED FOR



VERIZON WIRELESS

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY

Location Code: 492779
Old Cobb Road, Princeton, KY 42445
Caldwell County, Kentucky

COVER SHEET

DWG#: 22251
ISSUE #: 1
ISSUE DATE: 11-07-2023
SEE SHEET #1

SHEET
1
OF
6

PROPERTY INFORMATION

PARENT TAX PARCEL

- A. MARGERY CORTNER
TAX PARCEL: 94-13F
DEED BOOK D226, PAGE 732
TRACT 8, WOOD ESTATE
PLAT BOOK 1, PAGE 336
See Sheet #5

ADJOINING TAX PARCELS

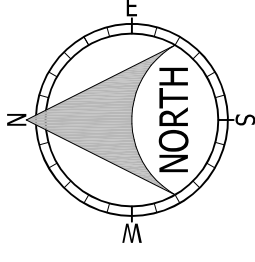
- B. HEIRS OF JERRY CORTNER
TAX PARCEL: 94-13A
DEED BOOK 197, PAGE 247
- C. MICHAEL DAREN SMILEY
TAX PARCEL: 94-13
DEED BOOK 282, PAGE 43
- D. HEIRS OF JERRY CORTNER
TAX PARCEL: 94-14 104-4
DEED BOOK 138, PAGE 164
- E. KENNETH R. CORTNER ...
TAX PARCEL: 94-11 & 103-18
DEED BOOK 243, PAGE 221

OVERVIEW MAP CAVEAT:
OVERVIEW MAP IS NOT A SURVEY BUT A VICINITY / LOCATION MAP
INTENDED ONLY TO SHOW SURVEYED PROPERTY IN RELATION TO
SURROUNDING AREA, VESTING AND ADJOINING PARCEL BOUNDARIES
ARE NOT INCLUDED IN OR CERTIFIED BY THIS SURVEY. BOUNDARY
LINES ARE A COMPOSITE OF DEED, PLAT AND/OR TAX MAP
INFORMATION

Surveyor's certification of Survey extends only to the Survey Area as
shown on Survey Map Sheets. This sheet includes items based on
information supplied to Surveyor by Title Examiners and other sources,
presented hereon as a convenience to clients, not included under
Survey Certification. No Survey was performed outside the Survey Area.

STATE OF KENTUCKY

 TRAVIS L. SHIELDS
 4246
 LICENSED
 PROFESSIONAL
 LAND SURVEYOR



THE
LAND CONSULTANTS
 LLC
 5449 Highway #41
 Jasper, TN 37347
 (423) 304-6722



(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY

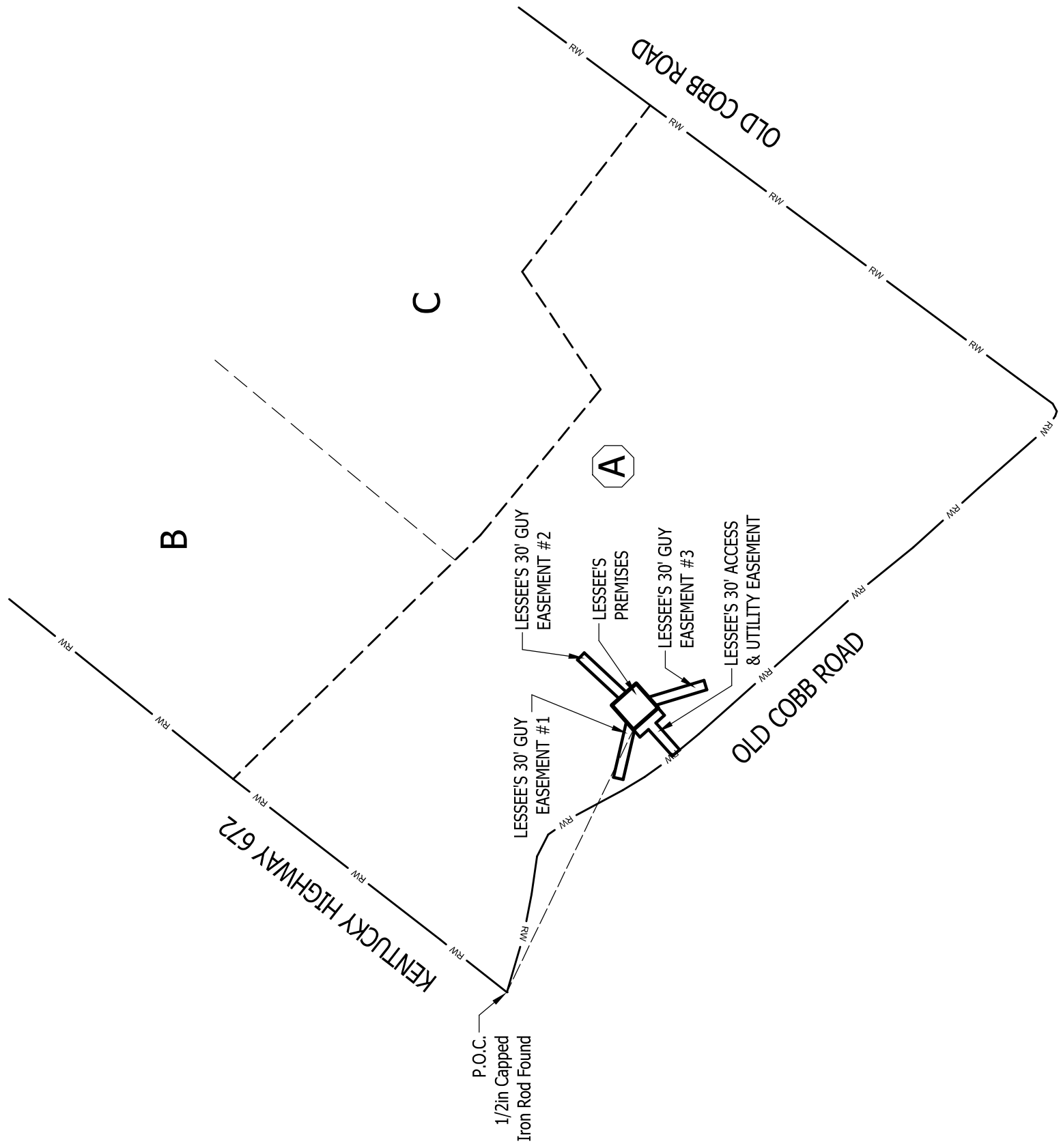
EV WALTONIA ROAD

Location Code: 492779
 Old Cobb Road, Princeton, KY 42445
 Caldwell County, Kentucky

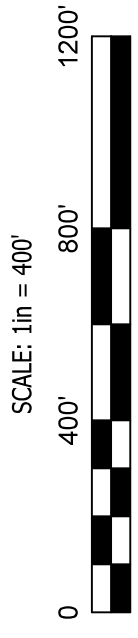
OVERVIEW MAP

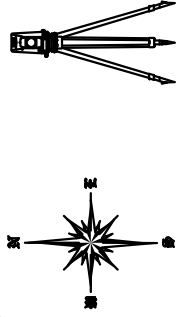
DWG#: 22251
 ISSUE #: 1
 ISSUE DATE: 11-07-2023
 SEE SHEET #1

SHEET **2** OF 6



— RW —	PUBLIC R/W
- - - - -	VESTING LAND
- - - - -	ADJOINING TAX PARCEL
- - - - -	TIE LINE
=====	LESSEE'S PREMISES
=====	LESSEES EASEMENT(S)



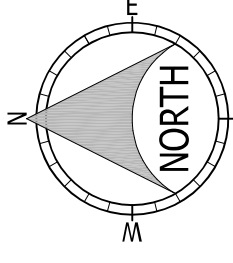


THE
LAND CONSULTANTS
LLC
5449 Highway #41
Jasper, TN 37347
(423) 304-6722

PREPARED FOR
verizon
VERIZON WIRELESS

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)
SITE SURVEY
EV WALTONIA ROAD
Location Code: 492779
Old Cobb Road, Princeton, KY 42445
Caldwell County, Kentucky

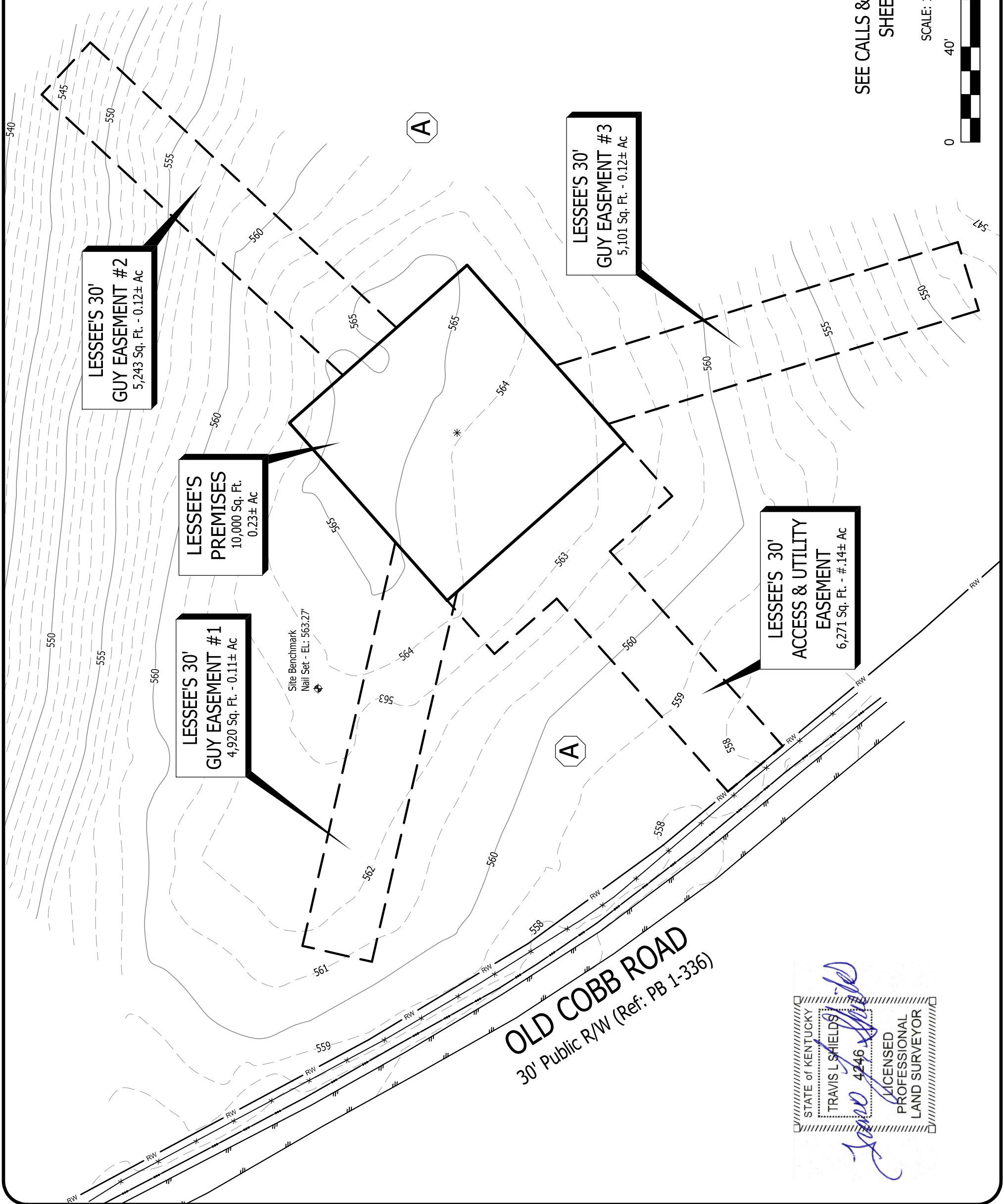
SITE SURVEY
DWG#: 22251
ISSUE #: 1
ISSUE DATE: 11-07-2023
SEE SHEET #1
SHEET **3** OF 6



KENTUCKY SOUTH
STATE PLANE

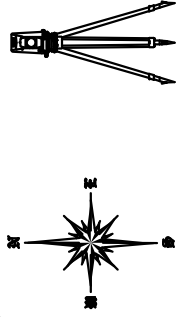
SEE CALLS & CALL TABLE
SHEET #4

SCALE: 1in = 40'



STATE OF KENTUCKY
TRAVIS L SHIELDS
4246
LISCENSED
PROFESSIONAL
LAND SURVEYOR

Travis L. Shields



THE
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LLC
5449 Highway #41
Jasper, TN 37347
(423) 304-6722

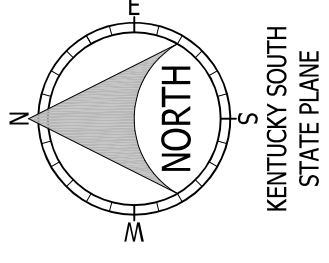
PREPARED FOR
verizon
VERIZON WIRELESS

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)
SITE SURVEY
EV WALTONIA ROAD
Location Code: 492779
Old Cobb Road, Princeton, KY 42445
Caldwell County, Kentucky

**LESSEE'S
BOUNDARIES**

DWG#: 22251
ISSUE #: 1
ISSUE DATE: 11-07-2023
SEE SHEET #1

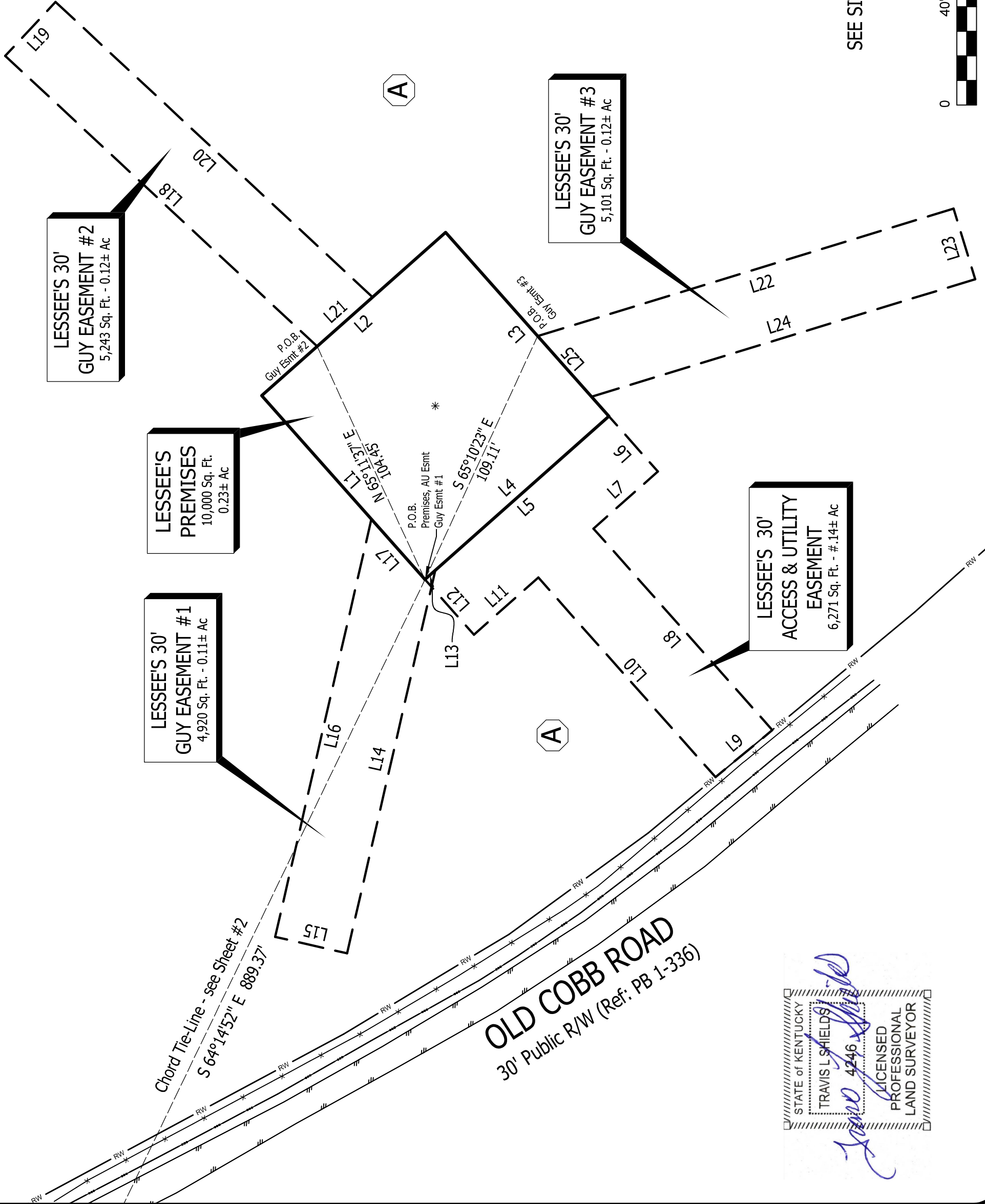
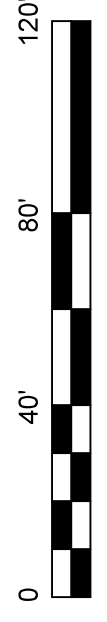
SHEET **4** OF **6**



LINE	BEARING	DISTANCE
L1	N 48°24'11" E	100.00'
L2	S 41°35'49" E	100.00'
L3	S 48°24'11" W	100.00'
L4	N 41°35'49" W	100.00'
L5	N 41°35'49" E	100.00'
L6	S 48°24'11" W	30.00'
L7	N 41°35'49" W	35.00'
L8	S 48°24'11" W	109.56'
L9	N 39°39'00" W	30.02'
L10	N 48°24'11" E	108.54'
L11	N 41°35'49" W	35.00'
L12	N 48°24'11" E	30.00'
L13	S 41°35'49" E	5.61'
L14	N 77°02'00" W	159.84'
L15	N 12°58'00" E	30.00'
L16	S 77°02'00" E	174.31'
L17	S 48°24'11" W	32.83'
L18	N 42°58'00" E	173.35'
L19	S 47°02'00" E	30.00'
L20	S 42°58'00" W	176.20'
L21	N 41°35'49" W	30.14'
L22	S 17°02'00" E	176.88'
L23	S 72°58'00" W	30.00'
L24	N 17°02'00" W	163.17'
L25	N 48°24'11" E	32.99'

SEE SITE SURVEY DATA
SHEET #3

SCALE: 1in = 40'



STATE OF KENTUCKY
TRAVIS L SHIELDS
4246
LICENSED
PROFESSIONAL
LAND SURVEYOR

OLD COBB ROAD
30' Public R/W (Ref: PB 1-336)

Chord Tie-Line - see Sheet #2
S 64°14'52" E 889.37'

LESSEE'S PREMISES

All that Tract or Parcel of land lying and being in Caldwell County, Kentucky, and being part of the property of Margery Cortner, of record in Deed Book D226, Page 732, and being more particularly described as follows:

COMMENCE at a one-half-inch Iron Rod Found on the Northeast side of the intersection of Kentucky Highway 126 and Old Cobb Road, same being the Westernmost corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of S 64° 14'52" E, a distance of 889.37 feet to the POINT OF BEGINNING;

Thence N 48°24'11" E, a distance of 100.00 feet;
Thence S 41°35'49" E, a distance of 100.00 feet;
Thence S 48°24'11" W, a distance of 100.00 feet;
Thence N 41°35'49" W, a distance of 100.00 feet to the POINT OF BEGINNING.

Said Premises contains 0.23 Acres (10,000 Square Feet), more or less.

LESSEE'S 30' ACCESS & UTILITY EASEMENT

All that Tract or Parcel of land lying and being in Caldwell County, Kentucky, and being part of the property of Margery Cortner, of record in Deed Book D226, Page 732, and being more particularly described as follows:

COMMENCE at a one-half-inch Iron Rod Found on the Northeast side of the intersection of Kentucky Highway 126 and Old Cobb Road, same being the Westernmost corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of S 64° 14'52" E, a distance of 889.37 feet to the POINT OF BEGINNING;

Thence S 41°35'49" E, a distance of 100.00 feet;
Thence S 48°24'11" W, a distance of 30.00 feet;
Thence N 41°35'49" W, a distance of 35.00 feet;
Thence S 48°24'11" W, a distance of 109.56 feet to a point on the Northern Right-of-Way Line of Old Cobb Road;
Thence N 39°39'00" W, along said Right-of-Way Line, a distance of 30.02 feet;
Thence N 48°24'11" E, leaving said Right-of-Way, a distance of 108.54 feet;
Thence N 41°35'49" W, a distance of 35.00 feet;
Thence N 48°24'11" E, a distance of 30.00 feet to the POINT OF BEGINNING.

Said Easement contains 0.14 Acres (6,271 Square Feet), more or less.



LESSEE'S 30' GUY EASEMENT #1

All that Tract or Parcel of land lying and being in Caldwell County, Kentucky, and being part of the property of Margery Cortner, of record in Deed Book D226, Page 732, and being more particularly described as follows:

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Thence along a Chord Tie Line having a Bearing of S 64° 14'52" E, a distance of 889.37 feet to the POINT OF BEGINNING;

Thence S 41°35'49" E, a distance of 5.61 feet;
Thence N 77°02'00" W, a distance of 159.84 feet;
Thence N 12°58'00" E, a distance of 30.00 feet;
Thence S 77°02'00" E, a distance of 174.31 feet;
Thence S 48°24'11" W, a distance of 32.83 feet to the POINT OF BEGINNING.

Said Easement contains 0.11 Acres (4,920 Square Feet), more or less.

LESSEE'S 30' GUY EASEMENT #2

All that Tract or Parcel of land lying and being in Caldwell County, Kentucky, and being part of the property of Margery Cortner, of record in Deed Book D226, Page 732, and being more particularly described as follows:

COMMENCE at a one-half-inch Iron Rod Found on the Northeast side of the intersection of Kentucky Highway 126 and Old Cobb Road, same being the Westernmost corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of S 64° 14'52" E, a distance of 889.37 feet;

Thence N 65°11'37" E, a distance of 104.45 feet to the POINT OF BEGINNING;

Thence N 42°58'00" E, a distance of 173.35 feet;
Thence S 47°02'00" E, a distance of 30.00 feet;
Thence S 42°58'00" W, a distance of 176.20 feet;
Thence N 41°35'49" W, a distance of 30.14 feet to the POINT OF BEGINNING.

Said Easement contains 0.12 Acres (5,243 Square Feet), more or less.

LESSEE'S 30' GUY EASEMENT #3

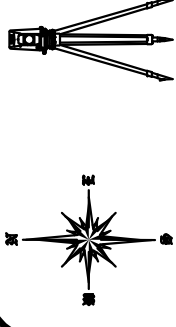
All that Tract or Parcel of land lying and being in Caldwell County, Kentucky, and being part of the property of Margery Cortner, of record in Deed Book D226, Page 732, and being more particularly described as follows:

COMMENCE at a one-half-inch Iron Rod Found on the Northeast side of the intersection of Kentucky Highway 126 and Old Cobb Road, same being the Westernmost corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of S 64° 14'52" E, a distance of 889.37 feet;

Thence S 65°10'23" E, a distance of 109.11 feet to the POINT OF BEGINNING;

Thence S 17°02'00" E, a distance of 176.88 feet;
Thence S 72°58'00" W, a distance of 30.00 feet;
Thence N 17°02'00" W, a distance of 163.17 feet;
Thence N 48°24'11" E, a distance of 32.99 feet to the POINT OF BEGINNING.

Said Easement contains 0.12 Acres (5,101 Square Feet), more or less.



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PREPARED FOR
VERIZON WIRELESS

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)
SITE SURVEY
EV WALTONIA ROAD
Location Code: 492779
Old Cobb Road, Princeton, KY 42445
Caldwell County, Kentucky

DESCRIPTIONS

DWG#: 22251
ISSUE #: 1
ISSUE DATE: 11-07-2023
SEE SHEET #1

SHEET
5
OF
6

TITLE EXAMINATION

(Surveyor's treatment of Title Examination Items is limited to the scope described in ALTA/NSPS 2016 requirements, Section 6. C. ii., and is limited to determination of the extent of land, that Title Items may influence, if any. Surveyor may indicate where review by Title Attorney may be warranted.)

Reference: ALTA Commitment for Title Insurance, issued by Fidelity National Title Insurance Company, Order Number: 37812549, Commitment Date: 08-24-2022 Schedule B, Part II:

Items 1: Taxes. Not addressed by Surveyor.

Item 2: Right-of-Way Easement to Pennyrite Rural Electric Cooperative Corporation, Deed Book 151, Page 156. Grants a 40' Right-of-Way Easement for electric utilities. No electric lines were visible in the surveyed area. An overhead power line was located Northwest of the proposed Lease Area. Located on Parent Tax Parcel outside of Survey Arera. assumed not located on Leasee's Premises or Easement.

Item 3: Plat Book 1, Page 336. Plat of lands including Parent Tax Parcel. Shows no matters located upon Parent Tax Parcel.

LEGAL DESCRIPTION OF PARENT PARCEL

The following described property located in Caldwell County, Kentucky, to-wit:

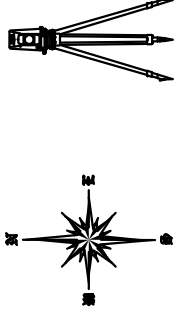
Beginning at an iron set on the North East side of the intersection of KY - 126 and Old Cobb Road, being 30 feet Southwest of the center of KY. 126 and on the North side of and 15 feet from the center of Old Cobb Road; thence with the meanders of the Southeast side of KY. 126 N. 37 deg. 28 min. 00 sec. E. 257.82 ft., and N. 37 deg. 05 min. 29 sec. E. 800.82 ft. to an iron pin set on the Southeast side of and 30 feet from the center of KY. 126, corner to Cortner (d.b.197 p.247) ; thence with his line S. 45 deg. 20 min. 34 sec. E. 1058.82 ft. to an iron pin set corner to Smiley (d.b.199 p.183);

thence with his lines S. 51 deg. 14 min. 35 sec. E. 577.47 ft. to an iron pin set, N. 55 deg. 37 min. 42 sec. E. 431.43 ft. to an iron pin set, and S. 53 deg. 10 min. 41 sec. E. 640.98 ft. to an iron pin set on the Northwest side of and 15 feet from the center of Old Cobb Road; thence with the meanders of the North and West side of Old Cobb Road S. 35 deg. 52 min. 37 sec. W., passing an iron pin set at 1000 feet, in all, 1397.81 ft. to a point, continuing with the road S. 35 deg. 18 min. 45 sec. W. 130.58 ft., S. 60 deg. 03 min. 51 sec. W. 26.87 ft., N. 72 deg. 02 min. 51 sec. W. 14.66 ft., N. 55 deg. 30 min. 59 sec. W. 45.66 ft., N. 42 deg. 06 min. 18 sec. W. 276.79 ft. to an iron pin set, N. 43 deg. 00 min. 08 sec. W. 269.52 ft., N. 39 deg. 48 min. 18 sec. W. 244.37 ft., N. 43 deg. 47 min. 12 sec. W. 77.65 ft., N. 42 deg. 22 min. 37 sec. W., passing an iron pin set at 408.57 ft., in all, 545.98 ft. to a point, continuing with the road N. 40 deg. 23 min. 14 sec. W. 140.94 ft., N. 36 deg. 48 min. 11 sec. W. 70.08 ft., N. 31 deg. 51 min. 02 sec. W. 78.42 ft., N. 29 deg. 00 min. 14 sec. W. 169.09 ft.,

N. 35 deg. 53 min. 10 sec. W. 95.91 ft., N. 63 deg. 46 min. 36 sec. W. 74.41 ft., N. 82 deg. 28 min. 19 sec. W. 116.67 ft., N. 79 deg. 52 min. 03 sec. W. 121.73 ft. to an iron pin set, and N. 74 deg. 25 min. 15 sec. W. 187.10 ft. to the beginning containing 60.82 acres, more or less, according to a survey by Billy J. May L.S. 878 of B.J. May Land Surveying, Inc., started on October 01, 2000. This is a survey of the Garland Wood Estate as recorded in deed book 94 at page 478. Plat recorded in Plat Cabinet 1 in sleeve 336.

AND BEING the same property conveyed to Jerry K. Cortner and Margery Cortner from Marcella W. Sanders, Rose W. Mitchell, Nancy W. Cates, Mari Anna W. Welch and Bobby G. Wood and Patsy M. Wood by Deed of Conveyance dated December 15, 2000 and recorded December 20, 2000 in Deed Book D226, Page 732; said Jerry Kent Cortner having departed this earth on or about December 6, 2016 leaving Margery Cortner his/her Surviving tenant by the entirety.

Tax Parcel No. 94-13F



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SITE SURVEY
EV WALTONIA ROAD

Location Code: 492779
Old Cobb Road, Princeton, KY 42445
Caldwell County, Kentucky

TITLE

DWG#: 22251
ISSUE #: 1
ISSUE DATE: 11-07-2023
SEE SHEET #1

SHEET
6
OF
6

Surveyor's certification of Survey extends only to the Survey Area as shown on Survey Map Sheets. This sheet includes items based on information supplied to Surveyor by Title Examiners and other sources, presented hereon as a convenience to clients, not included under Survey Certification. No Survey was performed outside the Survey Area.



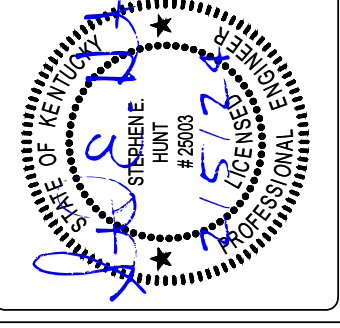


1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY : DLS
CHECKED BY : SEH

REVISIONS	
#	DESCRIPTION
6	02/05/24 PLS FINAL ZONING ISSUE
5	02/02/24 MJB FINAL ZONING ISSUE
4	01/25/24 MJB FINAL ZONING ISSUE
3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE



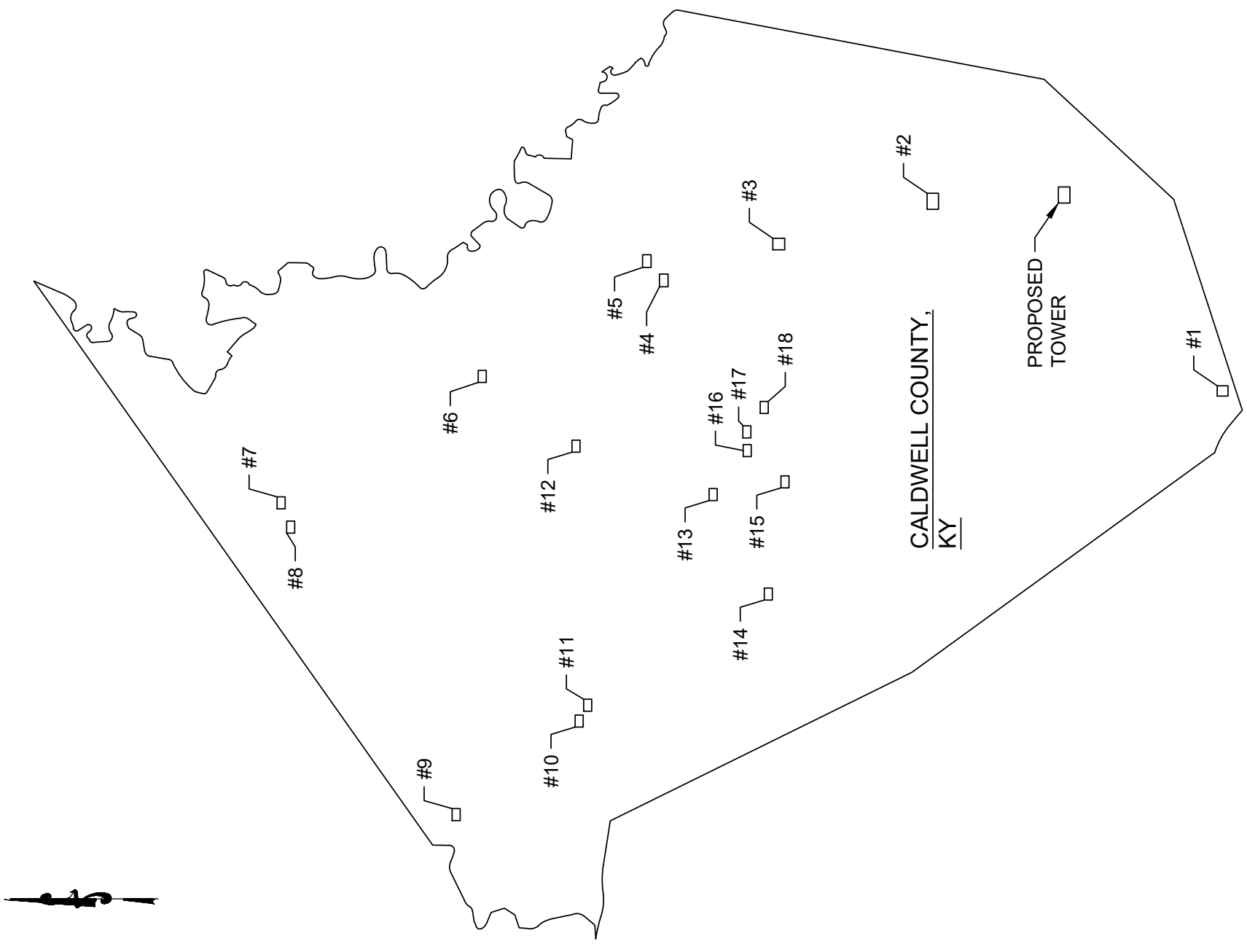
FUZE ID : 2115970
SITE NAME : EV WALTONIA ROAD
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445
SITE TYPE : RAWLAND

SHEET TITLE : COUNTY TOWER MAP

DRAWING # : Z1
REVISION : 6

TOWER	ASR	LATITUDE	LONGITUDE	TOWER OWNER
#1.	1030739	36° 57' 17.40"N	87° 51' 17.60"W	CROWN CASTLE GT COMPANY LLC
#2.	1303189	37° 03' 25.40"N	87° 46' 06.80"W	TILLMAN INFRASTRUCTURE LLC
#3.	1256011	37° 06' 41.40"N	87° 47' 14.70"W	AMERICAN TOWERS LLC
#4.	1235203	37° 09' 17.30"N	87° 48' 08.80"W	CROWN CASTLE SOUTH LLC
#5.	1221639	37° 09' 28.40"N	87° 47' 40.80"W	CROWN CASTLE GT COMPANY LLC
#6.	1044826	37° 13' 5.00"N	87° 50' 45.00"W	KENTUCKY, COMMONWEALTH OF DBA = KY EMERGENCY WARNING SYSTEM KEWS
#7.	1304536	37° 13' 32.70"N	87° 54' 10.70"W	TILLMAN INFRASTRUCTURE, LLC
#8.	1039663	37°17' 07.00"N	87° 54' 41.00"W	TEXAS GAS TRANSMISSION, LLC
#9.	1306038	37° 13' 32.70"N	88° 02' 32.10"W	SKYWAY TOWERS, LLC
#10.	1289004	37° 10' 51.10"N	87° 59' 53.00"W	KENTUCKY UTILITIES COMPANY
#11.	1200526	37° 10' 49.00"N	87° 59' 41.00"W	BIG RIVERS ELECTRIC CORPORATION
#12.	1305997	37° 11' 01.80"N	87° 52' 35.80"W	TILLMAN INFRASTRUCTURE, LLC PRINCETON, KY
#13.	1247278	37° 08' 04.75"N	87° 53' 48.25"W	PRINCETON ELECTRIC PLANT BOARD
#14.	1272322	37° 06' 51.00"N	87° 56' 32.00"W	AMERICAN TOWERS LLC
#15.	1201151	37° 06' 37.10"N	87° 53' 31.00"W	DBA FORD COMMUNICATIONS
#16.	1200993	37° 7' 21.10"N	87° 52' 42.00"W	PINNACLE TOWERS LLC
#17.	1040638	37° 07' 22.00"N	87° 52' 45.50"W	HAM BROADCASTING CO., INC.
#18.	1240993	37° 07' 21.10"N	87° 52' 42.00"W	HAM BROADCASTING CO., INC.
PROPOSED TOWER	VERIZON	37° 00' 39.49"N	87° 45' 45.87"W	VERTICAL BRIDGE



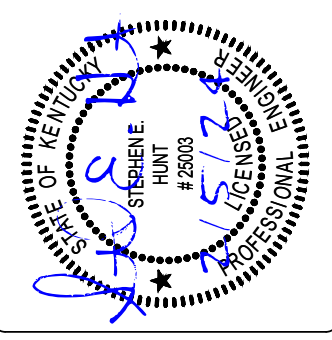


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CHECKED BY: SEH

REVISIONS		
#	DATE	DESCRIPTION
6	02/05/24	FINAL ZONING ISSUE
5	02/02/24	FINAL ZONING ISSUE
4	01/25/24	FINAL ZONING ISSUE
3	01/18/24	FINAL ZONING ISSUE
2	02/16/23	FINAL ZONING ISSUE
1	02/16/23	FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

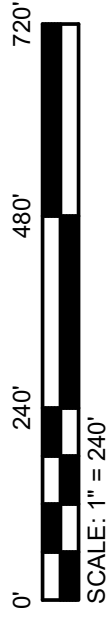
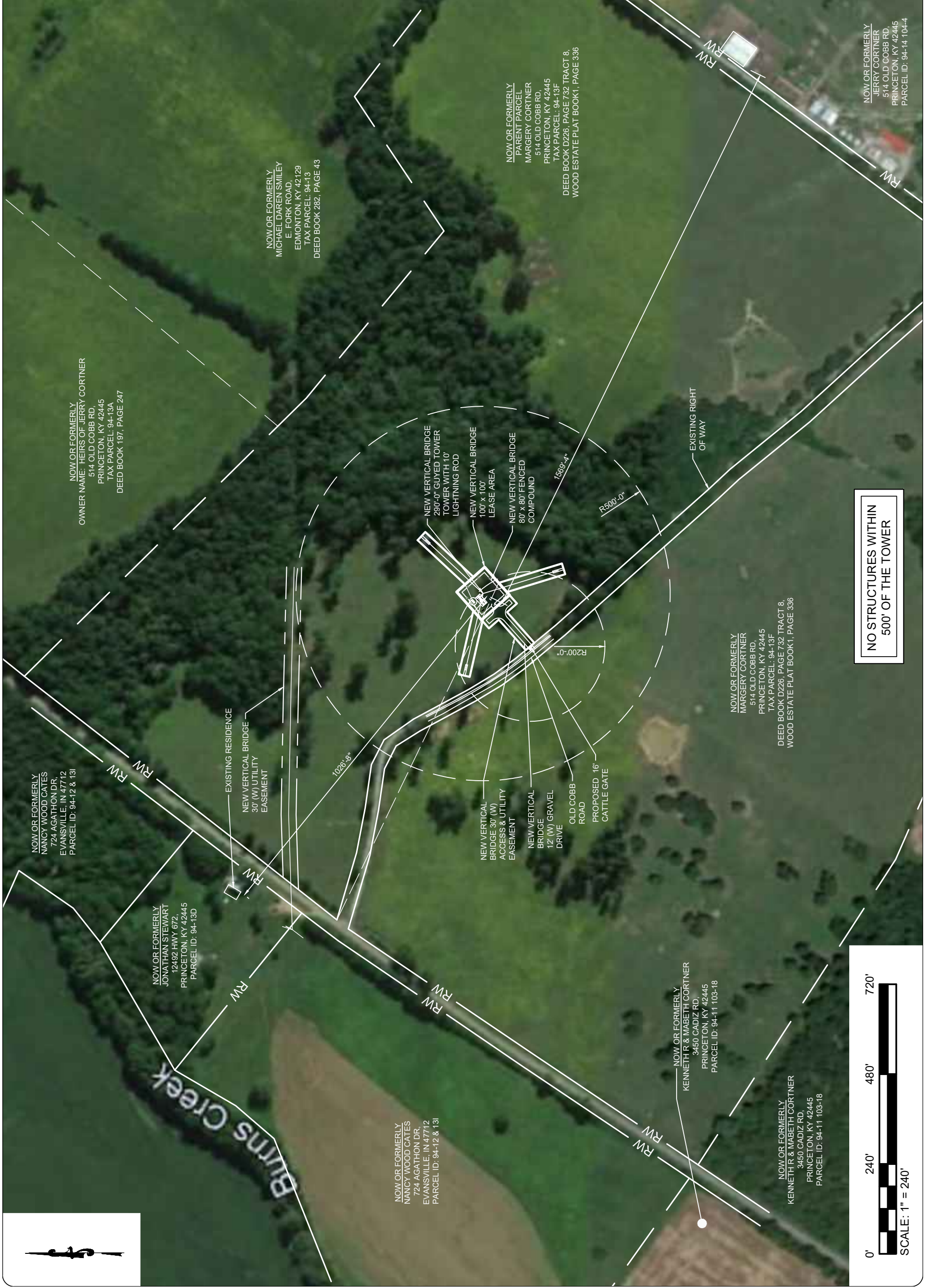
SITE # / LOCATION CODE : 492779

SITE ADDRESS :
OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE :
OVERALL SITE LAYOUT
WITH AERIAL OVERLAY

DRAWING # : Z2
REVISION : 6



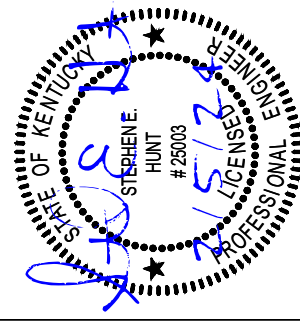


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REVISIONS		
#	DATE	DESCRIPTION
6	02/05/24	PLS FINAL ZONING ISSUE
5	02/02/24	IMB FINAL ZONING ISSUE
4	01/25/24	IMB FINAL ZONING ISSUE
3	01/18/24	IMB FINAL ZONING ISSUE
2	02/16/23	IMB FINAL ZONING ISSUE
1	02/16/23	IMB FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : OVERALL SITE LAYOUT WITHOUT AERIAL OVERLAY

DRAWING #: Z3
REVISION: 6

NOW OR FORMERLY
MICHAEL DAREN SMILEY
E. FORK ROAD,
EDMONTON, KY 42129
TAX PARCEL: 94-13
DEED BOOK 282, PAGE 43

NOW OR FORMERLY
PARENT PARCEL
MARGERY CORTNER
514 OLD COBB RD,
PRINCETON, KY 42445
TAX PARCEL: 94-13F
DEED BOOK D226, PAGE 732 TRACT 8,
WOOD ESTATE PLAT BOOK1, PAGE 336

NOW OR FORMERLY
JERRY CORTNER
514 OLD COBB RD,
PRINCETON, KY 42445
PARCEL ID: 94-14 104-4

NOW OR FORMERLY
OWNER NAME: HEIRS OF JERRY CORTNER
514 OLD COBB RD,
PRINCETON, KY 42445
TAX PARCEL: 94-13A
DEED BOOK 197, PAGE 247

NOW OR FORMERLY
NANCY WOOD CATES
724 AGATHON DR,
EVANSVILLE, IN 47712
PARCEL ID: 94-12 & 131

NOW OR FORMERLY
JONATHAN STEWART
12492 HWY 672,
PRINCETON, KY 42445
PARCEL ID: 94-13D

NOW OR FORMERLY
NANCY WOOD CATES
724 AGATHON DR,
EVANSVILLE, IN 47712
PARCEL ID: 94-12 & 131

NOW OR FORMERLY
KENNETH R. & MABETH CORTNER
3450 CADIZ RD,
PRINCETON, KY 42445
PARCEL ID: 94-11 103-18

NOW OR FORMERLY
KENNETH R. & MABETH CORTNER
3450 CADIZ RD,
PRINCETON, KY 42445
PARCEL ID: 94-11 103-18

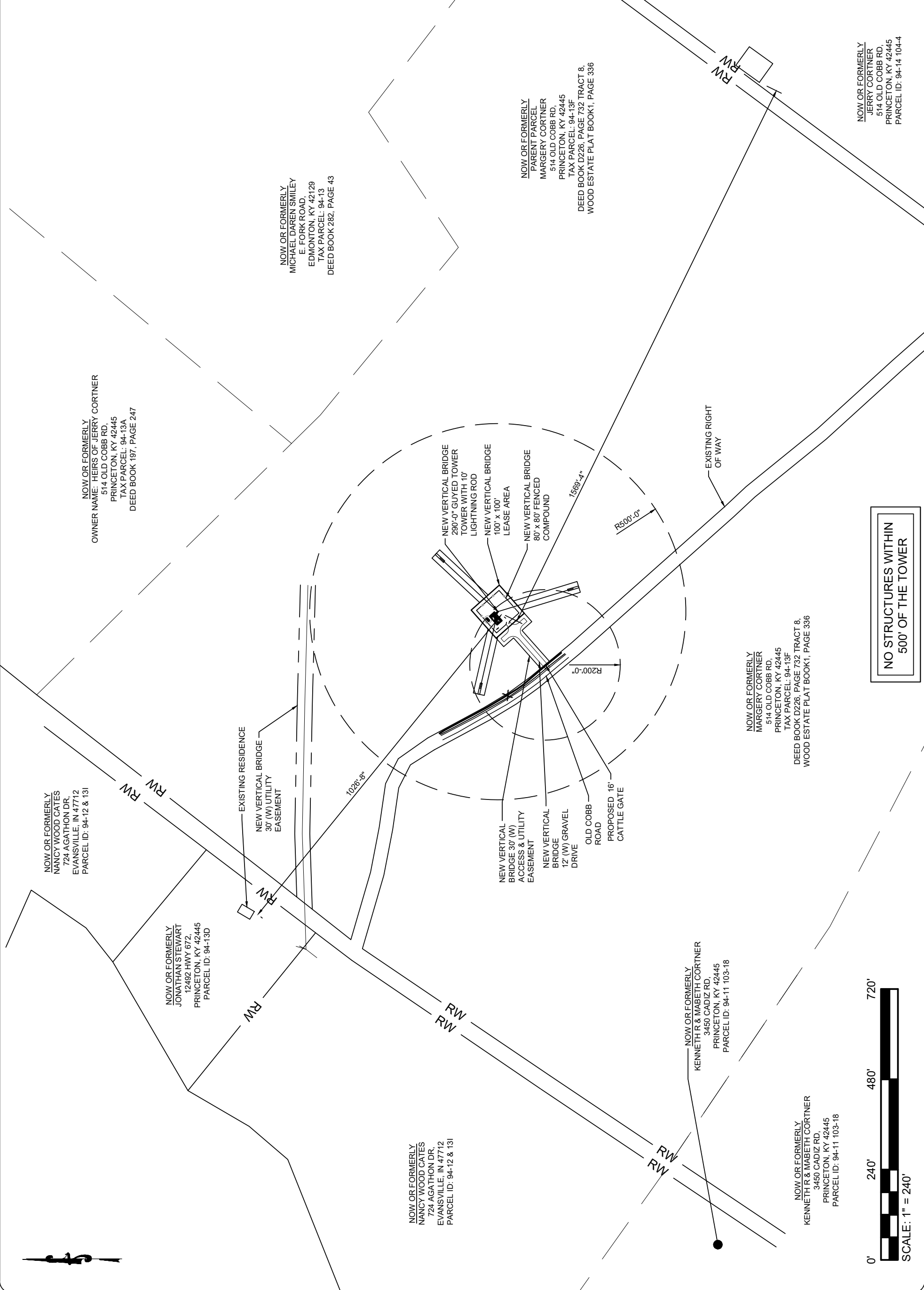
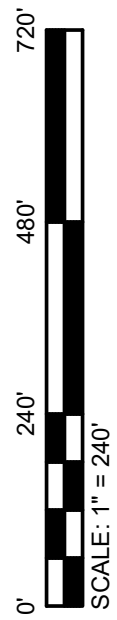
EXISTING RESIDENCE
NEW VERTICAL BRIDGE
30' (W) UTILITY
EASEMENT

NEW VERTICAL BRIDGE
280'-0" GUYED TOWER
TOWER WITH 10'
LIGHTNING ROD
NEW VERTICAL BRIDGE
100' x 100'
LEASE AREA
NEW VERTICAL BRIDGE
80' x 80' FENCED
COMPOUND

NEW VERTICAL
BRIDGE 30' (W)
ACCESS & UTILITY
EASEMENT
NEW VERTICAL
BRIDGE
12' (W) GRAVEL
DRIVE
OLD COBB
ROAD
PROPOSED 16'
CATTLE GATE

NOW OR FORMERLY
MARGERY CORTNER
514 OLD COBB RD,
PRINCETON, KY 42445
TAX PARCEL: 94-13F
DEED BOOK D226, PAGE 732 TRACT 8,
WOOD ESTATE PLAT BOOK1, PAGE 336

NO STRUCTURES WITHIN
500' OF THE TOWER



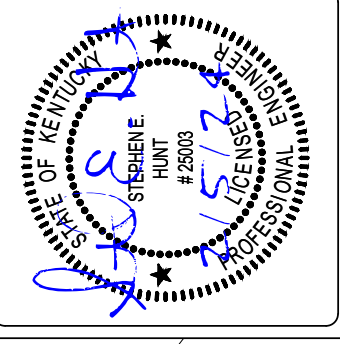


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#	DATE	DESCRIPTION
6	02/05/24	PLS FINAL ZONING ISSUE
5	02/02/24	MJB FINAL ZONING ISSUE
4	01/25/24	MJB FINAL ZONING ISSUE
3	01/18/24	MJB FINAL ZONING ISSUE
2	02/16/23	MJB FINAL ZONING ISSUE
1	02/16/23	MJB FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

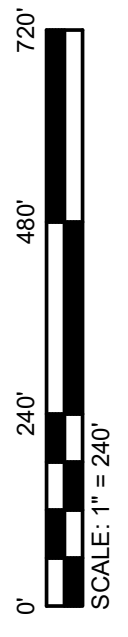
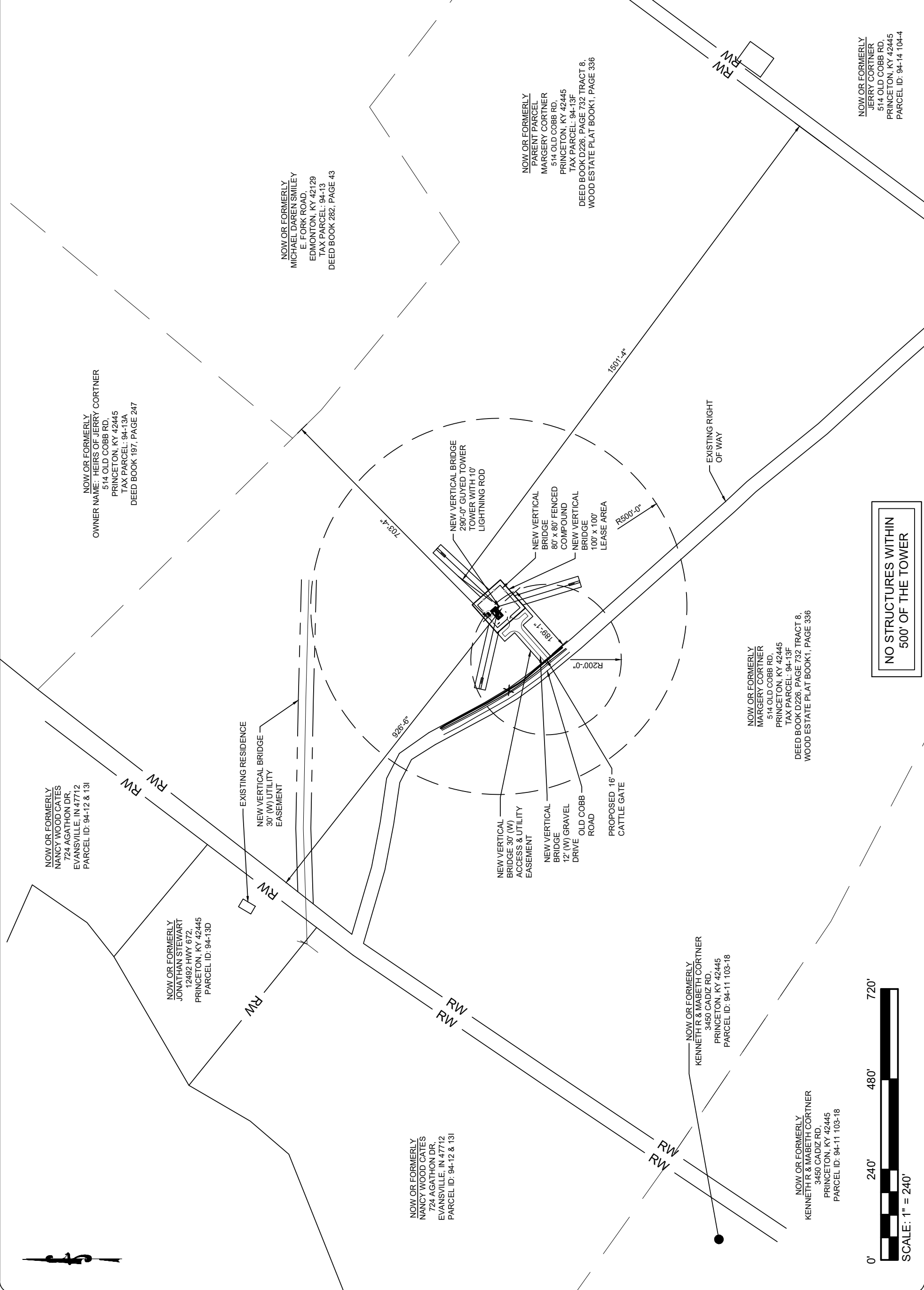
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : TOWER LOCATION PLAN

DRAWING # : Z4
REVISION : 6



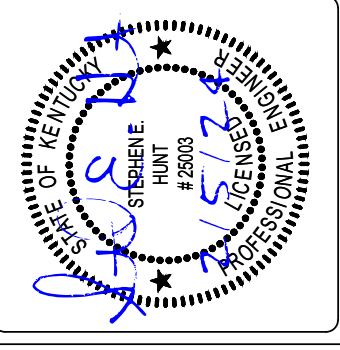



1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

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DRAWN BY: DLS
CHECKED BY: SEH

REVISIONS	
PLS	FINAL ZONING ISSUE
6	02/05/24
5	02/02/24
4	01/25/24
3	01/18/24
2	02/16/23
1	02/16/23
#	DATE
BY	DESCRIPTION

FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : SITE PLAN

DRAWING # : Z5	REVISION : 6
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NOW OR FORMERLY PARENT PARCEL MARGERY CORTNER 514 OLD COBB RD. PRINCETON, KY 42445 TAX PARCEL: 94-13F DEED BOOK D226, PAGE 732 TRACT 8, WOOD ESTATE PLAT BOOK1, PAGE 336

PROPOSED VERTICAL BRIDGE 20' WIDE GUY WIRE EASEMENTS (TYP.)

PROPOSED VERTICAL BRIDGE GUY WIRE, TYP.

NEW VERIZON WIRELESS PROANE TANK ON 4'-0" X 10'-0" CONCRETE PAD (40 SQFT LEASE AREA)

NEW VERIZON WIRELESS 16'-8" X 30'-0" LEASE AREA (500 SQFT)

NEW VERTICAL BRIDGE UTILITY FRAME

NEW VERTICAL BRIDGE 12' x 35' DOUBLE TURN-AROUND / PARKING AREA

EXISTING RIGHT OF WAY

EXISTING FENCE

EXISTING DITCH

EXISTING EDGE OF PAVEMENT

PROPOSED 16' CATTLE GATE

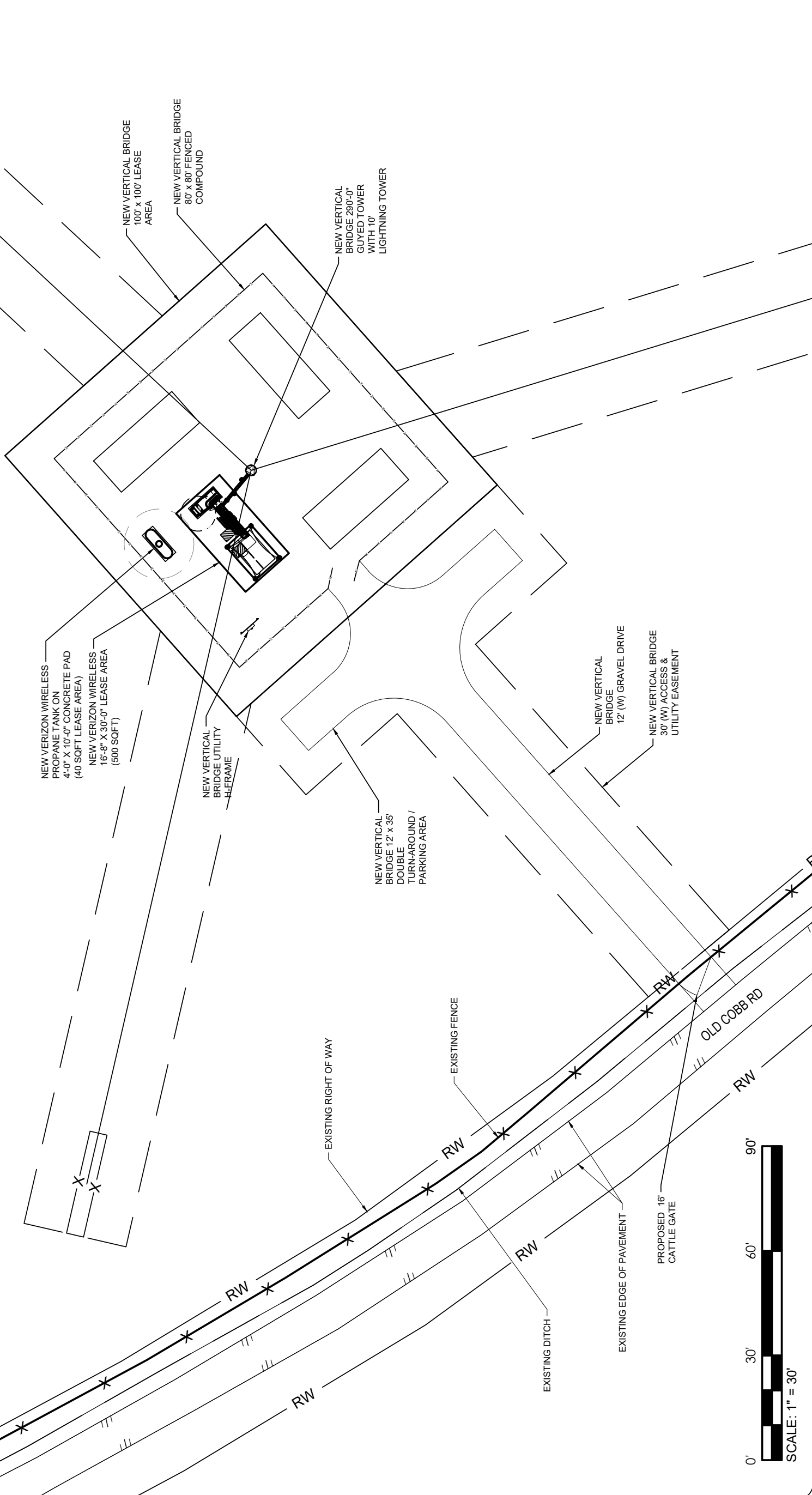
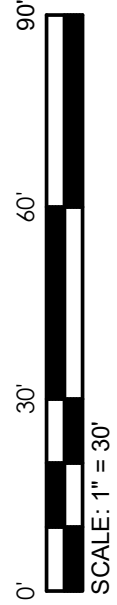
NEW VERTICAL BRIDGE 12' (W) GRAVEL DRIVE

NEW VERTICAL BRIDGE 30' (W) ACCESS & UTILITY EASEMENT

NEW VERTICAL BRIDGE 100' x 100' LEASE AREA

NEW VERTICAL BRIDGE 80' x 80' FENCED COMPOUND

NEW VERTICAL BRIDGE 290'-0" GUYED TOWER WITH 10' LIGHTNING TOWER



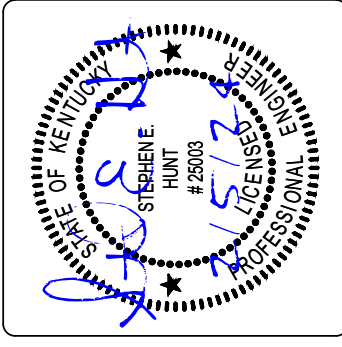


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HIYSON, TN 37343
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DRAWN BY	DLS
CHECKED BY	SEH

REVISIONS	
#	DESCRIPTION
6	02/05/24 PLS FINAL ZONING ISSUE
5	02/02/24 MJB FINAL ZONING ISSUE
4	01/25/24 MJB FINAL ZONING ISSUE
3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

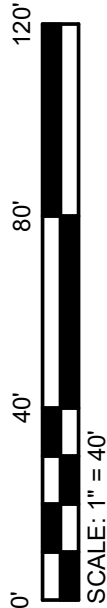
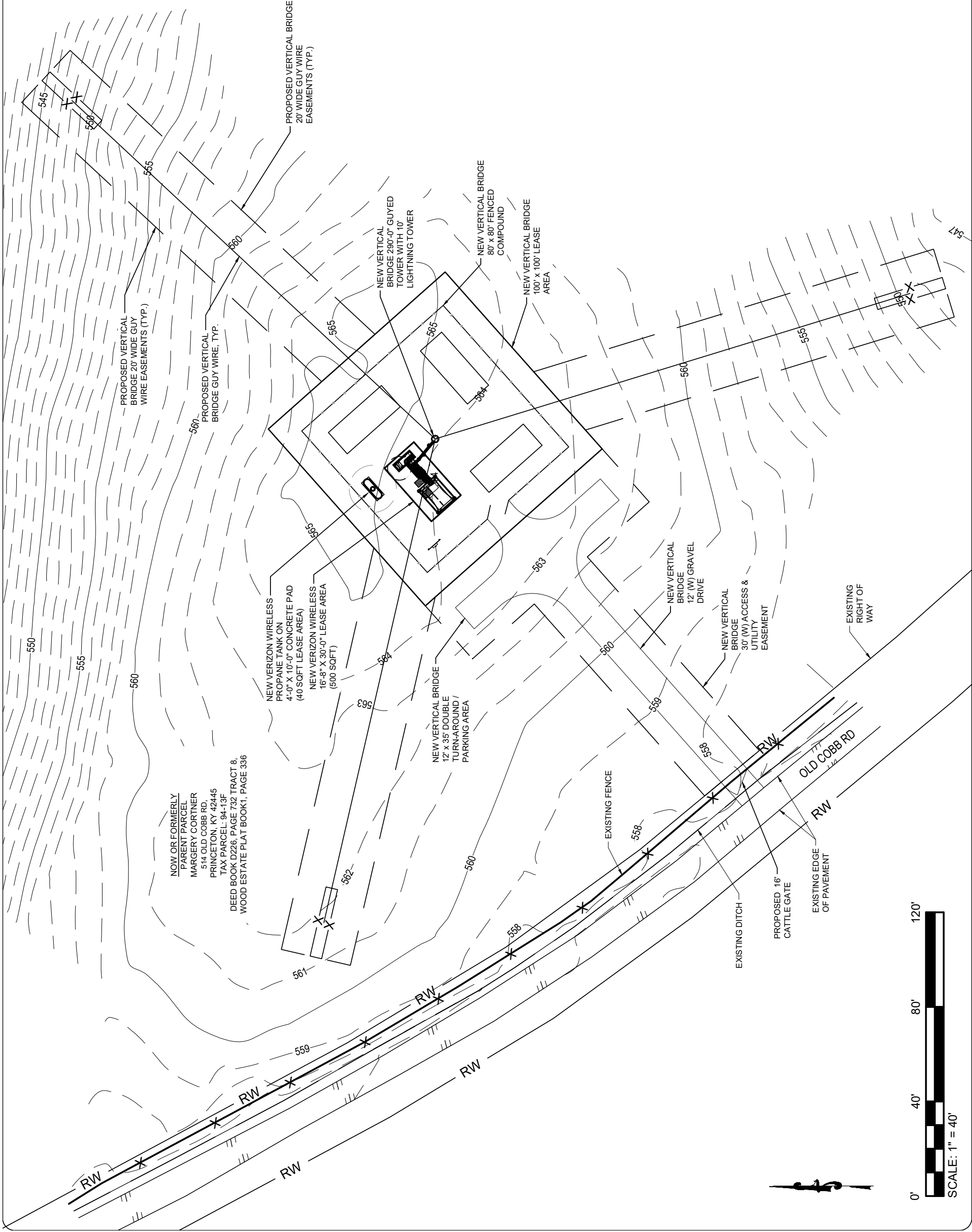
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : EROSION CONTROL SITE PLAN

DRAWING # :	Z6	REVISION :	6
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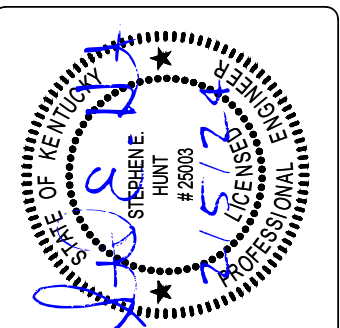



1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

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DRAWN BY: DLS
CHECKED BY: SEH

REVISIONS	
#	DESCRIPTION
6	FINAL ZONING ISSUE
5	FINAL ZONING ISSUE
4	FINAL ZONING ISSUE
3	FINAL ZONING ISSUE
2	FINAL ZONING ISSUE
1	FINAL ZONING ISSUE

FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

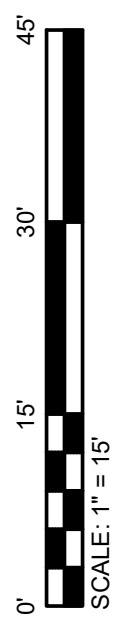
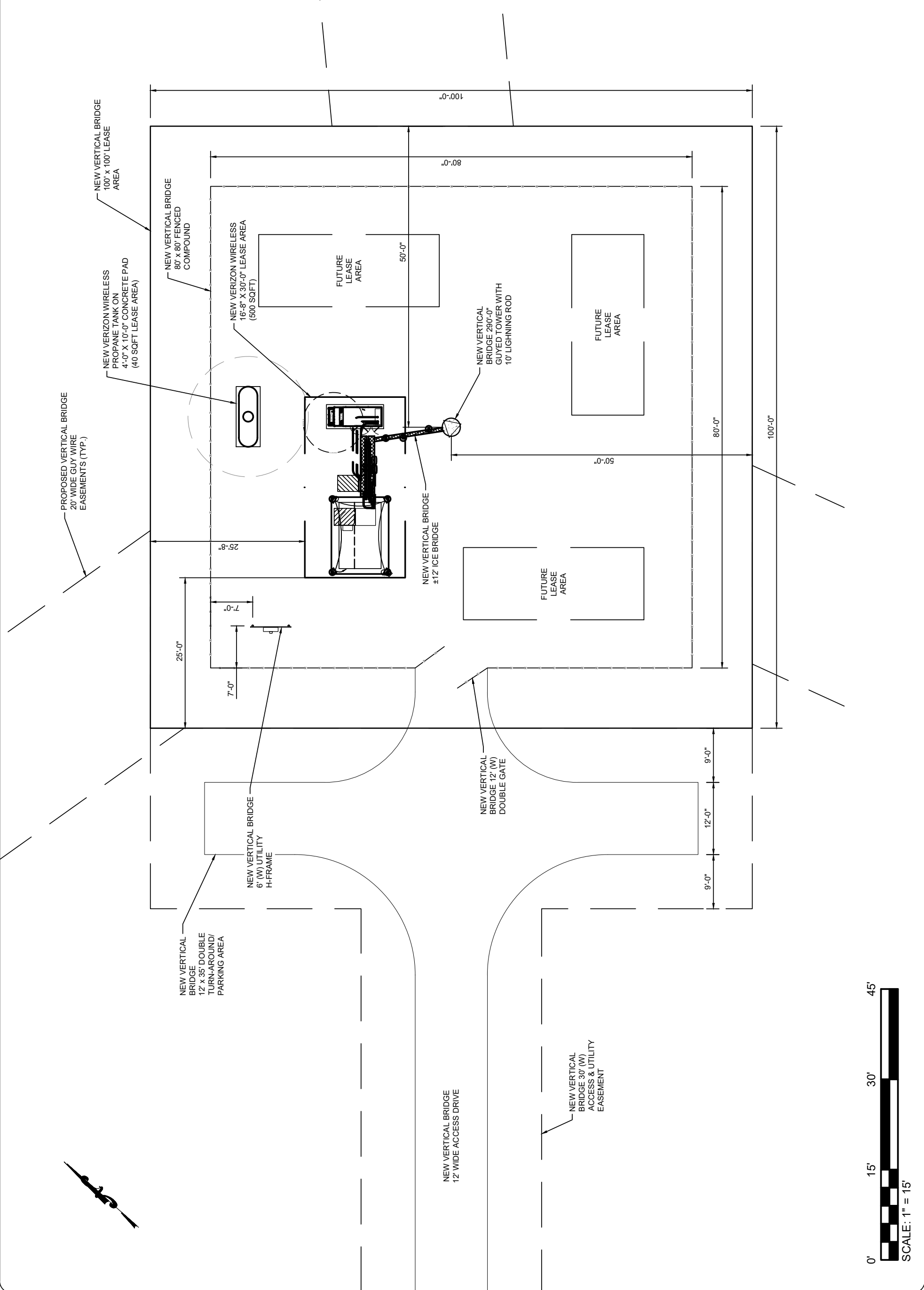
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : DIMENSION SITE PLAN

DRAWING # : Z7
REVISION : 6



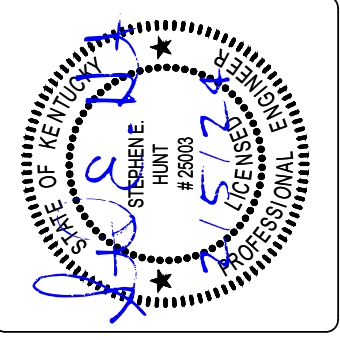


1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
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FAX : 423-843-9509

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DRAWN BY	DLS
CHECKED BY	SEH

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3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE



FUZE ID : 2115970

SITE NAME : EV WALTONIA ROAD

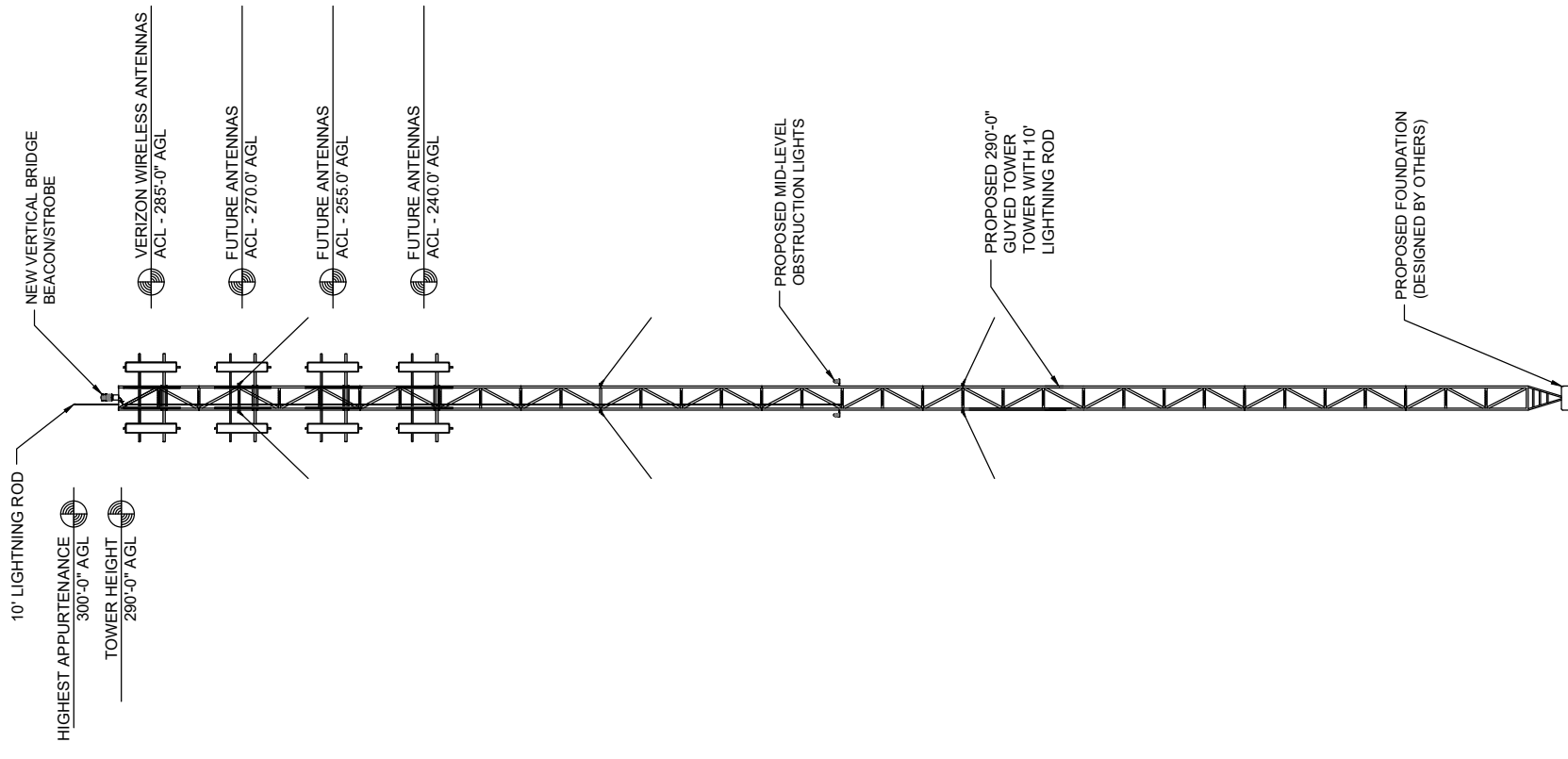
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445

SITE TYPE : RAWLAND

SHEET TITLE : TOWER ELEVATION

DRAWING # :	Z8	REVISION :	6
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TOWER ELEVATION
NTS

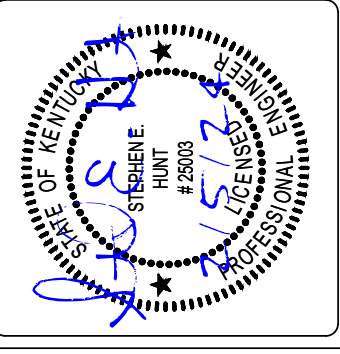


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SUITE 130
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FAX : 423-843-9509

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3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE

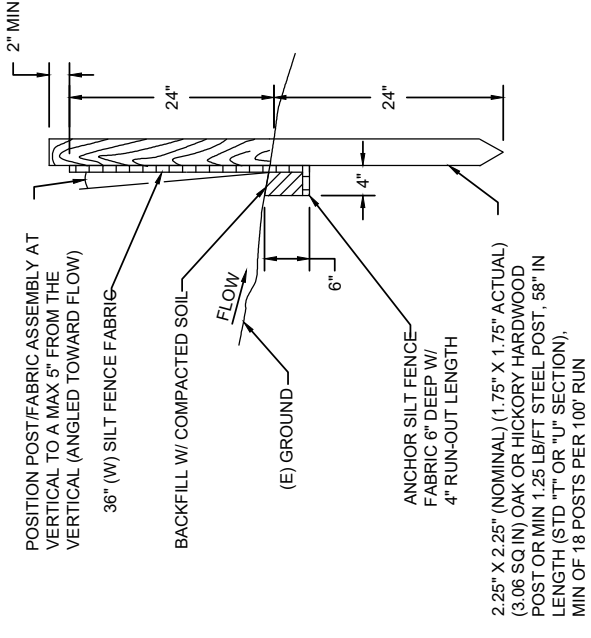


FUZE ID :	2115970
SITE NAME :	EV WALTONIA ROAD
SITE # / LOCATION CODE :	492779

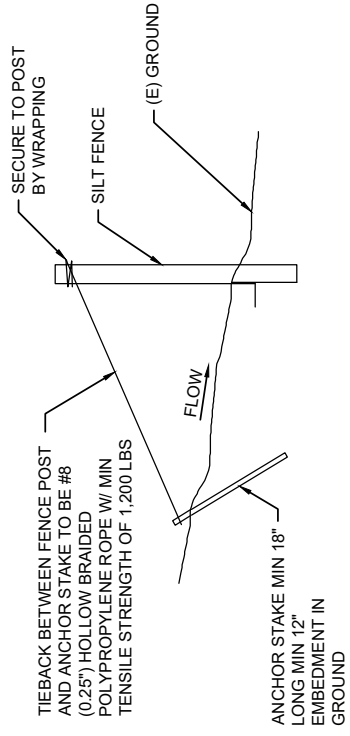
SITE ADDRESS :	OLD COBB ROAD PRINCETON, KY 42445
SITE TYPE :	RAWLAND

SHEET TITLE :	SITE DETAILS
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DRAWING # :	Z9	REVISION :	6
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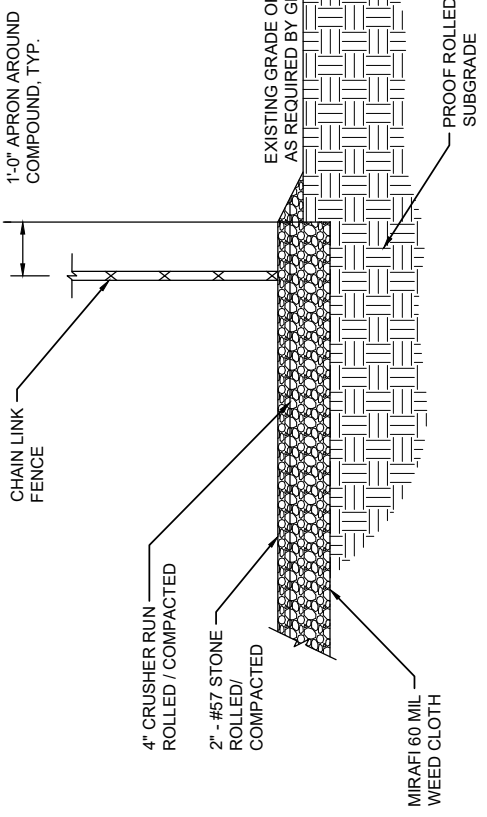
SECTIONAL VIEW



SILT FENCE TIEBACK FOR STEEL OR WOOD POSTS

SILT FENCE
DETAIL ①

NTS



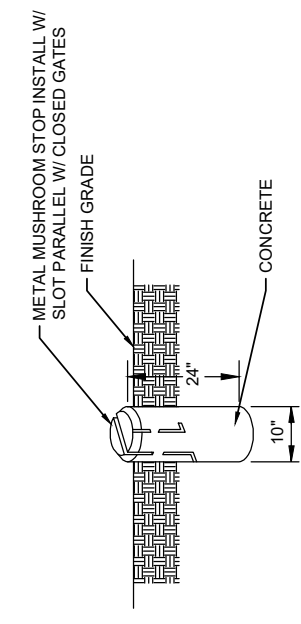
COMPOUND SURFACING ②

NTS

TYPICAL WOVEN WIRE FENCING NOTES:

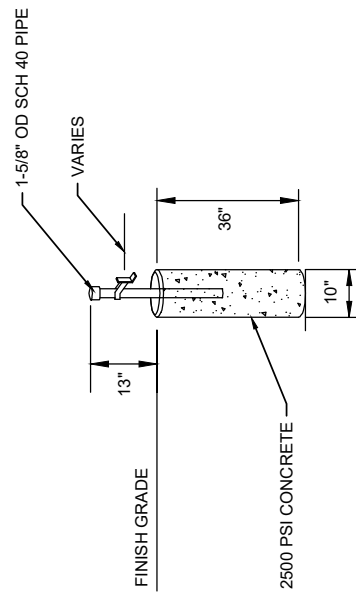
- (INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)
- GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 3"Ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
 - LINE POST: 2"Ø SCHEDULE 40 PIPE PER ASTM-F1083. INSTALL EVERY 8'-0" ALONG FENCE LINE.
 - GATE FRAME: 1-1/2"Ø SCHEDULE 40 PIPE, STEEL, HOT-DIPPED ZINC COATED (GALVANIZED) WELDED STEEL PIPE PER ASTM-F1083.
 - TOP RAIL & BRACE RAIL: 1-5/8"Ø SCHEDULE 40 PIPE PER ASTM-F 1083.
 - CHAIN LINK FABRIC: 9 GA. MIN. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
 - TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL. INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
 - TENSION WIRE: 7 GA. GALVANIZED STEEL.
 - BARBED WIRE: DOUBLE STRAND, 12-1/2" GA. TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS. (IF USED)
 - GATE LATCH: 1-3/8" OD PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY OWNER)
 - LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION. HEIGHT= 8' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION. WORK WITH SPECIFICATION 2831.

CHECK LOCAL CODES FOR BARBED WIRE REQUIREMENTS.



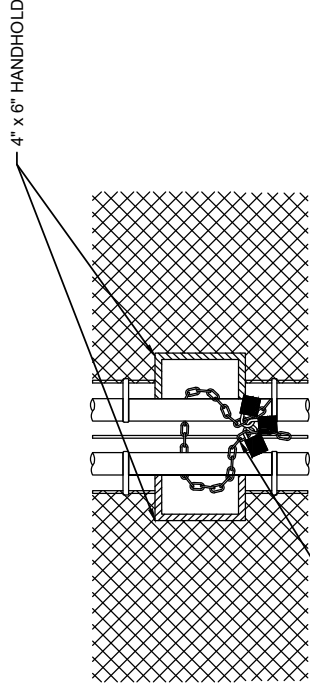
MUSHROOM STOP

NTS



GATE STOP DETAIL

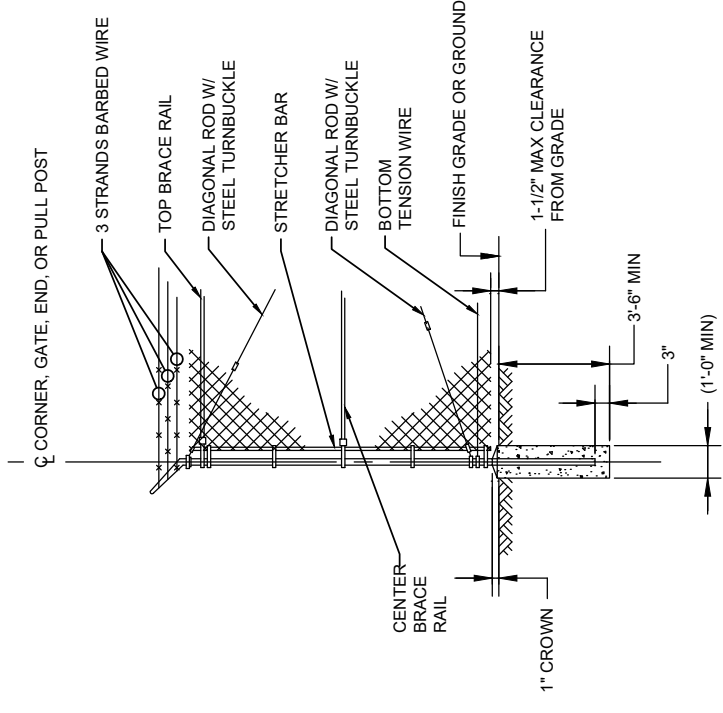
NTS



FENCE LOCK DETAIL

NTS

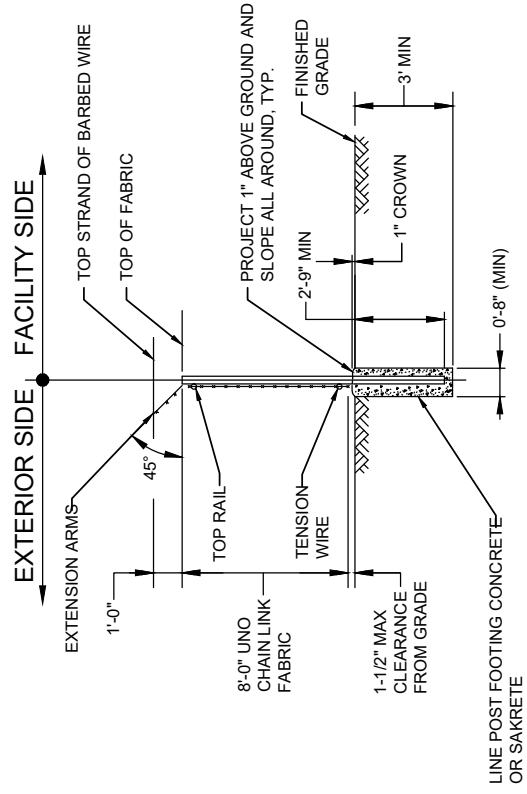
CONTRACTOR TO SUPPLY & INSTALL A 3/8" x 36" FORGED ZINC COATED CHAIN W/ A FOUR DIGIT COMBO MASTER LOCK W/ ELONGATED SHANK



WOVEN WIRE CORNER, GATE, END OR PULL POST

NTS

2

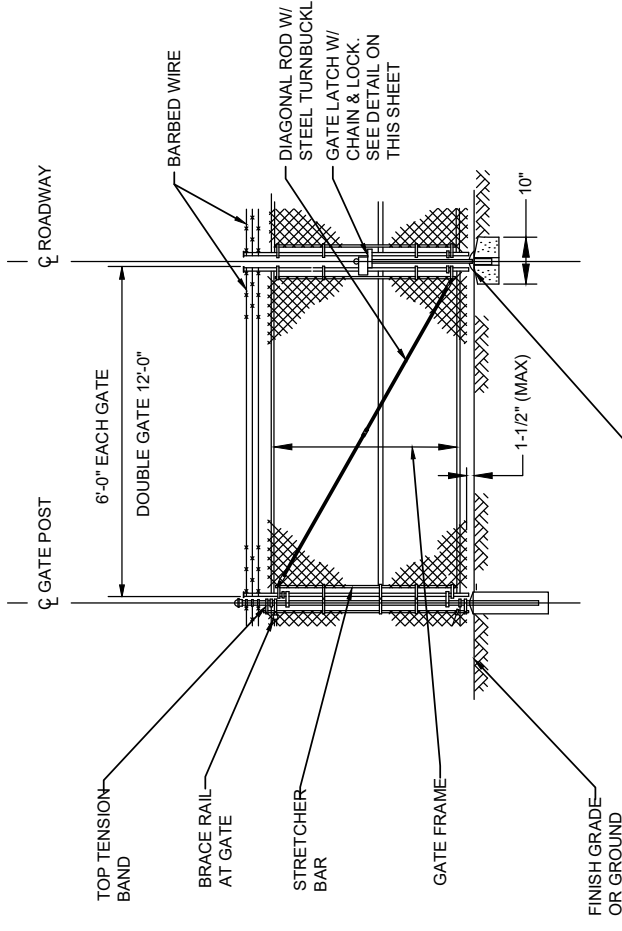


TYPICAL SECTION

WOVEN WIRE FENCE

NTS

1



GALVANIZED GATE CENTER STOP 6-1/2"Ø W/ 1-1/4" SLOT, 1-3/8" SHANK IN 1-5/8"Ø PIPE SET IN CONCRETE. SEE DETAIL ON THIS SHEET

WOVEN WIRE DOUBLE GATE

NTS

3



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DRAWN BY	DLS
CHECKED BY	SEH

REVISIONS	
#	DESCRIPTION
6	02/05/24 PLS FINAL ZONING ISSUE
5	02/02/24 MJB FINAL ZONING ISSUE
4	01/25/24 MJB FINAL ZONING ISSUE
3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE



FUZE ID :	2115970
SITE NAME :	EV WALTONIA ROAD
SITE # / LOCATION CODE :	492779

SITE ADDRESS :	OLD COBB ROAD PRINCETON, KY 42445
SITE TYPE :	RAWLAND

SHEET TITLE :	SITE DETAILS
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DRAWING # :	Z10
REVISION :	6

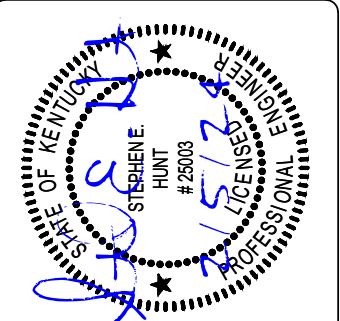


1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

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DRAWN BY	DLS
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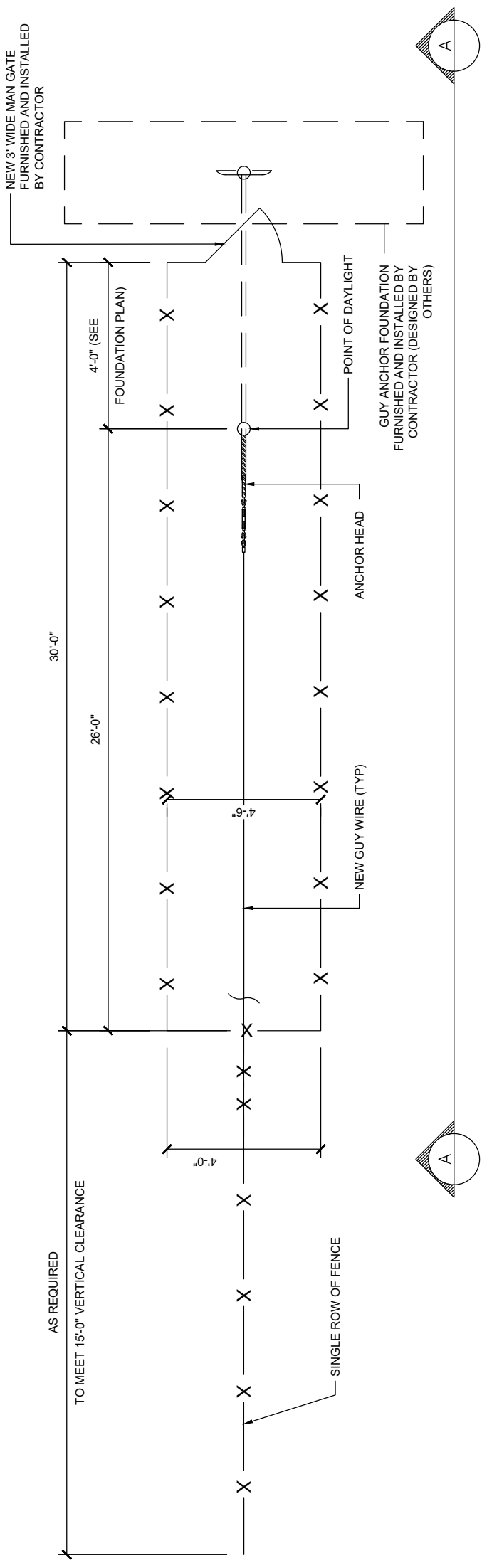
REVISIONS	
#	DESCRIPTION
6	02/05/24 PLS FINAL ZONING ISSUE
5	02/02/24 MJB FINAL ZONING ISSUE
4	01/25/24 MJB FINAL ZONING ISSUE
3	01/18/24 MJB FINAL ZONING ISSUE
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1	02/16/23 MJB FINAL ZONING ISSUE



FUZE ID :	2115970
SITE NAME :	EV WALTONIA ROAD
SITE # / LOCATION CODE :	492779

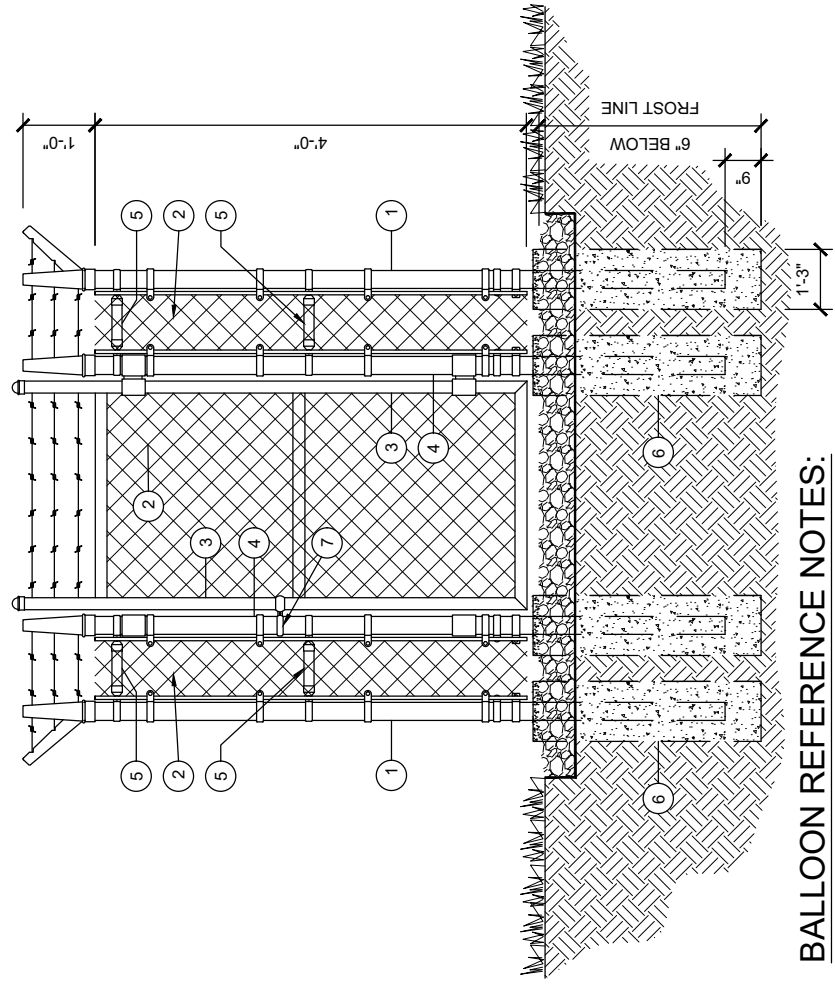
SITE ADDRESS :	OLD COBB ROAD PRINCETON, KY 42445
SITE TYPE :	RAWLAND
SHEET TITLE :	SITE DETAILS

DRAWING # :	Z11
REVISION :	6



SCALE: N.T.S.

1 GUY CABLE ANCHOR FENCE PLAN

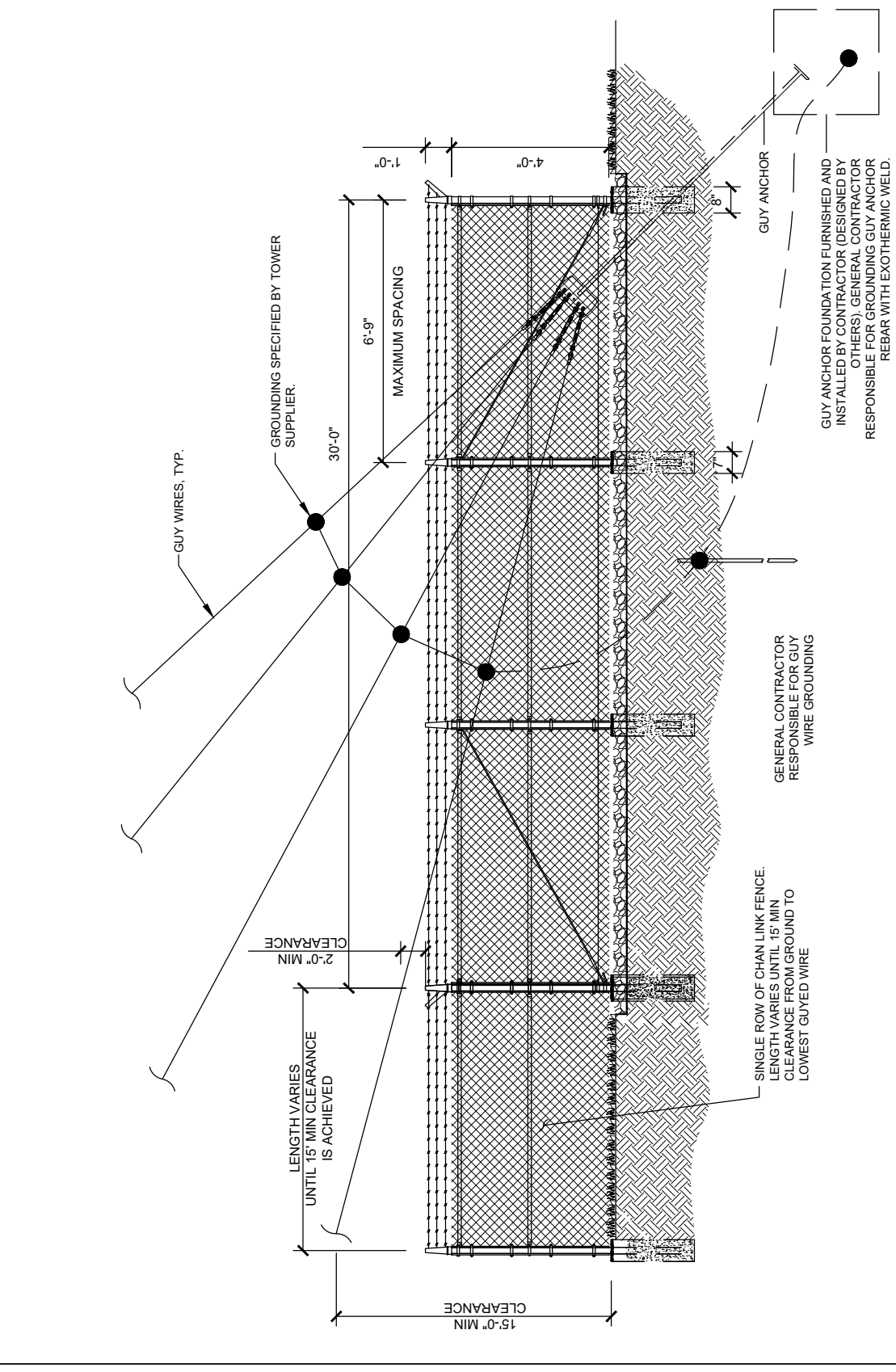


BALLOON REFERENCE NOTES:

- 1 CORNER, END OR PULL POST: 3" O.D., SCHEDULE 40 PIPE.
- 2 FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- 3 WELDED GATE FRAME: 2" O.D., SCHEDULE 40 PIPE, PER ASTM-F 1083.
- 4 GATE POST 4" O.D., SCHEDULE 40 PIPE, PER ASTM-F 1083.
- 5 GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
- 6 CONCRETE FOUNDATION (MIN 3000 PSI) MINIMUM DEPTH: 6" BELOW FROST LINE
- 7 FORK LATCH WITH COMBINATION LOCK

SCALE: N.T.S.

2 SINGLE SWING GATE DETAIL



SCALE: N.T.S.

3 SECTION A-A



World Tower
COMPANY, INC.

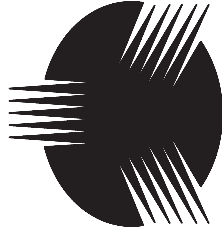
1213 Compressor Drive
P.O. Box 508
Mayfield, KY 42066
270-247-3642
FAX: 270-247-0909
E-mail: worldtower@worldtower.com
Web: www.worldtower.com

290' TYPE 36SR TOWER
FOR: VERTICAL BRIDGE
SITE: WALTONIA ROAD
PRINCETON (US-KY-5206)
CALDWELL COUNTY, KY
DESIGN PACKAGE



2-19-2024

Fabrication, Installation, and Maintenance of TV, AM, FM, & Wireless Communications Towers



WORLD TOWER

1213 COMPRESSOR DRIVE
MAYFIELD, KY 42066
P: 270-246-3642 F: 270-247-0909
WWW.WORLDTOWER.COM

SEAL



2-19-2024

GUY WIRE DATA

ELEV.	SIZE	BREAK STRENGTH	INITIAL TENSION	CUT LENGTH		SHACKLES	THIMBLES	TURN BUCKLE		
				210'(-17)	210'(-14)				210'(-2)	
2@270'	3/4 EHS	58300	5830	2@385'	2@380'	2@370'	1	7/8	1	1/4 X 24
230'	7/16 EHS	20800	2080	355'	350'	340'	5/8	1/2	3/4	X 12
180'	7/16 EHS	20800	2080	315'	315'	305'	5/8	1/2	3/4	X 12
120'	3/8 EHS	15400	1540	280'	275'	270'	5/8	1/2	3/4	X 12
60'	3/8 EHS	15400	1540	250'	250'	245'	5/8	1/2	3/4	X 12

GENERAL TOWER NOTES:

1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS. D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG STEEL IS 50 KSI MIN YIELD SOLID ROUND OR PIPE AND BRACING STEEL IS 36 KSI MIN YIELD SOLID ROUND OR STRUCTURAL ANGLE.
5. ALL STRUCTURAL BOLTS ARE ASTM A325.
6. TOWER SHOULD BE INSPECTED IN ACCORDANCE WITH TIA-222-H EVERY 5 YEARS.
7. TOWER INSPECTION SHOULD ONLY BE PERFORMED BY EXPERIENCED QUALIFIED PERSONNEL. FOR ASSISTANCE IN PROPER MAINTENANCE OF YOUR TOWER, CALL WORLD TOWER AT 270-247-3642.

REV.	DESCRIPTION	BY	DATE

290' TYPE 36SR TOWER
FOR: VERTICAL BRIDGE
SITE: WALTONIA ROAD
PRINCETON (US-KY-5206)
CALDWELL COUNTY, KY

SCALE	NONE	DWG. LKC	CAD.	DATE	2-19-24
FILE				DWG. NO.	Q240093N



WORLD TOWER

1213 COMPRESSOR DRIVE
MAYFIELD, KY 42066
P: 270-246-3642 F: 270-247-0909
WWW.WORLDTOWER.COM



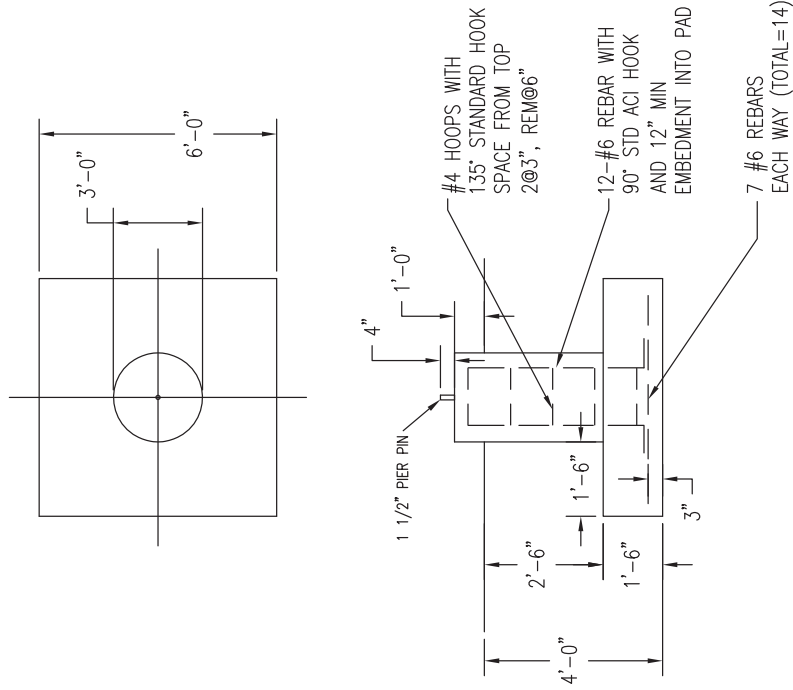
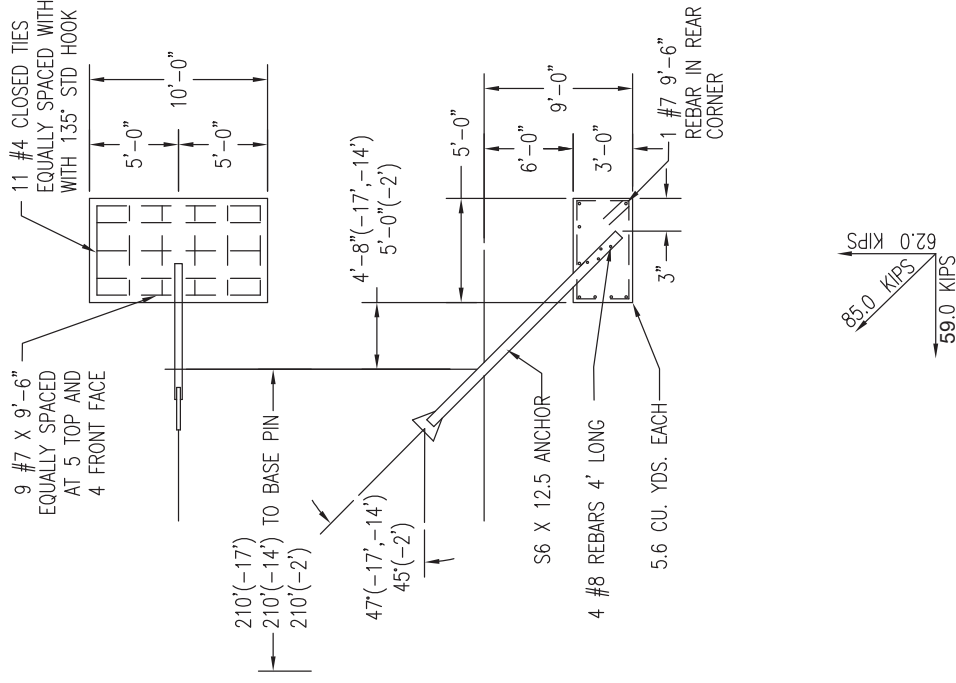
2-19-2024

SSL

REV.	DESCRIPTION	BY	DATE

290' TYPE 36SR TOWER
FOR: VERTICAL BRIDGE
SITE: WALTONIA ROAD
PRINCETON (US-KY-5206)
CALDWELL COUNTY, KY

SCALE	NONE	DWG. LK	CD.	DATE	2-19-24
FILE			DWG. NO.		Q240093

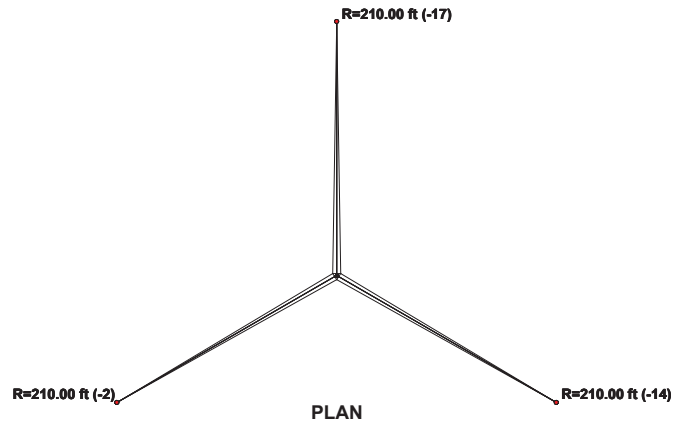
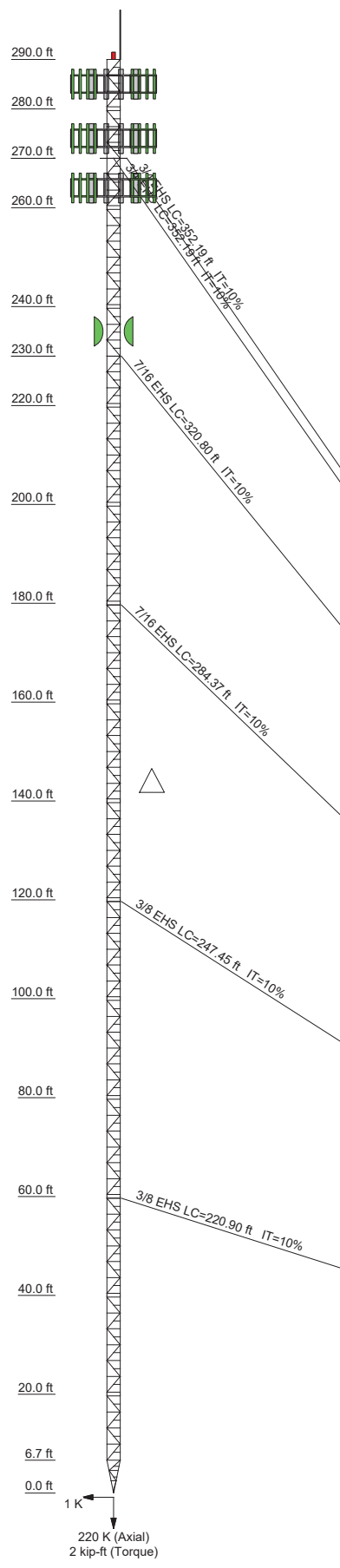


BASE REACTIONS	
SHEAR	1.0 KIPS
COMPRESSION	220.0 KIPS

FOUNDATION NOTES

1. CONCRETE TO HAVE 4000 PSI MINIMUM COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCEMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MINIMUM CONCRETE COVER.
4. FOUNDATION IS BASED UPON CUSTOMER SUPPLIED SOILS BY DELTA OAKS GROUP. PROJECT NUMBER GEO24-20639-08 DATED JANUARY 11, 2024.

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	
Legs		SR 2			SR 1 3/4												
Leg Grade																	
Diagonals																	
Top Girts																	
Bottom Girts																	
Horizontals																	
Sec. Horizontals																	
Top Guy Pull-Offs																	
Face Width (ft)																	
# Panels @ (ft)																	
Weight (K)																	



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Beacon Lighting	290	Dish Mount	235
Lightning Rod 9/16x10'	290	Dish Mount	235
Carrier 1 - 42,000 sq in	285	6 FT DISH	235
Carrier 2 - 30,000 sq in	274	6 FT DISH	235
Carrier 3 - 30,000 sq in	264		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 1 3/4	D	SR 3/4
B	SR 1 1/8	E	3 @ 2.09722
C	4 X 3/8		

MATERIAL STRENGTH

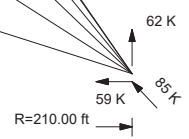
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Caldwell County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 106.00 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30.00 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 95.7%



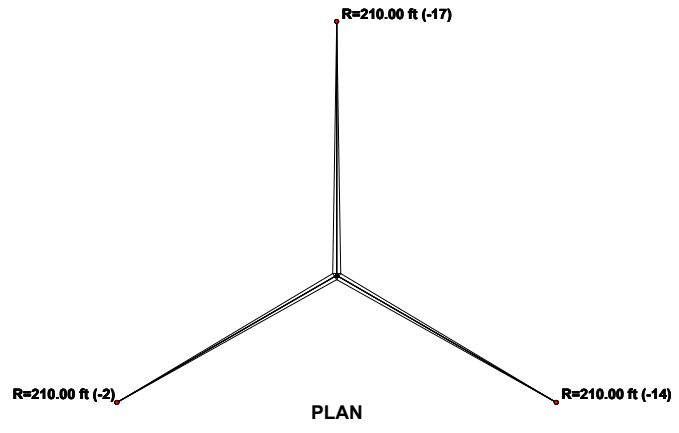
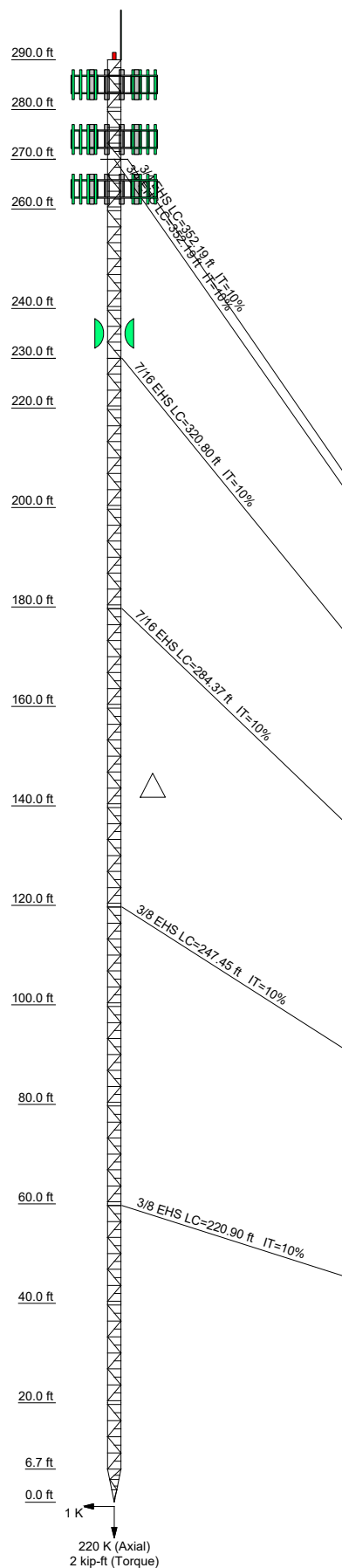
2-19-2024



ALL REACTIONS ARE FACTORED

World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job: 290' 36SR / WTC Q24-093
	Project: Waltonia Rd, Princeton, KY
	Client: Vertical Bridge US-KY-5206 Drawn by: kirk App'd:
	Code: TIA-222-H Date: 02/16/24 Scale: NTS
	Path: C:\Tower\PE_Runs\2024\Q24-093_princeton\Q24-093.eri Dwg No. E-1

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25	T26	T27	T28	T29	T30	T31	T32	T33	T34	T35	T36	T37	T38	T39	T40	T41	T42	T43	T44	T45	T46	T47	T48	T49	T50	T51	T52	T53	T54	T55	T56	T57	T58	T59	T60	T61	T62	T63	T64	T65	T66	T67	T68	T69	T70	T71	T72	T73	T74	T75	T76	T77	T78	T79	T80	T81	T82	T83	T84	T85	T86	T87	T88	T89	T90	T91	T92	T93	T94	T95	T96	T97	T98	T99	T100	T101	T102	T103	T104	T105	T106	T107	T108	T109	T110	T111	T112	T113	T114	T115	T116	T117	T118	T119	T120	T121	T122	T123	T124	T125	T126	T127	T128	T129	T130	T131	T132	T133	T134	T135	T136	T137	T138	T139	T140	T141	T142	T143	T144	T145	T146	T147	T148	T149	T150	T151	T152	T153	T154	T155	T156	T157	T158	T159	T160	T161	T162	T163	T164	T165	T166	T167	T168	T169	T170	T171	T172	T173	T174	T175	T176	T177	T178	T179	T180	T181	T182	T183	T184	T185	T186	T187	T188	T189	T190	T191	T192	T193	T194	T195	T196	T197	T198	T199	T200	T201	T202	T203	T204	T205	T206	T207	T208	T209	T210	T211	T212	T213	T214	T215	T216	T217	T218	T219	T220	T221	T222	T223	T224	T225	T226	T227	T228	T229	T230	T231	T232	T233	T234	T235	T236	T237	T238	T239	T240	T241	T242	T243	T244	T245	T246	T247	T248	T249	T250	T251	T252	T253	T254	T255	T256	T257	T258	T259	T260	T261	T262	T263	T264	T265	T266	T267	T268	T269	T270	T271	T272	T273	T274	T275	T276	T277	T278	T279	T280	T281	T282	T283	T284	T285	T286	T287	T288	T289	T290	T291	T292	T293	T294	T295	T296	T297	T298	T299	T300	T301	T302	T303	T304	T305	T306	T307	T308	T309	T310	T311	T312	T313	T314	T315	T316	T317	T318	T319	T320	T321	T322	T323	T324	T325	T326	T327	T328	T329	T330	T331	T332	T333	T334	T335	T336	T337	T338	T339	T340	T341	T342	T343	T344	T345	T346	T347	T348	T349	T350	T351	T352	T353	T354	T355	T356	T357	T358	T359	T360	T361	T362	T363	T364	T365	T366	T367	T368	T369	T370	T371	T372	T373	T374	T375	T376	T377	T378	T379	T380	T381	T382	T383	T384	T385	T386	T387	T388	T389	T390	T391	T392	T393	T394	T395	T396	T397	T398	T399	T400	T401	T402	T403	T404	T405	T406	T407	T408	T409	T410	T411	T412	T413	T414	T415	T416	T417	T418	T419	T420	T421	T422	T423	T424	T425	T426	T427	T428	T429	T430	T431	T432	T433	T434	T435	T436	T437	T438	T439	T440	T441	T442	T443	T444	T445	T446	T447	T448	T449	T450	T451	T452	T453	T454	T455	T456	T457	T458	T459	T460	T461	T462	T463	T464	T465	T466	T467	T468	T469	T470	T471	T472	T473	T474	T475	T476	T477	T478	T479	T480	T481	T482	T483	T484	T485	T486	T487	T488	T489	T490	T491	T492	T493	T494	T495	T496	T497	T498	T499	T500	T501	T502	T503	T504	T505	T506	T507	T508	T509	T510	T511	T512	T513	T514	T515	T516	T517	T518	T519	T520	T521	T522	T523	T524	T525	T526	T527	T528	T529	T530	T531	T532	T533	T534	T535	T536	T537	T538	T539	T540	T541	T542	T543	T544	T545	T546	T547	T548	T549	T550	T551	T552	T553	T554	T555	T556	T557	T558	T559	T560	T561	T562	T563	T564	T565	T566	T567	T568	T569	T570	T571	T572	T573	T574	T575	T576	T577	T578	T579	T580	T581	T582	T583	T584	T585	T586	T587	T588	T589	T590	T591	T592	T593	T594	T595	T596	T597	T598	T599	T600	T601	T602	T603	T604	T605	T606	T607	T608	T609	T610	T611	T612	T613	T614	T615	T616	T617	T618	T619	T620	T621	T622	T623	T624	T625	T626	T627	T628	T629	T630	T631	T632	T633	T634	T635	T636	T637	T638	T639	T640	T641	T642	T643	T644	T645	T646	T647	T648	T649	T650	T651	T652	T653	T654	T655	T656	T657	T658	T659	T660	T661	T662	T663	T664	T665	T666	T667	T668	T669	T670	T671	T672	T673	T674	T675	T676	T677	T678	T679	T680	T681	T682	T683	T684	T685	T686	T687	T688	T689	T690	T691	T692	T693	T694	T695	T696	T697	T698	T699	T700	T701	T702	T703	T704	T705	T706	T707	T708	T709	T710	T711	T712	T713	T714	T715	T716	T717	T718	T719	T720	T721	T722	T723	T724	T725	T726	T727	T728	T729	T730	T731	T732	T733	T734	T735	T736	T737	T738	T739	T740	T741	T742	T743	T744	T745	T746	T747	T748	T749	T750	T751	T752	T753	T754	T755	T756	T757	T758	T759	T760	T761	T762	T763	T764	T765	T766	T767	T768	T769	T770	T771	T772	T773	T774	T775	T776	T777	T778	T779	T780	T781	T782	T783	T784	T785	T786	T787	T788	T789	T790	T791	T792	T793	T794	T795	T796	T797	T798	T799	T800	T801	T802	T803	T804	T805	T806	T807	T808	T809	T810	T811	T812	T813	T814	T815	T816	T817	T818	T819	T820	T821	T822	T823	T824	T825	T826	T827	T828	T829	T830	T831	T832	T833	T834	T835	T836	T837	T838	T839	T840	T841	T842	T843	T844	T845	T846	T847	T848	T849	T850	T851	T852	T853	T854	T855	T856	T857	T858	T859	T860	T861	T862	T863	T864	T865	T866	T867	T868	T869	T870	T871	T872	T873	T874	T875	T876	T877	T878	T879	T880	T881	T882	T883	T884	T885	T886	T887	T888	T889	T890	T891	T892	T893	T894	T895	T896	T897	T898	T899	T900	T901	T902	T903	T904	T905	T906	T907	T908	T909	T910	T911	T912	T913	T914	T915	T916	T917	T918	T919	T920	T921	T922	T923	T924	T925	T926	T927	T928	T929	T930	T931	T932	T933	T934	T935	T936	T937	T938	T939	T940	T941	T942	T943	T944	T945	T946	T947	T948	T949	T950	T951	T952	T953	T954	T955	T956	T957	T958	T959	T960	T961	T962	T963	T964	T965	T966	T967	T968	T969	T970	T971	T972	T973	T974	T975	T976	T977	T978	T979	T980	T981	T982	T983	T984	T985	T986	T987	T988	T989	T990	T991	T992	T993	T994	T995	T996	T997	T998	T999	T1000
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DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Beacon Lighting	290	Dish Mount	235
Lightning Rod 9/16x10'	290	Dish Mount	235
Carrier 1 - 42,000 sq in	285	6 FT DISH	235
Carrier 2 - 30,000 sq in	274	6 FT DISH	235
Carrier 3 - 30,000 sq in	264		

SYMBOL LIST

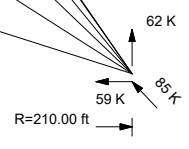
MARK	SIZE	MARK	SIZE
A	SR 1 3/4	D	SR 3/4
B	SR 1 1/8	E	3 @ 2.09722
C	4 X 3/8		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Caldwell County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 106.00 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30.00 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 95.7%



ALL REACTIONS ARE FACTORED

World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job: 290' 36SR / WTC Q24-093		
	Project: Waltonia Rd, Princeton, KY		
	Client: Vertical Bridge US-KY-5206	Drawn by: kirk	App'd:
	Code: TIA-222-H	Date: 02/16/24	Scale: NTS
	Path: C:\Tower\PE_Runs\2024\Q24-093_princeton\Q24-093.eri		Dwg No. E-1

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job 290' 36SR / WTC Q24-093	Page 1 of 33
	Project Waltonia Rd, Princeton, KY	Date 17:30:33 02/16/24
	Client Vertical Bridge US-KY-5206	Designed by kirk

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 290.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 3.00 ft at the top and tapered at the base.

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

The following design criteria apply:

Tower is located in Caldwell County, Kentucky.

Tower base elevation above sea level: 564.00 ft.

Basic wind speed of 106.00 mph.

Risk Category II.

Exposure Category C.

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

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.50 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30.00 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60.00 mph.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Safety factor used in guy design is 1.

Tower Section Geometry

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	290.00-280.00			3.00	1	10.00
T2	280.00-260.00			3.00	1	20.00
T3	260.00-240.00			3.00	1	20.00
T4	240.00-220.00			3.00	1	20.00
T5	220.00-200.00			3.00	1	20.00
T6	200.00-180.00			3.00	1	20.00
T7	180.00-160.00			3.00	1	20.00
T8	160.00-140.00			3.00	1	20.00
T9	140.00-120.00			3.00	1	20.00
T10	120.00-100.00			3.00	1	20.00
T11	100.00-80.00			3.00	1	20.00
T12	80.00-60.00			3.00	1	20.00
T13	60.00-40.00			3.00	1	20.00
T14	40.00-20.00			3.00	1	20.00
T15	20.00-6.67			3.00	1	13.33
T16	6.67-0.00			3.00	1	6.67

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job	290' 36SR / WTC Q24-093	Page	2 of 33
	Project	Waltonia Rd, Princeton, KY	Date	17:30:33 02/16/24
	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Tower Section Geometry (cont'd)

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Diagonal Spacing</i>	<i>Bracing Type</i>	<i>Has K Brace End Panels</i>	<i>Has Horizontals</i>	<i>Top Girt Offset</i>	<i>Bottom Girt Offset</i>
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	290.00-280.00	3.21	K Brace Left	No	Yes+Steps	0.00	4.50
T2	280.00-260.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T3	260.00-240.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T4	240.00-220.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T5	220.00-200.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T6	200.00-180.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T7	180.00-160.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T8	160.00-140.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T9	140.00-120.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T10	120.00-100.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T11	100.00-80.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T12	80.00-60.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T13	60.00-40.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T14	40.00-20.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T15	20.00-6.67	3.24	K Brace Left	No	Yes+Steps	4.50	0.00
T16	6.67-0.00	2.10	K Brace Left	No	Yes+Steps	0.00	4.50

Tower Section Geometry (cont'd)

<i>Tower Elevation</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
<i>ft</i>						
T1 290.00-280.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T2 280.00-260.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T3 260.00-240.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T4 240.00-220.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T5 220.00-200.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T6 200.00-180.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T7 180.00-160.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T8 160.00-140.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T9 140.00-120.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T10 120.00-100.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T11 100.00-80.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T12 80.00-60.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T13 60.00-40.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T14 40.00-20.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T15 20.00-6.67	Solid Round	2	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T16 6.67-0.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)

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<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
			(50 ksi)			(36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T1 290.00-280.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 280.00-260.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 260.00-240.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T4 240.00-220.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T5 220.00-200.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T6 200.00-180.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T7 180.00-160.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T8 160.00-140.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T9 140.00-120.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T10 120.00-100.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T11 100.00-80.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T12 80.00-60.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T13 60.00-40.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T14 40.00-20.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T15 20.00-6.67	Solid Round	7/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T16 6.67-0.00	Flat Bar	4 X 3/8	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 290.00-280.00	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 280.00-260.00	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 260.00-240.00	None	Solid Round		A36	Solid Round	3/4	A36

<p style="text-align: center;"><i>tnxTower</i></p> <p style="text-align: center;">World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com</p>	Job	290' 36SR / WTC Q24-093	Page	4 of 33
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<i>Tower Elevation</i> <i>ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T4 240.00-220.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T5 220.00-200.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T6 200.00-180.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T7 180.00-160.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T8 160.00-140.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T9 140.00-120.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T10 120.00-100.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T11 100.00-80.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T12 80.00-60.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T13 60.00-40.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T14 40.00-20.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T15 20.00-6.67	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36
T16 6.67-0.00	None	Solid Round		(36 ksi) A36	Solid Round	3/4	(36 ksi) A36

Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>Secondary Horizontal Type</i>	<i>Secondary Horizontal Size</i>	<i>Secondary Horizontal Grade</i>	<i>Inner Bracing Type</i>	<i>Inner Bracing Size</i>	<i>Inner Bracing Grade</i>
T1 290.00-280.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T2 280.00-260.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T3 260.00-240.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T4 240.00-220.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T5 220.00-200.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T6 200.00-180.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T7 180.00-160.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T8 160.00-140.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T9 140.00-120.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T10 120.00-100.00	Solid Round	3/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T11 100.00-80.00	Solid Round	3/4	A36	Solid Round		A36

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Tower Elevation	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
<i>ft</i>						
T12 80.00-60.00	Solid Round	3/4	(36 ksi) A36	Solid Round		(36 ksi) A36
T13 60.00-40.00	Solid Round	3/4	(36 ksi) A36	Solid Round		(36 ksi) A36
T14 40.00-20.00	Solid Round	3/4	(36 ksi) A36	Solid Round		(36 ksi) A36
T15 20.00-6.67	Solid Round	3/4	(36 ksi) A36	Solid Round		(36 ksi) A36
T16 6.67-0.00	Solid Round	3/4	(36 ksi) A36	Solid Round		(36 ksi) A36

Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
<i>ft</i>	<i>ft²</i>	<i>in</i>					<i>in</i>	<i>in</i>	<i>in</i>
T1 290.00-280.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T2 280.00-260.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T3 260.00-240.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T4 240.00-220.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T5 220.00-200.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T6 200.00-180.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T7 180.00-160.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T8 160.00-140.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T9 140.00-120.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T10 120.00-100.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T11 100.00-80.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T12 80.00-60.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T13 60.00-40.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T14 40.00-20.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T15 20.00-6.67	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00
T16 6.67-0.00	0.00	0.00	A36 (36 ksi)	1	1	1.04	36.00	36.00	36.00

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Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Calc K Single Angles	Calc K Solid Rounds	Legs	<i>K Factors¹</i>							
				<i>X</i> Brace Diags	<i>K</i> Brace Diags	<i>Single</i> Diags	<i>Girts</i>	<i>Horiz.</i>	<i>Sec.</i> Horiz.	<i>Inner</i> Brace	
				<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	
T1	Yes	Yes	1	1	1	1	1	1	1	1	1
290.00-280.00				1	1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1	1
280.00-260.00				1	1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1	1
260.00-240.00				1	1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1	1
240.00-220.00				1	1	1	1	1	1	1	1
T5	Yes	Yes	1	1	1	1	1	1	1	1	1
220.00-200.00				1	1	1	1	1	1	1	1
T6	Yes	Yes	1	1	1	1	1	1	1	1	1
200.00-180.00				1	1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1	1
180.00-160.00				1	1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1	1
T13	Yes	Yes	1	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1	1
T14	Yes	Yes	1	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1	1
T15	Yes	Yes	1	1	1	1	1	1	1	1	1
20.00-6.67				1	1	1	1	1	1	1	1
T16 6.67-0.00	Yes	Yes	1	1	1	1	1	1	1	1	1

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

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 290.00-280.00	0.00	1	0.00	1	0.00	1	0.00	1	0.00	0.75	0.00	1	0.00	0.75
T2 280.00-260.00	0.00	1	0.00	1	0.00	1	0.00	1	0.00	0.75	0.00	1	0.00	0.75
T3 260.00-240.00	0.00	1	0.00	1	0.00	1	0.00	1	0.00	0.75	0.00	1	0.00	0.75

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Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T12 80.00-60.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T13 60.00-40.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T14 40.00-20.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T15 20.00-6.67	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T16 6.67-0.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 290.00-280.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T2 280.00-260.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T3 260.00-240.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T4 240.00-220.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T5 220.00-200.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T6 200.00-180.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T7 180.00-160.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T8 160.00-140.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T9 140.00-120.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T10 120.00-100.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T11 100.00-80.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T12 80.00-60.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T13 60.00-40.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T14 40.00-20.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T15 20.00-6.67	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0
T16 6.67-0.00	Flange	0.75	4	0.00	0	0.00	0	0.00	0	0.63	0	0.00	0	0.00	0

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Guy Data

Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	L_u	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency	
ft			K		ksi	plf	ft	ft	°	ft	%	
270	EHS	A	3/4	5.83	10%	19000	1.16	354.31	210.00	0.000	-17	100%
		B	3/4	5.83	10%	19000	1.16	351.89	210.00	0.000	-14	100%
		C	3/4	5.83	10%	19000	1.16	342.29	210.00	0.000	-2	100%
230	EHS	A	7/16	2.08	10%	21000	0.40	322.82	210.00	0.000	-17	100%
		B	7/16	2.08	10%	21000	0.40	320.54	210.00	0.000	-14	100%
		C	7/16	2.08	10%	21000	0.40	311.52	210.00	0.000	-2	100%
179.625	EHS	A	7/16	2.08	10%	21000	0.40	286.19	210.00	0.000	-17	100%
		B	7/16	2.08	10%	21000	0.40	284.14	210.00	0.000	-14	100%
		C	7/16	2.08	10%	21000	0.40	276.12	210.00	0.000	-2	100%
119.625	EHS	A	3/8	1.54	10%	21000	0.27	248.86	210.00	0.000	-17	100%
		B	3/8	1.54	10%	21000	0.27	247.23	210.00	0.000	-14	100%
		C	3/8	1.54	10%	21000	0.27	240.97	210.00	0.000	-2	100%
59.625	EHS	A	3/8	1.54	10%	21000	0.27	221.72	210.00	0.000	-17	100%
		B	3/8	1.54	10%	21000	0.27	220.71	210.00	0.000	-14	100%
		C	3/8	1.54	10%	21000	0.27	217.00	210.00	0.000	-2	100%

Guy Data(cont'd)

Guy Elevation	Mount Type	Torque-Arm Spread	Torque-Arm Leg Angle	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
ft		ft	°				
270	Torque Arm	6.00	0.000	Channel	A36 (36 ksi)	Channel	C12x30
230	Corner						
179.625	Corner						
119.625	Corner						
59.625	Corner						

Guy Data (cont'd)

Guy Elevation	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
ft								
270.00	A36 (36 ksi)	Solid Round			No	A36 (36 ksi)	Solid Round	1 1/4
230.00	A36 (36 ksi)	Solid Round			Yes	A36 (36 ksi)	Flat Bar	4 x 3/8
179.63	A36 (36 ksi)	Solid Round			Yes	A36 (36 ksi)	Flat Bar	4 x 3/8
119.63	A36 (36 ksi)	Solid Round			Yes	A36 (36 ksi)	Flat Bar	4 x 3/8
59.63	A36 (36 ksi)	Solid Round			Yes	A36 (36 ksi)	Flat Bar	4 X 3/8

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Guy Data (cont'd)

Guy Elevation ft	Cable Weight		Cable Weight		Tower Intercept		Tower Intercept		Tower Intercept	
	A K	B K	C K	D K	A ft	B ft	C ft	D ft		
270	0.41	0.41	0.40		12.10	11.94	11.31			
230	0.13	0.13	0.12		6.0 sec/pulse	6.0 sec/pulse	5.8 sec/pulse			
179.625	0.11	0.11	0.11		9.77	9.64	9.11			
119.625	0.07	0.07	0.07		5.4 sec/pulse	5.4 sec/pulse	5.2 sec/pulse			
59.625	0.06	0.06	0.06		7.72	7.61	7.19			
					4.8 sec/pulse	4.8 sec/pulse	4.6 sec/pulse			
					5.43	5.36	5.10			
					4.0 sec/pulse	4.0 sec/pulse	3.9 sec/pulse			
					4.33	4.29	4.16			
					3.6 sec/pulse	3.6 sec/pulse	3.5 sec/pulse			

Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
270	No	No	1	1	0.7	0.7	1	1
230	No	No			0.7	0.7	1	1
179.625	No	No			0.7	0.7	1	1
119.625	No	No			0.7	0.7	1	1
59.625	No	No			0.7	0.7	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
270	0.00 A325N	0	0.00	1	0.00 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
230	0.00 A325N	0	0.00	1	0.00 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
179.625	0.00 A325N	0	0.00	1	0.00 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
119.625	0.00 A325N	0	0.00	1	0.00 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
59.625	0.00 A325N	0	0.00	1	0.00 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75

Guy Pressures

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Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
270	A	127	32	3	1.72
	B	128	32	3	1.72
	C	134	32	3	1.73
230	A	107	31	2	1.69
	B	108	31	2	1.69
	C	114	31	2	1.70
179.625	A	81	29	2	1.64
	B	83	29	2	1.64
	C	89	30	2	1.66
119.625	A	51	26	2	1.57
	B	53	27	2	1.57
	C	59	27	2	1.59
59.625	A	21	22	2	1.44
	B	23	22	2	1.45
	C	29	23	2	1.48

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	B	No	No	Ar (CaAa)	5.00 - 290.00	0.00	0.25	1	1	0.50	0.38		0.22
1 5/8	A	No	No	Ar (CaAa)	5.00 - 285.00	0.00	0	18	9	0.50	1.98		1.04
1 5/8	B	No	No	Ar (CaAa)	5.00 - 274.00	0.00	0	12	6	0.50	1.98		1.04
1 5/8	C	No	No	Ar (CaAa)	5.00 - 264.00	0.00	0	12	6	0.50	1.98		1.04

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	290.00-280.00	A	0.000	0.000	17.820	0.000	0.09
		B	0.000	0.000	0.375	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T2	280.00-260.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	34.014	0.000	0.18
		C	0.000	0.000	9.504	0.000	0.05
T3	260.00-240.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T4	240.00-220.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T5	220.00-200.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T6	200.00-180.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com</p>	Job	290' 36SR / WTC Q24-093	Page	12 of 33
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	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
T7	180.00-160.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T8	160.00-140.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T9	140.00-120.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T10	120.00-100.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T11	100.00-80.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T12	80.00-60.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T13	60.00-40.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T14	40.00-20.00	A	0.000	0.000	71.280	0.000	0.37
		B	0.000	0.000	48.270	0.000	0.25
		C	0.000	0.000	47.520	0.000	0.25
T15	20.00-6.67	A	0.000	0.000	47.520	0.000	0.25
		B	0.000	0.000	32.180	0.000	0.17
		C	0.000	0.000	31.680	0.000	0.17
T16	6.67-0.00	A	0.000	0.000	5.940	0.000	0.03
		B	0.000	0.000	4.022	0.000	0.02
		C	0.000	0.000	3.960	0.000	0.02

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
T1	290.00-280.00	A	1.861	0.000	0.000	16.763	0.000	0.38
		B		0.000	0.000	4.097	0.000	0.05
		C		0.000	0.000	0.000	0.000	0.00
T2	280.00-260.00	A	1.851	0.000	0.000	66.988	0.000	1.51
		B		0.000	0.000	42.871	0.000	0.84
		C		0.000	0.000	9.919	0.000	0.21
T3	260.00-240.00	A	1.837	0.000	0.000	66.898	0.000	1.50
		B		0.000	0.000	57.599	0.000	1.15
		C		0.000	0.000	49.502	0.000	1.05
T4	240.00-220.00	A	1.821	0.000	0.000	66.803	0.000	1.50
		B		0.000	0.000	57.437	0.000	1.15
		C		0.000	0.000	49.401	0.000	1.05
T5	220.00-200.00	A	1.805	0.000	0.000	66.699	0.000	1.49
		B		0.000	0.000	57.262	0.000	1.14
		C		0.000	0.000	49.292	0.000	1.04
T6	200.00-180.00	A	1.787	0.000	0.000	66.586	0.000	1.48
		B		0.000	0.000	57.071	0.000	1.13
		C		0.000	0.000	49.174	0.000	1.03
T7	180.00-160.00	A	1.767	0.000	0.000	66.462	0.000	1.47
		B		0.000	0.000	56.862	0.000	1.12
		C		0.000	0.000	49.043	0.000	1.03
T8	160.00-140.00	A	1.745	0.000	0.000	66.324	0.000	1.46

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
		B		0.000	0.000	56.629	0.000	1.11
		C		0.000	0.000	48.898	0.000	1.02
T9	140.00-120.00	A	1.720	0.000	0.000	66.169	0.000	1.45
		B		0.000	0.000	56.366	0.000	1.10
		C		0.000	0.000	48.734	0.000	1.01
T10	120.00-100.00	A	1.692	0.000	0.000	65.990	0.000	1.43
		B		0.000	0.000	56.064	0.000	1.09
		C		0.000	0.000	48.546	0.000	1.00
T11	100.00-80.00	A	1.658	0.000	0.000	65.780	0.000	1.42
		B		0.000	0.000	55.708	0.000	1.07
		C		0.000	0.000	48.325	0.000	0.99
T12	80.00-60.00	A	1.617	0.000	0.000	65.523	0.000	1.40
		B		0.000	0.000	55.272	0.000	1.05
		C		0.000	0.000	48.054	0.000	0.97
T13	60.00-40.00	A	1.564	0.000	0.000	65.189	0.000	1.37
		B		0.000	0.000	54.706	0.000	1.03
		C		0.000	0.000	47.702	0.000	0.95
T14	40.00-20.00	A	1.486	0.000	0.000	64.704	0.000	1.34
		B		0.000	0.000	53.883	0.000	1.00
		C		0.000	0.000	47.190	0.000	0.92
T15	20.00-6.67	A	1.370	0.000	0.000	42.656	0.000	0.85
		B		0.000	0.000	35.108	0.000	0.63
		C		0.000	0.000	30.954	0.000	0.59
T16	6.67-0.00	A	1.193	0.000	0.000	5.241	0.000	0.10
		B		0.000	0.000	4.233	0.000	0.07
		C		0.000	0.000	3.773	0.000	0.07

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
T1	290.00-280.00	-2.88	-2.78	-0.43	-0.98
T2	280.00-260.00	-1.38	-3.93	-0.15	-2.12
T3	260.00-240.00	-0.40	-2.90	0.28	-1.35
T4	240.00-220.00	-0.39	-2.82	0.26	-1.29
T5	220.00-200.00	-0.40	-2.91	0.28	-1.39
T6	200.00-180.00	-0.40	-2.91	0.27	-1.40
T7	180.00-160.00	-0.39	-2.83	0.26	-1.34
T8	160.00-140.00	-0.40	-2.87	0.26	-1.40
T9	140.00-120.00	-0.40	-2.87	0.26	-1.42
T10	120.00-100.00	-0.38	-2.79	0.24	-1.37
T11	100.00-80.00	-0.40	-2.87	0.25	-1.47
T12	80.00-60.00	-0.40	-2.87	0.25	-1.49
T13	60.00-40.00	-0.38	-2.79	0.22	-1.47
T14	40.00-20.00	-0.40	-2.87	0.22	-1.59
T15	20.00-6.67	-0.39	-2.86	0.20	-1.70
T16	6.67-0.00	-0.18	-1.41	0.02	-0.34

Shielding Factor Ka

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	Safety Line 3/8	280.00 - 290.00	0.6000	0.4656
T1	2	1 5/8	280.00 - 285.00	0.6000	0.4656
T2	1	Safety Line 3/8	260.00 - 280.00	0.6000	0.4708
T2	2	1 5/8	260.00 - 280.00	0.6000	0.4708
T2	3	1 5/8	260.00 - 274.00	0.6000	0.4708
T2	4	1 5/8	260.00 - 264.00	0.6000	0.4708
T3	1	Safety Line 3/8	240.00 - 260.00	0.6000	0.4896
T3	2	1 5/8	240.00 - 260.00	0.6000	0.4896
T3	3	1 5/8	240.00 - 260.00	0.6000	0.4896
T3	4	1 5/8	240.00 - 260.00	0.6000	0.4896
T4	1	Safety Line 3/8	220.00 - 240.00	0.6000	0.4660
T4	2	1 5/8	220.00 - 240.00	0.6000	0.4660
T4	3	1 5/8	220.00 - 240.00	0.6000	0.4660
T4	4	1 5/8	220.00 - 240.00	0.6000	0.4660
T5	1	Safety Line 3/8	200.00 - 220.00	0.6000	0.4991
T5	2	1 5/8	200.00 - 220.00	0.6000	0.4991
T5	3	1 5/8	200.00 - 220.00	0.6000	0.4991
T5	4	1 5/8	200.00 - 220.00	0.6000	0.4991
T6	1	Safety Line 3/8	180.00 - 200.00	0.6000	0.5024
T6	2	1 5/8	180.00 - 200.00	0.6000	0.5024
T6	3	1 5/8	180.00 - 200.00	0.6000	0.5024
T6	4	1 5/8	180.00 - 200.00	0.6000	0.5024
T7	1	Safety Line 3/8	160.00 - 180.00	0.6000	0.4800
T7	2	1 5/8	160.00 - 180.00	0.6000	0.4800
T7	3	1 5/8	160.00 - 180.00	0.6000	0.4800
T7	4	1 5/8	160.00 - 180.00	0.6000	0.4800
T8	1	Safety Line 3/8	140.00 - 160.00	0.6000	0.5026
T8	2	1 5/8	140.00 - 160.00	0.6000	0.5026
T8	3	1 5/8	140.00 - 160.00	0.6000	0.5026
T8	4	1 5/8	140.00 - 160.00	0.6000	0.5026
T9	1	Safety Line 3/8	120.00 - 140.00	0.6000	0.5071

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	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	2	1 5/8	120.00 - 140.00	0.6000	0.5071
T9	3	1 5/8	120.00 - 140.00	0.6000	0.5071
T9	4	1 5/8	120.00 - 140.00	0.6000	0.5071
T10	1	Safety Line 3/8	100.00 - 120.00	0.6000	0.4870
T10	2	1 5/8	100.00 - 120.00	0.6000	0.4870
T10	3	1 5/8	100.00 - 120.00	0.6000	0.4870
T10	4	1 5/8	100.00 - 120.00	0.6000	0.4870
T11	1	Safety Line 3/8	80.00 - 100.00	0.6000	0.5183
T11	2	1 5/8	80.00 - 100.00	0.6000	0.5183
T11	3	1 5/8	80.00 - 100.00	0.6000	0.5183
T11	4	1 5/8	80.00 - 100.00	0.6000	0.5183
T12	1	Safety Line 3/8	60.00 - 80.00	0.6000	0.5258
T12	2	1 5/8	60.00 - 80.00	0.6000	0.5258
T12	3	1 5/8	60.00 - 80.00	0.6000	0.5258
T12	4	1 5/8	60.00 - 80.00	0.6000	0.5258
T13	1	Safety Line 3/8	40.00 - 60.00	0.6000	0.5111
T13	2	1 5/8	40.00 - 60.00	0.6000	0.5111
T13	3	1 5/8	40.00 - 60.00	0.6000	0.5111
T13	4	1 5/8	40.00 - 60.00	0.6000	0.5111
T14	1	Safety Line 3/8	20.00 - 40.00	0.6000	0.5500
T14	2	1 5/8	20.00 - 40.00	0.6000	0.5500
T14	3	1 5/8	20.00 - 40.00	0.6000	0.5500
T14	4	1 5/8	20.00 - 40.00	0.6000	0.5500
T15	1	Safety Line 3/8	6.67 - 20.00	0.6000	0.5790
T15	2	1 5/8	6.67 - 20.00	0.6000	0.5790
T15	3	1 5/8	6.67 - 20.00	0.6000	0.5790
T15	4	1 5/8	6.67 - 20.00	0.6000	0.5790
T16	1	Safety Line 3/8	5.00 - 6.67	0.6000	0.2563
T16	2	1 5/8	5.00 - 6.67	0.6000	0.2563
T16	3	1 5/8	5.00 - 6.67	0.6000	0.2563
T16	4	1 5/8	5.00 - 6.67	0.6000	0.2563

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C_{AA} Front	C_{AA} Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft ²	ft ²	K	
Beacon Lighting	A	From Leg	0.00	0.00	0.000	290.00	No Ice	2.70	2.70	0.05
			0				1/2" Ice	3.10	3.10	0.07
			0				1" Ice	3.50	3.50	0.09
							2" Ice	4.30	4.30	0.13
Lightning Rod 9/16x10'	B	From Leg	0.00	0.00	0.000	290.00	No Ice	0.56	0.56	0.03
			0				1/2" Ice	1.58	1.58	0.03
			5				1" Ice	2.61	2.61	0.04

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz Lateral	Vert						ft
						2" Ice	4.71	4.71	0.09	
*** Carrier 1 - 42,000 sq in	C	None			0.000	285.00	No Ice 1/2" Ice 1" Ice 2" Ice	292.00 312.00 332.00 372.00	292.00 312.00 332.00 372.00	8.00 10.00 12.00 16.00
Carrier 2 - 30,000 sq in	C	None			0.000	274.00	No Ice 1/2" Ice 1" Ice 2" Ice	208.00 228.00 248.00 288.00	208.00 228.00 248.00 288.00	5.00 6.00 7.00 9.00
Carrier 3 - 30,000 sq in	C	None			0.000	264.00	No Ice 1/2" Ice 1" Ice 2" Ice	208.00 228.00 248.00 288.00	208.00 228.00 248.00 288.00	5.00 6.00 7.00 9.00
*** Dish Mount	B	From Leg	1.00 0 0		0.000	235.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.62 2.34 2.69 3.42	1.62 2.34 2.69 3.42	0.02 0.04 0.06 0.11
Dish Mount	C	From Leg	1.00 0 0		0.000	235.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.62 2.34 2.69 3.42	1.62 2.34 2.69 3.42	0.02 0.04 0.06 0.11

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz Lateral	Vert							ft
6 FT DISH	B	Paraboloid w/o Radome	From Leg	1.00	0.000	0.000	°	235.00	6.00	No Ice	28.27	0.14
										1/2" Ice	29.05	0.29
										1" Ice	29.83	0.44
										2" Ice	31.39	0.74
6 FT DISH	C	Paraboloid w/o Radome	From Leg	1.00	0.000	0.000	°	235.00	6.00	No Ice	28.27	0.14
										1/2" Ice	29.05	0.29
										1" Ice	29.83	0.44
										2" Ice	31.39	0.74

Guy Design Data

Section No.	Elevation	Size	Initial Tension	Breaking Load	Actual T _u	Allowable φT _n	Required S.F.	Actual S.F.
	ft		K	K	K	K		
T2	270.00 (A) (718)	3/4 EHS	5.83	58.30	25.47	34.98	1.000	1.373 ✓

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	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
	270.00 (A) (719)	3/4 EHS	5.83	58.30	26.05	34.98	1.000	1.343 ✓
	270.00 (B) (714)	3/4 EHS	5.83	58.30	26.19	34.98	1.000	1.335 ✓
	270.00 (B) (715)	3/4 EHS	5.83	58.30	26.24	34.98	1.000	1.333 ✓
	270.00 (C) (710)	3/4 EHS	5.83	58.30	25.66	34.98	1.000	1.363 ✓
	270.00 (C) (711)	3/4 EHS	5.83	58.30	25.14	34.98	1.000	1.392 ✓
T4	230.00 (A) (727)	7/16 EHS	2.08	20.80	9.82	12.48	1.000	1.271 ✓
	230.00 (B) (726)	7/16 EHS	2.08	20.80	10.20	12.48	1.000	1.224 ✓
	230.00 (C) (722)	7/16 EHS	2.08	20.80	9.96	12.48	1.000	1.254 ✓
T7	179.63 (A) (733)	7/16 EHS	2.08	20.80	10.50	12.48	1.000	1.189 ✓
	179.63 (B) (732)	7/16 EHS	2.08	20.80	10.80	12.48	1.000	1.155 ✓
	179.63 (C) (728)	7/16 EHS	2.08	20.80	10.57	12.48	1.000	1.181 ✓
T10	119.63 (A) (739)	3/8 EHS	1.54	15.40	8.06	9.24	1.000	1.146 ✓
	119.63 (B) (738)	3/8 EHS	1.54	15.40	8.07	9.24	1.000	1.145 ✓
	119.63 (C) (734)	3/8 EHS	1.54	15.40	7.94	9.24	1.000	1.163 ✓
T13	59.63 (A) (745)	3/8 EHS	1.54	15.40	6.67	9.24	1.000	1.386 ✓
	59.63 (B) (744)	3/8 EHS	1.54	15.40	6.59	9.24	1.000	1.403 ✓
	59.63 (C) (740)	3/8 EHS	1.54	15.40	6.47	9.24	1.000	1.428 ✓

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	1 3/4	10.00	3.21	88.0	2.41	-13.49	61.44	0.220
T2	280 - 260	2	20.00	3.21	77.0	3.14	-61.16	91.64	0.667 ¹
T3	260 - 240	1 3/4	20.00	3.21	88.0	2.41	-46.32	61.44	0.754 ¹
T4	240 - 220	1 3/4	20.00	3.21	88.0	2.41	-49.28	61.44	0.802 ¹
T5	220 - 200	1 3/4	20.00	3.21	88.0	2.41	-45.50	61.44	0.741 ¹
T6	200 - 180	1 3/4	20.00	3.21	88.0	2.41	-57.33	61.44	0.933

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T7	180 - 160	1 3/4	20.00	3.21	88.0	2.41	-58.10	61.44	0.946
T8	160 - 140	2	20.00	3.21	77.0 K=1.00	3.14	-57.94	91.64	0.632 ¹
T9	140 - 120	2	20.00	3.21	77.0 K=1.00	3.14	-58.96	91.64	0.643 ¹
T10	120 - 100	2	20.00	3.21	77.0 K=1.00	3.14	-66.31	91.64	0.724 ¹
T11	100 - 80	2	20.00	3.21	77.0 K=1.00	3.14	-68.72	91.64	0.750 ¹
T12	80 - 60	2	20.00	3.21	77.0 K=1.00	3.14	-69.09	91.64	0.754 ¹
T13	60 - 40	2	20.00	3.21	77.0 K=1.00	3.14	-73.19	91.64	0.799 ¹
T14	40 - 20	2	20.00	3.21	77.0 K=1.00	3.14	-74.34	91.64	0.811 ¹
T15	20 - 6.66667	2	13.33	3.24	77.8 K=1.00	3.14	-74.38	90.87	0.819 ¹
T16	6.66667 - 0	2	6.89	2.17	52.0 K=1.00	3.14	-75.64	116.01	0.652

¹ P_u / φP_n controls

Leg Bending Design Data (Compression)

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio M _{ux} / φM _{ux}	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio M _{uy} / φM _{uy}
T1	290 - 280	1 3/4	1	3	0.323	0	3	0.000
T2	280 - 260	2	0	5	0.063	0	5	0.000
T3	260 - 240	1 3/4	0	3	0.057	0	3	0.000
T4	240 - 220	1 3/4	0	3	0.056	0	3	0.000
T5	220 - 200	1 3/4	0	3	0.058	0	3	0.000
T6	200 - 180	1 3/4	0	3	0.137	0	3	0.000
T7	180 - 160	1 3/4	0	3	0.131	0	3	0.000
T8	160 - 140	2	0	5	0.056	0	5	0.000
T9	140 - 120	2	0	5	0.068	0	5	0.000
T10	120 - 100	2	0	5	0.063	0	5	0.000
T11	100 - 80	2	0	5	0.064	0	5	0.000
T12	80 - 60	2	0	5	0.076	0	5	0.000
T13	60 - 40	2	0	5	0.069	0	5	0.000
T14	40 - 20	2	0	5	0.086	0	5	0.000
T15	20 - 6.66667	2	0	5	0.085	0	5	0.000
T16	6.66667 - 0	2	1	5	0.134	0	5	0.000

Leg Interaction Design Data (Compression)

Section No.	Elevation ft	Size	Ratio P _u / φP _n	Ratio M _{ux} / φM _{ux}	Ratio M _{uy} / φM _{uy}	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	290 - 280	1 3/4	0.220	0.323	0.000	0.482	1.000	4.8.1 ✓

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Section No.	Elevation ft	Size	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
			$\frac{P_u}{\phi P_n}$	$\frac{M_{ux}}{\phi M_{nx}}$	$\frac{M_{uy}}{\phi M_{ny}}$			
T2	280 - 260	2	0.667	0.063	0.000	0.667 ¹	1.000	4.8.1 ✓
T3	260 - 240	1 3/4	0.754	0.057	0.000	0.754 ¹	1.000	4.8.1 ✓
T4	240 - 220	1 3/4	0.802	0.056	0.000	0.802 ¹	1.000	4.8.1 ✓
T5	220 - 200	1 3/4	0.741	0.058	0.000	0.741 ¹	1.000	4.8.1 ✓
T6	200 - 180	1 3/4	0.933	0.137	0.000	0.952	1.000	4.8.1 ✓
T7	180 - 160	1 3/4	0.946	0.131	0.000	0.957	1.000	4.8.1 ✓
T8	160 - 140	2	0.632	0.056	0.000	0.632 ¹	1.000	4.8.1 ✓
T9	140 - 120	2	0.643	0.068	0.000	0.643 ¹	1.000	4.8.1 ✓
T10	120 - 100	2	0.724	0.063	0.000	0.724 ¹	1.000	4.8.1 ✓
T11	100 - 80	2	0.750	0.064	0.000	0.750 ¹	1.000	4.8.1 ✓
T12	80 - 60	2	0.754	0.076	0.000	0.754 ¹	1.000	4.8.1 ✓
T13	60 - 40	2	0.799	0.069	0.000	0.799 ¹	1.000	4.8.1 ✓
T14	40 - 20	2	0.811	0.086	0.000	0.811 ¹	1.000	4.8.1 ✓
T15	20 - 6.66667	2	0.819	0.085	0.000	0.819 ¹	1.000	4.8.1 ✓
T16	6.66667 - 0	2	0.652	0.134	0.000	0.699	1.000	4.8.1 ✓

¹ $P_u / \phi P_n$ controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio
			ft	ft		in^2	K	K	$\frac{P_u}{\phi P_n}$
T1	290 - 280	1 1/8	4.39	4.18	124.8 K=0.70	0.99	-9.92	14.18	0.699 ¹
T2	280 - 260	1 1/4	4.39	4.15	111.5 K=0.70	1.23	-14.44	20.66	0.699 ¹
T3	260 - 240	1	4.39	4.18	140.4 K=0.70	0.79	-3.88	9.00	0.431 ¹
T4	240 - 220	1	4.39	4.18	140.4 K=0.70	0.79	-4.38	9.00	0.487 ¹
T5	220 - 200	7/8	4.39	4.18	160.5 K=0.70	0.60	-2.29	5.28	0.433 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T6	200 - 180	7/8	4.39	4.18	160.5 K=0.70	0.60	-4.05	5.28	0.768 ¹
T7	180 - 160	7/8	4.39	4.18	160.5 K=0.70	0.60	-3.34	5.28	0.632 ¹
T8	160 - 140	7/8	4.39	4.15	159.3 K=0.70	0.60	-2.01	5.35	0.375 ¹
T9	140 - 120	7/8	4.39	4.15	159.3 K=0.70	0.60	-2.97	5.35	0.555 ¹
T10	120 - 100	7/8	4.39	4.15	159.3 K=0.70	0.60	-3.18	5.35	0.594 ¹
T11	100 - 80	7/8	4.39	4.15	159.3 K=0.70	0.60	-1.45	5.35	0.271 ¹
T12	80 - 60	7/8	4.39	4.15	159.3 K=0.70	0.60	-3.43	5.35	0.640 ¹
T13	60 - 40	7/8	4.39	4.15	159.3 K=0.70	0.60	-2.76	5.35	0.516 ¹
T14	40 - 20	7/8	4.39	4.15	159.3 K=0.70	0.60	-2.05	5.35	0.383 ¹
T15	20 - 6.66667	1	4.42	4.17	140.1 K=0.70	0.79	-2.62	9.04	0.290 ¹
T16	6.66667 - 0	1	2.21	1.68	80.3 K=0.99	0.79	-13.45	18.13	0.742 ¹

¹ P_u / φP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	3.00	2.85	127.9 K=0.70	0.44	-2.57	6.05	0.425 ¹
T2	280 - 260	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.85	6.13	0.302 ¹
T3	260 - 240	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.08	6.05	0.178 ¹
T4	240 - 220	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.12	6.05	0.185 ¹
T5	220 - 200	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.04	6.05	0.172 ¹
T6	200 - 180	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.35	6.05	0.223 ¹
T7	180 - 160	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.35	6.05	0.223 ¹
T8	160 - 140	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.20	6.13	0.196 ¹
T9	140 - 120	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.22	6.13	0.199 ¹
T10	120 - 100	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.38	6.13	0.225 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T11	100 - 80	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.42	6.13	0.232 ¹ ✓
T12	80 - 60	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.42	6.13	0.232 ¹ ✓
T13	60 - 40	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.52	6.13	0.248 ¹ ✓
T14	40 - 20	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.53	6.13	0.250 ¹ ✓
T15	20 - 6.66667	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.55	6.13	0.252 ¹ ✓
T16	6.66667 - 0	3/4	2.06	1.89	84.7 K=0.70	0.44	-1.36	9.82	0.138 ¹ ✓

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T2	280 - 260	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T3	260 - 240	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T4	240 - 220	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T5	220 - 200	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T6	200 - 180	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T7	180 - 160	3/4	1.50	1.43	83.6 K=0.91	0.44	-0.00	9.91	0.000 ¹ ✓
T8	160 - 140	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T9	140 - 120	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T10	120 - 100	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T11	100 - 80	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T12	80 - 60	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T13	60 - 40	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓
T14	40 - 20	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T15	20 - 6.66667	3/4	1.50	1.42	83.4 K=0.92	0.44	-0.00	9.92	0.000 ¹
T16	6.66667 - 0	3/4	1.22	1.14	72.8 K=1.00	0.44	-0.00	10.83	0.000 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	7/8	3.00	2.85	109.6 K=0.70	0.60	-0.13	10.35	0.013 ¹
T2	280 - 260	7/8	3.00	2.83	108.8 K=0.70	0.60	-3.37	10.45	0.322 ¹
T3	260 - 240	7/8	3.00	2.85	109.6 K=0.70	0.60	-1.15	10.35	0.111 ¹
T4	240 - 220	7/8	3.00	2.85	109.6 K=0.70	0.60	-1.12	10.35	0.108 ¹
T5	220 - 200	7/8	3.00	2.85	109.6 K=0.70	0.60	-1.04	10.35	0.101 ¹
T6	200 - 180	7/8	3.00	2.85	109.6 K=0.70	0.60	-1.35	10.35	0.131 ¹
T7	180 - 160	7/8	3.00	2.85	109.6 K=0.70	0.60	-1.35	10.35	0.131 ¹
T8	160 - 140	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.20	10.45	0.115 ¹
T9	140 - 120	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.22	10.45	0.117 ¹
T10	120 - 100	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.38	10.45	0.132 ¹
T11	100 - 80	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.42	10.45	0.136 ¹
T12	80 - 60	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.42	10.45	0.136 ¹
T13	60 - 40	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.52	10.45	0.145 ¹
T14	40 - 20	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.53	10.45	0.147 ¹
T15	20 - 6.66667	7/8	3.00	2.83	108.8 K=0.70	0.60	-1.55	10.45	0.148 ¹
T16	6.66667 - 0	4 X 3/8	3.00	2.83	314.1 K=1.00	1.50	-1.36	3.44	0.395 ¹

KL/R > 200 (C) - 687

¹ P_u / φP_n controls

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Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	KL/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	3.00	2.85	127.9 K=0.70	0.44	-3.33	6.05	0.551 ¹
T2	280 - 260	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.26	6.13	0.205 ¹
T3	260 - 240	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.08	6.05	0.178 ¹
T4	240 - 220	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.12	6.05	0.185 ¹
T5	220 - 200	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.04	6.05	0.172 ¹
T6	200 - 180	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.35	6.05	0.223 ¹
T7	180 - 160	3/4	3.00	2.85	127.9 K=0.70	0.44	-1.35	6.05	0.223 ¹
T8	160 - 140	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.20	6.13	0.196 ¹
T9	140 - 120	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.22	6.13	0.199 ¹
T10	120 - 100	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.38	6.13	0.225 ¹
T11	100 - 80	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.42	6.13	0.232 ¹
T12	80 - 60	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.42	6.13	0.232 ¹
T13	60 - 40	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.52	6.13	0.248 ¹
T14	40 - 20	3/4	3.00	2.83	126.9 K=0.70	0.44	-1.53	6.13	0.250 ¹

¹ P_u / φP_n controls

Top Guy Pull-Off Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	KL/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	280 - 260	1 1/4	3.00	2.83	76.2 K=0.70	1.23	-16.21	29.30	0.553 ¹
T7	180 - 160	4 x 3/8	3.00	2.85	221.5 K=0.70	1.50	-0.19	6.91	0.027 ¹
T10	120 - 100	KL/R > 200 (C) - 731 4 x 3/8	3.00	2.83	219.9 K=0.70	1.50	-0.15	7.01	0.021 ¹
T13	60 - 40	KL/R > 200 (C) - 737 4 X 3/8	3.00	2.83	219.9 K=0.70	1.50	-0.14	7.01	0.020 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
KL/R > 200 (C) - 743									

¹ P_u / φP_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	280 - 260 (712)	C12x30	3.00	2.92	45.9	8.82	-7.14	255.80	0.028
T2	280 - 260 (713)	C12x30	3.00	2.92	45.9	8.82	-0.45	255.80	0.002
T2	280 - 260 (716)	C12x30	3.00	2.92	45.9	8.82	-7.61	255.80	0.030
T2	280 - 260 (717)	C12x30	3.00	2.92	45.9	8.82	-7.62	255.80	0.030
T2	280 - 260 (720)	C12x30	3.00	2.92	45.9	8.82	-7.29	255.80	0.028
T2	280 - 260 (721)	C12x30	3.00	2.92	45.9	8.82	-7.34	255.80	0.029

Torque-Arm Top Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
T2	280 - 260 (712)	C12x30	-61	91	0.675	0	8	0.000
T2	280 - 260 (713)	C12x30	-61	91	0.668	0	8	0.000
T2	280 - 260 (716)	C12x30	-62	91	0.688	0	8	0.000
T2	280 - 260 (717)	C12x30	-60	91	0.664	0	8	0.000
T2	280 - 260 (720)	C12x30	-62	91	0.678	0	8	0.000
T2	280 - 260 (721)	C12x30	-62	91	0.686	0	8	0.000

Torque-Arm Top Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T2	280 - 260 (712)	C12x30	0.028	0.675	0.000	0.689	1.000	4.8.1 ✓
T2	280 - 260 (713)	C12x30	0.002	0.668	0.000	0.669	1.000	4.8.1 ✓
T2	280 - 260 (716)	C12x30	0.030	0.688	0.000	0.703	1.000	4.8.1 ✓
T2	280 - 260 (717)	C12x30	0.030	0.664	0.000	0.679	1.000	4.8.1 ✓

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Section No.	Elevation ft	Size	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
			$\frac{P_u}{\phi P_n}$	$\frac{M_{ux}}{\phi M_{nx}}$	$\frac{M_{uy}}{\phi M_{ny}}$			
T2	280 - 260 (720)	C12x30	0.028	0.678	0.000	0.692 ✓	1.000	4.8.1 ✓
T2	280 - 260 (721)	C12x30	0.029	0.686	0.000	0.700 ✓ ✓	1.000	4.8.1 ✓

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio
			ft	ft		in ²	K	K	$\frac{P_u}{\phi P_n}$
T1	290 - 280	1 3/4	10.00	3.21	88.0	2.41	0.24	108.24	0.002
T2	280 - 260	2	20.00	3.21	77.0	3.14	44.12	141.37	0.312

Leg Bending Design Data (Tension)

Section No.	Elevation ft	Size	M _{ux}	φM _{nx}	Ratio	M _{uy}	φM _{ny}	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
T1	290 - 280	1 3/4	1	3	0.402	0	3	0.000
T2	280 - 260	2	1	5	0.102	0	5	0.000

Leg Interaction Design Data (Tension)

Section No.	Elevation ft	Size	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
			$\frac{P_u}{\phi P_n}$	$\frac{M_{ux}}{\phi M_{nx}}$	$\frac{M_{uy}}{\phi M_{ny}}$			
T1	290 - 280	1 3/4	0.002	0.402	0.000	0.403 ✓	1.000	4.8.1 ✓
T2	280 - 260	2	0.312	0.102	0.000	0.368 ✓ ✓	1.000	4.8.1 ✓

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio
			ft	ft		in ²	K	K	$\frac{P_u}{\phi P_n}$
T1	290 - 280	1 1/8	4.39	4.18	178.3	0.99	9.84	32.21	0.306 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	280 - 260	1 1/4	4.39	4.15	159.3	1.23	14.48	39.76	0.364 ¹ ✓
T3	260 - 240	1	4.39	4.18	200.6	0.79	3.38	25.45	0.133 ¹ ✓
T4	240 - 220	1	4.39	4.18	200.6	0.79	4.12	25.45	0.162 ¹ ✓
T5	220 - 200	7/8	4.39	4.18	229.2	0.60	2.01	19.48	0.103 ¹ ✓
T6	200 - 180	7/8	4.39	4.18	229.2	0.60	3.56	19.48	0.183 ¹ ✓
T7	180 - 160	7/8	4.39	4.18	229.2	0.60	2.86	19.48	0.147 ¹ ✓
T8	160 - 140	7/8	4.39	4.15	227.6	0.60	1.62	19.48	0.083 ¹ ✓
T9	140 - 120	7/8	4.39	4.15	227.6	0.60	2.23	19.48	0.115 ¹ ✓
T10	120 - 100	7/8	4.39	4.15	227.6	0.60	2.34	19.48	0.120 ¹ ✓
T11	100 - 80	7/8	4.39	4.15	227.6	0.60	1.15	19.48	0.059 ¹ ✓
T12	80 - 60	7/8	4.39	4.15	227.6	0.60	2.44	19.48	0.125 ¹ ✓
T13	60 - 40	7/8	4.39	4.15	227.6	0.60	1.82	19.48	0.093 ¹ ✓
T14	40 - 20	7/8	4.39	4.15	227.6	0.60	1.10	19.48	0.056 ¹ ✓
T15	20 - 6.66667	1	4.42	4.17	200.2	0.79	2.19	25.45	0.086 ¹ ✓
T16	6.66667 - 0	1	2.64	2.11	101.4	0.79	1.61	25.45	0.063 ¹ ✓

¹ P_u / φP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	3.00	2.85	182.7	0.44	2.58	14.31	0.181 ¹ ✓
T2	280 - 260	3/4	3.00	2.83	181.3	0.44	2.05	14.31	0.143 ¹ ✓
T3	260 - 240	3/4	3.00	2.85	182.7	0.44	1.08	14.31	0.075 ¹ ✓
T4	240 - 220	3/4	3.00	2.85	182.7	0.44	1.12	14.31	0.078 ¹ ✓
T5	220 - 200	3/4	3.00	2.85	182.7	0.44	1.04	14.31	0.073 ¹ ✓

<p>tnxTower</p> <p>World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com</p>	Job	290' 36SR / WTC Q24-093	Page	27 of 33
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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T6	200 - 180	3/4	3.00	2.85	182.7	0.44	1.35	14.31	0.094 ¹
T7	180 - 160	3/4	3.00	2.85	182.7	0.44	1.35	14.31	0.094 ¹
T8	160 - 140	3/4	3.00	2.83	181.3	0.44	1.20	14.31	0.084 ¹
T9	140 - 120	3/4	3.00	2.83	181.3	0.44	1.22	14.31	0.085 ¹
T10	120 - 100	3/4	3.00	2.83	181.3	0.44	1.38	14.31	0.096 ¹
T11	100 - 80	3/4	3.00	2.83	181.3	0.44	1.42	14.31	0.099 ¹
T12	80 - 60	3/4	3.00	2.83	181.3	0.44	1.42	14.31	0.099 ¹
T13	60 - 40	3/4	3.00	2.83	181.3	0.44	1.52	14.31	0.106 ¹
T14	40 - 20	3/4	3.00	2.83	181.3	0.44	1.53	14.31	0.107 ¹
T15	20 - 6.66667	3/4	3.00	2.83	181.3	0.44	1.55	14.31	0.108 ¹
T16	6.66667 - 0	3/4	1.11	0.95	60.5	0.44	1.41	14.31	0.098 ¹

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T2	280 - 260	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹
T3	260 - 240	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T4	240 - 220	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T5	220 - 200	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T6	200 - 180	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T7	180 - 160	3/4	1.50	1.43	91.3	0.44	0.00	14.31	0.000 ¹
T8	160 - 140	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹
T9	140 - 120	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹
T10	120 - 100	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T11	100 - 80	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹ ✓
T12	80 - 60	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹ ✓
T13	60 - 40	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹ ✓
T14	40 - 20	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹ ✓
T15	20 - 6.66667	3/4	1.50	1.42	90.7	0.44	0.00	14.31	0.000 ¹ ✓
T16	6.66667 - 0	3/4	1.22	1.14	72.8	0.44	0.00	14.31	0.000 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	7/8	3.00	2.85	156.6	0.60	0.14	19.48	0.007 ¹ ✓
T2	280 - 260	7/8	3.00	2.83	155.4	0.60	3.13	19.48	0.161 ¹ ✓
T3	260 - 240	7/8	3.00	2.85	156.6	0.60	1.27	19.48	0.065 ¹ ✓
T4	240 - 220	7/8	3.00	2.85	156.6	0.60	1.12	19.48	0.057 ¹ ✓
T5	220 - 200	7/8	3.00	2.85	156.6	0.60	1.04	19.48	0.053 ¹ ✓
T6	200 - 180	7/8	3.00	2.85	156.6	0.60	1.35	19.48	0.069 ¹ ✓
T7	180 - 160	7/8	3.00	2.85	156.6	0.60	1.39	19.48	0.071 ¹ ✓
T8	160 - 140	7/8	3.00	2.83	155.4	0.60	1.20	19.48	0.062 ¹ ✓
T9	140 - 120	7/8	3.00	2.83	155.4	0.60	1.22	19.48	0.063 ¹ ✓
T10	120 - 100	7/8	3.00	2.83	155.4	0.60	1.38	19.48	0.071 ¹ ✓
T11	100 - 80	7/8	3.00	2.83	155.4	0.60	1.42	19.48	0.073 ¹ ✓
T12	80 - 60	7/8	3.00	2.83	155.4	0.60	1.42	19.48	0.073 ¹ ✓
T13	60 - 40	7/8	3.00	2.83	155.4	0.60	1.52	19.48	0.078 ¹ ✓
T14	40 - 20	7/8	3.00	2.83	155.4	0.60	1.53	19.48	0.079 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T15	20 - 6.66667	7/8	3.00	2.83	155.4	0.60	1.55	19.48	0.079 ¹
T16	6.66667 - 0	4 X 3/8	3.00	2.83	314.1	1.50	11.35	48.60	0.234 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	290 - 280	3/4	3.00	2.85	182.7	0.44	3.59	14.31	0.251 ¹
T2	280 - 260	3/4	3.00	2.83	181.3	0.44	1.32	14.31	0.092 ¹
T3	260 - 240	3/4	3.00	2.85	182.7	0.44	1.08	14.31	0.075 ¹
T4	240 - 220	3/4	3.00	2.85	182.7	0.44	1.12	14.31	0.078 ¹
T5	220 - 200	3/4	3.00	2.85	182.7	0.44	1.04	14.31	0.073 ¹
T6	200 - 180	3/4	3.00	2.85	182.7	0.44	1.41	14.31	0.098 ¹
T7	180 - 160	3/4	3.00	2.85	182.7	0.44	1.35	14.31	0.094 ¹
T8	160 - 140	3/4	3.00	2.83	181.3	0.44	1.20	14.31	0.084 ¹
T9	140 - 120	3/4	3.00	2.83	181.3	0.44	1.22	14.31	0.085 ¹
T10	120 - 100	3/4	3.00	2.83	181.3	0.44	1.38	14.31	0.096 ¹
T11	100 - 80	3/4	3.00	2.83	181.3	0.44	1.42	14.31	0.099 ¹
T12	80 - 60	3/4	3.00	2.83	181.3	0.44	1.42	14.31	0.099 ¹
T13	60 - 40	3/4	3.00	2.83	181.3	0.44	1.52	14.31	0.106 ¹
T14	40 - 20	3/4	3.00	2.83	181.3	0.44	1.53	14.31	0.107 ¹
T16	6.66667 - 0	3/4	0.17	0.00	0.1	0.44	2.86	14.31	0.200 ¹

¹ P_u / φP_n controls

Top Guy Pull-Off Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	280 - 260	1 1/4	3.00	2.83	108.8	1.23	16.29	39.76	0.410 ¹
T4	240 - 220	4 x 3/8	3.00	2.85	316.4	1.50	3.11	48.60	0.064 ¹
T7	180 - 160	4 x 3/8	3.00	2.85	316.4	1.50	3.46	48.60	0.071 ¹
T10	120 - 100	4 x 3/8	3.00	2.83	314.1	1.50	2.99	48.60	0.062 ¹
T13	60 - 40	4 X 3/8	3.00	2.83	314.1	1.50	2.86	48.60	0.059 ¹

¹ P_u / φP_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	280 - 260 (712)	C12x30	3.00	2.92	45.9	8.82	7.30	285.77	0.026
T2	280 - 260 (713)	C12x30	3.00	2.92	45.9	8.82	6.82	285.77	0.024
T2	280 - 260 (716)	C12x30	3.00	2.92	45.9	8.82	6.83	285.77	0.024
T2	280 - 260 (717)	C12x30	3.00	2.92	45.9	8.82	6.92	285.77	0.024
T2	280 - 260 (720)	C12x30	3.00	2.92	45.9	8.82	6.54	285.77	0.023
T2	280 - 260 (721)	C12x30	3.00	2.92	45.9	8.82	7.20	285.77	0.025

Torque-Arm Top Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
T2	280 - 260 (712)	C12x30	-54	91	0.598	0	8	0.000
T2	280 - 260 (713)	C12x30	-52	91	0.579	0	8	0.000
T2	280 - 260 (716)	C12x30	-53	91	0.589	0	8	0.000
T2	280 - 260 (717)	C12x30	-51	91	0.565	0	8	0.000
T2	280 - 260 (720)	C12x30	-54	91	0.591	0	8	0.000
T2	280 - 260 (721)	C12x30	-54	91	0.594	0	8	0.000

Torque-Arm Top Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T2	280 - 260 (712)	C12x30	0.026	0.598	0.000	0.610	1.000	4.8.1 ✓

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job	290' 36SR / WTC Q24-093	Page	31 of 33
	Project	Waltonia Rd, Princeton, KY	Date	17:30:33 02/16/24
	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Section No.	Elevation ft	Size	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
			ϕP_n	ϕM_{ux}	ϕM_{uy}			
T2	280 - 260 (713)	C12x30	0.024	0.579	0.000	0.591	1.000	4.8.1 ✓
T2	280 - 260 (716)	C12x30	0.024	0.589	0.000	0.600	1.000	4.8.1 ✓
T2	280 - 260 (717)	C12x30	0.024	0.565	0.000	0.577	1.000	4.8.1 ✓
T2	280 - 260 (720)	C12x30	0.023	0.591	0.000	0.603	1.000	4.8.1 ✓
T2	280 - 260 (721)	C12x30	0.025	0.594	0.000	0.606	1.000	4.8.1 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	290 - 280	Leg	1 3/4	2	-13.49	61.44	48.2	Pass
T2	280 - 260	Leg	2	29	-61.16	91.64	66.7	Pass
T3	260 - 240	Leg	1 3/4	78	-46.32	61.44	75.4	Pass
T4	240 - 220	Leg	1 3/4	124	-49.28	61.44	80.2	Pass
T5	220 - 200	Leg	1 3/4	173	-45.50	61.44	74.1	Pass
T6	200 - 180	Leg	1 3/4	220	-57.33	61.44	95.2	Pass
T7	180 - 160	Leg	1 3/4	268	-58.10	61.44	95.7	Pass
T8	160 - 140	Leg	2	317	-57.94	91.64	63.2	Pass
T9	140 - 120	Leg	2	366	-58.96	91.64	64.3	Pass
T10	120 - 100	Leg	2	414	-66.31	91.64	72.4	Pass
T11	100 - 80	Leg	2	462	-68.72	91.64	75.0	Pass
T12	80 - 60	Leg	2	510	-69.09	91.64	75.4	Pass
T13	60 - 40	Leg	2	558	-73.19	91.64	79.9	Pass
T14	40 - 20	Leg	2	606	-74.34	91.64	81.1	Pass
T15	20 - 6.66667	Leg	2	654	-74.38	90.87	81.9	Pass
T16	6.66667 - 0	Leg	2	685	-75.64	116.01	69.9	Pass
T1	290 - 280	Diagonal	1 1/8	11	-9.92	14.18	69.9	Pass
T2	280 - 260	Diagonal	1 1/4	59	-14.44	20.66	69.9	Pass
T3	260 - 240	Diagonal	1	120	-3.88	9.00	43.1	Pass
T4	240 - 220	Diagonal	1	154	-4.38	9.00	48.7	Pass
T5	220 - 200	Diagonal	7/8	181	-2.29	5.28	43.3	Pass
T6	200 - 180	Diagonal	7/8	229	-4.05	5.28	76.8	Pass
T7	180 - 160	Diagonal	7/8	305	-3.34	5.28	63.2	Pass
T8	160 - 140	Diagonal	7/8	361	-2.01	5.35	37.5	Pass
T9	140 - 120	Diagonal	7/8	373	-2.97	5.35	55.5	Pass
T10	120 - 100	Diagonal	7/8	450	-3.18	5.35	59.4	Pass
T11	100 - 80	Diagonal	7/8	506	-1.45	5.35	27.1	Pass
T12	80 - 60	Diagonal	7/8	518	-3.43	5.35	64.0	Pass
T13	60 - 40	Diagonal	7/8	594	-2.76	5.35	51.6	Pass
T14	40 - 20	Diagonal	7/8	615	-2.05	5.35	38.3	Pass
T15	20 - 6.66667	Diagonal	1	660	-2.62	9.04	29.0	Pass
T16	6.66667 - 0	Diagonal	1	693	-13.45	18.13	74.2	Pass
T1	290 - 280	Horizontal	3/4	14	-2.57	6.05	42.5	Pass
T2	280 - 260	Horizontal	3/4	63	-1.85	6.13	30.2	Pass
T3	260 - 240	Horizontal	3/4	104	-1.08	6.05	17.8	Pass
T4	240 - 220	Horizontal	3/4	153	-1.12	6.05	18.5	Pass
T5	220 - 200	Horizontal	3/4	192	-1.04	6.05	17.2	Pass
T6	200 - 180	Horizontal	3/4	235	-1.35	6.05	22.3	Pass
T7	180 - 160	Horizontal	3/4	283	-1.35	6.05	22.3	Pass
T8	160 - 140	Horizontal	3/4	343	-1.20	6.13	19.6	Pass

<p>tnxTower</p> <p>World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com</p>	Job	290' 36SR / WTC Q24-093	Page	32 of 33
	Project	Waltonia Rd, Princeton, KY	Date	17:30:33 02/16/24
	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	σP_{allow} K	% Capacity	Pass Fail
T9	140 - 120	Horizontal	3/4	392	-1.22	6.13	19.9	Pass
T10	120 - 100	Horizontal	3/4	426	-1.38	6.13	22.5	Pass
T11	100 - 80	Horizontal	3/4	474	-1.42	6.13	23.2	Pass
T12	80 - 60	Horizontal	3/4	522	-1.42	6.13	23.2	Pass
T13	60 - 40	Horizontal	3/4	570	-1.52	6.13	24.8	Pass
T14	40 - 20	Horizontal	3/4	618	-1.53	6.13	25.0	Pass
T15	20 - 6.66667	Horizontal	3/4	663	-1.55	6.13	25.2	Pass
T16	6.66667 - 0	Horizontal	3/4	704	-1.36	9.82	13.8	Pass
T1	290 - 280	Secondary Horizontal	3/4	20	-0.00	9.91	0.1	Pass
T2	280 - 260	Secondary Horizontal	3/4	47	-0.00	9.92	0.1	Pass
T3	260 - 240	Secondary Horizontal	3/4	95	-0.00	9.91	0.1	Pass
T4	240 - 220	Secondary Horizontal	3/4	143	-0.00	9.91	0.1	Pass
T5	220 - 200	Secondary Horizontal	3/4	191	-0.00	9.91	0.1	Pass
T6	200 - 180	Secondary Horizontal	3/4	239	-0.00	9.91	0.1	Pass
T7	180 - 160	Secondary Horizontal	3/4	287	-0.00	9.91	0.1	Pass
T8	160 - 140	Secondary Horizontal	3/4	335	-0.00	9.92	0.1	Pass
T9	140 - 120	Secondary Horizontal	3/4	383	-0.00	9.92	0.1	Pass
T10	120 - 100	Secondary Horizontal	3/4	431	-0.00	9.92	0.1	Pass
T11	100 - 80	Secondary Horizontal	3/4	479	-0.00	9.92	0.1	Pass
T12	80 - 60	Secondary Horizontal	3/4	527	-0.00	9.92	0.1	Pass
T13	60 - 40	Secondary Horizontal	3/4	575	-0.00	9.92	0.1	Pass
T14	40 - 20	Secondary Horizontal	3/4	623	-0.00	9.92	0.1	Pass
T15	20 - 6.66667	Secondary Horizontal	3/4	668	-0.00	9.92	0.1	Pass
T16	6.66667 - 0	Secondary Horizontal	3/4	695	0.00	14.31	0.2	Pass
T1	290 - 280	Top Girt	7/8	4	-0.13	10.35	1.3	Pass
T2	280 - 260	Top Girt	7/8	32	-3.37	10.45	32.2	Pass
T3	260 - 240	Top Girt	7/8	79	-1.15	10.35	11.1	Pass
T4	240 - 220	Top Girt	7/8	129	-1.12	10.35	10.8	Pass
T5	220 - 200	Top Girt	7/8	175	-1.04	10.35	10.1	Pass
T6	200 - 180	Top Girt	7/8	225	-1.35	10.35	13.1	Pass
T7	180 - 160	Top Girt	7/8	273	-1.35	10.35	13.1	Pass
T8	160 - 140	Top Girt	7/8	319	-1.20	10.45	11.5	Pass
T9	140 - 120	Top Girt	7/8	368	-1.22	10.45	11.7	Pass
T10	120 - 100	Top Girt	7/8	416	-1.38	10.45	13.2	Pass
T11	100 - 80	Top Girt	7/8	464	-1.42	10.45	13.6	Pass
T12	80 - 60	Top Girt	7/8	512	-1.42	10.45	13.6	Pass
T13	60 - 40	Top Girt	7/8	560	-1.52	10.45	14.5	Pass
T14	40 - 20	Top Girt	7/8	608	-1.53	10.45	14.7	Pass
T15	20 - 6.66667	Top Girt	7/8	656	-1.55	10.45	14.8	Pass
T16	6.66667 - 0	Top Girt	4 X 3/8	687	-1.36	3.44	39.5	Pass
T1	290 - 280	Bottom Girt	3/4	8	-3.33	6.05	55.1	Pass
T2	280 - 260	Bottom Girt	3/4	34	-1.26	6.13	20.5	Pass
T3	260 - 240	Bottom Girt	3/4	83	-1.08	6.05	17.8	Pass
T4	240 - 220	Bottom Girt	3/4	132	-1.12	6.05	18.5	Pass
T5	220 - 200	Bottom Girt	3/4	178	-1.04	6.05	17.2	Pass
T6	200 - 180	Bottom Girt	3/4	228	-1.35	6.05	22.3	Pass
T7	180 - 160	Bottom Girt	3/4	276	-1.35	6.05	22.3	Pass
T8	160 - 140	Bottom Girt	3/4	322	-1.20	6.13	19.6	Pass
T9	140 - 120	Bottom Girt	3/4	371	-1.22	6.13	19.9	Pass
T10	120 - 100	Bottom Girt	3/4	419	-1.38	6.13	22.5	Pass
T11	100 - 80	Bottom Girt	3/4	467	-1.42	6.13	23.2	Pass
T12	80 - 60	Bottom Girt	3/4	515	-1.42	6.13	23.2	Pass
T13	60 - 40	Bottom Girt	3/4	563	-1.52	6.13	24.8	Pass
T14	40 - 20	Bottom Girt	3/4	611	-1.53	6.13	25.0	Pass
T16	6.66667 - 0	Bottom Girt	3/4	689	2.86	14.31	20.0	Pass
T2	280 - 260	Guy A@270	3/4	719	26.05	34.98	74.5	Pass
T4	240 - 220	Guy A@230	7/16	727	9.82	12.48	78.7	Pass
T7	180 - 160	Guy A@179.625	7/16	733	10.50	12.48	84.1	Pass
T10	120 - 100	Guy A@119.625	3/8	739	8.06	9.24	87.3	Pass
T13	60 - 40	Guy A@59.625	3/8	745	6.67	9.24	72.1	Pass
T2	280 - 260	Guy B@270	3/4	715	26.24	34.98	75.0	Pass

<p>tnxTower</p> <p>World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com</p>	Job	290' 36SR / WTC Q24-093	Page	33 of 33
	Project	Waltonia Rd, Princeton, KY	Date	17:30:33 02/16/24
	Client	Vertical Bridge US-KY-5206	Designed by	kirk

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail	
T4	240 - 220	Guy B@230	7/16	726	10.20	12.48	81.7	Pass	
T7	180 - 160	Guy B@179.625	7/16	732	10.80	12.48	86.6	Pass	
T10	120 - 100	Guy B@119.625	3/8	738	8.07	9.24	87.3	Pass	
T13	60 - 40	Guy B@59.625	3/8	744	6.59	9.24	71.3	Pass	
T2	280 - 260	Guy C@270	3/4	710	25.66	34.98	73.4	Pass	
T4	240 - 220	Guy C@230	7/16	722	9.96	12.48	79.8	Pass	
T7	180 - 160	Guy C@179.625	7/16	728	10.57	12.48	84.7	Pass	
T10	120 - 100	Guy C@119.625	3/8	734	7.94	9.24	86.0	Pass	
T13	60 - 40	Guy C@59.625	3/8	740	6.47	9.24	70.0	Pass	
T2	280 - 260	Top Guy	1 1/4	55	-16.21	29.30	55.3	Pass	
		Pull-Off@270							
T4	240 - 220	Top Guy	4 x 3/8	724	3.11	48.60	6.4	Pass	
		Pull-Off@230							
T7	180 - 160	Top Guy	4 x 3/8	731	3.46	48.60	7.1	Pass	
		Pull-Off@179.625							
T10	120 - 100	Top Guy	4 x 3/8	737	2.99	48.60	6.2	Pass	
		Pull-Off@119.625							
T13	60 - 40	Top Guy	4 X 3/8	743	2.86	48.60	5.9	Pass	
		Pull-Off@59.625							
T2	280 - 260	Torque Arm	C12x30	716	-7.61	255.80	70.3	Pass	
		Top@270							
							Summary		
							Leg (T7)	95.7	Pass
							Diagonal (T6)	76.8	Pass
							Horizontal (T1)	42.5	Pass
							Secondary Horizontal (T16)	0.2	Pass
							Top Girt (T16)	39.5	Pass
							Bottom Girt (T1)	55.1	Pass
							Guy A (T10)	87.3	Pass
							Guy B (T10)	87.3	Pass
							Guy C (T10)	86.0	Pass
							Top Guy Pull-Off (T2)	55.3	Pass
							Torque Arm Top (T2)	70.3	Pass
							Bolt Checks	21.2	Pass
							RATING =	95.7	Pass

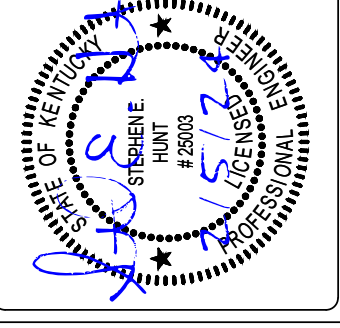


1961 NORTHPOINT BLVD.
SUITE 130
HIYSON, TN 37343
PH : 423-843-9500
FAX : 423-843-9509

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY : DLS
CHECKED BY : SEH

REVISIONS	
#	DESCRIPTION
6	02/05/24 PLS FINAL ZONING ISSUE
5	02/02/24 MJB FINAL ZONING ISSUE
4	01/25/24 MJB FINAL ZONING ISSUE
3	01/18/24 MJB FINAL ZONING ISSUE
2	02/16/23 MJB FINAL ZONING ISSUE
1	02/16/23 MJB FINAL ZONING ISSUE



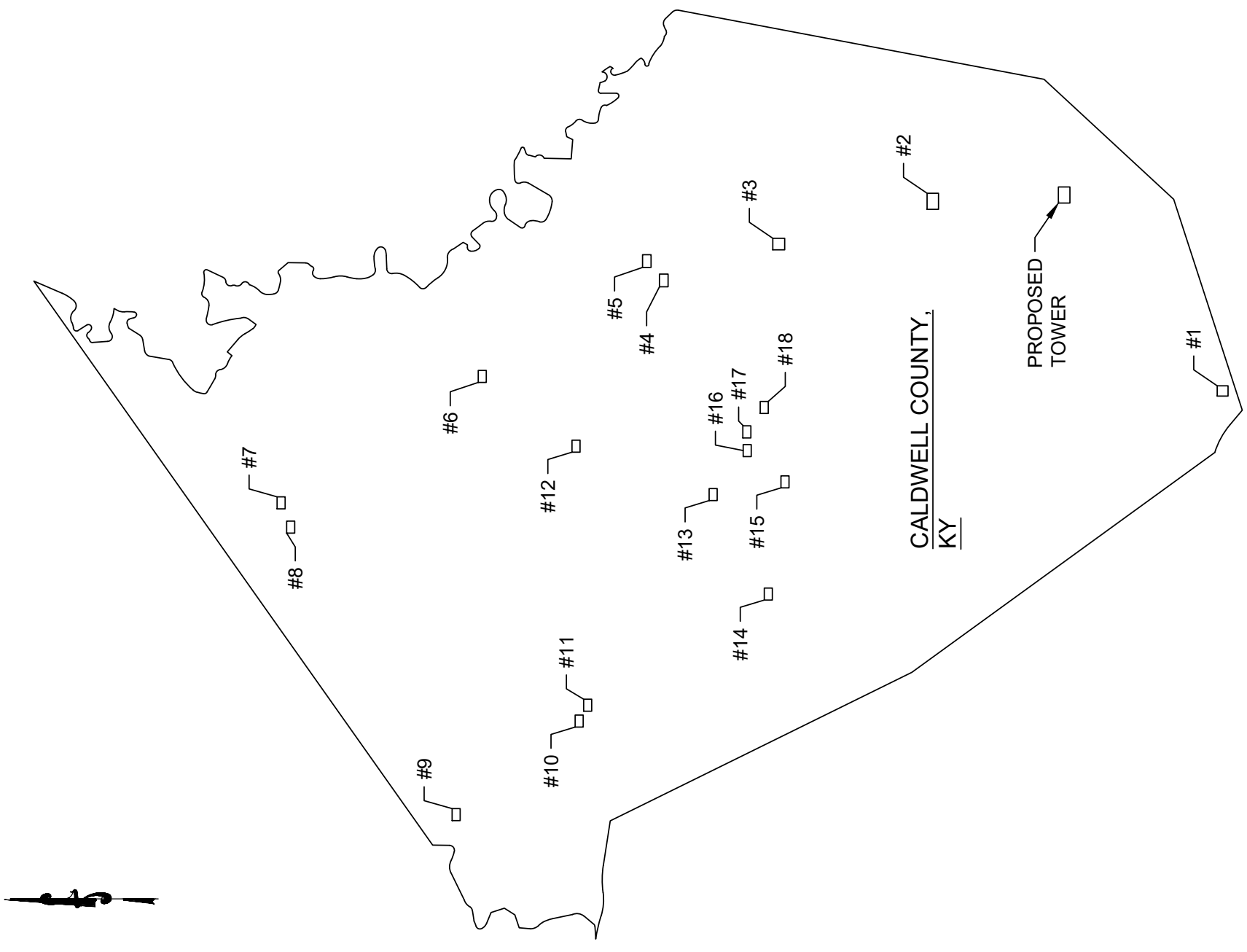
FUZE ID : 2115970
SITE NAME : EV WALTONIA ROAD
SITE # / LOCATION CODE : 492779

SITE ADDRESS : OLD COBB ROAD
PRINCETON, KY 42445
SITE TYPE : RAWLAND

SHEET TITLE : COUNTY TOWER MAP

DRAWING # : Z1
REVISION : 6

TOWER	ASR	LATITUDE	LONGITUDE	TOWER OWNER
#1.	1030739	36° 57' 17.40"N	87° 51' 17.60"W	CROWN CASTLE GT COMPANY LLC
#2.	1303189	37° 03' 25.40"N	87° 46' 06.80"W	TILLMAN INFRASTRUCTURE LLC
#3.	1256011	37° 06' 41.40"N	87° 47' 14.70"W	AMERICAN TOWERS LLC
#4.	1235203	37° 09' 17.30"N	87° 48' 08.80"W	CROWN CASTLE SOUTH LLC
#5.	1221639	37° 09' 28.40"N	87° 47' 40.80"W	CROWN CASTLE GT COMPANY LLC
#6.	1044826	37° 13' 5.00"N	87° 50' 45.00"W	KENTUCKY, COMMONWEALTH OF DBA = KY EMERGENCY WARNING SYSTEM KEWS
#7.	1304536	37° 13' 32.70"N	87° 54' 10.70"W	TILLMAN INFRASTRUCTURE, LLC
#8.	1039663	37°17' 07.00"N	87° 54' 41.00"W	TEXAS GAS TRANSMISSION, LLC
#9.	1306038	37° 13' 32.70"N	88° 02' 32.10"W	SKYWAY TOWERS, LLC
#10.	1289004	37° 10' 51.10"N	87° 59' 53.00"W	KENTUCKY UTILITIES COMPANY
#11.	1200526	37° 10' 49.00"N	87° 59' 41.00"W	BIG RIVERS ELECTRIC CORPORATION
#12.	1305997	37° 11' 01.80"N	87° 52' 35.80"W	TILLMAN INFRASTRUCTURE, LLC PRINCETON, KY
#13.	1247278	37° 08' 04.75"N	87° 53' 48.25"W	PRINCETON ELECTRIC PLANT BOARD
#14.	1272322	37° 06' 51.00"N	87° 56' 32.00"W	AMERICAN TOWERS LLC
#15.	1201151	37° 06' 37.10"N	87° 53' 31.00"W	DBA FORD COMMUNICATIONS
#16.	1200993	37° 7' 21.10"N	87° 52' 42.00"W	PINNACLE TOWERS LLC
#17.	1040638	37° 07' 22.00"N	87° 52' 45.50"W	HAM BROADCASTING CO., INC.
#18.	1240993	37° 07' 21.10"N	87° 52' 42.00"W	HAM BROADCASTING CO., INC.
PROPOSED TOWER	VERIZON	37° 00' 39.49"N	87° 45' 45.87"W	VERTICAL BRIDGE





Proposed Case for : 2024-ASO-1768-OE

For information only.

This proposal has not yet been studied. Study outcomes will be posted at a later date. Public comments are not requested, and will not be considered at this time.

Overview				
Study (ASN): 2024-ASO-1768-OE	Received Date: 01/25/2024			
Prior Study:	Entered Date: 01/25/2024			
Status: Work In Progress	Map: View Map			
Construction Info				
Notice Of: CONSTR	Structure Summary			
Duration: PERM (Months: 0 Days: 0)	Structure Type: Antenna Tower			
Work Schedule:	Structure Name: US-KY-5206 - Waltonia Rd			
	FCC Number:			
Structure Details				
Latitude (NAD 83): 37° 00' 38.44" N	Proposed			
Longitude (NAD 83): 87° 45' 45.87" W				
Datum: NAD 83				
City: Princeton				
State: KY				
Nearest County: Caldwell				
Height and Elevation				
Site Elevation:	564			
Structure Height:	300			
Total Height (AMSL):	864			
Frequencies				
Low Freq	High Freq	Unit	ERP	Unit
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	2000	W
614	698	MHz	1000	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
3700	3980	MHz	3280	W

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APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

JURISDICTION

602 KAR 50:030

Section 1. The commission has zoning jurisdiction over that airspace over and around the public use and military airports within the Commonwealth which lies above the imaginary surface that extends outward and upward at one (1) of the following slopes:

- (1) 100 to one (1) for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each public use airport and military airport with at least one (1) runway 3,200 feet or more in length; or
- (2) fifty (50) to one (1) for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each public use and military airport with its longest runway less than 3,200 feet in length.

Section 2. The commission has zoning jurisdiction over the use of land and structures within public use airports within the state.

Section 3. The commission has jurisdiction from the ground upward within the limits of the primary and approach surfaces of each public use airport and military airport as depicted on airport zoning maps approved by the Kentucky Airport Zoning Commission.

Section 4. The Commission has jurisdiction over the airspace of the Commonwealth that exceeds 200 feet in height above the ground.

Section 5. The owner or person who has control over a structure which penetrates or will penetrate the airspace over which the Commission has Jurisdiction shall apply for a permit from the Commission in accordance with 602 KAR 50:090.

INSTRUCTIONS

1. "Alteration" means to increase or decrease the height of a structure or change the obstruction marking and lighting.
2. "Applicant" means the person who will own or have control over the completed structure.
3. "Certification by Applicant" shall be made by the individual who will own or control the completed structure; or a partner in a partnership; or the president or authorized officer of a corporation company, or association; or the authorized official of a body politic; or the legally designated representative of a trustee, receiver, or assignee.
4. Prepare the application and forward to the Kentucky Dept. of Aviation, ATTN: Airport Zoning Commission, 90 Airport Drive, Frankfort KY 40601. For questions, telephone 502-782-4043.
5. The statutes applicable to the Kentucky Airport Commission are KRS 183.861 to 183.990 and the administrative regulations are 602 KAR Chapter 50.
6. When applicable, attach the following appendices to the application:

Appendix A. A 7.5 minute quadrangle topographical map prepared by the U.S. Geological Survey and the Kentucky Geological Survey with the exact location of the structure which is the subject of the application indicated thereon. (*The 7.5 minute quadrangle map may be obtained from the Kentucky Geological Survey, Department of Mines and Minerals, Lexington, KY 40506.*)

Appendix B. For structures on or very near to property of a public use airport, a copy of the airport layout drawing (ALP) with the exact location of the structure which is the subject of this application indicated thereon. (*The ALP may be obtained from the Chairperson of the local airport board or the Kentucky Airport Zoning Commission.*)

Appendix C. Copies of Federal Aviation Administration Applications (*FFA Form 7460-1*) or any orders issued by the manager, Air Traffic Division, FAA regional office.

Appendix D. If the applicant has indicated in item number 7 of the application that the structure will not be marked or lighted in accordance with the regulations of the Commission, the applicant shall attach a written request for a determination by the commission that the marking and lighting are not necessary. The applicant shall specifically state the reasons that the absence of marking and lighting will not impair the safety of air navigation.

Appendix E. The overall height in feet of the overhead transmission line or static wire above ground level or mean water level with span length 1,000 feet and over shall be depicted on a blueprint profile map.

PENALTIES

1. Persons failing to comply with the Airport Zoning Commission statutes and regulations are liable for a fine or imprisonment as set forth in KRS 183.990(3).
2. Applicants are cautioned: Noncompliance with Federal Aviation Administration Regulations may provide for further penalties.



KENTUCKY TRANSPORTATION CABINET
KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) Vertical Bridge REIT, LLC		PHONE 561-406-4015	FAX	KY AERONAUTICAL STUDY #	
ADDRESS (street) 750 Park of Commerce Drive, Suite 200		CITY Boca Raton		STATE FL	ZIP 33487
APPLICANT'S REPRESENTATIVE (name) Gretchen Blanton		PHONE 704-472-0374	FAX		
ADDRESS (street) 750 Park of Commerce Drive, Suite 200		CITY Boca Raton		STATE FL	ZIP 33487
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start End	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank <input type="checkbox"/> Landfill <input type="checkbox"/> Other		MARKING/PAINTING/LIGHTING PREFERRED <input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other			
LATITUDE 37°00'38.44"		LONGITUDE - 87°45'45.87"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
NEAREST KENTUCKY City Princeton County Caldwell		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT 2M0 Princeton-Caldwell County			
SITE ELEVATION (AMSL, feet) 564		TOTAL STRUCTURE HEIGHT (AGL, feet) 300		CURRENT (FAA aeronautical study #) 2024-ASO-1768-OE	
OVERALL HEIGHT (site elevation plus total structure height, feet) 864				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 7.72 Nautical Miles				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) NW					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) See attached					
DESCRIPTION OF PROPOSAL 300' AGL Guyed Tower					
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					
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 Gretchen Blanton	TITLE Project Manager	SIGNATURE <i>Gretchen Blanton</i>		DATE 02/07/2024	
COMMISSION ACTION <input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC					
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved		SIGNATURE		DATE	

FAA 1-A SURVEY CERTIFICATION

Applicant: Verizon Wireless

Site Name: EV WALTONIA ROAD
Location Code: 492779
Site Location: Old Cobb Road, Princeton, KY 42445

Survey Type: GPS Survey
Horizontal Datum: NAD83
Vertical Datum: NAVD88
Benchmark: DK3316 KYTB CORS ARP

Structure Type: Proposed Tower

CENTER OF PROPOSED TOWER

		Decimal Degrees	Degrees Minutes Seconds
Latitude:	NORTH:	37.010678°	37° 00' 38.44"
Longitude:	WEST:	87.762742°	87° 45' 45.87"

ELEVATIONS:

Ground Elevation at Center 564.1 Feet AMSL (NAVD88)

CERTIFICATION

I certify that the coordinates specified above are accurate to within 20± feet horizontally and that the elevation(s) specified above are accurate to within 3± feet vertically. Horizontal Coordinates are in terms of the North American Datum of 1983 and are expressed as decimal degrees, to the nearest 10⁻⁶ degree (0.01 Seconds). Elevations are in terms of the North American Vertical Datum of 1988 (NAVD 88) and are determined to the nearest 0.1 foot. Horizontal Coordinates and Elevations established on site by means of a GPS survey.

Travis L. Shields
Kentucky P.L.S. #4246
5449 Highway #41, Jasper, TN 37347
(423) 304-6722



Date: October 03, 2022



DELTA OAKS GROUP

GEOTECHNICAL INVESTIGATION REPORT

January 11, 2024

Prepared For:

TeleCAD Wireless



**EV Waltonia Road
Princeton, KY**

Proposed 300-Foot Guyed Tower

Near KY-672 & 500 Old Cobb Road, Princeton (Caldwell County), Kentucky 42445
Latitude N 37.010678°, Longitude W 87.762742°

Delta Oaks Group Project GEO24-20639-08

Revision 0

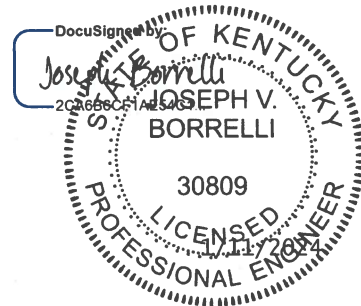
geotech@deltaoaksgroup.com

Performed By:

Sarah C. Russek, P.E.

Reviewed By:

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





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INTRODUCTION

This geotechnical investigation report has been completed for the proposed 300-foot, single ring, guyed tower located near KY-672 & 500 Old Cobb Road in Princeton (Caldwell County), Kentucky. The purpose of this investigation was to provide engineering recommendations and subsurface condition data at the proposed tower location. A geotechnical engineering interpretation of the collected information was completed and utilized to suggest design parameters regarding the adequacy of the structure's proposed foundation capacity under various loading conditions. This report provides the scope of the geotechnical investigation; geologic material identification; results of the geotechnical laboratory testing; and design parameter recommendations for use in the design of the telecommunication facility's foundation and site development.

SITE CONDITION SUMMARY

The proposed tower and compound are located on a partially wooded field exhibiting a gradually sloping topography across the tower compound and subject property. Generally, topography appears to slope downward away from the proposed tower center.

REFERENCES

- Construction Drawings, prepared by TeleCAD Wireless, dated October 24, 2022
- Project Information, provided by TeleCAD Wireless via email
- TIA Standard (TIA-222-G), dated August 2005

SUBSURFACE FIELD INVESTIGATION SUMMARY

The subsurface field investigation was conducted through the advancement of four mechanical soil test borings designated B-1 through B-4. B-1 and B-2 were advanced the auger refusal depths of 3.5 feet bgs and 3.3 feet bgs, respectively. B-3 and B-4 were advanced to the termination depth of 20.5 feet bgs. Samples were obtained at selected intervals in accordance with ASTM D 1586. The sampling was conducted at the staked centerline of the proposed tower mast and guy anchors with the exception of the northeast anchor location B-2. Boring B-2 was offset approximately 35 feet southwest from the anchor location. Sloped topography prevented the driller from leveling the drill rig at the northeast anchor location. Soil samples were transported to our laboratory and classified by a geotechnical engineer in accordance with ASTM D 2487. A detailed breakdown of the material encountered in our subsurface field investigation can be found in the boring logs presented in the Appendix of this report.

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



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SUBSURFACE CONDITION SUMMARY

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

FILL

Fill material was not encountered during the subsurface field investigation.

SOIL

The residual soil encountered in the subsurface field investigation began at the existing ground surface and consisted of lean clay and clayey/silty sand. The materials ranged from a very loose to medium dense relative density and a medium stiff to hard consistency.

Auger advancement refusal was encountered during the subsurface field investigation at borings B-1 and B-2 depths of 3.5 feet bgs and 3.3 feet bgs, respectively.

ROCK

Bedrock was not verified through coring; however, it is possible that auger refusal depth indicates the top of rock.

SUBSURFACE WATER

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

FROST PENETRATION

The frost penetration depth for Caldwell County, Kentucky is 20 inches (1.7 feet).

CORROSIVITY

Soil resistivity was performed in accordance with ASTM G187 with a test result of 5,950 ohms-cm.



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FOUNDATION DESIGN SUMMARY

In consideration of the provided tower parameters and the determined soil characteristics, Delta Oaks Group recommends utilizing a shallow foundation for the proposed tower mast structure and concrete blocks for the guy anchors. The strength parameters presented in the following sections can be utilized for design of the foundation.

GENERAL SUBSURFACE STRENGTH PARAMETERS

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-1	0.0 - 2.0	CL	120	0	1,100
	2.0 - 3.5	CL	130	0	4,000

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-2	0.0 - 3.3	CL	120	0	1,300

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-3	0.0 - 3.0	SC	90	28	0
	3.0 - 6.0	CL	115	0	700
	6.0 - 9.0	CL	120	0	1,100
	9.0 - 13.0	CL	130	0	4,000
	13.0 - 18.0	CL	120	0	1,000
	18.0 - 20.5	CL	115	0	700



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Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-4	0.0 - 3.0	CL	120	0	800
	3.0 - 6.0	SM	115	32	0
	6.0 - 8.0	CL	120	0	1,500
	8.0 - 13.0	CL	120	0	1,700
	13.0 - 18.0	CL	120	0	1,000
	18.0 - 20.5	CL	120	0	1,500

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



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SUBSURFACE STRENGTH PARAMETERS – SHALLOW FOUNDATION

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-1	5.0 x 5.0	3.0	27,630
		Greater than 4.0	30,000
	10.0 x 10.0	3.0	26,150
		Greater than 4.0	30,000
	15.0 x 15.0	3.0	25,660
		Greater than 4.0	30,000
	20.0 x 20.0	3.0	25,410
		Greater than 4.0	30,000
	25.0 x 25.0	3.0	25,260
		Greater than 4.0	30,000

- Delta Oaks Group recommends the foundation bear a minimum of 3.0 feet bgs.
- A sliding friction factor of 0.35 can be utilized along the base of the proposed foundation.
- Ultimate Passive Pressure Tables, for the tower mast and guy anchors, with a reduction due to frost penetration to a depth of 1.7 feet bgs is presented on the following pages.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.



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ULTIMATE PASSIVE PRESSURE VS. DEPTH - TOWER FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	120	0	1,100	0.00	1.00	1100.00
Bottom	1.7	120	0	1,100	204.00	1.00	1202.00
Top	1.7	120	0	1,100	204.00	1.00	2404.00
Bottom	2.0	120	0	1,100	240.00	1.00	2440.00
Top	2.0	130	0	4,000	240.00	1.00	8240.00
Bottom	3.5	130	0	4,000	435.00	1.00	8435.00

ULTIMATE PASSIVE PRESSURE VS. DEPTH - NORTHEASTERN GUY ANCHOR

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	120	0	1,300	0.00	1.00	1300.00
Bottom	1.7	120	0	1,300	204.00	1.00	1402.00
Top	1.7	120	0	1,300	204.00	1.00	2804.00
Bottom	3.3	120	0	1,300	396.00	1.00	2996.00



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ULTIMATE PASSIVE PRESSURE VS. DEPTH – SOUTHEASTERN GUY ANCHOR

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	90	28	0	0.00	2.77	0.00
Bottom	1.7	90	28	0	153.00	2.77	211.89
Top	1.7	90	28	0	153.00	2.77	423.78
Bottom	3.0	90	28	0	270.00	2.77	747.85
Top	3.0	115	0	700	270.00	1.00	1670.00
Bottom	6.0	115	0	700	615.00	1.00	2015.00
Top	6.0	120	0	1,100	615.00	1.00	2815.00
Bottom	9.0	120	0	1,100	975.00	1.00	3175.00
Top	9.0	130	0	4,000	975.00	1.00	8975.00
Bottom	10.0	130	0	4,000	1105.00	1.00	9105.00

ULTIMATE PASSIVE PRESSURE VS. DEPTH – NORTHWESTERN GUY ANCHOR

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	120	0	800	0.00	1.00	800.00
Bottom	1.7	120	0	800	204.00	1.00	902.00
Top	1.7	120	0	800	204.00	1.00	1804.00
Bottom	3.0	120	0	800	360.00	1.00	1960.00
Top	3.0	115	32	0	360.00	3.25	1171.65
Bottom	6.0	115	32	0	705.00	3.25	2294.48
Top	6.0	120	0	1,500	705.00	1.00	3705.00
Bottom	8.0	120	0	1,500	945.00	1.00	3945.00
Top	8.0	120	0	1,700	945.00	1.00	4345.00
Bottom	10.0	120	0	1,700	1185.00	1.00	4585.00



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CONSTRUCTION

SITE DEVELOPMENT

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

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

STRUCTURAL FILL PLACEMENT

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

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

SHALLOW FOUNDATIONS

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



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DRILLED SHAFT FOUNDATIONS

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

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

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

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



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QUALIFICATIONS

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

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

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

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



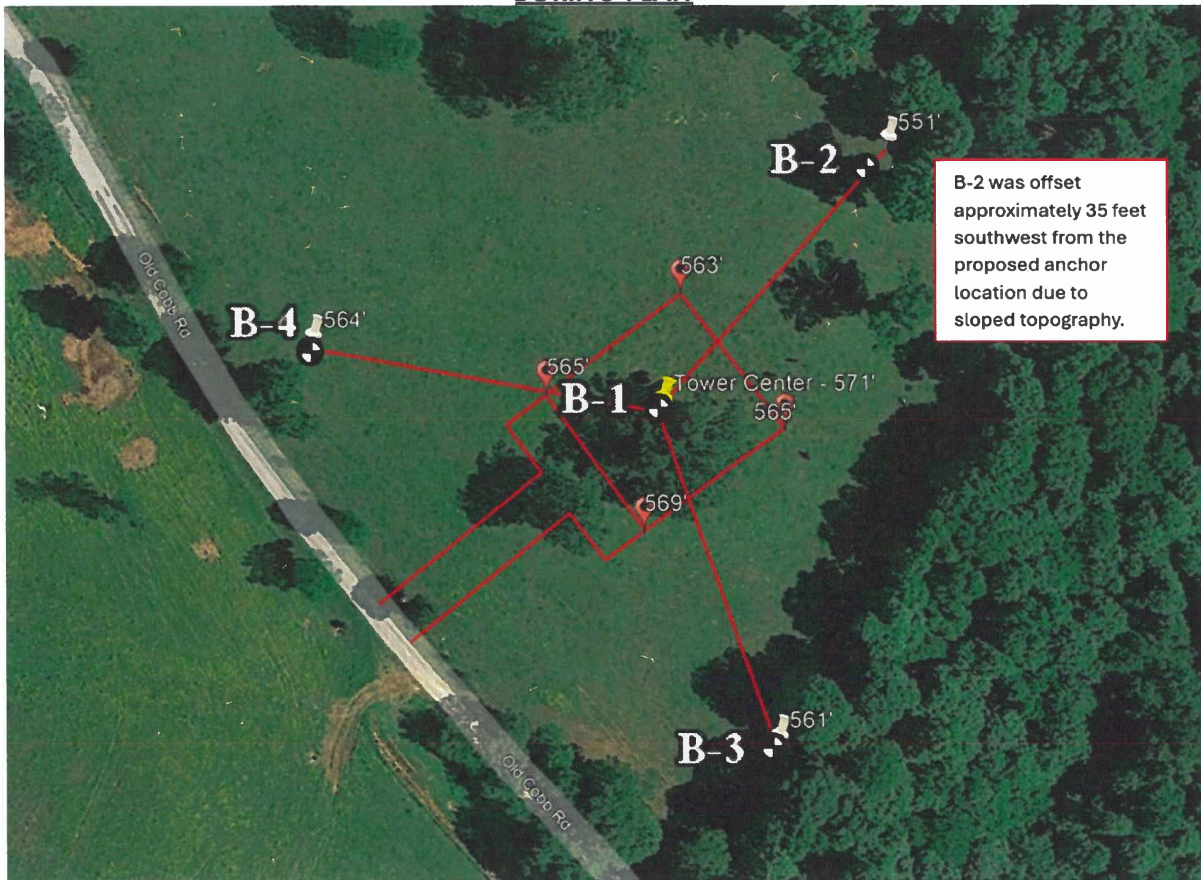
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APPENDIX



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BORING PLAN





PROJECT NAME EV Waltonia Road (Princeton, KY)

CLIENT TeleCAD Wireless

PROJECT NUMBER GEO24-20639-08

Boring No.: B-1

PROJECT LOCATION Princeton, KY

DATE DRILLED : 1/5/2024 DRILLING METHOD : Hollow Stem Auger GROUND ELEVATION : BORING DEPTH (ft) : 3.5		GROUND WATER LEVELS: ▽ AT TIME OF DRILLING : — Not encountered ▽ AT END OF DRILLING : — Not encountered ▽ AFTER DRILLING : — Not measured																
DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE	▲ SPT N VALUE ▲									
0									10	20	30	40	50	60	70	80	90	
	Red, orange, brown, hard, LEAN CLAY, with sand, trace silt, trace organics, trace gravel, trace mica, moist		CL		3	8	50/3"	100										▲
	Refusal at 3.5 feet. Bottom of borehole at 3.5 feet.																	
5																		
10																		
15																		
20																		



PROJECT NAME EV Waltonia Road (Princeton, KY)

CLIENT TeleCAD Wireless

PROJECT NUMBER GEO24-20639-08

Boring No.: B-4

PAGE 1 OF 1

PROJECT LOCATION Princeton, KY

DATE DRILLED : 1/5/2024		GROUND WATER LEVELS:							
DRILLING METHOD : Hollow Stem Auger		▽	AT TIME OF DRILLING : -- Not encountered						
GROUND ELEVATION :		▽	AT END OF DRILLING : -- Not encountered						
BORING DEPTH (ft) : 20.5		▽	AFTER DRILLING : -- Not measured						
DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE	▲ SPT N VALUE ▲
0									10 20 30 40 50 60 70 80 90
	Brown, orange, medium stiff, LEAN CLAY (CL), trace organics, trace gravel, moist		CL		2	3	5	8	▲
	Brown, medium dense, SILTY SAND (SM), with clay, dry		SM		8	9	8	17	▲
5									
	Red, orange, brown, stiff, LEAN CLAY (CL), with sand, with silt, trace gravel, moist		CL		8	8	7	15	▲
	-- very stiff				7	9	8	17	▲
10									
	-- stiff				5	5	5	10	▲
15									
					8	7	8	15	▲
20									
	Bottom of borehole at 20.5 feet.								

DIRECTIONS TO THE SITE

DIRECTIONS FROM CALDWELL COUNTY DISTRICT COURTHOUSE: HEAD NORTHWEST ON US-62 W / KY-139 / KY-293 / W MARKET ST TOWARD KY-293 / W COURT SQ (92 FT), TURN LEFT ONTO KY-293 / W COURT SQ, THEN IMMEDIATELY TURN LEFT ONTO US-62 E / KY-91 / KY-293 / W MAIN ST (0.2 MI), KEEP RIGHT TO STAY ON KY-91 / HOPKINSVILLE ST (9.3 MI), TURN RIGHT ONTO KY-672 / STATE ROUTE 672 (2.6 MI), TURN LEFT ONTO OLD COBB RD (0.2 MI), ARRIVE AT OLD COBB RD ON THE LEFT. THE LAST INTERSECTION BEFORE YOUR DESTINATION IS KY-672 / STATE ROUTE 672. IF YOU REACH HARDY MILL RD, YOU'VE GONE TOO FAR.

PREPARED BY: TELECAD WIRELESS 423-843-9500

LODGED FOR RECORD

AT 1:35 P M

JUL 21 2023

REG. FEE 58 TAX -
CALDWELL COUNTY, JENNIFER W. HALE, CLERK
BY D. Hughes D.C.

This Instrument prepared by and after recording return to:

Cellco Partnership d/b/a Verizon Wireless

c/o Coots Henke & Wheeler, P.C.

255 E. Carmel Drive

Carmel, IN 46032

Attn: Daniel E. Coots, Esq. D.E. Coots

VzW Site Name: EV Waltonia Road

Location Code: 492779

STATE OF KENTUCKY

COUNTY OF CALDWELL

MEMORANDUM OF LAND LEASE AGREEMENT

This Memorandum of Land Lease Agreement is made this 5th day of July, 2023, between **Margery Cortner**, a Kentucky resident having a mailing address of 514 Old Cobb Road, Princeton, KY 42445, hereinafter designated LESSOR, and **Cellco Partnership d/b/a Verizon Wireless**, with its principal offices at One Verizon Way, Mailstop 4AW100, Basking Ridge, NJ 07920, hereinafter designated LESSEE.

1. LESSOR and LESSEE entered into a certain Land Lease Agreement ("Lease") dated July 5, 2023. Such Lease has an initial term of five (5) years which shall be automatically extended for four (4) additional five (5) year terms, unless LESSEE terminates the Lease in accordance with the terms thereof.

2. In consideration of the rental set forth in the Lease, LESSOR hereby leases to LESSEE certain ground space area consisting of approximately 100' x 100', or 10,000 square feet, for the construction and maintenance of LESSEE's telecommunications facility upon that certain real estate located approximately at approximately 514 Old Cobb Road, Princeton, Kentucky 42445 (Caldwell County), with a legal description attached as Exhibit A ("Property"), together with the non-exclusive right for ingress and egress, access, and utility easements.

3. The term of the Lease shall commence the first (1st) day of the month after LESSEE begins construction of LESSEE's telecommunications facility. A copy of the Lease is on file in the office

MEMORANDUM OF LAND LEASE AGREEMENT CONTINUED

of the LESSOR and LESSEE.

4. The terms, covenants and provisions of the Lease of which this is a Memorandum, shall extend to and be binding upon the respective executors, administrators, heirs, successors and assigns of LESSOR and LESSEE, including but not limited to any rights of first refusal to purchase the Premises/Property during any given Term of the Lease.

5. The purpose of this Memorandum is to give record notice of the Lease and of the rights created thereby, all of which are hereby confirmed. In the event of a conflict between the terms of this Memorandum and the terms of the Lease, the terms of the Lease shall prevail.

[the remainder of this page is intentionally left blank]

MEMORANDUM OF LAND LEASE AGREEMENT CONTINUED

IN WITNESS WHEREOF, hereunto and to a duplicate hereof, LESSOR and LESSEE have caused this Memorandum to be duly executed on July 5, 2023.

LESSEE:

CELLCO PARTNERSHIP
d/b/a Verizon Wireless

By: [Signature]
Printed: Stan Wojciechowski
Title: Director Network Performance

Address: One Verizon Way, Mailstop 4AW100
Basking Ridge, NJ 07920

Date: 7/5/23

LESSEE NOTARY BLOCK:

STATE OF Michigan COUNTY OF Oakland

[The foregoing instrument was acknowledged before me this 5th day of July, 2023, by Stan Wojciechowski, Director Network Performance (Title) of Cellco Partnership d/b/a Verizon Wireless, who is personally known to me.

NOTARIAL SEAL

[Signature]
(OFFICIAL NOTARY SIGNATURE)
NOTARY PUBLIC—STATE OF Michigan
Barbara Madigan Evans
(NAME OF NOTARY)
COMMISSION NUMBER: _____

My commission expires: 5/10/2027

BARBARA MADIGAN EVANS
Notary Public, State of Michigan
County of Oakland
My Commission Expires 05-10-2027
Acting in the County of _____

MEMORANDUM OF LAND LEASE AGREEMENT CONTINUED

LESSOR:

Margery Cortner
Margery Cortner

Date: 12-28-22

LESSOR NOTARY BLOCK:

STATE OF Kentucky

COUNTY OF Lyon

The foregoing instrument was acknowledged before me this 28th day of December, 2022,
by Margery Cortner, who are personally known to me.

Deidra Neville Unsell
(OFFICIAL NOTARY SIGNATURE)
NOTARY PUBLIC—STATE OF Kentucky



Deidra Neville Unsell
(NAME OF NOTARY)
COMMISSION NUMBER: KYNP15208

“I, affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law.”

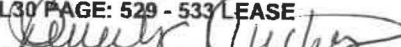
Jenny
Jennifer J. Conlon

EXHIBIT A
Legal Description

The following described property located in Caldwell County, Kentucky, to-wit:

Beginning at an iron set on the North East side of the intersection of KY - 126 and Old Cobb Road, being 30 feet Southwest of the center of KY. 126 and on the North side of and 15 feet from the center of Old Cobb Road; thence with the meanders of the Southeast side of KY. 126 N. 37 deg. 28 min. 00 sec. E. 257.82 ft., and N. 37 deg. 05 min. 29 sec. E. 800.82 ft. to an iron pin set on the Southeast side of and 30 feet from the center of KY. 126, corner to Cortner (d.b.197 p.247) ; thence with his line S. 45 deg. 20 min. 34 sec. E. 1058.82 ft. to an iron pin set corner to Smiley (d.b.199 p.183); thence with his lines S. 51 deg. 14 min. 35 sec. E. 577.47 ft. to an iron pin set, N. 55 deg. 37 min. 42 sec. E. 431.43 ft. to an iron pin set, and S. 53 deg. 10 min. 41 sec. E. 640.98 ft. to an iron pin set on the Northwest side of and 15 feet from the center of Old Cobb Road; thence with the meanders of the North and West side of Old Cobb Road S. 35 deg. 52 min. 37 sec. W., passing an iron pin set at 1000 feet, in all, 1397.81 ft. to a point, continuing with the road S. 35 deg. 18 min. 45 sec. W. 130.58 ft., S. 60 deg. 03 min. 51 sec. W. 26.87 ft., N. 72 deg. 02 min. 51 sec. W. 14.66 ft., N. 55 deg. 30 min. 59 sec. W. 45.66 ft., N. 42 deg. 06 min. 18 sec. W. 276.79 ft. to an iron pin set, N. 43 deg. 00 min. 08 sec. W. 269.52 ft., N. 39 deg. 48 min. 18 sec. W. 244.37 ft., N. 43 deg. 47 min. 12 sec. W. 77.65 ft., N. 42 deg. 22 min. 37 sec. W., passing an iron pin set at 408.57 ft., in all, 545.98 ft. to a point, continuing with the road N. 40 deg. 23 min. 14 sec. W. 140.94 ft., N. 36 deg. 48 min. 11 sec. W. 70.08 ft., N. 31 deg. 51 min. 02 sec. W, 78.42 ft., N. 29 deg. 00 min. 14 sec. W. 169.09 ft., N. 35 deg. 53 min. 10 sec. W. 95.91 ft., N. 63 deg. 46 min. 36 sec. W. 74.41 ft., N. 82 deg. 28 min. 19 sec. W. 116.67 ft., N. 79 deg. 52 min. 03 sec. W. 121.73 ft. to an iron pin set, and N. 74 deg. 25 min. 15 sec. W. 187.10 ft. to the beginning containing 60.82 acres, more or less, according to a survey by Billy J, May L.S. 878 of B.J. May Land Surveying, Inc., started on October 01, 2000. This is a survey of the Garland Wood Estate as recorded in deed book 94 at page 478. Plat recorded in Plat Cabinet 1 in sleeve 336.

AND BEING the same property conveyed to Jerry K. Cortner and Margery Cortner from Marcella W. Sanders, Rose W. Mitchell, Nancy W. Cates, Mari Anna W. Welch and Bobby G. Wood and Patsy M. Wood by Deed of Conveyance dated December 15, 2000 and recorded December 20, 2000 in Deed Book D226, Page 732; said Jerry Kent Cortner having departed this earth on or about December 6, 2016 leaving Margery Cortner his/her Surviving tenant by the entirety. Tax Parcel No. 94-13F

DOCUMENT NO: 242310
RECORDED ON: 7/21/2023 1:35:00 PM
COUNTY CLERK: JENNIFER WATSON HALE
COUNTY: CALDWELL COUNTY
BOOK: 130 PAGE: 529 - 533 LEASE
Signed: 

Notification Listing with PVA Screenshots

Parcel 94-13F
 CORTNER JERRY K & MARGERY
 514 OLD COBB ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA

Elizabeth Williams Search search_

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-13F
 Account Number 100132 (PID: 224416 PTID: 100132)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 60.82 ACRES (FARM #2 TRACT 6)
 Acres N/A
 Deed Information 226/732

[View Map](#)

Owner Information

Current Owner
 CORTNER JERRY K & MARGERY
 514 OLD COBB ROAD
 PRINCETON KY 42445

Valuation

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
12/01/2000	\$48,500			WOOD GARLAND EST	

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-13A
 CORTNER JERRY
 514 OLD COBB ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA

Elizabeth Williams Search search_

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-13A
 Account Number 100140 (PID: 224422 PTID: 100140)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 53 ACRES HWY 672
 Acres N/A
 Deed Information 197/247

[View Map](#)

Owner Information

Current Owner
 CORTNER JERRY
 514 OLD COBB ROAD
 PRINCETON KY 42445

Valuation

Recent Sales In Area

Sale date range:
 From: 02/07/2021 To: 02/07/2024

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-13
 SMILEY MICHAEL DAREN
 3085 HARDY MILL ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search...

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-13
 Account Number 107823 (PID: 222343 PTID: 107823)
 Location Address HARDY MILL ROAD
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 59.5 ACRES & BARN
 Acres N/A
 Deed Information 282/43

[View Map](#)

Owner Information

Current Owner
 SMILEY MICHAEL DAREN
 3085 HARDY MILL ROAD
 PRINCETON KY 42445

Valuation

Photos/Sketches

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-14 104-4
 CORTNER JERRY
 514 OLD COBB ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search...

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-14 104-4
 Account Number 104904 (PID: 228060 PTID: 104904)
 Location Address 514 OLD COBB ROAD
 Tax District 00 Caldwell County
 Homestead Yes
 Tax Rate 0.817
 Property Class FARM
 Description HOUSE & 83 ACRES
 Acres N/A
 Deed Information 138/164

[View Map](#)

Owner Information

Current Owner
 CORTNER JERRY
 514 OLD COBB ROAD
 PRINCETON KY 42445

Land Information

Lot Size	Lot Frontage	Lot Depth	Acres	Street Type	Driveway	Neighborhood Type	Site Condition	Land Value
				SECONDARY	GRAVEL			

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-11 & 103-18
 CORTNER KENNETH R & MABETH
 3450 CADIZ ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search_

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-11 & 103-18
 Account Number 100172 (PID: 224444 PTID: 100172)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 323 ACRES HIGHWAY 672
 Acres N/A
 Deed Information 243/221

[View Map](#)

Owner Information


Current Owner
 CORTNER KENNETH R & MABETH
 3450 CADIZ ROAD
 PRINCETON KY 42445

Valuation

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
10/01/2003	\$227,600			CORTNER PAULINE	

Information



Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation
 Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-11 & 103-18
 CORTNER KENNETH R & MABETH
 3450 CADIZ ROAD
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search_

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-11 & 103-18
 Account Number 100172 (PID: 224444 PTID: 100172)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 323 ACRES HIGHWAY 672
 Acres N/A
 Deed Information 243/221

[View Map](#)

Owner Information


Current Owner
 CORTNER KENNETH R & MABETH
 3450 CADIZ ROAD
 PRINCETON KY 42445

Valuation

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
10/01/2003	\$227,600			CORTNER PAULINE	

Information



Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation
 Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-12 & 131
 CATES NANCY WOOD MRS
 724 AGATHON DRIVE
 EVANSVILLE IN 47712

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search...

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-12 & 131
 Account Number 104486 (PID: 227738 PTID: 104486)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 100.60 ACRES (FARM #2 TRACT 1 & 3)
 Acres N/A
 Deed Information 337L/E/210

[View Map](#)

Owner Information

Current Owner
 CATES NANCY WOOD MRS
 724 AGATHON DRIVE
 EVANSVILLE IN 47712

Valuation

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
09/02/2021	\$521,080	337L/E	210	CATES NANCY WOOD	

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-13D
 STEWART JOHNATHON
 12492 HWY 672
 PRINCETON KY 42445

qPublic.net Caldwell County, KY PVA Elizabeth Williams Search search...

Layers Map Search Results **Report** Sales Search Sales List Sales Results Tax Estimator Home

Parcel Summary

Map Number 94-13D
 Account Number 100637 (PID: 224806 PTID: 100637)
 Location Address 12492 HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class RESIDENTIAL
 Description HOUSE & 4.63 ACRES
 Acres 4.63
 Deed Information 341/458

[View Map](#)

Owner Information

Current Owner
 STEWART JOHNATHON
 12492 HWY 672
 PRINCETON KY 42445

Land Information

Lot Size	Lot Frontage	Lot Depth	Acreage	Street Type	Driveway	Neighborhood Type	Site Condition	Land Value
			4.63	2 LANE	GRAVEL	TYPICAL	AVERAGE	

Valuation

Residential Improvement Information

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
07/01/2022		341	458	HAMBY DARRELL W	

Information

Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation Administrator
 Ronald D. Wood
 270-365-7227

Announcements

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Parcel 94-12 &13I
 CATES NANCY WOOD MRS
 724 AGATHON DRIVE
 EVANSVILLE IN 47712

Parcel Summary

Map Number 94-12 & 13I
 Account Number 104486 (PID: 227738 PTID: 104486)
 Location Address HWY 672
 Tax District 00 Caldwell County
 Homestead No
 Tax Rate 0.817
 Property Class FARM
 Description 100.60 ACRES (FARM #2 TRACT 1 & 3)
 Acres N/A
 Deed Information 337L/E/210

[View Map](#)

Owner Information

Current Owner
 CATES NANCY WOOD MRS
 724 AGATHON DRIVE
 EVANSVILLE IN 47712

Valuation

Sales Information

Sale Date	Sale Price	Deed Book	Deed Page	Previous Owner	Sale Type
09/02/2021	\$521,080	337L/E	210	CATES NANCY WOOD	



Information



Caldwell County, KY
 100 East Market Room #28
 Princeton, Kentucky 42445

Property Valuation
 Administrator
[Ronald D. Wood](#)
 270-365-7227

Announcements

[How to use the Beacon site - view Demo Videos](#)



Russell L. Brown
Attorney at Law
rbrown@clarkquinnlaw.com

320 N. Meridian St., Ste. 1100
Indianapolis, IN 46204
(317) 637-1321 main
(317) 687-2344 fax

February 8, 2024

**Notice of Proposed Construction of
Wireless Communications Facility
Site Name: Waltonia Road**

Cellco Partnership, d/b/a Verizon Wireless and and VB BTS II, LLC / Vertical Bridge are filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on the northeast side of Old Cobb Road, southeast of the intersection of Old Cobb Road and KY-672, Princeton, KY 42445. (North Latitude: (37° 00' 38.44", West Longitude 87° 45' 45.87"). The proposed facility will include a 300-foot tall antenna tower, plus a 10-foot lightning arrestor and related ground facilities. Site name is Waltonia Road. This facility is needed to provide improved coverage for wireless communications in the area.

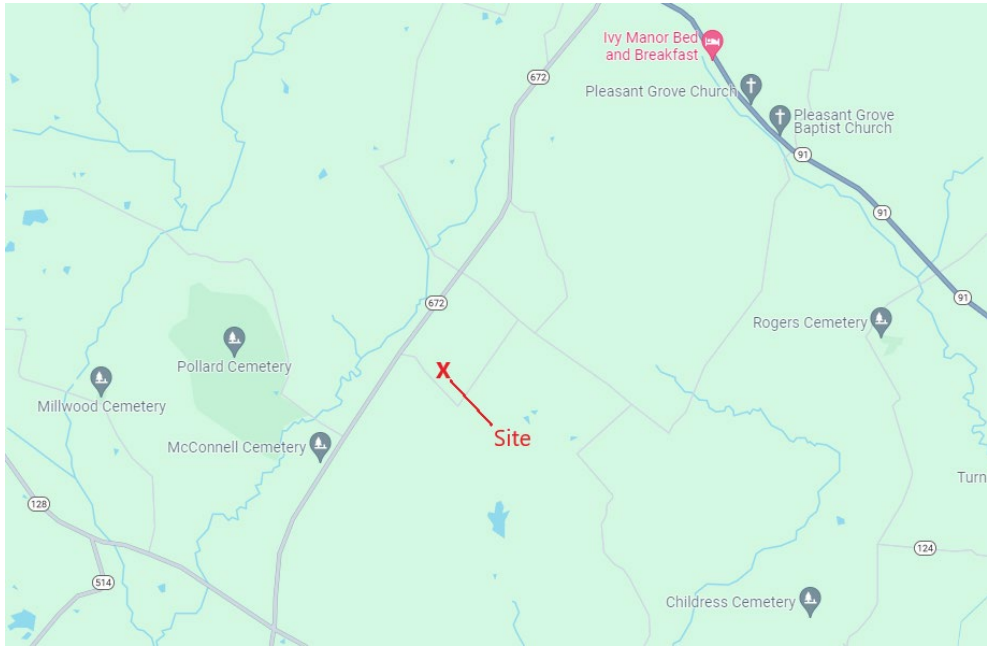
This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the 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 2024-00023 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. Applicant's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us at 317-637-1321 if you have any comments or questions about this proposal.

Sincerely,
Russell L. Brown

Attorney for Applicant
RLB/mnw
enclosure

Location Map



ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP

CERTIFIED MAIL



9589 0710 5270 1623 2622 23

CORTNER JERRY K & MARGERY
514 OLD COBB ROAD
PRINCETON KY 42445

FIRST-CLASS



US POSTAGE^{IMPITNEY BOWES}



ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP

CERTIFIED MAIL



9589 0710 5270 1623 2622 30

CORTNER JERRY
514 OLD COBB ROAD
PRINCETON KY 42445

FIRST-CLASS



US POSTAGE^{IMPITNEY BOWES}



ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP

CERTIFIED MAIL



9589 0710 5270 1623 2622 47

SMILEY MICHAEL DAREN
3085 HARDY MILL ROAD
PRINCETON KY 42445

FIRST-CLASS



US POSTAGE^{IMPITNEY BOWES}



ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP



9589 0710 5270 1623 2622 54

CORTNER KENNETH R & MABETH
3450 CADIZ ROAD
PRINCETON KY 42445

CERTIFIED MAIL

ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP



9589 0710 5270 1623 2621 93

CATES NANCY WOOD MRS
724 AGATHON DRIVE
EVANSVILLE IN 47712

CERTIFIED MAIL

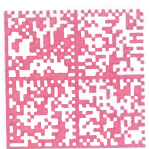
ClarkQuinn
Clark, Quinn, Moses, Scott & Grahn, LLP



9589 0710 5270 1623 2622 09

STEWART JOHNATHON
12492 HWY 672
PRINCETON KY 42445

FIRST-CLASS



US POSTAGETMPITNEY BOWES
ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

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02 7H
0006035028 FEB 08 2024

FIRST-CLASS



US POSTAGETMPITNEY BOWES
ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CATES NANCY WOOD MRS
 724 AGATHON DRIVE
 EVANSVILLE IN 47712



9590 9402 8463 3186 7610 78

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2621 93

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Carla Cushman*

- Agent
- Addressee

B. Received by (Printed Name)

Carla Cushman

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CORTNER KENNETH R & MABETH
 3450 CADIZ ROAD
 PRINCETON KY 42445



9590 9402 8463 3186 7610 85

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 54

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Kent Cortner*

- Agent
- Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CORTNER JERRY K & MARGERY
514 OLD COBB ROAD
PRINCETON KY 42445



9590 9402 8463 3186 7611 15

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 23

PS Form 3811, July 2020 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Margie Cortner* Agent
 Addressee

B. Received by (Printed Name)

MARGIE CORTNER Agent
 Addressee

C. Date of Delivery

7/12/24

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Mail Restricted Delivery (00)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CORTNER JERRY
514 OLD COBB ROAD
PRINCETON KY 42445



9590 9402 8463 3186 7611 08

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 30

PS Form 3811, July 2020 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Margie Cortner* Agent
 Addressee

B. Received by (Printed Name)

MARGIE CORTNER Agent
 Addressee

C. Date of Delivery

7/12/24

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SMILEY MICHAEL DAREN
3085 HARDY MILL ROAD
PRINCETON KY 42445



9590 9402 8463 3186 7610 92

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 47

PS Form 3811, July 2020 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Daren Smiley* Agent
 Addressee

B. Received by (Printed Name)

DAREN SMILEY Agent
 Addressee

C. Date of Delivery

7/21/24

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Mail Restricted Delivery (00)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

STEWART JOHNATHON
12492 HWY 672
PRINCETON KY 42445



9590 9402 8463 3186 7610 61

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 09

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *John Stewart*

- Agent
- Addressee

B. Received by (Printed Name)

John Stewart

C. Date of Delivery

02/23/24

D. Is delivery address different from item 1? If YES, enter delivery address below:

- Yes
- No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Mail Restricted Delivery
00)

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt



ClarkQuinn

www.clarkquinnlaw.com

Russell L. Brown
Attorney at Law
rbrown@clarkquinnlaw.com

320 N. Meridian St., Ste. 1100
Indianapolis, IN 46204
(317) 637-1321 main
(317) 687-2344 fax

February 8, 2024

Via Certified Mail, Return Receipt Requested
9589 0710 5270 1623 2622 16

William D. Young, Judge Executive
Caldwell County Courthouse
100 East Market Street, Room #27
Princeton, KY 42445

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2024-00023
Site Name: Waltonia Road

Dear Judge Young:

Cellco Partnership, d/b/a Verizon Wireless and VB BTS II, LLC / Vertical Bridge are filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on the northeast side of Old Cobb Road, southeast of the intersection of Old Cobb Road and KY-672, Princeton, KY 42445. (North Latitude: (37° 00' 38.44", West Longitude 87° 45' 45.87"). The proposed facility will include a 300-foot tall antenna tower, plus a 10-foot lightning arrestor and related ground facilities. Site name is Waltonia Road. This facility is needed to provide improved coverage for wireless communications in the area

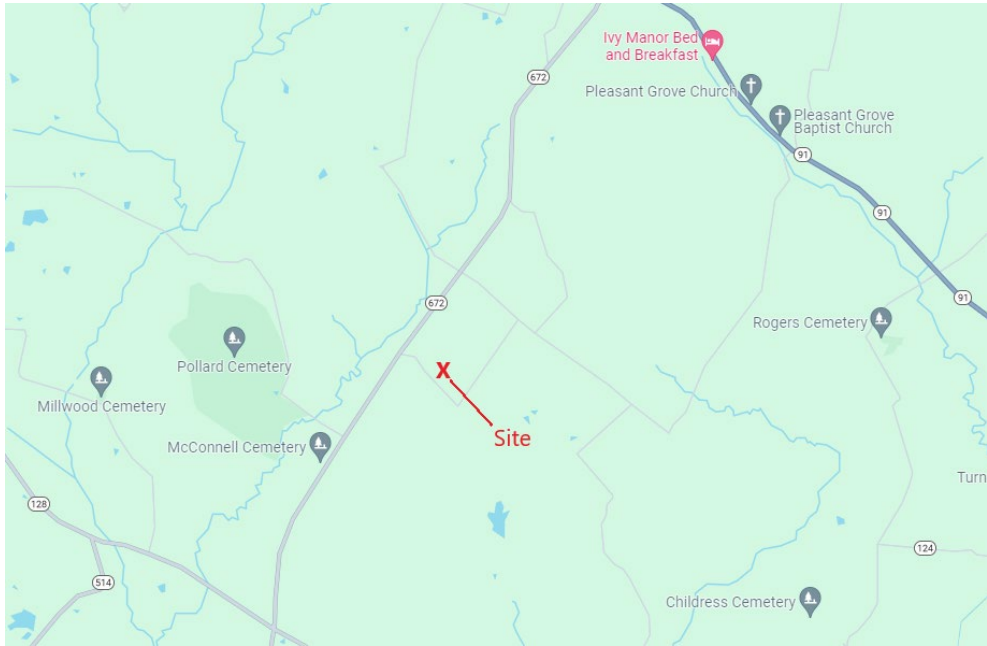
You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2024-00023 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. Verizon Wireless' 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,
Russell L. Brown

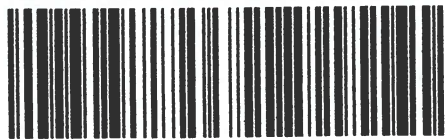
Attorney for Applicant
RLB/mnw
Enclosures

Location Map



CERTIFIED MAIL

ClarkQuinn
ark, Quinn, Moses, Scott & Grahn, LLP



9589 0710 5270 1623 2622 16

FIRST-CLASS



US POSTAGETM PITNEY BOWES



ZIP 46204 \$ 008.69⁰
02 7H
0006035028 FEB 08 2024

William D. Young, Judge Executive
Caldwell County Courthouse
100 East Market Street, Room #27
Princeton, KY 42445

SENDER: COMPLETE THIS SECTION

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

William D. Young, Judge Executive
 Caldwell County Courthouse
 100 East Market Street, Room #27
 Princeton, KY 42445



9590 9402 8463 3186 7611 22

2. Article Number (Transfer from service label)

9589 0710 5270 1623 2622 16

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Handwritten Signature] Agent
 Add

B. Received by (Printed Name)

[Handwritten Name]

C. Date

D. Is delivery address different from
If YES, enter delivery address below:

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt

SITE NAME: Waltonia Road NOTICE SIGNS

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

Cellco Partnership, d/b/a Verizon Wireless and Vertical Bridge propose to construct a telecommunications **tower** on this site. If you have questions, please contact Clark, Quinn, Moses, Scott & Grahn, LLP, 320 N. Meridian Street, Indianapolis, IN 46204; 317-637-1321, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2024-00023 in your correspondence.

Cellco Partnership, d/b/a Verizon Wireless and Vertical Bridge propose to construct a telecommunications **tower** on this site. If you have questions, please contact Clark, Quinn, Moses, Scott & Grahn, LLP, 320 N. Meridian Street, Indianapolis, IN 46204; 317-637-1321, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2024-00023 in your correspondence.



Robert B. Scott
Charles R. Grahn
Frank D. Otte*
John "Bart" Herriman
William W. Gooden**
Michael P. Maxwell
Russell L. Brown**†
Jennifer F. Perry
Keith L. Beall
N. Davey Neal
Travis W. Cohron
Maggie L. Sadler
Kristin A. McIlwain
Olivia A. Hess

VIA EMAIL: ggilbert@tribunecourier.com

Tribune Courier
86 Commerce Blvd.
Benton, KY 42025

Land Use Consultant
Elizabeth Bentz Williams, AICP

*Also admitted in Montana
†Also admitted in Kentucky
**

Registered Civil Mediator

RE: Legal Notice Advertisement
Site Name: Waltonia Road

To Whom It May Concern,

Please publish the following legal notice advertisement in the next available edition of the publication serving Caldwell County, Princeton, Kentucky:

NOTICE

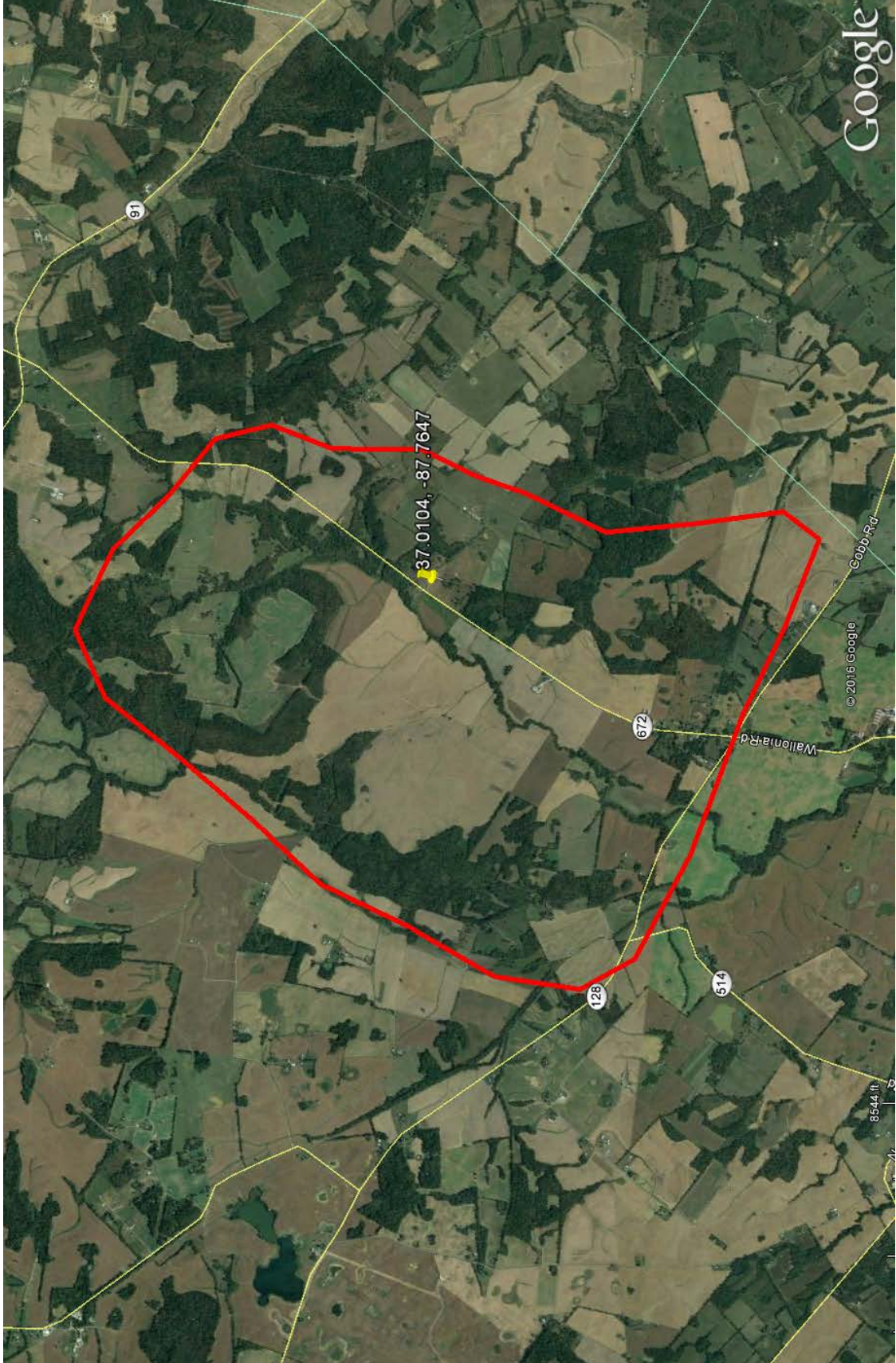
Cellco Partnership, d/b/a Verizon Wireless and and VB BTS II, LLC / Vertical Bridge are filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on the northeast side of Old Cobb Road, southeast of the intersection of Old Cobb Road and KY-672, Princeton, KY 42445. (North Latitude: (37° 00' 38.44", West Longitude 87° 45' 45.87"). The proposed facility will include a 300-foot tall antenna tower, plus a 10-foot lightning arrestor and related ground facilities. Site name is Waltonia Road. 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 2024-00023 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 Clark, Quinn, Moses, Scott & Grahn, LLC, 320 N. Meridian Street, Indianapolis, IN 46204 or by email to ebw@clarkquinnlaw.com. Please call me on my cell with any questions at 317-902-2187 if you have any questions. Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads 'Elizabeth Bentz Williams'.

Elizabeth Bentz Williams, AICP



EV Waltonia Road – New Build SARF Map



January, 30th, 2024

RE: Proposed Cellco Partnership d/b/a Verizon Wireless Communications Facility

Site Name: EV Waltonia Rd

Type of Tower: 300 ft. Self-Support

Location: 514 Old Cobb Road, Princeton, KY 42445 Caldwell County

To Whom It May Concern:

As a radio frequency engineer for Verizon Wireless, I am providing this letter to state the need for a Verizon Wireless site called, EV Waltonia Rd.

The EV Waltonia Rd site is proposed with the below objectives:

1. To improve cellular service for the residents and businesses in South/Southeast Caldwell County. Also traveling along KY-672 & KY-91.
2. To offload existing traffic of existing Verizon sites in this area.

Currently the area is experiencing poor service along KY-672, KY-91, and in the residential areas in South/Southeast Caldwell County. There is high demand for wireless high-speed data in these locations. This tower is needed to provide Verizon customers in the area with the best experience on their wireless devices.

Raw Land – Design plans for a new tower would provide an overall tower height of 300 feet with a Verizon Wireless Centerline of 285'. The new structure height was decided upon to best cover KY-672, KY-91, the residents in the area, and to offload traffic from the nearby existing Verizon sites. If we are limited to building a structure less than the proposed height, another tower would be needed in the vicinity in the near future. In addition, building a structure that is too short can cause existing taller sites to cover over the proposed site and building a site that is too tall can cause the proposed site to shoot over existing sites. Both situations create a poor experience from a user perspective. The new structure is proposed to be placed near the center of the problem area. The new tower design solves the stated objectives.

Verizon Wireless cares about the communities as well as the environment and prefers to collocate on existing structures when available. Verizon Wireless is currently collocated on many structures in the County. We prefer collocation due to reduced construction costs, faster deployment, and environment protection. However, Verizon Wireless was unable to find a suitable structure within the center of the demand area to collocate the proposed site on.



Verizon Wireless design engineers establish search area criteria in order to effectively meet coverage objectives as well as offload existing Verizon cell sites. When met, the criterion also reduces the need for a new site to cover the area in the immediate future. Each cellular site covers a limited area, depending on site configuration and the surrounding terrain. Cell sites are built in an interconnected network; which means each cell site must be located so that their respective coverage areas are contiguous. This provides uninterrupted communications throughout the coverage area.

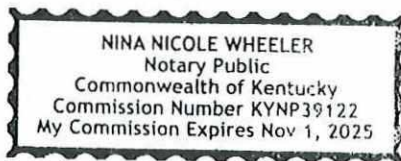
Since collocation is generally the most cost-effective means for prompt deployment of new facilities, Verizon Wireless makes every effort to investigate the feasibility for using existing towers or other tall structures for collocation when designing a new site or system expansion. However, collocation on an existing tower or tall structure is not always feasible due to location of existing cell sites. Cell sites are placed in a way so they provide a smooth hand off to each other and are placed at some distance from each other to eliminate too much overlap. Too much overlap may result in a waste of resources and raise a system capacity overload concern.

This cell site has been designed, and shall be constructed and operated in a manner that satisfies regulations and requirements of all applicable governmental agencies that have been charged with regulating tower specifications, operation, construction, and placement, including the FAA and FCC.

Sincerely,

Steven Belcher
RF Engineer
Verizon Wireless

1/30/24
Nina Nicole Wheeler
notary public





January, 30th, 2024

RE: Zoning Coverage Plots

Site Name: EV Waltonia Rd

To Whom It May Concern:

This map is not a guarantee of coverage and may contain areas with no service. This map reflects a depiction of predicted and approximate wireless coverage of the network and is intended to provide a relative comparison of coverage. The depictions of coverage do not guarantee service availability as there are many factors that can influence coverage and service availability. These factors vary from location to location and change over time. The coverage areas may include locations with limited or no coverage. Even within a coverage area shown, there are many factors, including but not limited to, usage volumes, outage, customer's equipment, terrain, proximity to buildings, foliage, and weather that may impact service.

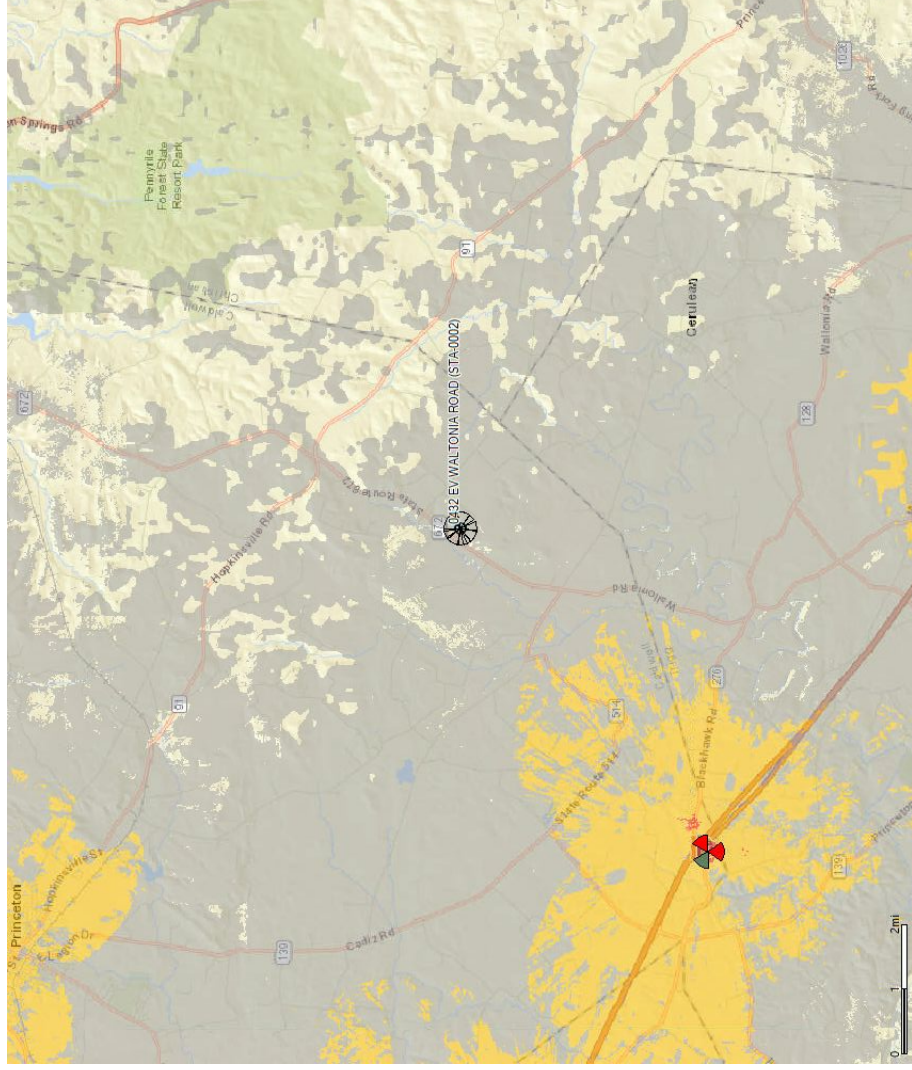
The proposed site is needed to offload capacity from existing sites and to improve coverage in the area. This map reflects the predicted coverage area that will be offloaded from existing sites and transferred to the proposed site and also depicts improved coverage in the area.

Sincerely,

A handwritten signature in black ink, appearing to read "Jared A. Sharp", written over a horizontal line. The signature is stylized and somewhat messy.

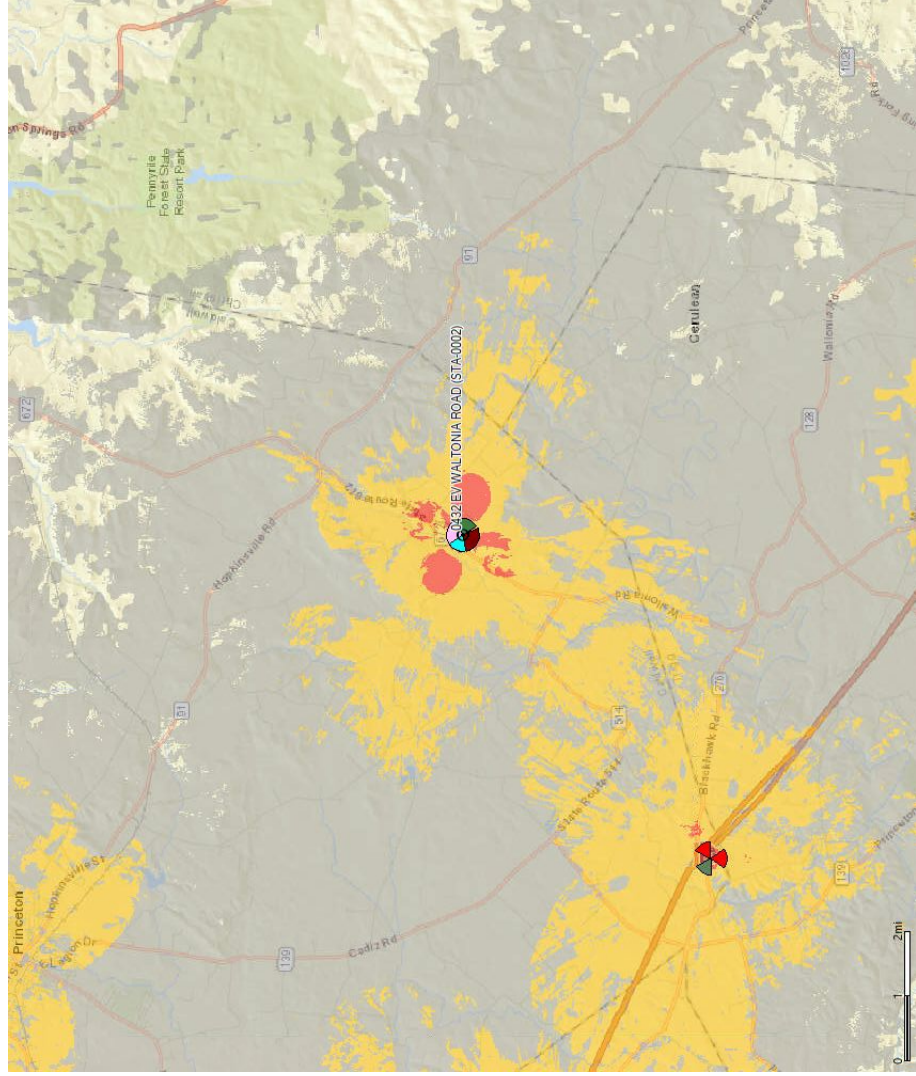
Jared A. Sharp
RF Engineer III
Verizon Wireless

Current Coverage - Without Proposed EV Waltonia Rd



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Coverage - With Proposed EV Waltonia Rd



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

Exhibit S
List of Qualified Professionals

Travis L. Fields
Professional Land Surveyor
Kentucky License 4246
The Land Consultants
5449 Highway #41
Jasper, TN 37347

Stephen E. Hunt
Professional Engineer
Kentucky License 25003
Telecad Wireless
1961 Northpoint Blvd., Suite 130
Hixson, TN 37343

Kirk R. Hall
Professional Engineer
Kentucky License 25154
World Tower Company
1213 Compressor Drive
P.O. Box 508
Mayfield, KY 42066

Joseph V. Borrelli
Professional Engineer
Kentucky License 30809
Delta Oaks Group
4904 Professional Court, Second Floor
Raleigh, NC 27609

Billy Waldrige Jr.
Construction Manager
Verizon Wireless
2421 Holloway Road
Louisville, KY 40299

Steven Beltcher
RF Engineer
Verizon Wireless
2421 Holloway Road
Louisville, KY 40299

Jared A. Sharp
RF Engineer
Verizon Wireless
2421 Holloway Road
Louisville, KY 40299

