



RECEIVED

AUG 04 2008

PUBLIC SERVICE
COMMISSION

July 30, 2008

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

RE: KY-00-0816A STUMPS RUN

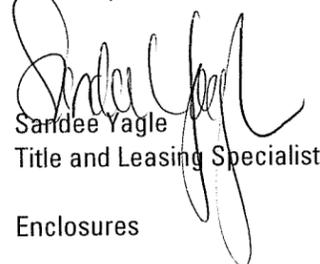
2008-262

Dear Public Service Commission;

Please accept the attached application for a Certificate of Public Convenience and Necessity for a cellular communications tower at 220 Kees Branch, Grayson, KY 41143

Please find enclosed, one(1) original and five (5) copies of the entire application. Should you have any questions, please feel free to contact me at (231) 929-4555, ext. 28 or via email at syagle@cellere.us.

Sincerely,



Sandee Yagle
Title and Leasing Specialist

Enclosures

KY-00-0816A STUMPS RUN

TEL 231.929.4555
FAX 231.929.0099
WWW cellere.us
info@cellere.us
4110 Copper Ridge Drive, Suite 204, Traverse City, MI 49684

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Application of Central States Tower Holdings, LLC for Issuance
of a Certificate of Public Convenience and Necessity to Construct
a Cell Site (KY-00-0816A STUMPS RUN) in Grayson, Kentucky

Case No. 2008-00262
FILED

AUG 04 2008

PUBLIC SERVICE
COMMISSION

APPLICATION FOR A CERTIFICATE OF
PUBLIC CONVENIENCE AND NECESSITY

Cellere, LLC ("Cellere") as agent for Central States Tower Holdings, LLC ("Central States"), pursuant to KRS 278.020 and 278.040, hereby submits this application for a certificate of public convenience and necessity to construct a cell site to be known as the KY-00-0816A STUMPS RUN ("STUMPS RUN") cell site in Grayson, Kentucky, namely the county of Carter, Kentucky.

1. As required by 807 KAR 5:001 Sections 8(1) and (3), and 807 KAR 5:063, Cellere states that it is a Michigan limited liability company who is acting as agent for Central States Tower Holdings, LLC, who is a Delaware limited liability company and whose full name and address are: Cellere, LLC, 4110 Copper Ridge Drive, Suite 204, Traverse City, Michigan 49684. Central States Tower Holdings, LLC, whose address is: 323 S. Hale Street, Suite #100, Wheaton, IL 60187.
2. Pursuant to 807 KAR §1(1)(b), a copy of the applicant's applications to and approval from the Federal Aviation Administration and Kentucky Airport Zoning Commission are submitted as Exhibit "A".
3. Pursuant to 807 KAR 5:063 § 1(1)(d), applicant is submitting as Exhibit "B", a geotechnical investigation report, signed and sealed by a professional engineer registered in Kentucky, that includes boring logs and foundation design recommendations; and as Exhibit "E", a map that outlines the finding as to the susceptibility of the area surrounding the proposed site to flood hazard.
4. Pursuant to 807 KAR 5:063 § 1(1)(e), clear directions from the county seat to the proposed site, including highway numbers and street names, if applicable, with the telephone number of the person who prepared the directions are submitted as Exhibit "C".
5. Pursuant to 807 KAR § 1(1)(f), a copy of the lease for the property on which the cell tower is proposed to be located is submitted as Exhibit "D".

6. Pursuant to 807 KAR § 1(1)(g), experienced personnel will manage and operate the STUMPS RUN cell site. The Vice President of Construction for Cellere, LLC., Chuck Norris, is ultimately responsible for all construction of the cell tower. Mr. Norris has over 15 years of experience. Arthur J. Krueger, Licensed Professional Engineer of Wilcox Professional Services, is responsible for the design specifications of the proposed tower (identified in Exhibit "B"). S.M. Naeem Akhter, Licensed Professional Engineer of Glenmartin, is responsible for the foundation design of the proposed tower (identified in Exhibit "B"). Central States Tower Holdings, LLC, is responsible for the operations of the tower, once constructed. Central States operates cellular communications towers in 19 states with the principals having 35+ years of experience.

7. Pursuant to 807 KAR 5:063 § 1(1)(h), a site development plan or survey, signed and sealed by a professional engineer registered in Kentucky, that shows the proposed location of the tower and all easements and existing structures within 500 feet of the proposed site on the property on which the tower will be located, and all easements and existing structures within 200 feet of the access drive, including the intersection with the public street system, is submitted as Exhibit "E"

8. Pursuant to 807 KAR 5:063 § 1(1)(i), a vertical profile sketch of the tower, signed and sealed by a professional engineer registered in Kentucky, indicating the height of the tower and the placement of all antennae is submitted as Exhibit "B".

9. Pursuant to 807 KAR 5:063 § 1(1)(j), the tower and foundation design plans and a description of the standard according to which the tower was designed, signed and sealed by a professional engineer registered in Kentucky, is submitted as Exhibit "B".

10. Pursuant to 807 KAR 5:063 § 1(1)(k), a map, drawn to a scale no less than one (1) inch equals 200 feet, that identifies every structure and every owner of real estate within 500 feet of the proposed tower, is submitted as Exhibit "E".

11. Pursuant to 807 KAR 5:063 § 1(1)(l), applicant hereby affirms that every person who owns property within 500 feet of the proposed tower has been: (i) notified by certified mail, return receipt requested, of the proposed construction, (ii) given the commission docket number under which the applications will be processed; and (iii) informed of his or her right to request intervention.

12. Pursuant to KRS 278.665 (2), applicant hereby affirms that every person who, according to the records of the property valuation administrator, owns property contiguous to the property where the proposed cellular tower will be located has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of his or her right to request intervention.

13. Pursuant to 807 KAR 5:063 § 1(1)(m), a list of the property owners who received the notice together with copies of the certified letters sent to listed property owners, is submitted as Exhibit "F".

14. Pursuant to 807 KAR 5:063 § 1(1)(n), applicant hereby affirms that the Office of Carter County Judge Executive has been: (i) notified by certified mail , return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of its right to request intervention.

15. Pursuant to 807 KAR 5:063 § 1(1)(o), a copy of the notice send to the Carter County Judge Executive is submitted as Exhibit "G".

16. Pursuant to 807 KAR 5:063 § 1(1)(p), applicant hereby affirms that (i) two written notices meeting subsection two (2) of this section have been posted, one in a visible location on the proposed site and one on the nearest public road; and (ii) the notices shall remain posted for at least two weeks after the application has been filed.

17. Pursuant to 807 KAR 5:063 § 1(2)(a), applicant affirms that:

(a) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "Central States Tower Holdings, LLC proposes to construct a telecommunications tower on this site", including the addresses and telephone numbers of the applicant and the Kentucky Public Service Commission, has been posted and shall remain in a visible location on the proposed site until final disposition of the application; and

(b) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "Central States Tower Holdings, LLC, proposes to construct a telecommunications tower near this site", including the addresses and telephone numbers of the applicant and the Kentucky Public Service Commission, has been posted on the public road nearest the site.

A Copy of each sign is attached as Exhibit "H".

18. Pursuant to 807 KAR 5:063 § 1(1)(q), a statement that notice of the location of the proposed construction has been published in a newspaper of general circulation in the county in which the construction is proposed, a copy of which is submitted as Exhibit "I".

19. Pursuant to 807 KAR 5:063 § 1(1)(r), the cell site, which has been selected, is in a relatively undeveloped area in Grayson, in Carter County, Kentucky.

20. Pursuant to 807 KAR 5:063 § 1(1)(s), Central States, LLC, has considered the likely effects of the installation on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service to the area can be provided, and that there is no reasonably available opportunity to co-locate. Central States, LLC, has attempted to co-locate on towers

designed to host multiple wireless service provider's facilities or existing structures, such as a telecommunications tower, or another suitable structure capable of supporting the utility's facilities.

21. Pursuant to 807 KAR 5:063 § 1(1)(t), a map of the area in which the tower is proposed to be located, that is drawn to scale and that clearly depicts the search area in which a site should, pursuant to radio frequency requirements, be located is submitted as Exhibit "J".

22. Pursuant to KRS 100.987 (2)(a), a grid map, that is drawn to scale, that shows the location of all existing cellular antenna towers and that indicates the general position of proposed construction sites for new cellular antenna towers is submitted as Exhibit "K".

23. No reasonably available telecommunications tower, or other suitable structure capable of supporting the cellular facilities of Central States, LLC and which would provide adequate service to the area exists.

24. Correspondence and communication with regard to this application should be addressed to:

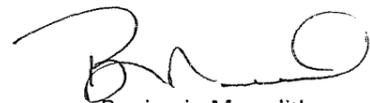
Benjamin Meredith
Cellere, LLC
4110 Copper Ridge Drive, Suite 204
Traverse City, MI 49684
(231) 929-4555
(fax) 929-0099
bmeredith@cellere.us

WHEREFORE, Cellere, LLC, as agent for Central States Tower Holdings, LLC, requests the Commission to enter and order:

1. Granting a certificate of public convenience and necessity to construct the STUMPS RUN cell site; and

2. Granting all other relief as appropriate.

Respectfully submitted,



Benjamin Meredith
Cellere, LLC
4110 Copper Ridge Drive, Suite 204
Traverse City, MI 49684
(231) 929-4555
(fax) 929-0099
bmeredith@cellere.us

Index to Exhibits

- EXH. A FAA Application and Determination; Kentucky Airport Zoning Commission Application and Approval
- EXH. B Geotechnical Report; Survey; Tower Design; Tower Foundation Design
- EXH. C Directions to Site from County Seat
- EXH. D Memorandum of Lease
- EXH. E Site Plan- 500' Radius Map with Flood Plain Information
- EXH. F Affidavit of Notification of Adjacent Property Owners and Owners within 500 feet.
- EXH. G Certified Letter to Judge Executive
- EXH. H Public Notice Signs (photos)
- EXH. I Affidavit of Publication of Public Notice
- EXH. J Map of Search Area
- EXH. K Map of Existing and Proposed Towers

EXHIBIT A

**FAA Application and Determination
And
Kentucky Airport Zoning Commission
Application and Approval**



Federal Aviation Administration
 Air Traffic Airspace Branch, ASW-520
 2601 Meacham Blvd.
 Fort Worth, TX 76137-0520

Aeronautical Study No.
 2008-ASO-1842-OE

Issued Date: 05/19/2008

Brian Meier
 Central States Tower Holdings, LLC
 323 South Hale Street Suite 100
 Wheaton, IL 60187

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

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

Structure: Tower KY-00-0816A STUMPS RUN
 Location: Grayson, KY
 Latitude: 38-23-48.27N NAD 83
 Longitude: 83-01-09.20W
 Heights: 300 feet above ground level (AGL)
 1200 feet above mean sea level (AMSL)

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

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

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

See attachment for additional condition(s) or information.

This determination expires on 11/19/2009 unless:

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

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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

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

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

If we can be of further assistance, please contact our office at (817) 838-1994. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2008-ASO-1842-OE.

Signature Control No: 569629-102132068

Linda Steele
Technician

(DNE)

Attachment(s)
Additional Information

Additional information for ASN 2008-ASO-1842-OE

It should be noted that no transmitted frequencies were submitted or approved for this tower at this time.

A separate study is required for any transmitting frequency(ies) on this antenna tower.

Notice of Proposed Construction or Alteration - Off Airport

Project Name: CENTR-000091815-08 **Sponsor:** Central States Tower Holdings, LLC

Details for Case : KY-00-0816A STUMPS RUN

Show Project Summary

Case Status		Date Accepted: 04/02/2008	
ASN: 2008-ASO-1842-OE		Date Determined:	
Status: Accepted		Letters: None	
Construction / Alteration Information		Structure Summary	
Notice Of: Construction		Structure Type: Antenna Tower	
Duration: Permanent		Structure Name: KY-00-0816A STUMPS RUN	
if Temporary : Months: Days:		FCC Number:	
Work Schedule - Start:		Prior ASN:	
Work Schedule - End:			
State Filing: Not filed with State			
Structure Details		Common Frequency Bands	
Latitude: 38° 23' 48.27" N		Low Freq	High Freq Freq Unit ERP ERP Unit
Longitude: 83° 1' 9.2" W		Specific Frequencies	
Horizontal Datum: NAD83			
Site Elevation (SE): 900 (nearest foot)			
Structure Height (AGL): 300 (nearest foot)			
Marking/Lighting: Dual-red and medium intensity			
Other :			
Nearest City: Grayson			
Nearest State: Kentucky			
Description of Location: Vacant field			
Description of Proposal: Tower only			



KY-00-0816 Stumps Run

KENTUCKY AIRPORT ZONING COMMISSION

Steven L. Beshear
Governor

90 Airport Road 502-564-4480
Frankfort, Kentucky 40601 fax: 502-564-7953
<http://transportation.ky.gov/aviation/kyzoning.htm>
502-564-4480 No.: AS-022-2KY5-08-086

July 23, 2008

APPROVAL OF APPLICATION

APPLICANT:

Central States Tower, Inc.
323 South Hale Street, Suite 100
Wheaton, IL 60187

SUBJECT: AS-022-2KY5-08-086

STRUCTURE: Antenna Tower
LOCATION: Grayson, KY
COORDINATES: 38-23-48.27 N / 83-01-09.2 W
HEIGHT: 300' AGL/1200' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 300' AGL/1200' AMSL Antenna Tower near, Grayson, KY 38-23-48.27 N / 83-01-09.2 W.

This permit is valid for a period of 18 months from its date of issuance. If construction is not completed within this period, this permit shall lapse and be void, and no work shall be performed without a new application being approved by the commission.

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

M-Dual Obstruction lighting is required

John Houlihan, Administrator



An Equal Opportunity Employer M/F/D



KENTUCKY AIRPORT ZONING COMMISSION

Steven L. Beshear
Governor

90 Airport Road
Frankfort, Kentucky 40601
502-564-4480
<http://transportation.ky.gov/aviation/kyzoning.htm>
502-564-4480

502-564-4480
fax: 502-564-7953
No.: AS-022-2KY5-08-086

CONSTRUCTION/ALTERATION STATUS REPORT

July 23, 2008

AERONAUTICAL STUDY NUMBER: AS-022-2KY5-08-086

Central States Tower, Inc
323 South Hale Street, Suite 100
Wheaton, IL 60187

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on July 10, 2008. This permit is valid for a period of 18 months from the date of issuance. If construction is not completed within this period, this permit shall lapse and be void, and no work shall be performed without a new application being approved by the commission. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 90 Airport Road, Building 400 Frankfort, KY 40601. (502) 564-4480.

STRUCTURE: Antenna Tower
LOCATION: Grayson, KY
COORDINATES: 38-23-48.27 N / 83-01-09.2 W
HEIGHT: 300' AGL/1200' AMSL

CONSTRUCTION/ALTERATION STATUS

1. The project () is abandoned. () is not abandoned

2. Construction status is as follows:

Structure reached its greatest height of _____ ft. AGL
_____ ft. AMSL on _____ (date).

Date construction was completed. _____

Type of obstruction marking/painting. _____

Type of obstruction lighting. _____

As built coordinates. _____

Miscellaneous Information: _____

DATE _____

SIGNATURE/TITLE _____



Kentucky Transportation Cabinet, Kentucky Airport Zoning Commission, 200 Mero Street, Frankfort, KY 40622
APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE
INSTRUCTIONS INCLUDED

Kentucky Aeronautical Study Number

AS-002-2015-00-086

1. APPLICANT -- Name, Address, Telephone, Fax, etc.
Central States Tower, Inc.
223 South Hale Street, Suite 100
Wheaton, IL 60187
(630) 221-8500

B. Latitude: 38° 23' 48.27" N
10. Longitude: 83° 1' 9.2" W
11. Datum: NAD83 NAD27 Other _____
12. Nearest Kentucky City: Grayson County Carter

2. Representative of Applicant -- Name, Address, Telephone, Fax
Cellere
4110 Copper Ridge Dr, Suite 204
Traverse City, MI 49684

13. Nearest Kentucky public use or Military airport:
Fleming-Mason
14. Distance from #13 to Structure: 4 - 40 miles
15. Direction from #13 to Structure: SE 1/4

3. Application for: New Construction Alteration Existing
4. Duration: Permanent Temporary (Months _____ Days _____)
5. Work Schedule: Start _____ End _____
6. Type: Antenna Tower Crane Building Power Line
 Landfill Water Tank Other _____

16. Site Elevation (AMSL): 900 Feet
17. Total Structure Height (AGL): 300 Feet
18. Overall Height (#16 + #17) (AMSL): 1200 Feet
19. Previous FAA and/or Kentucky Aeronautical Study Number(s): _____

7. Marking/Painting and/or Lighting Preferred:
 Red Lights and Paint Dual - Red & Medium Intensity White
 White - Medium Intensity Dual - Red & High Intensity White
 White - High Intensity Other _____
8. FAA Aeronautical Study Number 2008-A50-1842-0E

20. 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 map

21. Description of Proposal:
Tower only

22. Has a "NOTICE OF CONSTRUCTION OR ALTERATION" (FAA Form 7480-1) been filed with the Federal Aviation Administration?
 No Yes, When 4/2/08

CERTIFICATION: I hereby certify that all the above statements made by me are true, complete and correct to the best of my knowledge and belief.
Braxton Dougherty Braxton Dougherty 4/4/08
VP Construction, Cellere Signature Date

PENALTIES: Persons failing to comply with Kentucky Revised Statutes (KRS 183.881 through 183.990) and Kentucky Administrative Regulations (802 KAR 050-Series) are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Non-compliance with Federal Aviation Administration Regulations may result in further penalties.

Commission Action: Chairman, KAZC Administrator, KAZC
 Approved Disapproved
[Signature] Date 7-23-08

April 2, 2008

Administrator
Kentucky Airport Zoning Commission
Department of Aviation
200 Metro Street
Frankfort, KY 40622

RE: Form TC 56-50E – Application for New Construction

Hello,

Enclosed please find Form TC-56-50-E for your review and approval for the construction of a new 300' telecommunications tower proposed in Grayson, County, Kentucky. I have enclosed a copy of the FAA Form 7460-1, a quad map showing the location of the proposed tower and a copy of the 1A Certification.

If you have any questions or require any additional information please don't hesitate to contact our office.

Thank you,

Joann Wendels
Cellere, Agent for Central States Tower, Inc.



Kentucky Transportation Cabinet, Kentucky Airport Zoning Commission, 200 Mero Street, Frankfort, KY 40622 APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE INSTRUCTIONS INCLUDED		Kentucky Aeronautical Study Number
1. APPLICANT - Name, Address, Telephone, Fax, etc. Central States Tower, Inc. 323 South Hale Street, Suite 100 Wheaton, IL 60187 (630) 221-8500	9. Latitude: <u>38 ° 23 ' 48 . 27 " N</u> 10. Longitude: <u>83 ° 01 ' 09 . 02 " W</u> 11. Datum: <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other _____ 12. Nearest Kentucky City: <u>Emyson</u> County <u>Carter</u>	13. Nearest Kentucky public use or Military airport: <u>Fleming Mason</u> 14. Distance from #13 to Structure: <u>+/- 40 miles</u> 15. Direction from #13 to Structure: <u>SE</u> 16. Site Elevation (AMSL): <u>900</u> Feet 17. Total Structure Height (AGL): <u>300</u> Feet 18. Overall Height (#16 + #17) (AMSL): <u>1200</u> Feet 19. Previous FAA and/or Kentucky Aeronautical Study Number(s): <u>NONE</u>
2. Representative of Applicant - Name, Address, Telephone, Fax Cellere 4110 Copper Ridge Drive, Suite 204 Traverse City, MI 49684 (231) 929-4555	3. Application for: <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing 4. Duration: <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Months _____ Days _____) 5. Work Schedule: Start _____ End _____ 6. Type: <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Crane <input type="checkbox"/> Building <input type="checkbox"/> Power Line <input type="checkbox"/> Landfill <input type="checkbox"/> Water Tank <input type="checkbox"/> Other _____ 7. Marking/Painting and/or Lighting Preferred: <input type="checkbox"/> Red Lights and Paint <input checked="" type="checkbox"/> Dual - Red & Medium Intensity White <input type="checkbox"/> White - Medium Intensity <input type="checkbox"/> Dual - Red & High Intensity White <input type="checkbox"/> White - High Intensity <input type="checkbox"/> Other _____	20. Description of Location: (Attach USGS 7.5 minute Quadrangle Map or an Airport layout Drawing with the precise site marked and any certified survey) <u>See attached 7.5 minute Quad Map and IA Certification</u>
8. FAA Aeronautical Study Number <u>2008 - ASO - 1842 - 0E</u>		
21. Description of Proposal: <u>Tower Only</u>		
22. Has a "NOTICE OF CONSTRUCTION OR ALTERATION" (FAA Form 7460-1) been filed with the Federal Aviation Administration? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, When <u>4/2/08</u>		
CERTIFICATION: I hereby certify that all the above statements made by me are true, complete and correct to the best of my knowledge and belief.		
Printed Name and Title _____ Signature _____		Date <u>4/4/08</u>
PENALTIES: Persons failing to comply with Kentucky Revised Statutes (KRS 183.881 through 183.890) and Kentucky Administrative Regulations (802 KAR 050-Series) are liable for fines and/or imprisonment as set forth in KRS 183.890(3). Non-compliance with Federal Aviation Administration Regulations may result in further penalties.		
Commission Action: <input type="checkbox"/> Chairman, KAZC <input type="checkbox"/> Administrator, KAZC <input type="checkbox"/> Approved _____ <input checked="" type="checkbox"/> Disapproved _____ Date _____		

Notice of Proposed Construction or Alteration - Off Airport

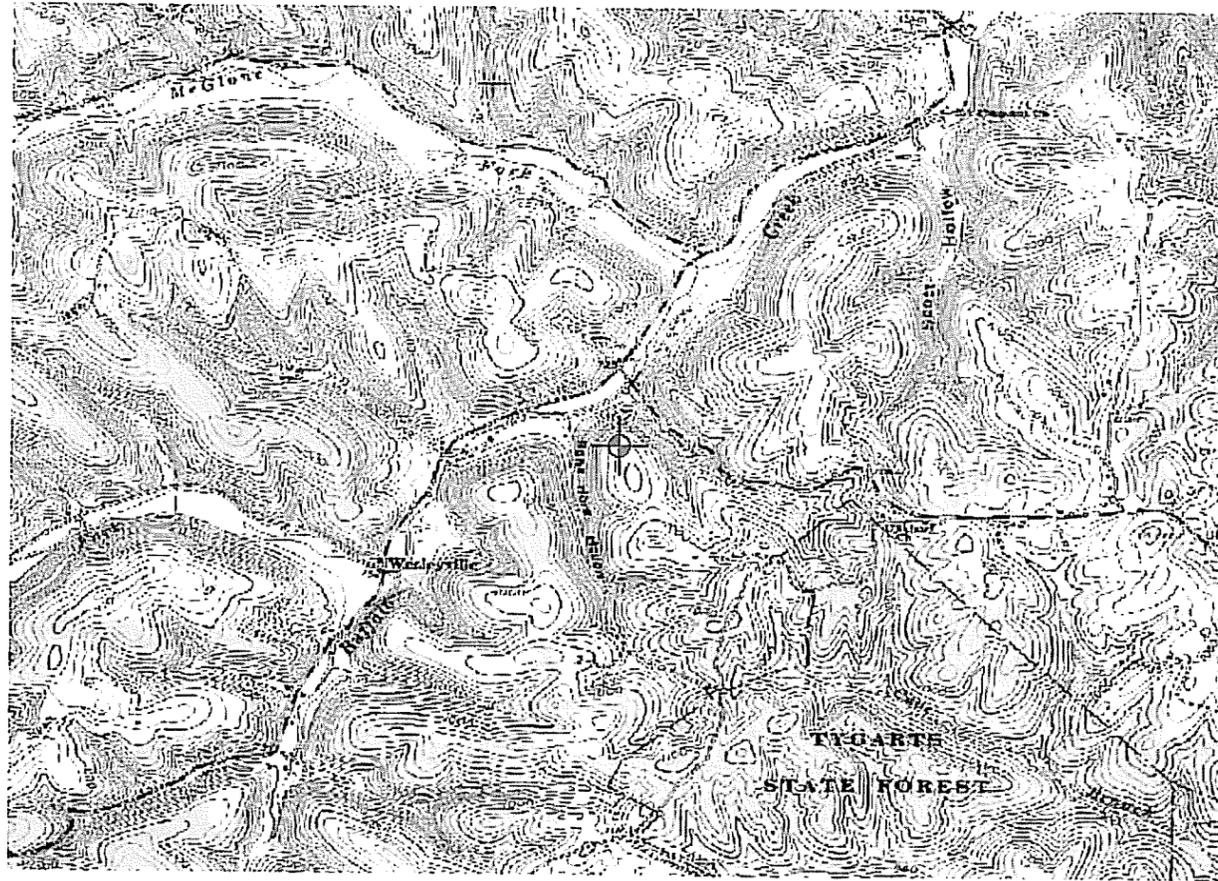
Project Name: CENTR-000091815-08 Sponsor: Central States Tower Holdings, LLC

Details for Case : KY-00-0816A STUMPS RUN

Show Project Summary

Case Status		Date Accepted: 04/02/2008	
ASN:	2008-ASO-1842-OE	Date Determined:	
Status:	Work In Progress	Letters:	04/03/2008 ADD
Construction / Alteration Information		Structure Summary	
Notice Of:	Construction	Structure Type:	Antenna Tower
Duration:	Permanent	Structure Name:	KY-00-0816A STUMPS RUN
<i>if Temporary</i> :	Months: Days:	FCC Number:	
Work Schedule - Start:		Prior ASN:	
Work Schedule - End:			
State Filing:	Not filed with State		
Structure Details		Common Frequency Bands	
Latitude:	38° 23' 48.27" N	Low Freq	High Freq Freq Unit ERP ERP Unit
Longitude:	83° 1' 9.2" W	Specific Frequencies	
Horizontal Datum:	NAD83		
Site Elevation (SE):	900 (nearest foot)		
Structure Height (AGL):	300 (nearest foot)		
Marking/Lighting:	Dual-red and medium intensity		
<i>Other :</i>			
Nearest City:	Grayson		
Nearest State:	Kentucky		
Description of Location:	Vacant field		
Description of Proposal:	Tower only		

Close Print





engineering & surveying

705-F Lakeview Plaza Blvd.
Worthington, Ohio 43085
Phone: (614) 841-0053
Fax: (614) 841-0170
E-mail: hlg@geoinno.com

Date: March 31, 2008
Applicant: Central States Tower, Inc.
323 South Hale Street, Suite 100
Wheaton, IL 60187

Site Number/Name: KY-00-0816A Stumps Run

County: Carter

Site Address: +/- 220 Kees Branch; Grayson, Ky; 41143

Center of Tower: LATITUDE: N38°23' 48.27"
LONGITUDE: W83°01' 09.20"
HORIZONTAL DATUM: NAD 83
GROUND ELEVATION: 900 Feet
VERTICAL DATUM: NAVD 88

CERTIFICATION

I herby certify that the survey of this tower site was performed under my direct supervision, and to the best of my knowledge, the location of the center of the site, as shown in geographic coordinates above, has an horizontal accuracy within +/- 20 feet and a vertical accuracy within +/- 3 feet.

HLG Engineering & Surveying, Inc.

ANTHONY J. ROBINSON, P.S. # 3601, KENTUCKY
JOB# 1011.031

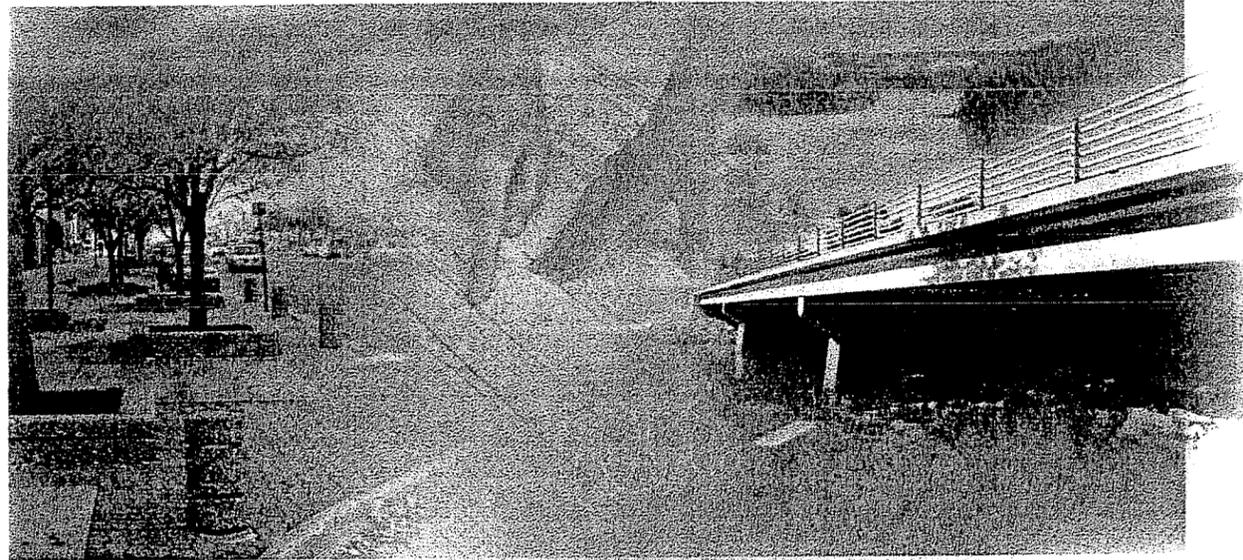


3-31-08

DATE

EXHIBIT B

**Geotechnical Report; Survey; Tower Design
Tower Foundation Design**



**SOIL BORING AND
ROCK CORING INVESTIGATION REPORT**

CST SITE NO. KY-00-0816A
STUMPS RUN

Grayson, Carter County, Kentucky

Prepared for:
CST Holdings, LLC
323 South Hale Street, Suite 100
Wheaton, Illinois 60187

Prepared by:
Wilcox Professional Services, LLC
One Madison Avenue
Cadillac, MI 49601
Wilcox Project No. 25036.00004.08

Applied Geotechnical Services, Inc.

June 9, 2008

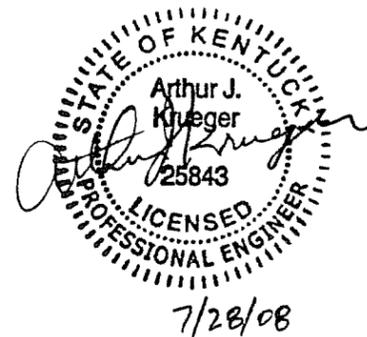


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EXECUTIVE SUMMARY

The driller did not report encountering topsoil at the site. Approximately 2½ to 5 feet of sandy clay was encountered at the boring locations. At the locations of Borings 2 and 3, silty fine to medium sands were encountered to approximate depths of 5 to 7 feet below the ground surface. Below these depths, weathered shale was encountered to depths of approximately 10 to 17 feet. At the location of Boring 2, NQ rock coring was performed from approximate depths of 10 feet to 20 feet below the existing ground surface. The rock coring encountered medium hard shale that extended to the explored depth of 20 feet.

Borings 1 and 3 were reported as dry both during drilling and upon completion of the boring. Boring 2 was also reported as dry during drilling. However, water was introduced into Boring 2 during the NQ rock coring operations. Therefore, the groundwater level was not obtained upon completion. Based on our review of the site topographic map and the available soil and rock core information, we estimate the prevailing groundwater level may be located below the explored depth of the soil/ rock core borings.

We understand Central States Tower is planning the construction of a 300-foot self-supporting tower at the site. At the time of our investigation, no information was available to us as to the tower manufacturer or loads. These loads vary considerably depending on the tower characteristics and the number of carriers. Estimated tower loads, based on our experience with similar towers, are presented in Section 1.1 of this report.

We understand mat-and-pier or mat-type foundations are typically used for support of the self-supporting towers such as proposed for the site. Based on the subsurface conditions revealed by the soil and rock core borings, we concur with the use of either-mat-and-pier or mat foundations for support of the proposed tower. We estimate the mat foundation may be on the order of 30 to 35 square feet in plan area and be constructed at a depth of approximately 6 to 8 feet below the existing ground surface. Based on these conditions, we recommend the mat be designed for a presumptive maximum net allowable soil pressure of 10,000 pounds per square foot (psf) on the undisturbed hard weathered shale.

EXECUTIVE SUMMARY, Page 2 of 2

We anticipate the use of a jack-hammer or similar rock excavation equipment may be necessary to level the base of the mat foundation on the weathered shale surface.

Several feet of cut and fill is anticipated to achieve finished grades within the proposed tower area. We recommend the subgrade soils be scarified and properly benched prior to placement of engineered fill to reduce the risk of a slip plane forming along the native soil-engineered fill surface.

Do not consider this summary separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the appendix of this report.

REPORT PREPARED BY:

Applied Geotechnical Services, Inc.



Jefferey T. Anagnostou, P.E., C.P.G.
Project Consultant

REPORT REVIEWED BY:

Wilcox Professional Services, LLC



Arthur J. Krueger, P.E.
Project Manager

1. INTRODUCTION

We have completed the Soil Boring & Rock Coring Investigation for the proposed Central States Tower Site No. KY-00-0816A – Stumps Run self-supporting lattice tower to be located in Grayson, Carter County, Kentucky. Cellere, Inc. retained **Wilcox Professional Services, LLC** to perform this investigation. Subsequently, Wilcox has retained Applied Geotechnical Services, Inc. for laboratory testing and assistance with preparing the engineering report. This report presents the results of the soil boring/rock coring investigation and our estimated soil and rock parameters to be used in the design of the tower foundation.

1.1 Project Description

We understand Central States Tower is planning to construct a 300-foot high, self-supporting lattice type tower at the site. The tower will have three legs on an equilateral triangle. We estimate the tower base width may be approximately 29 feet. At the time this investigation was completed, the tower loads were not yet available. Based on estimated tower loads for a multi-carrier co-locate site, we estimate the tower may impose a compression load per leg of approximately 510 kips, an uplift load per leg of approximately 435 kips, a total shear load of approximately 75 kips and a overturning moment of approximately 12,080 foot-kips.

We estimate the tower base plate elevation may be in the range of Elevation 898 to 900 feet.

1.2 Scope of Services

Our scope of services for this project is as follows.

- A) Performing one soil boring at the center of the tower to auger refusal on bedrock, followed by NQ rock coring to a depth of 10 feet into the bedrock and performing soil borings extending to auger refusal on bedrock at a distance of approximately 30 feet uphill and 30 feet downhill of the tower center;
- B) Performing appropriate laboratory testing including visual engineering classification, natural moisture content, unconfined compressive strength estimates on representative cohesive samples, performing resistivity, pH, chloride, and sulfide testing of a composite soil sample obtained between depths of 1 to 10 feet; and
- C) Preparing an engineering report providing our recommendations for the tower foundation design and construction. The written report includes recommendations regarding the allowable soil bearing capacity, estimated settlement, and construction considerations related to foundation construction.

The field drilling operations were performed by Triad Engineering, Inc. of Scott Depot, West Virginia with coordination by Wilcox Professional Services, LLC. The laboratory testing and engineering report preparation were performed under the direction and supervision of a registered professional engineer according to generally accepted standards and procedures in the practice of geotechnical engineering. If changes occur

Central States Tower No. KY-00-0816A – Stumps Run
Wilcox Project No. 25036.00004.08

in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless Wilcox Professional Services, LLC reviews the changes. Wilcox Professional Services, LLC will then provide any necessary changes in writing. Our conclusions and recommendations are based on the soil boring/rock coring performed by Triad Engineering, Inc. and project information provided by Cellere, Inc. Slope stability analyses for the proposed tower were beyond the scope of the present geotechnical investigation. We recommend an evaluation of the factor of safety of the proposed mat foundation with respect to global and sliding block failure mechanisms be performed prior to construction.

2. FIELD AND LABORATORY PROGRAM

2.1 Field Program

Cellere, Inc. selected the depth and location of the borings in consultation with Wilcox Professional Services, Inc. As shown on the Schematic Soil Boring Location Plan, a total of three (3) soil borings were performed for the project. The approximate ground surface elevation at the soil rock core boring locations were estimated based on the ground surface elevation contour lines shown on the Survey Plan prepared by HLG Engineering and Surveying, Inc. dated April 9, 2008 and are presented in Table 1.

Soil Boring No.	Approximate Ground Surface Elevation (ft)
B-1	+/- 897
B-2	+/- 900
B-3	+/- 896

A truck mounted rotary drill rig was used to perform the soil boring. Standard split-spoon samplers were used to obtain the soil samples by the Standard Penetration Test (SPT) method in general conformance with ASTM Standard D1586. The number of blows required to drive the sampler 12 inches, after an initial seating of 6 inches, with a 140-pound hammer falling 30 inches is termed the Standard Penetration Resistance, N-value. A graphical representation of the N-values is given on the boring logs appended to this report.

During the field operations, the drill crew maintained a log of the subsurface conditions, including changes in stratigraphy and observed groundwater levels. After completion of the drilling operations, the boreholes were backfilled with drill cuttings and bentonite crumbles.

2.2 Laboratory Testing

The soil and rock samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. A geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System. The cored rock samples were classified by Triad Engineering, Inc.

Laboratory testing of the soil samples included estimating the unconfined compressive strength of the cohesive split-spoon samples with a calibrated hand penetrometer. With a hand penetrometer, the unconfined compressive strength of a soil sample is estimated by measuring the resistance of the soil sample to the penetration of a small, calibrated spring-loaded cylinder. The penetrometer can measure a maximum unconfined compressive strength of 4½ tons per square foot (tsf).

The cores were logged for core recovery and Rock Quality Designation (RQD) by a Triad Engineering, Inc. engineer. The RQD is one the standard measurements of rock competence and is given by the percentage ratio of the total length of the recovered samples 4 inches or more in length to the total length of the core run. Sometimes, core lengths smaller than 4 inches may be included if they are judged to have been fractured during coring and handling.

We will hold the soil and rock core samples for 60 days from the date of this report. If you would like the samples, please contact us within this time frame.

2.3 Laboratory Soil Box Resistivity Test Results

Estimated earth resistivity values of the subsoil below the proposed development area were obtained by performing laboratory resistivity testing using the Miller Soil Box Resistivity instrument. The testing was performed on selected composite split-spoon samples from Soil/Rock Core Borings B-1 through B-3. The composite samples were prepared by thoroughly mixing prior to placement in the soil box instrument. The following estimated earth resistivity values are presented based on the Miller Soil Box Resistivity test results and may be used with judgment in the design of the lightning protection grounding system:

Table 2. Miller Soil Box Resistivity Results			
Boring Numbers	Sample Numbers	Represented Depth Below Ground Surface (ft)	Resistivity (Ohm-feet)
B-1 - B-3	S1 – S4	1 to 10	120

3. SITE AND SUBSURFACE CONDITIONS

3.1 Site Conditions

The subject site is located at +/- 220 Kees Branch in Grayson, Carter County, Kentucky. Based on our review of the Survey Plan prepared by HLG Engineering and Surveying, Inc. dated April 9, 2008 and the Central States Tower Site Candidate Package, it appears the site is situated at the top of a relatively small hill situated at the north end of a generally north-south trending, partially wooded ridge. Within the proposed tower compound, the ground surface slopes downward from the center of the compound at a rate of up to approximately 3 units horizontal to 1 unit vertical. The ground surface elevations range from approximately Elevation 900 within the central portion of the compound to Elevation 887 feet in the vicinity of the northwestern portion of the site.

3.2 Soil and Rock Conditions

The driller did not report encountering topsoil at the site. Approximately 2½ to 5 feet of sandy clay was encountered at the boring locations. At the locations of Borings 2 and 3, silty fine to medium sands were encountered to approximate depths of 5 to 7 feet below the ground surface. Below these depths, weathered shale was encountered to depths of approximately 10 to 17 feet. At the location of Boring 2, NQ rock coring was performed from approximate depths of 10 feet to 20 feet below the existing ground surface. The rock coring encountered medium hard shale that extended to the explored depth of 20 feet.

The sandy clays were very stiff to hard with calibrated hand penetrometer unconfined compressive strengths of 2 to in excess of 4½ tsf and natural moisture contents of approximately 12 to 21 percent. The weathered shale was very stiff to hard with calibrated penetrometer unconfined compressive strengths of 3½ to in excess of 4½ tsf

Central States Tower No. KY-00-0816A – Stumps Run
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and natural moisture contents of 8 to 14 percent. The shale specimen obtained from the NQ rock coring possessed a recovery of 100 percent and an RQD value of 58 percent.

The stratification depths shown on the soil boring log represent the soil and rock conditions at the boring location. Variations may occur at locations away from the boring. Additionally, the stratigraphic lines represent the approximate boundary between soil and rock types; the transition may be more gradual than what is shown. The boring log was prepared on the basis of laboratory classification and testing as well as the field logs of the explored soils and bedrock.

The soil/rock core boring logs are presented in the appendix. The soil and rock profile described above is a generalized description of the conditions encountered at the boring location. Please consult the boring logs for more specific information.

3.3 Groundwater Level Observations

Borings 1 and 3 were reported to be dry both during drilling and upon completion of the boring. Boring 2 was also reported as dry during drilling. However, water was introduced into Boring 2 during the NQ rock coring operations. Therefore, the groundwater level was not obtained upon completion. Based on our review of the site topographic map and the available soil and rock core information, we estimate the prevailing groundwater level may be located below the explored depth of the soil/ rock core borings. Expect the prevailing groundwater level to vary due to changes in precipitation, evaporation, surface run-off, and other factors. The groundwater levels discussed herein and shown on the boring logs represent the conditions at the time of the measurements.

4. RESULTS & RECOMMENDATIONS

4.1 Mat Foundation Recommendations

We understand mat-and-pier or mat-type foundations are typically used for support of the self-supporting towers such as proposed for the site. Based on the subsurface conditions revealed by the soil and rock core borings, we concur with the use of either-mat-and-pier or mat foundations for support of the proposed tower. We estimate the mat foundation may be on the order of 30 to 35 square feet in plan area and be constructed at a depth of approximately 6 to 8 feet below the existing ground surface. Based on these conditions, we recommend the mat be designed for a presumptive maximum net allowable soil pressure of 10,000 pounds per square foot (psf) on the undisturbed hard weathered shale. The mat foundation excavation must be properly sloped or shored in accordance with local, state, and federal trench safety requirements.

The mat foundation excavation can be backfilled with on-site excavated soils free of topsoil and other deleterious materials. All backfill should be constructed as engineered fill. We anticipate the on-site overburden will generally be sandy clay or silty fine to medium sands. Compaction equipment suitable for compacting both cohesive and granular materials should be used. Place the engineered fill in the mat foundation excavation in level lifts not exceeding 9 inches in loose thickness, and compact to a minimum of 95 percent of the maximum laboratory dry density as determined in accordance with ASTM Standard D-1557 (Modified Proctor). All engineered fill should be placed and compacted at or near the optimum moisture content. The moisture/density relations for the material to be used for engineered fill should be confirmed by a qualified geotechnical engineer prior to placement in the field.

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Based on our experience with similar soils, we estimate 120 pounds per cubic foot (pcf) in-place moist density may result from the above compaction requirements.

We anticipate the use of a jack-hammer or similar equipment may be necessary to level the base of the mat foundation. In addition, we recommend the subgrade below fill areas be benched as discussed in Section 4.2 of this report. We recommend an evaluation of the factor of safety of the proposed mat foundation with respect to global and sliding block failure mechanisms be performed prior to construction.

Once the tower loads are known, Wilcox Professional Services, LLC should be notified so we can re-evaluate our design recommendations in the light of the actual loads.

We recommend all foundation construction be performed under the supervision of a qualified geotechnical engineer. The appropriate type and number of field tests and observations should be performed to verify the foundation bearing material is suitable.

4.2 Engineered Fill Placement

We anticipate several feet of cut and fill will be required to achieve finished grades within the tower compound area. To reduce the risk of a potential slip plane developing between the engineered fill and underlying subgrade soils, we recommend the subgrade surface be scarified and properly benched prior to placement of the engineered fill.

Any fill beneath on-grade structures should be an approved, environmentally clean material. The fill should also be free of organic matter, frozen soil, clods, or other harmful material. Spread the fill in level lifts, not exceeding 9 inches in loose thickness, and

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compact the soil to a minimum of 95 percent of the maximum dry density. Determine the maximum dry density according to ASTM Standard D1557 (Modified Proctor). All engineered fill should be placed at or near the optimum moisture content.

4.3 General Comments

The purpose of this report is to aid in the tower foundation. If changes occur in the design, location, or concept of the project, the recommendations contained in this report are not valid. The changes must be reviewed by **WILCOX PROFESSIONAL SERVICES, LLC** with the recommendations of this report modified or affirmed in writing by **WILCOX PROFESSIONAL SERVICES, LLC**.

We base the estimated soil and rock parameters presented in this report upon the data from the soil/rock core borings performed at the approximate locations shown on the Schematic Soil Boring/Rock Core Location Plan. This report does not reflect variations that may occur away from the boring location. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

We recommend **WILCOX PROFESSIONAL SERVICES, LLC** be given the opportunity to review the final design plans and specifications as they relate to the recommendations presented in this report. The review is necessary to verify that the report conclusions and recommendations have been interpreted according to our intent and are properly incorporated into the design. Further, the review will verify that subsequent changes to the project have not affected our recommendations. Without this review, we cannot be held responsible for misinterpretation of our data, analysis, and/or our recommendations or how these are incorporated in the final design.

Central States Tower No. KY-00-0816A – Stumps Run
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We also recommend a qualified geotechnical engineer supervise all geotechnical related work, including foundation construction, subgrade preparation, and engineered fill placement. The geotechnical engineer should perform the appropriate testing to confirm the geotechnical conditions given in the report are found during construction.

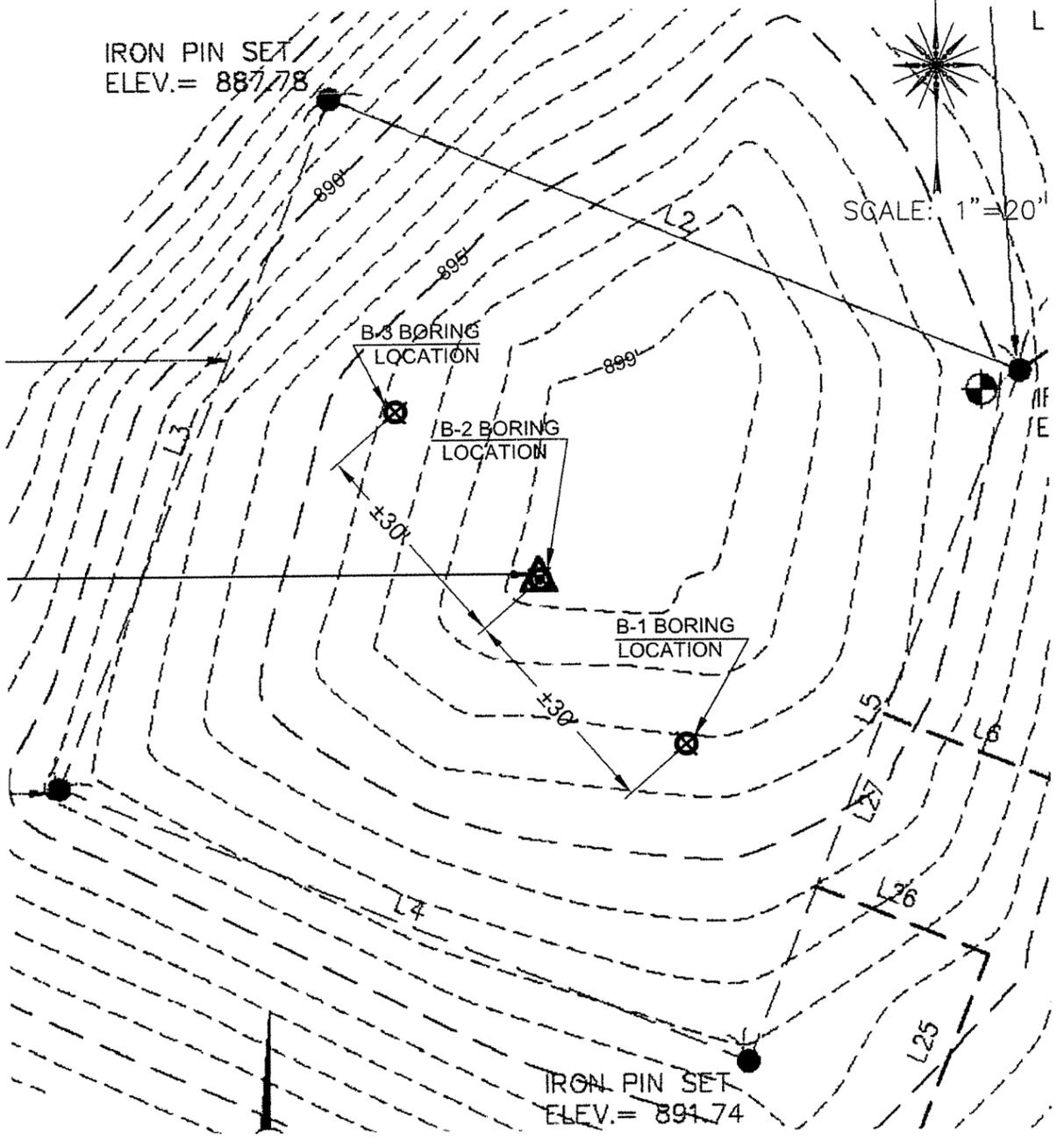
The contract specifications should include the following:

“The contractor will, upon becoming aware of subsurface or latent physical conditions differing from those disclosed by the original soil investigation work, promptly notify the owner verbally to permit verification of the conditions, and in writing, as to the nature of the differing conditions. No claim by the contractor for any conditions differing from those anticipated in the plans and specifications and disclosed by the soil studies will be allowed unless the contractor has so notified the owner, verbally and in writing, as required above, of such differing subsurface conditions.”

APPENDIX

1. SCHEMATIC SOIL\ROCK CORE LOCATION PLAN
2. GENERAL NOTES
3. SOIL/ROCK CORE BORING LOGS (B-1 to B-3)
4. UNIFIED SOIL CLASSIFICATION SYSTEM

KY-00-0816 STUMPS RUN



SURVEYOR: HLG, ENGINEERING & SURVEYING, INC.

<p>KY-00-0816 STUMPS RUN SCHEMATIC SOIL BORING LOCATION PLAN</p>	<p>DATE 4-30-08</p>				
	<p>DRN AJK</p>				
<p>CLIENT: CELLERE / CENTRAL STATE TOWERS</p>	<p>CHD AJK</p>	<p>SCALE N/A</p>	<p>F B PG</p>	<p>SHEET 1 OF 1</p>	<p>WILCOX JOB NO. 25036.00004.08</p>

GENERAL NOTES

Drilling & Sampling Symbols

SS – Split Spoon (1 ³ / ₈ " I.D., 2" O.D., except where noted)	HA – Hand Auger Boring
ST – Shelby Tube (3" O.D., except where noted)	BS – Bag Sample
PA – Power Auger	RC – Rock Core with diamond bit, NX size, except where noted
PS – Piston Sample (3" diameter)	RB – Roller Bit
WB – Wash Boring	N/A – Not applicable or available
WS – Wash Sample	

Standard Penetration Test "N" Value - Blows per foot after an initial 6-inch seating of a 140-pound hammer falling 30 inches on a 2-inch O.D. split spoon, except where noted.

Water Level Measurement Notation

First—	When noted during drilling or sampling process.
Completion—	After all drilling tools are removed from borehole.
HR—	Number of hours after completion.
N/R—	Not recorded.
Dry—	No measurable water level found in borehole.

Particle Sizes

Boulders—	Greater than 6" (152 mm)
Cobbles—	3" to 6" (76 to 152 mm)
Gravel—	<i>Coarse:</i> ¼ to 3" (19 to 76 mm) <i>Fine:</i> No.4 to ¼" (4.75 to 19 mm)
Sand—	<i>Coarse:</i> No.10 to No.4 (2 to 4.75 mm) <i>Medium:</i> No.40 to No.10 (.425 to 2 mm) <i>Fine:</i> No.200 to No.40 (.074 mm to .425mm)
Silt—	Minus No.200 (.005 mm to .074 mm)
Clay—	Less than .005 mm

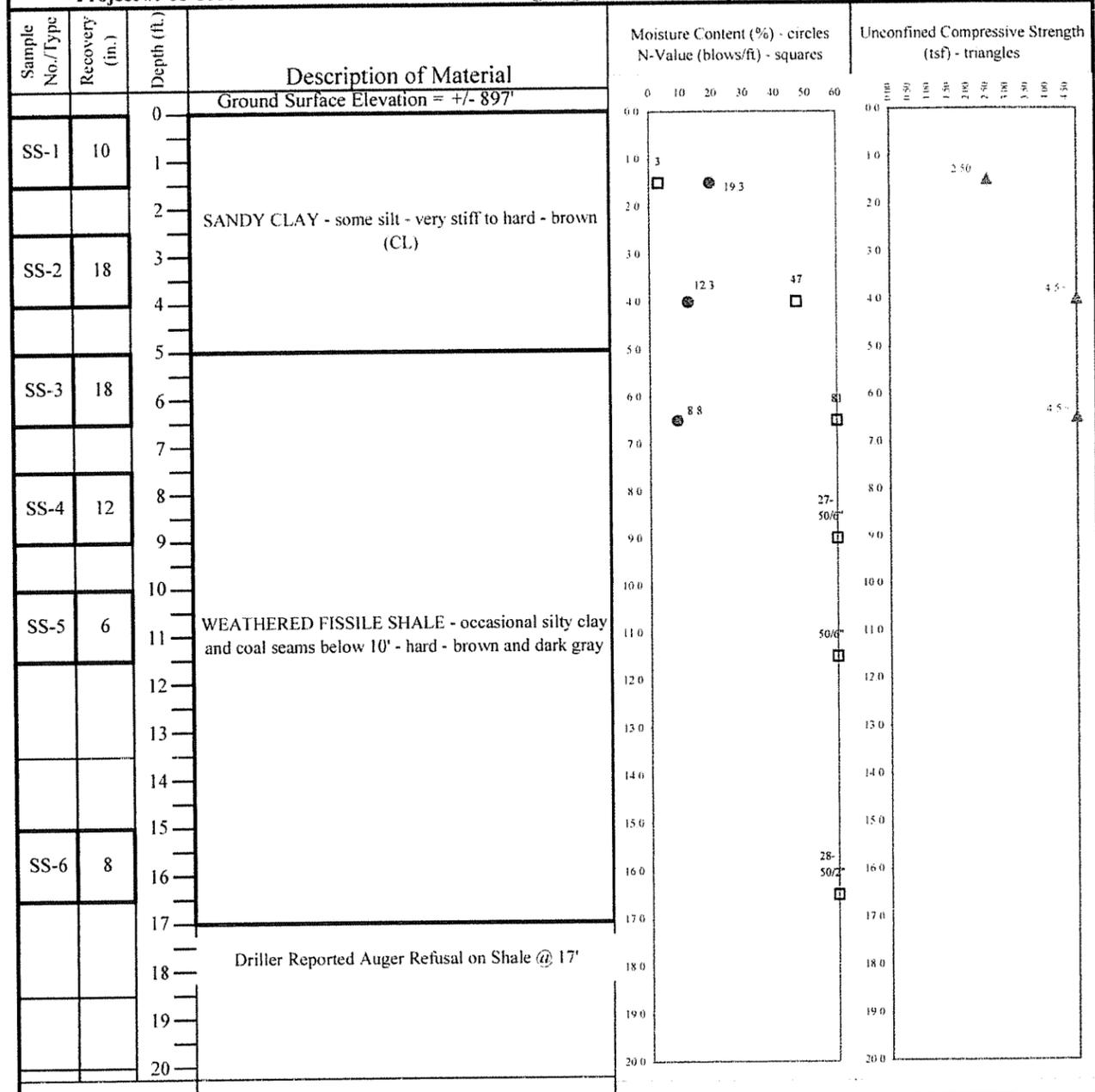
Water levels indicated on the boring logs are the levels measured in the boring at the time indicated. The accurate determination of groundwater levels may not be possible with short term observations, especially in impervious soils. The level shown may fluctuate throughout the year with variations in precipitation, evaporation, runoff, and other hydrogeologic features.

CLASSIFICATION

<u>Cohesionless Soil</u>		<u>Cohesive Soil</u>	
<u>Relative Density "N" Value (Blows/ft)</u>		<u>Unconfined Compressive (tons per ft²)</u>	<u>Consistency</u>
Very Loose	0 to 4	Less than 0.25	Very Soft
Loose	5 to 9	0.25 to 0.49	Soft
Medium Dense	10 to 29	0.49 to 0.99	Medium
Dense	30 to 49	1.00 to 1.99	Stiff
Very Dense	50 to 79	2.00 to 3.99	Very Stiff
Extremely Dense	Over 80	Greater than 4.00	Hard
		If clay content is sufficient so that clay dominates soil properties, then clay becomes the primary noun with other major soil constituent as modifier, i.e. silty clay. Other minor soil constituents may be added according to estimates of soil constituents present, i.e. silty clay, trace to some sand, trace gravel.	
<u>Soil Constituents</u>			
"Trace"	Less than 10%		
"Trace to Some"	10% to 19%		
"Some"	20% to 34%		
"And"	35% to 50%		

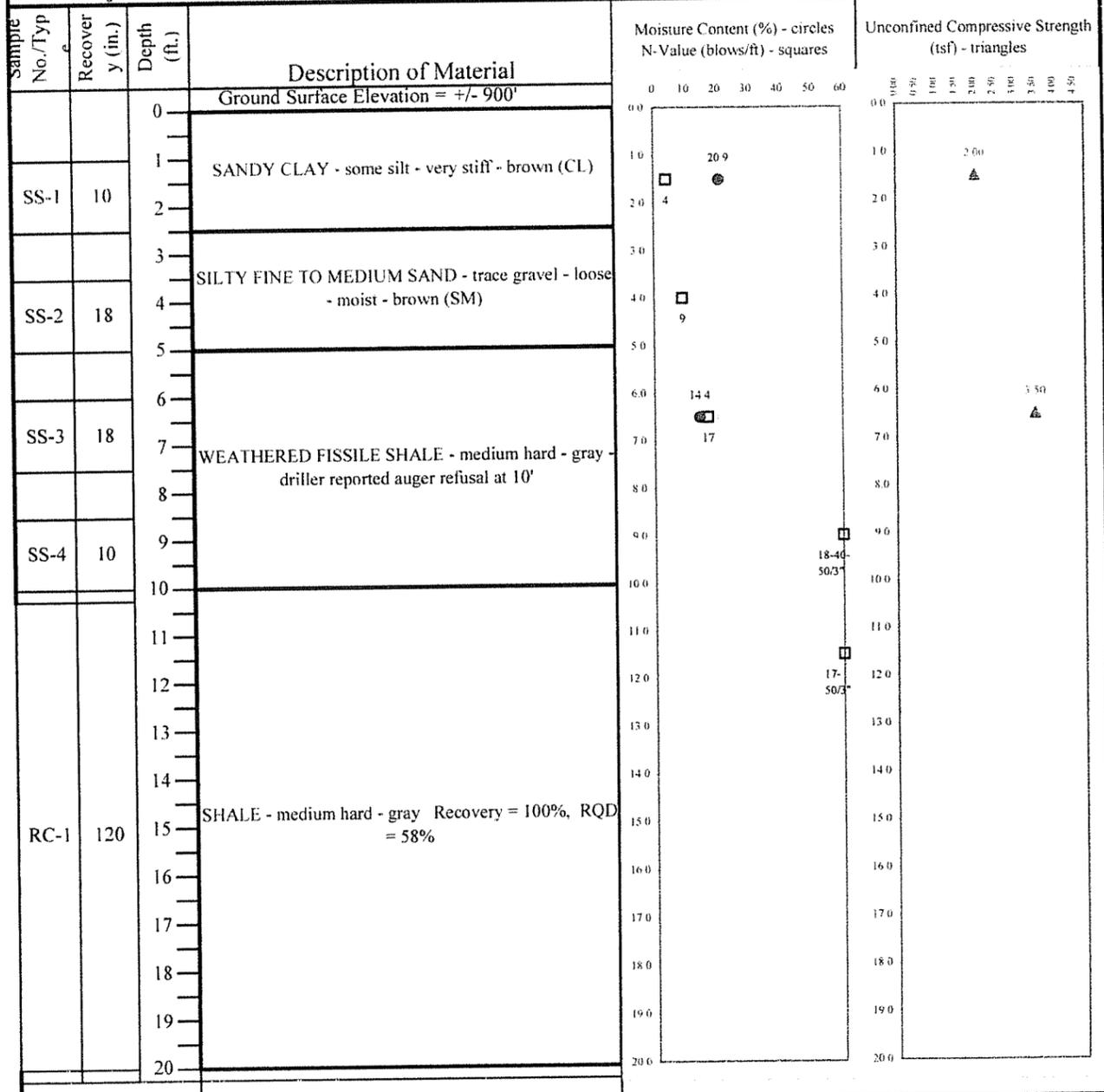
AGS, Inc.
15798 Riverside, Livonia, MI 48154
Tel/Fax: (734) 432-2631

Project: CST Site No. KY-00-0816A - Stumps Run	AGS, Inc.
Client: Cellere, Inc.	37637 Five Mile Road #224
Location: Grayson, Carter Co., Kentucky	Livonia, MI 48154
Project #: 08-1016 Boring Log #: B-1	Ph/Fax: (734) 293-5077



Water Level Observations: While Drilling: Dry At Completion: Dry Cave-In At:	Boring Started: 4/9/08 Boring Completed: 4/9/08 Rig: Rotary Driller: Triad Engineering	Approved: Drawn By: JTA
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Project: CST Site No. KY-00-0816A - Stumps Run	AGS, Inc.
Client: Cellere, Inc.	37637 Five Mile Road #224
Location: Grayson, Carter Co., Kentucky	Livonia, MI 48154
Project #: 08-1016 Boring Log #: B-2	Ph/Fax: (734) 293-5077



Water Level Observations: While Drilling: Dry At Completion: NA Cave-In At:	Boring Started: 4/9/08 Boring Completed: 4/9/08 Rig: Rotary Driller: Triad Engineering	Approved: Drawn By: JTA
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Project: CST Site No. KY-00-0816A - Stumps Run				AGS, Inc.	
Client: Cellere, Inc.				37637 Five Mile Road #224	
Location: Grayson, Carter Co., Kentucky				Livonia, MI 48154	
Project #: 08-1016				Boring Log #: B-3	
Sample No./Typ	Recovery (in.)	Depth (ft.)	Description of Material	Moisture Content (%) - circles N-Value (blows/ft) - squares	Unconfined Compressive Strength (tsf) - triangles
		0	Ground Surface Elevation = +/- 896'		
SS-1	18	1	SANDY CLAY - some silt - very stiff - brown (CL)	18.6	1.50
		2		4	
SS-2	18	4	SILTY FINE TO MEDIUM SAND - trace gravel - medium dense to loose - moist - brown (SM)	14	
		5			
SS-3	18	6		22.8	2.00
		7		9	
		8	WEATHERED FISSILE SHALE - medium hard - brown and gray		
SS-4	18	9		10.2	1.50
		10		20-50/6'	
		11			
		12	SHALE - medium hard - brown and gray	28-50/5'	
		13			
		14			
		15	Driller Reported Auger Refusal @ 14' on Apparent Shale Bedrock		
		16			
		17			
		18			
		19			
		20			

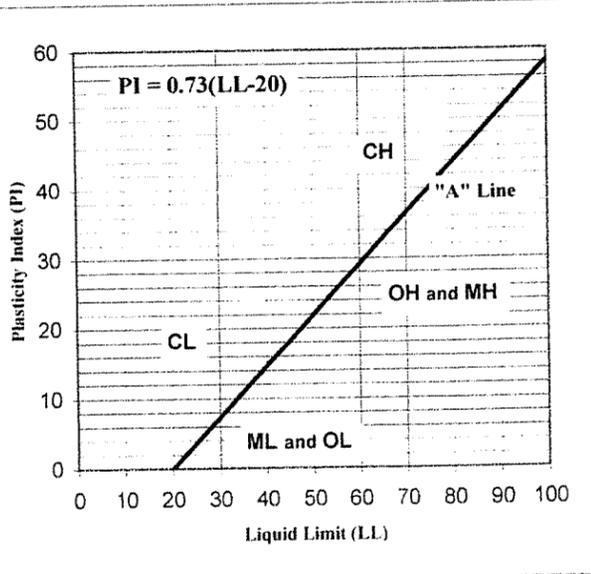
Water Level Observations:
While Drilling: Dry
At Completion: Dry
Cave-In At:

Boring Started: 4/9/08
Boring Completed: 4/9/08
Rig: Rotary
Driller: Triad Engineering

Approved:

Drawn By: JTA

Unified Soil Classification

Major Divisions		Symbol	Typical Names	Laboratory Classification Criteria			
Coarse Grained Soils (More than half of material > No. 200 sieve)	Gravels (More than half of coarse fraction is larger than No. 4 sieve)	Clean Gravels (little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ greater than 4; $C_c = (D_{30})^2 / (D_{10} \times D_{30})$ between 1 and 3 Not meeting all gradation requirements for GW		
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines			
		Gravels with appreciable amount of fines	GM	d	Silty gravels, gravel-sand-silt mixtures	Atterberg Limits below "A" line or PI less than 4	Above "A" line with PI between 4 and 7 are borderline cases requiring dual symbols
				u		Atterberg Limits above "A" line with PI greater than 7	
			GC	Clayey gravels, gravel-sand-clay mixtures			
	Sands (More than half of coarse fraction is smaller than No. 4 sieve)	Clean Sands (little or no fines)	SW	Well graded sands, gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ greater than 6; $C_c = (D_{30})^2 / (D_{10} \times D_{30})$ between 1 and 3 Not meeting all gradation requirements for SW		
			SP	Poorly graded sands, little or no fines			
		Sands with appreciable amount of fines	SM	d	Silty sands, sand-silt mixtures	Atterberg Limits below "A" line or PI less than 4	Liquid Limits plotting between 10 and 30 with PI between 4 and 7 is a borderline case requiring dual symbols (CL-ML)
				u		Atterberg Limits above "A" line with PI greater than 7	
			SC	Clayey sands, sand-clay mixtures			
Fine Grained Soils (more than half of material < No. 200 sieve)	Silts and Clays (Liquid Limit < 50)	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	<div style="text-align: center;"> PLASTICITY CHART  </div>			
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean clays				
		OL	Organic silts and silty clays of low plasticity				
	Silts and Clays (Liquid Limit > 50)	MH	Inorganic silts, micaceous or diamaceous fine sandy or silty soils, elastic silts				
		CH	Inorganic clays of high plasticity, fat clays				
		OH	Organic clays of medium to high plasticity, organic silts				
	Highly Organic Soils	Pt	Peat and other highly organic soils				

Depending on percentage of fines (fraction smaller than No. 200 sieve), coarse grained soils are classified as follows:
 Less than 5%.....GW, GP, SW, SP
 More than 5% to 12%.....GM, GC, SM, SC
 5 to 12%.....Borderline case requiring dual symbols



An ISO 9001:2000
Certified Company

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Cadillac, MI 49601
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Fax: 231-775-3135
www.wilcox.us

Built on Quality -
continuously improving our
quality of service to meet
and exceed our
clients' expectations.

July 28, 2008

Mr. Brian Meier
CST Holdings, LLC
323 South Hale Street, Suite 100
Wheaton, Illinois 60187

**Re: Soil Boring & Rock Coring Investigation
Central States Tower Site No. KY-00-0816A – Stumps Run
+/- 220 Kees Branch
Grayson, Carter County, Kentucky
Wilcox Project No. 25036.00004.08**

Dear Mr. Meier:

We have completed the Soil Boring & Rock Coring Investigation for the proposed Central States Tower, Inc. 300-foot self support tower in Grayson, Carter County, Kentucky. This report presents the results of our soil boring/rock coring investigation and estimated soil and rock parameters to be used as a guideline in the design of the tower foundations.

This letter also presents the results of the analytical testing for the chloride and sulfide in the soil samples. The analytical testing was performed on a composite sample formed by thoroughly mixing portions of Sample Nos. S-1 through S-4 from Borings B-1 through B-3. The test results indicate the soil sample possessed a chloride content of 39 parts per million (ppm) and non-detect for sulfide content. A copy of the test results are appended to this letter.

We appreciate the opportunity to assist you and the design team on this project. If there are any questions, please do not hesitate to contact me at 231-775-7755.

Thank you very much for your use of our services.

Respectfully,

WILCOX PROFESSIONAL SERVICES, LLC

Arthur J. Krueger, P.E.
Project Manager

Enclosure

CLIENT NAME: APPLIED GEOTECHNICAL SERVICES, INC. PROJECT NAME/NO.: 08-1016
37637 FIVE MILE RD, #224
LIVONIA, MI 48154

DATE RECEIVED: 06/11/08 DATE ANALYZED: 06/18/08 DATE REPORTED: 06/20/08

ANALYZED BY: JL ALL RESULTS REPORTED IN ppmILLION

LAB NO./DESCRIPTION	RD L	SOIL	ppm
1314 SOIL CST SITE KY-00-0816A 08-1016 B-1-B-3 S-1-4 1-10'			
SULFIDE 4500-S2-F	20		ND
CHLORIDE 4500-CL-C	10		39

NOTE: "ND" DENOTES THAT ANALYTE RESULT IS BELOW THE REPORTED REGULATORY DERIVED TARGET
LIMIT OF DETECTION.

THOMAS S. MEGNA, PRESIDENT

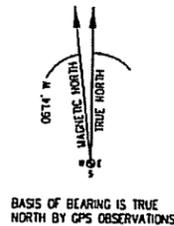
REFERENCES: 40 CFR PART 136. CURRENT EDITION. las

ALA GAJDA, LAB SUPERVISOR

THE TOWER LOCATION, AS SHOWN IN THE COORDINATES BELOW, HAVE A HORIZONTAL ACCURACY WITHIN ± 20 FEET AND A VERTICAL ACCURACY WITHIN ± 3 FEET.

LATITUDE: 38° 23' 48.27" N
 LONGITUDE: 83° 01' 09.20" W
 GROUND ELEVATION: 900' FEET (NAVD 88)

TOWER COORDINATES



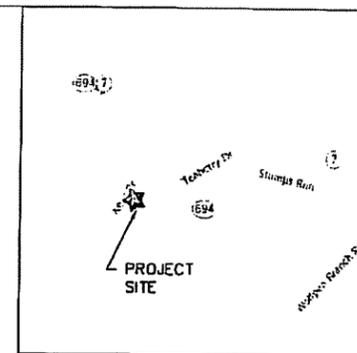
THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

Anthony J. Robinson 4-15-08
 ANTHONY J. ROBINSON, P.S. No. 3601 DATE
 BEARING BASIS: TRUE NORTH AS DETERMINED BY GPS OBSERVATION.

SITUATED IN THE CITY OF GRAYSON, CARTER COUNTY, AND STATE OF KENTUCKY

STATE OF KENTUCKY
 ANTHONY J. ROBINSON
 # 3601
 LICENSED PROFESSIONAL LAND SURVEYOR

CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD	CHD BRG.
C1	164.95'	75.00'	147.26'	126°01'14"	133.66'	N 19°42'38" E
C2	96.30'	175.00'	49.40'	31°31'40"	95.09'	S 81°30'55" E
C3	74.87'	100.00'	39.29'	42°53'43"	73.13'	N 87°11'56" W
C4	210.98'	125.00'	140.55'	98°42'17"	186.81'	S 38°01'46" E
C5	168.78'	100.00'	112.44'	98°42'17"	149.45'	S 38°01'46" E
C6	93.88'	125.00'	49.11'	42°53'43"	91.41'	N 87°11'56" W
C7	82.84'	150.00'	42.34'	31°31'40"	81.50'	S 81°30'55" E
C8	109.97'	50.00'	98.17'	126°01'13"	89.11'	N 19°42'38" E



LEGEND	
	EXISTING TRANSFORMER
	EXISTING TREE
	BENCHMARK
	IRON PIN SET
	IRON PIN FOUND
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER MANHOLE
	EXISTING WATER METER
	EXISTING PARKING METER
	EXISTING STREET SIGN
	EXISTING BILLBOARD & LARGE SIGNS
	EXISTING GUARDRAIL
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
	EXISTING UTILITY POLE WITH STREET LIGHT
	EXISTING GROUND GULLY WIRE
	EXISTING GAS VALVE
	EXISTING TRAFFIC SIGNAL POLE
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING ELEC. OR TELE. WH.
	EXISTING INLET
	EXISTING TRENCH DRAIN
	EXISTING STORM DRAIN
	EXISTING SANITARY
	EXISTING WATER MAIN
	EXISTING ELECTRIC WIRE
	EXISTING FENCE
	EXISTING CONCRETE
	EXISTING BUILDING
	PROPOSED
	EXISTING
	PROPOSED ELEVATION MARK
	MONUMENT BOX W/IRON PIN
	IRON PIPE FOUND

PROPERTY OWNERS:
 CHARLES & SUSAN KITCHEN
 330 KEES BRANCH
 GRAYSON, KENTUCKY 41143

GENERAL NOTES:
 NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE.
 FINISHED GRADE WILL MATCH EXISTING CONTOUR.
 THERE WILL BE NO CHANGE IN DRAINAGE PATTERN DUE TO THE PROPOSED INSTALLATION.
 NO SIGNIFICANT RUNOFF IS GENERATED BY THE PROPOSED INSTALLATION.
 NO HAZARDOUS MATERIALS WILL BE USED, PROCESSED OR STORED AT THE SITE.
 TOWER LIGHTING SHALL CONFORM TO FAA STANDARDS AS REQUIRED.
 ALL WORK SHALL CONFORM TO FAA & FCC REGULATIONS.

ZONING INFORMATION:
 SUBJECT PARCEL ZONING: NO ZONING (PER SITE PACKAGE)
 ADJACENT ZONING: NONE PROVIDED
 TOWER SETBACKS: (PER SITE PACKAGE)
 FRONT: N/A
 REAR: N/A
 SIDES: N/A

NOTIFY UTILITY COMPANIES BEFORE DIGGING
 THE LOCATION OF THE EXISTING UTILITIES, AS SHOWN ON THIS PLAN, ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY "KENTUCKY UNDERGROUND PROTECTION, INC." AT 1-800-752-6007 THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

FLOOD PLAIN INFORMATION
 SITE LIES WITHIN FLOOD ZONE "C" WHICH IS AN AREA OF MINIMAL FLOODING AS DETERMINED FROM THE NATIONAL FLOOD INSURANCE PROGRAM, COMMUNITY PANEL NUMBER 210050 0045 B, EFFECTIVE DATE FEBRUARY 15, 1984

THIS SURVEY HAS BEEN COMPLETED WITH THE BENEFIT OF A TITLE REPORT REVIEW FOR THE SUBJECT PARCEL. ALL COVENANTS AND AGREEMENTS OF RECORDS HAVE BEEN PLOTTED ON THIS SURVEY AS SHOWN.

FIRST AMERICAN TITLE INSURANCE COMPANY
 COMMITMENT No. BT-42915
 COMMITMENT DATE: MARCH 10, 2008

SCHEDULE B - SECTION II ITEMS:

(10) LEASE BETWEEN CENTRAL STATES TOWER HOLDINGS, LLC AND CHARLES KITCHEN AND SUE KITCHEN, RECORDED IN OFFICIAL RECORD BOOK 210, PG. 814. OPTION AND LEASE AGREEMENT FOR SUBJECT PARCEL - NOTHING TO PLOT ON SURVEY.

(11) LEASE BETWEEN COMMONWEALTH GAS CORPORATION AND CLYDE R. KEE AND FAYE H. KEE, RECORDED IN LEASE BOOK 23, PAGE 533, ASSIGNED TO JOHN W. NICHOLS AND EASTON OIL COMPANY IN LEASE BOOK 30, PG. 183. ILLEGIBLE COPY OF DOCUMENT - NOT ABLE TO DETERMINE EXTENTS OF LEASE AGREEMENT.

(12) EASEMENT AND RIGHT OF WAY GRANTED TO GRAYSON RURAL ELECTRIC COOPERATIVE CORPORATION, FROM FAYE KEE, RECORDED IN DEED BOOK 211, PG. 545. ITEM GRANTED RIGHT-OF-WAY RIGHTS ALONG PUBLIC HIGHWAY (NO WIDTH ESTABLISHED).

(13) EASEMENT AND RIGHT OF WAY GRANTED TO GRAYSON RURAL ELECTRIC COOPERATIVE CORPORATION, FROM CHARLES KITCHEN AND SUE KITCHEN, RECORDED IN DEED BOOK 211, PG. 674. ITEM GRANTED RIGHT-OF-WAY RIGHTS ALONG PUBLIC HIGHWAY (NO WIDTH ESTABLISHED).

(14) TITLE LIEN STATEMENT TO THE COMMERCIAL BANK OF GRAYSON, FROM CHARLES AND SUE KITCHEN, FILE No. 7001594. NOTHING TO PLOT ON SURVEY.

Legal Description for a Central States Tower, Inc. Lease Area
 Project No. 50,470
 April 8, 2008

Situated in the County of Carter and State of Kentucky, also known as being part of lands conveyed to Charles and Sue Kitchen by deed dated August 01, 1991 as recorded in Book 211, Page 58 of Carter County Court Clerk's Records further bounded and described as follows:

Commencing at an iron pin found and used at the Southeast corner of lands conveyed to Junius L. and Laura Ann Huffman by deed dated May 01, 1992 as recorded in Book 214, Page 713 of Carter County Court Clerk's Records;

Thence, bearing South 55°38'17" West, a distance of 512.92 feet to an iron pin set and the PRINCIPLE PLACE OF BEGINNING of the Lease Area herein described;

Thence, bearing South 21°46'33" West, a distance of 100.00 feet to an iron pin set;

Thence at a right angle, bearing North 68°13'27" West, a distance of 100.00 feet to an iron pin set;

Thence at a right angle, bearing North 21°46'33" East, a distance of 100.00 feet to an iron pin set;

Thence at a right angle, bearing South 68°13'27" East, a distance of 100.00 feet to an iron pin set and the PRINCIPLE PLACE OF BEGINNING, containing 0.2296 acres of land, more or less but subject to all legal highways and all covenants and agreements of record.

Bearings are based on True North as determined from GPS observations and are used herein to indicate angles only.

This legal description was prepared based on a survey under the supervision of Anthony J. Robinson, P.S. No. 3601 in April 2008.

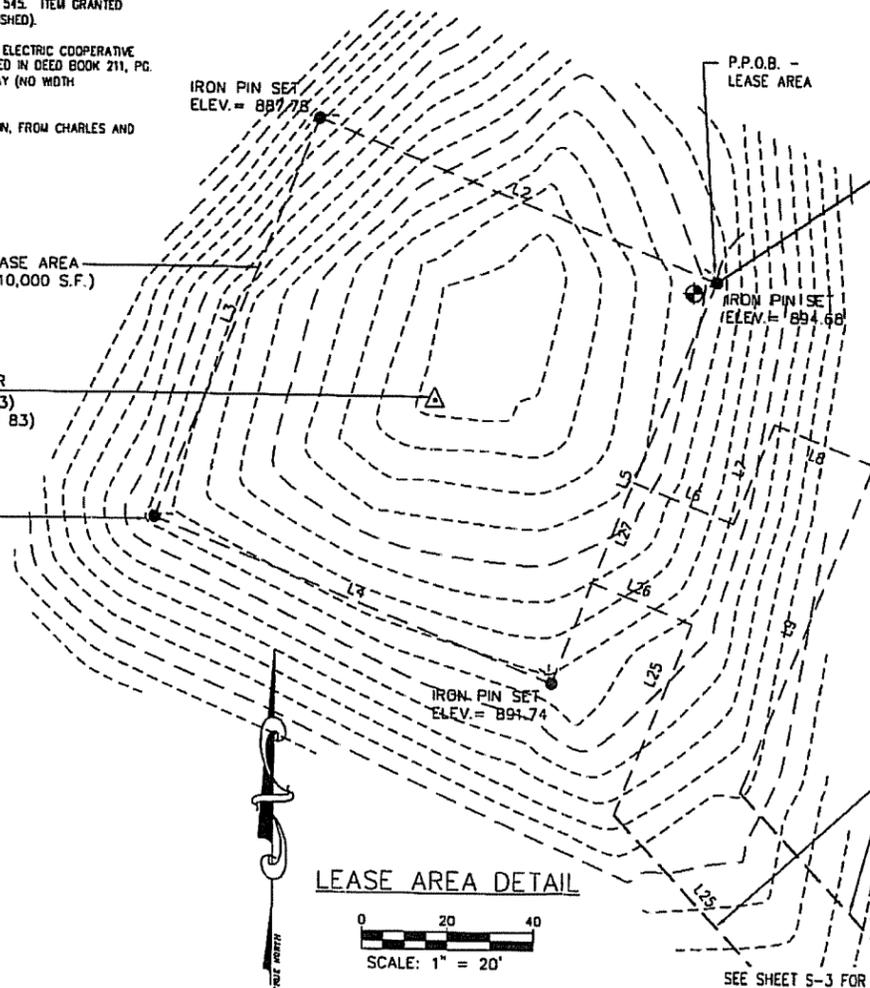
PROPOSED LEASE AREA
 100' X 100' (10,000 S.F.)

PROPOSED SELF SUPPORT TOWER
 LATITUDE: 38°23'48.27" N.(NAD83)
 LONGITUDE: 83°01'09.20" W.(NAD 83)
 SITE GROUND ELEVATION: 900'

IRON PIN SET
 ELEV. = 891.41

IRON PIN SET
 ELEV. = 894.74

IRON PIN SET AT THE NORTHEAST CORNER OF PROPOSED LEASE AREA
 ELEVATION = 894.68'



PROP. 25' W/OE ACCESS/UTILITY EASEMENT

SEE SHEET S-3 FOR CONTINUATION OF ACCESS/UTILITY EASEMENT

LINE TABLE		
LINE	LENGTH	BEARING
L1	512.92'	S 55°38'17" W
L2	100.00'	N 68°13'27" W
L3	100.00'	S 21°46'33" W
L4	100.00'	S 68°13'27" E
L5	100.00'	N 21°46'33" E
L6	25.00'	S 68°13'27" E
L7	25.00'	N 21°46'33" E
L8	25.00'	S 68°13'27" E
L9	81.30'	S 21°46'33" W
L10	124.81'	S 43°17'58" E
L11	45.14'	S 82°43'15" W
L12	85.69'	N 65°45'05" W
L13	43.70'	S 71°21'12" W
L14	176.10'	N 86°22'55" W
L15	79.83'	N 10°19'23" E
L16	117.76'	N 00°39'01" E
L17	72.21'	N 28°24'14" E
L18	118.24'	S 00°39'01" W
L19	81.95'	S 10°19'23" W
L20	171.18'	S 86°22'55" E
L21	38.78'	N 71°21'12" E
L22	85.69'	S 65°45'05" E
L23	45.14'	N 82°43'15" E
L24	140.76'	N 43°17'58" W
L25	47.25'	N 21°46'33" E
L26	25.00'	N 68°13'27" W
L27	25.00'	N 21°46'33" E
L28	149.69'	N 08°08'56" E
L29	215.79'	S 08°08'56" W

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

MAX ENGINEERING, LLC
 9000 SW FREEWAY, Ste # 410
 Houston, Texas 77074
 Phone (713) 773-2525
 Fax (713) 773-2558



CENTRAL STATES TOWER, INC.
 323 SOUTH HALE STREET
 SUITE 100
 WHEATON, IL 60187

SITE NAME: STUMPS RUN
SITE NO.: KY-00-0816A
 SITE ADDRESS: 220 KEES BRANCH
 GRAYSON, KENTUCKY, 41143

- PLAN PREPARED BY -
H.G. ENGINEERING AND SURVEYING, INC.

 705-F LAKEVIEW PLAZA BLVD.
 WORTHINGTON, OH 43085
 (614) 841-0053 (PHONE)
 (614) 841-0170 (FAX)

NO.	DATE	REVISIONS	BY	CHK	APP'D
C	04/11/08	TITLE COMMENTS		DP	AR
B	04/09/08	REVISED ACCESS/UTILITY ESM'T.		DP	AR
A	04/08/08	FINAL SURVEY SUBMITTED		DP	AR

SHEET S-1		
SURVEY PLAN		
SCALE	CHECKED BY:	DRAWN:
AS SHOWN	DAP	PRE
JOB NO.	ENG. NO.	REV
50470	50470_Master	C

PARENT PARCEL LEGAL DESCRIPTION

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:
LYING AND BEING IN CARTER COUNTY, KENTUCKY AND MORE PARTICULARLY DESCRIBED AS FOLLOWS.

TRACT No. ONE: BEGINNING AT A STONE IN THE OLD FIELD IN THE DIVISION LINE OF THE ALEXANDER BROWN SURVEY OF 16,000 ACRES SIXTEEN THOUSAND ACRES AND ITS INTERSECTION WITH LINE OF RIGGS TRACT NOW THE IRON HILLS; THENCE WITH LINE OF SAID IRON HILLS TRACT N.83 E. 23 POLES TO A SMALL WHITE OAK, BLACK OAK AND SOURWOOD ON THE EAST BANK OF BRANCH; THENCE N.7W 160 POLES TO TWO BLACK OAKS AND WHITE OAK SAPLINGS ON A RIDGE; THENCE S.84W 9 POLES TO A BLACK JACK AND HICKORY SAPLING; THENCE N.10W 118 POLES TO A WHITE OAK STUMP ON WEST BANK OF BRANCH; THENCE N.9E 58 POLES TO A STAKE IN FENCE CORNER TO B. NEWMAN LANDS; THENCE WITH HIS LINE S.45E 29 POLES TO A WHITE OAK STUMP ON A STEEP HILL SIDE; THENCE UP POINT S.2W 48 POLES TO A WHITE OAK; THENCE 23E 22 POLES TO FOUR WHITE OAK SAPLINGS; THENCE 68 E 14 POLES TO A CHESTNUT OAK; THENCE N.86E 26 POLES TO A SOURWOOD AND OAK; THENCE S.80E 63 POLES TO A STAKE CORNER TO TERRY RAMEYS; THENCE WITH HIS LINE S.30W 84 POLES TO A LARGE BLACK OAK NEAR HEAD OF DRAIN; THENCE S.60E 84 POLES TO A STONE IN ROAD A CORNER TO J.G. HAYDEN; THENCE WITH HIS LINE UP STUMP RUN S.20W 42 POLES TO A STONE AT FORKS OF BRANCH; THENCE S.10E 68 POLES TO A STONE IN MARY A. EVERMAN LINE; THENCE WITH HER LINE UP HILL N.82W 47 POLES TO TWO BLACK JACKS ON TOP OF RIDGE; THENCE S.37W 15 POLES TO LARGE PINE (NOW CUT DOWN); THENCE WITH CENTER OF RIDGE S.50W 118 POLES TO A DOUBLE DOGWOOD AND CHESTNUT OAK; THENCE E.14W 9 POLES TO A BLACK JACK; THENCE S.28W 11 POLES TO A WHITE OAK SAPLING; THENCE S.28E 12 POLES TO THREE BLACK JACKS; THENCE S.19E 15 POLES TO A DOGWOOD; THENCE S.1W 32 POLES TO A LARGE PINE STUMP; THENCE S.54W 21 POLES TO THREE BLACK JACKS IN SAID DIVISION LINE; THENCE WITH SAID DIVISION LINE N.44W 110 POLES TO THE BEGINNING CONTAINING (179) ACRES AND DID CONTAIN (180) ACRES ONE ACRE HERETOFORE BEING SOLD TO LUTHER HUFFMAN.

TRACT No. TWO: BEGINNING AT BLACK OAK CORNER TO OR BETWEEN THE LAND OF PARTY OF THE FIRST PART, AND JOHN ROBERTS; THENCE A NORTHERLY COURSE WITH THE RIDGE AND A ROAD TO THE LANDS OF A.T. HALL AT A BLACK OAK; THENCE WITH HIS LINE AN EASTERLY COURSE TO THE LANDS OF JOHN HALL, AT A CORNER OF LANDS OF PETER KEE, JOHN HALL AND THE PARTY OF THE FIRST PART HEREIN; THEN A SOUTHERLY COURSE AND THE DIVIDING RIDGE TO A BLACK OAK CORNER TO THE LANDS OF JOHN ROBERTS AND THE PARTY OF THE FIRST PART; THENCE A SOUTHERLY COURSE WITH THE RIDGE TO THE BEGINNING CONTAINING SIXTEEN (16) ACRE MORE OR LESS.

TRACT No. THREE: BEGINNING AT A BLACK OAK HALLS CORNER; THENCE N.82E 25 POLES TO A DOUBLE BLACK OAK; THENCE N.11W 103 POLES TO A STAKE AND SYCAMORE; THENCE UP THE BRANCH S.14W 5 POLES TO A WHITE OAK; S.11W 4 POLES TO A WHITE OAK; THENCE S.4E 20 POLES; THENCE S.61W 9 POLES TO A MULBERRY; THENCE S.18E 41 POLES TO A BLACK OAK; THENCE S.3E 8 POLES; S.9W 6 POLES TO A SYCAMORE; S.28W 18 POLES TO A CUM; S.25W 23 POLES TO A BLACK OAK; S.10-14 POLES TO THE BEGINNING CONTAINING 7 ACRES MORE OR LESS.

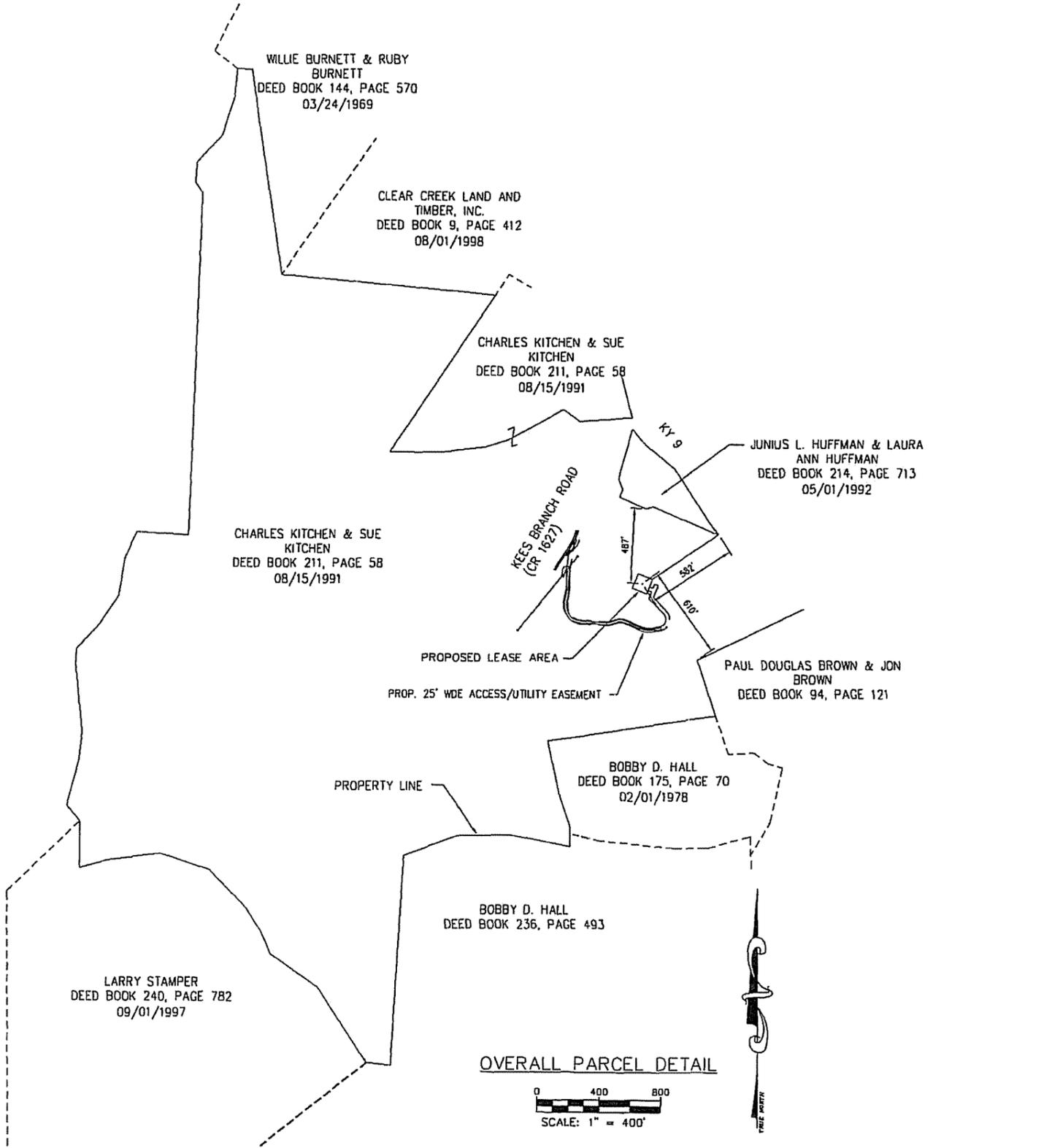
TRACT No. FOUR: BEGINNING AT A STONE IN THE COUNTY ROAD ON STUMPS RUN IN THE WILLIAM NEWMAN LINE; THENCE S.23E 20 POLES TO A STAKE IN THE CENTER OF THE ROAD; S.48E 10 POLES; S.64E 18 POLES; S.54E 37 POLES; S.63E LEAVING THE COUNTY ROAD 14 POLES TO A STONE AT THE FOOT OF POINT; THENCE SOUTHWESTERLY COURSE 68 STEPS TO THE FORKS OF THE BRANCH; THENCE WITH THE BRANCH A SOUTHEASTERLY COURSE 225 STEPS TO A SET STONE ON THE BANK OF THE BRANCH; THENCE A WESTERLY COURSE 10 STEPS TO THE ROBERTS AND BROWN CORNER; THENCE WITH ROBERTS AND BROWN LINE S.63W 50 POLES TO A LARGE LEANING WHITE OAK ON TOP OF THE RIDGE; THENCE LEAVING THE LINE N.60W 144 POLES TO A LARGE BLACK OAK NEAR THE HEAD OF A RAVINE; N.30E 84 POLES TO A STAKE IN THE WILLIAM NEWMAN LINE; AND WITH SAID LINE S.63E 13 POLES TO THE BEGINNING, CONTAINING 69 ACRES, PLUS OR MINUS.

TRACT No. FIVE: BEGINNING AT A STAKE IN THE BRANCH CORNER TO GREGORY, EVERMAN, FOSSETT; THENCE A NORTHEAST COURSE TO A BLACK GUM IN THE J.B. ROBERTS LINE; THENCE N.3E 30 POLES TO TWO CHESTNUT OAKS; THENCE N.70W 20 POLES TO TWO SMALL BLACK OAK BUSHES; THENCE N.14W 35 POLES TO A LARGE LEANING WHITE OAK; THENCE WITH THE RAMEY LINE N.6W 60 POLES TO A STONE ON STUMPS RUN, CORNER TO W.E. GREGORY; THENCE WITH GREGORY LINE S.20W 42 POLES TO A STONE AT FORKS BRANCH; THENCE S.10E 68 POLES TO THE BEGINNING, CONTAINING 50 ACRES, PLUS OR MINUS.

TRACT No. SIX: LYING ON THE WATERS OF STUMPS RUN, A TRIBUTARY OF TYGARTS CREEK, IN CARTER COUNTY, KENTUCKY, BEGINNING AT A SET STONE IN THE OLD COUNTY ROAD (NOW ABANDONED) IN THE W.M. NEWMAN LINE AND A CORNER OF THE WAYNE PARSONS FARM; THENCE S.23E 20 POLES TO A STAKE IN THE ROAD; S.48E 10 POLES; S.42E 11 POLES TO A POPLAR; S.28E 14 POLES TO A STAKE ON BANK OF BRANCH; S.30E 15 POLES AND 11 LINKS; S.63E 6 POLES TO THE END OF A CULVERT UNDER STATE HIGHWAY No. 7; THENCE WITH SAID HIGHWAY N.29W 49 POLES TO A REACH TREE; THENCE N.38W 16 POLES TO AN ASH; N.43W 15 POLES TO A STAKE IN THE NEWMAN LINE; THENCE WITH SAID LINE S.41W 4 POLES TO THE BEGINNING, CONTAINING ONE AND ONE-HALF ACRES, PLUS OR MINUS.

THERE IS EXCEPTED FROM TRACT 4, 5 AND 6, 5 1/2 ACRES CONVEYED TO THE COMMONWEALTH OF KENTUCKY.
THERE IS ALSO EXCEPTED AND EXCLUDED FROM THE SAID BOUNDARIES OF TRACT 4, 5 AND 6, AND NOT HEREBY CONVEYED, THE TWO TRACTS OF LAND HERETOFORE CONVEYED, NAMELY, ABOUT 25 ACRES CONVEYED TO CECIL COUNTS AND DEXTER COUNTS, HIS WIFE TO FRED KITCHEN BY DEED DATED MAY 3, 1947, AND RECORDED IN DEED BOOK 74, PAGE 386, AND ABOUT 25 ACRES CONVEYED BY CECIL COUNTS AND DEXTER COUNTS, HIS WIFE, TO CARL EVERMAN BY DEED DATED OCTOBER 21, 1944, AND RECORDED IN DEED BOOK 68 PAGE 12, CARTER COUNTY, KENTUCKY DEED RECORDS, TO WHICH EXCLUSIONS REFERENCE IS MADE TO SAID DEEDS.

TRACT No. SEVEN: A TRACT OF LAND ON THE WEST FORK OF STUMPS RUN, A TRIBUTARY OF TYGARTS CREEK, IN CARTER COUNTY, KENTUCKY, TO WIT:
BEGINNING AT A SMALL WHITE OAK, SOURWOOD AND BLACK OAK STANDING ON THE EAST SIDE OF A BRANCH, A CORNER TO THE LAND OF PETER KEYS, THEN RUNNING WITH HIS LINE N.7E 147 POLES TO A BLACK OAK STANDING ON TOP OF A RIDGE AT A ROAD, THEN RUNNING WITH SAID RIDGE AND ROAD S.45W 15 POLES TO TWO BLACK OAKS, S.78W 20 POLES, S.51W 8 POLES TO TWO BLACK OAKS, S.78W 20 POLES, S.51W 8 POLES TO TWO BLACK OAKS, S.78W 20 POLES TO A BLACK OAK, S.29W 9 POLES TO A BLACK OAK, S.13W 21 POLES TO A BLACK OAK, S.43W 12 POLES TO A BLACK OAK, S.29W 7 POLES TO THREE BLACK OAKS FROM ONE ROOT, S.1E 9 POLES TO A BLACK OAK, S.16E 10 POLES TO A POST OAK; S.2E 19 POLES TO A BLACK OAK; S.27W 19 POLES TO A BLACK OAK; S. 32W 7 POLES TO A BLACK OAK; S.70E 16 POLES TO A STONE, N.76E 11 POLES TO A SMALL WHITE OAK; S.51 E 16 POLES TO A CHESTNUT OAK AND BLACK OAK, S.25E 21 POLES TO A FORKED CHESTNUT STANDING ON THE EAST BANK OF THE ROAD, THEN LEAVING THE ROAD S.86E 14 POLES TO A BUNCH OF POPLAR SPROUTS, N.89E 44 POLES TO THE BEGINNING CONTAINING 61 1/2 ACRES MORE OR LESS.
SAVING AND EXCEPTING AN OUT CONVEYANCE OUT FROM THE ABOVE DESCRIBED TRACTS 4,5 AND 6 OF RECORD IN DEED BOOK 212, PAGE 599



MAX ENGINEERING, LLC
9000 SW FREEWAY, Ste # 1410
Houston, Texas 77074
Phone (713) 773-2525
Fax (713) 773-2558

CST CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE NAME: STUMPS RUN
SITE NO.: KY-00-0816A
SITE ADDRESS: 220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

- PLAN PREPARED BY -
HLG, ENGINEERING AND SURVEYING, INC.
705-F LAKEVIEW PLAZA BLVD.
WORTHINGTON, OH 43085
(614) 841-0053 (PHONE)
(614) 841-0170 (FAX)

NO.	DATE	REVISIONS	BY	CHK	APP'D
C.	04/11/08	TITLE COMMENTS		DP	AR
B.	04/09/08	REVISED ACCESS/UTILITY ESM'T.		DP	AR
A.	04/08/08	FINAL SURVEY SUBMITTED		DP	AR

SCALE	AS SHOWN	CHECKED BY:	DAP	DRAWN:	PRE

SHEET S-2

SURVEY PLAN

JOB NO.	DWG. NO.	REV
50470	50470_Master	c

Legal Description for a 25-Foot Access and Utility Easement
 Project No. 50470
 Revised April 9, 2008

Situated in the County of Carter and State of Kentucky, also known as being part of lands conveyed to Charles and Sue Kilchen by deed dated August 01, 1991 as recorded in Book 211, Page 58 of Carter County Court Clerk's Records further bounded and described as follows:

Commencing at an iron pin found and used at the Southeast corner of lands conveyed to Junius L. and Laura Ann Hullman by deed dated May 01, 1992 as recorded in Book 214, Page 713 of Carter County Court Clerk's Records;

Thence, bearing South 55°38'17" West, a distance of 512.92 feet to an Northeast corner of a Central States Tower, Inc. Lease Area;

Thence along the Eastern line of said Lease Area, bearing South 21°46'33" West, a distance of 50.00 feet to a point thereon and the PRINCIPLE PLACE OF BEGINNING of the Access and Utility Easement herein described;

Thence at a right angle, bearing South 68°13'27" East, a distance of 25.00 feet to a point;

Thence at a right angle, bearing North 21°46'33" East, a distance of 25.00 feet to a point;

Thence at a right angle, bearing South 68°13'27" East, a distance of 25.00 feet to a point;

Thence at a right angle, bearing South 21°46'33" West, a distance of 81.30 feet to a point;

Thence, bearing South 43°17'58" East, a distance of 124.81 feet to a point;

Thence along a tangent curve to the right with a radius of 75.00 feet, a tangent length of 147.26 feet, the chord of which bears South 19°42'38" West for a distance of 133.66 feet, along said arc for a distance of 164.96 feet to a point;

Thence, bearing South 82°43'15" West, a distance of 45.14 feet to a point;

Thence along a tangent curve to the right with a radius of 175.00 feet, a tangent length of 49.40 feet, the chord of which bears North 81°30'55" West for a distance of 95.09 feet, along said arc for a distance of 96.30 feet to a point;

Thence, bearing North 65°45'05" West, a distance of 85.69 feet to a point;

Thence along a tangent curve to the left with a radius of 100.00 feet, a tangent length of 39.29 feet, the chord of which bears North 87°11'56" West for a distance of 73.13 feet, along said arc for a distance of 74.87 feet to a point;

Thence, bearing South 71°21'12" West, a distance of 43.70 feet to a point;

Thence, bearing North 85°22'55" West, a distance of 176.10 feet to a point;

Thence along a tangent curve to the right with a radius of 125.00 feet, a tangent length of 140.56 feet, the chord of which bears North 38°01'46" West for a distance of 186.81 feet, along said arc for a distance of 210.98 feet to a point;

Thence, bearing North 10°19'23" East, a distance of 79.83 feet to a point;

Thence, bearing North 00°39'01" East, a distance of 117.76 feet to a point;

Thence, bearing North 08°08'56" East, a distance of 149.69 feet to a point on the edge of an existing gravel road, Kees Branch Road (CR 1627);

Thence with the edge of an existing gravel road, Kees Branch Road, bearing North 28°24'14" East, a distance of 72.21 feet to a point thereon;

Thence, bearing South 08°08'56" West, a distance of 215.79 feet to a point;

Thence, bearing South 00°39'01" West, a distance of 118.24 feet to a point;

Thence, bearing South 10°19'23" West, a distance of 81.95 feet to a point;

Thence along a tangent curve to the left with a radius of 100.00 feet, a tangent length of 112.44 feet, the chord of which bears South 38°01'46" East for a distance of 149.45 feet, along said arc for a distance of 168.78 feet to a point;

Thence, bearing South 86°22'55" East, a distance of 171.18 feet to a point;

Thence, bearing North 71°21'12" East, a distance of 38.78 feet to a point;

Thence along a tangent curve to the right with a radius of 125.00 feet, a tangent length of 49.11 feet, the chord of which bears South 87°11'56" East for a distance of 91.41 feet, along said arc for a distance of 93.56 feet to a point;

Thence, bearing South 65°45'05" East, a distance of 85.69 feet to a point;

Thence along a tangent curve to the left with a radius of 150.00 feet, a tangent length of 42.34 feet, the chord of which bears South 81°30'55" East for a distance of 81.50 feet, along said arc for a distance of 82.54 feet to a point;

Thence, bearing North 82°43'15" East, a distance of 45.14 feet to a point;

Thence along a tangent curve to the left with a radius of 50.00 feet, a tangent length of 98.17 feet, the chord of which bears North 19°42'38" East for a distance of 89.11 feet, along said arc for a distance of 109.97 feet to a point;

Thence, bearing North 43°17'58" West, a distance of 140.76 feet to a point;

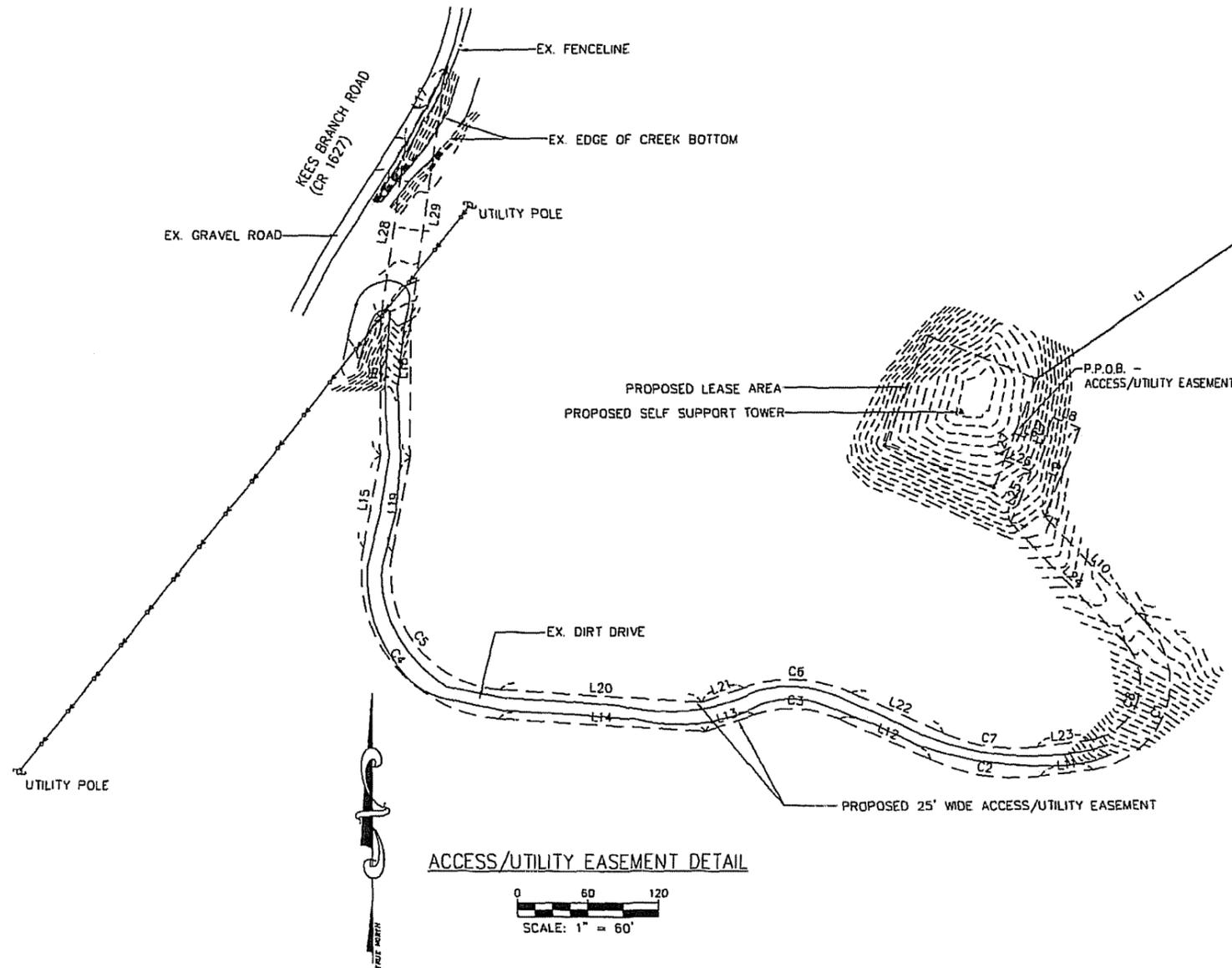
Thence at a right angle, bearing North 21°46'33" East, a distance of 47.25 feet to a point;

Thence at a right angle, bearing North 68°13'27" West, a distance of 25.00 feet to a point;

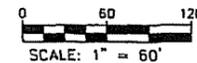
Thence at a right angle, bearing North 21°46'33" East, a distance of 25.00 feet to a point on the Eastern line of aforesaid Central States Tower, Inc. Lease Area and the PRINCIPLE PLACE OF BEGINNING, containing 0.8209 acres of land, intending to be a strip of land 25-foot wide to be used for access and utility purposes, more or less but subject to all legal highways and all covenants and agreements of record.

Bearings are based on True North as determined from GPS observations and are used herein to indicate angles only.

This legal description was prepared based on a survey under the supervision of Anthony J. Robinson, P.S. No. 3601 in April 2008.



ACCESS/UTILITY EASEMENT DETAIL



MAX ENGINEERING, LLC
 9000 SW FREEWAY, Ste # 410
 Houston, Texas 77074
 Phone (713) 773-2525
 Fax (713) 773-2558



CENTRAL STATES TOWER, INC.
 323 SOUTH MALE STREET
 SUITE 100
 WHEATON, IL 60187

SITE NAME: STUMPS RUN
SITE NO.: KY-00-0816A
 SITE ADDRESS: 220 KEES BRANCH
 GRAYSON, KENTUCKY, 41143

- PLAN PREPARED BY -

HLG, ENGINEERING AND SURVEYING, INC.



705-F LAKEVIEW PLAZA BLVD.
 WORTHINGTON, OH 43085
 (614) 841-0053 (PHONE)
 (614) 841-0170 (FAX)

NO.	DATE	REVISIONS	BY	CHK	APP'D
C.	04/11/08	TITLE COMMENTS	DP	AR	
B.	04/09/08	REVISED ACCESS/UTILITY ESM'T.	DP	AR	
A.	04/08/08	FINAL SURVEY SUBMITTED	DP	AR	

SCALE	AS SHOWN	CHECKED BY:	DAP	DRAWN:	PRE
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SHEET 5-3

SURVEY PLAN

JOB NO.	DWG. NO.	REV
50470	50470_Master	C



SITE No: KY-00-0816A
SITE NAME: STUMPS RUN

AT&T Site No: WV312A
AT&T Site Name: CST

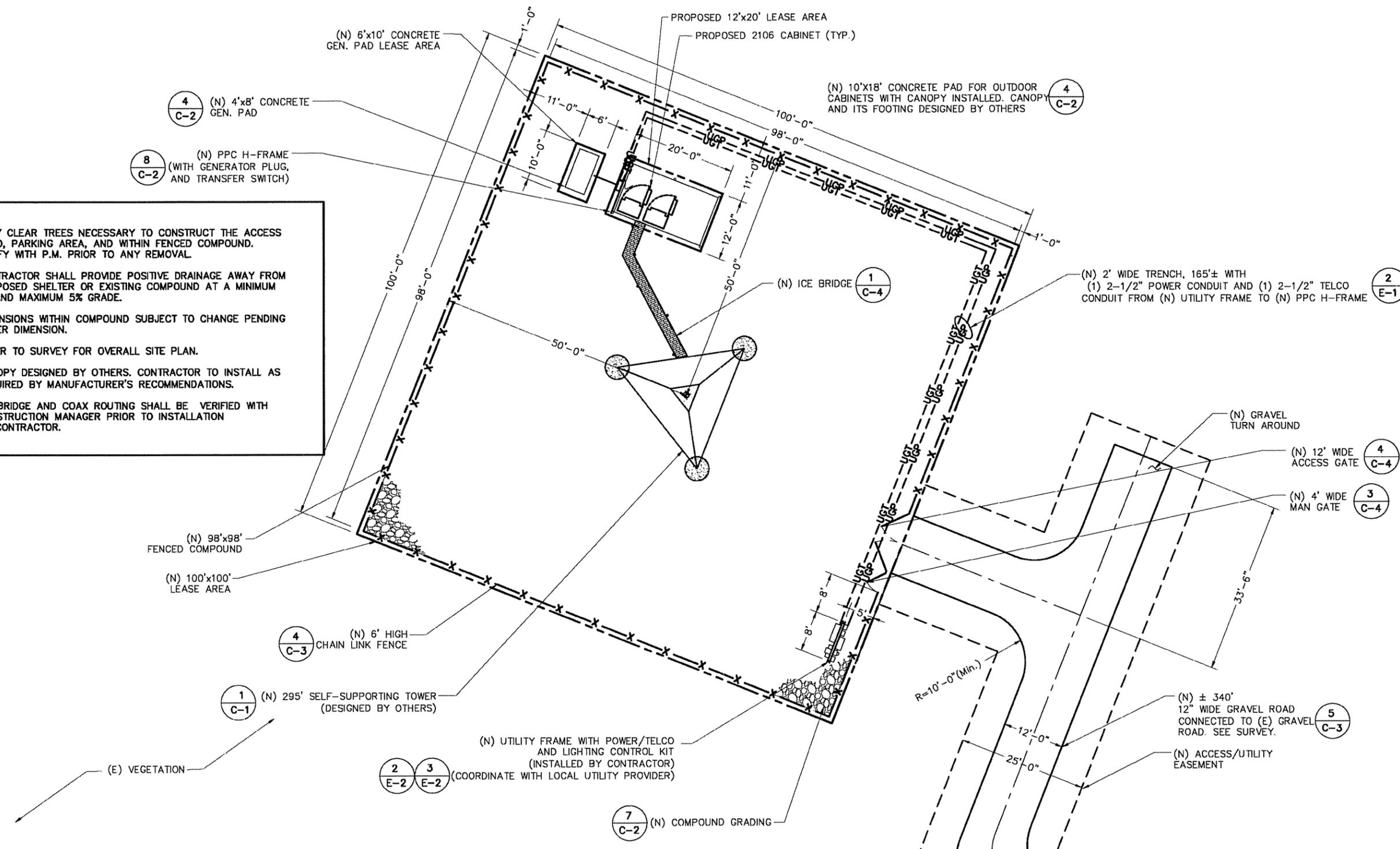
DRAWING INDEX		REV	ARCHITECT/ENGINEER	SURVEYOR	PROJECT INFORMATION	
T-1	TITLE SHEET	1	MAX ENGINEERING, LLC 9000 SW FREEWAY, STE # 410 HOUSTON, TX 77074 PHONE: (713) 773-2525 FAX: (713) 773-2558	HLG, ENGINEERING AND SURVEYING, INC. 705-F LAKEVIEW PLAZA BLVD. WORTHINGTON, OH 43085 PHONE: (614) 841-0053 FAX: (614) 841-0170	SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY	
S-1 & S-2	SURVEY (BY OTHERS) 2 SHEETS	1			TYPE OF CONSTRUCTION: PROPOSED 295' SELF-SUPPORTING TOWER	
P-1	ENLARGED SITE PLAN	1			SITE ADDRESS: 220 KEES BRANCH GRAYSON, KENTUCKY, 41143	
C-1	TOWER ELEVATION & DETAILS	1			TOWER LOCATION: LATITUDE: N 38° 23' 48.27" (NAD 83) (FROM SURVEY DRAWING BY HLG, ENGINEERING AND SURVEYING, LLC, DRAWING No. 50470) LONGITUDE: W 83° 01' 03.20" (NAD 83) GROUND ELEVATION (AMSL): 903' (NAVD 83)	
C-2	FOUNDATION PLAN & DETAILS	1			SQUARE FOOTAGE: PROPOSED LEASE AREA 10,000 SQ. FT.	
C-3	ICE BRIDGE & FENCE DETAILS	1			PROPERTY OWNER: CHARLES AND SUE KITCHEN 330 KEES BRANCH GRAYSON, KY 41143 TEL: (606) 474-9528	
C-4	GENERAL NOTES	0			PARCEL NUMBER (TAX ID) _____	
E-1	ELECTRICAL NOTES AND DETAILS	1			OCCUPANT LOAD UNOCCUPIED	
E-2	SINGLE LINE DIAGRAM & DETAILS	1			PARKING REQUIREMENTS: ADDITIONAL PARKING REQUIRED: NONE EXISTING PARKING MODIFICATIONS: NONE REQUIRED	
E-2A	RF CONFIGURATION & COLOR CODE	0			NOTES CONCRETE AND REINFORCING STEEL NOTES..... (SEE PAGE C-5) APPLICABLE BUILDING CODES AND STANDARDS..... (SEE PAGE C-5) SITE WORK GENERAL NOTES..... (SEE PAGE C-5) STRUCTURAL STEEL NOTES..... (SEE PAGE C-5) GROUNDING NOTES..... (SEE PAGE E-5) ELECTRICAL INSTALLATION NOTES..... (SEE PAGE E-1) GENERAL NOTES..... (SEE PAGE C-5)	
E-2B	COAX COLOR CODING	0				
E-3	SINGLE LINE DIAGRAM & DETAILS	1				
E-4	GROUNDING & ELEVATION DETAILS	1				
E-5	GROUNDING PLAN AND NOTES	1				
REF	CANOPY (DESIGN BY OTHER)	-				
NOTES			VICINITY MAP			
AT&T COMPLIANCE: SIGNATURE: _____ DATE: _____ AT&T CONSTRUCTION: SIGNATURE: _____ DATE: _____ AT&T RF ENGINEER: SIGNATURE: _____ DATE: _____ TURKEY CONSTRUCTION: SIGNATURE: _____ DATE: _____			DIRECTIONS: DEPART GRAYSON SR-1 (SR-7) (NORTH) 0.3 MILE. TURN LEFT (WEST) ONTO SR-9 5.6 MILES. TURN LEFT (SOUTH-WEST) ONTO KEES BRANCH 2 MILE. TURN LEFT (EAST) ONTO LOCAL ROAD (S) .01 MILE.			



CALL BEFORE YOU DIG,
DRILL OR BLAST!
WEST VIRGINIA LAW REQUIRES AN
HOURS NOTICE FOR CONSTRUCTION
PHASE AND 10 DAYS IN DESIGN STAGE
MISS UTILITY OF WEST VIRGINIA, INC.
1-800-245-4848

 MAX ENGINEERING, LLC 8000 SW FREEWAY, Ste # 410 Houston, Texas 77074 Phone (713) 773-2525 Fax (713) 773-2558	 CENTRAL STATES TOWER, INC. 323 SOUTH HALE STREET SUITE 100 WHEATON, IL 60187	SITE No: KY-00-0816A SITE NAME: STUMPS RUN 220 KEES BRANCH GRAYSON, KENTUCKY, 41143	NO. DATE REVISIONS BY CHK APP'D	SHEET TITLE TITLE SHEET SHEET NUMBER T-1
			1 07/24/09 PER CLIENT'S RECOMMENDATION HJ VD HW	
			0 03/09/08 FOR CONSTRUCTION HJ VD HW	
SCALE AS SHOWN DESIGNED BY KC DRAWN BY DW			A 04/23/08 FOR REVIEW HJ VD HW	

- NOTES:**
- ONLY CLEAR TREES NECESSARY TO CONSTRUCT THE ACCESS ROAD, PARKING AREA, AND WITHIN FENCED COMPOUND. VERIFY WITH P.M. PRIOR TO ANY REMOVAL.
 - CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM PROPOSED SHELTER OR EXISTING COMPOUND AT A MINIMUM 1% AND MAXIMUM 5% GRADE.
 - DIMENSIONS WITHIN COMPOUND SUBJECT TO CHANGE PENDING TOWER DIMENSION.
 - REFER TO SURVEY FOR OVERALL SITE PLAN.
 - CANOPY DESIGNED BY OTHERS. CONTRACTOR TO INSTALL AS REQUIRED BY MANUFACTURER'S RECOMMENDATIONS.
 - ICE BRIDGE AND COAX ROUTING SHALL BE VERIFIED WITH CONSTRUCTION MANAGER PRIOR TO INSTALLATION BY CONTRACTOR.



1 ENLARGE SITE PLAN
 SCALE: 1" = 20'-0" (11"x17" SIZE)
 1" = 10'-0" (24"x36" SIZE)



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(CST) CENTRAL STATES TOWER, INC.
 323 SOUTH HALE STREET
 SUITE 100
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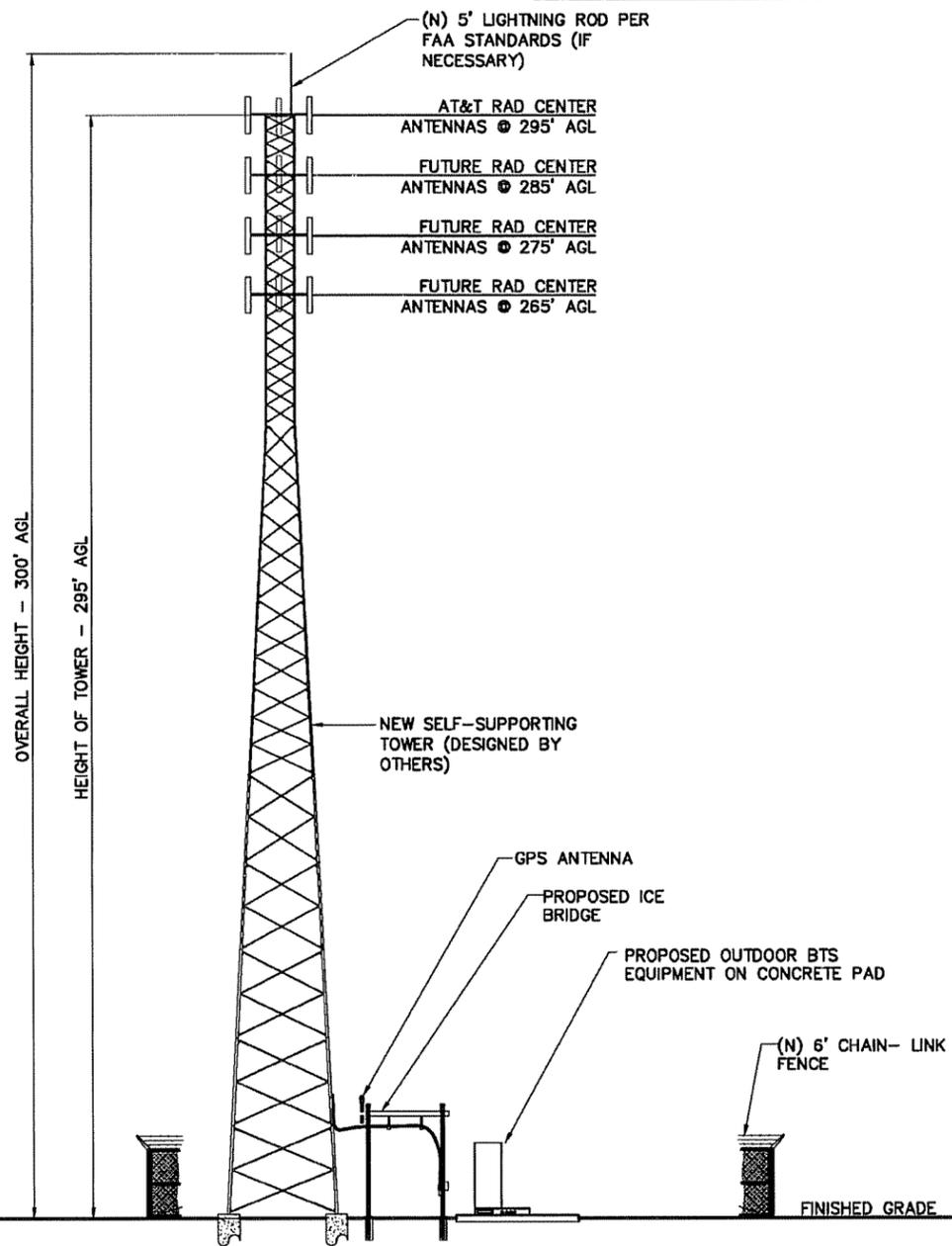
SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
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0	05/08/08	FOR CONSTRUCTION	HD	VD	HM
A	04/23/08	FOR REVIEW	HD	VD	HM

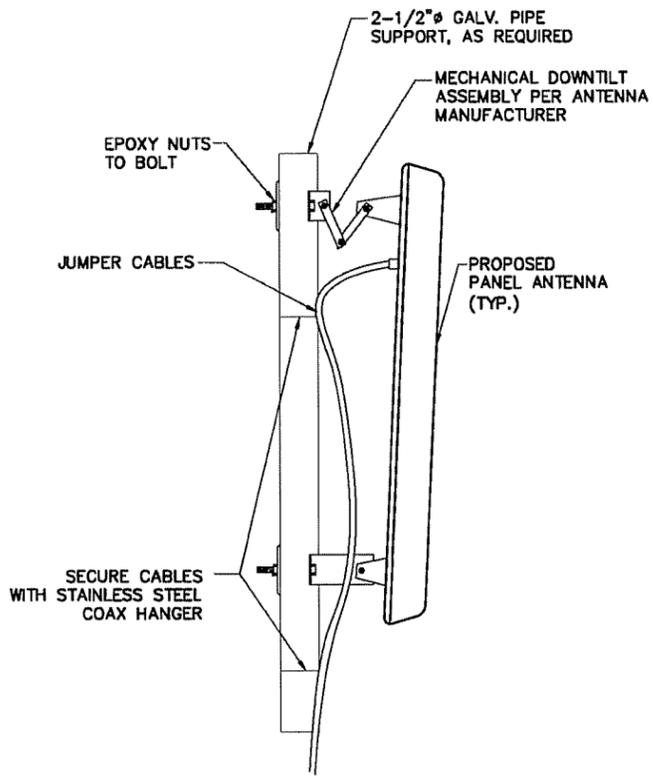
SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE	ENLARGE SITE PLAN
SHEET NUMBER	P-1

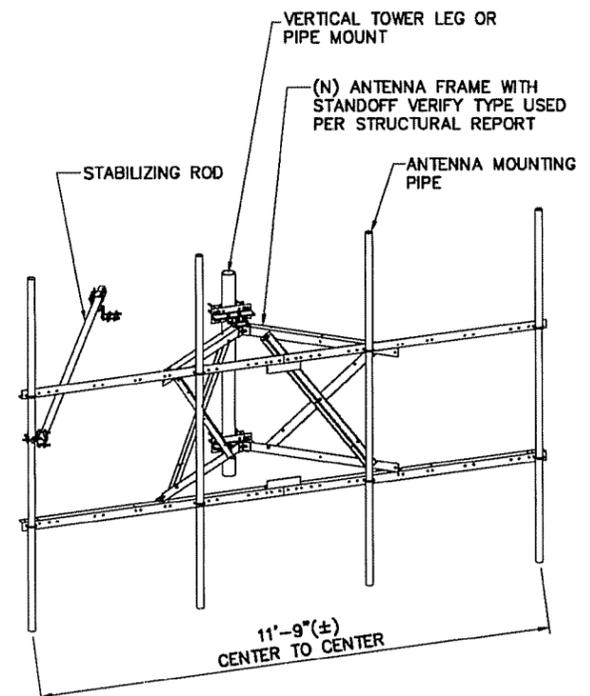
ANALYSIS AND DESIGN OF TOWER AND FOUNDATION BY OTHERS. REFER TO APPROPRIATE SHEETS FOR MORE INFORMATION. NO ERECTION OR MODIFICATION OF TOWER AND FOUNDATION SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER



1 TOWER ELEVATION
N.T.S.

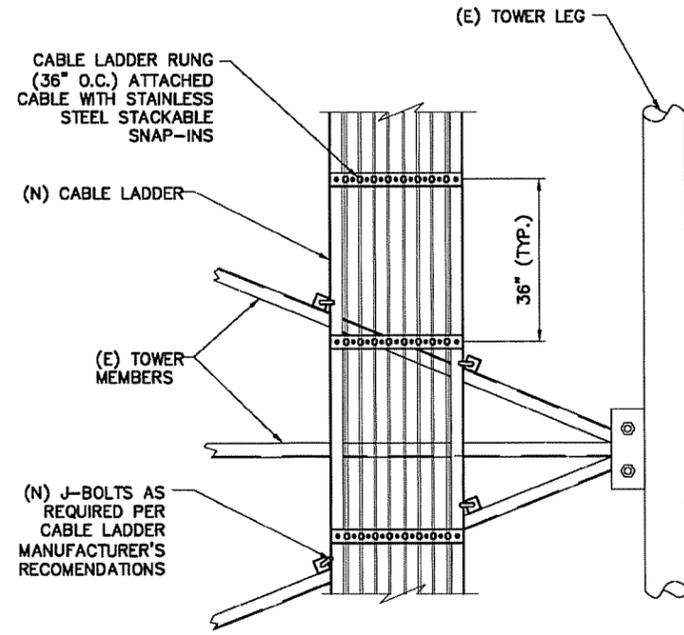


2 ANTENNA MOUNTING DETAILS
N.T.S.

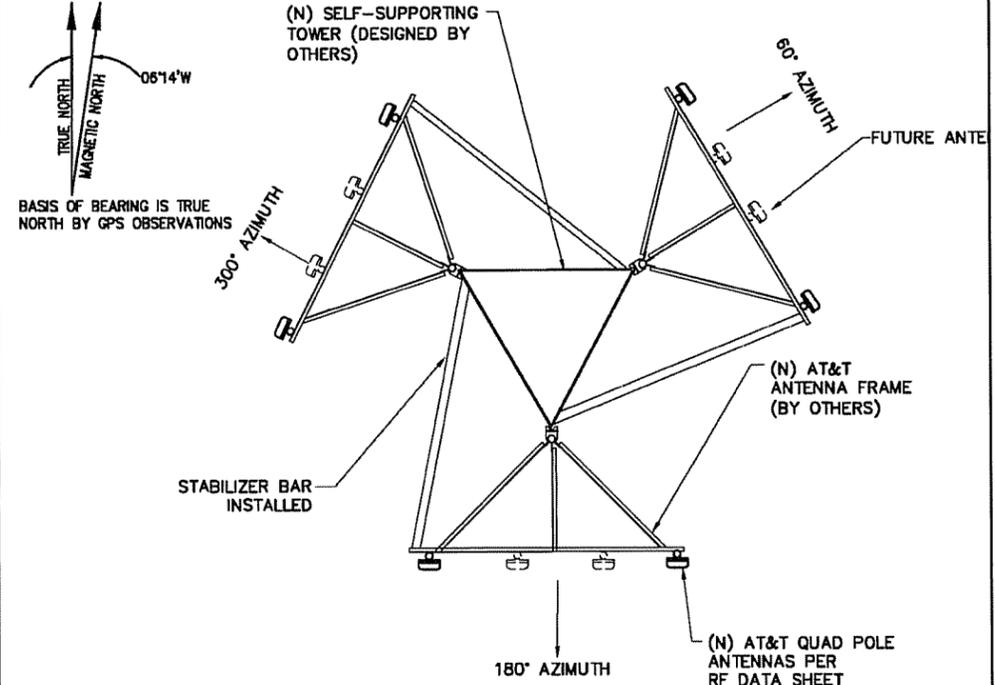


NOTE:
CONTRACTOR TO INSTALL APPROVED ANTENNA MOUNTS PER STRUCTURAL ANALYSIS (DONE BY OTHERS).

3 STANDOFF WIRELESS FRAME
N.T.S.



4 CABLE LADDER DETAILS
N.T.S.



5 TYPICAL SECTORIZED ANTENNA CONFIGURATION
N.T.S.

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SUITE 100
WHEATON, IL 60187

SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

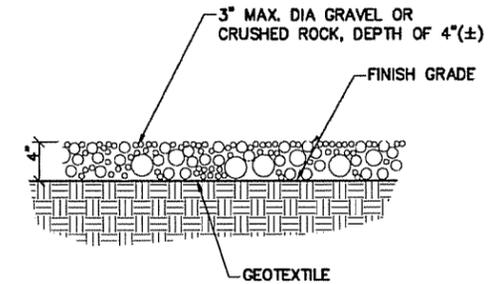
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SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

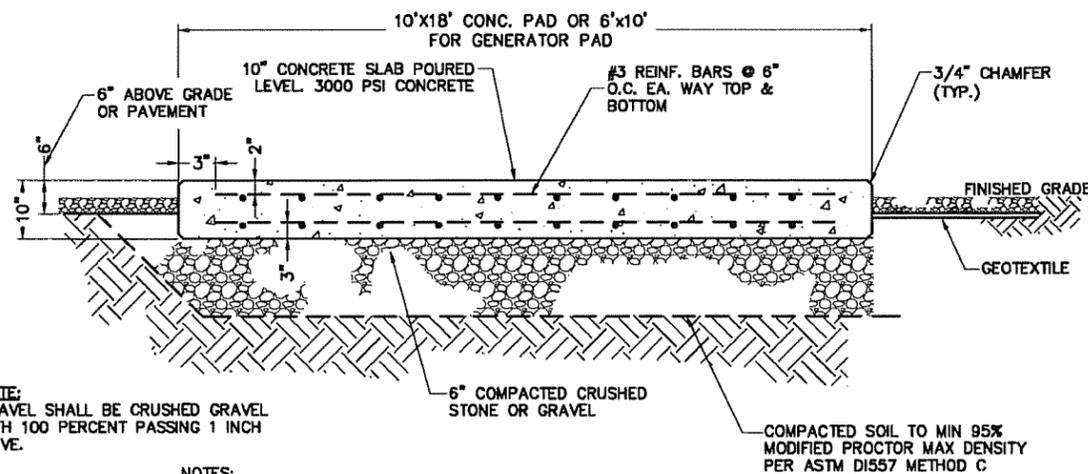
SHEET TITLE
TOWER ELEVATION & DETAILS
SHEET NUMBER
C-1

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWING. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.



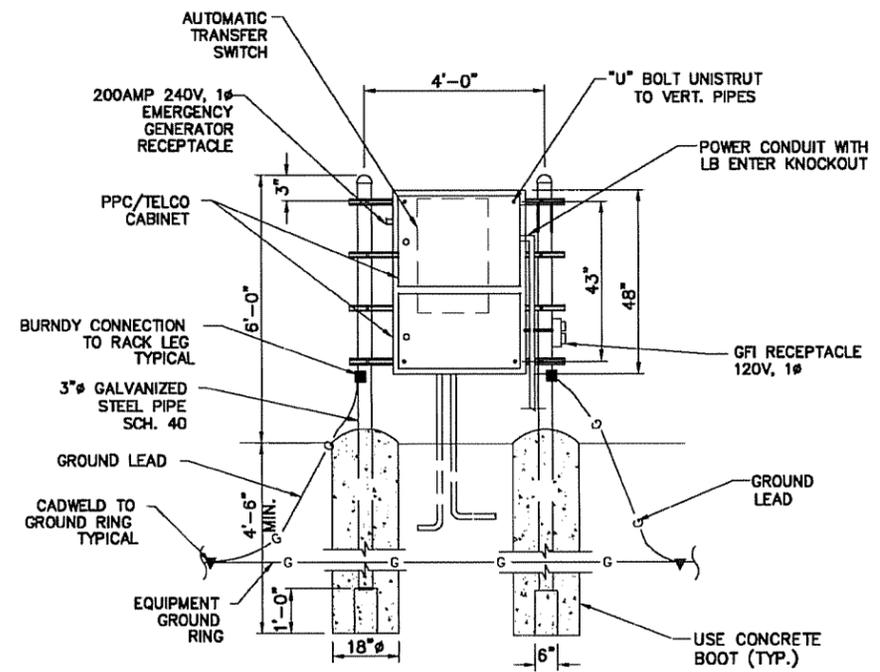
7 COMPOUND GRADE
N.T.S.



NOTE:
GRAVEL SHALL BE CRUSHED GRAVEL WITH 100 PERCENT PASSING 1 INCH SIEVE.

- NOTES:**
1. CONCRETE FINISH TO BE CLASS "A" TOLERANCE.
 2. TEST FOR 3000 PSI AT 7, 14, & 28 DAYS PER POUR BY INDEPENDENT LAB.
 3. ALL CONCRETE TO BE SIX SACK MIX.
 4. PERFORM CONCRETE SLUMP TEST (4" MAX). NO WATER TO BE ADDED TO CONCRETE MIX AFTER 4" SLUMP HAS BEEN ESTABLISHED BY INDEPENDENT LAB.

4 CONCRETE BTS PAD / GEN. PAD SECTION
N.T.S.



8 4' H-FRAME DETAIL
N.T.S.

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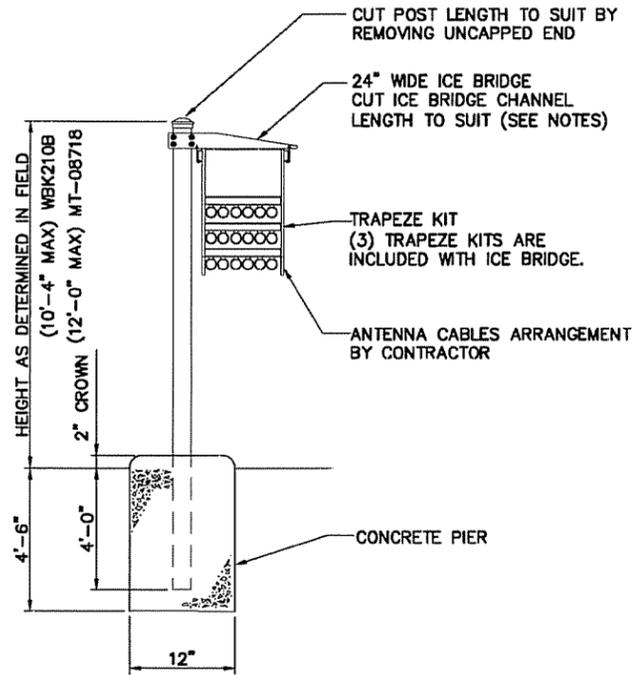
CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

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0	05/08/08	FOR CONSTRUCTION	HD	VD	HM
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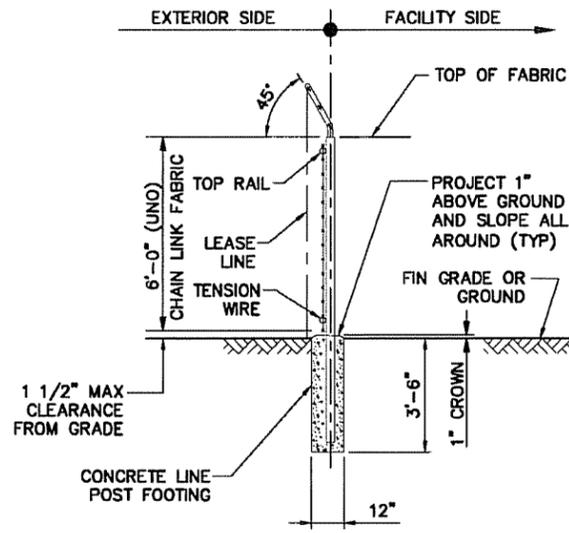
SHEET TITLE	
FOUNDATION PLAN & DETAILS	
SHEET NUMBER	
C-2	



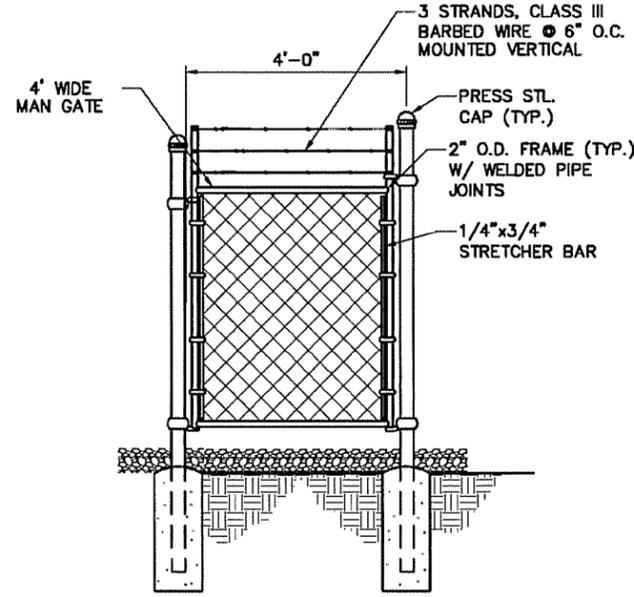
NOTES:

1. WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 9 FEET FOR 10 FEET BRIDGE CHANNEL.
2. WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.
3. WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES SPRAYED WITH COLD GALVANIZE. SOFTENERS WILL BE ADDED TO PROTECT THE FEEDLINES.
5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
7. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.
8. THE DESIGN IS BASED ON ASCE 7-98, 3 SECOND GUST WIND SPEED OF 110 MPH, EXPOSURE C, ELEVATION AT GRADE.
9. THIS DESIGN IS BASED ON 24" WIDE ICE BRIDGE AND (18) 1 5/8" DIA COAX CABLES AND MAX. POST SUPPORT SPACING OF 10'-0".

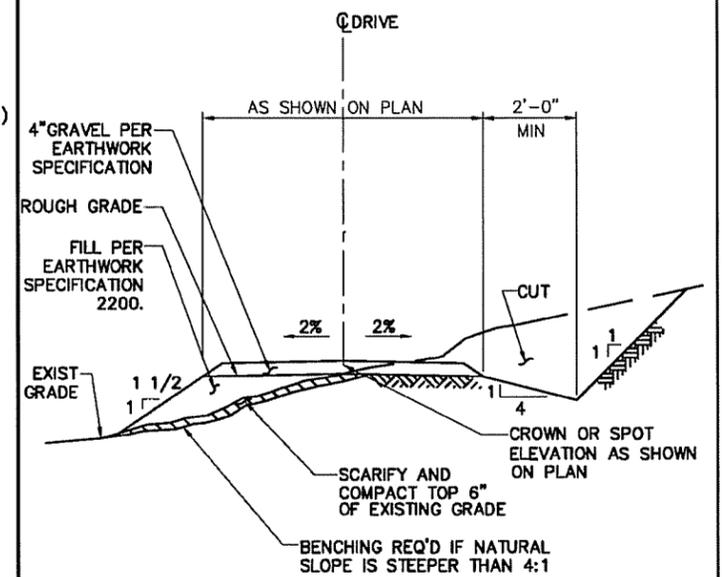
1 ICE BRIDGE SUPPORT POST FOUNDATION
N.T.S.



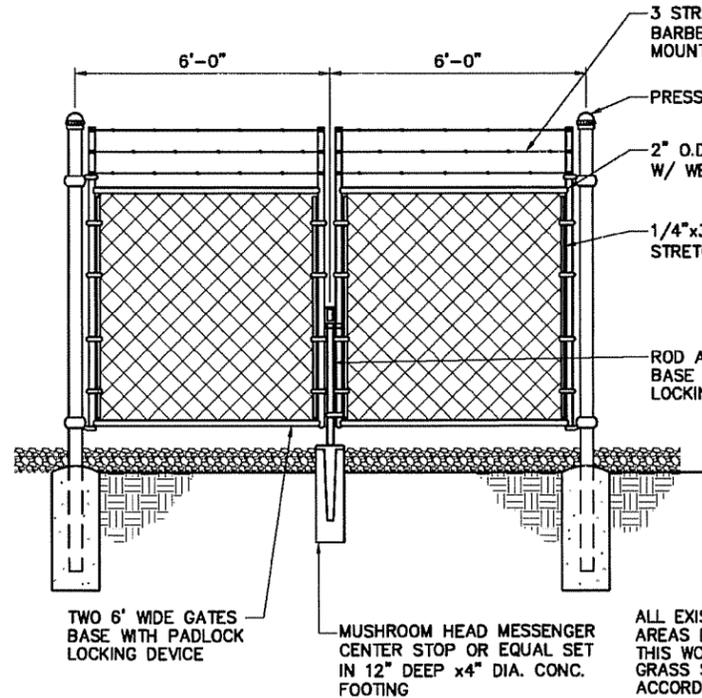
2 FENCE/BARBED WIRE ARM DETAIL
N.T.S.



3 4' MAN GATE DETAIL
N.T.S.

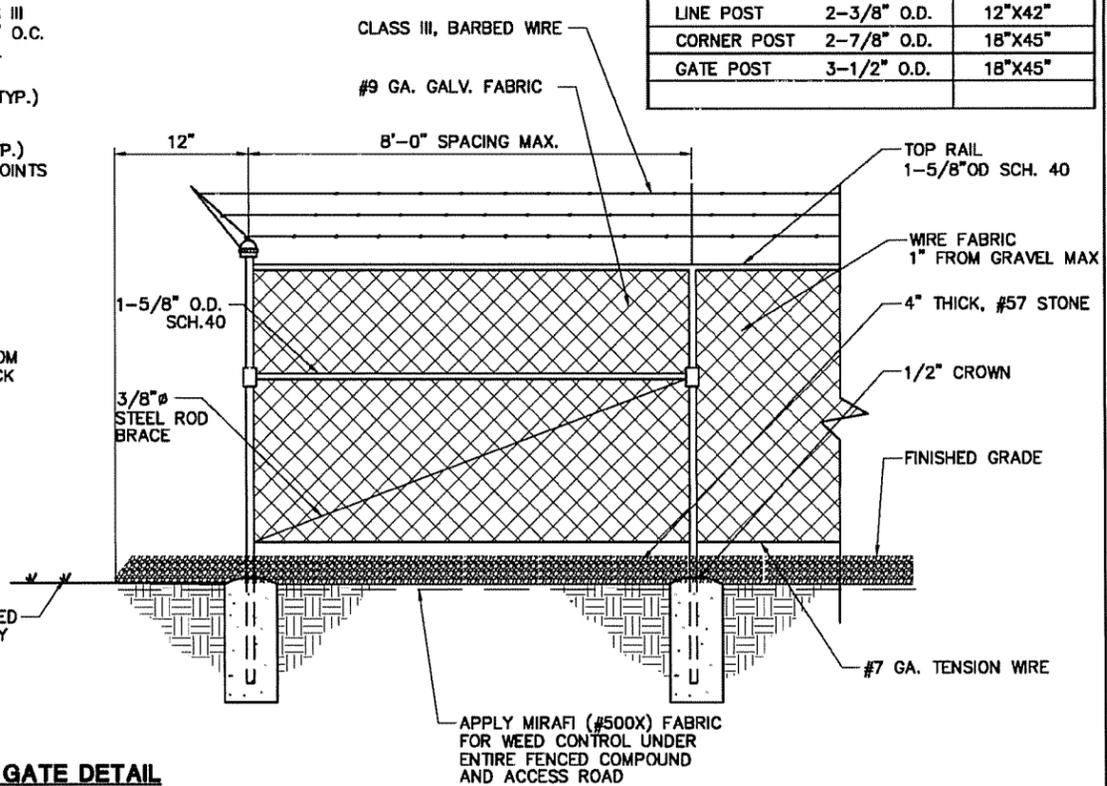


4 GRAVEL DRIVE DETAILS
N.T.S.



FRONT VIEW

5 FENCE AND GATE DETAIL
N.T.S.



APPLY MIRAFI (#500X) FABRIC FOR WEED CONTROL UNDER ENTIRE FENCED COMPOUND AND ACCESS ROAD

6' HIGH FENCE		FOOTINGS
LINE POST	2-3/8" O.D.	12"X42"
CORNER POST	2-7/8" O.D.	18"X45"
GATE POST	3-1/2" O.D.	18"X45"

MAX ENGINEERING, LLC
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Houston, Texas 77074
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Fax (713) 773-2558

CST CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
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SITE No. KY-00-0816A
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0	05/08/08	FOR CONSTRUCTION	HD	VD	HM
A	04/23/08	FOR REVIEW	HD	VD	HM

SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE
ICE BRIDGE & FENCE DETAILS
SHEET NUMBER
C-3

SITE WORK GENERAL NOTES

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
7. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
8. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
9. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
10. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

STRUCTURAL STEEL NOTES

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

CONCRETE AND REINFORCING STEEL NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. SLAB FOUNDATION DESIGN BASED ON ASSUMING ALLOWABLE SOIL SOIL BEARING PRESSURE OF 2000 PSF.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR. SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFIRM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR - CELLERE
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER - CENTRAL STATE TOWER, INC. (CST)
 OEM - ORIGINAL EQUIPMENT MANUFACTURE
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND TI CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.
9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTORS WORK SHALL COMPLY WITH ALL THE APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF THE CONTRACT AWARD SHALL GOVERN THE DESIGN.

2003 STATE CONSTRUCTION CODE (2003 IBC)

NATIONAL ELECTRICAL CODE (NEC 2002 PART 8 STATE MENDMENTS) WITH LOCAL UNDERWRITTEN LABORATORIES APPROVED ELECTRICAL PRODUCTS

LIFE SAFETY CODE NFPA - 101

SUBCONTRACTOR'S WORK SHALL COOMPLY WITH THE LATEST EDITION OF THE FOLLOWING:

AMERICAN CONCRETE INSTITUTE 9ACIO 318, BUILDING CODE REQUIREMENT FOR STRUCTURAL

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION (ASD)

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) EIA-222-F, STRUCTURAL STANDARDS FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINNERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDENCE AND EARTH SURFACE POTENTIAL OF A GROUND SYSTEM.

IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC.

IEEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND HIGH SYSTEM EXPOSURE")

TIA 807 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECORDIA GR-1503 COAXIAL CABLE CONNECTIONS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL METHODS OF CONSTRUCTION OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THER IS A CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS & SYMBOLS

SYMBOLS		ABBREVIATIONS	
	SOLID GROUND BUS BAR	AGL	ABOVE GRADE LEVEL
	SOLID NEUTRAL BUS BAR	BTS	BASE TRANSCEIVER STATION
	SUPPLEMENTAL GROUND CONDUCTOR	(E)	EXISTING
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER	MIN	MINIMUM
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER	N.T.S.	NOT TO SCALE
	CHEMICAL GROUND ROD	REF	REFERENCE
	GROUND ROD	RF	RADIO FREQUENCY
	DISCONNECT SWITCH	T.B.D.	TO BE DETERMINED
	METER	T.B.R.	TO BE RESOLVED
	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)	TYP	TYPICAL
	MECHANICAL CONNECTION (UNLESS OTHERWISE NOTED)	REQ	REQUIRED
	5/8" x 10' COPPER CLAD STEEL GROUND	EGR	EQUIPMENT GROUND RING
	5/8" x 10' COPPER CLAD STEEL GROUND ROD WITH INSPECTION SLEEVE	AWG	AMERICAN WIRE GAUGE
	EXOTHERMIC WELD (CADWELD) WITH INSPECTION SLEEVE	MGB	MASTER GROUND BUS
	GROUNDING WIRE	EG	EQUIPMENT GROUND
		BCW	BARE COPPER WIRE
		SIAD	SMART INTEGRATED ACCESS DEVICE
		GEN	GENERATOR
		IGR	INTERIOR GROUND RING (HALO)
		RBS	RADIO BASE STATION

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 SUITE 100
 WHEATON, IL 60187

SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
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SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

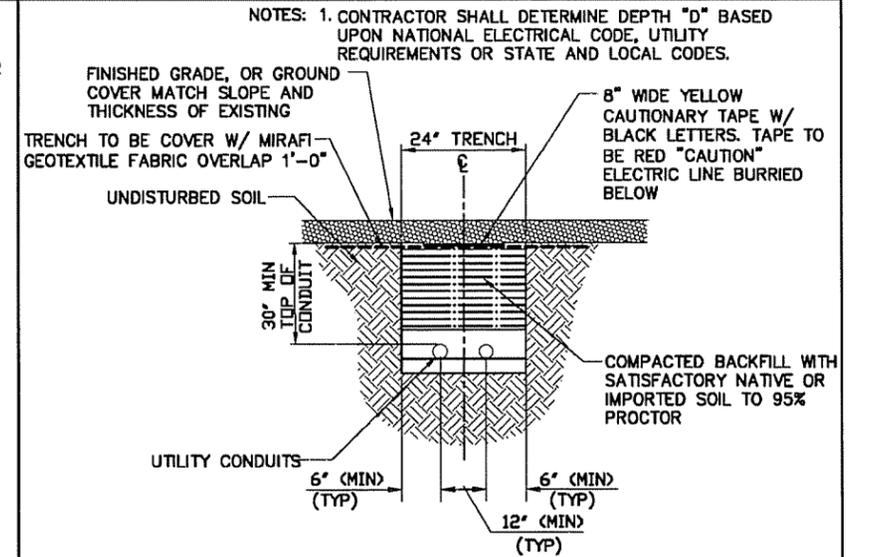
C-4

ELECTRICAL INSTALLATION NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER)

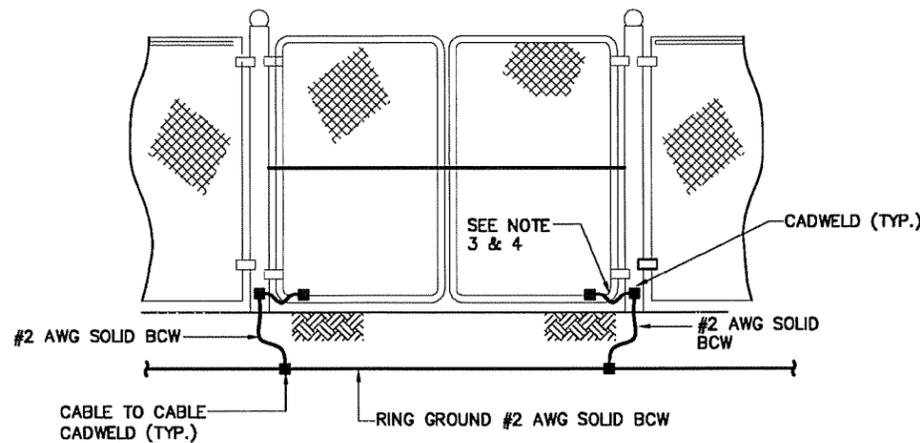
ELECTRICAL INSTALLATION NOTES (cont.):

- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) BETTER INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



* CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

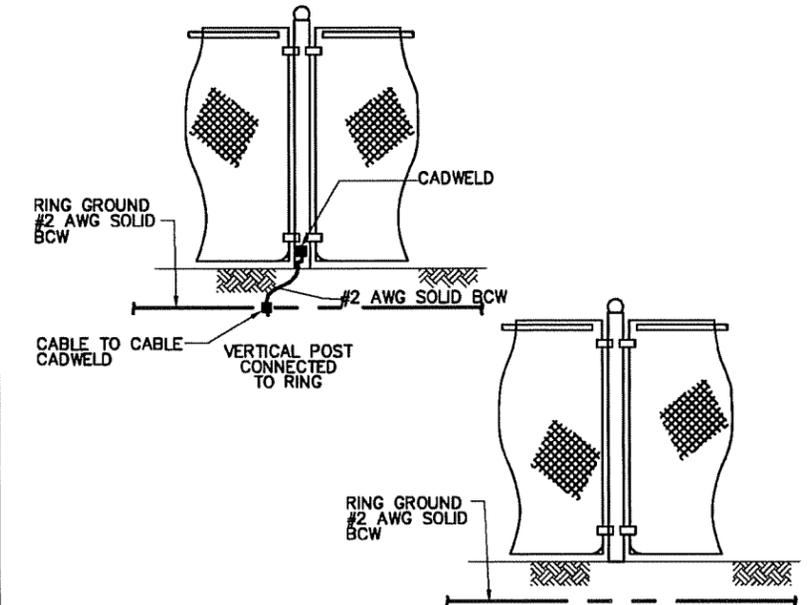
2 TYPICAL TRENCH DETAILS
N.T.S.



NOTES:

- THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
- BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING.
- GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
- GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

1 FENCE GATE GROUNDING DETAILS
N.T.S.



NOTE:

- VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN TO FENCE.
- HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
- BOND EACH HORIZONTAL POLE / BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING

3 FENCE GROUNDING DETAILS
N.T.S.

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CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

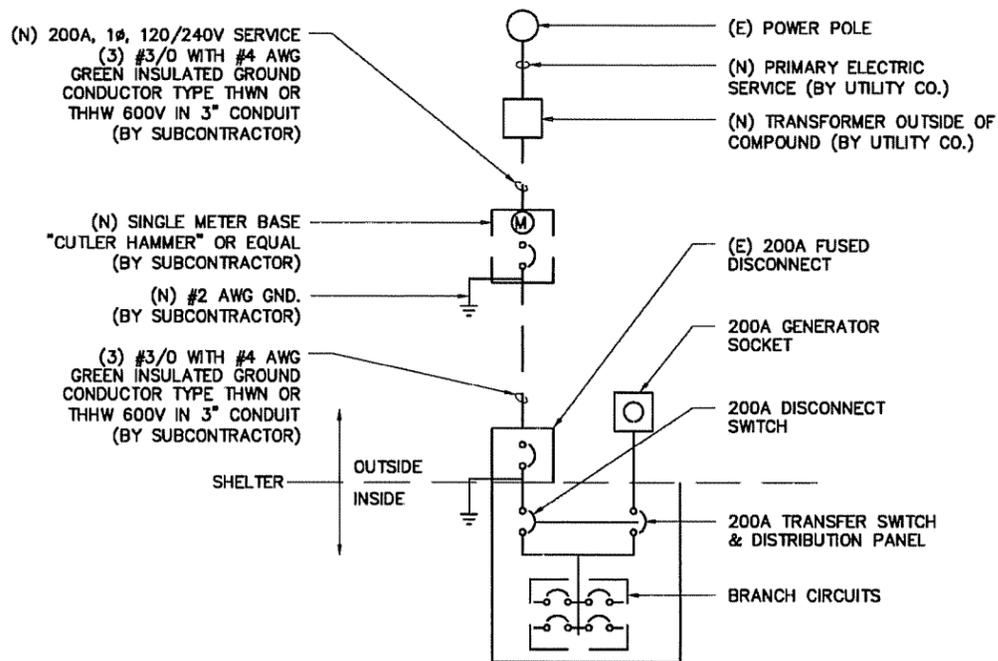
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SHEET TITLE
ELECTRICAL NOTES & DETAILS
SHEET NUMBER
E-1

ELECTRICAL NOTES:

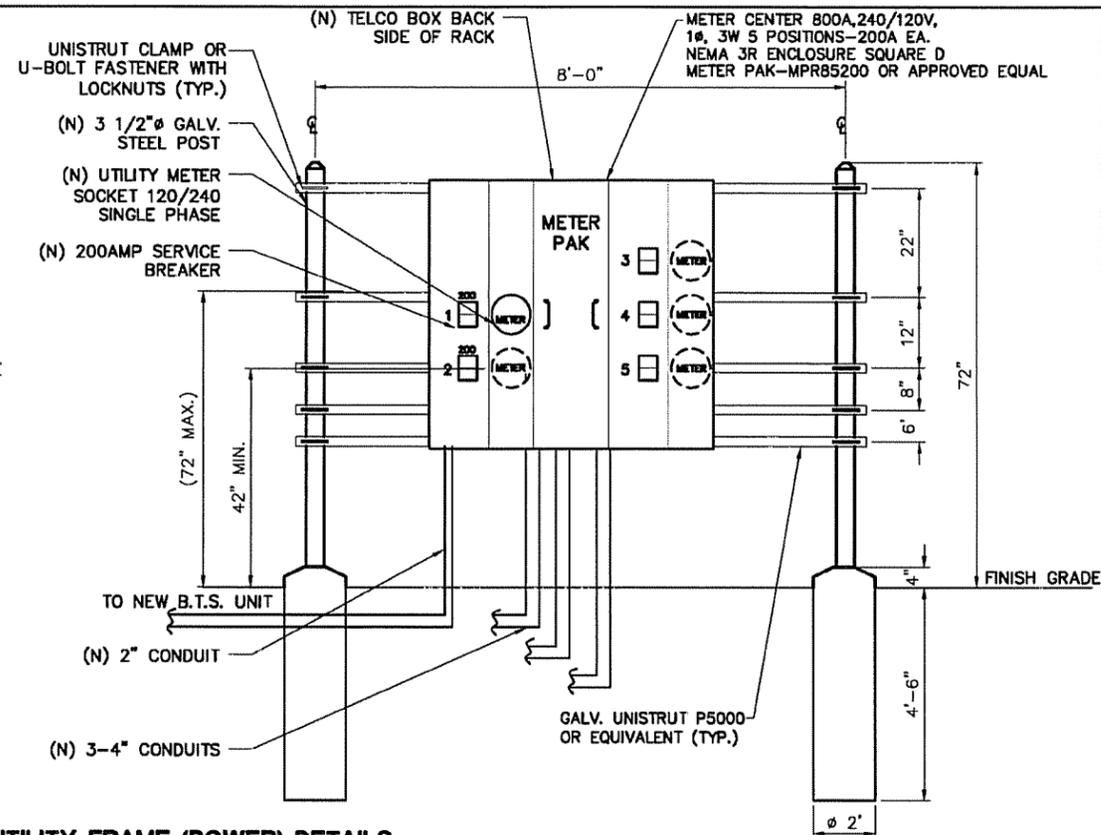
1. SUBCONTRACTOR SHALL PROVIDE 200AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR SITE.
2. SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PANEL MANUFACTURER.
4. SUBCONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC CONDUIT TO THE INTERIOR OF THE BTS CABINET.
5. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
6. CUT, COIL, AND TAPE A 3 FOOT PIGTAIL FROM END OF LFMC FOR TERMINATING BY BTS EQUIPMENT MANUFACTURER.
7. SUBCONTRACTOR SHALL VERIFY THAT MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY WHEN PANEL IS SERVICE ENTRANCE EQUIPMENT.



1 200 AMP SINGLE LINE DIAGRAM
N.T.S.

NOTE:

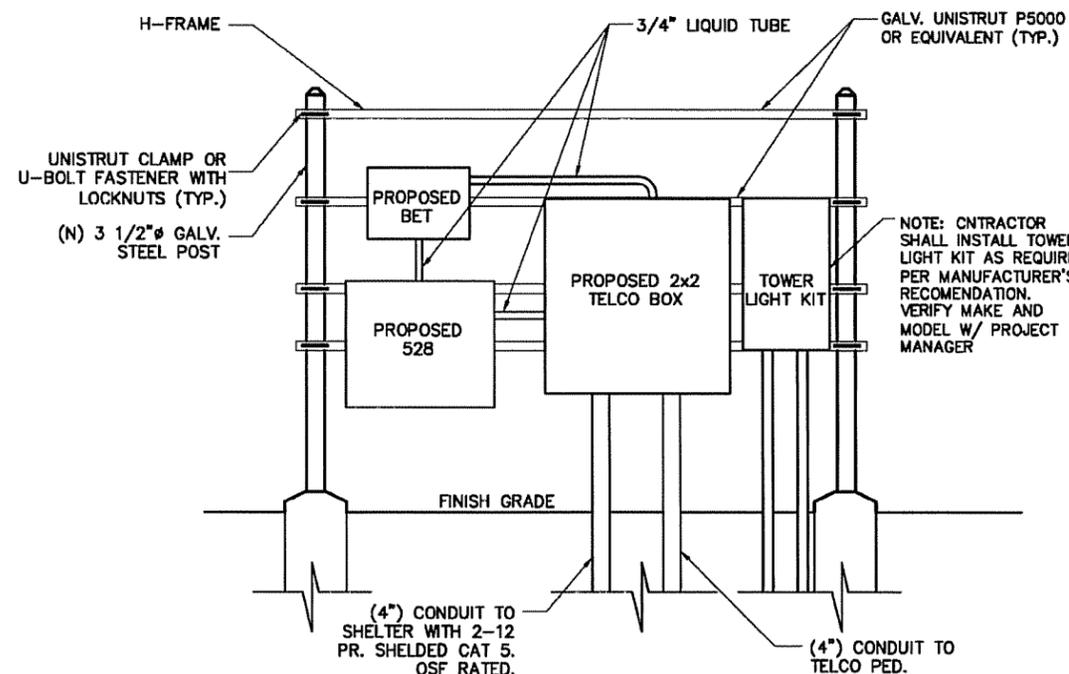
1. FROM THE TAP BOX: THE TWO (2) FOUR INCH (4") CONDUIT WILL RETURN TO THE LOCATION DETERMINED BY THE LOCAL UTILITY AND EXTENDED OUT OF THE FINISHED GRADE 12" AND 36" RESPECTIVELY. BOTH CONDUITS SHALL BE INSTALLED WITH PULL-STRINGS AND WATERPROOFING CAPS.
2. CABINET AND CONDUCTORS FURNISHED AND INSTALLED BY CUSTOMER, 350 KCMIL SERVICE CONDUCTORS FURNISHED AND INSTALLED BY UTILITY.
3. EQUIPMENT ASSEMBLY DRAWINGS AND RISER DIAGRAMS MUST BE SUBMITTED TO A UTILITY PLANNER FOR ACCEPTANCE PRIOR TO INSTALLATION.
4. CABINETS AND CONDUITS SHOWN SHALL CONTAIN ONLY UNMETERED LINE CONDUCTORS. CABINET SHALL BE SEALABLE WITH ACCEPTABLE SEALING HASP.
5. TRANSMISSION TOWER SERVICES WILL UTILIZE A STANDARD 200 AMP SERVICE W/ CONTINUOUS CONDUIT TO THE SOURCE.
6. SUBSTATION CELLULAR SERVICES WILL BE A SINGLE 200AMP SERVICE OR BUILT TO THIS SPECIFICATION. NO SERVICE SHALL BE TAKEN OUT OF THE SUBSTATION HOUSE SERVICE.
7. ALL CONDUIT AND NIPPLE ENTRIES TO CABINET AND METER BOXES WILL BE MADE WITH WEATHERPROOF HUBS, CONNECTORS OR LOCKNUTS LISTED FOR THE APPLICATIONS. NON-METALLIC BRUSHINGS.
8. FOR INACCESSIBLE LOCATIONS CONSULT WITH METER ENGINEERING FOR POSSIBLE ERT METER INSTALLATION.
9. ONLY ONE SERVICE ALLOWED PER LUG. ALL GROUNDING AND BONDING MUST COMPLY WITH NEC 250 REQUIRED.
10. ALL ELECTRICAL PLUMBING MUST BE VERIFIED PRIOR TO INSTALLATION BY CONTRACTOR AND MUST MEET GOVERNING CODES, NO EXCEPTIONS.



2 NEW UTILITY FRAME (POWER) DETAILS
N.T.S.

NOTES:

1. COORDINATE WITH LOCAL TELCO UTILITY PRIOR TO PROCURING AND INSTALLATION OF BOX AND COMPONENTS.
2. ALL MATERIAL SHALL MEET REQUIREMENTS OF LOCAL TELCO UTILITY.
3. ITEM #4 SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. BOND SURGE PROTECTION UNIT TO GROUND BAR WITH #6 AWG INSULATED WIRE.
4. COORDINATE SIZE, TYPE AND QUANTITY OF ITEM(S) #5 WITH LOCAL UTILITY.
5. INSTALL ITEM #6 ONLY IF REQUIRED BY UTILITY. RECEPTACLE POWERED FROM SPARE BREAKER IN DISTRIBUTION PANEL.
6. 1 20" x 20" x 8" NEMA 3R ENCLOSURE (HOFFMAN A-20R20BHCR OR SIMILAR).
7. NEW TOWER LIGHT KIT TO BE INSTALLED BY CONTRACTOR. VERIFY ALL REQUIREMENTS PRIOR TO INSTALLATION.



3 NEW UTILITY FRAME (TELCO) DETAILS
N.T.S.

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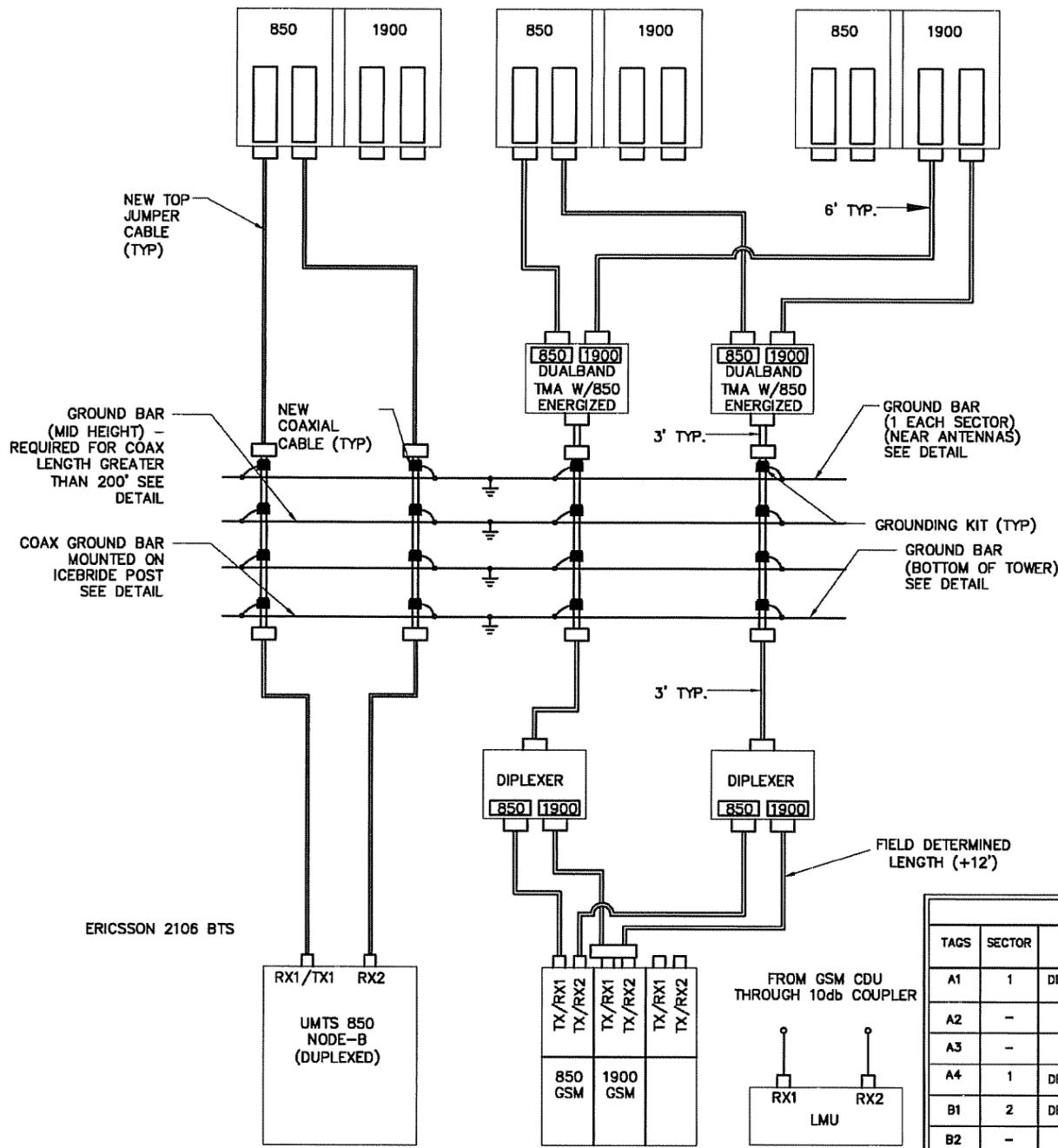
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SHEET TITLE	
SINGLE LINE DIAGRAM & DETAILS	
SHEET NUMBER	
E-2	



NOTES:

1. ALL MATERIALS SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUBCONTRACTOR FOR INSTALLATION.
2. SUBCONTRACTOR SHALL AS-BUILT CABLE LENGTHS AND PROVIDE ANTENNA SERIAL NUMBERS ON RED-LINED DRAWINGS.
3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWNTILT BRACKETS AND HEAVY DUTY CLAMPS SUPPLIED BY ANTENNA MANUFACTURER.
4. FOLLOW DETAIL FOR AT&T COAX COLOR CODING.
5. COAX GROUND KITS, COAX WEATHER PROOFING, SNAP-IN HANGER CLAMPS AND HOISTING GRIPS SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUBCONTRACTOR FOR INSTALLATION.
6. RF DATA IS TO BE VERIFIED BY CONTRACTOR

① - ANTENNAS PER SECTOR CONFIGURATION

ANTENNA AND COAXIAL CABLE SCHEDULE															
TAGS	SECTOR	ANTENNA TYPE	ANTENNA SERIAL NUMBER	ELEC. DOWN TILT	MECH DOWN TILT	AZIMUTH	ANTENNA RAD CTR	CABLE LENGTH	COAXIAL CABLE	TOP JUMPER	BOTTOM JUMPER	COLOR CODE	TMA TYPE	DIPLEXER	DC BLOCK Y/N
A1	1	DBXLH-8585A-VTM		2°	0°	60°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	1 GREEN STRIPE	KRY112 75/1	LGP 21903	N
A2	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	2 GREEN STRIPES	-	-	N
A3	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	3 GREEN STRIPES	-	-	N
A4	1	DBXLH-8585A-VTM		2°	0°	60°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	4 GREEN STRIPES	KRY112 75/1	LGP 21903	N
B1	2	DBXLH-8585A-VTM		2°	0°	180°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	1 BLUE STRIPE	KRY112 75/1	LGP 21903	N
B2	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	2 BLUE STRIPES	-	-	N
B3	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	3 BLUE STRIPES	-	-	N
B4	2	DBXLH-8585A-VTM		2°	0°	180°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	4 BLUE STRIPES	KRY112 75/1	LGP 21903	N
C1	3	DBXLH-8585A-VTM		2°	0°	300°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	1 WHITE STRIPE	KRY112 75/1	LGP 21903	N
C2	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	2 WHITE STRIPES	-	-	N
C3	-	-		-	-	-	-	-	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	3 WHITE STRIPES	KRY112 75/1	LGP 21903	N
C4	3	DBXLH-8585A-VTM		2°	0°	300°	295	365	ANDREWS AVA7-50 1-5/8'	(6") 1/2# LDF4P	(6") 1/2# SF	4 WHITE STRIPES	KRY112 75/1	LGP 21903	N

MAX ENGINEERING, LLC
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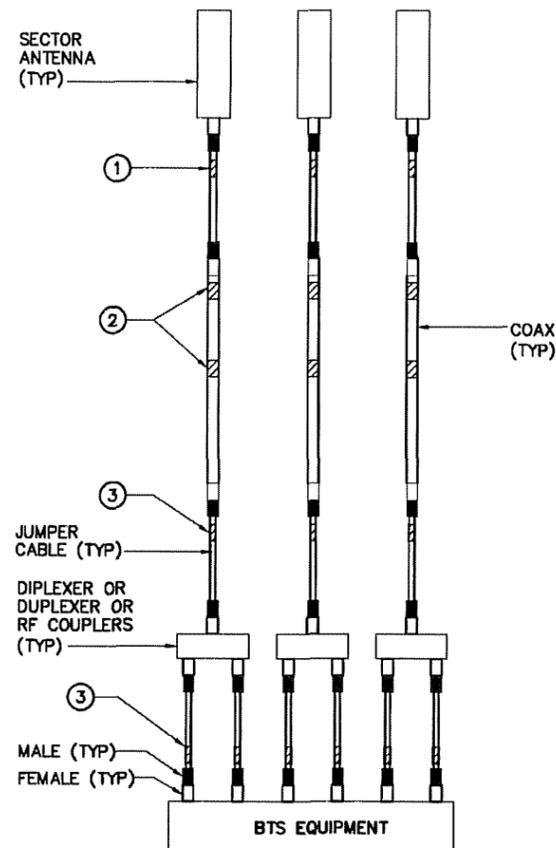
CST CENTRAL STATES TOWER, INC.
 323 SOUTH HALE STREET
 SUITE 100
 WHEATON, IL 60187

SITE No. KY-00-0816A
 SITE NAME: STUMPS RUN
 220 KEES BRANCH
 GRAYSON, KENTUCKY, 41143

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	07/24/08	FOR CONSTRUCTION		HD	VD HM
A	04/23/08	FOR REVIEW		HD	VD HM

SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE
ANTENNA SCHEMATICS AND DETAILS
 SHEET NUMBER
E-2A

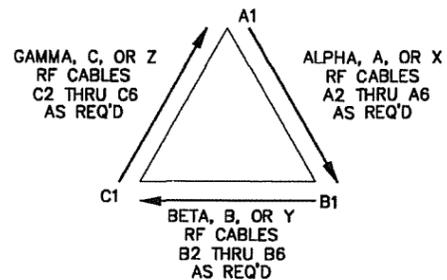


**1 CABLE MARKING LOCATIONS DIAGRAM
GRAVEL DRIVE DETAILS**

ALL RF CABLE SHALL BE MARKED AS PER CABLE MARKING LOCATIONS TABLE BELOW:

CABLE MARKING LOCATIONS TABLE			
NO.	TAPE	TAG	LOCATIONS
1.	X		EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2.	X		EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3.	X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
4.	*	*	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

(* - DENOTES TAG OR TAPE.)



NOTE:
SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SPECIFIC SITE TO DETERMINE THE SECTOR ORIENTATION.

ANTENNA SECTOR AND CABLE DEFINITION



TO PROVIDE ADDITIONAL IDENTIFICATION EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, CABLE NUMBER, AND "AT&T" TO IDENTIFY AT&T MOBILITY CABLES. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE. PREFERRED TAG LABELING SHOULD BE AS SHOWN ABOVE "TDMA LINE TAG", "GSM LINE TAG" AND "UMTS LINE TAG".

2 CABLE MARKING TAGS

NOTES:

1. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLES BY SECTOR AND CABLE NUMBER, AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE" (EX. SECTOR ALPHA, CABLE A3 WOULD BE THREE GREEN BANDS)
2. THE STANDARD CABLE MARKING TAPE IS BASED ON THE 5 "NEMA" COLORED TAPES: GREEN, BLUE, WHITE, RED AND ORANGE.
3. UMTS CABLES WILL BE MARKED WITH A MINIMUM OF 3" WIDE AT TOP AND MIDDLE OF TOWER, AND 2" WIDE AT THE BOTTOM. ALL JUMPERS SHALL BE INCLUDED.
4. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT TO AVOID UNWRAPPING.
5. ALL COLOR CODE TAPE SHALL BE 3" WIDE AT TOP AND MIDDLE OF TOWER, AND 2" WIDE AT THE BOTTOM. ALL JUMPERS SHALL BE INCLUDED

3 COAX COLOR CODING AND IDENTIFICATION DETAIL FOR OVERLAY

FSA3 - CABLE MARKING COLOR CONVENTION TABLE

SECTOR	850 TDMA/GSM		1900 TDMA/GSM		850 UMTS (FUTURE)		1900 UMTS	
	CABLE	CABLE	CABLE	CABLE	CABLE	CABLE	CABLE	CABLE
SECTOR ALPHA, A, OR X	CABLE A1	CABLE A2	CABLE A3	CABLE A4	CABLE UMTS1	CABLE UMTS2	CABLE UMTS3	CABLE UMTS4
	ONE (1) 3/4" GRN	TWO (2) 3/4" GRN	THREE (3) 3/4" GRN	FOUR (4) 3/4" GRN	ONE (1) 1 1/2" GRN 3/4" ORG	TWO (2) 1 1/2" GRN 3/4" ORG	THREE (3) 1 1/2" GRN 3/4" ORG	FOUR (4) 1 1/2" GRN 3/4" ORG
SECTOR BETA, B, OR Y	CABLE B1	CABLE B2	CABLE B3	CABLE B4	ONE (1) 1 1/2" BLUE 3/4" ORG	TWO (2) 1 1/2" BLUE 3/4" ORG	THREE (3) 1 1/2" BLUE 3/4" ORG	FOUR (4) 1 1/2" BLUE 3/4" ORG
	ONE (1) 3/4" BLUE	TWO (2) 3/4" BLUE	THREE (3) 3/4" BLUE	FOUR (4) 3/4" BLUE	ONE (1) 1 1/2" WHT 3/4" ORG	TWO (2) 1 1/2" WHT 3/4" ORG	THREE (3) 1 1/2" WHT 3/4" ORG	FOUR (4) 1 1/2" WHT 3/4" ORG
SECTOR GAMMA, C, OR Z	CABLE C1	CABLE C2	CABLE C3	CABLE C4	ONE (1) 3/4" WHT	TWO (2) 3/4" WHT	THREE (3) 3/4" WHT	FOUR (4) 3/4" WHT
	ONE (1) 3/4" WHT	TWO (2) 3/4" WHT	THREE (3) 3/4" WHT	FOUR (4) 3/4" WHT	ONE (1) 1 1/2" RED 3/4" ORG	TWO (2) 1 1/2" RED 3/4" ORG	THREE (3) 1 1/2" RED 3/4" ORG	FOUR (4) 1 1/2" RED 3/4" ORG
SECTOR DELTA, D, OR W	CABLE D1	CABLE D2	CABLE D3	CABLE D4	ONE (1) 3/4" RED	TWO (2) 3/4" RED	THREE (3) 3/4" RED	FOUR (4) 3/4" RED
	ONE (1) 3/4" RED	TWO (2) 3/4" RED	THREE (3) 3/4" RED	FOUR (4) 3/4" RED	ONE (1) 1 1/2" RED 3/4" ORG	TWO (2) 1 1/2" RED 3/4" ORG	THREE (3) 1 1/2" RED 3/4" ORG	FOUR (4) 1 1/2" RED 3/4" ORG

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CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE No: KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

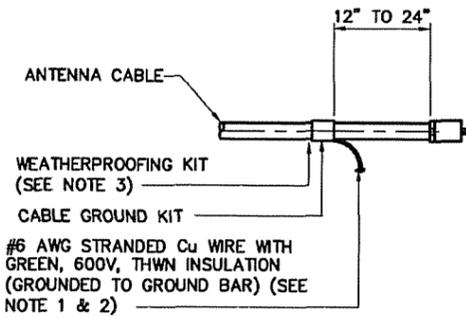
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	07/24/08	FOR CONSTRUCTION		HD	VD HM
A	04/23/08	FOR REVIEW		HD	VD HM
SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM					

SHEET TITLE

COAX COLOR CODING

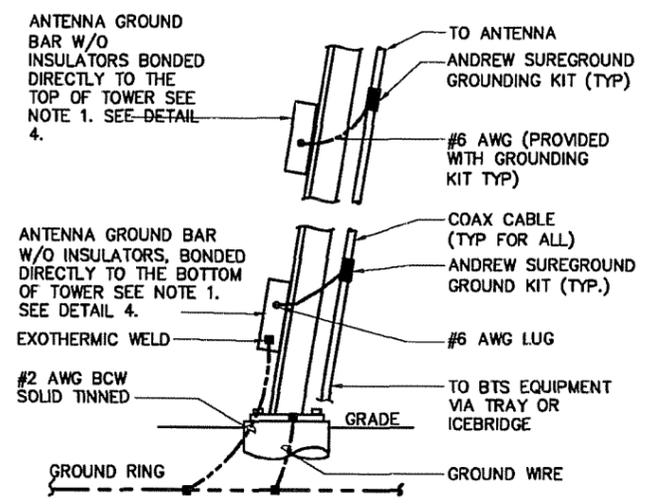
SHEET NUMBER

E-2B



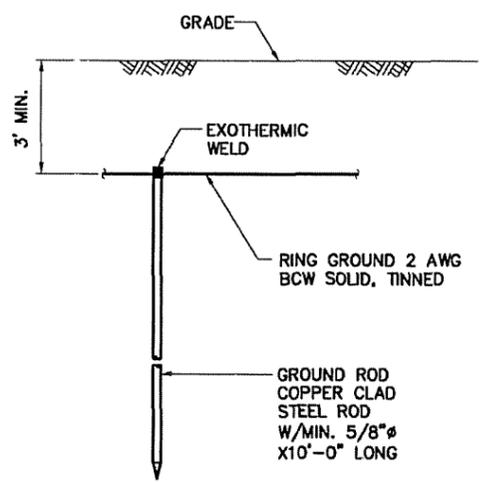
- NOTES:**
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 - WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

1 CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE
N.T.S.



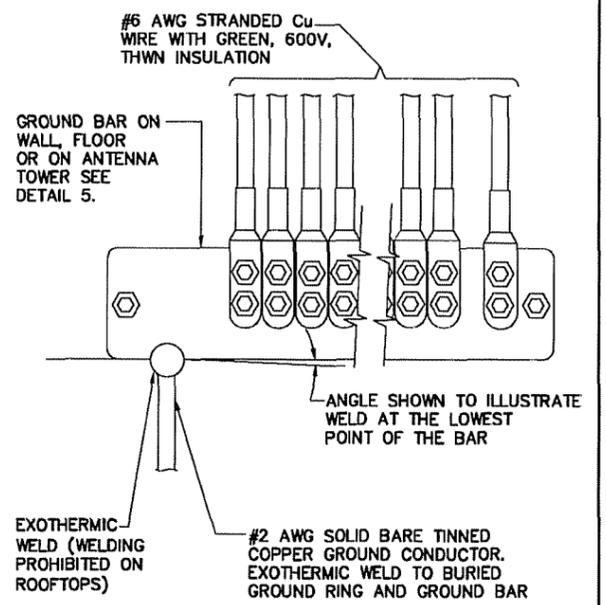
- NOTE:**
- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
 - AN ADDITIONAL GROUND BARS TO BE MOUNTED ON THE MIDDLE OF TOWER IF TOWER HEIGHT IS MORE THAN 200'.

2 ANTENNA CABLE GROUNDING FOR A SELF SUPPORTING LATTICE TOWER
NTS



- GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

3 GROUND ROD DETAILS
N.T.S.



4 INSTALLATION OF GROUND WIRE TO GROUND BAR DETAILS
N.T.S.

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PROTECTORS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR (#2)
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.
- COAX SUPPRESSION

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" - ISOLATED GROUND ZONE

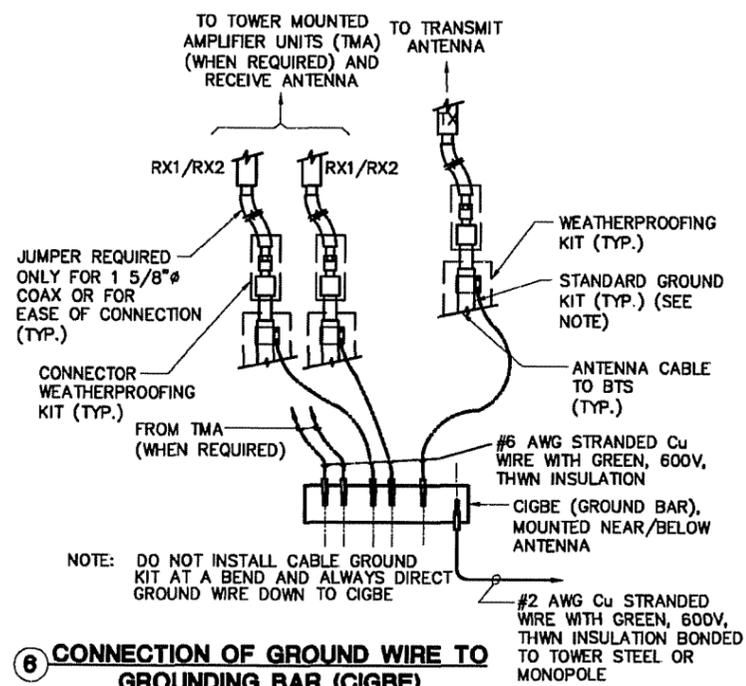
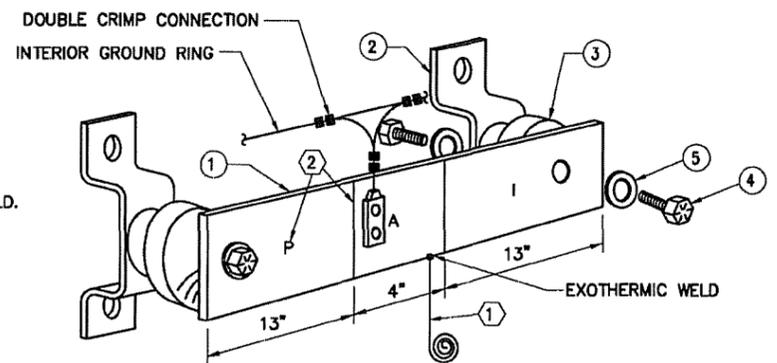
- ALL COMMUNICATIONS EQUIPMENT FRAMES.
- ISOLATED GROUND BAR - IGB (#2)

DETAIL NOTES:

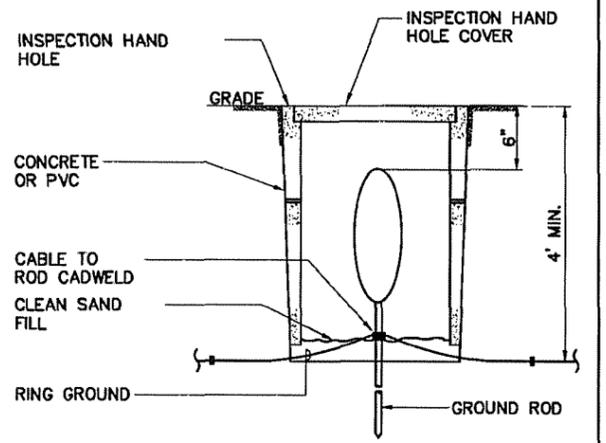
- EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.

5 (IGB) REFERENCE GROUND BAR DETAIL
N.T.S.

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x30"	SOLID GND. BAR
2	2	A-6056	WALL MTG. BRKT.
3	2	3061-4	INSULATORS
4	4	3012-1	5/8"-11x1" H.H.C.S.
5	4	3015-8	5/8 LOCKWASHER



6 CONNECTION OF GROUND WIRE TO TOWER/MONOPOLE
N.T.S.



- NOTE:** INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 8" IN WIDTH/DIAMETER

7 GROUND ROD WITH ACCESS AREA DETAILS
N.T.S.

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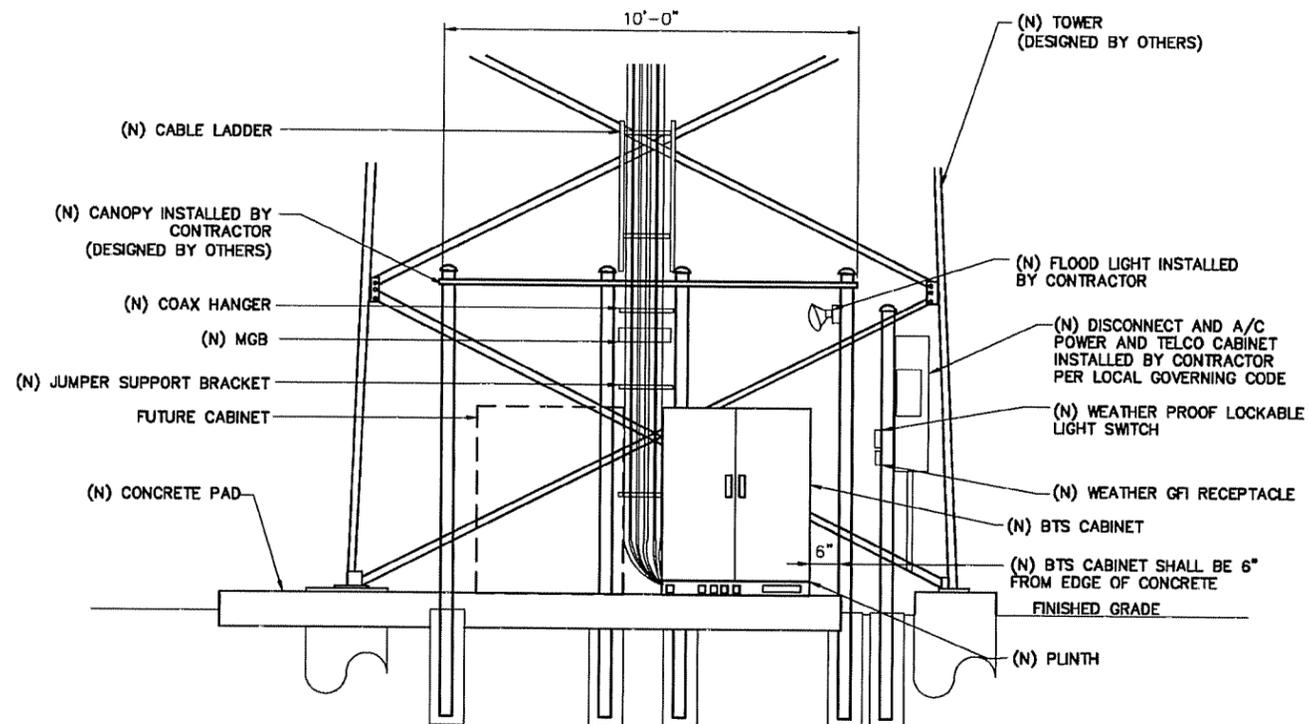
(CST) CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

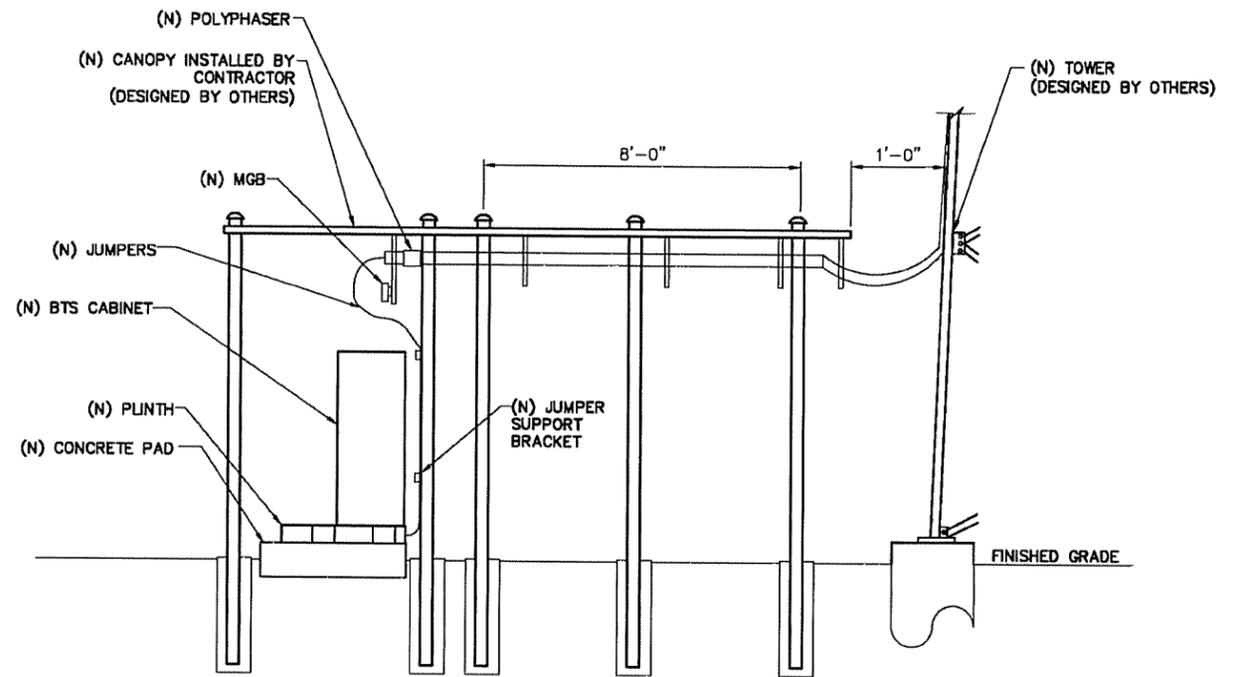
NO.	DATE	REVISIONS	BY	CHK	APP'D
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SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE
GROUNDING DETAILS
SHEET NUMBER
E-3

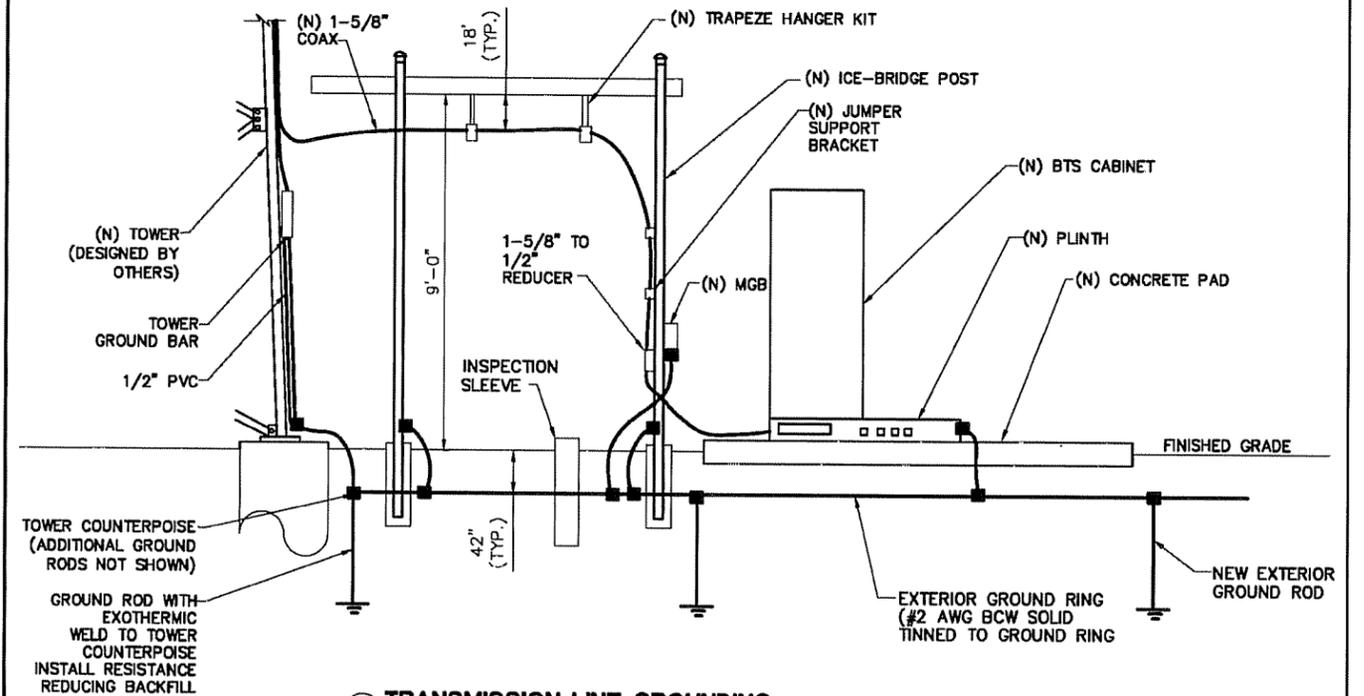


① **CABINET FRONT ELEVATION**
N.T.S.



② **CABINET SIDE ELEVATION**
N.T.S.

NOT USED



④ **TRANSMISSION LINE GROUNDING - EQUIPMENT AND SERVICE (SIDE ELEVATION)**
N.T.S.

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SUITE 100
WHEATON, IL 60187

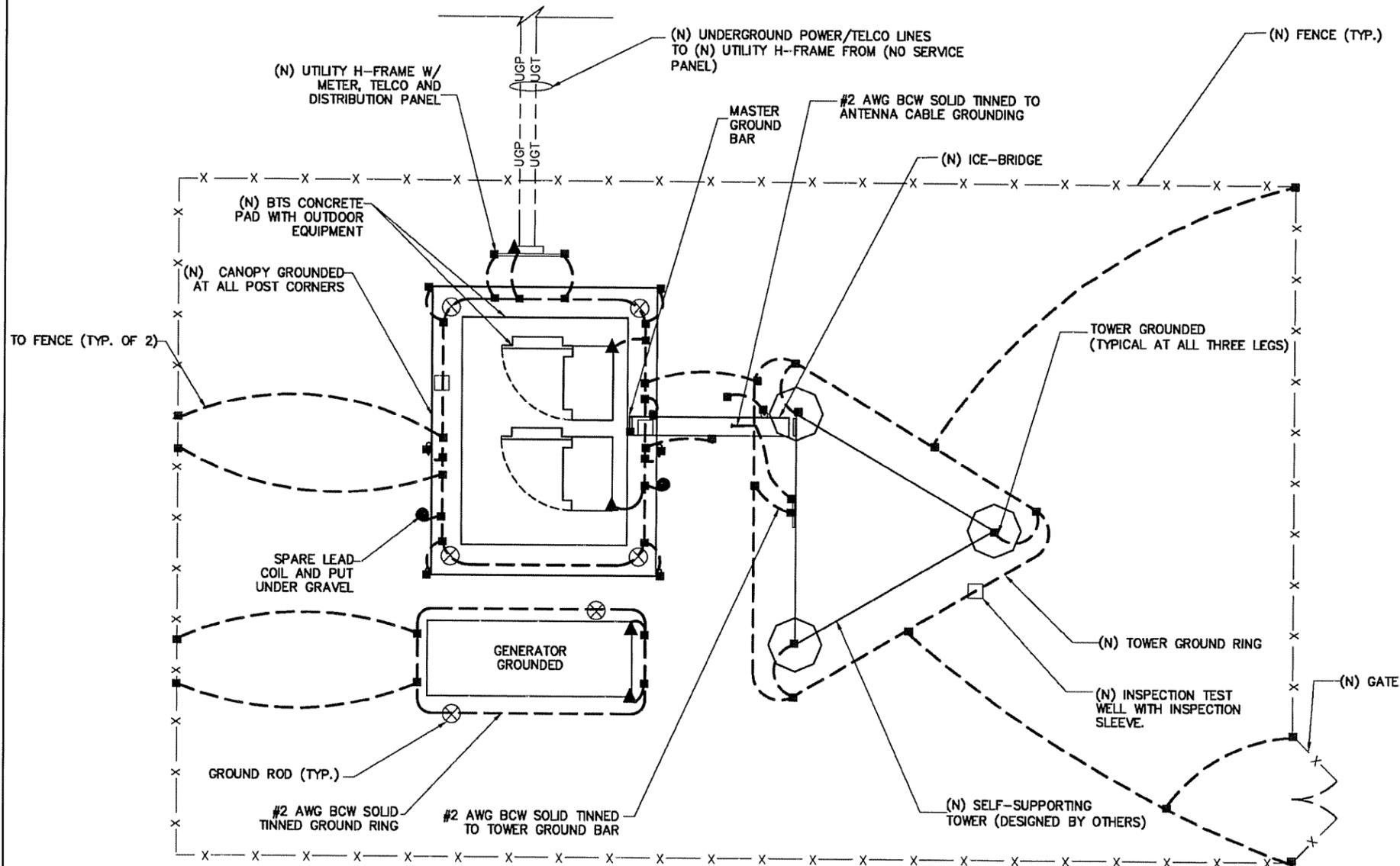
SITE No: KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

NO.	DATE	REVISIONS	BY	CHK	APP'D
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0	05/08/08	FOR CONSTRUCTION	HD	VD	HM
A	04/23/08	FOR REVIEW	HD	VD	HM

SCALE: AS SHOWN DESIGNED BY: EC DRAWN BY: CM

SHEET TITLE
GROUNDING AND ELEVATION DETAILS
SHEET NUMBER

E-4



1 TYPICAL SELF-SUPPORTING TOWER GROUNDING PLAN
N.T.S. (SCHEMATIC ONLY)

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUB-CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT & PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED-BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90± BENDS IS PROHIBITED. MAXIMUM BENDING IN THE PROTECTION GROUNDING CONDUCTORS IS 45°.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. INSTALL GROUND RODS FOR THE NEW GROUND RING, SEPARATION BETWEEN GROUND RODS SHOULD NOT BE LESS THAN THE LENGTH OF THE RODS NOR BE MORE THAN ONE AND ONE-HALF TIMES THE LENGTH OF THE RODS. CONNECT THE NEW RING TO EXISTING GROUND RING AT LEAST TWO SEPARATE PLACES.

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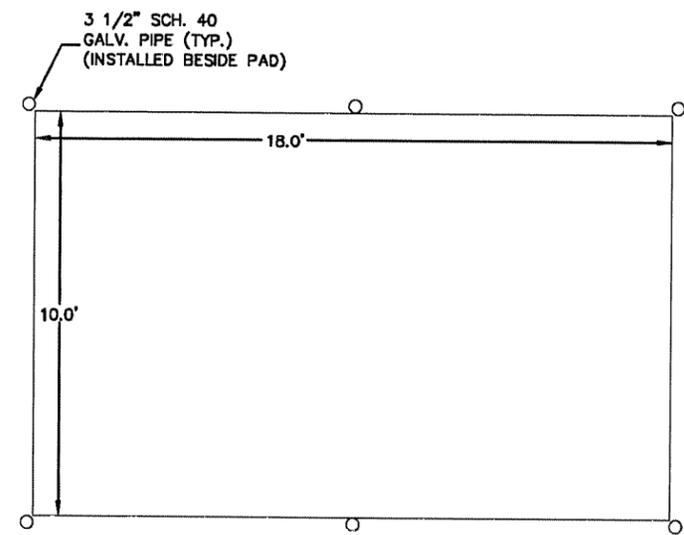
SITE No. KY-00-0816A
SITE NAME: STUMPS RUN
220 KEES BRANCH
GRAYSON, KENTUCKY, 41143

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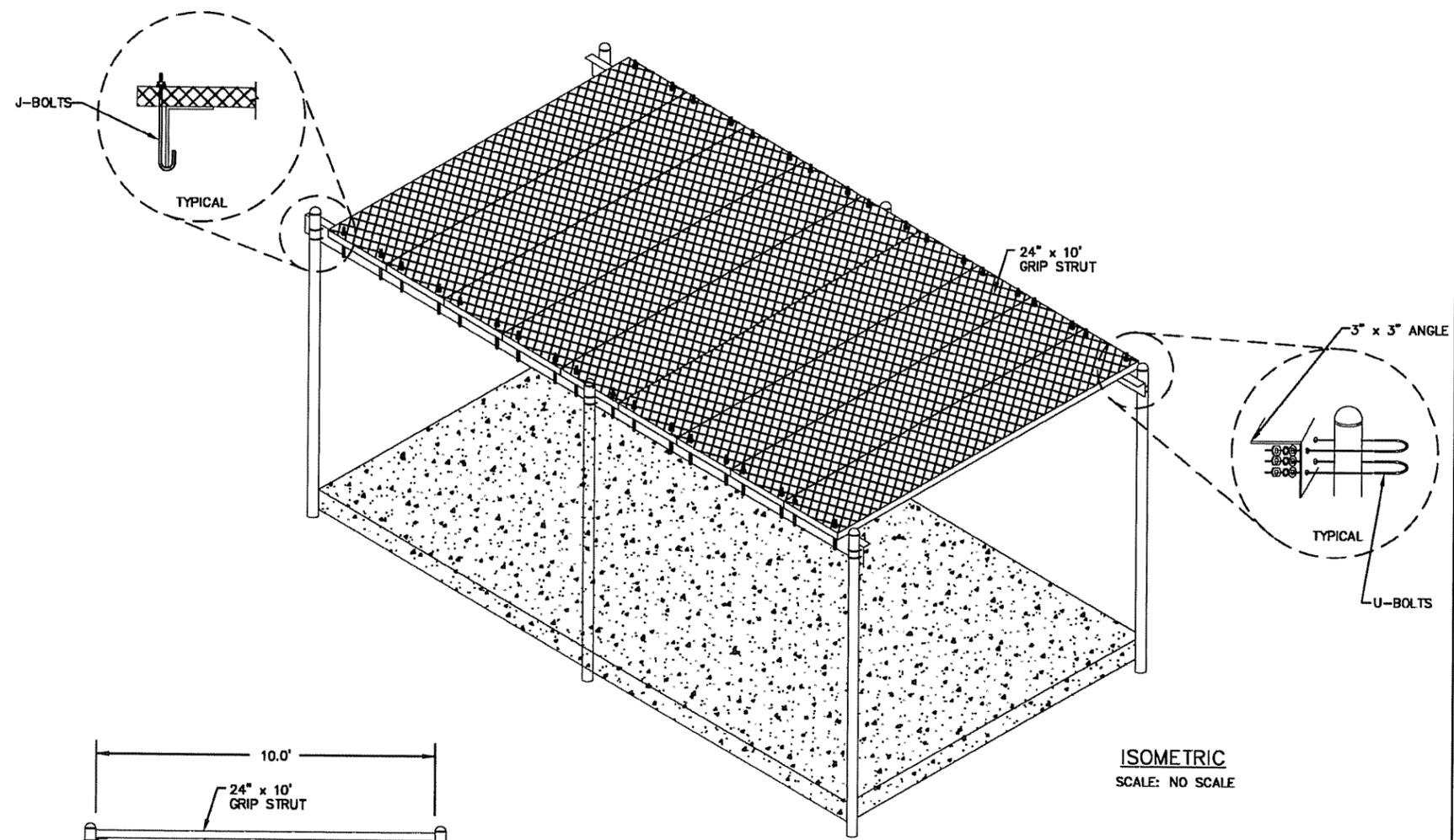
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SHEET TITLE
GROUNDING NOTES & DETAILS
SHEET NUMBER
E-5

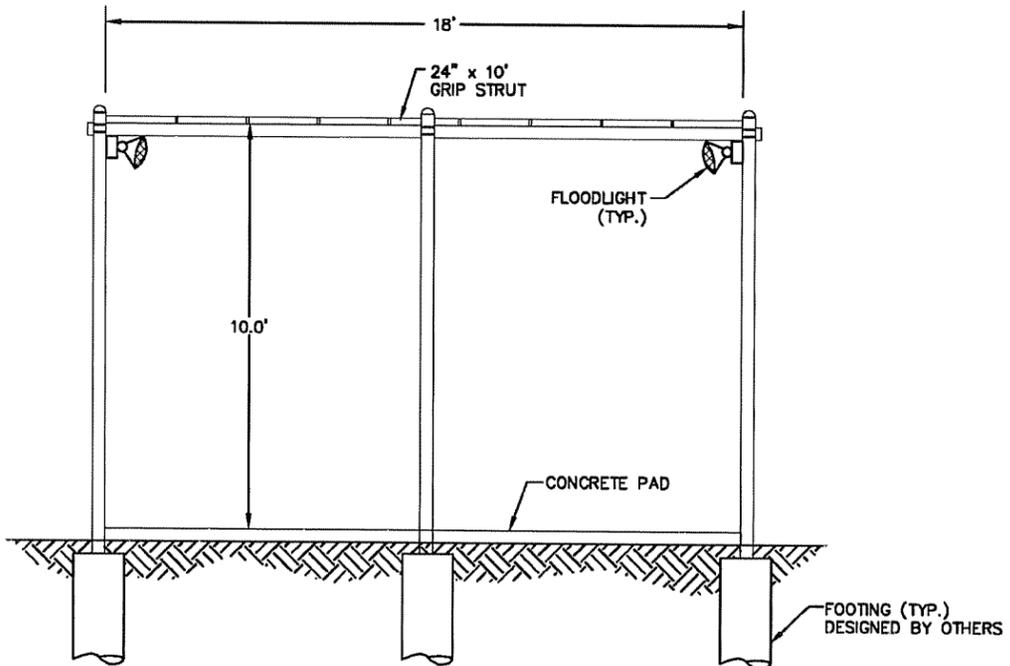
NOTE:
CANOPY SHALL BE SITE PRO 1
PART #COV1018 OR EQUAL.



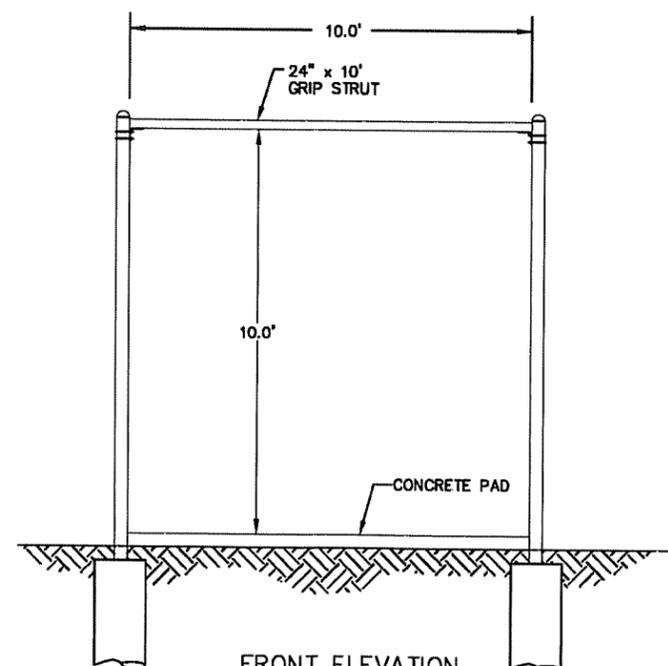
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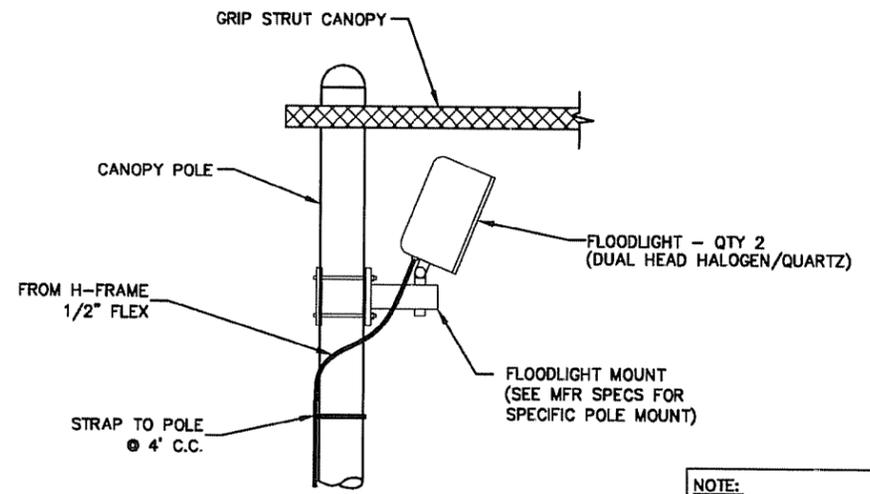
ISOMETRIC
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SIDE ELEVATION
SCALE: NO SCALE



FRONT ELEVATION
SCALE: NO SCALE



FLOODLIGHT DETAIL
SCALE: NO SCALE

NOTE:
LIGHTS TO BE MOUNTED ON THE
SIDE OF CANOPY OPPOSITE OF
THE CABINETS. AIM LIGHTS AT
CABINETS.

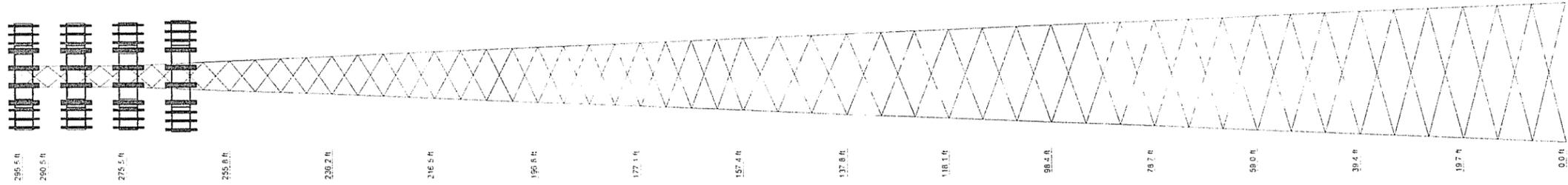
(CST) CENTRAL STATES TOWER, INC.
323 SOUTH HALE STREET
SUITE 100
WHEATON, IL 60187

SITE No. KY-00-0821
SITE NAME: GREENBO LAKE
72 HARRIS HOLLOW RD.
ARGILLITE, KY 41121

NO.	DATE	REVISIONS	BY	CHK	APP'D

SCALE: AS SHOWN DESIGNED BY: DRAWN BY:

SHEET TITLE
CANOPY
SHEET NUMBER
REF



Section	Top	Bottom	Top Grade	Bottom Grade	Diagrams	Diagrams at Grade	Top Chords	Face Width (ft)	# Panels (ft)	Weight (lb)
11	296.5	290.5	296.5	290.5	1.1	1.1	24.800	24.800	1.1	51513.4
10	290.5	284.5	290.5	284.5	1.1	1.1	21.280	21.280	1.1	44814.0
9	284.5	278.5	284.5	278.5	1.1	1.1	18.840	18.840	1.1	40422.0
8	278.5	272.5	278.5	272.5	1.1	1.1	16.420	16.420	1.1	36210.0
7	272.5	266.5	272.5	266.5	1.1	1.1	14.020	14.020	1.1	32178.0
6	266.5	260.5	266.5	260.5	1.1	1.1	11.640	11.640	1.1	28326.0
5	260.5	254.5	260.5	254.5	1.1	1.1	9.280	9.280	1.1	24642.0
4	254.5	248.5	254.5	248.5	1.1	1.1	6.940	6.940	1.1	21126.0
3	248.5	242.5	248.5	242.5	1.1	1.1	4.620	4.620	1.1	17778.0
2	242.5	236.5	242.5	236.5	1.1	1.1	2.320	2.320	1.1	14598.0
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DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
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(411) 46 Antenna	290	(411) 46 Antenna	290
(411) 46 Antenna	284	(411) 46 Antenna	284
BM-1207	284	BM-1207	284
(411) 46 Antenna	278	(411) 46 Antenna	278
(411) 46 Antenna	272	(411) 46 Antenna	272
(411) 46 Antenna	266	(411) 46 Antenna	266
(411) 46 Antenna	260	(411) 46 Antenna	260
(411) 46 Antenna	254	(411) 46 Antenna	254

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	P1.5x1.145	C	1.0 4.91697
B	L1.172x1.12x1.16		

MATERIAL STRENGTH		GRADE		FU		FY		FU	
A500-50	50 ksi	A36/A57-31	50 ksi						

TOWER DESIGN NOTES

1. Tower is located in Carter County, Kentucky
2. Tower designed for Exposure C to the TIA-222-G Standard
3. Tower designed for a 90 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 30 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. All members stamped for identification in accordance with EIA/TIA-222/G.
7. Lock washers provided for all brace bolted connections. Brace connector bolts meet A325X structural joint specification. All X-braces are center bolted.
8. Step bolt climb ladder provided on single leg with fall protection cable.
9. All members hot dipped galvanized after fabrication per ASTM A123 Hardware (Bolts, Nuts, Etc.) galvanized per ASTM B695 Class 50 (Mechanical).
10. All welded joints and connections certified for integrity and quality per AWS D1.1

MAX CORNER REACTIONS AT BASE

DOWN 637522 lb
 UPLIFT -54233 lb
 SHEAR -54743 lb

AXIAL
 283636 lb

MOMENT
 194241 lb-ft

TORQUE 0 lb-ft
 30 mph WIND - 0 7500 in ICE

AXIAL
 89157 lb

MOMENT
 1394876 lb-ft

TORQUE 43 lb-ft
 REACTIONS - 90 mph WIND



GLENMARTIN
 13620 Old Hwy 40
 Booneville, Mo 65233
 Phone (660) 882-2734
 FAX (660) 882-7200

Site: Stumps Run SO: 18924
 Project: 295' HS 90mph-G (18754 geometry)
 Client: Cellere
 Designer: GM
 Date: 07/15/08
 Title: TIA-222-G
 Scale: NTS
 Sheet No: E-1

GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone: (660) 882-2734 FAX: (660) 882-7200	Job Site Stumps Run SO 18924	Page 1 of 6
	Project 295' HS 90mph-G (18754 geometry)	Date 11 47.14 07/15/08
	Client Cellere	Designed by GM

SITE NAME: Stumps Run
SITE #: KY-00-0816A
SALES ORDER: 18924
SITE ADDRESS: Carter County, Kentucky

Purchaser Cellere
Project Contact Braxton Dougherty
231-929-4555
bdougherty@cellere.us

Contact Address:
Attn Braxton Dougherty
Cellere, LLC
4110 Copper Ridge Drive
Ste 204
Traverse City MI 49684

All documents and details prepared in accordance with applicable EIA/TIA-222-G under the direct supervision of a registered professional engineer under the laws of the state of Kentucky. Enclosed calculations are certified and meet all specified purchaser requirements.

CERTIFIED BY Naeem Akhter

DATE REVIEWED: 7-21-08



GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone: (660) 882-2734 FAX: (660) 882-7200	Job Site Stumps Run SO 18924	Page 2 of 6
	Project 295' HS 90mph-G (18754 geometry)	Date 11 47 14 07/15/08
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Tower Input Data

The main tower is a 3x free standing tower with an overall height of 295.52 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 4.00 ft at the top and 26.50 ft at the base.

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

The following design criteria apply:

Tower is located in Carter County, Kentucky.

Basic wind speed of 90 mph.

Structure Class II.

Exposure Category C.

Topographic Category I.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

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

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

All members stamped for identification in accordance with EIA/TIA-222G..

Lock washers provided for all brace bolted connections. Brace connection bolts meet A325X structural joint specification. All X-braces are center bolted..

Step bolt climb ladder provided on single leg with fall protection cable..

All members hot dipped galvanized after fabrication per ASTM A123. Hardware (Bolts, Nuts, Etc.) galvanized per ASTM B695 Class 50 (Mechanical)..

All welded joints and connections certified for integrity and quality per AWS D1:1..

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

Pressures are calculated at each section.

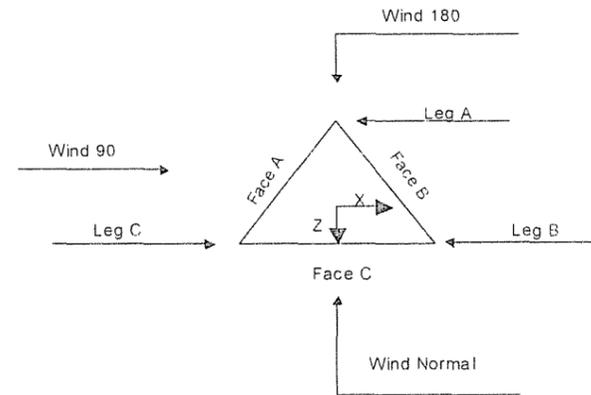
Stress ratio used in tower member design is 1.

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

Options

Consider Moments - Legs	<input checked="" type="checkbox"/> Distribute Leg Loads As Uniform	<input checked="" type="checkbox"/> Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	<input checked="" type="checkbox"/> Assume Legs Pinned	<input checked="" type="checkbox"/> Use ASCE 10 X-Brace LA Rules
Consider Moments - Diagonals	<input checked="" type="checkbox"/> Assume Rigid Index Plate	<input checked="" type="checkbox"/> Calculate Redundant Bracing Forces
Use Moment Magnification	<input checked="" type="checkbox"/> Use Clear Spans For Wind Area	<input checked="" type="checkbox"/> Ignore Redundant Members in FFA
<input checked="" type="checkbox"/> Use Code Stress Ratios	<input checked="" type="checkbox"/> Use Clear Spans For KI/r	<input checked="" type="checkbox"/> SR Leg Bolts Resist Compression
<input checked="" type="checkbox"/> Use Code Safety Factors - Guys	<input checked="" type="checkbox"/> Retension Guys To Initial Tension	<input checked="" type="checkbox"/> All Leg Panels Have Same Allowable
Escalate Ice	<input checked="" type="checkbox"/> Bypass Mast Stability Checks	<input checked="" type="checkbox"/> Offset Girt At Foundation
Always Use Max Kz	<input checked="" type="checkbox"/> Use Azimuth Dish Coefficients	<input checked="" type="checkbox"/> Consider Feedline Torque
Use Special Wind Profile	<input checked="" type="checkbox"/> Project Wind Area of Appurt	<input checked="" type="checkbox"/> Include Angle Block Shear Check
<input checked="" type="checkbox"/> Include Bolts In Member Capacity	<input checked="" type="checkbox"/> Autocalc Torque Arm Areas	<input checked="" type="checkbox"/> Poles
<input checked="" type="checkbox"/> Leg Bolts Are At Top Of Section	<input checked="" type="checkbox"/> SR Members Have Cut Ends	<input checked="" type="checkbox"/> Include Shear-Torsion Interaction
<input checked="" type="checkbox"/> Secondary Horizontal Braces Leg	<input checked="" type="checkbox"/> Sort Capacity Reports By Component	<input checked="" type="checkbox"/> Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	<input checked="" type="checkbox"/> Triangulate Diamond Inner Bracing	<input checked="" type="checkbox"/> Use Top Mounted Sockets
Add IBC 6D+W Combination		

GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone (660) 882-2734 FAX: (660) 882-7200	Job Site Stumps Run SO- 18924	Page 3 of 6
	Project 295' HS 90mph-G (18754 geometry)	Date 11 47 14 07/15/08
	Client Cellere	Designed by GM



Triangular Tower

Maximum Tower Deflections - Service Wind

Section No	Elevation ft	Horz Deflection in	Gov Load Comb.	Tilt °	Twist °
T1	295.52 - 290.52	18.910	47	0.7416	0.0000
T2	290.52 - 275.52	18.131	47	0.7376	0.0000
T3	275.52 - 255.84	15.844	47	0.6795	0.0000
T4	255.84 - 236.16	13.163	47	0.5929	0.0000
T5	236.16 - 216.48	10.829	47	0.5166	0.0000
T6	216.48 - 196.8	8.834	47	0.4307	0.0000
T7	196.8 - 177.12	7.163	47	0.3618	0.0000
T8	177.12 - 157.44	5.720	47	0.3157	0.0000
T9	157.44 - 137.76	4.468	47	0.2687	0.0000
T10	137.76 - 118.08	3.410	47	0.2212	0.0000
T11	118.08 - 98.4	2.524	47	0.1876	0.0000
T12	98.4 - 78.72	1.777	47	0.1536	0.0000
T13	78.72 - 59.04	1.164	47	0.1195	0.0000
T14	59.04 - 39.36	0.691	47	0.0850	0.0000
T15	39.36 - 19.68	0.340	47	0.0570	0.0000
T16	19.68 - 0	0.109	43	0.0286	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
295.00	BM-1207	47	18.829	0.7414	0.0000	93627
285.00	BM-1207	47	17.274	0.7225	0.0000	25319
275.00	BM-1207	47	15.767	0.6770	0.0000	10978
265.00	BM-1207	47	14.363	0.6310	0.0000	12220

GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone (660) 882-2734 FAX (660) 882-7200	Job Site: Stumps Run SO: 18924	Page 4 of 6
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	Client Cellere	Designed by GM

Maximum Tower Deflections - Design Wind

Section No	Elevation ft	Horz Deflection in	Gov Load Comb	Tilt °	Twist °
11	295.52 - 290.52	68.175	18	2.6741	0.0002
12	290.52 - 275.52	65.366	18	2.6597	0.0002
13	275.52 - 255.84	57.121	18	2.4502	0.0002
14	255.84 - 236.16	47.458	18	2.1380	0.0002
15	236.16 - 216.48	39.042	18	1.8630	0.0002
16	216.48 - 196.8	31.850	18	1.5533	0.0002
17	196.8 - 177.12	25.823	18	1.3047	0.0001
18	177.12 - 157.44	20.622	18	1.1383	0.0001
19	157.44 - 137.76	16.106	18	0.9690	0.0001
110	137.76 - 118.08	12.290	18	0.7976	0.0001
111	118.08 - 98.4	9.098	18	0.6763	0.0001
112	98.4 - 78.72	6.406	18	0.5538	0.0000
113	78.72 - 59.04	4.195	18	0.4307	0.0000
114	59.04 - 39.36	2.491	18	0.3065	0.0000
115	39.36 - 19.68	1.226	18	0.2054	0.0000
116	19.68 - 0	0.394	18	0.1031	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb	Deflection in	Tilt °	Twist °	Radius of Curvature ft
295.00	BM-1207	18	67.883	2.6733	0.0002	25166
285.00	BM-1207	18	62.278	2.6053	0.0002	7021
275.00	BM-1207	18	56.847	2.4411	0.0002	3054
265.00	BM-1207	18	51.784	2.2755	0.0002	3399

Bolt Design Data

Section No	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load lb	Ratio Load/Allowable	Allowable Ratio	Criteria
11	295.52	Leg	A325X	0.7500	4	0.08	29820.60	0.000	1	Bolt Tension
		Diagonal	A325X	0.5000	1	1771.86	7312.50	0.242	1	Member Bearing
12	290.52	Leg	A325X	0.7500	4	1079.89	29820.60	0.036	1	Bolt Tension
		Diagonal	A325X	0.5000	1	4924.84	7312.50	0.673	1	Member Bearing
13	275.52	Leg	A325X	1.0000	4	8674.69	53014.40	0.164	1	Bolt Tension
		Diagonal	A325X	0.5000	1	6273.35	8835.73	0.710	1	Bolt Shear
14	255.84	Leg	A325X	1.0000	4	22077.00	53014.40	0.416	1	Bolt Tension
		Diagonal	A325X	0.5000	1	5952.42	8835.73	0.674	1	Bolt Shear

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	Client Cellere	Designed by GM

Section No	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load lb	Ratio Allowable	Allowable Ratio	Criteria
15	236.16	Leg	A325X	1.0000	4	33914.80	53014.40	0.640 ✓	1	Bolt Tension
		Diagonal	A325X	0.5000	1	5912.06	8835.73	0.669 ✓	1	Bolt Shear
16	216.48	Leg	A325X	1.0000	6	29304.50	53014.40	0.553 ✓	1	Bolt Tension
		Diagonal	A325X	0.5000	1	6381.53	8835.73	0.722 ✓	1	Bolt Shear
17	196.8	Leg	A325X	1.0000	6	35420.50	53014.40	0.668 ✓	1	Bolt Tension
		Diagonal	A325X	0.5000	1	6976.47	8835.73	0.790 ✓	1	Bolt Shear
18	177.12	Leg	A325X	1.0000	6	41249.70	53014.40	0.778 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	1	7604.15	12339.80	0.616 ✓	1	Member Bearing
19	157.44	Leg	A325X	1.0000	6	47056.20	53014.40	0.888 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	1	8435.19	12339.80	0.684 ✓	1	Member Bearing
T10	137.76	Leg	A325X	1.0000	10	31679.10	53014.40	0.598 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	1	9404.66	16453.10	0.572 ✓	1	Member Bearing
T11	118.08	Leg	A325X	1.0000	10	35075.90	53014.40	0.662 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	1	10441.50	16453.10	0.635 ✓	1	Member Bearing
T12	98.4	Leg	A325X	1.0000	10	38500.50	53014.40	0.726 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	1	11208.60	16453.10	0.681 ✓	1	Member Bearing
T13	78.72	Leg	A325X	1.0000	10	41918.20	53014.40	0.791 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	2	6269.76	19880.40	0.315 ✓	1	Bolt Shear
T14	59.04	Leg	A325X	1.0000	10	45357.20	53014.40	0.856 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	2	6651.12	19880.40	0.335 ✓	1	Bolt Shear
T15	39.36	Leg	A325X	1.0000	10	48761.40	53014.40	0.920 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	2	7143.93	19880.40	0.359 ✓	1	Bolt Shear
T16	19.68	Leg	A325X	1.0000	10	52180.40	53014.40	0.984 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	2	7977.60	19880.40	0.401 ✓	1	Bolt Shear

Compression Checks

Leg Design Data (Compression)

Section No	Elevation ft	Size	L ft	L _u ft	KL/r	A in ²	P _u lb	φP _n lb	Ratio P _u /φP _n
T1	295.52 - 290.52	P1.5x145	5.00	4.92	94.8 K=1.00	0.7995	-3168.53	18657.20	0.170 ✓
T2	290.52 - 275.52	P2x154	15.00	4.97	75.8 K=1.00	1.0745	-29967.10	31766.40	0.943 ✓
T3	275.52 - 255.84	P3.5x226	19.70	4.90	44.0 K=1.00	2.6795	-86789.00	104643.00	0.829 ✓
T4	255.84 -	P5x258	19.70	4.90	31.3	4.2999	-138482.00	180083.00	0.769 ✓

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Section No	Elevation ft	Size	L ft	L _m ft	K/r	A m ²	P _n lb	φP _n lb	Ratio P _n / φP _n
T5	236.16 - 216.48	P5x 258	19.70	4.90	K=1.00 31.3	4.2999	-182415.00	180083.00	1.013 ¹
T6	216.48 - 196.8	4 9-3 (1 01 CR) - 88 P6x 28	19.70	4.90	K=1.00 26.2	5.5813	-223048.00	238856.00	0.934
T7	196.8 - 177.12	P8x 322	19.70	4.90	K=1.00 20.0	8.3993	-262624.00	367036.00	0.716 ¹
T8	177.12 - 157.44	P8x 322	19.70	4.90	K=1.00 20.0	8.3993	-302407.00	367036.00	0.824 ¹
T9	157.44 - 137.76	P8x 322	19.70	6.54	K=1.00 26.7	8.3993	-340120.00	358753.00	0.948 ¹
T10	137.76 - 118.08	P10x 365	19.70	6.54	K=1.00 21.4	11.9083	-380056.00	518292.00	0.733 ¹
T11	118.08 - 98.4	P10x 365	19.70	6.54	K=1.00 21.4	11.9083	-420567.00	518292.00	0.811 ¹
T12	98.4 - 78.72	P10x 365	19.70	6.54	K=1.00 21.4	11.9083	-461484.00	518292.00	0.890 ¹
T13	78.72 - 59.04	P10x 365	19.70	6.54	K=1.00 21.4	11.9083	-503025.00	518292.00	0.971 ¹
T14	59.04 - 39.36	P12x 375	19.70	6.54	K=1.00 17.9	14.5790	-545112.00	640815.00	0.851 ¹
T15	39.36 - 19.68	P12x 375	19.70	6.54	K=1.00 17.9	14.5790	-587980.00	640815.00	0.918 ¹
T16	19.68 - 0	P12x 375	19.70	6.54	K=1.00 17.9	14.5790	-630459.00	640815.00	0.984 ¹

¹ P_n / φP_n controls

Diagonal Design Data (Compression)

Section No	Elevation ft	Size	L ft	L _m ft	K/r	A m ²	P _n lb	φP _n lb	Ratio P _n / φP _n
T1	295.52 - 290.52	1.1 1/2x1 1/2x1/8	6.34	3.04	K=1.00 123.3	0.3594	-1771.86	5338.98	0.332 ¹
T2	290.52 - 275.52	1.1 1/2x1 1/2x1/8	6.38	3.03	K=1.00 122.9	0.3594	-1924.84	5377.19	0.916 ¹
T3	275.52 - 255.84	1.1 3/4x1 3/4x3/16	7.30	3.56	K=1.00 124.3	0.6211	-6273.35	9075.09	0.691 ¹
T4	255.84 - 236.16	1.1 3/4x1 3/4x3/16	8.56	4.12	K=1.00 143.9	0.6211	-5805.27	6779.15	0.856 ¹
T5	236.16 - 216.48	1.2x2x3/16	9.92	4.81	K=1.00 146.4	0.7150	-5912.06	7536.18	0.784 ¹
T6	216.48 - 196.8	1.2 1/2x2 1/2x3/16	11.34	5.48	K=1.00 132.7	0.9020	-6381.53	11563.90	0.552 ¹
T7	196.8 - 177.12	1.2 1/2x2 1/2x3/16	12.81	6.12	K=1.00 148.5	0.9020	-6976.47	9244.29	0.755 ¹
T8	177.12 - 157.44	1.3x3x3/16	14.31	6.88	K=1.00 138.5	1.0900	-7797.43	12840.00	0.607 ¹

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Section No	Elevation ft	Size	L ft	L _n ft	K/I ¹	A in ²	P _n lb	φP _n lb	Ratio $\frac{P_n}{\phi P_n}$
T9	157.44 - 137.76	1.3x3x3/16	16.35	7.93	159.6 K=1.00	1.0900	-8783.71	9668.03	0.909 ¹
T10	137.76 - 118.08	1.3x3x1/4	17.83	8.58	173.9 K=1.00	1.4400	-9669.66	10761.70	0.899 ¹
T11	118.08 - 98.4	1.3 1/2x3 1/2x1/4	19.34	9.33	161.4 K=1.00	1.6900	-10709.30	14659.20	0.731 ¹
T12	98.4 - 78.72	1.3 1/2x3 1/2x1/4	20.85	10.10	174.6 K=1.00	1.6900	-11524.50	12527.70	0.920 ¹
T13	78.72 - 59.04	1.4x4x1/4	22.39	10.86	164.0 K=1.00	1.9400	-12539.50	16296.60	0.769 ¹
T14	59.04 - 39.36	1.4x4x1/4	23.93	11.55	174.3 K=1.00	1.9400	-13302.30	14418.00	0.923 ¹
T15	39.36 - 19.68	1.4x4x5/16	25.48	12.33	187.0 K=1.00	2.4000	-11287.90	15502.20	0.922 ¹
T16	19.68 - 0	1.4x4x3/8	27.03	13.11	199.6 K=1.00	2.8600	-15955.20	16216.80	0.984 ¹

¹ P_n / φP_n controls

Top Girt Design Data (Compression)

Section No	Elevation ft	Size	L ft	L _n ft	K/I ¹	A in ²	P _n lb	φP _n lb	Ratio $\frac{P_n}{\phi P_n}$
T1	295.52 - 290.52	1.1 1/2x1 1/2x1/8	4.00	3.84	155.6 K=1.00	0.3594	-972.47	3351.34	0.290 ¹

¹ P_n / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No	Elevation ft	Size	L ft	L _n ft	K/I ¹	A in ²	P _n lb	φP _n lb	Ratio $\frac{P_n}{\phi P_n}$
T1	295.52 - 290.52	P1.5x 145	5.00	4.92	94.8	0.7995	2694.55	35975.60	0.075 ¹
T2	290.52 - 275.52	P2x 154	15.00	4.97	75.8	1.0745	27738.30	48353.90	0.574 ¹
T3	275.52 - 255.84	P3.5x 226	19.70	4.90	44.0	2.6795	80964.30	120579.00	0.671 ¹
T4	255.84 - 236.16	P5x 258	19.70	4.90	31.3	4.2999	129839.00	193494.00	0.671 ¹
T5	236.16 -	P5x 258	19.70	4.90	31.3	4.2999	170687.00	193494.00	0.882 ¹

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	Client Cellere	Designed by GM

Section No	Elevation ft	Size	L	L _w	KI _r	A	P _n	φP _n	Ratio $\frac{P_n}{\phi P_n}$
	216.48								
		4 9-3 (1 01 CR) - 88							
T6	216.48 - 196.8	P6x 28	19.70	4.90	26.2	5.5813	207610.00	251161.00	0.827 ¹
T7	196.8 - 177.12	P8x 322	19.70	4.90	20.0	8.3993	242774.00	377967.00	0.642 ¹
T8	177.12 - 157.44	P8x 322	19.70	4.90	20.0	8.3993	277659.00	377967.00	0.735 ¹
T9	157.44 - 137.76	P8x 322	19.70	6.54	26.7	8.3993	310638.00	377967.00	0.822 ¹
T10	137.76 - 118.08	P10x 365	19.70	6.54	21.4	11.9083	344611.00	535873.00	0.643 ¹
T11	118.08 - 98.4	P10x 365	19.70	6.54	21.4	11.9083	378692.00	535873.00	0.707 ¹
T12	98.4 - 78.72	P10x 365	19.70	6.54	21.4	11.9083	412864.00	535873.00	0.770 ¹
T13	78.72 - 59.04	P10x 365	19.70	6.54	21.4	11.9083	447120.00	535873.00	0.834 ¹
T14	59.04 - 39.36	P12x 375	19.70	6.54	17.9	14.5790	481254.00	656053.00	0.734 ¹
T15	39.36 - 19.68	P12x 375	19.70	6.54	17.9	14.5790	515416.00	656053.00	0.786 ¹
T16	19.68 - 0	P12x 375	19.70	6.54	17.9	14.5790	548812.00	656053.00	0.837 ¹

¹ P_n / φP_n controls

Diagonal Design Data (Tension)

Section No	Elevation ft	Size	L	L _w	KI _r	A	P _n	φP _n	Ratio $\frac{P_n}{\phi P_n}$
T1	295.52 - 290.52	1.1 1/2x1 1/2x1/8	6.34	3.04	78.5	0.2109	1769.36	10283.20	0.172 ¹
T2	290.52 - 275.52	1.1 1/2x1 1/2x1/8	6.38	3.03	78.2	0.2109	4795.16	10283.20	0.466 ¹
T3	275.52 - 255.84	1.1 3/4x1 3/4x3/16	7.30	3.56	79.5	0.3779	6091.42	18424.10	0.331 ¹
T4	255.84 - 236.16	1.1 3/4x1 3/4x3/16	7.60	3.65	81.6	0.3779	5820.21	18424.10	0.316 ¹
T5	236.16 - 216.48	1.2x2x3/16	9.92	4.81	93.5	0.4481	5645.86	21857.50	0.258 ¹
T6	216.48 - 196.8	1.2 1/2x2 1/2x3/16	11.34	5.48	84.5	0.5886	6143.06	28694.70	0.214 ¹
T7	196.8 - 177.12	1.2 1/2x2 1/2x3/16	12.81	6.12	94.5	0.5886	6784.89	28694.70	0.236 ¹
T8	177.12 - 157.44	1.3x3x3/16	14.31	6.88	87.9	0.6945	7604.15	33854.60	0.225 ¹
T9	157.44 - 137.76	1.3x3x3/16	16.35	7.93	101.3	0.6945	8435.19	33854.60	0.249 ¹

GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone (660) 882-2734 FAX (660) 882-7200	Job Site: Stumps Run SO: 18924	Page 9 of 6
	Project 295' HS 90mph-G (18754 geometry)	Date 11 47 14 07/15/08
	Client Cellere	Designed by GM

Section No	Elevation ft	Size	L ft	L _u ft	KLr	A in ²	P _u lb	φP _u lb	Ratio $\frac{P_u}{\phi P_u}$
T10	137.76 - 118.08	1.3x3x1/4	17.83	8.58	110.7	0.9159	9404.66	44652.00	0.211 ¹
T11	118.08 - 98.4	1.3 1/2x3 1/2x1/4	19.34	9.33	102.8	1.1034	10441.50	53792.60	0.194 ¹
T12	98.4 - 78.72	1.3 1/2x3 1/2x1/4	20.85	10.10	111.2	1.1034	11208.60	53792.60	0.208 ¹
T13	78.72 - 59.04	1.4x4x1/4	22.39	10.86	104.3	1.2909	12220.20	62933.20	0.194 ¹
T14	59.04 - 39.36	1.4x4x1/4	23.93	11.55	110.9	1.2909	12966.10	62933.20	0.206 ¹
T15	39.36 - 19.68	1.4x4x5/16	25.48	12.33	119.3	1.5919	13932.00	77752.40	0.179 ¹
T16	19.68 - 0	1.4x4x3/8	27.03	13.11	127.9	1.8989	15543.80	92571.70	0.168 ¹

¹ P_u / φP_u controls

Top Girt Design Data (Tension)

Section No	Elevation ft	Size	L ft	L _u ft	KLr	A in ²	P _u lb	φP _u lb	Ratio $\frac{P_u}{\phi P_u}$
T1	295.52 - 290.52	1.1 1/2x1 1/2x1/8	4.00	3.84	99.1	0.2695	923.20	13139.60	0.070 ¹

¹ P_u / φP_u controls

Section Capacity Table

Section No	Elevation ft	Component Type	Size	Critical Element	P lb	oP _u lb	% Capacity	Pass/Fail
T1	295.52 - 290.52	Leg	P1.5x145	1	-3168.53	18657.20	17.0	Pass
		Diagonal	1.1 1/2x1 1/2x1/8	7	-1771.86	5338.98	33.2	Pass
		Top Girt	1.1 1/2x1 1/2x1/8	5	-972.47	3351.34	29.0	Pass
T2	290.52 - 275.52	Leg	P2x154	15	-29967.10	31766.40	94.3	Pass
		Diagonal	1.1 1/2x1 1/2x1/8	16	-4924.84	5377.19	91.6	Pass
T3	275.52 - 255.84	Leg	P3.5x226	34	-86789.00	104643.00	82.9	Pass
		Diagonal	1.1 3/4x1 3/4x3/16	37	-6273.35	9075.09	69.1	Pass
T4	255.84 - 236.16	Leg	P5x258	61	-138482.00	180083.00	76.9	Pass
		Diagonal	1.1 3/4x1 3/4x3/16	64	-5805.27	6779.15	85.6	Pass
T5	236.16 - 216.48	Leg	P5x258	89	-182415.00	180083.00	101.3	Pass
		Diagonal	1.2x2x3/16	92	-5912.06	7536.18	78.4	Pass
T6	216.48 - 196.8	Leg	P6x28	115	-223048.00	238856.00	95.4	Pass
		Diagonal	1.2 1/2x2 1/2x3/16	118	-6381.53	11563.90	55.2	Pass
T7	196.8 - 177.12	Leg	P8x322	143	-262624.00	367036.00	71.6	Pass

GLENMARTIN GLENMARTIN 13620 Old Hwy 40 Boonville, Mo 65233 Phone (660) 882-2734 FAX (660) 882-7200	Job Site: Stumps Run SO: 18924	Page 10 of 6
	Project 295' HS 90mph-G (18754 geometry)	Date 11 47 14 07/15/08
	Client Cellere	Designed by GM

Section No	Elevation ft	Component Type	Size	Critical Element	P lb	oP _{allow} lb	% Capacity	Pass/Fail
		Diagonal	1 2 1/2x2 1/2x3/16	145	-6976 47	9244 29	75 5	Pass
		Leg	P8x 322	160	-332407 00	367036 00	82 4	Pass
18	177 12 - 157 44	Diagonal	1 3x3x3/16	172	-7797 43	12840 00	60 7	Pass
		Leg	P8x 322	198	-340120 00	358753 00	94 8	Pass
19	157 44 - 137 76	Diagonal	1 3x3x3/16	199	-8783 71	9668 03	90 9	Pass
		Leg	P10x 365	217	-380056 00	518292 00	73 3	Pass
T10	137 76 - 118 08	Diagonal	1 3x3x1/4	220	-9669 66	10761 70	89 9	Pass
		Leg	P10x 365	240	-420567 00	518292 00	81 1	Pass
T11	118 08 - 98 4	Diagonal	1 3 1/2x3 1/2x1/4	243	-10709 30	14659 20	73 1	Pass
		Leg	P10x 365	260	-461484 00	518292 00	89 0	Pass
T12	98 4 - 78 72	Diagonal	1 3 1/2x3 1/2x1/4	262	-11524 50	12527 70	92 0	Pass
		Leg	P10x 365	280	-533025 00	518292 00	97 1	Pass
T13	78 72 - 59 04	Diagonal	1 4x4x1/4	283	-12539 50	16296 60	76 9	Pass
		Leg	P12x 375	301	-545112 00	640815 00	85 1	Pass
		Diagonal	1 4x4x1/4	307	-13302 20	14418 00	92 3	Pass
T15	39 36 - 19 68	Leg	P12x 375	322	-587980 00	640815 00	91 8	Pass
		Diagonal	1 4x4x5/16	325	-14287 90	15502 20	92 2	Pass
T16	19 68 - 0	Leg	P12x 375	343	-630459 00	640815 00	98 4	Pass
		Diagonal	1 4x4x3/8	347	-15955 20	16216 80	98 4	Pass
							Summary	
							Leg (T5)	101 3
							Diagonal (T16)	98 4
							Top Girt (T1)	29 0
							Bolt Checks	98 4
							RATING =	101.3
								Pass

SST TOWER PIER/MAT FOUNDATION DESIGN WORK SHEET:

Site Name:	Stumps Run
Project #:	18924
DRW #:	GM-05326
Site #:	KY-00-0816A
Site Location:	Carter County, KY
Client:	Callere
Revision:	0
Geotech Report #:	25036.00004.08
Report By:	Wilcox Professional Services, LLC
Of:	Wheaton, Illinois
Report Date:	30-Apr-08
A owab e bearing presssure	10000 psi
Concrete Compressive Strength:	4000 psi
Sack Mix:	
Minimum Slump:	
Maximum Slump:	
Ultimate Bearing Pressure	20000 psf
Vertical Down:	637.522 kips
MAX Up ft:	554.233 kips
MAX Shear/Leg:	54.743 kips
Axia Load:	283.856 kips
OTM:	13948.876 ft kips
Tota Shear @ Base:	11.517 kips
Tower weight:	51813.4 lbs
Fy of Re-bars (ksi)	60 ksi

Tower Spread (input)	26.5
Tower Spread (Dimension sign)	26'-6" ft
1/3 Distance:	7'-7 3/4"
2/3 Distance:	15'-3 9/16"
1/2 Face Distance:	13'-3" ft

MAX. CORNER REACTIONS AT BASE
 DOWN: 53750.0#
 UP: 55423.3#
 SHEAR: 54743.0#



TOWER WIND - 0.7500 WIND
 UP: 55423.3#
 SHEAR: 54743.0#



TOWER WIND - 0.5000 WIND
 UP: 55423.3#
 SHEAR: 54743.0#

	26'-6" 1/2	ft
	7'-8" 1/2	ft
	15'-4" 1/2	ft
	13'-3" 1/2	ft

Pier Diameter (Pad Width):	4'-6" ft	4' 6"/12	ft
1/2 Pier Diameter (1/2 Pad width)	2'-3"	2' 3"/12	ft
Total PIER HEIGHT:	5'-6" ft	5' 6"/12	ft
Finished Height Above Grade:	1 ft	1	ft
Total Mat Width:	33'-0" ft	33	ft
1/2 Total Mat Width	16'-6"	16' 6"/12	ft
Mat Thickness:	1'-6" ft	1' 6"/12	ft
Tower height	295 ft		
Total height	7'-0"	7	ft
Volume of Concrete Pier:			
Total Volume of Concrete:			
Pier height below grade	4'-6"	4' 6"/12	ft
PIER BAR SIZE	9 # Rebar		
PIER BAR NUMBER	14		
Size of Horizontal Ties:	4 12" Spacing		
MAT BAR SIZE	9 # Rebar		
MAT BAR NUMBER	18		
TOTAL MAT BAR NUMBER	72		
Anchor Bolt Diameter:	2 in	2	inch
Quantity of Anchor Bolts:	8		
Bolt Circle Diameter:	19 in	19	inch
Anchor Bolt Projection:	11 in	11	inch
Anchor bolt length:	72 in	72	inch
Distance Base Plate & Pad:			
Thickness Base Plate:	in		

DRAWN	SDH
DATE	7/16/2008
CHECKED	XIN
DATE	7/16/2008

SQUARE BAR SIZE	9		
SQUARE BAR NUMBER	20		
PIERS MOVE UP DIMENSION	3.05 ft	19' 7"/12	ft
MAT LARGER HALF DIMENSION	19'-7" ft		
MAT SMALLER HALF DIMENSION	13'-5" ft	13' 5"/12	ft

INPUT DATA AND DESIGN PARAMETERS

MAT WIDTH	33	ft	CONCRETE DENSITY	150	pcf	
MAT THICKNESS	1.5	ft	BACKFILL DENSITY	110	pcf	
PIER DIAMETER	4.5	ft	MIN SOIL DENSITY	110	pcf	
PIER TOTAL HEIGHT	5.5	ft	AXIAL LOAD	283856	lb	Factored oad
PIER HEIGHT AGL	1	ft	UPLIFT LOAD	554233	lb	Factored oad
INPUT WATER TABLE	n/a	ft	BASE SHEAR FORCE	11517	lb	Factored oad
WATER TABLE FOR CALCS	N/A	ft	OTM	13948876	ft-lb	Factored oad
MAT LENGTH	33	ft	CONCRETE STRENGTH	4000	psi	
ρ (PIER)	0.006		ULTIMATE BEAR PRESSURE	20000	psf	U timate bearing
ρ (MAT)	0.005		TOWER SPREAD	26.5		
COHESION	500	psf	LOCAL OTM	12000	ft-lb	
COFRICION	0.45	base footing				
PIER BAR SIZE	9	#	SPACING OK FOR PIER BAR SIZING			REBAR UP. CAP. 618359.682 lb
PIER BAR NUMBER	14		SPACING OK FOR SQUARE BAR SIZING			REBAR UP. CHECK PIER REBAR OK FOR UPLIFT
SQUARE BAR SIZE	9	#	SPACING OK FOR MAT BAR SIZING			
SQUARE BAR NUMBER	20					
MAT BAR SIZE	9	#	PIER HEIGHT DESIGN OK			
MAT BAR NUMBER	36					
ECENTRICITY	12.8208525		Qo	1087983.5	lb	
ECENTRICITY FACTOR	5.5		PIER TO CENTER	15.30	ft	
RESULT	ECENTRICITY ANALYSIS OK					
SDIE EDGE CHECK	SIDE EDGE OK		N/A	ft		
BOTTOM EDGE CHECK	MOVE PIERS UP AT LEAST		3.05	ft		
DOWN, UPLIFT, AND OVERTURNING MOMENT CHECKING						
ACTUAL AREA WIDTH	7.35829496	ft	WEIGHT OF SOIL	593811.405	lb	
ACTUAL AREA LENGTH	7.35829496	ft	WEIGHT OF CONCRETE	295143.75	lb	
INVERSE SOIL HEIGHT	2.5965	ft	DESIGN UPLIFT	666716.3663	lb	Resistance factor=0.75
FOOTING PERIMETER	132	ft	REQUIRED UPLIFT	607988.0828	lb	
INVERSE SOIL VOLUME	771.1605	ft ³	DESIGN DOWN	3642356.003	lb	Resistance factor=0.75
INVERSE SOIL WEIGHT	84827.655	lb	REQUIRED DOWN	2336792.5	lb	
RESULT	UPLIFT ANALYSIS OK					
	DOWN ANALYSIS OK					
SLIDING FRICTION						
FRICTION CAPACITY	489592.575	lb				
RESULT	ANALYSIS OK IN HORIZONTAL MOVEMENT					

PUNCHING SHEAR IN FOOTING

PU1	1248809	lb		ONE WAY PUNCHING SHEAR-ASSUMED SQUARE BASE FOOTING	
d	15	in	φ	TWO WAY PUNCHING SHEAR-ASSUMED SQUARE BASE FOOTING WITH COLUMN LOCATED I	
e1	156	in	vc	0.85	
vu1	82.8207173	psi	SH1	126.4911064	psi
PU2	312241.6	lb	JF	107.5174404	psi
MU2	158400	lb-in	R2	3323902.5	
b2	69	in	v2	274.776431	
AREAP	4140	in^2	AREAF	0.4	
vu2	76.0119418	psi	SH2	156816	in^2
RESULT	FOUNDATION DESIGN, ONEWAY SHEAR PUNCHING OK			215.0348809	psi
	FOUNDATION DESIGN, TWO-WAY SHEAR PUNCHING OK				

ANCHOR BOLT DESIGN

			<i>Anchor bolt design use ASD method</i>		
LEG TYPE & SIZE	P12	(FROM TOWER DESIGN)	SET INDEX	24	
LEG TYPE & SIZE	P12	(FROM SET INDEX)	FLANGE THICK	1.5	in (FROM PIER)
BOLT DIAMETER	2	in	OTM	12000	ft-lb (OTM=12000)
BOLT QUANTITY	8		AXIALWEIGHT	398451.25	lb Actua load w/o factor
BOLT LENGTH	72	in	SHEARFORCE	34214.375	lb Actua load w/o factor
BOLT CIRCLE DIA	19	in	Fc	4000	psi
BASE PLATE DIA	26	in	Fy	60000	psi
BOLT PROJECTION	11	in	BASE PLATE STR	750.4791245	psi
RESULT	OK IN LEG TYPE AND SIZE MATCH				
	ANALYSIS OK FOR ANCHOR BOLT RATIO				
	ANALYSIS OK FOR PUNCHING				
	ANALYSIS OK FOR BASE PLATE STRENGTH				

MIN TENSTRBLTU	55000	psi	DIA NUTPUNCHING	3.13	in
ALL TENSTRBLT	36300	psi	THREADS PER LENG	4.5	in
YIELDSTRFLANGE	50000	psi	OUTSIDE DIA	27	in
DATA2	5.7	in			
DIASTREBOLT	1.78348889	in	AREASTREBOLT	2.498225937	in^2
AXIALBOLT	49806.4063	lb	AREANOMBOLT	3.1416	in^2
			STRESSBOLT	19936.71009	psi
BOLTDEGREE	45	degree			
Yt	451.2500	in^2	BOLTRADIUS	0.7853975	rad
Ya	381.0000	in^2	RADIUSBC	9.5	in
MINERSINBOLT	0.49565083	in^4	MINEBOLTTOTAL	905.83277	in^4

TIA222-G 4.9.61

MAX ANCHOR BOLT LENGTH DEVELOPMENT

id	8.69626357		DIAMETER SHEARIN	15	in
SHEAR PLATE THICK	0.7	in	DIAMETER SHEAROUT	23	in
F(DIAMNB)	0.05	in	PLATE AREA	238.7616	in^2
K(DIAMNB)	0	in	ST1	119380.8	
G(DIAMNB)	0	in	TOTALANLEN	5.540993756	ft
PLATE TOTAL THICK	0.75	in	ALD	55.49192507	in
H(TOTAANLEN)	0		FSHEARFORCE	4276.796875	lb
P(TOTAANLEN)	0		XSHEARFACTOR	0.06288094	
J(TOTAANLEN)	0		SSHEARSBB	2282.578108	

EXHIBIT C

Directions to Site from County Seat



Directions to the Site
From the County Seat of Carter County, Kentucky

Stumps Run Site
Carter County, Kentucky

From the Carter County Courthouse in Grayson, Kentucky, begin heading East on US-60/ W. Main Street toward Hillview Street for .2 miles. Turn Left onto KY-1/KY-7/ Railroad Street. Continue on KY-1/ KY-7 for 1.4 miles. Turn Left onto KY-694/KY-9? Governor John Y. Brown Jr. for 5.6 miles. Turn left on Kees Branch for .2 miles. End at 220 Kees branch, Grayson, Kentucky, 41143.



Sandee L. Yagle, Cellere
7-29-08
Date

EXHIBIT D

Memorandum of Lease

MEMORANDUM OF LEASE

Return to:
C/O Central States Tower Holdings, LLC
323 S. Hale Street, Suite 100
Wheaton, IL 60187
(630) 221-8500 Main Number
Attn: Property Manager

Prepared By:
David Larsen
Cellere
4110 Copper Ridge Drive Ste. 204
Traverse City, MI 49684
(231) 929-4555

Re: Cell Site #KY-00-0816A; Cell Site Name: STUMPS RUN

State: Kentucky
County: Carter

This Memorandum of Lease is entered into on this 21st day of JANUARY, 2008, by and between Charles Kitchen and Sue Kitchen, husband and wife, jointly with survivorship, having a mailing address of 330 Kees Branch Rd., Grayson, KY 41143 (hereinafter referred to as "**Landlord**") and Central States Tower Holdings, LLC, a Delaware limited liability company, having a mailing address of 323 S. Hale Street, Suite 100, Wheaton, IL 60187 (hereinafter referred to as "**Tenant**").

1. Landlord and Tenant entered into a certain Option and Lease Agreement ("**Agreement**") on the 21st day of JANUARY 21st, 2008, for the purpose of installing, operating and maintaining a communications facility and other improvements. All of the foregoing are set forth in the Agreement.
2. The initial lease term will be five (5) years ("**Initial Term**") commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option, with five (5) successive five (5) year options to renew.
3. A portion of the Property being leased to Tenant contained and described in **Exhibit A** annexed hereto.
4. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Agreement, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum of Lease and the provisions of the Agreement, the provisions of the Agreement shall control. The Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Agreement.

LANDLORD ACKNOWLEDGMENT

INDIVIDUAL ACKNOWLEDGMENT

STATE OF KENTUCKY)
) ss:
COUNTY OF CARTER)

BE IT REMEMBERED, that on this 9th day of Jan., 2000 before me, the subscriber, a person authorized to take oaths in the State of Kentucky, personally appeared Charles Kitchen and Sue Kitchen, husband and wife, jointly with survivorship, who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

Notary Public: *Joseph Porter Caines*
My Commission Expires: 6/22/2011

PARTNERSHIP (consisting of corporations) ACKNOWLEDGMENT

STATE OF)
) ss:
COUNTY OF)

I CERTIFY that on NA NA, 2007, NA personally came before me and this/these person(s) acknowledged under oath to my satisfaction, that:

- (a) this/these person(s) signed, sealed and delivered the attached document as NA of _____ a corporation of the State of _____, which is a general partner of the partnership named in this document;
- (b) the proper corporate seal of said corporate general partner was affixed; and
- (c) this document was signed and delivered by the corporation as its voluntary act and deed as [a] general partner(s) on behalf of said partnership [by virtue of authority from its Board of Directors].

Notary Public: _____
My Commission Expires: _____

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

WITNESSES:

"LANDLORD"

Tonya Caines
Print Name: Tonya Caines

By: Charles Kitchen
Print Name: Charles Kitchen
Its: Owner

Date: 1-9-08

Tonya Caines
Print Name: Tonya Caines

By: Sue Kitchen
Print Name: Sue Kitchen
Its: Owner

Date: 1-9-08

WITNESSES:

"TENANT"

Central States Tower Holdings, LLC
a Delaware limited liability company

Marianne Grant
Print Name: MARIANNE GRANT

By: Brian P. Meier
Print Name: Brian P. Meier
Its: C.O.O.

Date: 1-21-08

[ACKNOWLEDGMENTS APPEAR ON THE NEXT PAGE]

EXHIBIT A

DESCRIPTION OF PROPERTY

Page 1 of 2

to the Memorandum of Lease dated JANUARY 21ST, 2008, by and between Charles Kitchen and Sue Kitchen, husband and wife, jointly with survivorship, as Landlord, and Central States Tower Holdings, LLC, a Delaware limited liability company, as Tenant.

The Property is described and/or depicted as follows:

Tract No. One: Beginning at a stone in the old field in the division line of the Alexander Brown survey of 16,000 acres (sixteen thousand acres) and its intersection with the line of Riggs tract, now the Iron Hills; thence with line of said Iron Hills tract, N 83°E, 23 poles to a small white oak, black oak and sourwood on east bank of branch; thence N 7°W, 160 ½ poles to two black oaks and white oak saplings on a ridge; thence S 84°W, 9 4/5 poles to a black jack and hickory sapling; thence N 10°W, 118 ¼ poles to a white oak stump on west bank of branch; thence N 9°E, 58 poles to a stake in fence corner to B. Newman lands; thence with his line S 45°E, 29 poles to a white oak stump on a steep hill side; thence up point S 2 ½ °W, 48 ½ poles to a white oak; thence S 23 ½ °E, 22 poles to four white oak saplings; thence 68 ½ °E, 14 ½ poles to a chestnut oak; thence N 86 ½ °E, 26 poles to a sourwood and oak; thence S 80 ½ °E, 63 poles to a stake corner to Terry Rameys; thence with his line S 30°W, 84 poles to a large black oak near head of drain; thence S 60°E, 84 poles to a stone in road a corner to J.G. Hayden; thence with his line, up stump run S 20°W, 42 poles to a stone at forks of branch; thence S 10 ¾ °E, 68 poles to a stone in Mary A. Everman line; thence with her line, up hill N 82 ½ °W, 47 4/5 poles to two black jacks on top of ridge; thence S 37°W, 15 ½ poles to a large pine (now cut down); thence with center of ridge S 50 ¼ °W, 11 4/5 poles to a double dogwood and chestnut oak; thence E 14°W, 9 poles to a black jack; thence S 28°W, 11 poles to a white oak sapling; thence S 28 ½ °E, 12 ½ poles to three black jacks; thence S 19 ½ °E, 15 ¼ poles to a dogwood; thence S ½ °W, 32 2/3 poles to a large pine stump; thence S 54 ½ °W, 2 ½ poles to three black jacks in said division line; thence with said division line N 44 ½ °W, 110 poles to the beginning containing (179) acres and did contain (180) acres, one acre heretofore being sold to Luther Huffman.

Tract No. Two: Beginning at a black oak, corner to or between the land of party of the first part, and John Roberts; thence a northerly course with the ridge and a road to the lands of A.T. Hall at a black oak; thence, with his line an easterly course to the lands of John Hall, at a corner of the lands of Peter Kee, John Hall and party of the first part herein; then a southerly course and the dividing ridge to a black oak, corner to the lands of John Roberts and the party of the first part; thence a southerly course with the ridge to the beginning containing sixteen (16) acres more or less.

Tract No. Three: Beginning at a black oak Halls corner; thence N 82 ½ °E, 25 ½ poles to a double black oak; thence N 11°W, 103 poles to a stake and sycamore; thence up the branch S 14°W, 5 ½ poles to a white oak; S 1 ½ °W, 4 poles to a white oak; thence S 4°E, 20 poles; thence S 6 ½ °W, 9 poles to a mulberry; thence S 18°E, 4 ½ poles to a black oak; thence S 3°E, 8 ½ poles; S 9°W, 6 poles to a sycamore; S 28°W, 18 ½ poles to a gum; S 25°W, 23 poles to a black oak; S 10-14 poles to the beginning containing 7 acres more or less.

Tract No. Four: Beginning at a stone in the County Road on Stumps Run in the William Newman line; thence S 23°E, 20 poles to a stake in the center of the road; S 48 ½ °E, 10 poles; S 64 ½ °E, 18 poles; S 54 ½ °E, 37 ½ poles; S 63 ½ °E, leaving the county road, 14 poles to a stone at the foot of point; thence Southwesterly course 68 steps to the forks of the branch; thence with the branch a Southeasterly course 225 steps to a set stone on the bank of the branch; thence a Westerly course 10 steps to the Roberts and Brown corner; thence with the Roberts and Brown line, S 63°W, 50 poles to a large leaning white oak on top the ridge; thence leaving the line N 60°W, 144 poles to a large black oak near the head of a ravine; N 30°E, 84 poles to a stake in the William Newman line; and with said line S 63°E, 13 poles to the beginning, containing 69 acres, plus or minus.

DESCRIPTION OF PROPERTY

Page 2 of 2

Tract No. Five: Beginning at a stake in the branch, corner to Gregory, Everman, Fossett; thence a Northeast course to a black gum in the J.B. Roberts line; thence N 3°E, 30 poles to two chestnut oaks; thence N 70 ½ °W, 20 poles to two small black oak bushes; thence N 14°W, 35 poles to a large leaning white oak; thence with the Ramey line N 6°W, 60 poles to a stone on Stumps Run, corner to W.E. Gregory; thence with the Gregory line S 20°W, 42 poles to a stone at forks of branch; thence S 10 ¾ °E, 68 poles to the beginning, containing 50 acres, plus or minus.

Tract No. Six: Lying on the waters of Stumps Run, a tributary of Tygarts Creek, in Carter County, Kentucky, beginning at a set stone in the old county road (now abandoned) in the W.M. Newman line and a corner of the Wayne Parsons farm; thence S 23°E, 20 poles to a stake in the road; S 48 ½ °E, 10 poles; S 42 ½ °E, 11 poles to a poplar; S 29°E, 14 poles to a stake on bank of branch; S 30 ½ °E, 15 poles and 11 links; S 63°E, 6 poles to the end of a culvert under State Highway No. 7; thence with said Highway, N 29°W, 49 poles to a peach tree; thence N 38 ½ °W, 16 poles to an ash; N 43 ½ °W, 15 2/3 poles to a stake in the Newman line; thence with said line S 41°W, 4 poles to the beginning, containing one and one-half (1 ½) acres, plus or minus.

There is excepted from Tract 4, 5 and 6, 5 ¼ acres conveyed to the Commonwealth of Kentucky.

There is also excepted and excluded from the said boundaries of Tract 4, 5 and 6, and not hereby conveyed, the two tracts of land heretofore conveyed, namely, about 25 ½ acres conveyed to Cecil Counts and Dexter Counts, his wife to Fred Kitchen by deed dated May 3, 1947, and recorded in Deed Book 74 page 386, and about 25 acres conveyed by Cecil Counts and Dexter Counts, his wife, to Carl Everman by deed dated October 21, 1944, and recorded in Deed Book 68 Page 12, Carter County, Kentucky deed records, to which exclusions reference is made to said deeds.

Tract No. Seven: A tract of land on the West Fork of Stumps Run, a tributary of Tygarts Creek, in Carter County, Kentucky, to wit: Beginning at a small white oak, sourwood and black oak, standing on the East side of a branch, a corner to the land of Peter Keys, then running with his line N 7°E, 147 poles to a black oak standing on top of a ridge at a road, then running with said ridge and road S 45°W, 15 poles to two black oaks, S 78 ½ °W, 20 poles; S 51 ½ °W, 8 poles to two black oaks; S 78 ½ °W, 20 poles, S 51 ½ °W, 8 poles to two black oaks; S 78 ½ °W, 20 poles to a black oak, S 26°W, 9 poles to a black oak, S 13°W, 21 poles to a black oak, S 43°W, 12 ½ poles to a black oak, S 29°W, 7 poles to three black oaks from one root; S 1°E, 9 1/5 poles to a black oak; S 16°E, 10 1/5 poles to a post oak; S 2°E, 19 ½ poles to a black oak; S 27 ½ °W, 19 ½ poles to a black oak; S 32 ½ °W, 7 1/3 poles to a black oak, S 70°E, 16 ¾ poles to a stone; N 76°E, 11 poles to a small white oak; S 51°E, 16 poles to a chestnut oak and black oak; S 25°E, 2 ½ poles to a forked chestnut standing on the East bank of the road; then leaving the road S 86 ½ °E, 14 poles to a bunch of poplar sprouts; N 89°E, 44 poles to the beginning, containing 61 1/10 acres more or less.

All land lying and being in Carter County, Kentucky.



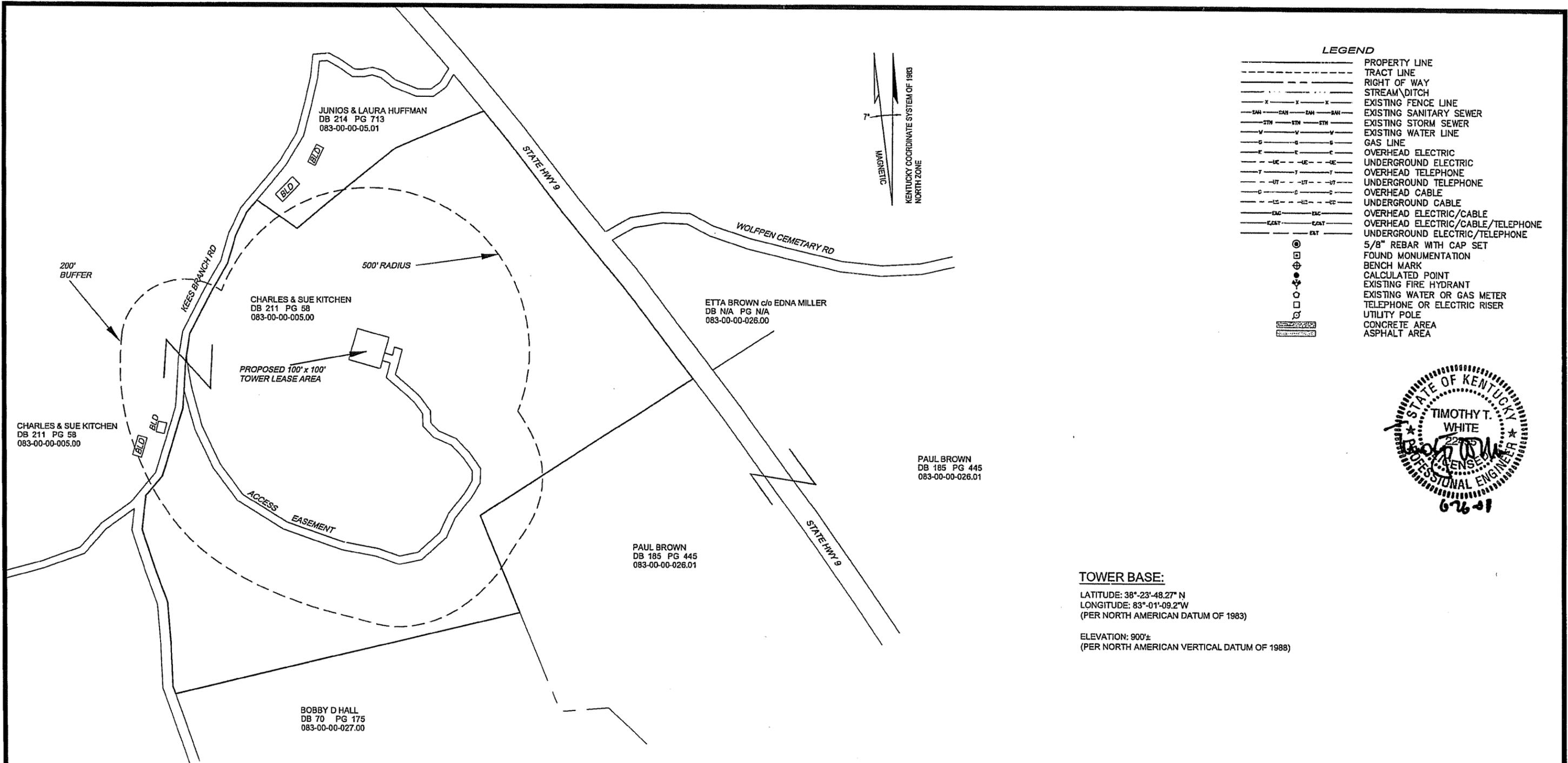
304215
Filed on: 2/7/2008 12:52:38 PM
Book: OR Number: 210
Pages: 814 - 819
Mike D. Johnston, Carter County
DC: SHANNA BRADLEY

Site Name: STUMPS RUN
Site Number: KY-00-0816A

Carter County
OR 210 PG 819

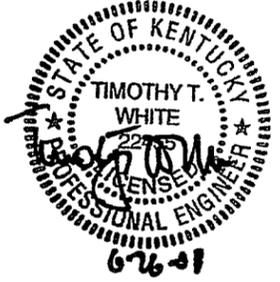
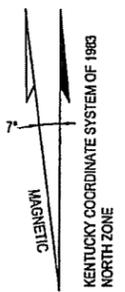
EXHIBIT E

**Site Plan – 500' Radius Map with
Flood Plain Information**



LEGEND

---	PROPERTY LINE
---	TRACT LINE
---	RIGHT OF WAY
---	STREAM/DITCH
X-X-X	EXISTING FENCE LINE
---S---S---S	EXISTING SANITARY SEWER
---ST---ST---ST	EXISTING STORM SEWER
---V---V---V	EXISTING WATER LINE
---G---G---G	GAS LINE
---E---E---E	OVERHEAD ELECTRIC
---UE---UE---UE	UNDERGROUND ELECTRIC
---T---T---T	OVERHEAD TELEPHONE
---UT---UT---UT	UNDERGROUND TELEPHONE
---C---C---C	OVERHEAD CABLE
---UC---UC---UC	UNDERGROUND CABLE
---EAC---EAC	OVERHEAD ELECTRIC/CABLE
---EAC/T---EAC/T	OVERHEAD ELECTRIC/CABLE/TELEPHONE
---UEAT---UEAT	UNDERGROUND ELECTRIC/TELEPHONE
⊙	5/8" REBAR WITH CAP SET
⊕	FOUND MONUMENTATION
⊙	BENCH MARK
⊙	CALCULATED POINT
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING WATER OR GAS METER
⊙	TELEPHONE OR ELECTRIC RISER
⊙	UTILITY POLE
▭	CONCRETE AREA
▭	ASPHALT AREA



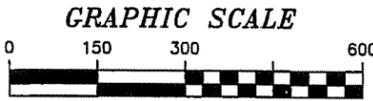
TOWER BASE:

LATITUDE: 38°-23'-48.27" N
 LONGITUDE: 83°-01'-09.2"W
 (PER NORTH AMERICAN DATUM OF 1983)

ELEVATION: 900±
 (PER NORTH AMERICAN VERTICAL DATUM OF 1988)

FLOOD PLAIN INFORMATION

THE SUBJECT PROPERTY LIES WITHIN ZONE "C", AN AREA OF MINIMAL FLOODING, AS DESIGNATED ON N.F.I.P. CARTER COUNTY, KY COMMUNITY PANEL #210050-0045 B, BEARING AN EFFECTIVE DATE OF FEBRUARY 15, 1984.



MAP:	NAME:	ADDRESS:	CITY:	STATE:	ZIP:	DB:	PG:
083-00-00-005.00	CHARLES & SUE KITCHEN	330 KEES BR	GRAYSON	KY	41143	211	58
083-00-00-005.01	JUNIOS L. & LAURA ANN HUFFMAN	59 KEES BR	GRAYSON	KY	41143	214	713
083-00-00-027.00	BOBBY D. HALL	615 KEES BR	GRAYSON	KY	41134	70	175
083-00-00-026.00	ETTA BROWN C/O EDNA MILLER	105 NEW HAMPSHIRE DR	ASHLAND	KY	41101	N/A	N/A
083-00-00-026.01	PAUL BROWN	7651 N. STHWY 7	GRAYSON	KY	41143	185	445

Waco Professional Services
 ONE MADISON AVENUE
 CADILLAC, MI 49601
 (231) 775-7755 OFFICE
 (231) 775-3135 FAX
 www.waco.us

CST CENTRAL STATES TOWER, INC.
 323 SOUTH HALE STREET
 SUITE 100
 WHEATON, IL 60187

TERRADON
 P.O. Box 519
 Nitro, West Virginia 25143
 (304) 755-8291 FAX 755-2636

KY-00-0816A
STUMPS RUN
 220 KEES BRANCH
 GRAYSON, KY 41143

NO.	DATE	REVISIONS	BY	CHK	APP'D

DATE: 08/23/08 SCALE: AS SHOWN DESIGNED BY: SFP DRAWN BY: SFP

SHEET R-1
 500' RADIUS MAP &
 FLOOD PLAIN INFORMATION
 DRAWING NUMBER
 KY-00-0816A

EXHIBIT F

**Affidavit of Notification of Adjacent Property
Owners and Owners within 500 feet**

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Application of Central States Tower Holdings, LLC for Issuance
of a Certificate of Public Convenience and Necessity to Construct
a Cell Site (KY-00-0816A STUMPS RUN) in Grayson, Kentucky

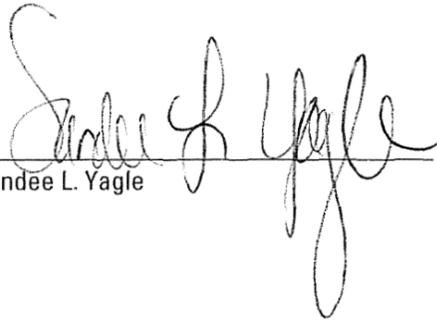
Case No. 2008-00262

Affidavit of Sandee L. Yagle

I, Sandee L. Yagle, being duly sworn, depose and state as follows:

1. My name is Sandee L. Yagle and I am an employee of Cellere, LLC, agent for Central States Tower Holdings, LLC and am submitting this affidavit in conjunction with the above referenced matter.
2. In order to demonstrate compliance with 807 KAR 5:063 § 1(1)(1), Exhibit 1 identifies the names of the residents/ tenants and property owners within 500 feet of the proposed tower who have been: (i) notified by written notice of the proposed construction, sufficient postage prepaid, by United States Certified Mail, return receipt requested; (ii) given the Commission docket number under which the application will be processed; and (iii) informed of the right to request intervention.
3. Attached as Exhibit 2 is a copy of the United States Certified Mail return receipts that demonstrate proof of service of the written notice of the proposed construction upon: (1) Charles and Sue Kitchen; (2) Paul Brown; (3) Etta Brown c/o Edna Miller; (4) Junior and Laura Huffman; (5) Bobby Hall. (See Exhibit1)

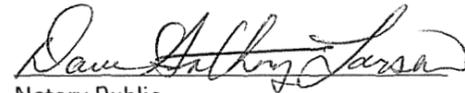
Further Affiant saith not.


Sandee L. Yagle

State of Michigan)
) SS:
County of Grand Traverse)

Subscribed and Sworn to before me this 30th day of July, 2008.

My commission expires: 2/2/2012


Notary Public

DAVID ANTHONY LARSEN
Notary Public, State of Michigan
County of Grand Traverse
My Commission Expires 02-02-2012
Acting in the County of *Gr. Traverse*.

Landowner and Adjacent Landowner List

Central States Tower Holdings, LLC
Stumps Run Site
Grayson, Kentucky

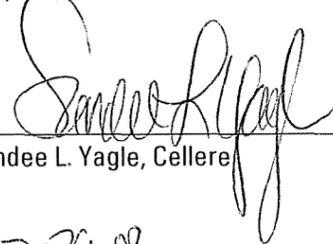
Charles and Sue Kitchen
330 Kees Branch
Grayson, KY 41143

Paul Brown
7651 N. St. Hwy 7
Grayson, KY 41143

Etta Brown c/o Edna Miller
105 New Hampshire Drive
Ashland, KY 41101

Junios and Laura Huffman
59 Kees Branch
Grayson, KY 41143

Bobby Hall
615 Kees Branch
Grayson, KY 41143



Sandee L. Yagle, Cellere

7-29-08
Date

July 2, 2008

Paul Brown
7651 N. St. Hwy 7
Grayson, KY 41143

Public Notice

Cellere, LLC, a Michigan limited liability company as agent for Central States Tower Holdings, LLC is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct a new cellular tower facility to provide cellular telephone service. This facility will include a 300 foot tower to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

Cellere and Central States welcome the opportunity to serve and provide wireless service in your community!

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.<input checked="" type="checkbox"/> Print your name and address on the reverse so that we can return the card to you.<input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.	A. Received by (Please Print Clearly) B. Date of Delivery JON B BROWN 7-12-08
1. Article Addressed to: Paul Brown 7651 N. St. Hwy 7 Grayson, KY 41143	C. Signature <input type="checkbox"/> Agent x Jon B Brown <input type="checkbox"/> Addressee <input type="checkbox"/> Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No
2. Article Number (Copy from service lab) 7008 0150 0001 5347 8133	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
PS Form 3811, July 1999	4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
Domestic Return Receipt	
	102595-00-M-0952

July 2, 2008

Etta Brown
c/o Edna Miller
105 New Hampshire Drive
Ashland, KY 41101

Public Notice

Cellere, LLC, a Michigan limited liability company as agent for Central States Tower Holdings, LLC is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct a new cellular tower facility to provide cellular telephone service. This facility will include a 300 foot tower to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location is attached.

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Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

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<ul style="list-style-type: none">Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.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.	A. Received by (Please Print Clearly) _____ B. Date of Delivery <u>7-12-08</u>
1. Article Addressed to:	C. Signature <u>Edna Miller</u> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee
Etta Brown c/o Edna Miller 105 New Hampshire Drive Ashland, KY 41101	D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:
2. Article Number (Copy from service label)	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
PS Form 3811, July 1999	4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
7008 0150 0001 5347 8126	
Domestic Return Receipt 102595-00-M-0952	

July 2, 2008

Junios and Laura Huffman
59 Kees Branch
Grayson, KY 41143

Public Notice

Cellere, LLC, a Michigan limited liability company as agent for Central States Tower Holdings, LLC is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct a new cellular tower facility to provide cellular telephone service. This facility will include a 300 foot tower to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

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SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none">■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.■ 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.	A. Received by (Please Print Clearly) B. Date of Delivery <i>Ann Huffman</i> <i>7/14/08</i>
1. Article Addressed to: Junios and Laura Huffman 59 Kees Branch Grayson, KY 41143	C. Signature <input type="checkbox"/> Agent <input type="checkbox"/> Addressee <input checked="" type="checkbox"/> <i>Ann Huffman</i>
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No
	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
	4. Restricted Delivery? (Extra Fee) <input checked="" type="checkbox"/> Yes
2. Article Number (Copy from service label)	7008 0150 0001 5347 8102
PS Form 3811, July 1999	Domestic Return Receipt 102595-00-M-0952

July 2, 2008

Charles and Sue Kitchen
330 Kees Branch
Grayson, KY 41143

Public Notice

Cellere, LLC, a Michigan limited liability company as agent for Central States Tower Holdings, LLC is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct a new cellular tower facility to provide cellular telephone service. This facility will include a 300 foot tower to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

Cellere and Central States welcome the opportunity to serve and provide wireless service in your community!

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<input checked="" type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.		A. Received by (Please Print Clearly)	B. Date of Delivery
<input checked="" type="checkbox"/> Print your name and address on the reverse so that we can return the card to you.		<i>Sue Kitchen</i>	7/12
<input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.		C. Signature	<input type="checkbox"/> Agent
		<i>Sue Kitchen</i>	<input type="checkbox"/> Addressee
1. Article Addressed to:		D. Is delivery address different from item 1?	<input type="checkbox"/> Yes
Charles and Sue Kitchen		If YES, enter delivery address below:	<input type="checkbox"/> No
330 Kees Branch			
Grayson, KY 41143			
		3. Service Type	
		<input checked="" type="checkbox"/> Certified Mail	<input type="checkbox"/> Express Mail
		<input type="checkbox"/> Registered	<input type="checkbox"/> Return Receipt for Merchandise
		<input type="checkbox"/> Insured Mail	<input type="checkbox"/> C.O.D.
		4. Restricted Delivery? (Extra Fee)	<input type="checkbox"/> Yes
2. Article Number (Copy from service label)	7008 0150 0001 5347 8096		
PS Form 3811, July 1999	Domestic Return Receipt	102595-00-M-0952	

July 2, 2008

Bobby Hall
615 Kees Branch
Grayson, KY 41143

Public Notice

Cellere, LLC, a Michigan limited liability company as agent for Central States Tower Holdings, LLC is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct a new cellular tower facility to provide cellular telephone service. This facility will include a 300 foot tower to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

Cellere and Central States welcome the opportunity to serve and provide wireless service in your community!

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.<input checked="" type="checkbox"/> Print your name and address on the reverse so that we can return the card to you.<input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.	A. Received by (Please Print Clearly) _____ B. Date of Delivery <u>7/17/08</u>
1. Article Addressed to: Bobby Hall 615 Kees Branch Grayson, KY 41143	C. Signature <u>[Signature]</u> <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No
	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
	4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
2. Article Number (Copy from service label)	7008 0150 0001 5347 8119

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

EXHIBIT G

Certified letter to Judge Executive



July 7, 2008

Via Certified Mail
Carter County Judge Executive
Charles Wallace
300 West Main Street
Room 227
Grayson, KY 41143

RE: Public Notice – Public Service Commission of Kentucky
Case No. 2008-00262

Cellere, LLC, as agent for Central States Tower Holdings, LLC, is applying to the Public Service Commission of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to propose construction and operation for a new facility to provide cellular telecommunications service in Carter County. The facility will include a 300 foot tower and an equipment shelter to be located at +/- 220 Kees Branch, Grayson, Kentucky 41143. A map showing the location of the proposed new facility is enclosed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter.

Your comments and request for intervention should be addressed to:

Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky 40602

Please refer to case number 2008-00262 in your correspondence.

Sincerely,

Benjamin Meredith
Cellere, LLC

Enclosure

sly

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. <input checked="" type="checkbox"/> Print your name and address on the reverse so that we can return the card to you. <input checked="" type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Received by (Please Print Clearly)	B. Date of Delivery
1. Article Addressed to:	<i>Charles Wallace</i> 7-12-08	
Carter County Judge Executive Charles Wallace 300 W. Main St., Rm. 227 Grayson, KY 41143	C. Signature <input checked="" type="checkbox"/> <i>Charles Wallace</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
2. Article Number (Copy from service label)	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
PS Form 3811, July 1999	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
Domestic Return Receipt	4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
102595-00-M-0952	7008 0150 0001 5347 7815	

EXHIBIT H

**Public Notice Signs
(Photos)**

PUBLIC NOTICE

Central States Tower Holdings, LLC
proposes to
construct a cellular
communications

TOWER

near this site. If you have any
questions please contact:

Central States Tower Holdings, LLC 111 Tower Blvd, Suite 100 Knoxville, TN 37922	The Executive Director Public Service Commission 111 Tower Blvd, P.O. Box 114 Knoxville, TN 37902
--	--

Please refer to P.S.C.
Case #2008-00262
in your correspondence.

PUBLIC NOTICE

Central States Tower Holdings, LLC
proposes to
construct a cellular
communications

TOWER

on this site. If you have any
questions please contact:

Central States Tower Holdings, LLC
10000 E. 1st Ave.
Denver, CO 80231
Phone: 303.733.4500

Debra L. Smith
Public Service Commission
2700 South Broadway, 423 Room 411
Denver, CO 80216
Phone: 303.733.4500

Please refer to P.S.C.

Case #2008-00262

in your correspondence.

EXHIBIT I

Affidavit of Publication of Public Notice

Morehead News Group

Newspaper Holdings, Inc.

722 W. First St., Morehead, KY 40351
606-784-4116 or 800-247-6142

Affidavit of Publication

STATE OF KENTUCKY

COUNTY OF Carter

I, Betty Kelly, classified clerk, of Morehead News Group, in the aforesaid State and County, hereby certify that the attached advertisement appeared on 7-30-08 in the Olive Hill Times.

Betty Kelly
Betty Kelly, Classified Clerk

7-24-08
Date

Subscribed and sworn to before me, a Notary Public, within and for the State and County aforesaid, by Betty Kelly, on the above date.

Chinila Horgett
Notary Public, State at Large, Kentucky

My Commission Expires: _____

EXHIBIT J

Map of Search Area

KY-00-0816

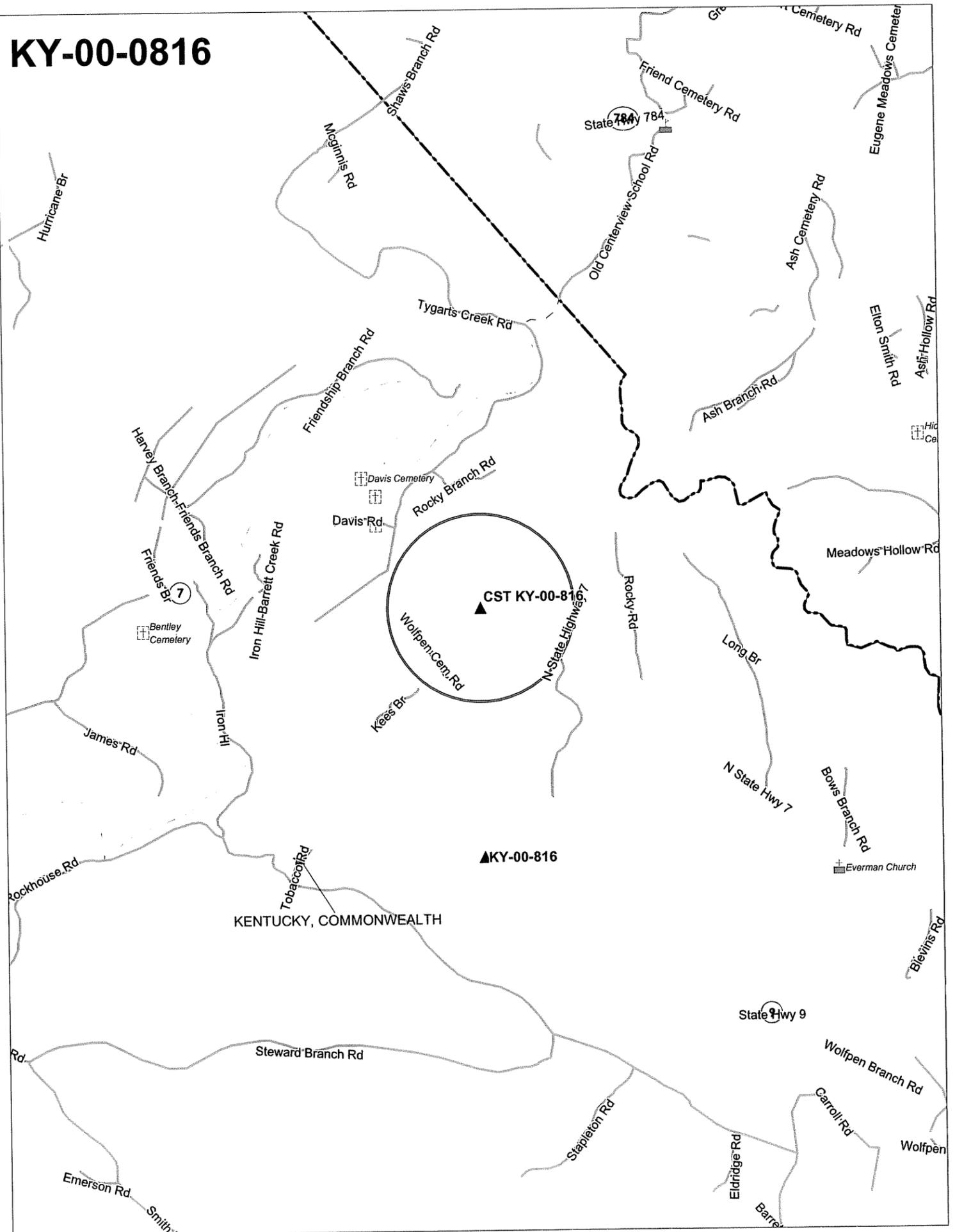


EXHIBIT K

Map of Existing and Proposed Towers

**PROPOSED TOWER LOCATIONS IN CARTER COUNTY and
Identified Existing Tower Locations within Carter County**

